RAMBOLL

ENVIRONMENT
& HEALTH

Mr. Frank Sowers
New York State Department of Environmental Conservation
6274 East Avon-Lima Road
Avon, NY 14414-9519

Date September 30, 2019

RE: Former ITT Rochester Form Machine Facility Site, Gates, New York - Site #8-28-112 - Emerging Contaminants Sampling Letter Report

Dear Mr. Sowers:

Ramboll
333 West Washington Street
Syracuse, NY 13202
USA

T 315-956-6100
F 315-463-7554
https://ramboll.com

O'Brien & Gere Engineers, Inc., a Ramboll company (Ramboll) presents this Emerging Contaminants Sampling Letter Report for the Former ITT Rochester Form Machine Facility (RFM), Site #828112 on the New York State Registry of Inactive Hazardous Waste Disposal Sites Registry, located at 30 Pixley Industrial Parkway in Gates, New York (Site). A Site map is presented as **Figure 1**.

Sampling for emerging contaminants (per-and polyfluoroalkyl substances [PFAS]) was completed at wells ITT-IBW-20, ITT-SBW-2, and ITT-SBW-4 on July 29, 2019, as a part of the routine annual groundwater monitoring, as requested in a letter dated December 13, 2018 from the New York State Department of Environmental Conservation (NYSDEC). Sampling was completed in accordance with the *Emerging Contaminants Sampling Work Plan* (EC Work Plan), dated March 22, 2019 and addendum dated April 12, 2019, as approved by NYSDEC in a letter dated April 17, 2019.

Consistent with NYSDEC's guidance document *Groundwater Sampling for Emerging Contaminants* dated April 2018 (PFAS Guidance), laboratory analysis for PFAS was completed by USEPA Method 537 Modified with quantification of 21 compounds. Laboratory analysis was conducted by ALS Environmental. A Category B analytical data deliverable was obtained from the laboratory.

Consistent with the EC Work Plan, data validation was conducted. Analytical data were validated by Vali-Data of Western New York, LLC. Upon completion of the data validation process a *Data Usability Summary Report* (DUSR) was prepared and is provided in **Attachment 1**.

Groundwater Sampling

Monitoring wells ITT-IBW-20, ITT-SBW-2, and ITT-SBW-4 were sampled on July 29, 2019 utilizing low flow sampling methods and PFAS-free equipment. The monitoring wells were sampled consistent with the EC Work Plan and the November 2012 *Periodic Groundwater Sampling Work Plan* prepared by Ramboll. Low flow sampling was completed utilizing PFAS free submersible (bladder) pumps and tubing. The three wells were purged and sampled consistent with the low-flow sampling techniques following protocols presented in Appendix D of the RI/FS Work Plan prepared by Ramboll with additional considerations for PFAS sampling as identified in the PFAS Guidance. A summary of the analytical results is included in **Table 1** and the field sampling logs are included as **Appendix A**.

Quality control (QC) samples including equipment blank, field duplicate, and matrix spike/matrix spike duplicate (MS/MSD) were collected for PFAS during the sampling event. The duplicate was collected from ITT-SBW-2 and the matrix spike/matrix spike duplicate from ITT-SBW-4.

Results

Laboratory analytical results for the sampled monitoring wells ITT-IBW-20, ITT-SBW-2, and ITT-SBW-4 are included in **Attachment 2**.

If you have any questions, please contact Lisa Hall of ITT at (949) 562-7402.

Yours sincerely

Douglas Crawford
Vice President

cc: B. Schilling (NYSDEC)
D. Loew (NYSDEC)
J. Kenney (NYSDOH)
J. Stanek (ITT)
L. Hall (ITT)
M. Peters (The West Firm)
S. Tucker (Ramboll)
G. Swenson (Ramboll)

List of Attachments:
Table 1 – July 2019 Emerging Contaminants Groundwater Sampling Results
Figure 1 – Sampling Locations
Appendix A – Groundwater Sampling Logs
Attachment 1 – Data Usability Summary Report
Attachment 2 – Laboratory Report

TABLE 1
JULY 2019 EMERGING CONTAMINANTS GROUNDWATER SAMPLING RESULTS

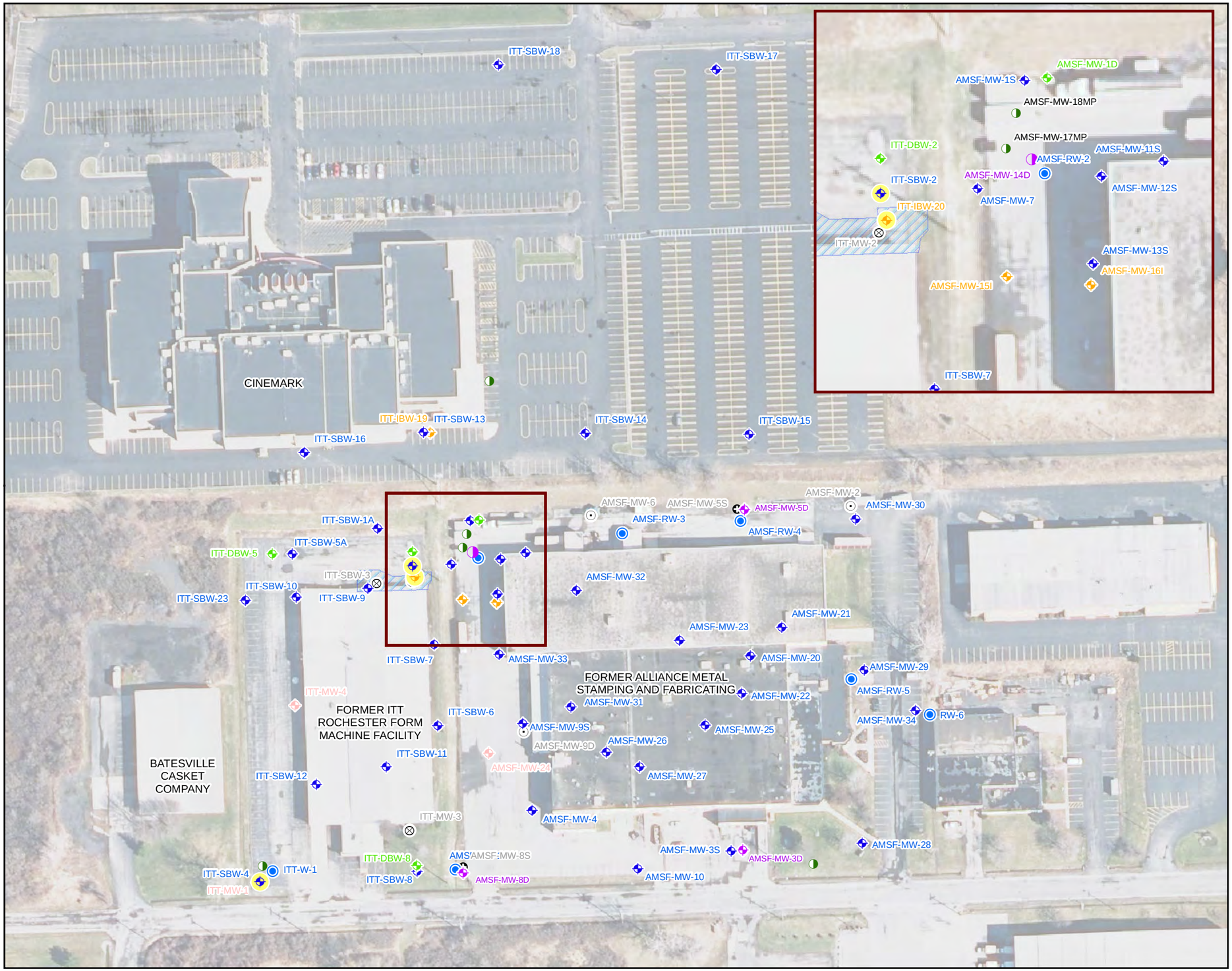
Table 1
July 2019 Emerging Contaminants Groundwater Sampling Results
Former ITT Rochester Form Machine Facility
Site #8-28-112
Town of Gates, New York

		Location Code:	ITT-IBW-20	ITT-SBW-2	ITT-SBW-2	ITT-SBW-4	
		Sample Name:	ITT-IBW-20-072919	ITT-SBW-2-072919	DUP-01-072919	ITT-SBW-4-072919	EB-072919
		Sample Type:	N	N	FD	N	EB
		Sample Date:	7/29/2019	7/29/2019	7/29/2019	7/29/2019	7/29/2019
Group	Analyte	Criteria[1]					
Perfluoroalkyl sulfonates	Perfluorobutanesulfonic acid (PFBS)	NC	1.2 J	0.87 J	0.74 J	1.0 J	0.28 UJ
	Perfluorohexanesulfonic acid (PFHxS)	NC	2.2 J	1.3 UJ	1.3 UJ	1.6 J	1.3 UJ
	Perfluoroheptanesulfonic acid (PFHpS)	NC	0.44 UJ	0.44 UJ	0.44 UJ	0.44 UJ	0.44 UJ
	Perfluorooctanesulfonic Acid (PFOS)	NC	0.63 J	8.6 J	7.5 J	0.53 J	0.44 UJ
	Perfluorodecanesulfonic acid (PFDS)	NC	0.30 UJ	0.30 UJ	0.30 UJ	0.30 UJ	0.30 UJ
Perfluoroalkyl carboxylates	Perfluorobutanoic acid (PFBA)	NC	27 JH	16 JH	15 JH	27 J	0.40 UJ
	Perfluoropentanoic acid (PFPeA)	NC	11 J	7.0 J	7.8 J	12 J	1.7 UJ
	Perfluorohexanoic acid (PFHxA)	NC	8.8 UJ	8.8 UJ	8.8 UJ	8.8 UJ	8.8 UJ
	Perfluoroheptanoic acid (PFHpA)	NC	2.8 J	3.8 J	3.5 J	2.8 J	0.63 UJ
	Perfluorooctanoic acid (PFOA)	NC	2.6 JH	8.3 JH	7.4 JH	2.5 J	1.6 UJ
	Perfluorononanoic acid (PFNA)	NC	1.1 UJ	1.1 UJ	1.2 J	1.1 UJ	1.1 UJ
	Perfluorodecanoic acid (PFDA)	NC	1.2 UJ	1.2 UJ	1.3 J	1.2 UJ	1.2 UJ
	Perfluoroundecanoic acid (PFUA/PFUdA)	NC	1.5 UJ	1.5 UJ	1.5 UJ	1.5 UJ	1.5 UJ
	Perfluorododecanoic acid (PFDoA)	NC	1.3 UJ	1.3 UJ	1.3 UJ	1.3 UJ	1.3 UJ
	Perfluorotridecanoic acid (PFTriA/PFTrDA)	NC	1.3 UJ	1.3 UJ	1.3 UJ	1.3 UJ	1.3 UJ
	Perfluorotetradecanoic acid (PFTA/PFTeDA)	NC	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
Fluorinated Telomer Sulfonates	6:2 Fluorotelomer sulfonate (6:2 FTS)	NC	4.2 UJ	4 UJ	4 UJ	0.55 UJ	4 UJ
	8:2 Fluorotelomer sulfonate (8:2 FTS)	NC	0.15 UJ	0.15 UJ	0.15 UJ	0.15 UJ	0.15 UJ
Perfluorooctanesulfonamides	Perfluroroctanesulfonamide (FOSA)	NC	0.52 UJ	5.5 J	6.9 J	0.52 UJ	0.52 UJ
Perfluorooctanesulfonamidoacetic acids	N-methyl perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	NC	1.4 UJ	1.7 J	3.3 J	1.4 UJ	1.4 UJ
	N-ethyl perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	NC	0.50 UJ	0.50 UJ	2.3 J	0.50 UJ	0.50 UJ

Notes:
All units in nanograms per liter (ng/L)
Sample type N = Normal, FD = Field Duplicate, EB = Equipment Blank
[1] New York State Department of Environmental Conservation, Technical and Operational Guidance Series (1.1.1), Class GA Standards and Guidance Values, Revised June 1998.
NC - No criteria exists
U - Not Detected at the Detection Limit shown, J - Estimated Value, H - Biased High
Validated

FIGURE 1
SAMPLE LOCATIONS

8/15/2019 2:42:47 PM



N

LEGEND

- RI PHASE I ABANDONED DEEP BORING
- OTHER DEEP BEDROCK WELL
- ABANDONED MULTIPORT BEDROCK BORING
- OVERBURDEN MONITORING WELL
- UPPER ERAMOSA DOLOMITE WELL
- LOWER ERAMOSA DOLOMITE WELL
- UPPER PENFIELD FORMATION WELL
- RECHARGE WELL
- PRE-RI MISSING WELL
- PRE-RI ABANDONED WELL
- PRE-RI DAMAGED WELL
- 1999 FORMER RFM SOIL REMEDIATION AREA

NOTE:
HIGHLIGHTED SAMPLING LOCATIONS REPRESENT SAMPLING LOCATIONS

FORMER ITT ROCHESTER FORM MACHINE FACILITY
TOWN OF GATES, NEW YORK
SITE #8-28-112

SAMPLING LOCATIONS

0 125 250
Feet

AUGUST 2019
3356.73105

O'BRIEN & GERE ENGINEERS, INC.

I:\ltt.3356\STDS\GIS\MXDs\SamplingLocations2019.mxd

APPENDIX A
GROUNDWATER SAMPLING LOGS

OBG
Part of Ramboll

Low Flow Groundwater Sampling Log

Well ID: ITT-IBW-20
Northing: 1146078.094
Easting: 1380540.888

Site Name: Auto FH-019 Former RFM
Site Location: Rochester, NY
Project #: 73105.001/002.016
Sampling Method: Bladder Pump
Equipment Used: QED Bladder Pump
Pump/Controller ID#: FA01201/FA01037
Field Personnel: ASY, SLH
Date: 7/29/2019
Weather: Sun, 85°F

Well information:
Installed Depth of Well*: 59.00 ft. bmp.
Measured Depth of Well*: 43.95 ft. bmp.
Depth to Water*: 12.55 ft. bmp.
Length of Water Column (LWC): 31.40 ft.
Well Diameter: 2.0 in.

Well Volume Multipliers:
[ ] 1 in. = 0.041 gal/ft
[X] 2 in. = 0.163 gal/ft
[ ] 4 in. = 0.653 gal/ft
[ ] 6 in. = 1.469 gal/ft
[ ] 8 in. = 2.611 gal/ft

* Measurement Point: Top of Well Casing
[ ] Other:
Well Volume: 5.1 gal.
Pump Intake Depth*: 19.3 ft. bmp.

Start Purge Time: 12:50
Initial Observations: *Color:* Clear *Odor:* None *Sheen/Free Product:* None

Select Units from Dropdown Menus

Elapsed Time *Minutes*	Depth to Water *ft bmp*	Temperature *Celsius*	pH *SU*	Specific Conductivity *mS/cm*	ORP *mV*	Dissolved Oxygen *mg/L*	Turbidity *NTU*	Flow Rate *ml/min*	Other
0	12.53	17.33	3.88	6.85	-153	7.35	3.84	280	
5	12.55	15.68	3.85	7.73	-177	2.24	1.43	290	
10	12.55	15.55	3.85	7.76	-181	2.22	1.07	290	
15	12.55	15.46	3.84	7.76	187	2.07	0.87	290	
20	12.54	15.36	3.84	7.64	-193	2.06	0.91	290	
25	12.55	15.15	3.85	7.55	-196	2.03	2.00	290	
30	12.55	15.23	3.85	7.49	-199	1.90	1.17	290	
35	12.55	15.22	3.86	7.43	-202	1.81	1.02	290	
40	12.55	15.18	3.86	7.41	-204	1.80	1.04	280	
45	12.55	14.90	3.87	7.37	-206	1.77	1.61	280	
50	12.55	14.90	3.87	7.36	-208	1.74	1.71	280	
55	12.55	15.00	3.88	7.33	-212	1.67	1.78	280	
60	12.55	15.01	3.89	7.33	-214	1.65	1.75	280	
Stabilization	Δ ≤ 0.3'	± 3%	± 0.1	± 3%	± 10 mV	± 10%	± 10%	200 ≤ X ≤ 500	

End Purge Time: 13:55
DO Titrataion: NA mg/L
Total volume of groundwater purged: 5.5 gal.

Final Observations: *Color:* Clear *Odor:* None *Sheen/Free Product:* None
Specific Gravity NA

Analytical Sample ID: ITT-IBW-20-072919 **Date:** 7/29/2019 **Time:** 14:00

Container Size	Container Type	# Collected	Field Filtered?	Preservative	Laboratory
250 ml	Polyethylene	2	No	None	ALS Labs
250 ml	Amber Glass	2	No	None	ALS Labs
40 ml	Clear VOA	3	No	HCl	ALS Labs

Notes:

OBG Part of Ramboll

Low Flow Groundwater Sampling Log

Well ID: ITT-SBW-2
Northing: 1146091.319
Easting: 1380537.904

Site Name: Auto FH-019 Former RFM | Sampling Method: Bladder Pump | Field Personnel: ASY, SLH
Site Location: Rochester, NY | Equipment Used: QED Bladder Pump | Date: 7/29/2019
Project #: 73105.001/002.016 | Pump/Controller ID#: FA01201/FA01037 | Weather: Sun, 90°F

Well information:
Installed Depth of Well*: 25.00 ft. bmp.
Measured Depth of Well*: 23.97 ft. bmp.
Depth to Water*: 12.26 ft. bmp.
Length of Water Column (LWC): 11.71 ft.
Well Diameter: 4.0 in.

Well Volume Multipliers:
___ 1 in. = 0.041 gal/ft
___ 2 in. = 0.163 gal/ft
X 4 in. = 0.653 gal/ft
___ 6 in. = 1.469 gal/ft
___ 8 in. = 2.611 gal/ft

* Measurement Point: Top of Well Casing
☐ Other: ___
Well Volume: 7.6 gal.
Pump Intake Depth*: 19.3 ft. bmp.

Start Purge Time: 11:20
Initial Observations: *Color:* Clear *Odor:* None *Sheen/Free Product:* None

Select Units from Dropdown Menus

Elapsed Time *Minutes*	Depth to Water *ft bmp*	Temperature *Celsius*	pH *SU*	Specific Conductivity *mS/cm*	ORP *mV*	Dissolved Oxygen *mg/L*	Turbidity *NTU*	Flow Rate *ml/min*	Other
0	12.27	21.00	3.55	2.92	-111	2.03	3.84	350	
5	12.30	20.82	3.68	2.72	-129	1.10	3.04	250	
10	12.30	17.57	3.61	3.04	-132	1.37	2.38	250	
15	12.29	16.29	3.61	3.04	-135	1.23	1.29	300	
20	12.30	16.18	3.62	3.02	-138	1.14	0.68	300	
25	12.29	16.20	3.62	3.06	-139	1.03	0.74	300	
30	12.29	16.17	3.62	3.06	-138	1.04	0.75	300	
35	12.30	15.86	3.67	3.06	-139	0.99	0.69	300	
40	12.30	15.98	3.69	3.05	-139	0.96	0.65	300	
45	12.30	15.86	3.70	3.05	-140	0.95	0.66	300	
Stabilization	Δ ≤ 0.3'	± 3%	± 0.1	± 3%	± 10 mV	± 10%	± 10%	200 ≤ X ≤ 500	

End Purge Time: 12:05
DO Titrataion: NA mg/L
Total volume of groundwater purged: 4 gal.

Final Observations: *Color:* Clear *Odor:* None *Sheen/Free Product:* None
Specific Gravity NA

Analytical Sample ID: ITT-SBW-2-072919 **Date:** 7/29/2019 **Time:** 12:08

Container Size	Container Type	# Collected	Field Filtered?	Preservative	Laboratory
250 ml	Polyethylene	4	No	None	ALS Labs
250 ml	Amber Glass	4	No	None	ALS Labs
40 ml	Clear VOA	6	No	HCl	ALS Labs

Notes: DUP-01-072919

OBG
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Low Flow Groundwater Sampling Log

Well ID: ITT-SBW-4
Northing: 1145695.99
Easting: 1380347.004

Site Name: Auto FH-019 Former RFM | Sampling Method: Bladder Pump | Field Personnel: SLH, ASY
Site Location: Rochester, NY | Equipment Used: QED Bladder Pump | Date: 7/29/2019
Project #: 73105.001/002.016 | Pump/Controller ID#: FA02526/ FA03896 | Weather: Sun, 90°F

Well information:
Installed Depth of Well*: 25.00 ft. bmp.
Measured Depth of Well*: 22.10 ft. bmp.
Depth to Water*: 5.70 ft. bmp.
Length of Water Column (LWC): 16.40 ft.
Well Diameter: 4.0 in.

Well Volume Multipliers:
1 in. = 0.041 gal/ft
2 in. = 0.163 gal/ft
X 4 in. = 0.653 gal/ft
6 in. = 1.469 gal/ft
8 in. = 2.611 gal/ft

* Measurement Point: Top of Well Casing
☐ Other:
Well Volume: 10.7 gal.
Pump Intake Depth*: 19.3 ft. bmp.

Start Purge Time: 15:10
Initial Observations: *Color:* Orange *Odor:* Sulfur *Sheen/Free Product:* None

Select Units from Dropdown Menus

Elapsed Time *Minutes*	Depth to Water *ft bmp*	Temperature *Celsius*	pH *SU*	Specific Conductivity *mS/cm*	ORP *mV*	Dissolved Oxygen *mg/L*	Turbidity *NTU*	Flow Rate *ml/min*	Other
0	5.67	21.30	4.15	2.45	32	2.45	3559 AU	350	
5	5.68	15.25	4.05	3.02	-56	1.30	74.9	300	
10	5.68	14.87	4.01	3.05	-65	1.15	26.3	300	
15	5.66	14.57	4.01	3.06	-66	1.04	31.1	300	
20	5.66	14.82	4.02	3.05	-68	0.94	14.4	200	
25	5.68	14.55	4.03	3.07	-67	0.95	13.29	250	
30	5.67	14.39	4.03	3.10	-67	0.97	14.4	250	
Stabilization	Δ ≤ 0.3'	± 3%	± 0.1	± 3%	± 10 mV	± 10%	± 10%	200 ≤ X ≤ 500	

End Purge Time: 15:40
DO Titrataion: NA mg/L
Total volume of groundwater purged: 5 gal.

Final Observations: *Color:* Clear *Odor:* Sulfur *Sheen/Free Product:* Slight Chemical Sheen
Specific Gravity NA

Analytical Sample ID: ITT-SBW-10-072919 **Date:** 7/29/2019 **Time:** 15:50

Container Size	Container Type	# Collected	Field Filtered?	Preservative	Laboratory
250 ml	Polyethylene	6	No	None	ALS Labs

Notes: ITT-SBW-4-072919-MS/ITT-SBW-4-072919-MSD

ATTACHMENT 1
DATA USABILITY SUMMARY REPORT

Data Usability Summary Report

Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

ITT (Auto FH-019 Former RFM)
ALS Environmental SDG#R1907111
September 4, 2019
Sampling date: 7/29/2019

Prepared by:
Jodi Zimmerman
Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the analytical data package for O'Brien & Gere/Ramboll, project located at ITT (Auto FH-019 Former RFM), ALS Environmental #R1907111 submitted to Vali-Data of WNY, LLC on August 22, 2019. This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocols and USEPA National Functional Guidelines. The laboratory performed the analysis using USEPA method PFC HPLC/MS (537 modified).

The temperature of the samples were outside QC limits, low. All target analytes in the samples should be qualified as estimated.

PFC HPLC/MS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Recoveries
- Internal Standard
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use except where qualified below in Surrogate Spike Recoveries, Method Blank, Compound Quantitation and Continuing Calibration.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS
All criteria were met.

HOLDING TIMES
All holding times were met.

SURROGATE RECOVERIES
All criteria were met except the %Rec of 13C4-PFBA was outside QC limits, high in ITT-SBW-2-072919 and should be qualified as estimated high. The %Rec of 13C4-PFBA, 13C2-PFHxA and 13C5-PFNA was outside QC limits, high in ITT-SBW-4-072919 and should be qualified as estimated high. Associated target analytes in these samples should be qualified as estimated low if detected or estimated if undetected.

INTERNAL STANDARD
All criteria were met.

METHOD BLANK
All the criteria were met except PFOA, PFBA and 6:2 FTS were detected above the MDL, below the reporting limit and are qualified as estimated in KQ1910949-06. These target analytes should be qualified as undetected at the reporting limit if they were detected in the associated samples below the reporting limit. These target analytes should be qualified as estimated high if detected in the associated samples above the reporting limit.

FIELD DUPLICATE SAMPLE PRECISION
All criteria were met except PFNA, PFDA and NEtFOSAA were detected in DUP—01-072919 but were not detected in ITT-SBW-2-072919.

LABORATORY CONTROL SAMPLES
All criteria were met.

MS/MSD
All criteria were met.

COMPOUND QUANTITATION
All the criteria were met except PFOA and 6:2 FTS were detected above the MDL, below the reporting limit and are qualified as estimated in EB-072919. These target analytes should be qualified as undetected at the reporting limit if they were detected in the associated samples below the reporting limit. These target analytes should be qualified as estimated high if detected in the associated samples above the reporting limit.

INITIAL CALIBRATION
All criteria were met.
Alternative forms of regression were used on target analytes in which the %RSD was >20%, with acceptable results.

CONTINUING CALIBRATION

All criteria were met except the %Rec of PFDS was outside QC limits, high in continuing calibration file#190807_141. The %Rec of PFHpS and PFDS was outside QC limits, high in continuing calibration file#190812_007. These target analytes should be qualified as estimated high in the associated blanks, samples and spikes in which they were detected.

ATTACHMENT 2
LABORATORY REPORT

August 16, 2019 Service Request No:R1907111

Mr. Scott Tucker
O'Brien & Gere Engineers, Incorporated
P.O. Box 4873
Syracuse, NY 13221

Laboratory Results for: Auto FH-019 Former RFM

Dear Mr.Tucker,

Enclosed are the results of the sample(s) submitted to our laboratory July 29, 2019
For your reference, these analyses have been assigned our service request number **R1907111.**

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

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp.
dba ALS Environmental

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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

1565 Jefferson Rd, Building 300, Rochester, NY 14623 | 585-288-5380 | www.alsglobal.com

Client: O'Brien & Gere Engineers, Incorporated
Project: Auto FH-019 Former RFM
Sample Matrix: Water

Service Request: R1907111
Date Received: 07/29/2019

CASE NARRATIVE

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

Sample Receipt:

Five water samples were received for analysis at ALS Environmental on 07/29/2019. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

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.

Approved by _____ Date 08/21/2019

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

Client: O'Brien & Gere Engineers, Incorporated **Service Request:**R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1907111-001	ITT-SBW-4-072919	7/29/2019	1550
R1907111-002	EB-072919	7/29/2019	1315
R1907111-003	ITT-SBW-2-072919	7/29/2019	1208
R1907111-004	DUP-01-072919	7/29/2019	
R1907111-005	ITT-IBW-20-072919	7/29/2019	1400

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM 57920

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	Project Number
Auto FH-019 Former RFM	73105.001/002.016
Project Manager	**Report CC**
Scott Tucker	
Company/Address	
OBG, Part of Ramboll 333 West Washington St. Syracuse, NY 13202	
Phone #	**Email**
315-463-7554	Scott.tucker@ramboll.com
Sampler's Signature	**Sampler's Printed Name**
	Amanda Young / Sara Hahne

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PFAS
ITT-SBW-4-072919		7/29/19	1550	WG	2	X
ITT-SBW-4-072919-MS		7/29/19	1550	WG	2	X
ITT-SBW-4-072919-MSD		7/29/19	1550	WG	2	X
~~ITT~~ EB-072919		7/29/19	1315	WQ	2	X
ITT-SBW-2-072919		7/29/19	1208	WG	2	X
~~ITT~~ DUP-01-072919		7/29/19		WG	2	X
ITT-IBW-20-072919		7/29/19	1400	WG	2	X
ITT-SBW-9-072919		7/29/19	1600	WG	2	X

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 _____

REMARKS/ ALTERNATE DESCRIPTION

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP X

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
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ____ Yes ____ No

INVOICE INFORMATION
PO # TBD
BILL TO: Accounts Payable
PO Box 4873
Syracuse, NY 13202

STATE WHERE SAMPLES WERE COLLECTED NY

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name Sara Hahne	Printed Name Daniel Ward	Printed Name	Printed Name	Printed Name	
Firm OBG POR	Firm ALS	Firm	Firm	Firm	
Date/Time 7/29/19 5:50	Date/Time 7/29/19 1750	Date/Time	Date/Time	Date/Time	

Distribution: White - Lab Copy; Yellow - Return to Originator

R1907111 5
O'Brien & Gere Engineers, Incorporated
Auto FH-019 Former RFM

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM 57920

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Project Name: Lito FH-019 former RFM	Project Number: 73105.001/002.016
Project Manager: Scott Tucker	Report CC:
Company/Address: OBG, Part of Ramboll 333 West Washington St. Syracuse, NY 13202	
Phone #: 315-463-7554	Email: Scott.tucker@ramboll.com
Sampler's Signature:	Sampler's Printed Name: Amanda Yanz / Sara Hahne

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 0

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)	PFAS								REMARKS/ ALTERNATE DESCRIPTION
ITT-SBW-4-072919		7/29/19	1550	WG	2								X								
ITT-SBW-4-072919-MS		7/29/19	1550	WG	2								X								
ITT-SBW-4-072919-MSD		7/29/19	1550	WG	2								X								
EB-072919		7/29/19	1315	WQ	2								X								
ITT-SBW-2-072919		7/29/19	1208	WG	2								X								
ITT-DUP-01-072919		7/29/19		WG	2								X								
ITT-TBW-20-072919		7/29/19	1400	WG	2								X								
ITT-SBW-9-072919		7/29/19	1600	WG	2								X								

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

See QAPP: X

STATE WHERE SAMPLES WERE COLLECTED: NY

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
- ___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
- X III. Results + QC and Calibration Summaries
- ___ IV. Data Validation Report with Raw Data
- Edata ___ Yes ___ No

INVOICE INFORMATION
- PO # TBD
- BILL TO: Accounts Payable
- PO Box 4873
- Syracuse, NY 13202

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: Sara Hahne	Printed Name: Daniel Hoyt	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: OBG POR	Firm: ALS	Firm:	Firm:	Firm:	Firm:
Date/Time: 7/29/19 5:50	Date/Time: 7/29/19 / 1750	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Lab Copy; Yellow - Return to Originator

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Cooler Receipt and Preservation Check Form

R1907111 5
O'Brien & Gere Engineers, Incorporated
Auto FH-019 Former RFM

Project/Client OB+G Folder Number

Cooler received on 7/29/19 by: DW

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: 7/29/19 Time: 1800 ID: IR#7 IR#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	13.1	4.6	6.7				
Correction Factor (°C)	+0.3	+0.3	+0.3				
Corrected Temp (°C)	13.4	4.9	7.0				
Temp from: Type of bottle	Cent. tube	Cent. tube	Cent tube				
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-002 by DW on 7/29/19 at 1800
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: 7/30/19 Time: 1210 by: AD

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: _____

Explain all Discrepancies/ Other Comments:

1 vial for IDW-072919
3 vials for the trip blank
1 vial for EB-072919
2 vials for ITT-SBW-23-072919

did not receive SBW-9 PFOA

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	(SUB)
SO3	MARRS
ALS	REV

Labels secondary reviewed by: AD
PC Secondary Review: DW 8/2/19

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

ALS Group USA, Corp.
dba ALS Environmental

Internal Chain of Custody Report

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R1907111-001.01					
	PFC/537M				
		7/30/2019	1205	SMO / GLAFORCE	8/7/2019
		7/30/2019	1206	SUBBED / GLAFORCE	8/7/2019
		8/1/2019	1434	OLC 28 / SMO2	8/7/2019
		8/1/2019	1435	K-OLC / SMO2	8/7/2019
		8/7/2019	0840	K-Disposed / KLMILLER	8/7/2019
R1907111-001.02					
		7/30/2019	1205	SMO / GLAFORCE	8/7/2019
		7/30/2019	1206	SUBBED / GLAFORCE	8/7/2019
		8/1/2019	1434	OLC 28 / SMO2	8/7/2019
		8/1/2019	1435	K-OLC / SMO2	8/7/2019
		8/7/2019	0840	K-Disposed / KLMILLER	8/7/2019
R1907111-001.03					
		7/30/2019	1206	SMO / GLAFORCE	8/7/2019
		7/30/2019	1206	SUBBED / GLAFORCE	8/7/2019
		8/1/2019	1434	OLC 28 / SMO2	8/7/2019
		8/1/2019	1435	K-OLC / SMO2	8/7/2019
		8/7/2019	0840	K-Disposed / KLMILLER	8/7/2019
R1907111-001.04					
	PFC/537M				
		7/30/2019	1206	SMO / GLAFORCE	8/12/2019
		7/30/2019	1206	SUBBED / GLAFORCE	8/12/2019
		8/1/2019	1434	OLC 28 / SMO2	8/12/2019
		8/1/2019	1435	K-OLC / SMO2	8/12/2019
		8/12/2019	1259	K-Disposed / KLMILLER	8/12/2019
R1907111-001.05					
		7/30/2019	1206	SMO / GLAFORCE	8/12/2019
		7/30/2019	1206	SUBBED / GLAFORCE	8/12/2019
		8/1/2019	1434	OLC 28 / SMO2	8/12/2019
		8/1/2019	1435	K-OLC / SMO2	8/12/2019
		8/12/2019	1258	K-Disposed / KLMILLER	8/12/2019
R1907111-001.06					
		7/30/2019	1206	SMO / GLAFORCE	8/12/2019
		7/30/2019	1206	SUBBED / GLAFORCE	8/12/2019
		8/1/2019	1434	OLC 28 / SMO2	8/12/2019
		8/1/2019	1435	K-OLC / SMO2	8/12/2019

ALS Group USA, Corp.
dba ALS Environmental

Internal Chain of Custody Report

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
		8/12/2019	1258	K-Disposed / KLMILLER	8/12/2019
R1907111-002.01					
	PFC/537M				
		7/30/2019	1205	SMO / GLAFORCE	8/7/2019
		7/30/2019	1206	SUBBED / GLAFORCE	8/7/2019
		8/1/2019	1434	OLC 28 / SMO2	8/7/2019
		8/1/2019	1435	K-OLC / SMO2	8/7/2019
		8/7/2019	0840	K-Disposed / KLMILLER	8/7/2019
R1907111-002.02					
		7/30/2019	1205	SMO / GLAFORCE	
		7/30/2019	1206	SUBBED / GLAFORCE	
		8/1/2019	1434	OLC 28 / SMO2	
		8/1/2019	1435	K-OLC / SMO2	
R1907111-003.01					
	PFC/537M,PFC/537M				
		7/30/2019	1205	SMO / GLAFORCE	8/7/2019
		7/30/2019	1206	SUBBED / GLAFORCE	8/7/2019
		8/1/2019	1434	OLC 28 / SMO2	8/7/2019
		8/1/2019	1435	K-OLC / SMO2	8/7/2019
		8/7/2019	0839	K-Disposed / KLMILLER	8/7/2019
R1907111-003.02					
		7/30/2019	1205	SMO / GLAFORCE	
		7/30/2019	1206	SUBBED / GLAFORCE	
		8/1/2019	1434	OLC 28 / SMO2	
		8/1/2019	1435	K-OLC / SMO2	
R1907111-004.01					
	PFC/537M				
		7/30/2019	1205	SMO / GLAFORCE	8/7/2019
		7/30/2019	1206	SUBBED / GLAFORCE	8/7/2019
		8/1/2019	1434	OLC 28 / SMO2	8/7/2019
		8/1/2019	1435	K-OLC / SMO2	8/7/2019
		8/7/2019	0840	K-Disposed / KLMILLER	8/7/2019
R1907111-004.02					
		7/30/2019	1205	SMO / GLAFORCE	
		7/30/2019	1206	SUBBED / GLAFORCE	
		8/1/2019	1434	OLC 28 / SMO2	
		8/1/2019	1435	K-OLC / SMO2	

ALS Group USA, Corp.
dba ALS Environmental

Internal Chain of Custody Report

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R1907111-005.01					
	PFC/537M				
		7/30/2019	1205	SMO / GLAFORCE	8/7/2019
		7/30/2019	1206	SUBBED / GLAFORCE	8/7/2019
		8/1/2019	1434	OLC 28 / SMO2	8/7/2019
		8/1/2019	1435	K-OLC / SMO2	8/7/2019
		8/7/2019	0840	K-Disposed / KLMILLER	8/7/2019
R1907111-005.02					
		7/30/2019	1205	SMO / GLAFORCE	
		7/30/2019	1206	SUBBED / GLAFORCE	
		8/1/2019	1434	OLC 28 / SMO2	
		8/1/2019	1435	K-OLC / SMO2	

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.

INORGANIC PREPARATION METHODS

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

Water/Liquid Matrix

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

Solid/Soil/Non-Aqueous Matrix

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

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

Subcontracted Analytical Parameters

ALS Environmental—Rochester Laboratory
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Kelso, WA 98626
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F : +1 360 636 1068
www.alsglobal.com

August 15, 2019 **Analytical Report for Service Request No:** R1907111

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

RE: Auto FH-019 Former RFM / 73105.001/002.016

Dear Janice Jaeger,

Enclosed are the results of the sample(s) submitted to our laboratory August 01, 2019.
For your reference, these analyses have been assigned our service request number **R1907111.**

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

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Chris Leaf
Project Manager

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Raw Data
    Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLCMS

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: O'Brien & Gere Engineers, Incorporated
Project: Auto FH-019 Former RFM
Sample Matrix: Water

Service Request: R1907111
Date Received: 07/29/2019

CASE NARRATIVE

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

Sample Receipt:

Five water samples were received for analysis at ALS Environmental - Kelso on 08/01/2019. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirement.

Organic LC:

Method PFC/537M, 08/08/2019: The upper control criterion was exceeded for one or more analytes in Continuing Calibration Verifications (CCV) KQ1911078-01 and KQ1911320-01. The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method PFC/537M, 08/08/2019: The control criteria was exceeded for one or more isotopes in Continuing Calibration Verifications (CCV) KQ1911078-01 and KQ1911320-01. The recoveryies of the associated native analytes were within control criteria, which indicated the analysis was in control. No further corrective action was appropriate.

Method PFC/537M, 08/08/2019:T he control criteria were exceeded for 13C4-PFBA in ITT-SBW-2-072919. Since the problem may indicate a potential bias, the sample was re-extracted and re-analyzed within the recommended hold time. The surrogates met control criteria for the re-analysis. Note the results for the field samples were comparable for both determinations, which indicated the problem with the initial analysis was restricted to the surrogate recovery. Both sets of results were reported. The data was flagged to indicate the problem.

Method PFC/537M, 08/08/2019: The control criteria were exceeded for one or more surrogates in ITT-SBW-4-072919 DMS KQ1911251-04. 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.

Approved by _____ Date 08/15/2019

Chain of Custody

ALS Environmental—Kelso Laboratory
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www.alsglobal.com

Intra-Network Chain of Custody

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

ALS Contact: Janice Jaeger

Project Name: Auto FH-019 Former RFM
Project Number: 73105.001/002.016
Project Manager: Scott Tucker
Company: O'Brien & Gere Engineers, Incorporated
QAP: LAB QAP

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Date Received	Send To	PFOA PFC/537M
R1907111-001	ITT-SBW-4-072919 QC	6	Water	7/29/19	1550	7/29/19	KELSO	IV
R1907111-002	EB-072919	2	Water	7/29/19	1315	7/29/19	KELSO	IV
R1907111-003	ITT-SBW-2-072919	↓	Water	7/29/19	1208	7/29/19	KELSO	IV
R1907111-004	DUP-01-072919		Water	7/29/19		7/29/19	KELSO	IV
R1907111-005	ITT-IBW-20-072919		Water	7/29/19	1400	7/29/19	KELSO	IV
~~R1907111-006~~	~~ITT-SBW-9-072919~~		~~Water~~	~~7/29/19~~	~~1600~~	~~7/29/19~~	~~KELSO~~	~~IV~~

Test Comments

PFOA - PFC/537M R1907111-001,2,3,4,5,6 NY list of 21

Run QC on sample R1907111-001 for PFC/537M/PFOA

Special Instructions/Comments

pH Checked _____

Turnaround Requirements

____ **RUSH** (Surcharges Apply)

PLEASE CIRCLE WORK DAYS

1 2 3 4 5

X **STANDARD**

Requested FAX Date: _____

Requested Report Date: 08/15/19

Report Requirements

____ I. Results Only

X II. Results + QC Summaries

____ III. Results + QC and Calibration Summaries

X IV. Data Validation Report with Raw Data

PQL/MDL/J Y

EDD Y

Invoice Information

PO# 58R1907111

Bill to

Relinquished By: [signature] 7/31/19 1435

Received By: NPedersen AIS 8.1.19 0945

Airbill Number: _____

PC CV

Cooler Receipt and Preservation Form

Client ALS Rochester Service Request *K19* R1907111

Received: 8·1·19 Opened: 8·1·19 By: NK Unloaded: 8·1·19 By: NK

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? 2 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
-0.8	0	—	—	-0.2	384		4846 1682 5690	

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: _____

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

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	07/29/19 15:50
Sample Matrix:	Water	**Date Received:**	07/29/19 17:50
Sample Name:	ITT-SBW-4-072919	**Units:**	ng/L
Lab Code:	R1907111-001	**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)	**1.0 J**	4.4	0.28	1	08/12/19 22:23	8/12/19	
Perfluorohexane sulfonic acid (PFHxS)	**1.6 J**	4.4	1.3	1	08/12/19 22:23	8/12/19	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	4.4	0.44	1	08/12/19 22:23	8/12/19	*
Perfluorooctane sulfonic acid (PFOS)	**0.53 J**	1.8	0.44	1	08/12/19 22:23	8/12/19	
Perfluorodecane sulfonic acid (PFDS)	ND U	4.4	0.30	1	08/12/19 22:23	8/12/19	*
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**27**	4.4	0.40	1	08/12/19 22:23	8/12/19	
Perfluoropentanoic acid (PFPeA)	**12**	4.4	1.7	1	08/12/19 22:23	8/12/19	
Perfluorohexanoic acid (PFHxA)	ND U	9.2	8.8	1	08/12/19 22:23	8/12/19	
Perfluoroheptanoic acid (PFHpA)	**2.8 J**	4.4	0.63	1	08/12/19 22:23	8/12/19	
Perfluorooctanoic acid (PFOA)	**2.5**	1.8	0.35	1	08/12/19 22:23	8/12/19	
Perfluorononanoic acid (PFNA)	ND U	4.4	1.1	1	08/12/19 22:23	8/12/19	
Perfluorodecanoic acid (PFDA)	ND U	4.4	1.2	1	08/12/19 22:23	8/12/19	
Perfluoroundecanoic acid (PFUnDA)	ND U	4.4	1.5	1	08/12/19 22:23	8/12/19	
Perfluorododecanoic acid (PFDoDA)	ND U	4.4	1.3	1	08/12/19 22:23	8/12/19	
Perfluorotridecanoic acid (PFTrDA)	ND U	4.4	1.3	1	08/12/19 22:23	8/12/19	
Perfluorotetradecanoic acid (PFTeDA)	ND U	4.4	2.0	1	08/12/19 22:23	8/12/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	ND U	4.4	0.52	1	08/12/19 22:23	8/12/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	ND U	4.4	1.4	1	08/12/19 22:23	8/12/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	ND U	4.4	0.50	1	08/12/19 22:23	8/12/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	ND U	4.4	0.55	1	08/12/19 22:23	8/12/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ND U	4.4	0.15	1	08/12/19 22:23	8/12/19	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	07/29/19 15:50
Sample Matrix:	Water	**Date Received:**	07/29/19 17:50
Sample Name:	ITT-SBW-4-072919	**Units:**	ng/L
Lab Code:	R1907111-001	**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	53	20 - 109	08/12/19 22:23	
18O2-PFHxS	93	26 - 122	08/12/19 22:23	
13C4-PFOS	89	25 - 121	08/12/19 22:23	
13C4-PFBA	97	27 - 124	08/12/19 22:23	
13C5-PFPeA	68	27 - 138	08/12/19 22:23	
13C2-PFHxA	93	28 - 132	08/12/19 22:23	
13C4-PFHpA	88	19 - 139	08/12/19 22:23	
13C4-PFOA	94	22 - 130	08/12/19 22:23	
13C5-PFNA	106	20 - 127	08/12/19 22:23	
13C2-PFDA	81	24 - 125	08/12/19 22:23	
13C2-PFUnDA	89	22 - 125	08/12/19 22:23	
13C2-PFDoDA	75	19 - 122	08/12/19 22:23	
13C2-PFTeDA	74	13 - 124	08/12/19 22:23	
13C8-FOSA	70	18 - 109	08/12/19 22:23	
D3-MeFOSAA	88	9 - 123	08/12/19 22:23	
D5-EtFOSAA	79	12 - 126	08/12/19 22:23	
13C2-6:2 FTS	121	10 - 226	08/12/19 22:23	
13C2-8:2 FTS	104	10 - 202	08/12/19 22:23	

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	07/29/19 13:15
Sample Matrix:	Water	**Date Received:**	07/29/19 17:50
Sample Name:	EB-072919	**Units:**	ng/L
Lab Code:	R1907111-002	**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)	ND U	4.0	0.28	1	08/08/19 19:46	8/6/19	
Perfluorohexane sulfonic acid (PFHxS)	ND U	4.0	1.3	1	08/08/19 19:46	8/6/19	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	4.0	0.44	1	08/08/19 19:46	8/6/19	
Perfluorooctane sulfonic acid (PFOS)	ND U	1.6	0.44	1	08/08/19 19:46	8/6/19	
Perfluorodecane sulfonic acid (PFDS)	ND U	4.0	0.30	1	08/08/19 19:46	8/6/19	*
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	ND U	4.0	0.40	1	08/08/19 19:46	8/6/19	
Perfluoropentanoic acid (PFPeA)	ND U	4.0	1.7	1	08/08/19 19:46	8/6/19	
Perfluorohexanoic acid (PFHxA)	ND U	9.2	8.8	1	08/08/19 19:46	8/6/19	
Perfluoroheptanoic acid (PFHpA)	ND U	4.0	0.63	1	08/08/19 19:46	8/6/19	
Perfluorooctanoic acid (PFOA)	**0.41 J**	1.6	0.35	1	08/08/19 19:46	8/6/19	
Perfluorononanoic acid (PFNA)	ND U	4.0	1.1	1	08/08/19 19:46	8/6/19	
Perfluorodecanoic acid (PFDA)	ND U	4.0	1.2	1	08/08/19 19:46	8/6/19	
Perfluoroundecanoic acid (PFUnDA)	ND U	4.0	1.5	1	08/08/19 19:46	8/6/19	
Perfluorododecanoic acid (PFDoDA)	ND U	4.0	1.3	1	08/08/19 19:46	8/6/19	
Perfluorotridecanoic acid (PFTrDA)	ND U	4.0	1.3	1	08/08/19 19:46	8/6/19	
Perfluorotetradecanoic acid (PFTeDA)	ND U	4.0	2.0	1	08/08/19 19:46	8/6/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	ND U	4.0	0.52	1	08/08/19 19:46	8/6/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	ND U	4.0	1.4	1	08/08/19 19:46	8/6/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	ND U	4.0	0.50	1	08/08/19 19:46	8/6/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**1.3 J**	4.0	0.55	1	08/08/19 19:46	8/6/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ND U	4.0	0.15	1	08/08/19 19:46	8/6/19	

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	07/29/19 13:15
Sample Matrix:	Water	**Date Received:**	07/29/19 17:50
Sample Name:	EB-072919	**Units:**	ng/L
Lab Code:	R1907111-002	**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	67	20 - 109	08/08/19 19:46	
18O2-PFHxS	121	26 - 122	08/08/19 19:46	
13C4-PFOS	99	25 - 121	08/08/19 19:46	
13C4-PFBA	107	27 - 124	08/08/19 19:46	
13C5-PFPeA	95	27 - 138	08/08/19 19:46	
13C2-PFHxA	104	28 - 132	08/08/19 19:46	
13C4-PFHpA	124	19 - 139	08/08/19 19:46	
13C4-PFOA	91	22 - 130	08/08/19 19:46	
13C5-PFNA	115	20 - 127	08/08/19 19:46	
13C2-PFDA	111	24 - 125	08/08/19 19:46	
13C2-PFUnDA	72	22 - 125	08/08/19 19:46	
13C2-PFDoDA	87	19 - 122	08/08/19 19:46	
13C2-PFTeDA	90	13 - 124	08/08/19 19:46	
13C8-FOSA	73	18 - 109	08/08/19 19:46	
D3-MeFOSAA	81	9 - 123	08/08/19 19:46	
D5-EtFOSAA	103	12 - 126	08/08/19 19:46	
13C2-6:2 FTS	113	10 - 226	08/08/19 19:46	
13C2-8:2 FTS	98	10 - 202	08/08/19 19:46	

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	07/29/19 12:08
Sample Matrix:	Water	**Date Received:**	07/29/19 17:50
Sample Name:	ITT-SBW-2-072919	**Units:**	ng/L
Lab Code:	R1907111-003	**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)	**0.87**	**J**	4.4	0.28	1	08/08/19 19:57	8/6/19	
Perfluorohexane sulfonic acid (PFHxS)	ND	U	4.4	1.3	1	08/08/19 19:57	8/6/19	
Perfluoroheptane sulfonic acid (PFHpS)	ND	U	4.4	0.44	1	08/08/19 19:57	8/6/19	
Perfluorooctane sulfonic acid (PFOS)	**8.6**		1.8	0.44	1	08/08/19 19:57	8/6/19	
Perfluorodecane sulfonic acid (PFDS)	ND	U	4.4	0.30	1	08/08/19 19:57	8/6/19	*
Perfluoroalkane Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	**16**		4.4	0.40	1	08/08/19 19:57	8/6/19	
Perfluoropentanoic acid (PFPeA)	**7.0**		4.4	1.7	1	08/08/19 19:57	8/6/19	
Perfluorohexanoic acid (PFHxA)	ND	U	9.2	8.8	1	08/08/19 19:57	8/6/19	
Perfluoroheptanoic acid (PFHpA)	**3.8**	**J**	4.4	0.63	1	08/08/19 19:57	8/6/19	
Perfluorooctanoic acid (PFOA)	**8.3**		1.8	0.35	1	08/08/19 19:57	8/6/19	
Perfluorononanoic acid (PFNA)	ND	U	4.4	1.1	1	08/08/19 19:57	8/6/19	
Perfluorodecanoic acid (PFDA)	ND	U	4.4	1.2	1	08/08/19 19:57	8/6/19	
Perfluoroundecanoic acid (PFUnDA)	ND	U	4.4	1.5	1	08/08/19 19:57	8/6/19	
Perfluorododecanoic acid (PFDoDA)	ND	U	4.4	1.3	1	08/08/19 19:57	8/6/19	
Perfluorotridecanoic acid (PFTrDA)	ND	U	4.4	1.3	1	08/08/19 19:57	8/6/19	
Perfluorotetradecanoic acid (PFTeDA)	ND	U	4.4	2.0	1	08/08/19 19:57	8/6/19	
Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	**5.5**		4.4	0.52	1	08/08/19 19:57	8/6/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	**1.7**	**J**	4.4	1.4	1	08/08/19 19:57	8/6/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	ND	U	4.4	0.50	1	08/08/19 19:57	8/6/19	
(n:2) Fluorotelomer Sulfonic Acids								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**0.76**	**J**	4.4	0.55	1	08/08/19 19:57	8/6/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ND	U	4.4	0.15	1	08/08/19 19:57	8/6/19	

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	07/29/19 12:08
Sample Matrix:	Water	**Date Received:**	07/29/19 17:50
Sample Name:	ITT-SBW-2-072919	**Units:**	ng/L
Lab Code:	R1907111-003	**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	81	20 - 109	08/08/19 19:57	
18O2-PFHxS	83	26 - 122	08/08/19 19:57	
13C4-PFOS	88	25 - 121	08/08/19 19:57	
13C4-PFBA	132	27 - 124	08/08/19 19:57	*
13C5-PFPeA	127	27 - 138	08/08/19 19:57	
13C2-PFHxA	102	28 - 132	08/08/19 19:57	
13C4-PFHpA	87	19 - 139	08/08/19 19:57	
13C4-PFOA	92	22 - 130	08/08/19 19:57	
13C5-PFNA	107	20 - 127	08/08/19 19:57	
13C2-PFDA	84	24 - 125	08/08/19 19:57	
13C2-PFUnDA	77	22 - 125	08/08/19 19:57	
13C2-PFDoDA	100	19 - 122	08/08/19 19:57	
13C2-PFTeDA	114	13 - 124	08/08/19 19:57	
13C8-FOSA	64	18 - 109	08/08/19 19:57	
D3-MeFOSAA	71	9 - 123	08/08/19 19:57	
D5-EtFOSAA	96	12 - 126	08/08/19 19:57	
13C2-6:2 FTS	133	10 - 226	08/08/19 19:57	
13C2-8:2 FTS	111	10 - 202	08/08/19 19:57	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	07/29/19 12:08
Sample Matrix:	Water	**Date Received:**	07/29/19 17:50
Sample Name:	ITT-SBW-2-072919	**Units:**	ng/L
Lab Code:	R1907111-003	**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 Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**17**	4.4	0.40	1	08/13/19 05:10	8/6/19	
Perfluorotridecanoic acid (PFTrDA)	ND U	4.4	1.3	1	08/13/19 05:10	8/6/19	
Perfluorotetradecanoic acid (PFTeDA)	ND U	4.4	2.0	1	08/13/19 05:10	8/6/19	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C4-PFBA	81	27 - 124	08/13/19 05:10	
13C2-PFTeDA	99	13 - 124	08/13/19 05:10	

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	07/29/19
Sample Matrix:	Water	**Date Received:**	07/29/19 17:50
Sample Name:	DUP-01-072919	**Units:**	ng/L
Lab Code:	R1907111-004	**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)	**0.74**	**J**	4.0	0.28	1	08/08/19 20:07	8/6/19	
Perfluorohexane sulfonic acid (PFHxS)	ND	U	4.0	1.3	1	08/08/19 20:07	8/6/19	
Perfluoroheptane sulfonic acid (PFHpS)	ND	U	4.0	0.44	1	08/08/19 20:07	8/6/19	
Perfluorooctane sulfonic acid (PFOS)	**7.5**		1.6	0.44	1	08/08/19 20:07	8/6/19	
Perfluorodecane sulfonic acid (PFDS)	ND	U	4.0	0.30	1	08/08/19 20:07	8/6/19	*
Perfluoroalkane Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	**15**		4.0	0.40	1	08/08/19 20:07	8/6/19	
Perfluoropentanoic acid (PFPeA)	**7.8**		4.0	1.7	1	08/08/19 20:07	8/6/19	
Perfluorohexanoic acid (PFHxA)	ND	U	9.2	8.8	1	08/08/19 20:07	8/6/19	
Perfluoroheptanoic acid (PFHpA)	**3.5**	**J**	4.0	0.63	1	08/08/19 20:07	8/6/19	
Perfluorooctanoic acid (PFOA)	**7.4**		1.6	0.35	1	08/08/19 20:07	8/6/19	
Perfluorononanoic acid (PFNA)	**1.2**	**J**	4.0	1.1	1	08/08/19 20:07	8/6/19	
Perfluorodecanoic acid (PFDA)	**1.3**	**J**	4.0	1.2	1	08/08/19 20:07	8/6/19	
Perfluoroundecanoic acid (PFUnDA)	ND	U	4.0	1.5	1	08/08/19 20:07	8/6/19	
Perfluorododecanoic acid (PFDoDA)	ND	U	4.0	1.3	1	08/08/19 20:07	8/6/19	
Perfluorotridecanoic acid (PFTrDA)	ND	U	4.0	1.3	1	08/08/19 20:07	8/6/19	
Perfluorotetradecanoic acid (PFTeDA)	ND	U	4.0	2.0	1	08/08/19 20:07	8/6/19	
Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	**6.9**		4.0	0.52	1	08/08/19 20:07	8/6/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	**3.3**	**J**	4.0	1.4	1	08/08/19 20:07	8/6/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	**2.3**	**J**	4.0	0.50	1	08/08/19 20:07	8/6/19	
(n:2) Fluorotelomer Sulfonic Acids								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**1.1**	**J**	4.0	0.55	1	08/08/19 20:07	8/6/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ND	U	4.0	0.15	1	08/08/19 20:07	8/6/19	

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	07/29/19
Sample Matrix:	Water	**Date Received:**	07/29/19 17:50
Sample Name:	DUP-01-072919	**Units:**	ng/L
Lab Code:	R1907111-004	**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	66	20 - 109	08/08/19 20:07	
18O2-PFHxS	102	26 - 122	08/08/19 20:07	
13C4-PFOS	80	25 - 121	08/08/19 20:07	
13C4-PFBA	121	27 - 124	08/08/19 20:07	
13C5-PFPeA	104	27 - 138	08/08/19 20:07	
13C2-PFHxA	113	28 - 132	08/08/19 20:07	
13C4-PFHpA	97	19 - 139	08/08/19 20:07	
13C4-PFOA	85	22 - 130	08/08/19 20:07	
13C5-PFNA	104	20 - 127	08/08/19 20:07	
13C2-PFDA	103	24 - 125	08/08/19 20:07	
13C2-PFUnDA	63	22 - 125	08/08/19 20:07	
13C2-PFDoDA	97	19 - 122	08/08/19 20:07	
13C2-PFTeDA	100	13 - 124	08/08/19 20:07	
13C8-FOSA	51	18 - 109	08/08/19 20:07	
D3-MeFOSAA	65	9 - 123	08/08/19 20:07	
D5-EtFOSAA	93	12 - 126	08/08/19 20:07	
13C2-6:2 FTS	110	10 - 226	08/08/19 20:07	
13C2-8:2 FTS	87	10 - 202	08/08/19 20:07	

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	07/29/19 14:00
Sample Matrix:	Water	**Date Received:**	07/29/19 17:50
Sample Name:	ITT-IBW-20-072919	**Units:**	ng/L
Lab Code:	R1907111-005	**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)	**1.2 J**	4.2	0.28	1	08/08/19 20:17	8/6/19	
Perfluorohexane sulfonic acid (PFHxS)	**2.2 J**	4.2	1.3	1	08/08/19 20:17	8/6/19	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	4.2	0.44	1	08/08/19 20:17	8/6/19	
Perfluorooctane sulfonic acid (PFOS)	**0.63 J**	1.7	0.44	1	08/08/19 20:17	8/6/19	
Perfluorodecane sulfonic acid (PFDS)	ND U	4.2	0.30	1	08/08/19 20:17	8/6/19	*
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**27**	4.2	0.40	1	08/08/19 20:17	8/6/19	
Perfluoropentanoic acid (PFPeA)	**11**	4.2	1.7	1	08/08/19 20:17	8/6/19	
Perfluorohexanoic acid (PFHxA)	ND U	9.2	8.8	1	08/08/19 20:17	8/6/19	
Perfluoroheptanoic acid (PFHpA)	**2.8 J**	4.2	0.63	1	08/08/19 20:17	8/6/19	
Perfluorooctanoic acid (PFOA)	**2.6**	1.7	0.35	1	08/08/19 20:17	8/6/19	
Perfluorononanoic acid (PFNA)	ND U	4.2	1.1	1	08/08/19 20:17	8/6/19	
Perfluorodecanoic acid (PFDA)	ND U	4.2	1.2	1	08/08/19 20:17	8/6/19	
Perfluoroundecanoic acid (PFUnDA)	ND U	4.2	1.5	1	08/08/19 20:17	8/6/19	
Perfluorododecanoic acid (PFDoDA)	ND U	4.2	1.3	1	08/08/19 20:17	8/6/19	
Perfluorotridecanoic acid (PFTrDA)	ND U	4.2	1.3	1	08/08/19 20:17	8/6/19	
Perfluorotetradecanoic acid (PFTeDA)	ND U	4.2	2.0	1	08/08/19 20:17	8/6/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	ND U	4.2	0.52	1	08/08/19 20:17	8/6/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	ND U	4.2	1.4	1	08/08/19 20:17	8/6/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	ND U	4.2	0.50	1	08/08/19 20:17	8/6/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**1.3 J**	4.2	0.55	1	08/08/19 20:17	8/6/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ND U	4.2	0.15	1	08/08/19 20:17	8/6/19	

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	07/29/19 14:00
Sample Matrix:	Water	**Date Received:**	07/29/19 17:50
Sample Name:	ITT-IBW-20-072919	**Units:**	ng/L
Lab Code:	R1907111-005	**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	68	20 - 109	08/08/19 20:17	
18O2-PFHxS	79	26 - 122	08/08/19 20:17	
13C4-PFOS	85	25 - 121	08/08/19 20:17	
13C4-PFBA	102	27 - 124	08/08/19 20:17	
13C5-PFPeA	91	27 - 138	08/08/19 20:17	
13C2-PFHxA	87	28 - 132	08/08/19 20:17	
13C4-PFHpA	72	19 - 139	08/08/19 20:17	
13C4-PFOA	86	22 - 130	08/08/19 20:17	
13C5-PFNA	99	20 - 127	08/08/19 20:17	
13C2-PFDA	73	24 - 125	08/08/19 20:17	
13C2-PFUnDA	68	22 - 125	08/08/19 20:17	
13C2-PFDoDA	68	19 - 122	08/08/19 20:17	
13C2-PFTeDA	81	13 - 124	08/08/19 20:17	
13C8-FOSA	66	18 - 109	08/08/19 20:17	
D3-MeFOSAA	53	9 - 123	08/08/19 20:17	
D5-EtFOSAA	71	12 - 126	08/08/19 20:17	
13C2-6:2 FTS	92	10 - 226	08/08/19 20:17	
13C2-8:2 FTS	93	10 - 202	08/08/19 20:17	

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/L
Lab Code:	KQ1910949-06	**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)	ND U	5.0	0.28	1	08/08/19 16:17	8/6/19	
Perfluorohexane sulfonic acid (PFHxS)	ND U	5.0	1.3	1	08/08/19 16:17	8/6/19	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	5.0	0.44	1	08/08/19 16:17	8/6/19	
Perfluorooctane sulfonic acid (PFOS)	ND U	2.0	0.44	1	08/08/19 16:17	8/6/19	
Perfluorodecane sulfonic acid (PFDS)	ND U	5.0	0.30	1	08/08/19 16:17	8/6/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**0.40 J**	5.0	0.40	1	08/08/19 16:17	8/6/19	
Perfluoropentanoic acid (PFPeA)	ND U	5.0	1.7	1	08/08/19 16:17	8/6/19	
Perfluorohexanoic acid (PFHxA)	ND U	10	8.8	1	08/08/19 16:17	8/6/19	
Perfluoroheptanoic acid (PFHpA)	ND U	5.0	0.63	1	08/08/19 16:17	8/6/19	
Perfluorooctanoic acid (PFOA)	**0.49 J**	2.0	0.35	1	08/08/19 16:17	8/6/19	
Perfluorononanoic acid (PFNA)	ND U	5.0	1.1	1	08/08/19 16:17	8/6/19	
Perfluorodecanoic acid (PFDA)	ND U	5.0	1.2	1	08/08/19 16:17	8/6/19	
Perfluoroundecanoic acid (PFUnDA)	ND U	5.0	1.5	1	08/08/19 16:17	8/6/19	
Perfluorododecanoic acid (PFDoDA)	ND U	5.0	1.3	1	08/08/19 16:17	8/6/19	
Perfluorotridecanoic acid (PFTrDA)	ND U	5.0	1.3	1	08/08/19 16:17	8/6/19	
Perfluorotetradecanoic acid (PFTeDA)	ND U	5.0	2.0	1	08/08/19 16:17	8/6/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	ND U	5.0	0.52	1	08/08/19 16:17	8/6/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	ND U	5.0	1.4	1	08/08/19 16:17	8/6/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	ND U	5.0	0.50	1	08/08/19 16:17	8/6/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**1.5 J**	5.0	0.55	1	08/08/19 16:17	8/6/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ND U	5.0	0.15	1	08/08/19 16:17	8/6/19	

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/L
Lab Code:	KQ1910949-06	**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	08/08/19 16:17	
18O2-PFHxS	71	26 - 122	08/08/19 16:17	
13C4-PFOS	79	25 - 121	08/08/19 16:17	
13C4-PFBA	69	27 - 124	08/08/19 16:17	
13C5-PFPeA	69	27 - 138	08/08/19 16:17	
13C2-PFHxA	72	28 - 132	08/08/19 16:17	
13C4-PFHpA	78	19 - 139	08/08/19 16:17	
13C4-PFOA	72	22 - 130	08/08/19 16:17	
13C5-PFNA	83	20 - 127	08/08/19 16:17	
13C2-PFDA	72	24 - 125	08/08/19 16:17	
13C2-PFUnDA	65	22 - 125	08/08/19 16:17	
13C2-PFDoDA	57	19 - 122	08/08/19 16:17	
13C2-PFTeDA	65	13 - 124	08/08/19 16:17	
13C8-FOSA	73	18 - 109	08/08/19 16:17	
D3-MeFOSAA	75	9 - 123	08/08/19 16:17	
D5-EtFOSAA	69	12 - 126	08/08/19 16:17	
13C2-6:2 FTS	83	10 - 226	08/08/19 16:17	
13C2-8:2 FTS	82	10 - 202	08/08/19 16:17	

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/L
Lab Code:	KQ1911251-06	**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)	ND U	5.0	0.28	1	08/12/19 20:49	8/12/19	
Perfluorohexane sulfonic acid (PFHxS)	ND U	5.0	1.3	1	08/12/19 20:49	8/12/19	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	5.0	0.44	1	08/12/19 20:49	8/12/19	
Perfluorooctane sulfonic acid (PFOS)	ND U	2.0	0.44	1	08/12/19 20:49	8/12/19	
Perfluorodecane sulfonic acid (PFDS)	ND U	5.0	0.30	1	08/12/19 20:49	8/12/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	ND U	5.0	0.40	1	08/12/19 20:49	8/12/19	
Perfluoropentanoic acid (PFPeA)	ND U	5.0	1.7	1	08/12/19 20:49	8/12/19	
Perfluorohexanoic acid (PFHxA)	ND U	10	8.8	1	08/12/19 20:49	8/12/19	
Perfluoroheptanoic acid (PFHpA)	ND U	5.0	0.63	1	08/12/19 20:49	8/12/19	
Perfluorooctanoic acid (PFOA)	ND U	2.0	0.35	1	08/12/19 20:49	8/12/19	
Perfluorononanoic acid (PFNA)	ND U	5.0	1.1	1	08/12/19 20:49	8/12/19	
Perfluorodecanoic acid (PFDA)	ND U	5.0	1.2	1	08/12/19 20:49	8/12/19	
Perfluoroundecanoic acid (PFUnDA)	ND U	5.0	1.5	1	08/12/19 20:49	8/12/19	
Perfluorododecanoic acid (PFDoDA)	ND U	5.0	1.3	1	08/12/19 20:49	8/12/19	
Perfluorotridecanoic acid (PFTrDA)	ND U	5.0	1.3	1	08/12/19 20:49	8/12/19	
Perfluorotetradecanoic acid (PFTeDA)	ND U	5.0	2.0	1	08/12/19 20:49	8/12/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	ND U	5.0	0.52	1	08/12/19 20:49	8/12/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	ND U	5.0	1.4	1	08/12/19 20:49	8/12/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	ND U	5.0	0.50	1	08/12/19 20:49	8/12/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	ND U	5.0	0.55	1	08/12/19 20:49	8/12/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ND U	5.0	0.15	1	08/12/19 20:49	8/12/19	

Analytical Report

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/L
Lab Code:	KQ1911251-06	**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	46	20 - 109	08/12/19 20:49	
18O2-PFHxS	95	26 - 122	08/12/19 20:49	
13C4-PFOS	78	25 - 121	08/12/19 20:49	
13C4-PFBA	77	27 - 124	08/12/19 20:49	
13C5-PFPeA	62	27 - 138	08/12/19 20:49	
13C2-PFHxA	85	28 - 132	08/12/19 20:49	
13C4-PFHpA	97	19 - 139	08/12/19 20:49	
13C4-PFOA	91	22 - 130	08/12/19 20:49	
13C5-PFNA	94	20 - 127	08/12/19 20:49	
13C2-PFDA	95	24 - 125	08/12/19 20:49	
13C2-PFUnDA	92	22 - 125	08/12/19 20:49	
13C2-PFDoDA	83	19 - 122	08/12/19 20:49	
13C2-PFTeDA	81	13 - 124	08/12/19 20:49	
13C8-FOSA	54	18 - 109	08/12/19 20:49	
D3-MeFOSAA	88	9 - 123	08/12/19 20:49	
D5-EtFOSAA	79	12 - 126	08/12/19 20:49	
13C2-6:2 FTS	93	10 - 226	08/12/19 20:49	
13C2-8:2 FTS	106	10 - 202	08/12/19 20:49	

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016
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	ITT-SBW-4-072919 R1907111-001	EB-072919 R1907111-002	ITT-SBW-2-072919 R1907111-003
13C3-PFBS	20-109	53	67	81
18O2-PFHxS	26-122	93	121	83
13C4-PFOS	25-121	89	99	88
13C4-PFBA	27-124	97	107	132*
13C5-PFPeA	27-138	68	95	127
13C2-PFHxA	28-132	93	104	102
13C4-PFHpA	19-139	88	124	87
13C4-PFOA	22-130	94	91	92
13C5-PFNA	20-127	106	115	107
13C2-PFDA	24-125	81	111	84
13C2-PFUnDA	22-125	89	72	77
13C2-PFDoDA	19-122	75	87	100
13C2-PFTeDA	13-124	74	90	114
13C8-FOSA	18-109	70	73	64
D3-MeFOSAA	9-123	88	81	71
D5-EtFOSAA	12-126	79	103	96
13C2-6:2 FTS	10-226	121	113	133
13C2-8:2 FTS	10-202	104	98	111

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

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016
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	ITT-SBW-2-072919 R1907111-003	DUP-01-072919 R1907111-004	ITT-IBW-20-072919 R1907111-005
13C3-PFBS	20-109		66	68
18O2-PFHxS	26-122		102	79
13C4-PFOS	25-121		80	85
13C4-PFBA	27-124	81	121	102
13C5-PFPeA	27-138		104	91
13C2-PFHxA	28-132		113	87
13C4-PFHpA	19-139		97	72
13C4-PFOA	22-130		85	86
13C5-PFNA	20-127		104	99
13C2-PFDA	24-125		103	73
13C2-PFUnDA	22-125		63	68
13C2-PFDoDA	19-122		97	68
13C2-PFTeDA	13-124	99	100	81
13C8-FOSA	18-109		51	66
D3-MeFOSAA	9-123		65	53
D5-EtFOSAA	12-126		93	71
13C2-6:2 FTS	10-226		110	92
13C2-8:2 FTS	10-202		87	93

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

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016
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 KQ1910949-06	Method Blank KQ1911251-06	Lab Control Sample KQ1910949-05
13C3-PFBS	20-109	50	46	58
18O2-PFHxS	26-122	71	95	105
13C4-PFOS	25-121	79	78	90
13C4-PFBA	27-124	69	77	85
13C5-PFPeA	27-138	69	62	76
13C2-PFHxA	28-132	72	85	92
13C4-PFHpA	19-139	78	97	104
13C4-PFOA	22-130	72	91	87
13C5-PFNA	20-127	83	94	113
13C2-PFDA	24-125	72	95	98
13C2-PFUnDA	22-125	65	92	67
13C2-PFDoDA	19-122	57	83	79
13C2-PFTeDA	13-124	65	81	80
13C8-FOSA	18-109	73	54	70
D3-MeFOSAA	9-123	75	88	74
D5-EtFOSAA	12-126	69	79	95
13C2-6:2 FTS	10-226	83	93	97
13C2-8:2 FTS	10-202	82	106	72

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

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016
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	Lab Control Sample KQ1911251-05	ITT-SBW-4-072919 KQ1911251-03	ITT-SBW-4-072919 KQ1911251-04
13C3-PFBS	20-109	48	57	67
18O2-PFHxS	26-122	87	93	102
13C4-PFOS	25-121	94	102	109
13C4-PFBA	27-124	86	110	132*
13C5-PFPeA	27-138	64	77	95
13C2-PFHxA	28-132	100	113	142*
13C4-PFHpA	19-139	87	84	97
13C4-PFOA	22-130	103	100	109
13C5-PFNA	20-127	102	109	128*
13C2-PFDA	24-125	111	98	114
13C2-PFUnDA	22-125	87	98	97
13C2-PFDoDA	19-122	99	87	109
13C2-PFTeDA	13-124	82	82	106
13C8-FOSA	18-109	50	76	66
D3-MeFOSAA	9-123	92	99	86
D5-EtFOSAA	12-126	99	84	97
13C2-6:2 FTS	10-226	98	113	134
13C2-8:2 FTS	10-202	98	113	129

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

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: O'Brien & Gere Engineers, Incorporated **Service Request:**R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016 **Date Analyzed:**08/08/19 15:56

Internal Standard Area and RT SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

File ID: J:\LCMS06\Data\190807_b8\190807_141 **Lab Code:**KQ1911078-01
Instrument ID: K-LCMS-06 **Analysis Lot:**646328
Analysis Method: PFC/537M **Signal ID:**1

		13C7-PFUnDA	
		Area	**RT**
	Result ==>	3,172,618	5.126
	Upper Limit ==>	6,345,236	6.13
	Lower Limit ==>	1,586,309	4.13
Associated Analyses			
Continuing Calibration Blank	KQ1911078-02	2903351	5.122
Method Blank	KQ1910949-06	5185941	5.128
Lab Control Sample	KQ1910949-05	4411598	5.127
EB-072919	R1907111-002	3247823	5.125
ITT-SBW-2-072919	R1907111-003	3181016	5.120
DUP-01-072919	R1907111-004	3735024	5.122
ITT-IBW-20-072919	R1907111-005	3005329	5.120

Client: O'Brien & Gere Engineers, Incorporated **Service Request:**R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016 **Date Analyzed:**08/12/19 20:28

Internal Standard Area and RT SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

File ID: J:\LCMS06\Data\190812_b1\190812_007 **Lab Code:**KQ1911320-01
Instrument ID: K-LCMS-06 **Analysis Lot:**646922
Analysis Method: PFC/537M **Signal ID:**1

		13C7-PFUnDA	
		Area	**RT**
	Result ==>	3,877,746	5.152
	Upper Limit ==>	7,755,492	6.15
	Lower Limit ==>	1,938,873	4.15
Associated Analyses			
Continuing Calibration Blank	KQ1911320-02	4037034	5.150
Method Blank	KQ1911251-06	6837841	5.140
Lab Control Sample	KQ1911251-05	6161415	5.139
ITT-SBW-4-072919	R1907111-001	4971715	5.129
ITT-SBW-4-072919MS	KQ1911251-03	4432809	5.128
ITT-SBW-4-072919DMS	KQ1911251-04	3579159	5.132

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: O'Brien & Gere Engineers, Incorporated **Service Request:**R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016 **Date Analyzed:**08/13/19 04:39

Internal Standard Area and RT SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

File ID: J:\LCMS06\Data\190812_b4\190812_054 **Lab Code:**KQ1911327-01
Instrument ID: K-LCMS-06 **Analysis Lot:**646926
Analysis Method: PFC/537M **Signal ID:**1

		13C7-PFUnDA	
		Area	**RT**
	Result ==>	3,817,208	5.124
	Upper Limit ==>	7,634,416	6.12
	Lower Limit ==>	1,908,604	4.12

Associated Analyses

Continuing Calibration Blank	KQ1911327-02	5081952	5.126
ITT-SBW-2-072919	R1907111-003	5881508	5.128

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Collected:**	07/29/19
Sample Matrix:	Water	**Date Received:**	07/29/19
		Date Analyzed:	08/12/19
		Date Extracted:	08/12/19

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

Sample Name:	ITT-SBW-4-072919	**Units:**	ng/L
Lab Code:	R1907111-001	**Basis:**	NA
Analysis Method:	PFC/537M		
Prep Method:	EPA 3535A		

		Matrix Spike			Duplicate Matrix Spike					
		KQ1911251-03			KQ1911251-04					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perfluorobutane sulfonic acid (PFBS)	1.0 J	30.1	23.7	123	30.9	23.3	128	61-140	3	30
Perfluorohexane sulfonic acid (PFHxS)	1.6 J	22.9	24.3	87	25.2	23.9	98	69-144	10	30
Perfluoroheptane sulfonic acid (PFHpS)	ND U	30.1	25.4	118	31.2	25.0	125	62-178	4	30
Perfluorooctane sulfonic acid (PFOS)	0.53 J	23.1	24.8	91	25.1	24.4	101	71-139	8	30
Perfluorodecane sulfonic acid (PFDS)	ND U	27.2	25.7	106	21.2	25.3	84	69-146	25	30
Perfluorobutanoic acid (PFBA)	27	53.4	26.7	99	54.2	26.2	104	51-157	2	30
Perfluoropentanoic acid (PFPeA)	12	42.5	26.7	115	41.4	26.2	113	67-127	3	30
Perfluorohexanoic acid (PFHxA)	ND U	31.8	26.7	119	30.6	26.2	117	71-138	4	30
Perfluoroheptanoic acid (PFHpA)	2.8 J	27.4	26.7	92	28.5	26.2	98	72-133	4	30
Perfluorooctanoic acid (PFOA)	2.5	30.1	26.7	104	31.7	26.2	111	74-146	5	30
Perfluorononanoic acid (PFNA)	ND U	24.0	26.7	90	25.2	26.2	96	69-148	5	30
Perfluorodecanoic acid (PFDA)	ND U	23.0	26.7	86	24.0	26.2	92	73-136	4	30
Perfluoroundecanoic acid (PFUnDA)	ND U	24.8	26.7	93	24.5	26.2	93	76-134	1	30
Perfluorododecanoic acid (PFDoDA)	ND U	27.7	26.7	104	27.0	26.2	103	71-138	2	30
Perfluorotridecanoic acid (PFTrDA)	ND U	30.0	26.7	113	27.2	26.2	104	65-140	10	30
Perfluorotetradecanoic acid (PFTeDA)	ND U	31.5	26.7	118	29.5	26.2	112	63-139	7	30
Perfluorooctane sulfonamide (FOSA)	ND U	25.0	26.7	94	26.0	26.2	99	64-135	4	30
N-Methyl perfluorooctane sulfonamidoacetic acid	ND U	26.0	26.7	97	34.0	26.2	130	69-151	27	30
N-Ethyl perfluorooctane sulfonamidoacetic acid	ND U	23.5	26.7	88	27.9	26.2	106	58-155	17	30
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	ND U	30.7	25.4	121	30.1	24.9	121	71-142	2	30
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ND U	25.8	25.6	101	21.9	25.2	87	69-137	16	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:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Analyzed:**	08/08/19
Sample Matrix:	Water	**Date Extracted:**	08/06/19

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:	646328

Lab Control Sample
KQ1910949-05

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	36.2	30.4	119	71-142
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	32.7	30.7	106	69-137
N-Ethyl perfluorooctane sulfonamidoacetic acid	32.2	32.0	101	58-155
N-Methyl perfluorooctane sulfonamidoacetic acid	32.8	32.0	103	69-151
Perfluorobutane sulfonic acid (PFBS)	34.9	28.4	123	61-140
Perfluorobutanoic acid (PFBA)	32.1	32.0	100	51-157
Perfluorodecane sulfonic acid (PFDS)	34.0	30.9	110	69-146
Perfluorodecanoic acid (PFDA)	29.4	32.0	92	73-136
Perfluorododecanoic acid (PFDoDA)	35.6	32.0	111	71-138
Perfluoroheptane sulfonic acid (PFHpS)	31.9	30.5	105	62-178
Perfluoroheptanoic acid (PFHpA)	27.9	32.0	87	72-133
Perfluorohexane sulfonic acid (PFHxS)	23.4	29.2	80	69-144
Perfluorohexanoic acid (PFHxA)	29.7	32.0	93	71-138
Perfluorononanoic acid (PFNA)	30.8	32.0	96	69-148
Perfluorooctane sulfonamide (FOSA)	32.9	32.0	103	64-135
Perfluorooctane sulfonic acid (PFOS)	28.6	29.7	96	71-139
Perfluorooctanoic acid (PFOA)	37.5	32.0	117	74-146
Perfluoropentanoic acid (PFPeA)	32.8	32.0	102	67-127
Perfluorotetradecanoic acid (PFTeDA)	33.0	32.0	103	63-139
Perfluorotridecanoic acid (PFTrDA)	32.8	32.0	102	65-140
Perfluoroundecanoic acid (PFUnDA)	35.4	32.0	111	76-134

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Analyzed:**	08/12/19
Sample Matrix:	Water	**Date Extracted:**	08/12/19

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:	646922

Lab Control Sample
KQ1911251-05

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	38.0	30.4	125	71-142
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	38.5	30.7	125	69-137
N-Ethyl perfluorooctane sulfonamidoacetic acid	26.2	32.0	82	58-155
N-Methyl perfluorooctane sulfonamidoacetic acid	33.9	32.0	106	69-151
Perfluorobutane sulfonic acid (PFBS)	35.1	28.4	124	61-140
Perfluorobutanoic acid (PFBA)	32.5	32.0	101	51-157
Perfluorodecane sulfonic acid (PFDS)	33.6	30.9	109	69-146
Perfluorodecanoic acid (PFDA)	27.7	32.0	87	73-136
Perfluorododecanoic acid (PFDoDA)	32.1	32.0	100	71-138
Perfluoroheptane sulfonic acid (PFHpS)	31.2	30.5	102	62-178
Perfluoroheptanoic acid (PFHpA)	33.5	32.0	105	72-133
Perfluorohexane sulfonic acid (PFHxS)	27.5	29.2	94	69-144
Perfluorohexanoic acid (PFHxA)	29.3	32.0	92	71-138
Perfluorononanoic acid (PFNA)	30.2	32.0	94	69-148
Perfluorooctane sulfonamide (FOSA)	33.5	32.0	105	64-135
Perfluorooctane sulfonic acid (PFOS)	26.1	29.7	88	71-139
Perfluorooctanoic acid (PFOA)	31.7	32.0	99	74-146
Perfluoropentanoic acid (PFPeA)	38.3	32.0	120	67-127
Perfluorotetradecanoic acid (PFTeDA)	35.1	32.0	110	63-139
Perfluorotridecanoic acid (PFTrDA)	40.7	32.0	127	65-140
Perfluoroundecanoic acid (PFUnDA)	29.8	32.0	93	76-134

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Analyzed:**	08/08/19 16:17
Sample Matrix:	Water	**Date Extracted:**	08/06/19

Method Blank Summary

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-LCMS-06
Lab Code:	KQ1910949-06	**File ID:**	J:\LCMS06\Data\190807_b8\190807_143
Analysis Method:	PFC/537M	**Analysis Lot:**	646328,646926
Prep Method:	EPA 3535A	**Extraction Lot:**	341924

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1910949-05	J:\LCMS06\Data\190807_b8\190807_144	08/08/19 16:28
EB-072919	R1907111-002	J:\LCMS06\Data\190807_b8\190807_163	08/08/19 19:46
ITT-SBW-2-072919	R1907111-003	J:\LCMS06\Data\190807_b8\190807_164	08/08/19 19:57
DUP-01-072919	R1907111-004	J:\LCMS06\Data\190807_b8\190807_165	08/08/19 20:07
ITT-IBW-20-072919	R1907111-005	J:\LCMS06\Data\190807_b8\190807_166	08/08/19 20:17
ITT-SBW-2-072919	R1907111-003	J:\LCMS06\Data\190812_b4\190812_057	08/13/19 05:10

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Analyzed:**	08/12/19 20:49
Sample Matrix:	Water	**Date Extracted:**	08/12/19

Method Blank Summary

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-LCMS-06
Lab Code:	KQ1911251-06	**File ID:**	J:\LCMS06\Data\190812_b1\190812_009
Analysis Method:	PFC/537M	**Analysis Lot:**	646922
Prep Method:	EPA 3535A	**Extraction Lot:**	342310

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1911251-05	J:\LCMS06\Data\190812_b1\190812_010	08/12/19 20:59
ITT-SBW-4-072919	R1907111-001	J:\LCMS06\Data\190812_b1\190812_018	08/12/19 22:23
ITT-SBW-4-072919MS	KQ1911251-03	J:\LCMS06\Data\190812_b1\190812_019	08/12/19 22:33
ITT-SBW-4-072919DMS	KQ1911251-04	J:\LCMS06\Data\190812_b1\190812_020	08/12/19 22:44

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Analyzed:**	08/08/19 16:28
Sample Matrix:	Water	**Date Extracted:**	08/06/19

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:	KQ1910949-05	**File ID:**	J:\LCMS06\Data\190807_b8\190807_144
Analysis Method:	PFC/537M	**Analysis Lot:**	646328,646926
Prep Method:	EPA 3535A	**Extraction Lot:**	341924

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1910949-06	J:\LCMS06\Data\190807_b8\190807_143	08/08/19 16:17
EB-072919	R1907111-002	J:\LCMS06\Data\190807_b8\190807_163	08/08/19 19:46
ITT-SBW-2-072919	R1907111-003	J:\LCMS06\Data\190807_b8\190807_164	08/08/19 19:57
DUP-01-072919	R1907111-004	J:\LCMS06\Data\190807_b8\190807_165	08/08/19 20:07
ITT-IBW-20-072919	R1907111-005	J:\LCMS06\Data\190807_b8\190807_166	08/08/19 20:17
ITT-SBW-2-072919	R1907111-003	J:\LCMS06\Data\190812_b4\190812_057	08/13/19 05:10

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Analyzed:**	08/12/19 20:59
Sample Matrix:	Water	**Date Extracted:**	08/12/19

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:	KQ1911251-05	**File ID:**	J:\LCMS06\Data\190812_b1\190812_010
Analysis Method:	PFC/537M	**Analysis Lot:**	646922
Prep Method:	EPA 3535A	**Extraction Lot:**	342310

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1911251-06	J:\LCMS06\Data\190812_b1\190812_009	08/12/19 20:49
ITT-SBW-4-072919	R1907111-001	J:\LCMS06\Data\190812_b1\190812_018	08/12/19 22:23
ITT-SBW-4-072919MS	KQ1911251-03	J:\LCMS06\Data\190812_b1\190812_019	08/12/19 22:33
ITT-SBW-4-072919DMS	KQ1911251-04	J:\LCMS06\Data\190812_b1\190812_020	08/12/19 22:44

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM **Calibration Date:** 8/7/2019

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

Calibration ID: KC1900319 **Signal ID:** 1
Instrument ID: K-LCMS-06

#	Lab Code	Sample Name	File Location	Acquisition Date
04	KC1900319-04	0.10 PPB ICAL	190807_013	08/07/2019 17:35
05	KC1900319-05	0.50 PPB ICAL	190807_014	08/07/2019 17:45
06	KC1900319-06	1.0 PPB ICAL	190807_015	08/07/2019 17:56
01	KC1900319-01	5.0 PPB ICAL	190807_016	08/07/2019 18:06
02	KC1900319-02	10.0 PPB ICAL	190807_017	08/07/2019 18:16
03	KC1900319-03	15.0 PPB ICAL	190807_018	08/07/2019 18:27
07	KC1900319-07	0.05 PPB ICAL	190807_020	08/07/2019 18:48

Analyte

13C2-6:2 FTS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.09532	02	5.0000	0.09976	03	5.0000	0.1061	04	5.0000	0.07609
05	5.0000	0.07133	06	5.0000	0.08432	07	5.0000	0.07451			

13C2-8:2 FTS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.05112	02	5.0000	0.05328	03	5.0000	0.051	04	5.0000	0.04861
05	5.0000	0.04788	06	5.0000	0.04729	07	5.0000	0.04703			

13C2-PFDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.7406	02	5.0000	0.7591	03	5.0000	0.7417	04	5.0000	0.6653
05	5.0000	0.6274	06	5.0000	0.8208	07	5.0000	0.6322			

13C2-PFDoDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.9164	02	5.0000	0.9326	03	5.0000	0.8993	04	5.0000	0.7471
05	5.0000	0.7033	06	5.0000	0.9712	07	5.0000	0.6524			

13C2-PFHxA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.004	02	5.0000	1.099	03	5.0000	1.043	04	5.0000	1.024
05	5.0000	0.857	06	5.0000	1.133	07	5.0000	0.8746			

13C2-PFTeDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.9837	02	5.0000	1.039	03	5.0000	0.9792	04	5.0000	0.8376
05	5.0000	0.8285	06	5.0000	0.9898	07	5.0000	0.7567			

13C2-PFUnDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.7672	02	5.0000	0.7943	03	5.0000	0.783	04	5.0000	0.7293
05	5.0000	0.7872	06	5.0000	0.798	07	5.0000	0.7462			

13C3-PFBS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.258	02	5.0000	0.2665	03	5.0000	0.2624	04	5.0000	0.2225

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM **Calibration Date:** 8/7/2019

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

Calibration ID: KC1900319 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

13C3-PFBS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
05	5.0000	0.2141	06	5.0000	0.2508	07	5.0000	0.2017			

13C4-PFBA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.8582	02	5.0000	0.9325	03	5.0000	0.9197	04	5.0000	0.7355
05	5.0000	0.7115	06	5.0000	0.8307	07	5.0000	0.6998			

13C4-PFHpA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.144	02	5.0000	1.164	03	5.0000	1.138	04	5.0000	1.098
05	5.0000	1.301	06	5.0000	1.198	07	5.0000	1.203			

13C4-PFOA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.171	02	5.0000	1.124	03	5.0000	1.105	04	5.0000	1.02
05	5.0000	0.9256	06	5.0000	1.187	07	5.0000	0.9341			

13C4-PFOS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1861	02	5.0000	0.1964	03	5.0000	0.1893	04	5.0000	0.1404
05	5.0000	0.1324	06	5.0000	0.1657	07	5.0000	0.1324			

13C5-PFNA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.9624	02	5.0000	0.9968	03	5.0000	0.9571	04	5.0000	0.7294
05	5.0000	0.7288	06	5.0000	0.8581	07	5.0000	0.6998			

13C5-PFPeA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.5467	02	5.0000	0.5793	03	5.0000	0.5649	04	5.0000	0.4692
05	5.0000	0.4489	06	5.0000	0.5245	07	5.0000	0.445			

13C8-FOSA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.4034	02	5.0000	0.3982	03	5.0000	0.4149	04	5.0000	0.3566
05	5.0000	0.342	06	5.0000	0.4254	07	5.0000	0.3246			

18O2-PFHxS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1292	02	5.0000	0.1343	03	5.0000	0.1421	04	5.0000	0.1304
05	5.0000	0.1383	06	5.0000	0.1474	07	5.0000	0.1375			

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

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
04	0.0951	1.39	05	0.4756	1.289	06	0.9512	1.227	01	4.7558	1.189
02	9.5117	1.18	03	14.2676	1.021						

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM **Calibration Date:** 8/7/2019

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

Calibration ID: KC1900319 **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
07	0.0480	0.8957	04	0.0960	1.005	05	0.4800	0.8546	06	0.9600	1.054
01	4.8002	0.7356	02	9.6004	0.7051						

D3-MeFOSAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1137	02	5.0000	0.1166	03	5.0000	0.1251	04	5.0000	0.1078
05	5.0000	0.1045	06	5.0000	0.1022	07	5.0000	0.09922			

D5-EtFOSAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.09891	02	5.0000	0.09609	03	5.0000	0.09431	04	5.0000	0.1041
05	5.0000	0.08941	06	5.0000	0.1185	07	5.0000	0.09364			

N-Ethyl perfluorooctane sulfonamidoacetic acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
04	0.1000	0.2403	05	0.5000	0.5241	06	1.0000	0.4426	01	5.0000	0.5694
02	10.0000	0.6802	03	15.0000	0.6855						

N-Methyl perfluorooctane sulfonamidoacetic acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
04	0.1000	0.5401	05	0.5000	0.7026	06	1.0000	0.7392	01	5.0000	0.6224
02	10.0000	0.627	03	15.0000	0.5966						

Perfluorobutane sulfonic acid (PFBS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0444	1.55	04	0.0887	1.513	05	0.4437	1.452	06	0.8874	1.371
01	4.4368	1.335	02	8.8737	1.427	03	13.3106	1.432			

Perfluorobutanoic acid (PFBA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0500	1.03	04	0.1000	1.036	05	0.5000	1.067	06	1.0000	1.019
01	5.0000	0.9831	02	10.0000	1.017	03	15.0000	1.012			

Perfluorodecane sulfonic acid (PFDS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
04	0.0965	0.8247	05	0.4823	1.059	06	0.9647	0.9543	01	4.8233	0.6991
02	9.6467	0.6993	03	14.4700	0.6794						

Perfluorodecanoic acid (PFDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0500	1.31	04	0.1000	1.129	05	0.5000	0.9579	06	1.0000	0.9089
01	5.0000	0.9321	02	10.0000	0.9455	03	15.0000	0.9123			

Perfluorododecanoic acid (PFDoDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0500	0.7348	04	0.1000	0.6962	05	0.5000	0.6382	06	1.0000	0.5622
01	5.0000	0.6317	02	10.0000	0.6365	03	15.0000	0.6393			

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM **Calibration Date:** 8/7/2019

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

Calibration ID: KC1900319 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

Perfluoroheptane sulfonic acid (PFHpS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0477	1.292	04	0.0953	1.382	05	0.4767	1.337	06	0.9534	1.336
01	4.7672	1.701	02	9.5344	1.723	03	14.3016	1.595			

Perfluoroheptanoic acid (PFHpA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0500	1.152	04	0.1000	1.036	05	0.5000	0.8145	06	1.0000	0.9314
01	5.0000	0.7845	02	10.0000	0.9237	03	15.0000	0.7919			

Perfluorohexane sulfonic acid (PFHxS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0457	1.696	04	0.0913	1.478	05	0.4565	1.254	06	0.9131	1.327
01	4.5654	1.278	02	9.1308	1.369	03	13.6961	1.317			

Perfluorohexanoic acid (PFHxA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0500	1.589	04	0.1000	1.247	05	0.5000	1.168	06	1.0000	1.015
01	5.0000	1.029	02	10.0000	1.027	03	15.0000	1.04			

Perfluorononanoic acid (PFNA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0500	1.062	04	0.1000	1.11	05	0.5000	0.9973	06	1.0000	0.8654
01	5.0000	0.8515	02	10.0000	0.8821	03	15.0000	0.8888			

Perfluorooctane sulfonamide (FOSA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0500	1.262	04	0.1000	1.3	05	0.5000	1.241	06	1.0000	1.188
01	5.0000	1.216	02	10.0000	1.345	03	15.0000	1.259			

Perfluorooctane sulfonic acid (PFOS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0465	0.9026	04	0.0929	0.9255	05	0.4646	0.9016	06	0.9292	0.8946
01	4.6461	0.8226	02	9.2923	0.836	03	13.9384	0.8537			

Perfluorooctanoic acid (PFOA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0500	1.555	04	0.1000	1.312	05	0.5000	1.235	06	1.0000	1.083
01	5.0000	1.046	02	10.0000	1.144	03	15.0000	1.111			

Perfluoropentanoic acid (PFPeA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0500	7	04	0.1000	4.488	05	0.5000	2.678	06	1.0000	2.336
01	5.0000	2.112	02	10.0000	2.175	03	15.0000	2.208			

Perfluorotetradecanoic acid (PFTeDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0500	1.362	04	0.1000	0.8897	05	0.5000	0.4509	06	1.0000	0.4024
01	5.0000	0.3461	02	10.0000	0.3496	03	15.0000	0.3411			

Client: O'Brien & Gere Engineers, Incorporated
Project: Auto FH-019 Former RFM

Service Request: R1907111
Calibration Date: 8/7/2019

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

Calibration ID: KC1900319
Instrument ID: K-LCMS-06

Signal ID: 1

Analyte

Perfluorotridecanoic acid (PFTrDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0500	0.9982	04	0.1000	0.6639	05	0.5000	0.6967	06	1.0000	0.7031
01	5.0000	0.7525	02	10.0000	0.7203	03	15.0000	0.6991			

Perfluoroundecanoic acid (PFUnDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
07	0.0500	1.374	04	0.1000	1.206	05	0.5000	0.9189	06	1.0000	0.9029
01	5.0000	0.8961	02	10.0000	0.8719	03	15.0000	0.8681			

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM **Calibration Date:** 8/7/2019

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

Calibration ID: KC1900319 **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	15.8	≤20	0.08677	
13C2-8:2 FTS	SURR	Average RF	% RSD	4.8	≤20	0.04946	
13C2-PFDA	SURR	Average RF	% RSD	10.2	≤20	0.7124	
13C2-PFDoDA	SURR	Average RF	% RSD	15.3	≤20	0.8317	
13C2-PFHxA	SURR	Average RF	% RSD	10.4	≤20	1.005	
13C2-PFTeDA	SURR	Average RF	% RSD	11.6	≤20	0.9163	
13C2-PFUnDA	SURR	Average RF	% RSD	3.4	≤20	0.7722	
13C3-PFBS	SURR	Average RF	% RSD	10.9	≤20	0.2394	
13C4-PFBA	SURR	Average RF	% RSD	12.0	≤20	0.8126	
13C4-PFHpA	SURR	Average RF	% RSD	5.5	≤20	1.178	
13C4-PFOA	SURR	Average RF	% RSD	10.1	≤20	1.067	
13C4-PFOS	SURR	Average RF	% RSD	17.2	≤20	0.1632	
13C5-PFNA	SURR	Average RF	% RSD	15.0	≤20	0.8475	
13C5-PFPeA	SURR	Average RF	% RSD	11.0	≤20	0.5112	
13C8-FOSA	SURR	Average RF	% RSD	10.3	≤20	0.3807	
18O2-PFHxS	SURR	Average RF	% RSD	4.7	≤20	0.137	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	TRG	Average RF	% RSD	10.1	≤20	1.216	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	TRG	Average RF	% RSD	16.0	≤20	0.8751	
D3-MeFOSAA	SURR	Average RF	% RSD	8.3	≤20	0.1099	
D5-EtFOSAA	SURR	Average RF	% RSD	9.7	≤20	0.09928	
N-Ethyl perfluorooctane sulfonamidoacetic acid	TRG	Linear	R2	0.9924	≥0.99	0.5237	
N-Methyl perfluorooctane sulfonamidoacetic acid	TRG	Quadratic	COD	0.9971	≥0.99	0.638	
Perfluorobutane sulfonic acid (PFBS)	TRG	Average RF	% RSD	5.2	≤20	1.44	
Perfluorobutanoic acid (PFBA)	TRG	Average RF	% RSD	2.5	≤20	1.023	
Perfluorodecane sulfonic acid (PFDS)	TRG	Average RF	% RSD	19.2	≤20	0.8192	
Perfluorodecanoic acid (PFDA)	TRG	Average RF	% RSD	14.9	≤20	1.014	
Perfluorododecanoic acid (PFDoDA)	TRG	Linear	R2	0.9972	≥0.99	0.6484	
Perfluoroheptane sulfonic acid (PFHpS)	TRG	Average RF	% RSD	12.6	≤20	1.481	
Perfluoroheptanoic acid (PFHpA)	TRG	Linear	R2	0.9933	≥0.99	0.9193	
Perfluorohexane sulfonic acid (PFHxS)	TRG	Average RF	% RSD	11.1	≤20	1.388	
Perfluorohexanoic acid (PFHxA)	TRG	Linear	R2	0.9976	≥0.99	1.159	

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM **Calibration Date:** 8/7/2019

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

Calibration ID: KC1900319 **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	0.9938	≥0.99	0.951	
Perfluorooctane sulfonamide (FOSA)	TRG	Average RF	% RSD	4.1	≤20	1.259	
Perfluorooctane sulfonic acid (PFOS)	TRG	Average RF	% RSD	4.4	≤20	0.8767	
Perfluorooctanoic acid (PFOA)	TRG	Linear	R2	0.9975	≥0.99	1.212	
Perfluoropentanoic acid (PFPeA)	TRG	Linear	R2	0.9991	≥0.99	3.285	
Perfluorotetradecanoic acid (PFTeDA)	TRG	Linear	R2	0.9979	≥0.99	0.5917	
Perfluorotridecanoic acid (PFTrDA)	TRG	Linear	R2	0.9991	≥0.99	0.7477	
Perfluoroundecanoic acid (PFUnDA)	TRG	Linear	R2	0.9985	≥0.99	1.005	

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM **Calibration Date:** 8/7/2019

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

Calibration ID: KC1900319 **Signal ID:** 1
Instrument ID: K-LCMS-06

#	Lab Code	Sample Name	File Location	Acquisition Date
08	KC1900319-08	1.0 PPB ICV	190807_021	08/07/2019 18:58

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	0.858	1.44E0	1.393E0	-3.301	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	0.867	1.388E0	1.318E0	-5.033	±30	Average RF
Perfluoroheptane sulfonic acid (PFHpS)	0.953	0.951	1.481E0	1.476E0	-0.303	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.928	8.767E-1	8.752E-1	-0.166	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	1.15	8.192E-1	9.776E-1	19.33	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	1.03	1.023E0	1.054E0	2.99	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	1.05	3.285E0	2.482E0	5.05	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	1.00	1.159E0	1.062E0	0.354	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	1.07	9.193E-1	9.199E-1	7.31	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	1.02	1.212E0	1.152E0	2.16	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	0.998	9.51E-1	9.076E-1	-0.239	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	0.948	1.014E0	9.604E-1	-5.249	±30	Average RF
Perfluoroundecanoic acid (PFUnDA)	1.00	1.13	1.005E0	1.025E0	13.44	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	0.993	6.484E-1	6.213E-1	-0.687	±30	Linear
Perfluorotridecanoic acid (PFTrDA)	1.00	1.22	7.477E-1	8.795E-1	22.32	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	1.06	5.917E-1	4.197E-1	6.36	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	0.958	1.259E0	1.206E0	-4.202	±30	Average RF
N-Methyl perfluorooctane sulfonamidoacetic acid	1.00	1.30	6.38E-1	9.205E-1	30.36*	±30	Quadratic
N-Ethyl perfluorooctane sulfonamidoacetic acid	1.00	1.00	5.237E-1	6.09E-1	0.484	±30	Linear
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	1.01	1.216E0	1.295E0	6.48	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	1.22	8.751E-1	1.111E0	26.99	±30	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
13C3-PFBS	5.00	4.80	2.394E-1	2.3E-1	-3.954	±30	Average RF
18O2-PFHxS	5.00	4.48	1.37E-1	1.227E-1	-10.486	±30	Average RF
13C4-PFOS	5.00	5.11	1.632E-1	1.669E-1	2.26	±30	Average RF
13C4-PFBA	5.00	4.82	8.126E-1	7.84E-1	-3.513	±30	Average RF
13C5-PFPeA	5.00	4.88	5.112E-1	4.985E-1	-2.485	±30	Average RF
13C2-PFHxA	5.00	5.90	1.005E0	1.187E0	18.07	±30	Average RF
13C4-PFHpA	5.00	4.28	1.178E0	1.009E0	-14.384	±30	Average RF
13C4-PFOA	5.00	5.33	1.067E0	1.137E0	6.60	±30	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: O'Brien & Gere Engineers, Incorporated **Service Request:** R1907111
Project: Auto FH-019 Former RFM **Calibration Date:** 8/7/2019

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

Calibration ID: KC1900319 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
13C5-PFNA	5.00	5.07	8.475E-1	8.601E-1	1.49	±30	Average RF
13C2-PFDA	5.00	5.77	7.124E-1	8.225E-1	15.44	±30	Average RF
13C2-PFUnDA	5.00	4.27	7.722E-1	6.597E-1	-14.563	±30	Average RF
13C2-PFDoDA	5.00	5.83	8.317E-1	9.699E-1	16.61	±30	Average RF
13C2-PFTeDA	5.00	4.67	9.163E-1	8.563E-1	-6.555	±30	Average RF
13C8-FOSA	5.00	6.00	3.807E-1	4.565E-1	19.90	±30	Average RF
D3-MeFOSAA	5.00	4.52	1.099E-1	9.937E-2	-9.560	±30	Average RF
D5-EtFOSAA	5.00	5.02	9.928E-2	9.972E-2	0.446	±30	Average RF
13C2-6:2 FTS	5.00	4.45	8.677E-2	7.716E-2	-11.076	±30	Average RF
13C2-8:2 FTS	5.00	4.11	4.946E-2	4.068E-2	-17.748	±30	Average RF

Client: O'Brien & Gere Engineers, Incorporated
Project: Auto FH-019 Former RFM/73105.001/002.016

Service Request: R1907111
Date Analyzed: 08/08/19 15:56

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

Analysis Method: PFC/537M
File ID: J:\LCMS06\Data\190807_b8\190807_141
Signal ID: 1

Calibration Date: 8/7/2019
Calibration ID: KC1900319
Analysis Lot: 646328
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	1.13	1.4402	1.8293	127	NA	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	0.854	1.3882	1.2987	93.5	NA	±30	Average RF
Perfluoroheptane sulfonic acid (PFHpS)	0.953	1.13	1.4808	1.7624	119	NA	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	1.04	0.8767	0.9801	112	NA	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	1.31	0.8192	1.116	136*	NA	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	1.12	1.0235	1.143	112	NA	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	1.13	3.2855	2.651	113	13.0	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	0.987	1.1593	1.045	98.7	-1.3	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	0.956	0.9193	0.821	95.6	-4.4	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	1.28	1.2123	1.4342	128	27.7	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	1.07	0.951	0.9768	107	7.5	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	1.02	1.0136	1.0341	102	NA	±30	Average RF
Perfluoroundecanoic acid (PFUnDA)	1.00	1.19	1.0053	1.0702	119	18.6	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	1.25	0.6484	0.7829	125	25.4	±30	Linear
Perfluorotridecanoic acid (PFTrDA)	1.00	1.28	0.7477	0.9189	128	27.9	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	1.18	0.5917	0.461	118	18.3	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	1.04	1.2586	1.3064	104	NA	±30	Average RF
N-Methyl perfluorooctane sulfonamidoacetic acid	1.00	1.30	0.638	0.9197	130	30.2	±30	Quadratic
N-Ethyl perfluorooctane sulfonamidoacetic acid	1.00	0.984	0.5237	0.595	98.4	-1.6	±30	Linear
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	1.15	1.2159	1.4737	121	NA	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	1.07	0.8751	0.972	111	NA	±30	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
13C3-PFBS	5.00	4.92	0.2394	0.2358	98.5	NA	±30	Average RF
18O2-PFHxS	5.00	6.84	0.137	0.1875	137*	NA	±30	Average RF
13C4-PFOS	5.00	6.18	0.1632	0.2018	124	NA	±30	Average RF
13C4-PFBA	5.00	5.62	0.8126	0.9126	112	NA	±30	Average RF
13C5-PFPeA	5.00	5.79	0.5112	0.5922	116	NA	±30	Average RF
13C2-PFHxA	5.00	6.18	1.0051	1.2414	124	NA	±30	Average RF
13C4-PFHpA	5.00	6.58	1.178	1.5492	132*	NA	±30	Average RF
13C4-PFOA	5.00	5.64	1.0668	1.2039	113	NA	±30	Average RF
13C5-PFNA	5.00	7.19	0.8475	1.219	144*	NA	±30	Average RF

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Analyzed:**	08/08/19 15:56

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

Analysis Method:	PFC/537M	**Calibration Date:**	8/7/2019
File ID:	J:\LCMS06\Data\190807_b8\190807_141	**Calibration ID:**	KC1900319
Signal ID:	1	**Analysis Lot:**	646328
		Units:	ng/mL

13C2-PFDA	5.00	6.76	0.7124	0.9636	135*	NA	±30	Average RF
13C2-PFUnDA	5.00	4.97	0.7722	0.7679	99.4	NA	±30	Average RF
13C2-PFDoDA	5.00	6.40	0.8317	1.0654	128	NA	±30	Average RF
13C2-PFTeDA	5.00	6.06	0.9163	1.1113	121	NA	±30	Average RF
13C8-FOSA	5.00	5.68	0.3807	0.4328	114	NA	±30	Average RF
D3-MeFOSAA	5.00	5.59	0.1099	0.1229	112	NA	±30	Average RF
D5-EtFOSAA	5.00	7.12	0.0993	0.1414	142*	NA	±30	Average RF
13C2-6:2 FTS	5.00	6.33	0.0868	0.1099	127	NA	±30	Average RF
13C2-8:2 FTS	5.00	5.53	0.0495	0.0547	111	NA	±30	Average RF

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Analyzed:**	08/12/19 20:28

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

Analysis Method:	PFC/537M	**Calibration Date:**	8/7/2019
File ID:	J:\LCMS06\Data\190812_b1\190812_007	**Calibration ID:**	KC1900319
Signal ID:	1	**Analysis Lot:**	646922
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	0.959	1.4402	1.5572	108	NA	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	0.957	1.3882	1.4556	105	NA	±30	Average RF
Perfluoroheptane sulfonic acid (PFHpS)	0.953	1.31	1.4808	2.0364	138*	NA	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.942	0.8767	0.8885	101	NA	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	1.62	0.8192	1.38	168*	NA	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	1.04	1.0235	1.0682	104	NA	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	1.12	3.2855	2.6343	112	12.2	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	0.996	1.1593	1.0535	99.6	-0.4	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	0.980	0.9193	0.8413	98.0	-2.0	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	1.04	1.2123	1.1743	104	4.2	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	0.975	0.951	0.8872	97.5	-2.5	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	0.933	1.0136	0.9455	93.3	NA	±30	Average RF
Perfluoroundecanoic acid (PFUnDA)	1.00	0.994	1.0053	0.9017	99.4	-0.6	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	0.914	0.6484	0.5724	91.4	-8.6	±30	Linear
Perfluorotridecanoic acid (PFTrDA)	1.00	1.24	0.7477	0.8904	124	23.9	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	1.03	0.5917	0.4078	103	3.0	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	0.949	1.2586	1.1939	94.9	NA	±30	Average RF
N-Methyl perfluorooctane sulfonamidoacetic acid	1.00	1.10	0.638	0.7742	110	9.7	±30	Quadratic
N-Ethyl perfluorooctane sulfonamidoacetic acid	1.00	1.07	0.5237	0.65	107	6.7	±30	Linear
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	1.03	1.2159	1.316	108	NA	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	0.942	0.8751	0.8586	98.1	NA	±30	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
13C3-PFBS	5.00	5.29	0.2394	0.2531	106	NA	±30	Average RF
18O2-PFHxS	5.00	4.56	0.137	0.125	91.2	NA	±30	Average RF
13C4-PFOS	5.00	4.66	0.1632	0.1522	93.3	NA	±30	Average RF
13C4-PFBA	5.00	5.88	0.8126	0.956	118	NA	±30	Average RF
13C5-PFPeA	5.00	5.49	0.5112	0.5617	110	NA	±30	Average RF
13C2-PFHxA	5.00	6.32	1.0051	1.2713	126	NA	±30	Average RF
13C4-PFHpA	5.00	5.15	1.178	1.2128	103	NA	±30	Average RF
13C4-PFOA	5.00	6.41	1.0668	1.3679	128	NA	±30	Average RF
13C5-PFNA	5.00	5.98	0.8475	1.0137	120	NA	±30	Average RF

Client:	O'Brien & Gere Engineers, Incorporated	**Service Request:**	R1907111
Project:	Auto FH-019 Former RFM/73105.001/002.016	**Date Analyzed:**	08/12/19 20:28

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

Analysis Method:	PFC/537M	**Calibration Date:**	8/7/2019
File ID:	J:\LCMS06\Data\190812_b1\190812_007	**Calibration ID:**	KC1900319
Signal ID:	1	**Analysis Lot:**	646922
		Units:	ng/mL

13C2-PFDA	5.00	7.18	0.7124	1.0229	144*	NA	±30	Average RF
13C2-PFUnDA	5.00	5.37	0.7722	0.8299	107	NA	±30	Average RF
13C2-PFDoDA	5.00	7.25	0.8317	1.2057	145*	NA	±30	Average RF
13C2-PFTeDA	5.00	6.42	0.9163	1.1765	128	NA	±30	Average RF
13C8-FOSA	5.00	5.73	0.3807	0.4362	115	NA	±30	Average RF
D3-MeFOSAA	5.00	7.00	0.1099	0.1539	140*	NA	±30	Average RF
D5-EtFOSAA	5.00	6.56	0.0993	0.1303	131*	NA	±30	Average RF
13C2-6:2 FTS	5.00	5.92	0.0868	0.1027	118	NA	±30	Average RF
13C2-8:2 FTS	5.00	9.25	0.0495	0.0915	185*	NA	±30	Average RF

Client: O'Brien & Gere Engineers, Incorporated
Project: Auto FH-019 Former RFM/73105.001/002.016

Service Request: R1907111
Date Analyzed: 08/13/19 04:39

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

Analysis Method: PFC/537M
File ID: J:\LCMS06\Data\190812_b4\190812_054
Signal ID: 1

Calibration Date: 8/7/2019
Calibration ID: KC1900319
Analysis Lot: 646926
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
Perfluorobutanoic acid (PFBA)	1.00	1.04	1.0235	1.061	104	NA	±30	Average RF
Perfluorotridecanoic acid (PFTrDA)	1.00	1.26	0.7477	0.9032	126	25.7	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	1.08	0.5917	0.4257	108	8.1	±30	Linear

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
13C4-PFBA	5.00	5.47	0.8126	0.8881	109	NA	±30	Average RF
13C2-PFTeDA	5.00	5.99	0.9163	1.0987	120	NA	±30	Average RF

Client: O'Brien & Gere Engineers, Incorporated **Service Request:**R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016

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

Analysis Method: PFC/537M **Analysis Lot:**646328
Instrument ID:K-LCMS-06

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\LCMS06\Data\190807_b8\190807_141	Continuing Calibration Verification	KQ1911078-01	8/8/2019	15:56	
J:\LCMS06\Data\190807_b8\190807_142	Continuing Calibration Blank	KQ1911078-02	8/8/2019	16:07	
J:\LCMS06\Data\190807_b8\190807_143	Method Blank	KQ1910949-06	8/8/2019	16:17	
J:\LCMS06\Data\190807_b8\190807_144	Lab Control Sample	KQ1910949-05	8/8/2019	16:28	
J:\LCMS06\Data\190807_b8\190807_145	ZZZZZZZ	ZZZZZZZ	8/8/2019	16:38	
J:\LCMS06\Data\190807_b8\190807_146	ZZZZZZZ	ZZZZZZZ	8/8/2019	16:48	
J:\LCMS06\Data\190807_b8\190807_147	ZZZZZZZ	ZZZZZZZ	8/8/2019	16:59	
J:\LCMS06\Data\190807_b8\190807_148	ZZZZZZZ	ZZZZZZZ	8/8/2019	17:09	
J:\LCMS06\Data\190807_b8\190807_149	ZZZZZZZ	ZZZZZZZ	8/8/2019	17:20	
J:\LCMS06\Data\190807_b8\190807_150	ZZZZZZZ	ZZZZZZZ	8/8/2019	17:30	
J:\LCMS06\Data\190807_b8\190807_151	ZZZZZZZ	ZZZZZZZ	8/8/2019	17:41	
J:\LCMS06\Data\190807_b8\190807_152	ZZZZZZZ	ZZZZZZZ	8/8/2019	17:51	
J:\LCMS06\Data\190807_b8\190807_155	ZZZZZZZ	ZZZZZZZ	8/8/2019	18:22	
J:\LCMS06\Data\190807_b8\190807_156	ZZZZZZZ	ZZZZZZZ	8/8/2019	18:33	
J:\LCMS06\Data\190807_b8\190807_157	ZZZZZZZ	ZZZZZZZ	8/8/2019	18:43	
J:\LCMS06\Data\190807_b8\190807_158	ZZZZZZZ	ZZZZZZZ	8/8/2019	18:54	
J:\LCMS06\Data\190807_b8\190807_159	ZZZZZZZ	ZZZZZZZ	8/8/2019	19:04	
J:\LCMS06\Data\190807_b8\190807_160	ZZZZZZZ	ZZZZZZZ	8/8/2019	19:15	
J:\LCMS06\Data\190807_b8\190807_163	EB-072919	R1907111-002	8/8/2019	19:46	
J:\LCMS06\Data\190807_b8\190807_164	ITT-SBW-2-072919	R1907111-003	8/8/2019	19:57	
J:\LCMS06\Data\190807_b8\190807_165	DUP-01-072919	R1907111-004	8/8/2019	20:07	
J:\LCMS06\Data\190807_b8\190807_166	ITT-IBW-20-072919	R1907111-005	8/8/2019	20:17	

Client: O'Brien & Gere Engineers, Incorporated **Service Request:**R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016

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

Analysis Method: PFC/537M **Analysis Lot:**646922
Instrument ID:K-LCMS-06

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\LCMS06\Data\190812_b1\190812_007	Continuing Calibration Verification	KQ1911320-01	8/12/2019	20:28	
J:\LCMS06\Data\190812_b1\190812_008	Continuing Calibration Blank	KQ1911320-02	8/12/2019	20:38	
J:\LCMS06\Data\190812_b1\190812_009	Method Blank	KQ1911251-06	8/12/2019	20:49	
J:\LCMS06\Data\190812_b1\190812_010	Lab Control Sample	KQ1911251-05	8/12/2019	20:59	
J:\LCMS06\Data\190812_b1\190812_011	ZZZZZZZ	ZZZZZZZ	8/12/2019	21:10	
J:\LCMS06\Data\190812_b1\190812_012	ZZZZZZZ	ZZZZZZZ	8/12/2019	21:20	
J:\LCMS06\Data\190812_b1\190812_013	ZZZZZZZ	ZZZZZZZ	8/12/2019	21:31	
J:\LCMS06\Data\190812_b1\190812_014	ZZZZZZZ	ZZZZZZZ	8/12/2019	21:41	
J:\LCMS06\Data\190812_b1\190812_015	ZZZZZZZ	ZZZZZZZ	8/12/2019	21:51	
J:\LCMS06\Data\190812_b1\190812_016	ZZZZZZZ	ZZZZZZZ	8/12/2019	22:02	
J:\LCMS06\Data\190812_b1\190812_017	ZZZZZZZ	ZZZZZZZ	8/12/2019	22:12	
J:\LCMS06\Data\190812_b1\190812_018	ITT-SBW-4-072919	R1907111-001	8/12/2019	22:23	
J:\LCMS06\Data\190812_b1\190812_019	ITT-SBW-4-072919 MS	KQ1911251-03	8/12/2019	22:33	
J:\LCMS06\Data\190812_b1\190812_020	ITT-SBW-4-072919 DMS	KQ1911251-04	8/12/2019	22:44	

Client: O'Brien & Gere Engineers, Incorporated **Service Request:**R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016

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

Analysis Method: PFC/537M **Analysis Lot:**646926
Instrument ID:K-LCMS-06

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\LCMS06\Data\190812_b4\190812_054	Continuing Calibration Verification	KQ1911327-01	8/13/2019	04:39	
J:\LCMS06\Data\190812_b4\190812_055	Continuing Calibration Blank	KQ1911327-02	8/13/2019	04:49	
J:\LCMS06\Data\190812_b4\190812_057	ITT-SBW-2-072919	R1907111-003	8/13/2019	05:10	
J:\LCMS06\Data\190812_b4\190812_059	ZZZZZZZ	ZZZZZZZ	8/13/2019	05:31	

Prep Summary Report

Client: O'Brien & Gere Engineers, Incorporated **Service Request:**R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016
Sample Matrix: Water

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Prep Method: EPA 3535A **Extraction Lot:** 341924
Analytical Method: PFC/537M **Extraction Date:** 08/06/19 09:00

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
Lab Control Sample	KQ1910949-05LCS	NA	NA	250 mL	8 mL	
Method Blank	KQ1910949-06MB	NA	NA	250 mL	8 mL	
EB-072919	R1907111-002	7/29/19	7/29/19	315.0000 mL	8 mL	
ITT-SBW-2-072919	R1907111-003	7/29/19	7/29/19	285.0000 mL	8 mL	
ITT-SBW-2-072919	R1907111-003	7/29/19	7/29/19	285.0000 mL	8 mL	
DUP-01-072919	R1907111-004	7/29/19	7/29/19	315.0000 mL	8 mL	
ITT-IBW-20-072919	R1907111-005	7/29/19	7/29/19	295.0000 mL	8 mL	

Prep Summary Report

Client: O'Brien & Gere Engineers, Incorporated **Service Request:**R1907111
Project: Auto FH-019 Former RFM/73105.001/002.016
Sample Matrix: Water

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Prep Method: EPA 3535A **Extraction Lot:** 342310
Analytical Method: PFC/537M **Extraction Date:** 08/12/19 08:29

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
Matrix Spike	KQ1911251-03MS	7/29/19	7/29/19	300.0000 mL	8 mL	
Duplicate Matrix Spike	KQ1911251-04DMS	7/29/19	7/29/19	305.0000 mL	8 mL	
Lab Control Sample	KQ1911251-05LCS	NA	NA	250 mL	8 mL	
Method Blank	KQ1911251-06MB	NA	NA	250 mL	8 mL	
ITT-SBW-4-072919	R1907111-001	7/29/19	7/29/19	285.0000 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

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

rep Run#: 341924
eam: Organic LC/NHILLIKER
Number of Copies to make: 5

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

Status: Prepped
Prep Date/Time: 8/6/19 09:00

	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1906950-001	DSSW-072719	.01	PFC/537M/PFOA		Water	280.0000mL	8.00mL	
2	K1906950-002	DSSW-072819	.01	PFC/537M/PFOA		Water	285.0000mL	8.00mL	
3	K1906950-003	DSSW-072919	.01	PFC/537M/PFOA		Water	280.0000mL	8.00mL	
4	K1906950-004	DSSW-072619	.01	PFC/537M/PFOA		Water	280.0000mL	8.00mL	
5	K1906953-001	Trip Blank	.01	PFC/537M/PFOA		Water	290.0000mL	8.00mL	
6	K1907061-001	ARS3-19-02338-001	.12	PFC/537M/PFOA		Water	270.0000mL	8.00mL	
7	K1907067-001	DSSW-073019	.03	PFC/537M/PFOA		Surface Water	280.0000mL	8.00mL	
8	K1907067-002	DSSW-073119	.03	PFC/537M/PFOA		Surface Water	280.0000mL	8.00mL	
9	K1907067-003	DSSW-073119-R	.03	PFC/537M/PFOA		Surface Water	250.0000mL	8.00mL	
10	K1907067-004	FB001-073119	.03	PFC/537M/PFOA		Water	270.0000mL	8.00mL	
11	K1907067-005	USSW-073119	.03	PFC/537M/PFOA		Surface Water	275.0000mL	8.00mL	
12	K1907067-006	EB001-073119	.03	PFC/537M/PFOA		Water	265.0000mL	8.00mL	
13	K1907067-007	DSSW-080119	.03	PFC/537M/PFOA		Surface Water	290.0000mL	8.00mL	
14	R1907111-001	ITT-SBW-4-072919	.01	PFC/537M/PFOA		Water	300.0000mL	8.00mL	
15	R1907111-002	EB-072919	.01	PFC/537M/PFOA		Water	315.0000mL	8.00mL	
16	R1907111-003	ITT-SBW-2-072919	.01	PFC/537M/PFOA		Water	285.0000mL	8.00mL	
17	R1907111-004	DUP-01-072919	.01	PFC/537M/PFOA		Water	315.0000mL	8.00mL	
18	R1907111-005	ITT-IBW-20-072919	.01	PFC/537M/PFOA		Water	295.0000mL	8.00mL	
19	KQ1910949-03	K1907067-002 MS	.04	PFC/537M/PFOA		Liquid	270.0000mL	8.00mL	
20	KQ1910949-04	K1907067-002 DMS	.05	PFC/537M/PFOA		Liquid	260.0000mL	8.00mL	
21	KQ1910949-07	R1907111-001 MS	.02	PFC/537M/PFOA		Liquid	300.0000mL	8.00mL	
22	KQ1910949-08	R1907111-001 DMS	.03	PFC/537M/PFOA		Liquid	295.0000mL	8.00mL	
23	KQ1910949-05	LCS		PFC/537M/PFOA		Liquid	250mL	8.00mL	
24	KQ1910949-06	MB		PFC/537M/PFOA		Liquid	250mL	8.00mL	

Spiking Solutions

Name: PFC IS Inventory ID 200659 Logbook Ref: 19-OLC-01-36F Expires On: 12/27/2019

K1906950-001	10.00µL	K1906950-002	10.00µL	K1906950-003	10.00µL	K1906950-004	10.00µL	K1906953-001	10.00µL	K1907061-001	10.00µL
K1907067-001	10.00µL	K1907067-002	10.00µL	K1907067-003	10.00µL	K1907067-004	10.00µL	K1907067-005	10.00µL	K1907067-006	10.00µL
K1907067-007	10.00µL	KQ1910949-03	10.00µL	KQ1910949-04	10.00µL	KQ1910949-05	10.00µL	KQ1910949-06	10.00µL	KQ1910949-07	10.00µL
KQ1910949-08	10.00µL	R1907111-001	10.00µL	R1907111-002	10.00µL	R1907111-003	10.00µL	R1907111-004	10.00µL	R1907111-005	10.00µL

Name: PFC isotopes 2ppm Inventory ID 200868 Logbook Ref: 19-OLC-01-38A Expires On: 01/03/2020

Preparation Information Benchsheet

Prep Run#: 341924
Team: Organic LC/NHILLIKER

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

Status: Prepped
Prep Date/Time: 8/6/19 09:00

K1906950-001	20.00µL	K1906950-002	20.00µL	K1906950-003	20.00µL	K1906950-004	20.00µL	K1906953-001	20.00µL	K1907061-001	20.00µL
K1907067-001	20.00µL	K1907067-002	20.00µL	K1907067-003	20.00µL	K1907067-004	20.00µL	K1907067-005	20.00µL	K1907067-006	20.00µL
K1907067-007	20.00µL	KQ1910949-03	20.00µL	KQ1910949-04	20.00µL	KQ1910949-05	20.00µL	KQ1910949-06	20.00µL	KQ1910949-07	20.00µL
KQ1910949-08	20.00µL	R1907111-001	20.00µL	R1907111-002	20.00µL	R1907111-003	20.00µL	R1907111-004	20.00µL	R1907111-005	20.00µL

Name: PFC Targets 200ppb Inventory ID 201557 Logbook Ref: 19-OLC-01-41P Expires On: 10/19/2019

KQ1910949-03	40.00µL	KQ1910949-04	40.00µL	KQ1910949-05	40.00µL	KQ1910949-07	40.00µL	KQ1910949-08	40.00µL

Name: PFC isotopes 2ppm Inventory ID 201734 Logbook Ref: 18-OLC-02-89I Expires On: 12/04/2023

K1906950-001	20.00µL	K1906950-002	20.00µL	K1906950-003	20.00µL	K1906950-004	20.00µL	K1906953-001	20.00µL	K1907061-001	20.00µL
K1907067-001	20.00µL	K1907067-002	20.00µL	K1907067-003	20.00µL	K1907067-004	20.00µL	K1907067-005	20.00µL	K1907067-006	20.00µL
K1907067-007	20.00µL	KQ1910949-03	20.00µL	KQ1910949-04	20.00µL	KQ1910949-05	20.00µL	KQ1910949-06	20.00µL	KQ1910949-07	20.00µL
KQ1910949-08	20.00µL	R1907111-001	20.00µL	R1907111-002	20.00µL	R1907111-003	20.00µL	R1907111-004	20.00µL	R1907111-005	20.00µL

Preparation Steps

Step:	Extraction	Step:	Final Volume
Started:	8/6/19 09:00	Started:	8/7/19 16:31
Finished:	8/7/19 16:31	Finished:	8/7/19 16:31
By:	KLMILLER	By:	KLMILLER
Comments		Comments	

Comments: _____

Reviewed By: E Domres Date: 8/9/19

Chain of Custody

Relinquished By: _____ Date: 8-7-19

Received By: Cmiller Date: 8/7/19

Extracts Examined: (Yes) No

Preparation Information Benchsheet

Prep Run#: 341924 **Prep WorkFlow:** OrgExtAq(14) **Status:** Draft
Team: Organic LC/NHILLIKER **Prep Method:** EPA 3535A **Prep Date/Time:** 8/6/19 09:00 AM
Number of Copies to make: 5

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext. mL	pH	Int. Vol	Final Vol mL	Surr Amt (µL)	Spike Amt (µL)
1	K1906950-001	DSSW-072719	.01	√	PFC/537M / PFOA	Water	280	3.5	N/A	8	20/20	—
2	K1906950-002	DSSW-072819	.01	√	PFC/537M / PFOA	Water	285					—
3	K1906950-003	DSSW-072919	.01	√	PFC/537M / PFOA	Water	280					—
4	K1906950-004	DSSW-072619	.01	√	PFC/537M / PFOA	Water	280					—
5	K1906953-001	Trip Blank	.01	√	PFC/537M / PFOA	Water	290					—
6	K1907061-001	ARS3-19-02338-001 ①	.12	√	PFC/537M / PFOA	Water	270					—
7	K1907067-001	DSSW-073019	.03	√	PFC/537M / PFOA	Surface Water	280					—
8	K1907067-002	DSSW-073119	.03	√	PFC/537M / PFOA	Surface Water	280					—
9	K1907067-003	DSSW-073119-R	.03	√	PFC/537M / PFOA	Surface Water	250					—
10	K1907067-004	FB001-073119	.03	√	PFC/537M / PFOA	Water	270					—
11	K1907067-005	USSW-073119	.03	√	PFC/537M / PFOA	Surface Water	275					—
12	K1907067-006	EB001-073119	.03	√	PFC/537M / PFOA	Water	265					—
13	K1907067-007	DSSW-080119	.03	√	PFC/537M / PFOA	Surface Water	290					—
14	R1907111-001	ITT-SBW-4-072919	.01	√	PFC/537M / PFOA	Water	300					—
15	R1907111-002	EB-072919	.01	√	PFC/537M / PFOA	Water	315					—
16	R1907111-003	ITT-SBW-2-072919	.01	√	PFC/537M / PFOA	Water	285					—
17	R1907111-004	DUP-01-072919	.01	√	PFC/537M / PFOA	Water	315					—
18	R1907111-005	ITT-IBW-20-072919	.01	√	PFC/537M / PFOA	Water	295					—
19	KQ1910949-03	K1907067-002 MS	.04	√	PFC/537M / PFOA	Liquid	270					40 µL
20	KQ1910949-04	K1907067-002 DMS	.05	√	PFC/537M / PFOA	Liquid	260					
21	KQ1910949-07	R1907111-001 MS	.02	√	PFC/537M / PFOA	Liquid	300					
22	KQ1910949-08	R1907111-001 DMS	.03	√	PFC/537M / PFOA	Liquid	295					
23	KQ1910949-05	LCS	—	—	PFC/537M / PFOA	Liquid	250					—
24	KQ1910949-06	MB	—	—	PFC/537M / PFOA	Liquid	250					—

① Sample centrifuged and decanted due to significant organic debris, original bottle not used. Despite being decanted, sample still clogged cartridge and required significant manual manipulation to load and elute.

EBD 8/9/19 – both pairs of MS/DMS appear to not have been spiked with surrogate. Prep analyst remembers pulling bottles for MS/DMS after all other samples in batch had been spiked. Target spikes added, oversight for surrogates. Sample volume remaining for re-extraction of both parent samples + new MS/DMS pairs.

Comments:

Surrogate ID: √IB-OLC-02-891 2ppm xp 12/4/23
√19-OLC-01-38A 2ppm xp 1/3/20

Spike ID: √19-OLC-01-41P 200ppb xp 10/19/19

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 K1906950, 6953, 7061, 7067, R7111 **Workgroup** KQ1910949

6cc 200mg Strata XL-AW Cartridge Sorbent Lot # S322-0025

Envi-Carb Lot # —

0.1% NH_4OH in MeOH Lot# 19-OLC-02-37F MeOH Lot# DW454-US

Reagent Water Lot# 59004

Acetic Acid (LCMS Grade) Lot# SHBK2445

25% NH_4OH Lot# —

Extraction (Manifold) Start (Time/Date/Initial): 15:25 8-6-19 K

Extraction (Manifold) Stop (Time/Date/Initial): 10:15 pm 8/6/19 NH

IS solution (13C7-PFUnDA 500ppb) Lot #: 19-OLC-01-36F (pascal)

Nylon Filter Lot#: 819601103

Extract Storage: Snowball

Completed(Time/Date/Initial): 12:35 8-7-19 K

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#: 342310
Team: Organic LC/KLMILLER
Number of Copies to make: 3

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

Status: Prepped
Prep Date/Time: 8/12/19 08:29

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1907067-002RE	DSSW-073119	.06	PFC/537M/PFOA		Surface Water	275.0000mL	8.00mL	
2	R1907111-001RE	ITT-SBW-4-072919	.04	PFC/537M/PFOA		Water	285.0000mL	8.00mL	
3	K1907270-001	Moose Creek-2-OC	.01	PFC/537M/PFOA		Water	295.0000mL	8.00mL	
4	K1907270-002	Moose Creek-2-OC Field Blank	.01	PFC/537M/PFOA		Water	285.0000mL	8.00mL	
5	K1907270-003	Moose Creek-20C2C	.01	PFC/537M/PFOA		Water	285.0000mL	8.00mL	
6	K1907270-004	Moose Creek-20C2C Field Blank	.01	PFC/537M/PFOA		Water	285.0000mL	8.00mL	
7	KQ1911251-01	K1907067-002 MS	.07	PFC/537M/PFOA		Liquid	265.0000mL	8.00mL	
8	KQ1911251-02	K1907067-002 DMS	.08	PFC/537M/PFOA		Liquid	270.0000mL	8.00mL	
9	KQ1911251-03	R1907111-001 MS	.05	PFC/537M/PFOA		Liquid	300.0000mL	8.00mL	
10	KQ1911251-04	R1907111-001 DMS	.06	PFC/537M/PFOA		Liquid	305.0000mL	8.00mL	
11	KQ1911251-05	LCS		PFC/537M/PFOA		Liquid	250mL	8.00mL	
12	KQ1911251-06	MB		PFC/537M/PFOA		Liquid	250mL	8.00mL	

Spiking Solutions

Name: PFC isotopes 2ppm — Inventory ID 200868 — Logbook Ref: 19-OLC-01-38A — Expires On: 01/03/2020

K1907067-002	20.00µL	K1907270-001	20.00µL	K1907270-002	20.00µL	K1907270-003	20.00µL	K1907270-004	20.00µL	KQ1911251-01	20.00µL
KQ1911251-02	20.00µL	KQ1911251-03	20.00µL	KQ1911251-04	20.00µL	KQ1911251-05	20.00µL	KQ1911251-06	20.00µL	R1907111-001	20.00µL

Name: PFC Targets 200ppb — Inventory ID 201557 — Logbook Ref: 19-OLC-01-41P — Expires On: 10/19/2019

KQ1911251-01	40.00µL	KQ1911251-02	40.00µL	KQ1911251-03	40.00µL	KQ1911251-04	40.00µL	KQ1911251-05	40.00µL

Name: PFC isotopes 2ppm — Inventory ID 201734 — Logbook Ref: 18-OLC-02-89I — Expires On: 12/04/2023

K1907067-002	20.00µL	K1907270-001	20.00µL	K1907270-002	20.00µL	K1907270-003	20.00µL	K1907270-004	20.00µL	KQ1911251-01	20.00µL
KQ1911251-02	20.00µL	KQ1911251-03	20.00µL	KQ1911251-04	20.00µL	KQ1911251-05	20.00µL	KQ1911251-06	20.00µL	R1907111-001	20.00µL

Name: PFC IS — Inventory ID 201873 — Logbook Ref: 19-OLC-01-42D — Expires On: 01/31/2020

K1907067-002	10.00µL	K1907270-001	10.00µL	K1907270-002	10.00µL	K1907270-003	10.00µL	K1907270-004	10.00µL	KQ1911251-01	10.00µL
KQ1911251-02	10.00µL	KQ1911251-03	10.00µL	KQ1911251-04	10.00µL	KQ1911251-05	10.00µL	KQ1911251-06	10.00µL	R1907111-001	10.00µL

Preparation Information Benchsheet

Prep Run#: 342310
Team: Organic LC/KLMILLER

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

Status: Prepped
Prep Date/Time: 8/12/19 08:29

Preparation Steps

Step:	Extraction	Step:	Final Volume
Started:	8/12/19 08:29	Started:	8/12/19 13:46
Finished:	8/12/19 10:47	Finished:	8/12/19 13:46
By:	KLMILLER	By:	KLMILLER
Comments		Comments	

Comments: _____

Reviewed By: L Domres Date: 8/13/19

Chain of Custody

Relinquished By: K Date: 8-12-19

Received By: L Domres Date: 8/12/19

Extracts Examined: (Yes) No

Preparation Information Benchsheet

Prep Run#: 342310
Team: Organic LC/KLMILLER
Number of Copies to make: 3

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

Status: Draft
Prep Date/Time: 8/12/19 08:29 AM

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext.	pH	Int. Vol	Final Vol mL	Surr Amt µL	Spike Amt
1	**K1907067-002RE**	DSSW-073119	.06	✓	PFC/537M / PFOA	Surface Water	~~285~~ 275	3.5	N/A	8	20/20	—
2	**R1907111-001RE**	ITT-SBW-4-072919	.04	✓	PFC/537M / PFOA	Water	285					—
3	**K1907270-001**	Moose Creek-2-OC	.01	✓	PFC/537M / PFOA	Water	295					—
4	**K1907270-002**	Moose Creek-2-OC Field Blank	.01	✓	PFC/537M / PFOA	Water	285					—
5	**K1907270-003**	Moose Creek-20C2C	.01	✓	PFC/537M / PFOA	Water	285					—
6	**K1907270-004**	Moose Creek-20C2C Field Blank	.01	✓	PFC/537M / PFOA	Water	285					—
7	**KQ1911251-01**	K1907067-002 MS	.07	✓	PFC/537M / PFOA	Liquid	265					40 µL
8	**KQ1911251-02**	K1907067-002 DMS	.08	✓	PFC/537M / PFOA	Liquid	270					
9	**KQ1911251-03**	R1907111-001 MS	.05	✓	PFC/537M / PFOA	Liquid	300					
10	**KQ1911251-04**	R1907111-001 DMS	.06	✓	PFC/537M / PFOA	Liquid	305					
11	**KQ1911251-05**	LCS			PFC/537M / PFOA	Liquid	250					↓
12	**KQ1911251-06**	MB			PFC/537M / PFOA	Liquid	250	↓	↓	↓	↓	—

Comments: ~~EE 8-9-19~~ 8-12-19 K

Surrogate ID: 18-OLC-02-B9I 2ppm 20µL xp 8/12/19 EPP: DB
19-OLC-01-38A 2ppm 20µL xp 1-3-20 EPP: DB

Spike ID: 19-OLC-01-41P 200ppb 40µL xp 10-19-19 EPP: DB

Witnessed By: —

Analyst:

Assisted By:

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

Waters

Service Request K1907067R, R1907111R, 7270 **Workgroup** KQ191125J

6cc 200mg Strata XL-AW Cartridge Sorbent Lot # S322-0025

Envi-Carb Lot # —

0.1% NH_4OH in MeOH Lot# 19-OLC-02-41C MeOH Lot# DW454-US

Reagent Water Lot# 59004

Acetic Acid (LCMS Grade) Lot# SHBK2445

25% NH_4OH Lot# —

Extraction (Manifold) Start (Time/Date/Initial): 10:40 8-12-19 K

Extraction (Manifold) Stop (Time/Date/Initial): 13:05 8-12-19 K

IS solution (13C7-PFUnDA 500ppb) Lot #: 19-OLC-01-42D (pascal)

Nylon Filter Lot#: 8196 1103

Extract Storage: Boo Kitty

Completed(Time/Date/Initial): 13:45 8-12-19 K

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 EJD 08/13/19
2nd 08/13/19

Validation Report

Data File: J:\LCMS06\Data\190812_b1\190812_018
Lab ID: R1907111-001
RunType: N/A
Matrix: Water

Date Acquired: 8/12/19 22:23
Batch ID: 646922
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	Perfluoroheptane sulfonic acid (PFHpS)	138	70	130	Narrate high bias, ND
	Perfluorodecane sulfonic acid (PFDS)	168	70	130	Narrate high bias, ND
	13C2-PFDA	144	70	130	Narrate native ok
	13C2-PFDoDA	145	70	130	Narrate native ok
	D3-MeFOSAA	140	70	130	Narrate native ok
	D5-EtFOSAA	131	70	130	Narrate native ok
	13C2-8:2 FTS	185	70	130	Narrate native ok

Primary Review: _____

Secondary Review: _____

1st EJD 08/13/19
2nd 08/13/19

Quantitation Report

Data File:	J:\LCMS06\Data\190812_b1\190812_018	**Instrument:**	K-LCMS-06
Acqu Date:	8/12/19 22:23	**Vial:**	12
Run Type:	N/A	**Dilution:**	1
Lab ID:	R1907111-001	**Raw Units:**	ng/mL

Bottle ID:	R1907111-001.04	**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/29/19	**Receive Date:**	7/29/19

Analysis Lot:	646922	**Prep Lot:**	342310	**Report Group:**	R1907111
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	8/12/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.129	-0.02	4971715	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.020	-0.02	629343	2.6434	53	20 - 109	Y
18O2-PFHxS	4.408	-0.02	635232	4.6619	93	26 - 122	Y
13C4-PFOS	4.751	-0.02	723227	4.4555	89	25 - 121	Y
13C4-PFBA	3.404	-0.03	3926079	4.8593	97	27 - 124	Y
13C5-PFPeA	3.968	-0.02	1720767	3.3851	68	27 - 138	Y
13C2-PFHxA	4.221	-0.02	4634694	4.6375	93	28 - 132	Y
13C4-PFHpA	4.409	-0.02	5135436	4.3844	88	19 - 139	Y
13C4-PFOA	4.584	-0.02	4987845	4.7021	94	22 - 130	Y
13C5-PFNA	4.763	-0.02	4479834	5.3161	106	20 - 127	Y
13C2-PFDA	4.947	-0.02	2883299	4.0701	81	24 - 125	Y
13C2-PFUnDA	5.129	-0.02	3398783	4.4266	89	22 - 125	Y
13C2-PFDoDA	5.303	-0.02	3086698	3.7323	75	19 - 122	Y
13C2-PFTeDA	5.620	-0.02	3350979	3.6777	74	13 - 124	Y
13C8-FOSA	5.241	-0.01	1331183	3.5163	70	18 - 109	Y
D3-MeFOSAA	5.046	-0.02	480013	4.3936	88	9 - 123	Y
D5-EtFOSAA	5.145	-0.02	391921	3.9702	79	12 - 126	Y
13C2-6:2 FTS	4.570	-0.02	520600	6.0337	121	10 - 226	Y
13C2-8:2 FTS	4.944	-0.02	256844	5.2227	104	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)	4.017	-0.02	6686	0.0368	1.0	J	Y
Perfluorohexane sulfonic acid (PFHxS)	4.407	-0.01	10140	0.0575	1.6	J	Y

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

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

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

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1st EJD 08/13/19

2nd 08/13/19

Data File:	J:\LCMS06\Data\190812_b1\190812_018	**Instrument:**	K-LCMS-06
Acqu Date:	8/12/19 22:23	**Vial:**	12
Run Type:	N/A	**Dilution:**	1
Lab ID:	R1907111-001	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.752	-0.02	2382	0.0189	0.53	J	Y
Perfluorodecane sulfonic acid (PFDS)	5.071	-0.06	1105	0.0094	0.26	U	Y
Perfluorobutanoic acid (PFBA)	3.404	-0.03	769843	0.9580	27		Y
Perfluoropentanoic acid (PFPeA)	3.968	-0.02	390149	0.4182	12		Y
Perfluorohexanoic acid (PFHxA)	4.219	-0.02	249667	0.2351	6.6	U	Y
Perfluoroheptanoic acid (PFHpA)	4.408	-0.02	103222	0.1001	2.8	J	Y
Perfluorooctanoic acid (PFOA)	4.582	-0.02	119782	0.0884	2.5		Y
Perfluorononanoic acid (PFNA)	4.759	-0.02	14882	0.0063	0.18	U	Y
Perfluorodecanoic acid (PFDA)	4.944	-0.02	8592	0.0147	0.41	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.127	-0.03	12897	-0.0082	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.304	-0.02	10506	0.0177	0.50	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.466	-0.02	4045	-0.0017	0	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.620	-0.02	38348	0.0164	0.46	U	Y
Perfluorooctane sulfonamide (FOSA)	5.241	-0.01	2080	0.0062	0.17	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.053	-0.01	876	0.0381	1.1	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.569	-0.02	1258	0.0099	0.28	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.957	0.00	12	0.0003	0.0084	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 8/13/2019 12:29:09 PM

Method File: J:\LCMS06\Data\190812_b1\190812_b1.lcm
Project File: J:\LCMS06\Data\190812_b1\190812_b1.damlp
Flags File: J:\LCMS06\Data\190812_b1\190812_b1.damlp

190812_018

Sample ID: R1907111-001RE
Date acquired: 8/12/2019 10:23:18 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b1\190812_018.lcd
Vial: 10 | Inj. Volume: 15.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.129	4971715	4971715	1	5.0000	ng/mL	----
PFBS_1	M	4.017	6686	629876	2	0.0368	ng/mL	----
PFBS-13C	Auto	4.020	629343	4971715	1	2.6434	ng/mL	----
PFBS-13C_IS	Auto	4.020	629876	629876	2	5.0000	ng/mL	----
PFHxS_1	M	4.407	10140	635232	3	0.0575	ng/mL	----
PFHxS-18O	Auto	4.408	635232	4971715	1	4.6619	ng/mL	----
PFHxS-18O_IS	Auto	4.408	635232	635232	3	5.0000	ng/mL	----
PFHpS_1	NI	----	----	635232	3	----	ng/mL	----
PFOS_1	M	4.752	2382	718917	4	0.0189	ng/mL	----
PFOS-13C	Auto	4.751	723227	4971715	1	4.4555	ng/mL	----
PFOS-13C_IS	Auto	4.751	718917	718917	4	5.0000	ng/mL	----
PFDS_1	Auto	5.071	1105	718917	4	0.0094	ng/mL	----
PFBA	Auto	3.404	769843	3926079	5	0.9580	ng/mL	----
PFBA-13C	Auto	3.404	3926079	4971715	1	4.8593	ng/mL	----
PFBA-13C_IS	Auto	3.404	3926079	3926079	5	5.0000	ng/mL	----
PFPeA	Auto	3.968	390149	1720767	6	0.4182	ng/mL	----
PFPeA-13C	Auto	3.968	1720767	4971715	1	3.3851	ng/mL	----
PFPeA-13C_IS	Auto	3.968	1720767	1720767	6	5.0000	ng/mL	----
PFHxA	Auto	4.219	249667	4634694	7	0.2351	ng/mL	----
PFHxA-13C	Auto	4.221	4634694	4971715	1	4.6375	ng/mL	----
PFHxA-13C_IS	Auto	4.221	4634694	4634694	7	5.0000	ng/mL	----
PFHpA	Auto	4.408	103222	5135436	8	0.1001	ng/mL	----
PFHpA-13C	Auto	4.409	5135436	4971715	1	4.3844	ng/mL	----
PFHpA-13C_IS	Auto	4.409	5135436	5135436	8	5.0000	ng/mL	----
PFOA	M	4.582	119782	4987845	9	0.0884	ng/mL	----
PFOA-13C	Auto	4.584	4987845	4971715	1	4.7021	ng/mL	----
PFOA-13C_IS	Auto	4.584	4987845	4987845	9	5.0000	ng/mL	----
PFNA	M	4.759	14882	4479834	10	0.0063	ng/mL	----
PFNA-13C	Auto	4.763	4479834	4971715	1	5.3161	ng/mL	----
PFNA-13C_IS	Auto	4.763	4479834	4479834	10	5.0000	ng/mL	----
PFDA	M	4.944	8592	2883299	11	0.0147	ng/mL	----
PFDA-13C	Auto	4.947	2883299	4971715	1	4.0701	ng/mL	----
PFDA-13C_IS	Auto	4.947	2883299	2883299	11	5.0000	ng/mL	----
PFUnA	Auto	5.127	12897	3398783	12	-0.0082	ng/mL	----
PFUnA-13C	Auto	5.129	3398783	4971715	1	4.4266	ng/mL	----
PFUnA-13C_IS	Auto	5.129	3398783	3398783	12	5.0000	ng/mL	----
PFDoA	Auto	5.304	10506	3086698	13	0.0177	ng/mL	----
PFDoA-13C	Auto	5.303	3086698	4971715	1	3.7323	ng/mL	----
PFDoA-13C_IS	Auto	5.303	3086698	3086698	13	5.0000	ng/mL	----
PFTrDA	M	5.466	4045	3350979	14	-0.0017	ng/mL	----
PFTeDA	Auto	5.620	38348	3350979	14	0.0164	ng/mL	----
PFTeDA-13C	Auto	5.620	3350979	4971715	1	3.6777	ng/mL	----
PFTeDA-13C_IS	Auto	5.620	3350979	3350979	14	5.0000	ng/mL	----
FOSA	M	5.241	2080	1331183	16	0.0062	ng/mL	----
FOSA-13C	Auto	5.241	1331183	4971715	1	3.5163	ng/mL	----
FOSA-13C_IS	Auto	5.241	1331183	1331183	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.053	876	480013	21	0.0381	ng/mL	----
N-MeFOSAA-d3	Auto	5.046	480013	4971715	1	4.3936	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.046	480013	480013	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	391921	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.145	391921	4971715	1	3.9702	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.145	391921	391921	22	5.0000	ng/mL	----
6_2-FTS_1	M	4.569	1258	520600	24	0.0099	ng/mL	----
6_2-FTS-13C	Auto	4.570	520600	4971715	1	6.0337	ng/mL	----
6_2-FTS-13C_IS	Auto	4.570	520600	520600	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.957	12	256844	25	0.0003	ng/mL	----
8_2-FTS-13C	Auto	4.944	256844	4971715	1	5.2227	ng/mL	----
8_2-FTS-13C_IS	Auto	4.944	256844	256844	25	5.0000	ng/mL	----

Insight Report

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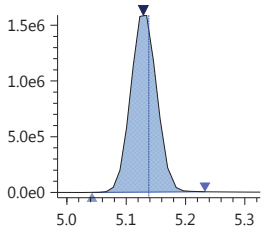
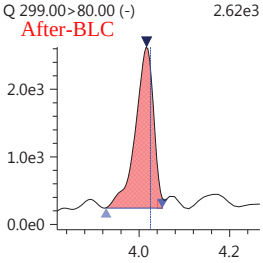
13C7-PFUnDA_IS
Conc 5.0000
RT 5.129 Area 4971715
ISTD 570.00>525.00 (-) 1.59e6



PFBS_1
Conc 0.0368
RT 4.017 Area 6686
Q 299.00>80.00 (-) 2.62e3



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Conc 2.6434
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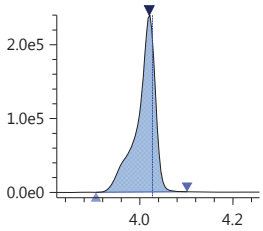
Q 301.80>80.00 (-) 2.40e5



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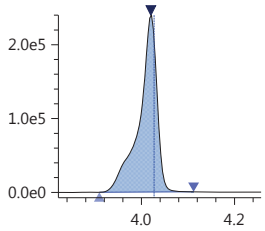
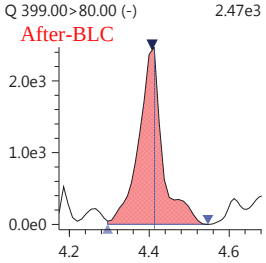
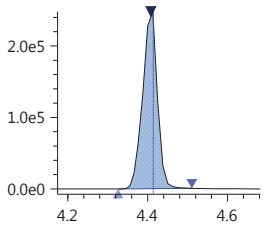


PFHxS_1
Conc 0.0575
RT 4.407 Area 10140
Q 399.00>80.00 (-) 2.47e3



PFHxS-18O
Conc 4.6619
RT 4.408 Area 635232
Q 402.70>84.05 (-) 2.48e5



PFHxS-18O_IS
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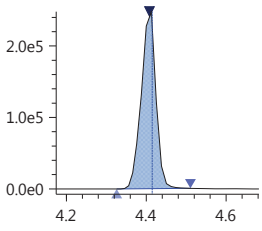
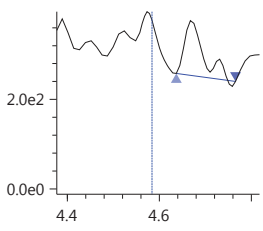
ISTD 402.70>84.05 (-) 2.48e5



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 3.96e2



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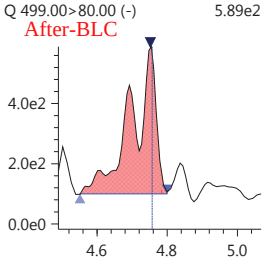
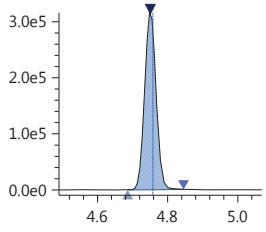
RT 4.752 Area 2382
Q 499.00>80.00 (-) 5.89e2



PFOS-13C
Conc 4.4555
RT 4.751 Area 723227
Q 502.80>80.05 (-) 3.16e5



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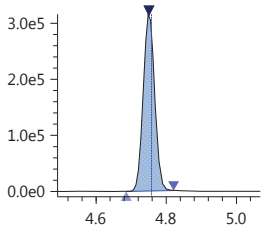

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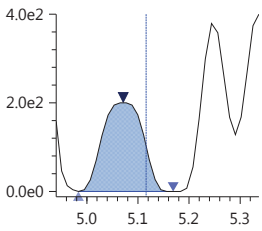
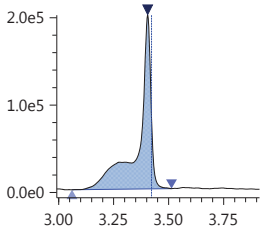
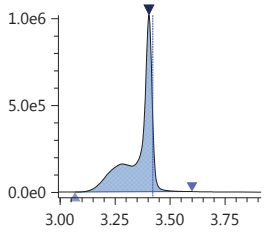
Conc 0.0094
RT 5.071 Area 1105
Q 599.00>79.90 (-) 4.00e2



PFBA
Conc 0.9580
RT 3.404 Area 769843
Q 213.00>169.10 (-) 2.03e5



PFBA-13C
Conc 4.8593
RT 3.404 Area 3926079
Q 216.90>172.15 (-) 1.02e6



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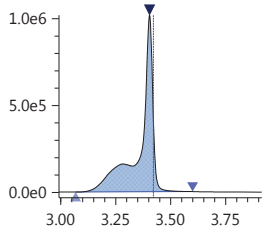
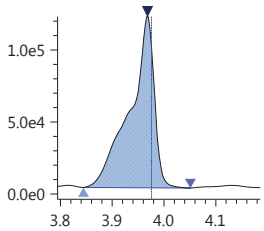
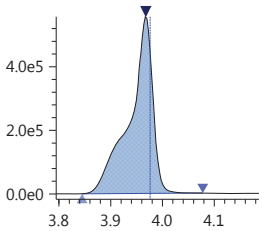


PFPeA
Conc 0.4182
RT 3.968 Area 390149
Q 263.05>219.10 (-) 1.23e5



PFPeA-13C
Conc 3.3851
RT 3.968 Area 1720767
Q 267.90>223.00 (-) 5.57e5



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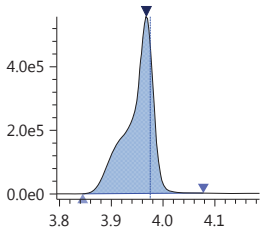

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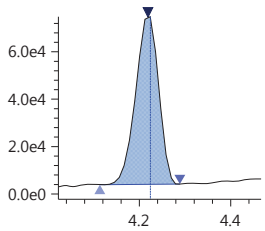

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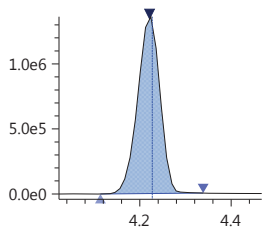

Insight Report

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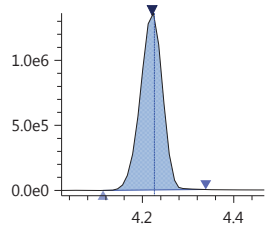
ISTD 314.90>270.10 (-) 1.36e6



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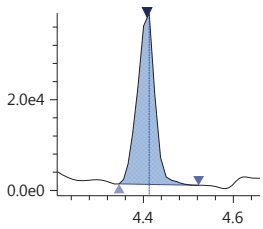

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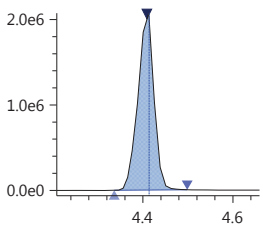

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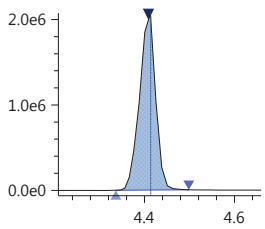

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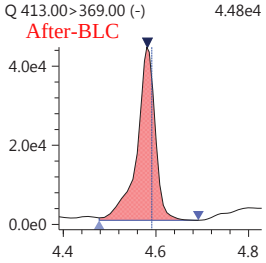

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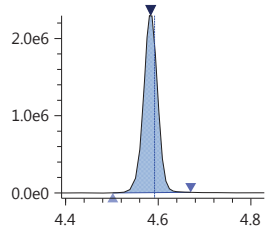

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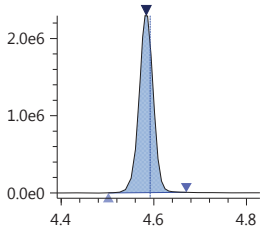

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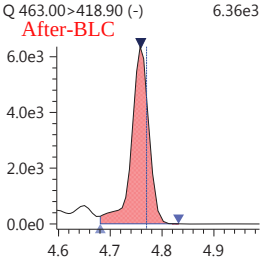

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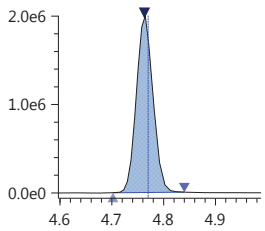

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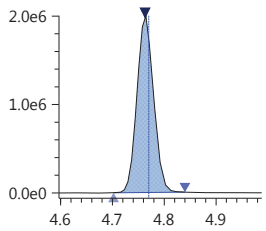

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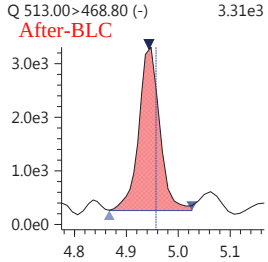

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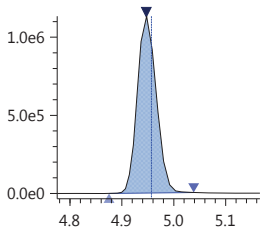

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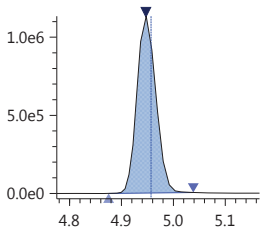

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Conc -0.0082
RT 5.127 Area 12897
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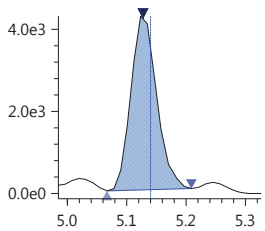

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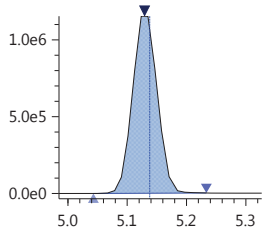

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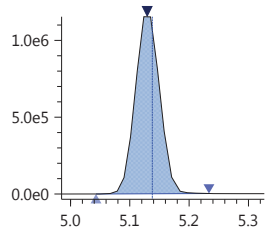

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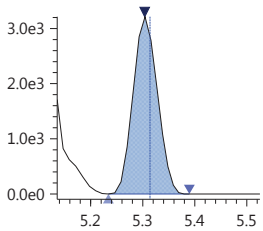

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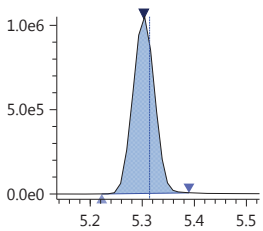

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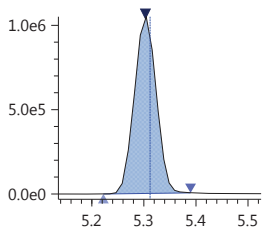

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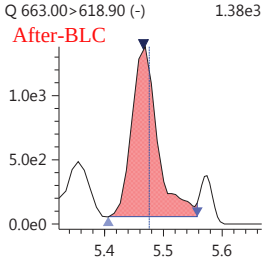

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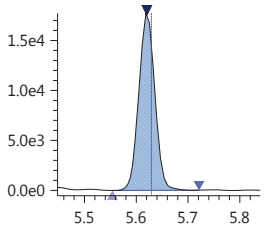

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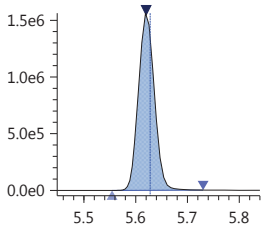
Q 714.70>669.90 (-) 1.56e6



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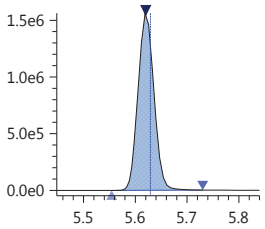

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Conc 0.0062
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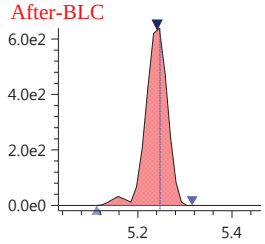
After-BLC



FOSA-13C
Conc 3.5163
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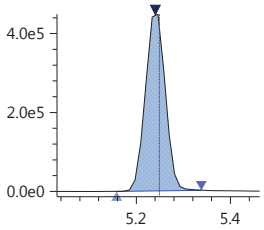
Q 506.00>78.05 (-) 4.49e5



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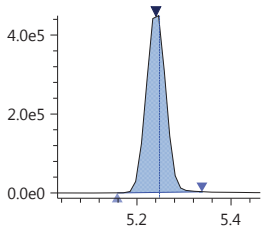

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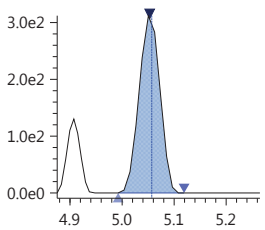

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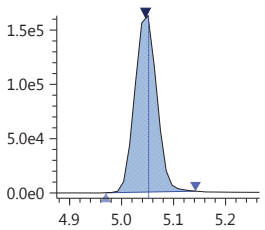
Q 572.80>419.05 (-) 1.63e5



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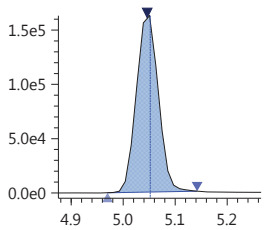

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RT ---- Area ----
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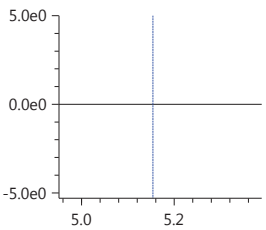

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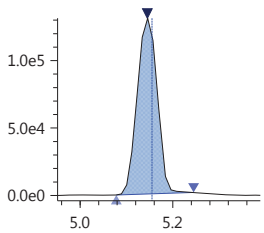

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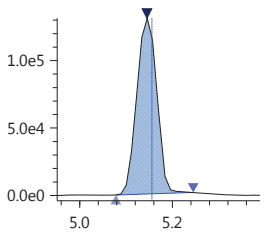

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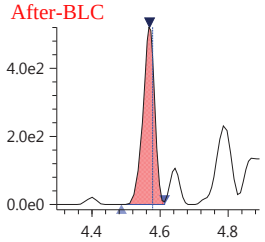
Q 427.00>407.00 (-) 5.21e2

After-BLC



6_2-FTS-13C
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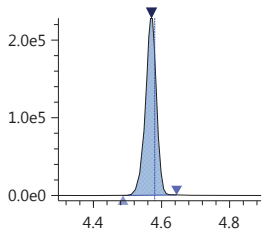
Q 428.90>409.00 (-) 2.28e5



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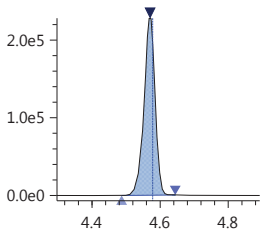

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Conc 0.0003
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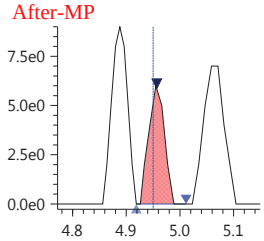
Q 527.10>506.90 (-) 9.00e0

After-MP



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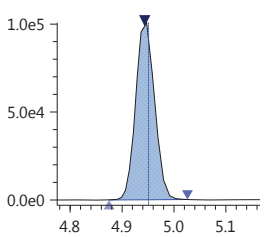

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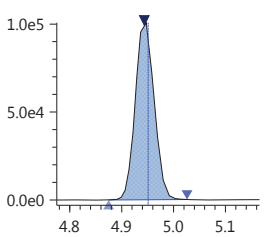

Insight Report

Printed at 8/13/2019 10:42:21 AM

190812_018

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Date acquired: 8/12/2019 10:23:18 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b1\190812_018.lcd
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13C7-PFUnDA_IS
Conc 5.0000
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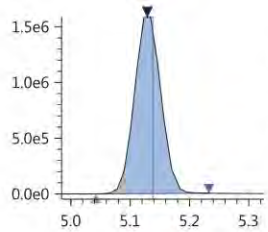
ISTD 570.00>525.00 (-) 1.59e6



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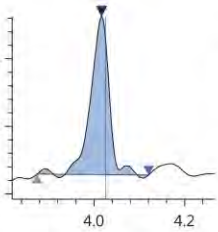

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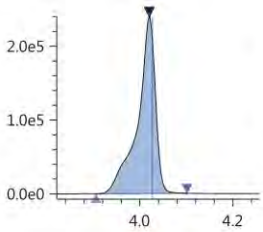
Q 301.80>80.00 (-) 2.40e5



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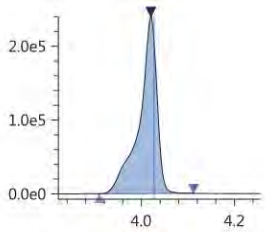

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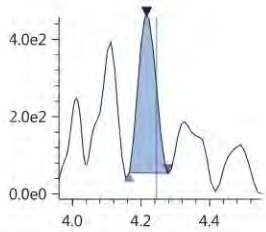

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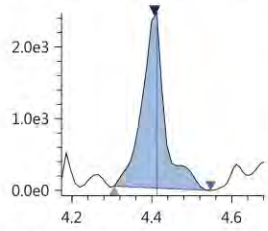

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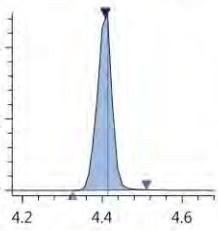
Q 402.70>84.05 (-) 2.48e5



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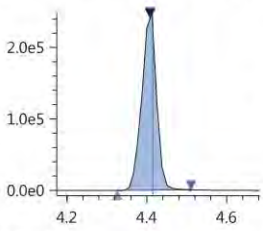

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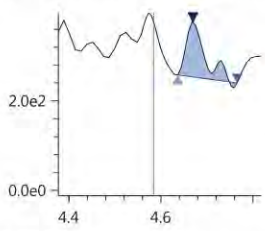

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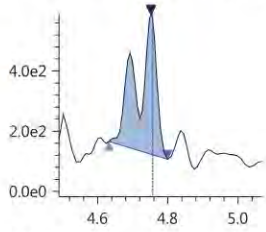

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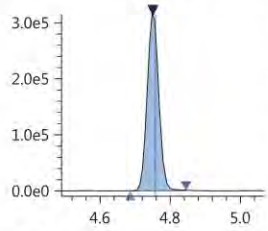

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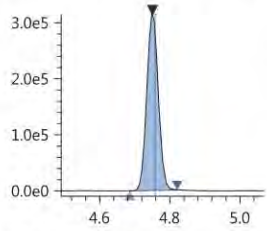

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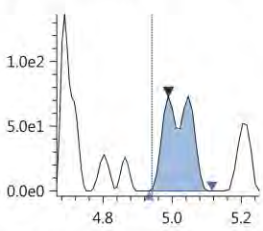

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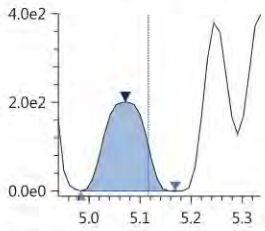
Q 599.00>79.90 (-) 4.00e2



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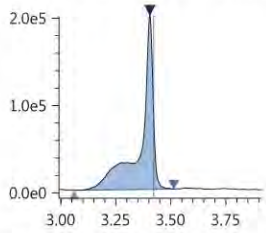

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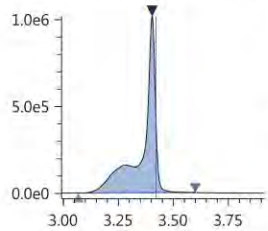
Q 216.90>172.15 (-) 1.02e6



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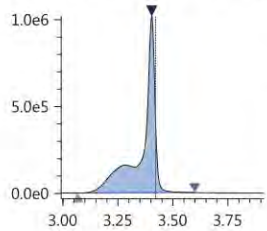

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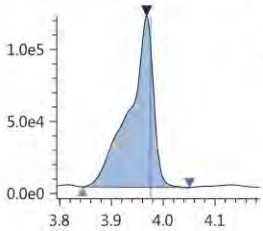

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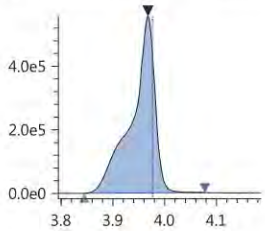

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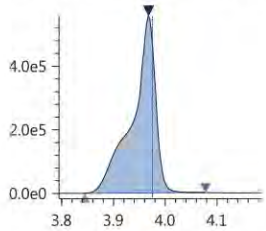

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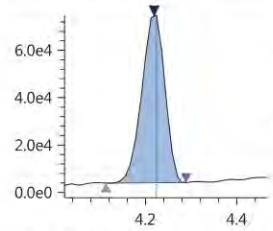

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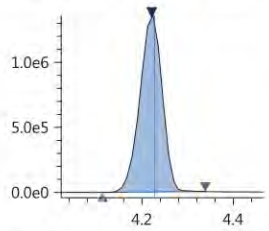

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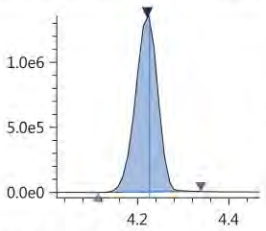

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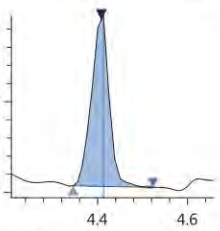

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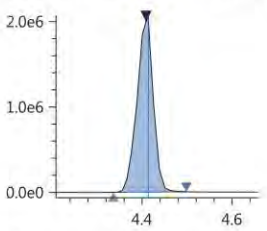

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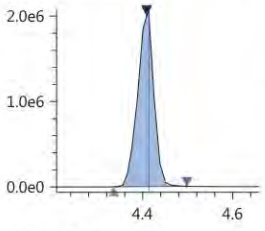

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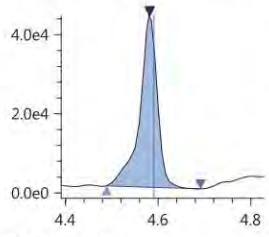

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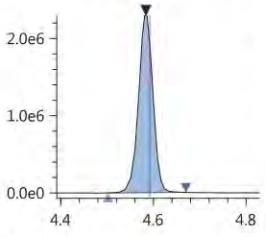

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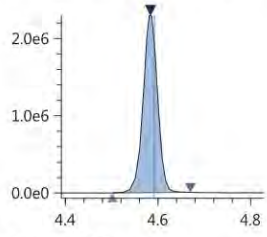

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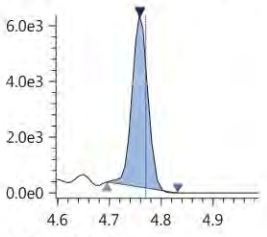

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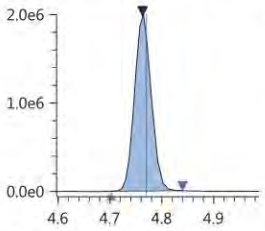

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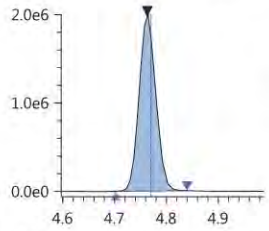

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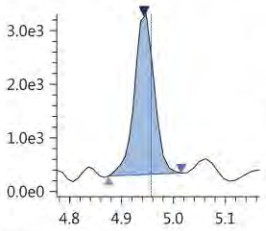

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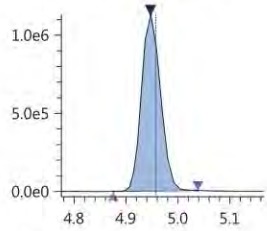

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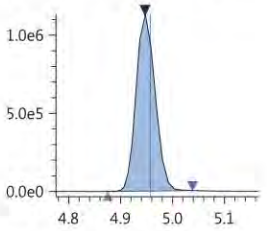

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Conc -0.0082
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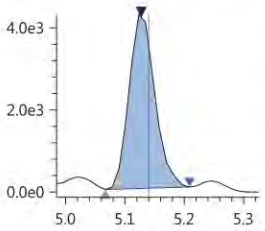

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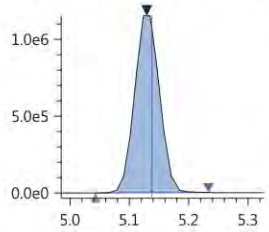

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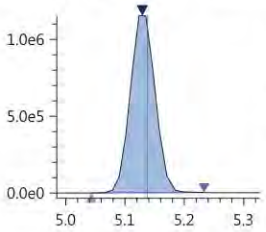

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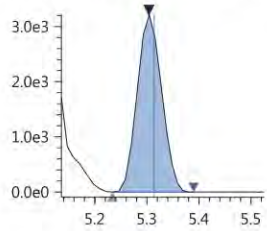

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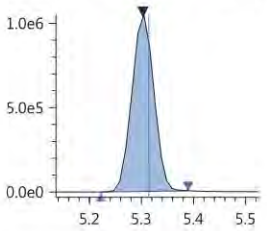

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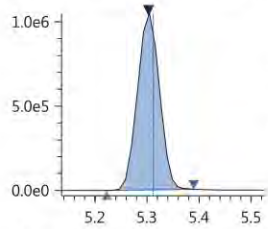

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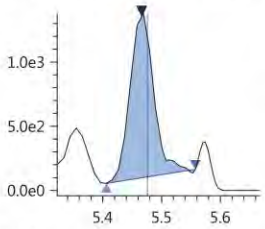

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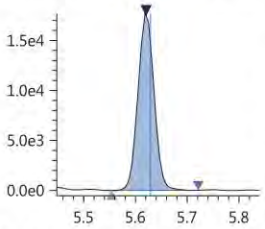

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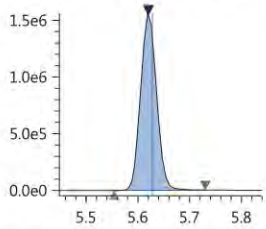

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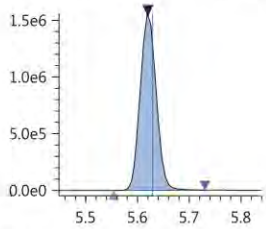
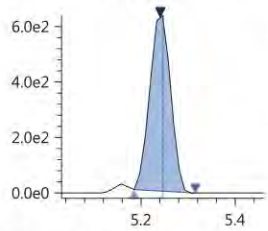
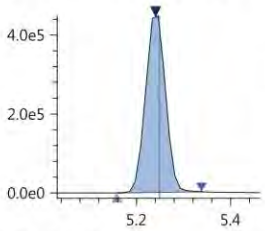
RT 5.620 Area 3350979
ISTD 714.70>669.90 (-) 1.56e6



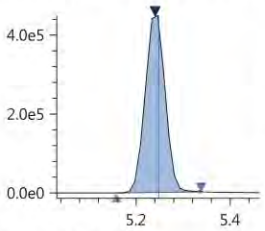
FOSA
Conc 0.0059
RT 5.241 Area 1963
Q 498.20>78.00 (-) 6.39e2



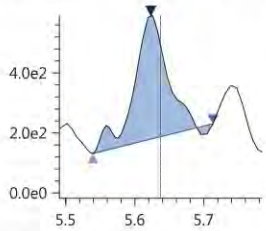
FOSA-13C
Conc 3.5163
RT 5.241 Area 1331183
Q 506.00>78.05 (-) 4.49e5



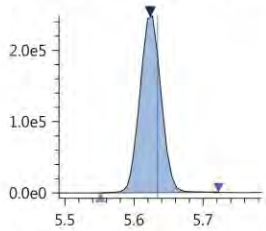
FOSA-13C_IS
Conc 5.0000
RT 5.241 Area 1331183
ISTD 506.00>78.05 (-) 4.49e5



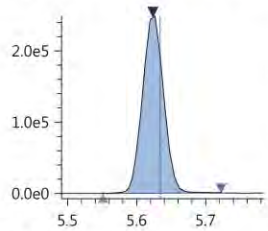
N-MeFOSA
Conc 0.0081
RT 5.623 Area 1368
Q 512.00>169.10 (-) 5.91e2



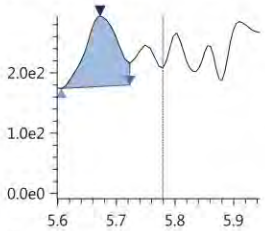
N-MeFOSA-d3
Conc 3.5980
RT 5.624 Area 534419
Q 514.90>168.90 (-) 2.49e5



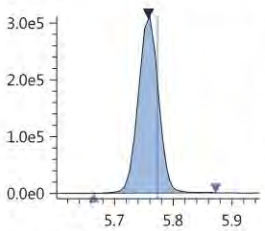
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.624 Area 534419
ISTD 514.90>168.90 (-) 2.49e5



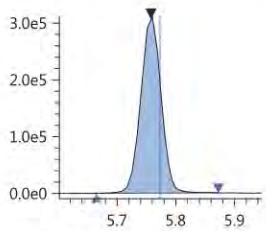
N-EtFOSA
Conc 0.0157
RT 5.672 Area 450
Q 526.90>169.10 (-) 2.94e2



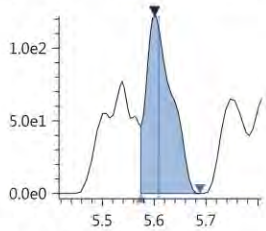
N-EtFOSA-d9
Conc 3.3859
RT 5.758 Area 748953
Q 530.90>169.15 (-) 3.12e5



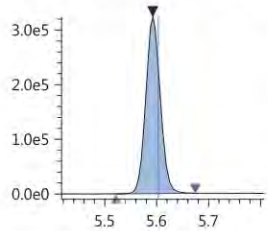
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.758 Area 748953
ISTD 530.90>169.15 (-) 3.12e5



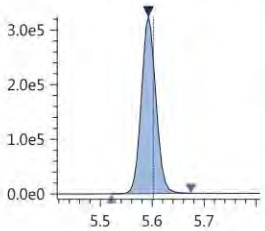
N-MeFOSE
Conc 0.0026
RT 5.601 Area 418
Q 616.00>59.00 (-) 1.22e2



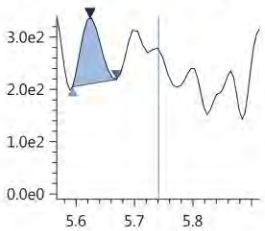
N-MeFOSE-d7
Conc 3.4497
RT 5.592 Area 629449
Q 622.70>59.10 (-) 3.24e5



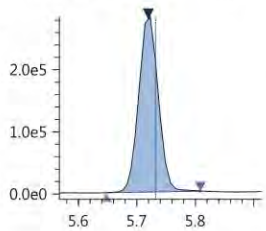
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.592 Area 629449
ISTD 622.70>59.10 (-) 3.24e5



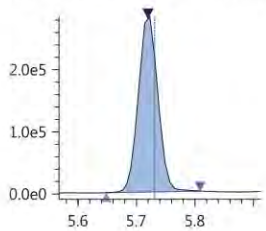
N-EtFOSE
Conc 0.0018
RT 5.624 Area 285
Q 630.00>58.90 (-) 3.39e2



N-EtFOSE-d9
Conc 3.5872
RT 5.720 Area 659368
Q 638.70>59.10 (-) 2.85e5



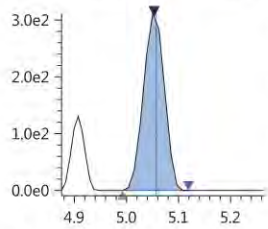
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.720 Area 659368
ISTD 638.70>59.10 (-) 2.85e5



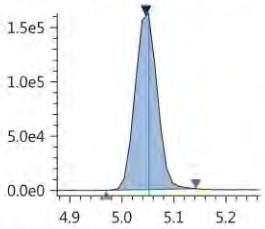
Insight Report

Printed at 8/13/2019 10:42:21 AM

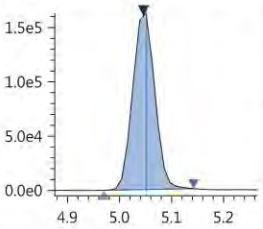
N-MeFOSAA
Conc 0.0381
RT 5.053 Area 876
Q 570.20>419.00 (-) 3.12e2



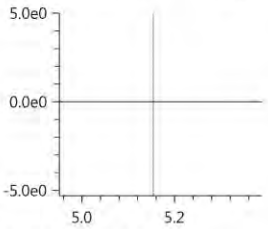
N-MeFOSAA-d3
Conc 4.3936
RT 5.046 Area 480013
Q 572.80>419.05 (-) 1.63e5



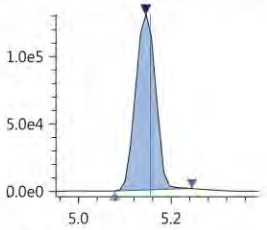
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.046 Area 480013
ISTD 572.80>419.05 (-) 1.63e5



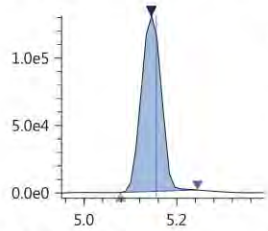
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



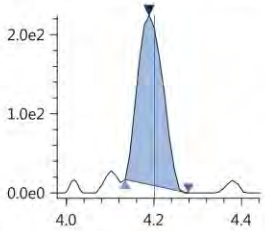
N-EtFOSAA-d5
Conc 3.9702
RT 5.145 Area 391921
Q 588.80>419.00 (-) 1.31e5



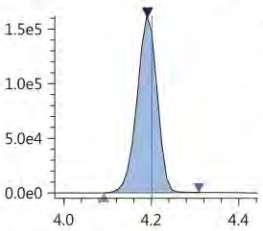
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.145 Area 391921
ISTD 588.80>419.00 (-) 1.31e5



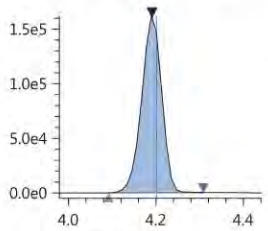
4_2-FTS_1
Conc 0.0067
RT 4.188 Area 863
Q 327.00>307.05 (-) 2.24e2



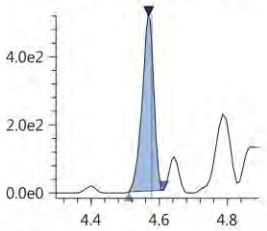
4_2-FTS-13C
Conc 5.6593
RT 4.191 Area 518016
Q 328.80>309.05 (-) 1.62e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.191 Area 518016
ISTD 328.80>309.05 (-) 1.62e5



6_2-FTS_1
Conc 0.0097
RT 4.569 Area 1223
Q 427.00>407.00 (-) 5.21e2



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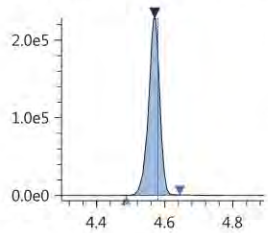
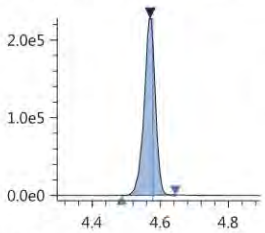
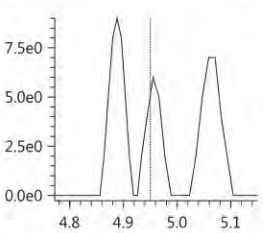
Conc 6.0337
RT 4.570 Area 520600
Q 428.90>409.00 (-) 2.28e5



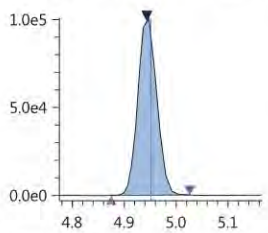
6_2-FTS-13C_IS
Conc 5.0000
RT 4.570 Area 520600
ISTD 428.90>409.00 (-) 2.28e5



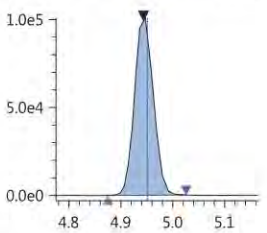
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 9.00e0



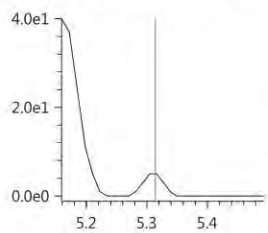
8_2-FTS-13C
Conc 5.2227
RT 4.944 Area 256844
Q 528.80>509.00 (-) 1.01e5



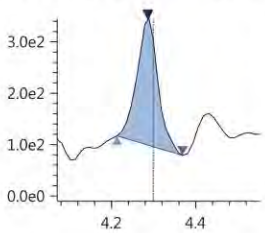
8_2-FTS-13C_IS
Conc 5.0000
RT 4.944 Area 256844
ISTD 528.80>509.00 (-) 1.01e5



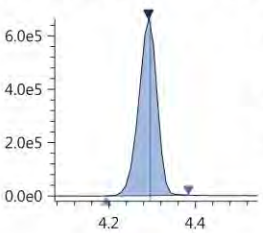
10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 4.00e1



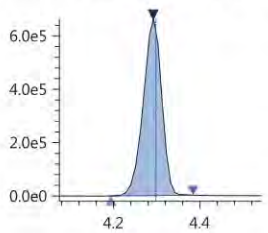
HPFO_DA
Conc 0.0023
RT 4.286 Area 855
Q 329.00>169.00 (-) 3.45e2



HFPO_DA-13C
Conc 3.9385
RT 4.292 Area 1966140
Q 332.00>286.80 (-) 6.64e5



HFPO_DA-13C_IS
Conc 5.0000
RT 4.292 Area 1966140
ISTD 332.00>286.80 (-) 6.64e5



1st EJD 08/09/19
2nd 08/12/19

Validation Report

Data File: J:\LCMS06\Data\190807_b8\190807_163
Lab ID: R1907111-002
RunType: N/A
Matrix: Water

Date Acquired: 8/8/19 19:46
Batch ID: 646328
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	Perfluorodecane sulfonic acid (PFDS)	136	70	130	Narrate high bias, ND
	18O2-PFHxS	137	70	130	narrate native ok
	13C4-PFHpA	132	70	130	narrate native ok
	13C5-PFNA	144	70	130	narrate native ok
	13C2-PFDA	135	70	130	narrate native ok
	D5-EtFOSAA	142	70	130	narrate native ok

Primary Review: _____

Secondary Review: _____

1st EJD 08/09/19
2nd 08/12/19

Quantitation Report

Data File:	J:\LCMS06\Data\190807_b8\190807_163	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 19:46	**Vial:**	23
Run Type:	N/A	**Dilution:**	1
Lab ID:	R1907111-002	**Raw Units:**	ng/mL

Bottle ID:	R1907111-002.01	**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/29/19	**Receive Date:**	7/29/19

Analysis Lot:	646328	**Prep Lot:**	341924	**Report Group:**	R1907111
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	8/6/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.125	0.00	3247823	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.015	0.00	520786	3.3484	67	20 - 109	Y
18O2-PFHxS	4.405	0.00	538516	6.0499	121	26 - 122	Y
13C4-PFOS	4.747	0.00	523026	4.9324	99	25 - 121	Y
13C4-PFBA	3.399	-0.01	2826590	5.3554	107	27 - 124	Y
13C5-PFPeA	3.916	-0.05	1581603	4.7628	95	27 - 138	Y
13C2-PFHxA	4.212	0.00	3404904	5.2154	104	28 - 132	Y
13C4-PFHpA	4.405	0.00	4756932	6.2169	124	19 - 139	Y
13C4-PFOA	4.579	0.00	3161271	4.5620	91	22 - 130	Y
13C5-PFNA	4.760		3159697	5.7397	115	20 - 127	Y
13C2-PFDA	4.943	0.00	2570575	5.5546	111	24 - 125	Y
13C2-PFUnDA	5.125	0.00	1812906	3.6144	72	22 - 125	Y
13C2-PFDoDA	5.299		2353309	4.3558	87	19 - 122	Y
13C2-PFTeDA	5.617		2690542	4.5202	90	13 - 124	Y
13C8-FOSA	5.249	+0.01	901920	3.6470	73	18 - 109	Y
D3-MeFOSAA	5.042		290808	4.0746	81	9 - 123	Y
D5-EtFOSAA	5.140	+0.00	330673	5.1277	103	12 - 126	Y
13C2-6:2 FTS	4.567		317794	5.6382	113	10 - 226	Y
13C2-8:2 FTS	4.936	0.00	156626	4.8753	98	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)	3.943	-0.07	418	0.0028	0.071	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.389	-0.01	2385	0.0160	0.41	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: 8/9/19 17:47
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1st EJD 08/09/19

2nd 08/12/19

Data File:	J:\LCMS06\Data\190807_b8\190807_163	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 19:46	**Vial:**	23
Run Type:	N/A	**Dilution:**	1
Lab ID:	R1907111-002	**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)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.745	0.00	535	0.0059	0.15	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.400	-0.01	3106	0.0054	0.14	U	Y
Perfluoropentanoic acid (PFPeA)	3.916	-0.05	78534	0.0029	0.074	U	Y
Perfluorohexanoic acid (PFHxA)	4.207	-0.01	42165	0.0340	0.86	U	Y
Perfluoroheptanoic acid (PFHpA)	4.388	-0.02	17346	0.0024	0.061	U	Y
Perfluorooctanoic acid (PFOA)	4.574	-0.01	25432	0.0162	0.41	J	Y
Perfluorononanoic acid (PFNA)	4.745	-0.02	9496	0.0046	0.12	U	Y
Perfluorodecanoic acid (PFDA)	4.937	-0.01	8745	0.0168	0.43	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.118	-0.01	16730	0.0227	0.58	U	Y
Perfluorododecanoic acid (PFDoDA)	5.293	-0.01	2064	-0.0027	0	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.465	+0.00	6911	0.0078	0.20	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.618	+0.00	29727	0.0107	0.27	U	Y
Perfluorooctane sulfonamide (FOSA)	5.250	+0.01	1633	0.0072	0.18	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.045	+0.00	702	0.0421	1.1	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.570	+0.00	3906	0.0506	1.3	J	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.930	-0.01	33	0.0012	0.030	U	Y

Prep Amount:	315.0000 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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190807_163

Sample ID: R1907111-002
Date acquired: 8/8/2019 7:46:33 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_163.lcd
Vial: 21 | Inj. Volume: 15.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.125	3247823	3247823	1	5.0000	ng/mL	----
PFBS_1	M	3.943	418	521128	2	0.0028	ng/mL	----
PFBS-13C	Auto	4.015	520786	3247823	1	3.3484	ng/mL	----
PFBS-13C_IS	Auto	4.015	521128	521128	2	5.0000	ng/mL	----
PFHxS_1	Auto	4.389	2385	538516	3	0.0160	ng/mL	----
PFHxS-18O	Auto	4.405	538516	3247823	1	6.0499	ng/mL	----
PFHxS-18O_IS	Auto	4.405	538516	538516	3	5.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	538516	3	----	ng/mL	----
PFOS_1	Auto	4.745	535	521066	4	0.0059	ng/mL	----
PFOS-13C	Auto	4.747	523026	3247823	1	4.9324	ng/mL	----
PFOS-13C_IS	Auto	4.747	521066	521066	4	5.0000	ng/mL	----
PFDS_1	ND(W/B)	----	----	521066	4	----	ng/mL	----
PFBA	M	3.400	3106	2826590	5	0.0054	ng/mL	----
PFBA-13C	Auto	3.399	2826590	3247823	1	5.3554	ng/mL	----
PFBA-13C_IS	Auto	3.399	2826590	2826590	5	5.0000	ng/mL	----
PFPeA	M	3.916	78534	1581603	6	0.0029	ng/mL	----
PFPeA-13C	Auto	3.916	1581603	3247823	1	4.7628	ng/mL	----
PFPeA-13C_IS	Auto	3.916	1581603	1581603	6	5.0000	ng/mL	----
PFHxA	Auto	4.207	42165	3404904	7	0.0340	ng/mL	----
PFHxA-13C	Auto	4.212	3404904	3247823	1	5.2154	ng/mL	----
PFHxA-13C_IS	Auto	4.212	3404904	3404904	7	5.0000	ng/mL	----
PFHpA	M	4.388	17346	4756932	8	0.0024	ng/mL	----
PFHpA-13C	Auto	4.405	4756932	3247823	1	6.2169	ng/mL	----
PFHpA-13C_IS	Auto	4.405	4756932	4756932	8	5.0000	ng/mL	----
PFOA	Auto	4.574	25432	3161271	9	0.0162	ng/mL	----
PFOA-13C	Auto	4.579	3161271	3247823	1	4.5620	ng/mL	----
PFOA-13C_IS	Auto	4.579	3161271	3161271	9	5.0000	ng/mL	----
PFNA	Auto	4.745	9496	3159697	10	0.0046	ng/mL	----
PFNA-13C	Auto	4.760	3159697	3247823	1	5.7397	ng/mL	----
PFNA-13C_IS	Auto	4.760	3159697	3159697	10	5.0000	ng/mL	----
PFDA	M	4.937	8745	2570575	11	0.0168	ng/mL	----
PFDA-13C	Auto	4.943	2570575	3247823	1	5.5546	ng/mL	----
PFDA-13C_IS	Auto	4.943	2570575	2570575	11	5.0000	ng/mL	----
PFUnA	M	5.118	16730	1812906	12	0.0227	ng/mL	----
PFUnA-13C	Auto	5.125	1812906	3247823	1	3.6144	ng/mL	----
PFUnA-13C_IS	Auto	5.125	1812906	1812906	12	5.0000	ng/mL	----
PFDoA	Auto	5.293	2064	2353309	13	-0.0027	ng/mL	----
PFDoA-13C	Auto	5.299	2353309	3247823	1	4.3558	ng/mL	----
PFDoA-13C_IS	Auto	5.299	2353309	2353309	13	5.0000	ng/mL	----
PFTrDA	M	5.465	6911	2690542	14	0.0078	ng/mL	----
PFTeDA	Auto	5.618	29727	2690542	14	0.0107	ng/mL	----
PFTeDA-13C	Auto	5.617	2690542	3247823	1	4.5202	ng/mL	----
PFTeDA-13C_IS	Auto	5.617	2690542	2690542	14	5.0000	ng/mL	----
FOSA	Auto	5.250	1633	901920	16	0.0072	ng/mL	----
FOSA-13C	Auto	5.249	901920	3247823	1	3.6470	ng/mL	----
FOSA-13C_IS	Auto	5.249	901920	901920	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.045	702	290808	21	0.0421	ng/mL	----
N-MeFOSAA-d3	Auto	5.042	290808	3247823	1	4.0746	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.042	290808	290808	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	330673	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.140	330673	3247823	1	5.1277	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.140	330673	330673	22	5.0000	ng/mL	----
6_2-FTS_1	M	4.570	3906	317794	24	0.0506	ng/mL	----
6_2-FTS-13C	Auto	4.567	317794	3247823	1	5.6382	ng/mL	----
6_2-FTS-13C_IS	Auto	4.567	317794	317794	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.930	33	156626	25	0.0012	ng/mL	----
8_2-FTS-13C	Auto	4.936	156626	3247823	1	4.8753	ng/mL	----
8_2-FTS-13C_IS	Auto	4.936	156626	156626	25	5.0000	ng/mL	----

Insight Report

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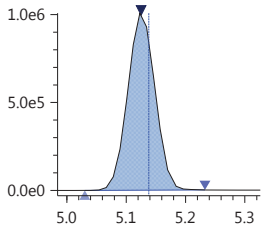
13C7-PFUnDA_IS
Conc 5.0000
RT 5.125 Area 3247823
ISTD 570.00>525.00 (-) 1.01e6



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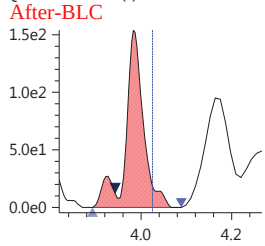
Conc 0.0028
RT 3.943 Area 418
Q 299.00>80.00 (-) 1.54e2



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Conc 3.3484
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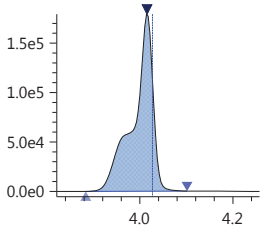

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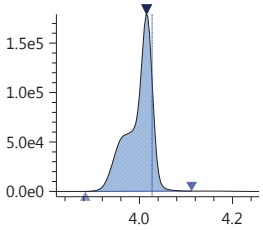

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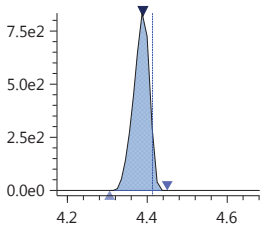

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Conc 6.0499
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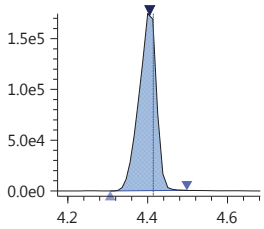
Q 402.70>84.05 (-) 1.75e5



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Conc 5.0000
RT 4.405 Area 538516
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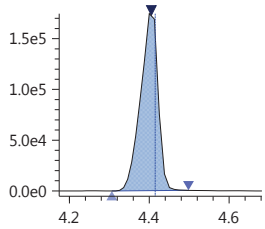

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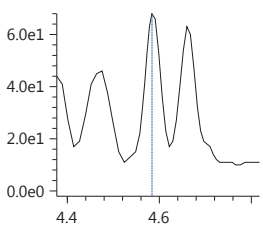
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 6.80e1



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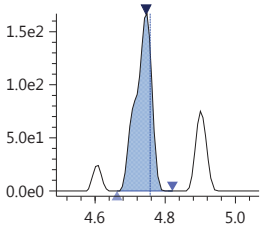

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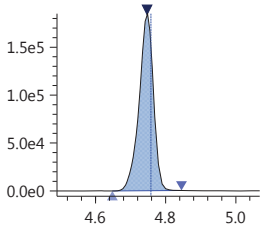

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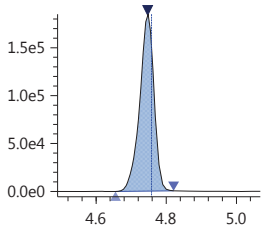

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Conc ----
RT ---- Area ----
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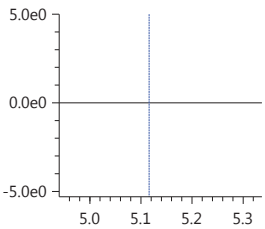

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Conc 0.0054
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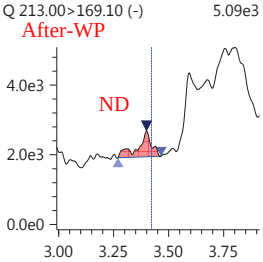
Q 213.00>169.10 (-) 5.09e3



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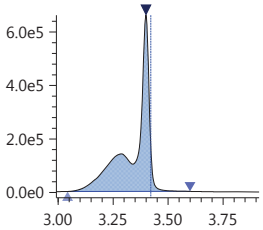
Conc 5.3554
RT 3.399 Area 2826590
Q 216.90>172.15 (-) 6.63e5



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RT 3.399 Area 2826590
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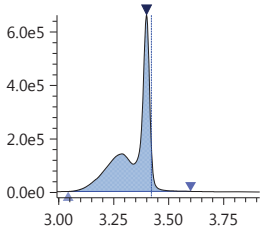

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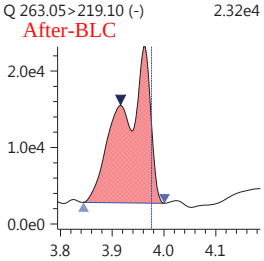
Q 263.05>219.10 (-) 2.32e4



PFPeA-13C
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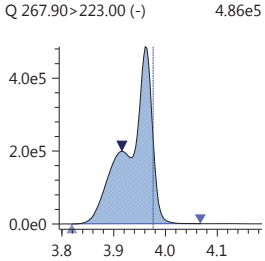

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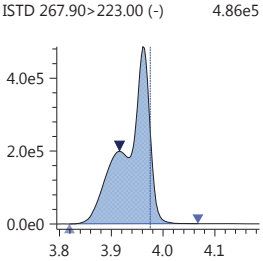

PFHxA
Conc 0.0340
RT 4.207 Area 42165
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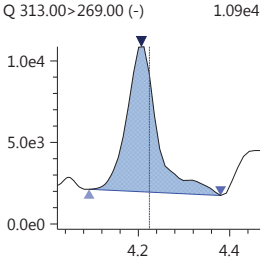

PFHxA-13C
Conc 5.2154
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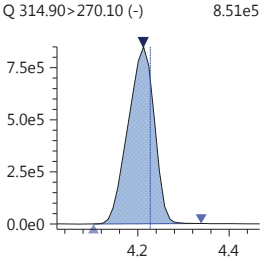

Insight Report

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PFHxA-13C_IS
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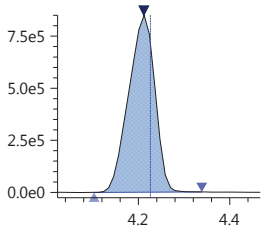
ISTD 314.90>270.10 (-) 8.51e5



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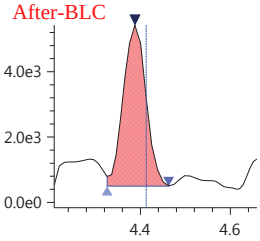

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Conc 6.2169
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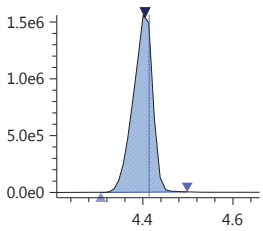
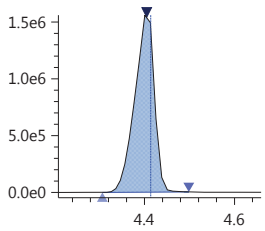
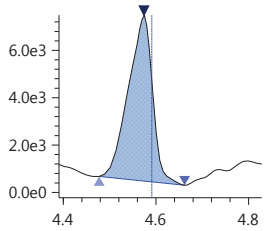


PFHpA-13C_IS
Conc 5.0000
RT 4.405 Area 4756932
ISTD 366.90>322.10 (-) 1.56e6



PFOA
Conc 0.0162
RT 4.574 Area 25432
Q 413.00>369.00 (-) 7.49e3



PFOA-13C
Conc 4.5620
RT 4.579 Area 3161271
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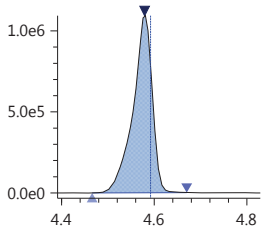

PFOA-13C_IS
Conc 5.0000
RT 4.579 Area 3161271
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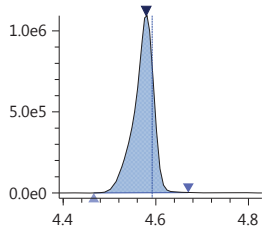

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Conc 0.0046
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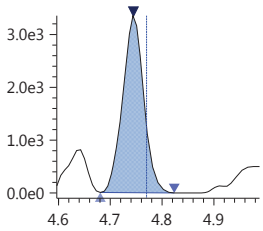

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RT 4.760 Area 3159697
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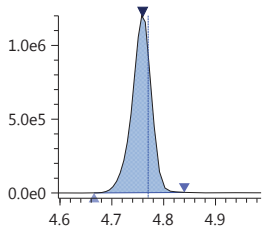

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RT 4.760 Area 3159697
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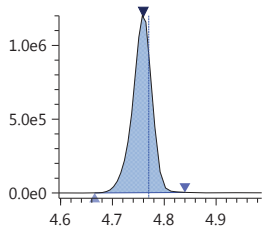

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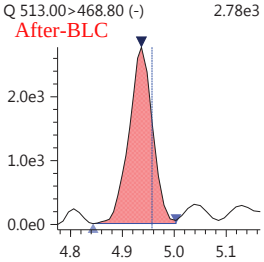

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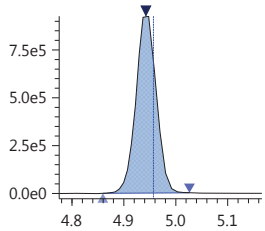

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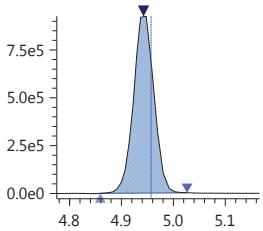

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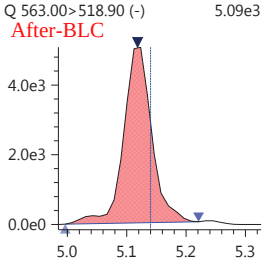
Conc 0.0227
RT 5.118 Area 16730
Q 563.00>518.90 (-) 5.09e3



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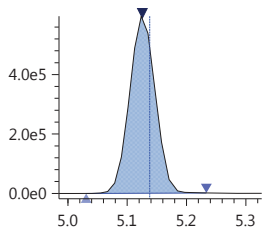

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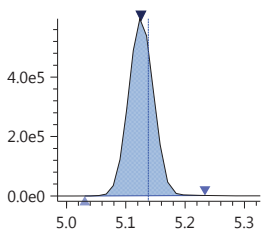

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Conc -0.0027
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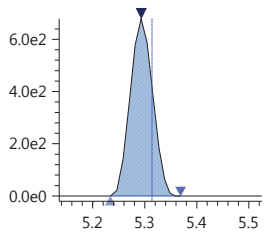

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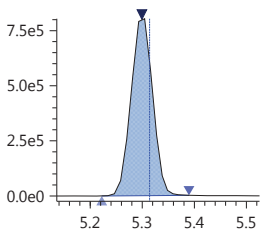

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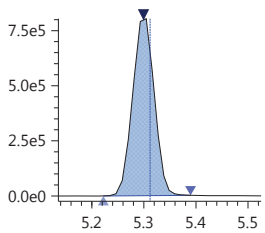

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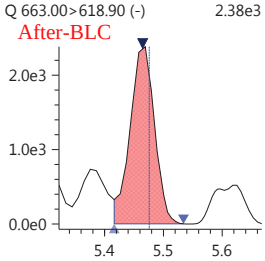

Insight Report

Printed at 8/9/2019 5:29:05 PM

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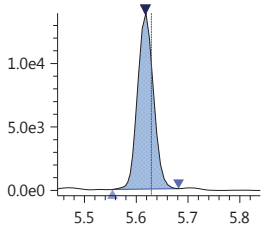

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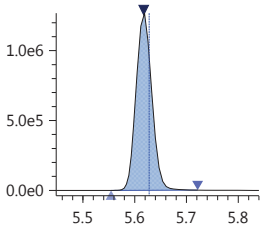
RT 5.617 Area 2690542
Q 714.70>669.90 (-) 1.27e6



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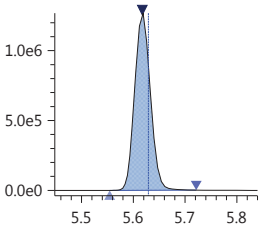

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Conc 0.0072
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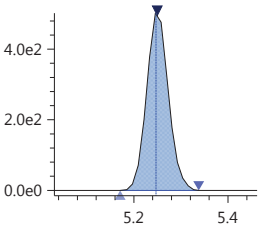

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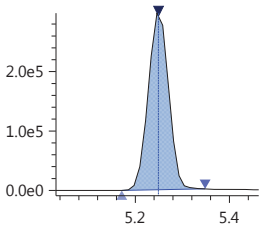
Conc 3.6470
RT 5.249 Area 901920
Q 506.00>78.05 (-) 2.98e5



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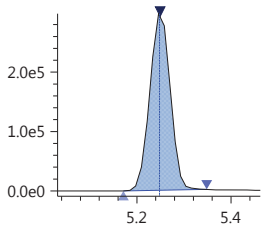
ISTD 506.00>78.05 (-) 2.98e5



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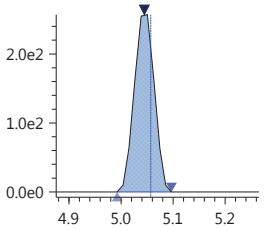

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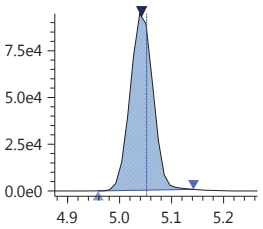
RT 5.042 Area 290808
Q 572.80>419.05 (-) 9.48e4



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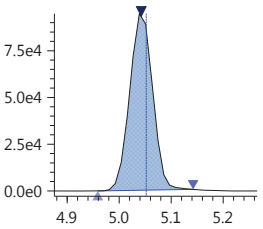

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RT ---- Area ----
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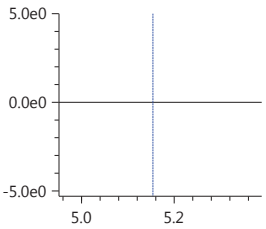

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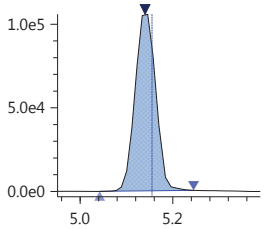
Q 588.80>419.00 (-) 1.06e5



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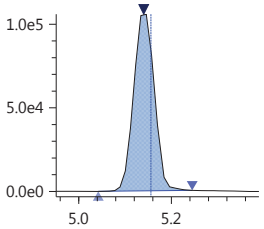

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RT 4.570 Area 3906
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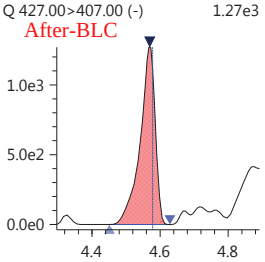

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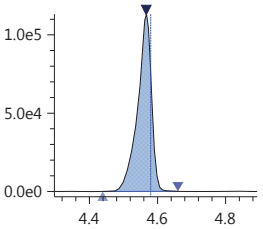
Conc 5.6382
RT 4.567 Area 317794
Q 428.90>409.00 (-) 1.13e5



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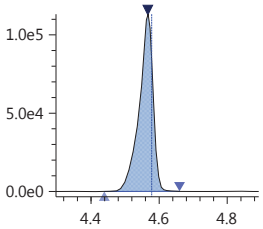

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Conc 0.0012
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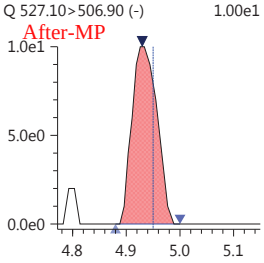

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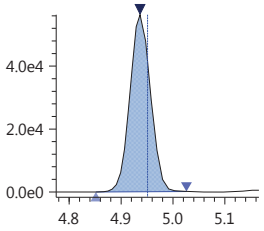
RT 4.936 Area 156626
Q 528.80>509.00 (-) 5.63e4



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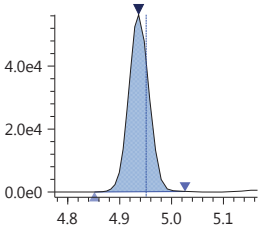

Insight Report

Printed at 8/9/2019 4:33:51 PM

190807_163

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Date acquired: 8/8/2019 7:46:33 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_163.lcd
Vial: 21 | Inj. Volume: 15.0000uL | Tray: 4

13C7-PFUnDA_IS
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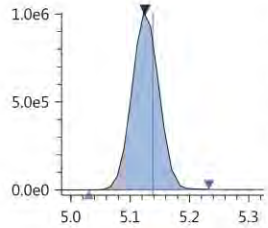
ISTD 570.00>525.00 (-) 1.01e6



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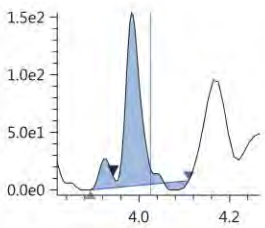

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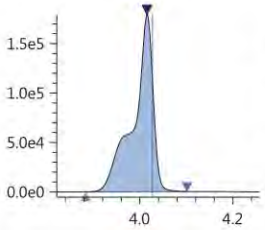

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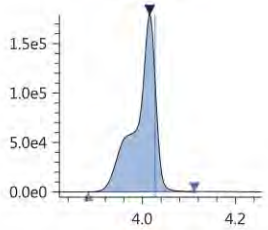

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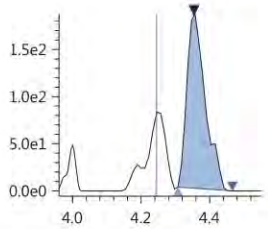

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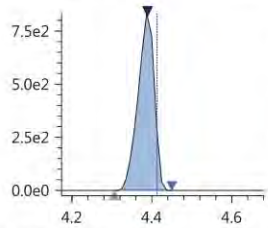

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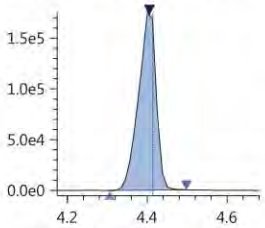

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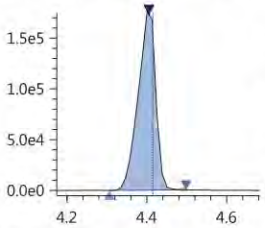

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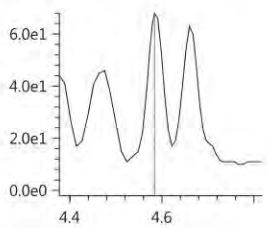
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 6.80e1



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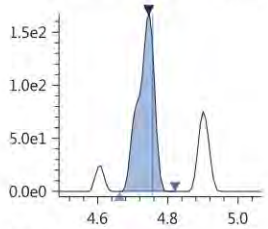

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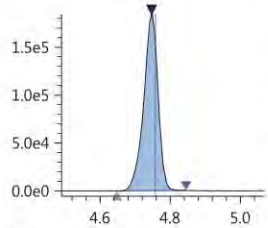

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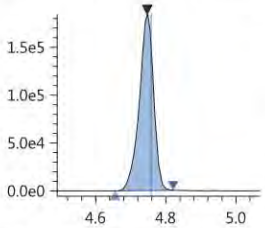
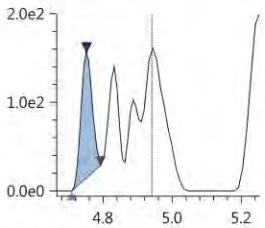
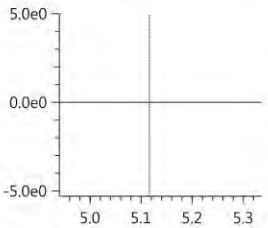


PFNS
Conc -0.0787
RT 4.752 Area 316
Q 549.00>99.00 (-) 2.00e2



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



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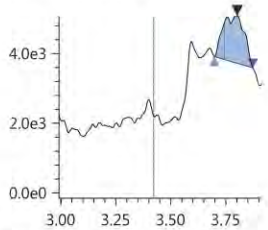
Conc 0.0157
RT 3.802 Area 9087
Q 213.00>169.10 (-) 5.09e3



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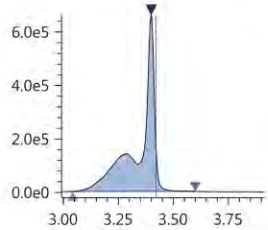
RT 3.399 Area 2826590
Q 216.90>172.15 (-) 6.63e5



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Conc 5.0000
RT 3.399 Area 2826590
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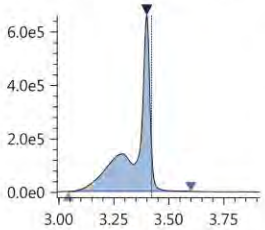

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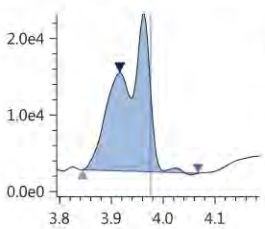

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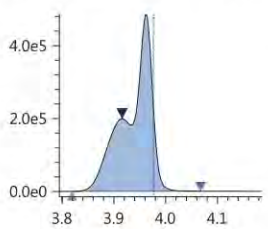

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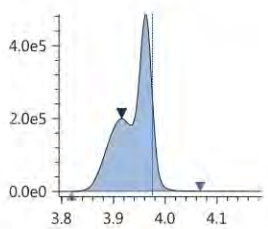

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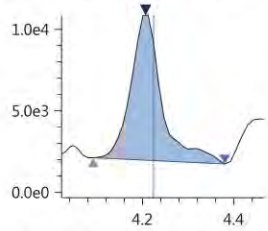

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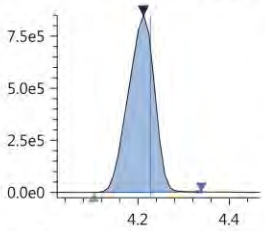
RT 4.212 Area 3404904
Q 314.90>270.10 (-) 8.51e5



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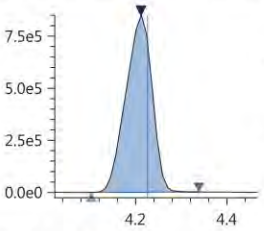

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Conc 0.0001
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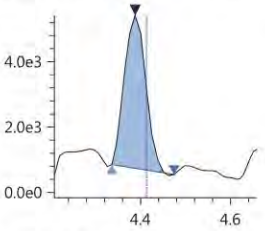

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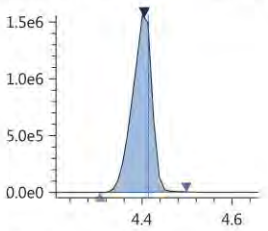
RT 4.405 Area 4756932
Q 366.90>322.10 (-) 1.56e6



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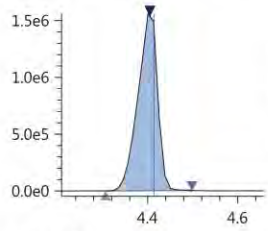
Conc 5.0000
RT 4.405 Area 4756932
ISTD 366.90>322.10 (-) 1.56e6



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Conc 0.0162
RT 4.574 Area 25432
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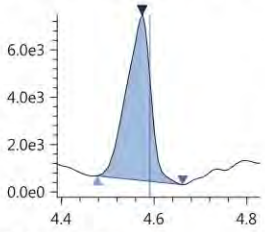

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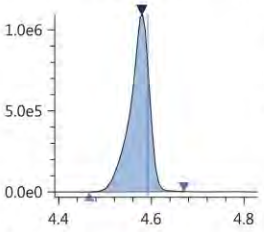
RT 4.579 Area 3161271
Q 416.80>372.05 (-) 1.09e6



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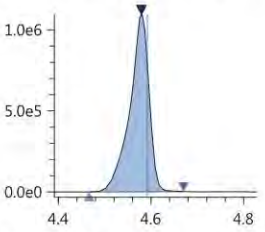

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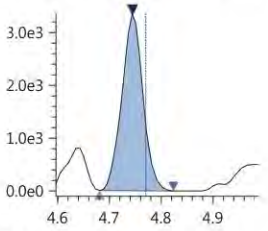

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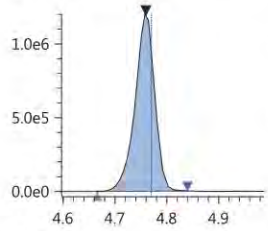
RT 4.760 Area 3159697
Q 467.80>423.00 (-) 1.20e6



PFNA-13C_IS
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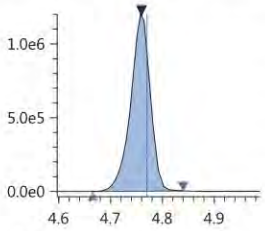
ISTD 467.80>423.00 (-) 1.20e6



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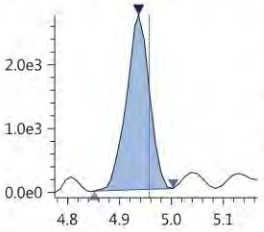
Conc 0.0163
RT 4.937 Area 8484
Q 513.00>468.80 (-) 2.78e3



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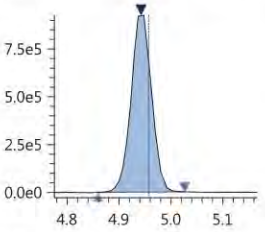
Q 514.80>469.95 (-) 9.26e5



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Conc 5.0000
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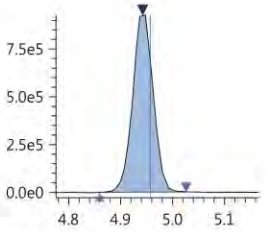
ISTD 514.80>469.95 (-) 9.26e5



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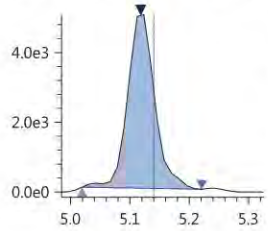
Q 563.00>518.90 (-) 5.09e3



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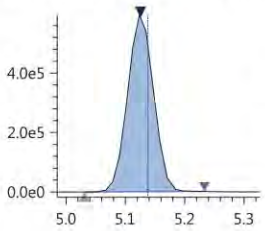
Q 564.80>519.95 (-) 5.96e5



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Conc 5.0000
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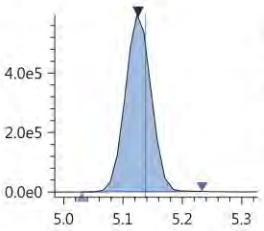
ISTD 564.80>519.95 (-) 5.96e5



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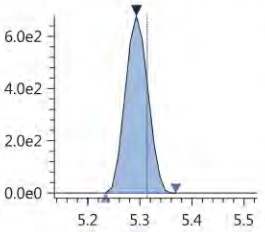
Conc -0.0027
RT 5.293 Area 2064
Q 613.05>569.00 (-) 6.79e2



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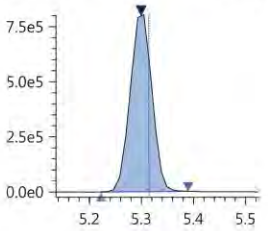
Conc 4.3558
RT 5.299 Area 2353309
Q 614.80>569.95 (-) 8.04e5



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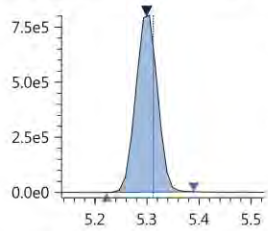
PFDoA-13C_IS
Conc 5.0000
RT 5.299 Area 2353309
ISTD 614.80>569.95 (-) 8.04e5



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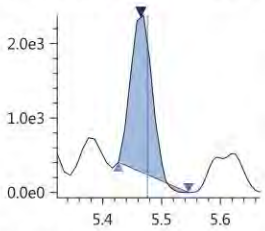
Conc 0.0035
RT 5.465 Area 5243
Q 663.00>618.90 (-) 2.38e3



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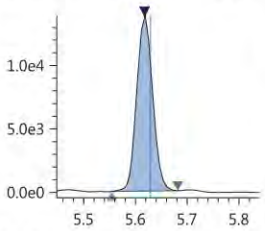
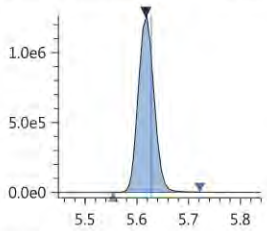
Q 713.40>669.00 (-) 1.40e4



PFTeDA-13C
Conc 4.5202
RT 5.617 Area 2690542
Q 714.70>669.90 (-) 1.27e6



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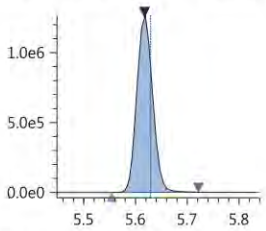
ISTD 714.70>669.90 (-) 1.27e6



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Conc 0.0072
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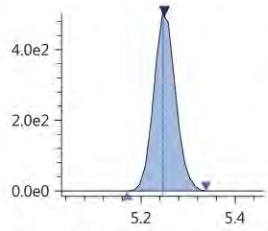
Q 498.20>78.00 (-) 5.02e2



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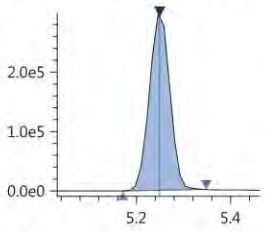
Conc 3.6470
RT 5.249 Area 901920
Q 506.00>78.05 (-) 2.98e5



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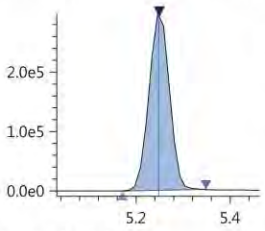

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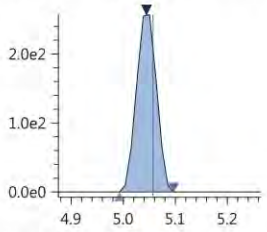
RT 5.045 Area 702
Q 570.20>419.00 (-) 2.57e2



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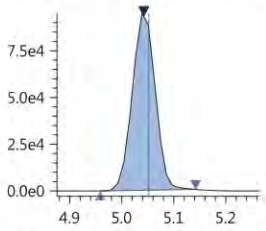
Conc 4.0746
RT 5.042 Area 290808
Q 572.80>419.05 (-) 9.48e4



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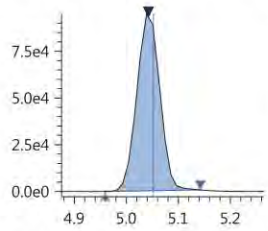
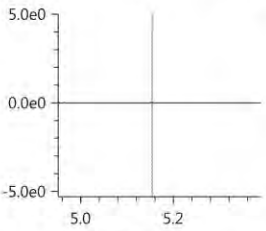
RT 5.042 Area 290808
ISTD 572.80>419.05 (-) 9.48e4



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



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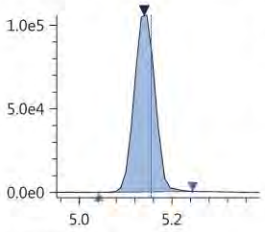
Conc 5.1277
RT 5.140 Area 330673
Q 588.80>419.00 (-) 1.06e5



N-EtFOSAA-d5_IS
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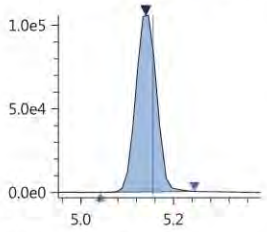
ISTD 588.80>419.00 (-) 1.06e5



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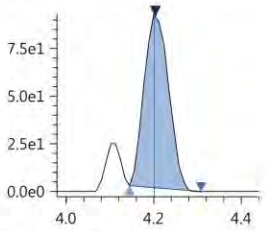
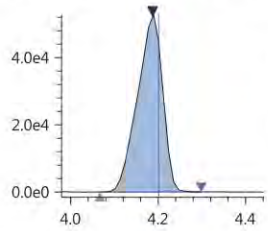
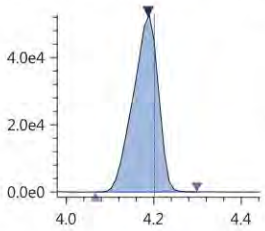
Conc 0.0068
RT 4.203 Area 355
Q 327.00>307.05 (-) 9.30e1



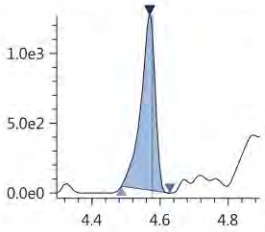
4_2-FTS-13C
Conc 3.5202
RT 4.187 Area 210493
Q 328.80>309.05 (-) 5.28e4



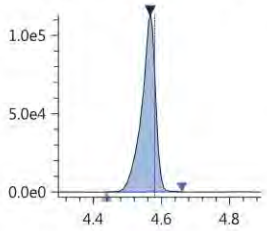
4_2-FTS-13C_IS
Conc 5.0000
RT 4.187 Area 210493
ISTD 328.80>309.05 (-) 5.28e4



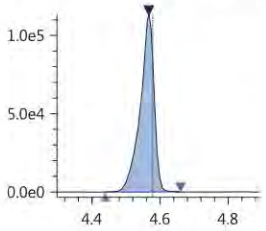
6_2-FTS_1
Conc 0.0476
RT 4.570 Area 3676
Q 427.00>407.00 (-) 1.27e3



6_2-FTS-13C
Conc 5.6382
RT 4.567 Area 317794
Q 428.90>409.00 (-) 1.13e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.567 Area 317794
ISTD 428.90>409.00 (-) 1.13e5



Insight Report

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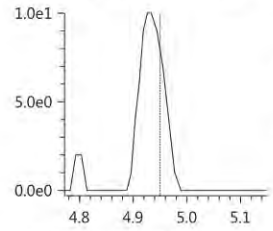
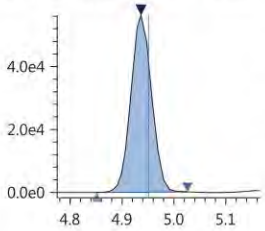
8_2-FTS_1

Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 1.00e1



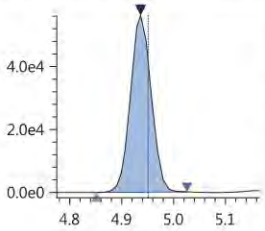
8_2-FTS-13C

Conc 4.8753
RT 4.936 Area 156626
Q 528.80>509.00 (-) 5.63e4



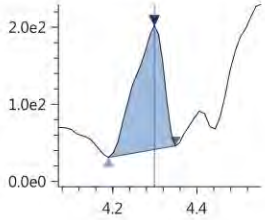
8_2-FTS-13C_IS

Conc 5.0000
RT 4.936 Area 156626
ISTD 528.80>509.00 (-) 5.63e4



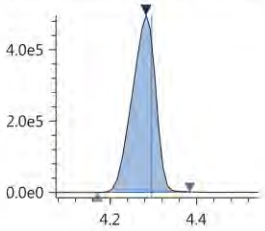
HPFO_DA

Conc 0.0022
RT 4.299 Area 759
Q 329.00>169.00 (-) 2.30e2



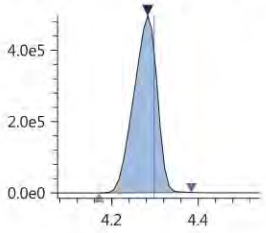
HFPO_DA-13C

Conc 5.7082
RT 4.283 Area 1861550
Q 332.00>286.80 (-) 4.97e5



HFPO_DA-13C_IS

Conc 5.0000
RT 4.283 Area 1861550
ISTD 332.00>286.80 (-) 4.97e5



1st EJD 08/09/19
2nd 08/12/19

Validation Report

Data File: J:\LCMS06\Data\190807_b8\190807_164
Lab ID: R1907111-003
RunType: N/A
Matrix: Water

Date Acquired: 8/8/19 19:57
Batch ID: 646328
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	Perfluorodecane sulfonic acid (PFDS)	136	70	130	Narrate high bias, ND
	18O2-PFHxS	137	70	130	narrate native ok
	13C4-PFHpA	132	70	130	narrate native ok
	13C5-PFNA	144	70	130	narrate native ok
	13C2-PFDA	135	70	130	narrate native ok
	D5-EtFOSAA	142	70	130	narrate native ok
Surrogates	13C4-PFBA	132	27	124	RR to confirm

Primary Review: _____

Secondary Review: _____

1st EJD 08/09/19
2nd 08/12/19

Quantitation Report

Data File:	J:\LCMS06\Data\190807_b8\190807_164	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 19:57	**Vial:**	24
Run Type:	N/A	**Dilution:**	1
Lab ID:	R1907111-003	**Raw Units:**	ng/mL

Bottle ID:	R1907111-003.01	**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/29/19	**Receive Date:**	7/29/19

Analysis Lot:	646328	**Prep Lot:**	341924	**Report Group:**	R1907111
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	8/6/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.120	-0.01	3181016	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
13C3-PFBS	4.009	-0.01	616281	4.0457	81		20 - 109	Y
18O2-PFHxS	4.397	-0.01	360805	4.1385	83		26 - 122	Y
13C4-PFOS	4.742	-0.01	457413	4.4042	88		25 - 121	Y
13C4-PFBA	3.390	-0.02	3408236	6.5930	132	*	27 - 124	Y
13C5-PFPeA	3.956	-0.01	2069829	6.3639	127		27 - 138	Y
13C2-PFHxA	4.210	-0.01	3273775	5.1198	102		28 - 132	Y
13C4-PFHpA	4.397	-0.01	3263774	4.3551	87		19 - 139	Y
13C4-PFOA	4.575	-0.01	3136412	4.6212	92		22 - 130	Y
13C5-PFNA	4.755	-0.01	2894899	5.3691	107		20 - 127	Y
13C2-PFDA	4.941	0.00	1897165	4.1856	84		24 - 125	Y
13C2-PFUnDA	5.120	-0.01	1902169	3.8720	77		22 - 125	Y
13C2-PFDoDA	5.297	0.00	2638887	4.9870	100		19 - 122	Y
13C2-PFTeDA	5.613	0.00	3312742	5.6824	114		13 - 124	Y
13C8-FOSA	5.244	+0.00	775014	3.1996	64		18 - 109	Y
D3-MeFOSAA	5.038	0.00	249243	3.5656	71		9 - 123	Y
D5-EtFOSAA	5.138	0.00	303197	4.8004	96		12 - 126	Y
13C2-6:2 FTS	4.561	-0.01	367808	6.6625	133		10 - 226	Y
13C2-8:2 FTS	4.934	0.00	175017	5.5622	111		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	5536	0.0311	0.87	J	Y
Perfluorohexane sulfonic acid (PFHxS)	4.395	-0.01	4636	0.0463	1.3	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 EJD 08/09/19
2nd 08/12/19

Data File:	J:\LCMS06\Data\190807_b8\190807_164	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 19:57	**Vial:**	24
Run Type:	N/A	**Dilution:**	1
Lab ID:	R1907111-003	**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)	4.565	-0.01	704	0.0066	0.19	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.742	-0.01	24348	0.3046	8.6		Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.395	-0.02	390538	0.5598	16		Y
Perfluoropentanoic acid (PFPeA)	3.956	-0.01	319175	0.2481	7.0		Y
Perfluorohexanoic acid (PFHxA)	4.210	-0.01	142254	0.1846	5.2	U	Y
Perfluoroheptanoic acid (PFHpA)	4.396	-0.01	85682	0.1367	3.8	J	Y
Perfluorooctanoic acid (PFOA)	4.574	-0.01	219238	0.2956	8.3		Y
Perfluorononanoic acid (PFNA)	4.754	-0.01	25653	0.0371	1.0	U	Y
Perfluorodecanoic acid (PFDA)	4.939	-0.01	15379	0.0400	1.1	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.119	-0.01	18593	0.0258	0.72	U	Y
Perfluorododecanoic acid (PFDoDA)	5.299		14385	0.0342	0.96	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.460	0.00	7496	0.0057	0.16	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.613	0.00	43664	0.0415	1.2	U	Y
Perfluorooctane sulfonamide (FOSA)	5.245	+0.01	38390	0.1968	5.5		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.048	+0.01	1227	0.0592	1.7	J	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.562	-0.01	2412	0.0270	0.76	J	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.943	+0.01	72	0.0023	0.065	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 8/9/2019 5:29:05 PM

190807_164

Sample ID: R1907111-003
Date acquired: 8/8/2019 7:57:01 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_164.lcd
Vial: 22 | Inj. Volume: 15.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.120	3181016	3181016	1	5.0000	ng/mL	----
PFBS_1	M	4.012	5536	618313	2	0.0311	ng/mL	----
PFBS-13C	Auto	4.009	616281	3181016	1	4.0457	ng/mL	----
PFBS-13C_IS	Auto	4.009	618313	618313	2	5.0000	ng/mL	----
PFHxS_1	M	4.395	4636	360805	3	0.0463	ng/mL	----
PFHxS-18O	Auto	4.397	360805	3181016	1	4.1385	ng/mL	----
PFHxS-18O_IS	Auto	4.397	360805	360805	3	5.0000	ng/mL	----
PFHpS_1	M	4.565	704	360805	3	0.0066	ng/mL	----
PFOS_1	M	4.742	24348	455787	4	0.3046	ng/mL	----
PFOS-13C	Auto	4.742	457413	3181016	1	4.4042	ng/mL	----
PFOS-13C_IS	Auto	4.742	455787	455787	4	5.0000	ng/mL	----
PFDS_1	NI	----	----	455787	4	----	ng/mL	----
PFBA	Auto	3.395	390538	3408236	5	0.5598	ng/mL	----
PFBA-13C	Auto	3.390	3408236	3181016	1	6.5930	ng/mL	----
PFBA-13C_IS	Auto	3.390	3408236	3408236	5	5.0000	ng/mL	----
PFPeA	M	3.956	319175	2069829	6	0.2481	ng/mL	----
PFPeA-13C	Auto	3.956	2069829	3181016	1	6.3639	ng/mL	----
PFPeA-13C_IS	Auto	3.956	2069829	2069829	6	5.0000	ng/mL	----
PFHxA	Auto	4.210	142254	3273775	7	0.1846	ng/mL	----
PFHxA-13C	Auto	4.210	3273775	3181016	1	5.1198	ng/mL	----
PFHxA-13C_IS	Auto	4.210	3273775	3273775	7	5.0000	ng/mL	----
PFHpA	M	4.396	85682	3263774	8	0.1367	ng/mL	----
PFHpA-13C	Auto	4.397	3263774	3181016	1	4.3551	ng/mL	----
PFHpA-13C_IS	Auto	4.397	3263774	3263774	8	5.0000	ng/mL	----
PFOA	Auto	4.574	219238	3139022	9	0.2956	ng/mL	----
PFOA-13C	Auto	4.575	3136412	3181016	1	4.6212	ng/mL	----
PFOA-13C_IS	Auto	4.575	3139022	3139022	9	5.0000	ng/mL	----
PFNA	Auto	4.754	25653	2894899	10	0.0371	ng/mL	----
PFNA-13C	Auto	4.755	2894899	3181016	1	5.3691	ng/mL	----
PFNA-13C_IS	Auto	4.755	2894899	2894899	10	5.0000	ng/mL	----
PFDA	M	4.939	15379	1897165	11	0.0400	ng/mL	----
PFDA-13C	Auto	4.941	1897165	3181016	1	4.1856	ng/mL	----
PFDA-13C_IS	Auto	4.941	1897165	1897165	11	5.0000	ng/mL	----
PFUnA	Auto	5.119	18593	1902169	12	0.0258	ng/mL	----
PFUnA-13C	Auto	5.120	1902169	3181016	1	3.8720	ng/mL	----
PFUnA-13C_IS	Auto	5.120	1902169	1902169	12	5.0000	ng/mL	----
PFDoA	Auto	5.299	14385	2638887	13	0.0342	ng/mL	----
PFDoA-13C	Auto	5.297	2638887	3181016	1	4.9870	ng/mL	----
PFDoA-13C_IS	Auto	5.297	2638887	2638887	13	5.0000	ng/mL	----
PFTrDA	M	5.460	7496	3312742	14	0.0057	ng/mL	----
PFTeDA	Auto	5.613	43664	3312742	14	0.0415	ng/mL	----
PFTeDA-13C	Auto	5.613	3312742	3181016	1	5.6824	ng/mL	----
PFTeDA-13C_IS	Auto	5.613	3312742	3312742	14	5.0000	ng/mL	----
FOSA	M	5.245	38390	775014	16	0.1968	ng/mL	----
FOSA-13C	Auto	5.244	775014	3181016	1	3.1996	ng/mL	----
FOSA-13C_IS	Auto	5.244	775014	775014	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.048	1227	249243	21	0.0592	ng/mL	----
N-MeFOSAA-d3	Auto	5.038	249243	3181016	1	3.5656	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.038	249243	249243	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	303197	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.138	303197	3181016	1	4.8004	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.138	303197	303197	22	5.0000	ng/mL	----
6_2-FTS_1	M	4.562	2412	367808	24	0.0270	ng/mL	----
6_2-FTS-13C	Auto	4.561	367808	3181016	1	6.6625	ng/mL	----
6_2-FTS-13C_IS	Auto	4.561	367808	367808	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.943	72	175017	25	0.0023	ng/mL	----
8_2-FTS-13C	Auto	4.934	175017	3181016	1	5.5622	ng/mL	----
8_2-FTS-13C_IS	Auto	4.934	175017	175017	25	5.0000	ng/mL	----

Insight Report

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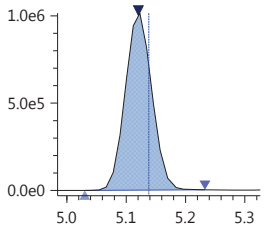
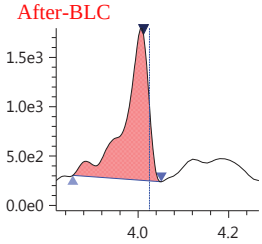
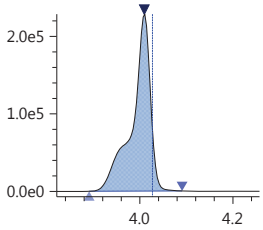
13C7-PFUnDA_IS
Conc 5.0000
RT 5.120 Area 3181016
ISTD 570.00>525.00 (-) 1.02e6



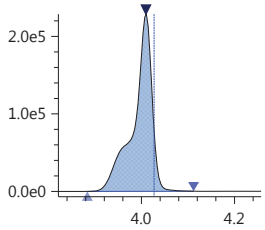
PFBS_1
Conc 0.0311
RT 4.012 Area 5536
Q 299.00>80.00 (-) 1.80e3



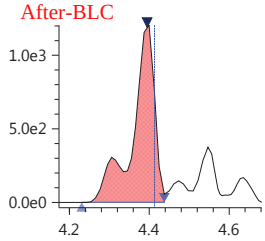
PFBS-13C
Conc 4.0457
RT 4.009 Area 616281
Q 301.80>80.00 (-) 2.29e5



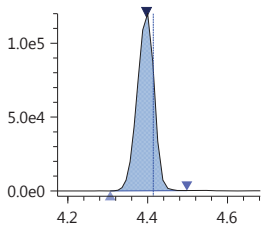
PFBS-13C_IS
Conc 5.0000
RT 4.009 Area 618313
ISTD 301.80>80.00 (-) 2.29e5



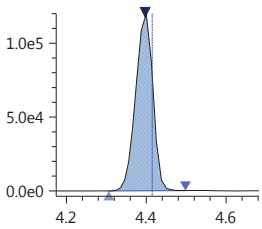
PFHxS_1
Conc 0.0463
RT 4.395 Area 4636
Q 399.00>80.00 (-) 1.21e3



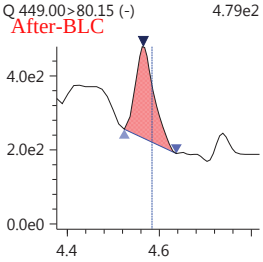
PFHxS-18O
Conc 4.1385
RT 4.397 Area 360805
Q 402.70>84.05 (-) 1.20e5



PFHxS-18O_IS
Conc 5.0000
RT 4.397 Area 360805
ISTD 402.70>84.05 (-) 1.20e5



PFHpS_1
Conc 0.0066
RT 4.565 Area 704
Q 449.00>80.15 (-) 4.79e2



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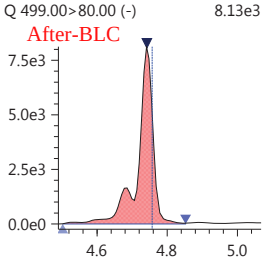

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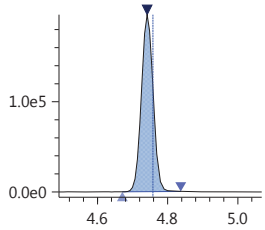

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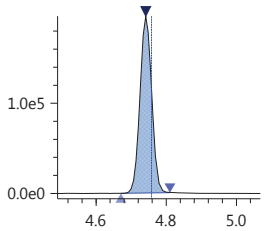

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RT ---- Area ----
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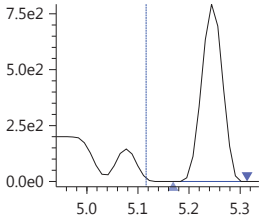

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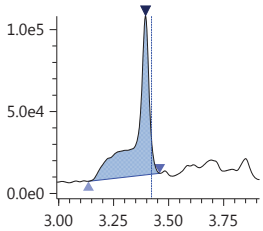

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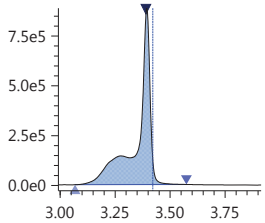

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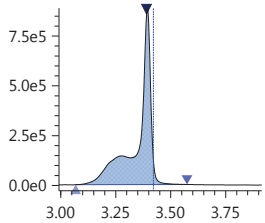

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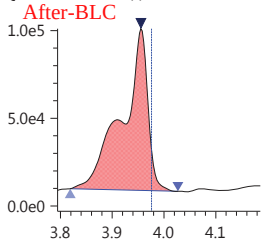

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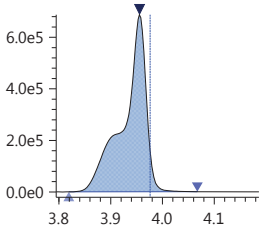

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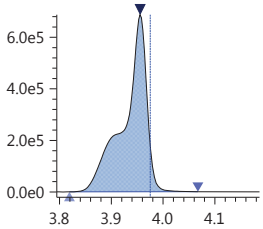

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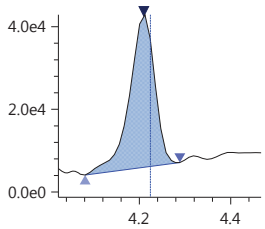

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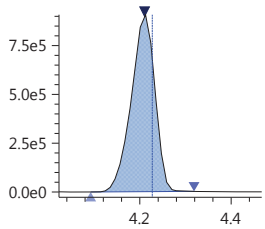

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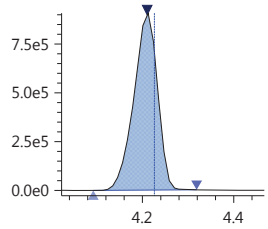

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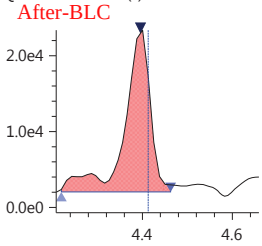

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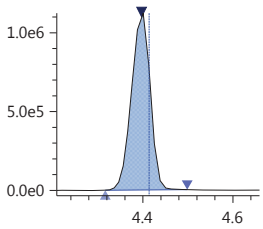

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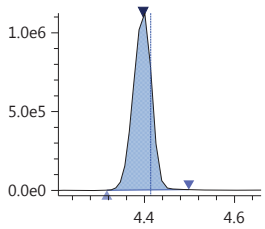

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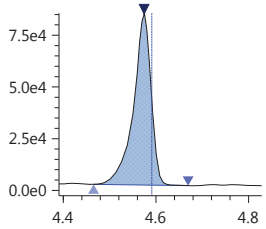

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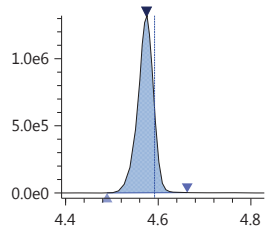

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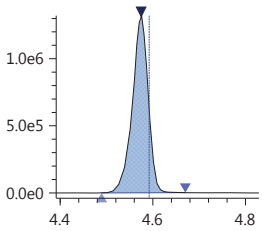

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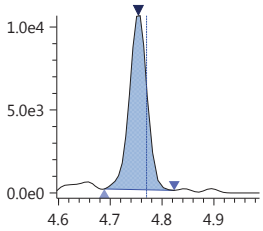

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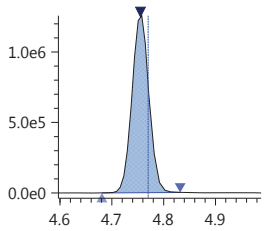

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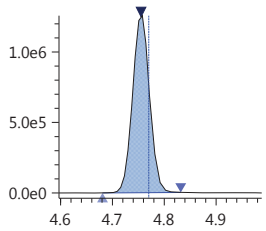

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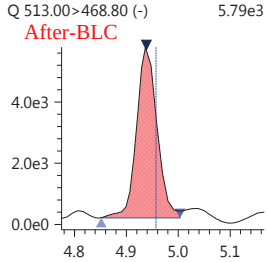

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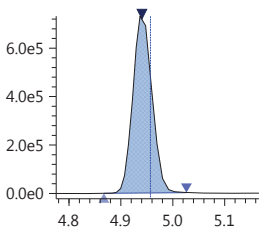

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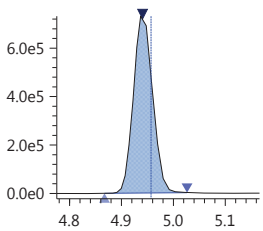

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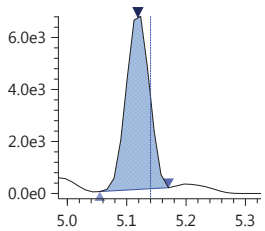

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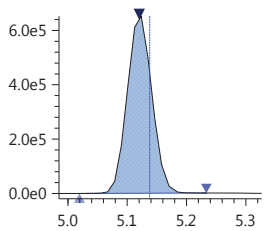

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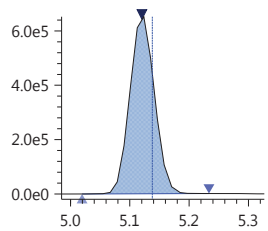

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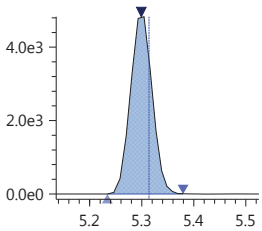

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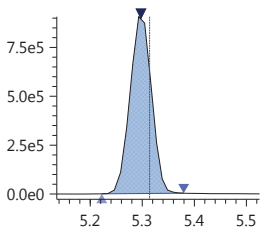

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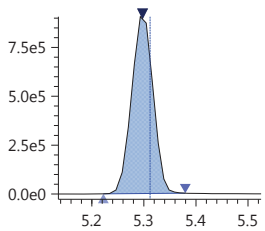

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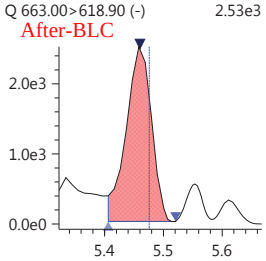

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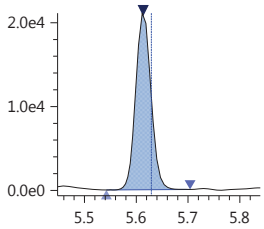

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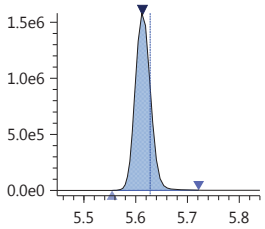

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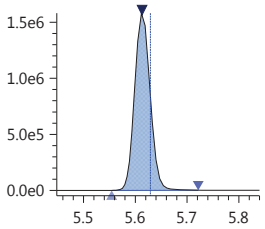

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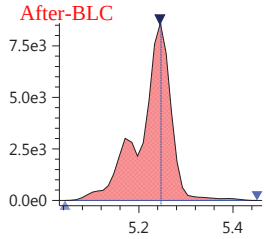

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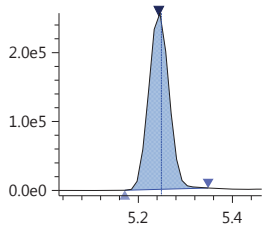

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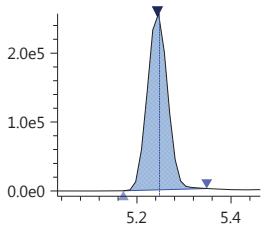

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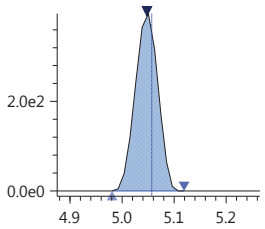

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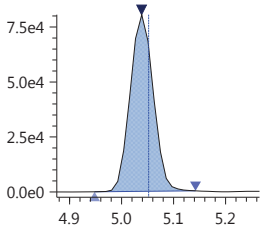

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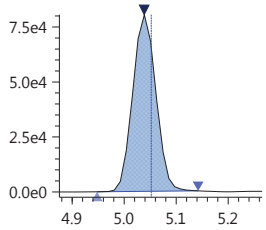

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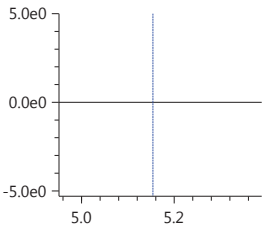

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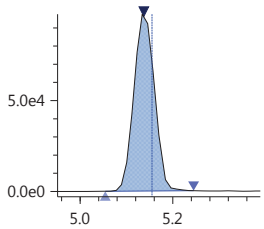

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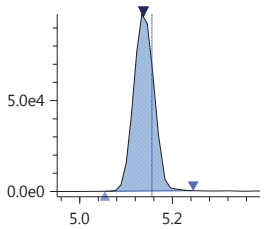
ISTD 588.80>419.00 (-) 9.76e4



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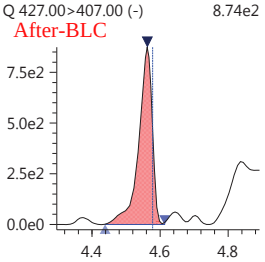
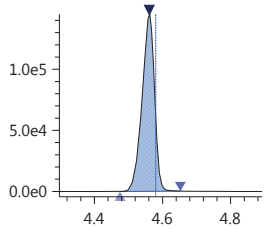
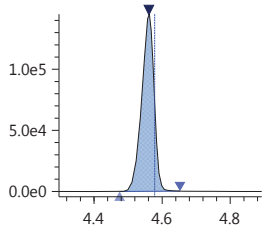
Conc 0.0270
RT 4.562 Area 2412
Q 427.00>407.00 (-) 8.74e2



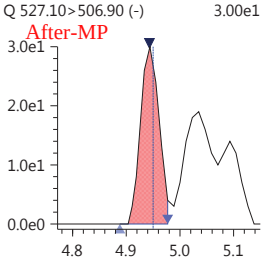
6_2-FTS-13C
Conc 6.6625
RT 4.561 Area 367808
Q 428.90>409.00 (-) 1.45e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.561 Area 367808
ISTD 428.90>409.00 (-) 1.45e5



8_2-FTS_1
Conc 0.0023
RT 4.943 Area 72
Q 527.10>506.90 (-) 3.00e1



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Conc 5.5622
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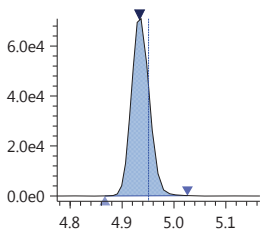
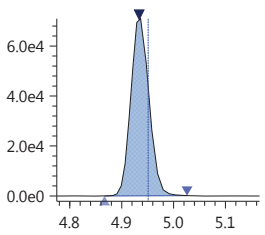
Q 528.80>509.00 (-) 7.09e4



8_2-FTS-13C_IS
Conc 5.0000
RT 4.934 Area 175017
ISTD 528.80>509.00 (-) 7.09e4



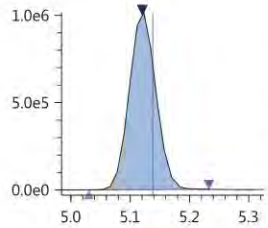
Insight Report

Printed at 8/9/2019 4:33:51 PM

190807_164

Sample ID: R1907111-003
Date acquired: 8/8/2019 7:57:01 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_164.lcd
Vial: 22 | Inj. Volume: 15.0000uL | Tray: 4

13C7-PFUnDA_IS
Conc 5.0000
RT 5.120 Area 3181016
ISTD 570.00>525.00 (-) 1.02e6



PFBS_1
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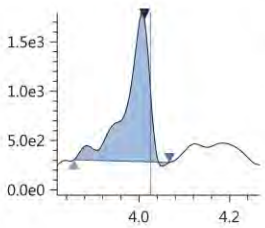
RT 4.012 Area 5275
Q 299.00>80.00 (-) 1.80e3



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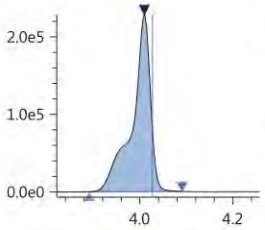
RT 4.009 Area 616281
Q 301.80>80.00 (-) 2.29e5



PFBS-13C_IS
Conc 5.0000
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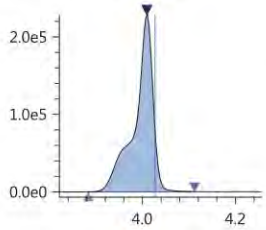

PFPeS
Conc 0.0247
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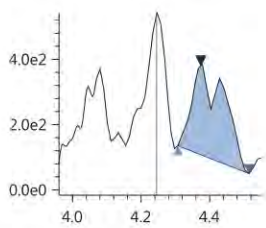
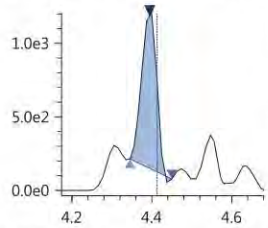
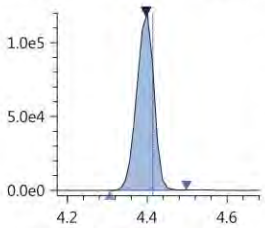
Q 349.00>99.00 (-) 5.43e2



PFHxS_1
Conc 0.0276
RT 4.395 Area 2766
Q 399.00>80.00 (-) 1.21e3



PFHxS-18O
Conc 4.1385
RT 4.397 Area 360805
Q 402.70>84.05 (-) 1.20e5



PFHxS-18O_IS
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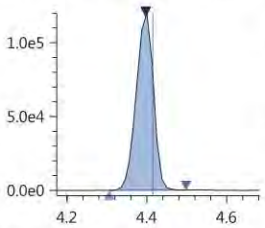
RT 4.397 Area 360805
ISTD 402.70>84.05 (-) 1.20e5



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Conc 0.0062
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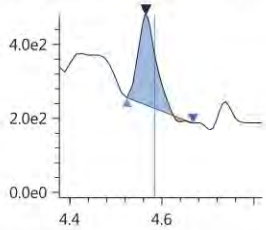

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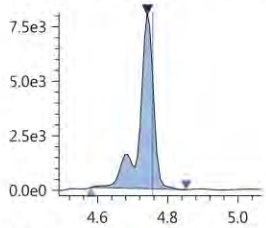
Q 499.00>80.00 (-) 8.13e3



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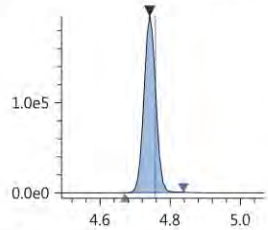
Q 502.80>80.05 (-) 1.97e5



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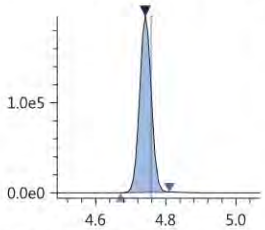
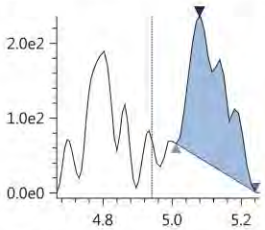


PFNS
Conc -0.0572
RT 5.079 Area 1357
Q 549.00>99.00 (-) 2.37e2



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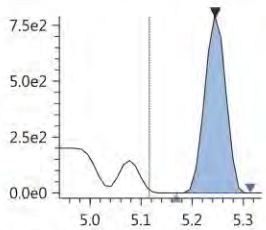
Conc 0.0305
RT 5.245 Area 2281
Q 599.00>79.90 (-) 7.93e2



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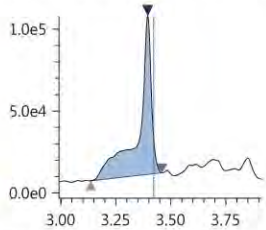
Conc 0.5598
RT 3.395 Area 390538
Q 213.00>169.10 (-) 1.08e5



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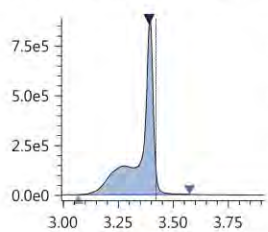
RT 3.390 Area 3408236
Q 216.90>172.15 (-) 8.90e5



PFBA-13C_IS
Conc 5.0000
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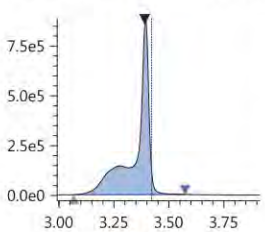

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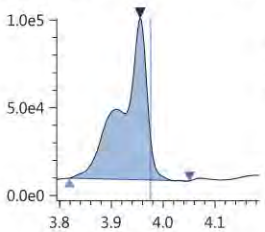
Q 263.05>219.10 (-) 1.01e5



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Conc 6.3639
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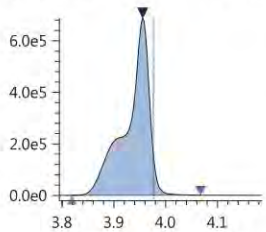
Q 267.90>223.00 (-) 6.88e5



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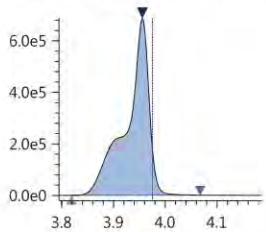
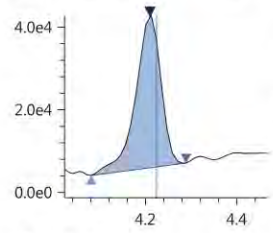


Insight Report

Printed at 8/9/2019 4:33:51 PM

PFHxA
Conc 0.1846
RT 4.210 Area 142254
Q 313.00>269.00 (-) 4.29e4



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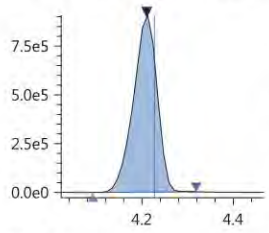
Conc 5.1198
RT 4.210 Area 3273775
Q 314.90>270.10 (-) 9.08e5



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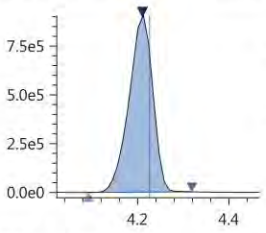

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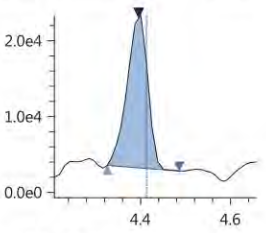

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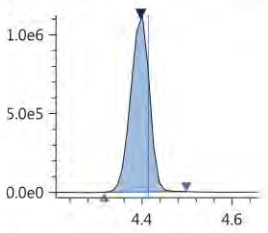

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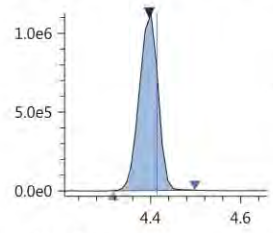

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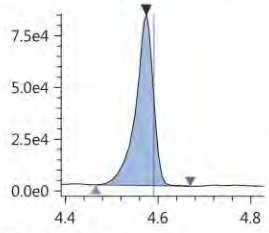
RT 4.574 Area 219238
Q 413.00>369.00 (-) 8.57e4



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RT 4.575 Area 3136412
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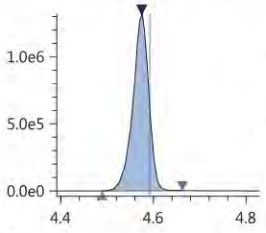

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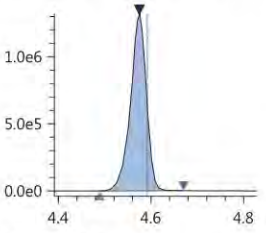

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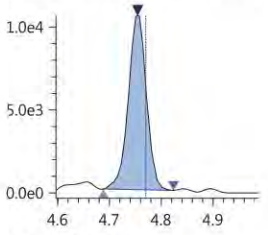
Q 463.00>418.90 (-) 1.07e4



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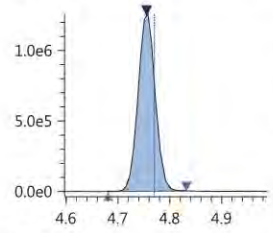

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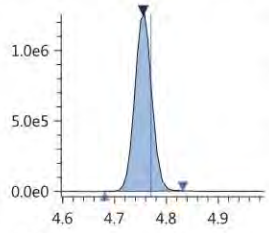

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Conc 0.0365
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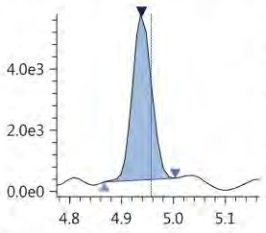

PFDA-13C
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RT 4.941 Area 1897165
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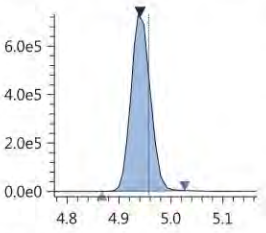

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RT 4.941 Area 1897165
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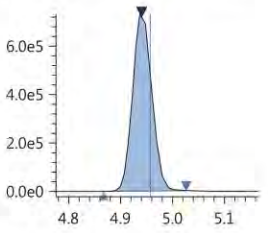

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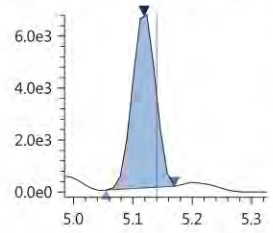
Conc 0.0258
RT 5.119 Area 18593
Q 563.00>518.90 (-) 6.82e3



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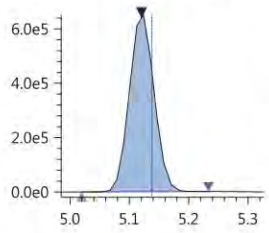
Q 564.80>519.95 (-) 6.52e5



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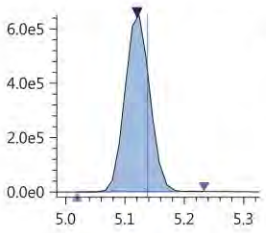
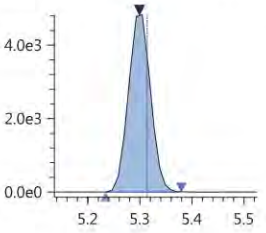
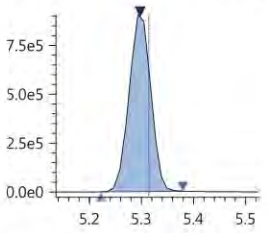
RT 5.120 Area 1902169
ISTD 564.80>519.95 (-) 6.52e5



PFDoA
Conc 0.0342
RT 5.299 Area 14385
Q 613.05>569.00 (-) 4.83e3



PFDoA-13C
Conc 4.9870
RT 5.297 Area 2638887
Q 614.80>569.95 (-) 9.07e5



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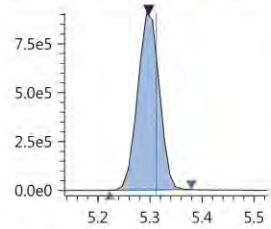
PFDoA-13C_IS
Conc 5.0000
RT 5.297 Area 2638887
ISTD 614.80>569.95 (-) 9.07e5



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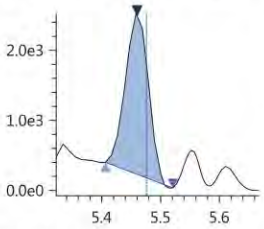
Conc 0.0030
RT 5.460 Area 6238
Q 663.00>618.90 (-) 2.53e3



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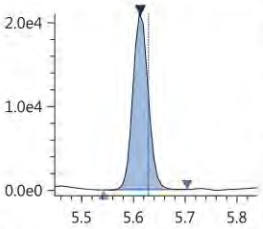
Conc 0.0415
RT 5.613 Area 43664
Q 713.40>669.00 (-) 2.11e4



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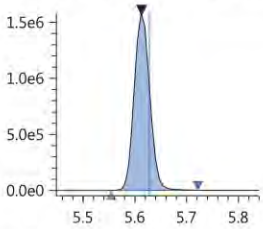
Conc 5.6824
RT 5.613 Area 3312742
Q 714.70>669.90 (-) 1.58e6



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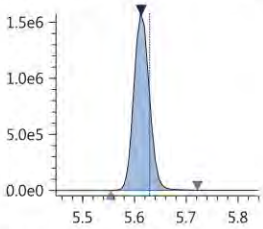
RT 5.613 Area 3312742
ISTD 714.70>669.90 (-) 1.58e6



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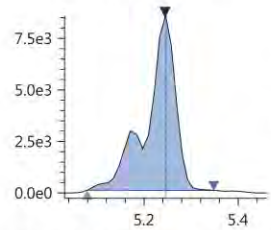
Conc 0.1841
RT 5.245 Area 35916
Q 498.20>78.00 (-) 8.60e3



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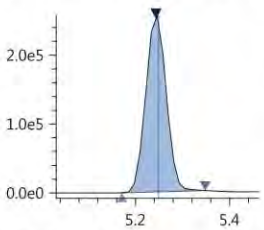
Conc 3.1996
RT 5.244 Area 775014
Q 506.00>78.05 (-) 2.57e5



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Conc 5.0000
RT 5.244 Area 775014
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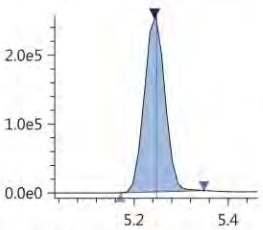

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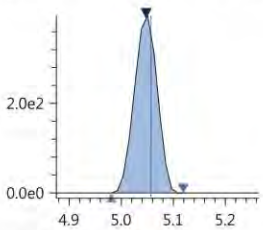
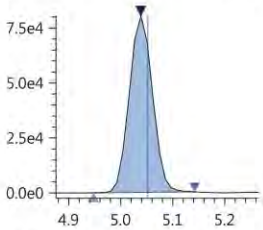
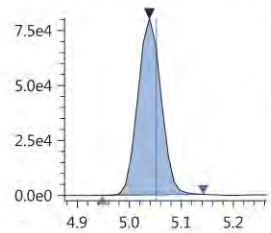
Conc 0.0592
RT 5.048 Area 1227
Q 570.20>419.00 (-) 3.96e2



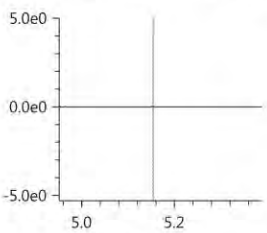
N-MeFOSAA-d3
Conc 3.5656
RT 5.038 Area 249243
Q 572.80>419.05 (-) 8.06e4



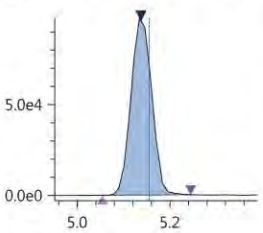
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.038 Area 249243
ISTD 572.80>419.05 (-) 8.06e4



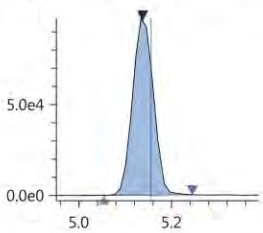
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



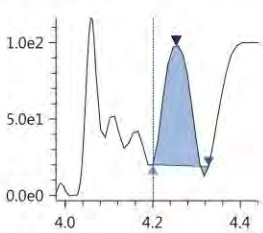
N-EtFOSAA-d5
Conc 4.8004
RT 5.138 Area 303197
Q 588.80>419.00 (-) 9.76e4



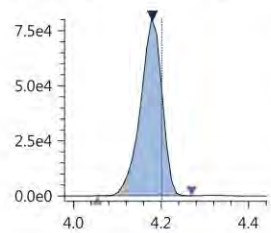
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.138 Area 303197
ISTD 588.80>419.00 (-) 9.76e4



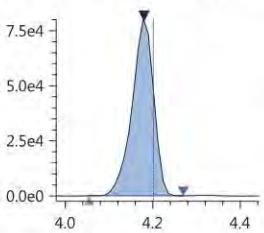
4_2-FTS_1
Conc 0.0045
RT 4.254 Area 307
Q 327.00>307.05 (-) 1.16e2



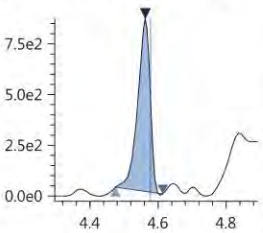
4_2-FTS-13C
Conc 4.7053
RT 4.180 Area 275569
Q 328.80>309.05 (-) 8.04e4



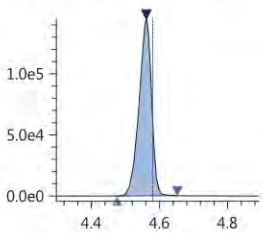
4_2-FTS-13C_IS
Conc 5.0000
RT 4.180 Area 275569
ISTD 328.80>309.05 (-) 8.04e4



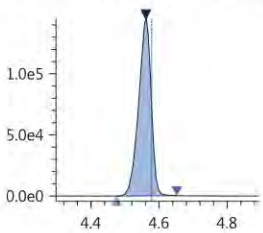
6_2-FTS_1
Conc 0.0241
RT 4.562 Area 2152
Q 427.00>407.00 (-) 8.74e2



6_2-FTS-13C
Conc 6.6625
RT 4.561 Area 367808
Q 428.90>409.00 (-) 1.45e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.561 Area 367808
ISTD 428.90>409.00 (-) 1.45e5



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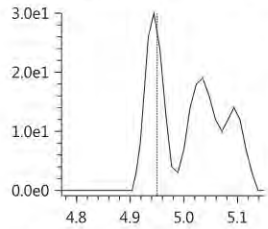
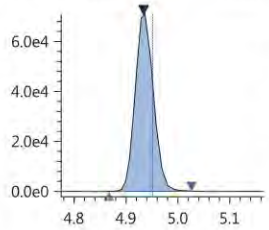
8_2-FTS_1

Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 3.00e1



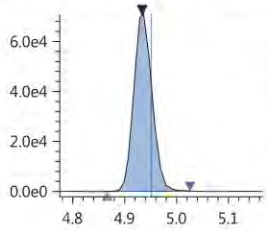
8_2-FTS-13C

Conc 5.5622
RT 4.934 Area 175017
Q 528.80>509.00 (-) 7.09e4



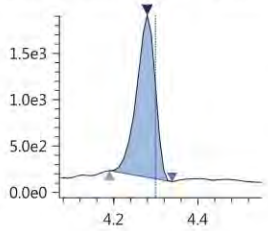
8_2-FTS-13C_IS

Conc 5.0000
RT 4.934 Area 175017
ISTD 528.80>509.00 (-) 7.09e4



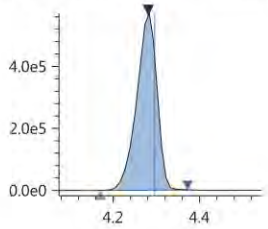
HPFO_DA

Conc 0.0157
RT 4.279 Area 5397
Q 329.00>169.00 (-) 1.91e3



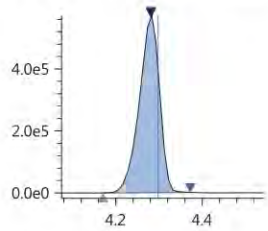
HFPO_DA-13C

Conc 5.7931
RT 4.281 Area 1850376
Q 332.00>286.80 (-) 5.72e5



HFPO_DA-13C_IS

Conc 5.0000
RT 4.281 Area 1850376
ISTD 332.00>286.80 (-) 5.72e5



1st CM 08/14/19
2nd 08/14/19

Validation Report

Data File: J:\LCMS06\Data\190812_b4\190812_057
Lab ID: R1907111-003
RunType: N/A
Matrix: Water

Date Acquired: 8/13/19 05:10
Batch ID: 646926
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	

Primary Review: _____

Printed: 8/14/19 10:33
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Secondary Review: _____

1st CM 08/14/19
2nd 08/14/19

Quantitation Report

Data File:	J:\LCMS06\Data\190812_b4\190812_057	**Instrument:**	K-LCMS-06
Acqu Date:	8/13/19 05:10	**Vial:**	2
Run Type:	N/A	**Dilution:**	1
Lab ID:	R1907111-003	**Raw Units:**	ng/mL

Bottle ID:	R1907111-003.01	**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/29/19	**Receive Date:**	7/29/19

Analysis Lot:	646926	**Prep Lot:**	341924	**Report Group:**	R1907111
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	8/6/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.128	+0.00	5881508	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C4-PFBA	3.401	-0.01	3856038	4.0343	81	27 - 124	Y
13C2-PFTeDA	5.618	+0.00	5329432	4.9443	99	13 - 124	N

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutanoic acid (PFBA)	3.401	-0.01	482327	0.6111	17		Y
Perfluorotridecanoic acid (PFTrDA)	5.464	+0.00	13544	0.0076	0.21	U	N
Perfluorotetradecanoic acid (PFTeDA)	5.619	+0.01	58196	0.0089	0.25	U	N

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: 8/14/19 10:33
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Insight Report

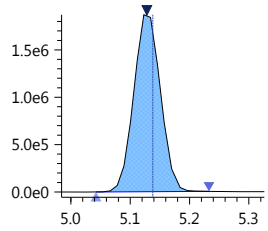
Printed at 8/14/2019 10:21:14 AM

190812_057

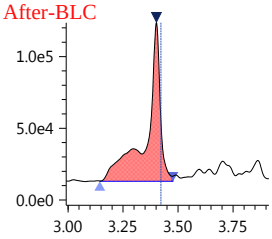
Sample ID: R1907111-003
Date acquired: 8/13/2019 5:10:46 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b4\190812_057.lcd
Vial: 38 | Inj. Volume: 15.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.128	5881508	5881508	1	5.0000	ng/mL	----
PFBA	M	3.401	482327	3856038	5	0.6111	ng/mL	----
PFBA-13C	Auto	3.401	3856038	5881508	1	4.0343	ng/mL	----
PFBA-13C_IS	Auto	3.401	3856038	3856038	5	5.0000	ng/mL	----
PFTrDA	M	5.464	13544	5329432	14	0.0076	ng/mL	----
PFTeDA	Auto	5.619	58196	5329432	14	0.0089	ng/mL	----
PFTeDA-13C	Auto	5.618	5329432	5881508	1	4.9443	ng/mL	----
PFTeDA-13C_IS	Auto	5.618	5329432	5329432	14	5.0000	ng/mL	----
N-EtFOSA	ND(W/B)	----	----	838420	18	----	ng/mL	----
N-EtFOSA-d9	Auto	5.763	838420	5881508	1	3.2040	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.763	838420	838420	18	5.0000	ng/mL	----

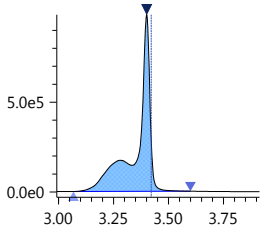
13C7-PFUnDA_IS
Conc 5.0000
RT 5.128 Area 5881508
ISTD 570.00>525.00 (-) 1.87e6



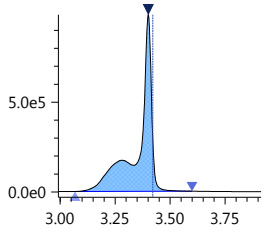
PFBA
Conc 0.6111
RT 3.401 Area 482327
Q 213.00>169.10 (-) 1.24e5



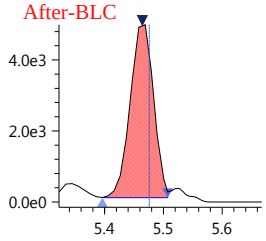
PFBA-13C
Conc 4.0343
RT 3.401 Area 3856038
Q 216.90>172.15 (-) 9.87e5



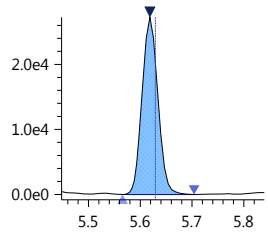
PFBA-13C_IS
Conc 5.0000
RT 3.401 Area 3856038
ISTD 216.90>172.15 (-) 9.87e5



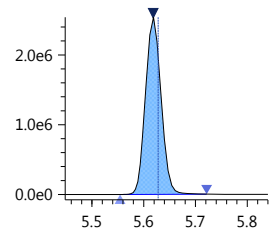
PFTrDA
Conc 0.0076
RT 5.464 Area 13544
Q 663.00>618.90 (-) 4.99e3



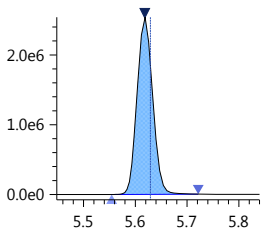
PFTeDA
Conc 0.0089
RT 5.619 Area 58196
Q 713.40>669.00 (-) 2.72e4



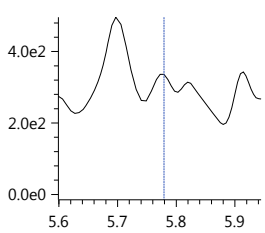
PFTeDA-13C
Conc 4.9443
RT 5.618 Area 5329432
Q 714.70>669.90 (-) 2.54e6



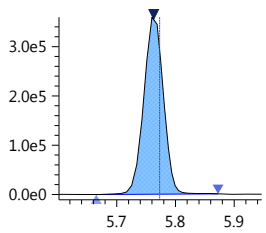
PFTeDA-13C_IS
Conc 5.0000
RT 5.618 Area 5329432
ISTD 714.70>669.90 (-) 2.54e6



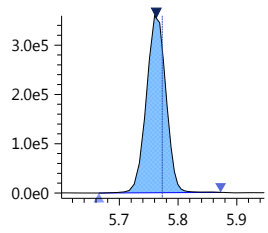
N-EtFOSA
Conc ----
RT ---- Area ----
Q 526.90>169.10 (-) 4.96e2



N-EtFOSA-d9
Conc 3.2040
RT 5.763 Area 838420
Q 530.90>169.15 (-) 3.60e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.763 Area 838420
ISTD 530.90>169.15 (-) 3.60e5



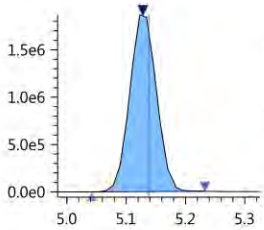
Insight Report

Printed at 8/14/2019 10:19:16 AM

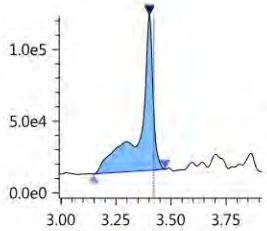
190812_057

Sample ID: R1907111-003
Date acquired: 8/13/2019 5:10:46 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b4\190812_057.lcd
Vial: 38 | Inj. Volume: 15.0000uL | Tray: 5

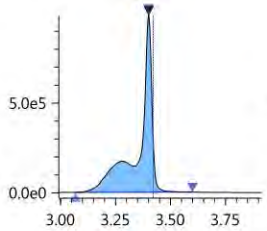
13C7-PFUnDA_IS
Conc 5.0000
RT 5.128 Area 5881508
ISTD 570.00>525.00 (-) 1.87e6



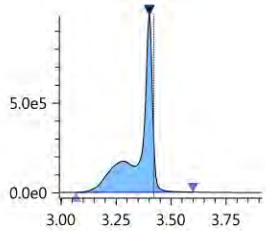
PFBA
Conc 0.5655
RT 3.401 Area 446349
Q 213.00>169.10 (-) 1.24e5



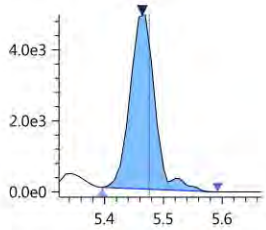
PFBA-13C
Conc 4.0343
RT 3.401 Area 3856038
Q 216.90>172.15 (-) 9.87e5



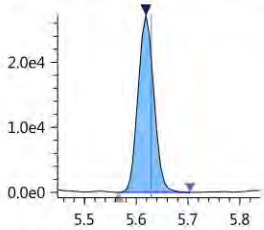
PFBA-13C_IS
Conc 5.0000
RT 3.401 Area 3856038
ISTD 216.90>172.15 (-) 9.87e5



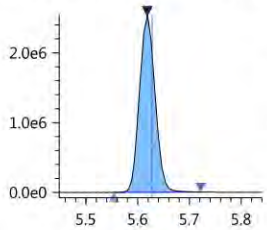
PFTrDA
Conc 0.0088
RT 5.464 Area 14441
Q 663.00>618.90 (-) 4.99e3



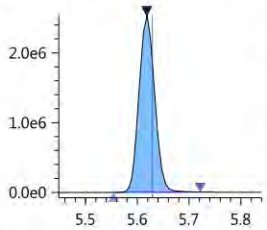
PFTeDA
Conc 0.0089
RT 5.619 Area 58196
Q 713.40>669.00 (-) 2.72e4



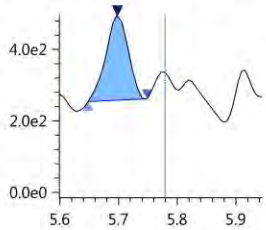
PFTeDA-13C
Conc 4.9443
RT 5.618 Area 5329432
Q 714.70>669.90 (-) 2.54e6



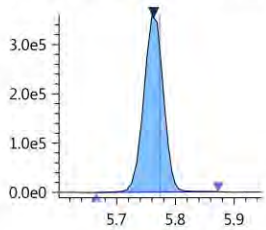
PFTeDA-13C_IS
Conc 5.0000
RT 5.618 Area 5329432
ISTD 714.70>669.90 (-) 2.54e6



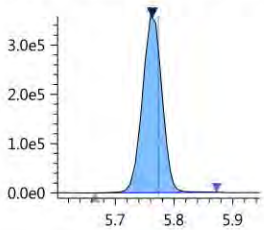
N-EtFOSA
Conc 0.0196
RT 5.698 Area 631
Q 526.90>169.10 (-) 4.96e2



N-EtFOSA-d9
Conc 3.2040
RT 5.763 Area 838420
Q 530.90>169.15 (-) 3.60e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.763 Area 838420
ISTD 530.90>169.15 (-) 3.60e5



1st EJD 08/09/19
2nd 08/12/19

Validation Report

Data File: J:\LCMS06\Data\190807_b8\190807_165
Lab ID: R1907111-004
RunType: N/A
Matrix: Water

Date Acquired: 8/8/19 20:07
Batch ID: 646328
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	Perfluorodecane sulfonic acid (PFDS)	136	70	130	Narrate high bias, ND
	18O2-PFHxS	137	70	130	narrate native ok
	13C4-PFHpA	132	70	130	narrate native ok
	13C5-PFNA	144	70	130	narrate native ok
	13C2-PFDA	135	70	130	narrate native ok
	D5-EtFOSAA	142	70	130	narrate native ok

Primary Review: _____

Secondary Review: _____

1st EJD 08/09/19
2nd 08/12/19

Quantitation Report

Data File:	J:\LCMS06\Data\190807_b8\190807_165	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 20:07	**Vial:**	25
Run Type:	N/A	**Dilution:**	1
Lab ID:	R1907111-004	**Raw Units:**	ng/mL

Bottle ID:	R1907111-004.01	**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/29/19	**Receive Date:**	7/29/19

Analysis Lot:	646328	**Prep Lot:**	341924	**Report Group:**	R1907111
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	8/6/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.122	0.00	3735024	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.014	0.00	586616	3.2797	66	20 - 109	Y
18O2-PFHxS	4.402	-0.01	523080	5.1099	102	26 - 122	Y
13C4-PFOS	4.745	0.00	487882	4.0008	80	25 - 121	Y
13C4-PFBA	3.295	-0.11	3665185	6.0384	121	27 - 124	Y
13C5-PFPeA	3.911	-0.05	1982885	5.1923	104	27 - 138	Y
13C2-PFHxA	4.212	0.00	4229821	5.6338	113	28 - 132	Y
13C4-PFHpA	4.402	-0.01	4275918	4.8593	97	19 - 139	Y
13C4-PFOA	4.578	0.00	3398751	4.2649	85	22 - 130	Y
13C5-PFNA	4.759	0.00	3284971	5.1889	104	20 - 127	Y
13C2-PFDA	4.941	0.00	2742317	5.1528	103	24 - 125	Y
13C2-PFUnDA	5.122	0.00	1827451	3.1681	63	22 - 125	Y
13C2-PFDoDA	5.298	0.00	3022899	4.8654	97	19 - 122	Y
13C2-PFTeDA	5.616	0.00	3410397	4.9822	100	13 - 124	Y
13C8-FOSA	5.247	+0.01	722842	2.5416	51	18 - 109	Y
D3-MeFOSAA	5.041	0.00	267358	3.2574	65	9 - 123	Y
D5-EtFOSAA	5.139		343210	4.6279	93	12 - 126	Y
13C2-6:2 FTS	4.565	0.00	356978	5.5072	110	10 - 226	Y
13C2-8:2 FTS	4.934	0.00	160466	4.3433	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)	4.009	-0.01	4942	0.0291	0.74	J	Y
Perfluorohexane sulfonic acid (PFHxS)	4.392	-0.01	5023	0.0346	0.88	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: 8/9/19 17:47
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1st EJD 08/09/19

2nd 08/12/19

Data File:	J:\LCMS06\Data\190807_b8\190807_165	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 20:07	**Vial:**	25
Run Type:	N/A	**Dilution:**	1
Lab ID:	R1907111-004	**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)	4.746	0.00	25302	0.2969	7.5		Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.398	-0.01	433042	0.5772	15		Y
Perfluoropentanoic acid (PFPeA)	3.914	-0.05	354316	0.3056	7.8		Y
Perfluorohexanoic acid (PFHxA)	4.210	-0.01	207552	0.2119	5.4	U	Y
Perfluoroheptanoic acid (PFHpA)	4.399	-0.01	113776	0.1388	3.5	J	Y
Perfluorooctanoic acid (PFOA)	4.577	0.00	234138	0.2913	7.4		Y
Perfluorononanoic acid (PFNA)	4.754	-0.01	36144	0.0490	1.2	J	Y
Perfluorodecanoic acid (PFDA)	4.935	-0.01	29074	0.0523	1.3	J	Y
Perfluoroundecanoic acid (PFUnDA)	5.116	-0.01	14983	0.0169	0.43	U	Y
Perfluorododecanoic acid (PFDoDA)	5.296	0.00	9725	0.0162	0.41	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.459	-0.01	10761	0.0119	0.30	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.617		40413	0.0223	0.57	U	Y
Perfluorooctane sulfonamide (FOSA)	5.245	+0.01	49460	0.2718	6.9		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.042	0.00	4028	0.1285	3.3	J	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.147	+0.01	369	0.0892	2.3	J	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.561	-0.01	3740	0.0431	1.1	J	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.895	-0.04	166	0.0059	0.15	U	Y

Prep Amount:	315.0000 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: 8/9/19 17:47

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Insight Report

Printed at 8/9/2019 5:29:05 PM

190807_165

Sample ID: R1907111-004
Date acquired: 8/8/2019 8:07:29 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_165.lcd
Vial: 23 | Inj. Volume: 15.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.122	3735024	3735024	1	5.0000	ng/mL	----
PFBS_1	M	4.009	4942	588911	2	0.0291	ng/mL	----
PFBS-13C	Auto	4.014	586616	3735024	1	3.2797	ng/mL	----
PFBS-13C_IS	Auto	4.014	588911	588911	2	5.0000	ng/mL	----
PFHxS_1	M	4.392	5023	523080	3	0.0346	ng/mL	----
PFHxS-18O	Auto	4.402	523080	3735024	1	5.1099	ng/mL	----
PFHxS-18O_IS	Auto	4.402	523080	523080	3	5.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	523080	3	----	ng/mL	----
PFOS_1	M	4.746	25302	485944	4	0.2969	ng/mL	----
PFOS-13C	Auto	4.745	487882	3735024	1	4.0008	ng/mL	----
PFOS-13C_IS	Auto	4.745	485944	485944	4	5.0000	ng/mL	----
PFDS_1	NI	----	----	485944	4	----	ng/mL	----
PFBA	Auto	3.398	433042	3665185	5	0.5772	ng/mL	----
PFBA-13C	Auto	3.295	3665185	3735024	1	6.0384	ng/mL	----
PFBA-13C_IS	Auto	3.295	3665185	3665185	5	5.0000	ng/mL	----
PFPeA	M	3.914	354316	1982885	6	0.3056	ng/mL	----
PFPeA-13C	Auto	3.911	1982885	3735024	1	5.1923	ng/mL	----
PFPeA-13C_IS	Auto	3.911	1982885	1982885	6	5.0000	ng/mL	----
PFHxA	M	4.210	207552	4229821	7	0.2119	ng/mL	----
PFHxA-13C	Auto	4.212	4229821	3735024	1	5.6338	ng/mL	----
PFHxA-13C_IS	Auto	4.212	4229821	4229821	7	5.0000	ng/mL	----
PFHpA	Auto	4.399	113776	4275918	8	0.1388	ng/mL	----
PFHpA-13C	Auto	4.402	4275918	3735024	1	4.8593	ng/mL	----
PFHpA-13C_IS	Auto	4.402	4275918	4275918	8	5.0000	ng/mL	----
PFOA	Auto	4.577	234138	3398751	9	0.2913	ng/mL	----
PFOA-13C	Auto	4.578	3398751	3735024	1	4.2649	ng/mL	----
PFOA-13C_IS	Auto	4.578	3398751	3398751	9	5.0000	ng/mL	----
PFNA	M	4.754	36144	3284971	10	0.0490	ng/mL	----
PFNA-13C	Auto	4.759	3284971	3735024	1	5.1889	ng/mL	----
PFNA-13C_IS	Auto	4.759	3284971	3284971	10	5.0000	ng/mL	----
PFDA	M	4.935	29074	2742317	11	0.0523	ng/mL	----
PFDA-13C	Auto	4.941	2742317	3735024	1	5.1528	ng/mL	----
PFDA-13C_IS	Auto	4.941	2742317	2742317	11	5.0000	ng/mL	----
PFUnA	Auto	5.116	14983	1827451	12	0.0169	ng/mL	----
PFUnA-13C	Auto	5.122	1827451	3735024	1	3.1681	ng/mL	----
PFUnA-13C_IS	Auto	5.122	1827451	1827451	12	5.0000	ng/mL	----
PFDoA	M	5.296	9725	3022899	13	0.0162	ng/mL	----
PFDoA-13C	Auto	5.298	3022899	3735024	1	4.8654	ng/mL	----
PFDoA-13C_IS	Auto	5.298	3022899	3022899	13	5.0000	ng/mL	----
PFTrDA	M	5.459	10761	3410397	14	0.0119	ng/mL	----
PFTeDA	Auto	5.617	40413	3410397	14	0.0223	ng/mL	----
PFTeDA-13C	Auto	5.616	3410397	3735024	1	4.9822	ng/mL	----
PFTeDA-13C_IS	Auto	5.616	3410397	3410397	14	5.0000	ng/mL	----
FOSA	Auto	5.245	49460	722842	16	0.2718	ng/mL	----
FOSA-13C	Auto	5.247	722842	3735024	1	2.5416	ng/mL	----
FOSA-13C_IS	Auto	5.247	722842	722842	16	5.0000	ng/mL	----
N-MeFOSAA	M	5.042	4028	267358	21	0.1285	ng/mL	----
N-MeFOSAA-d3	Auto	5.041	267358	3735024	1	3.2574	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.041	267358	267358	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.147	369	343210	22	0.0892	ng/mL	----
N-EtFOSAA-d5	Auto	5.139	343210	3735024	1	4.6279	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.139	343210	343210	22	5.0000	ng/mL	----
6_2-FTS_1	M	4.561	3740	356978	24	0.0431	ng/mL	----
6_2-FTS-13C	Auto	4.565	356978	3735024	1	5.5072	ng/mL	----
6_2-FTS-13C_IS	Auto	4.565	356978	356978	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.895	166	160466	25	0.0059	ng/mL	----
8_2-FTS-13C	Auto	4.934	160466	3735024	1	4.3433	ng/mL	----
8_2-FTS-13C_IS	Auto	4.934	160466	160466	25	5.0000	ng/mL	----

Insight Report

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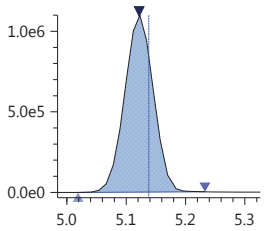
13C7-PFUnDA_IS
Conc 5.0000
RT 5.122 Area 3735024
ISTD 570.00>525.00 (-) 1.10e6



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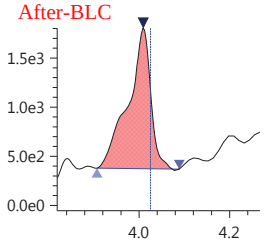
RT 4.009 Area 4942
Q 299.00>80.00 (-) 1.80e3



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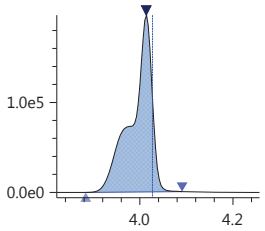
Conc 3.2797
RT 4.014 Area 586616
Q 301.80>80.00 (-) 1.97e5



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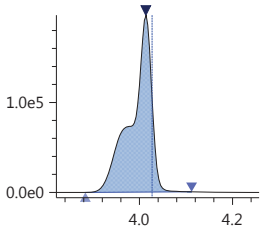

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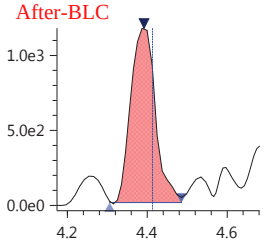

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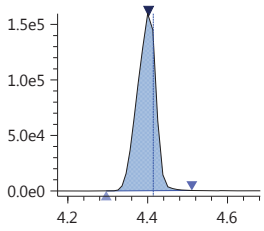

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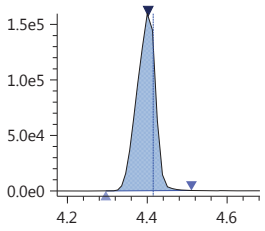

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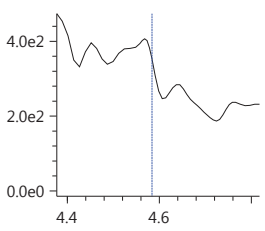
RT ---- Area ----
Q 449.00>80.15 (-) 4.74e2



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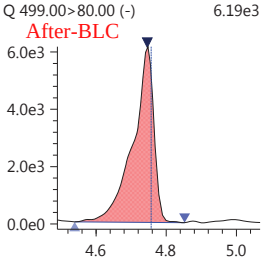

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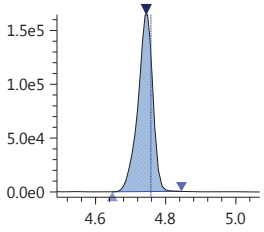

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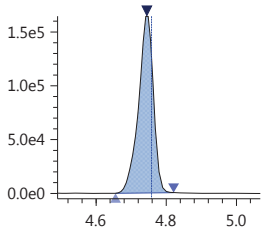

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Conc ----
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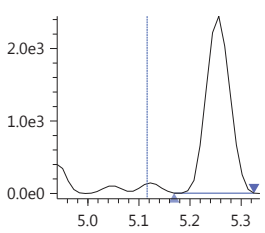
Q 599.00>79.90 (-) 2.45e3



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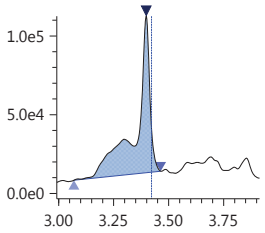

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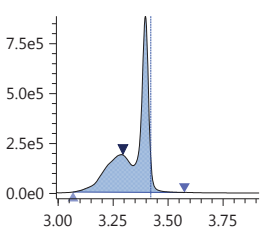
RT 3.295 Area 3665185
Q 216.90>172.15 (-) 8.88e5



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RT 3.295 Area 3665185
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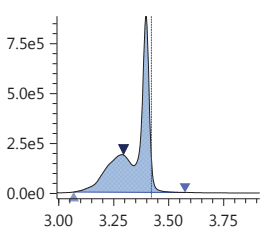

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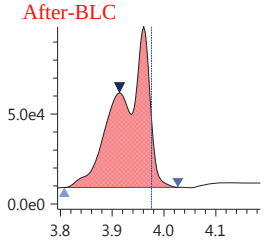
Conc 0.3056
RT 3.914 Area 354316
Q 263.05>219.10 (-) 9.86e4



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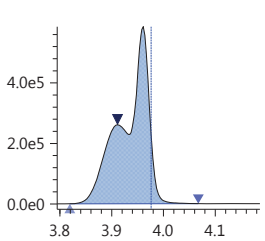
Q 267.90>223.00 (-) 5.86e5



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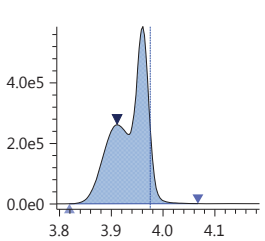

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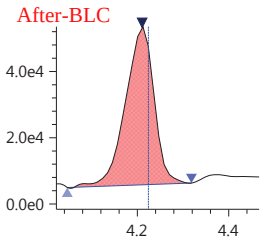

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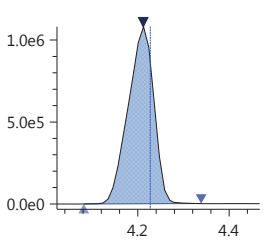

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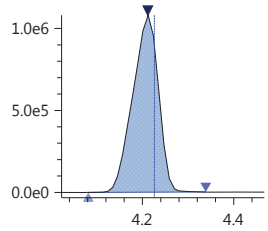

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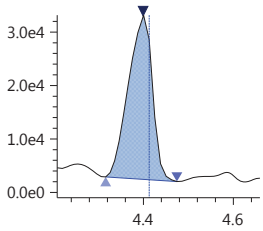

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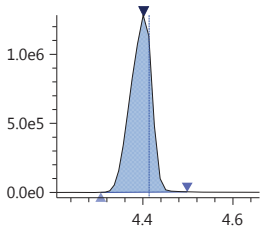

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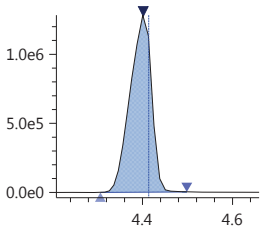

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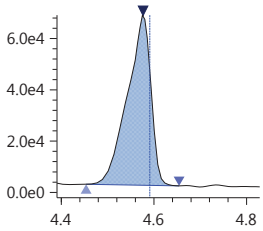

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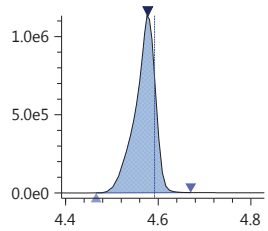

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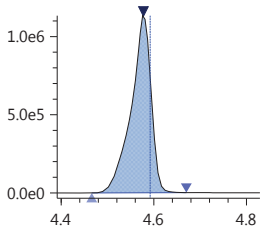

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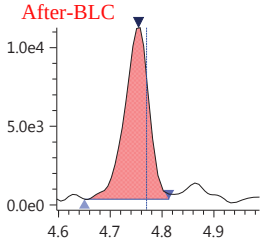
After-BLC



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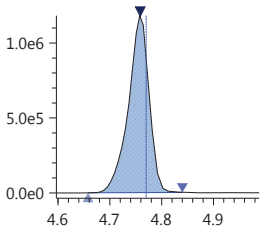
Q 467.80>423.00 (-) 1.18e6



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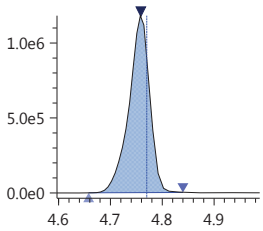

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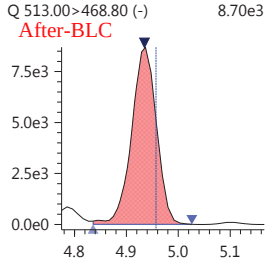
After-BLC



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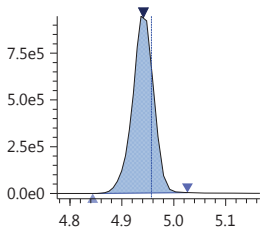

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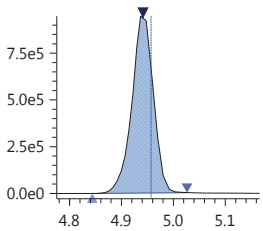

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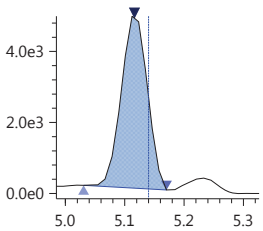

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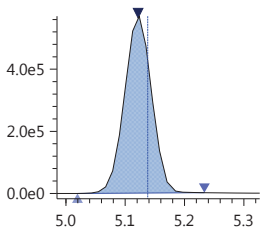
Q 564.80>519.95 (-) 5.71e5



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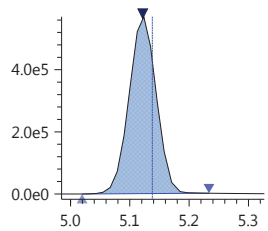

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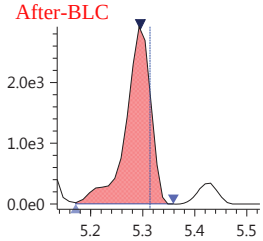
RT 5.296 Area 9725
Q 613.05>569.00 (-) 2.92e3

After-BLC



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RT 5.298 Area 3022899
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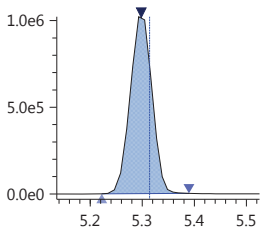

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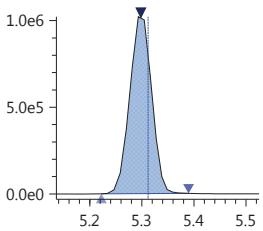

PFTrDA
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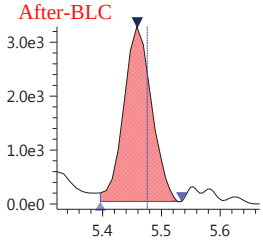
RT 5.459 Area 10761
Q 663.00>618.90 (-) 3.29e3

After-BLC



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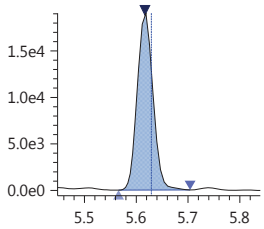
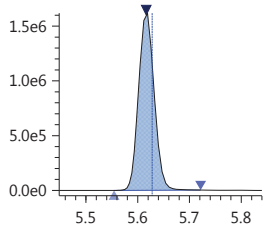


PFTeDA-13C
Conc 4.9822
RT 5.616 Area 3410397
Q 714.70>669.90 (-) 1.62e6



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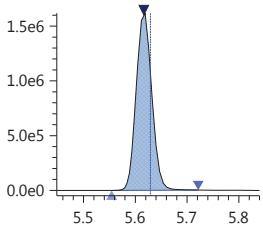

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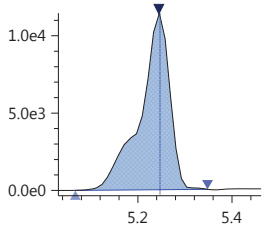
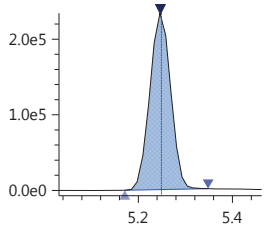
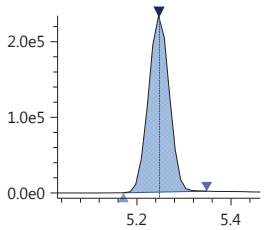
Q 498.20>78.00 (-) 1.15e4



FOSA-13C
Conc 2.5416
RT 5.247 Area 722842
Q 506.00>78.05 (-) 2.34e5



FOSA-13C_IS
Conc 5.0000
RT 5.247 Area 722842
ISTD 506.00>78.05 (-) 2.34e5



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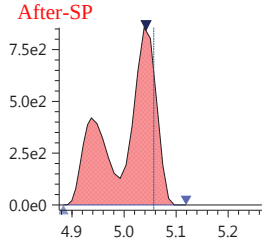
Conc 0.1285
RT 5.042 Area 4028
Q 570.20>419.00 (-) 8.56e2



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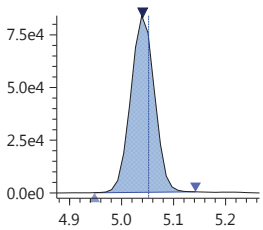
Conc 3.2574
RT 5.041 Area 267358
Q 572.80>419.05 (-) 8.41e4



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RT 5.041 Area 267358
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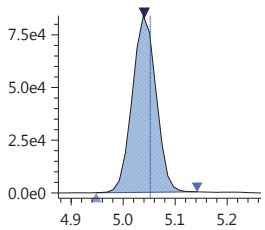

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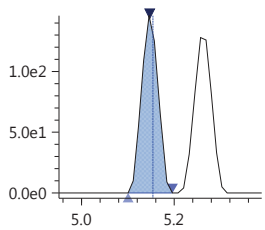
RT 5.147 Area 369
Q 584.20>418.95 (-) 1.46e2



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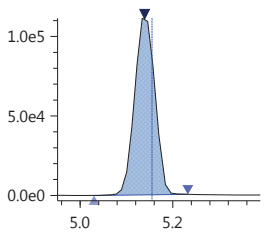
Conc 4.6279
RT 5.139 Area 343210
Q 588.80>419.00 (-) 1.12e5



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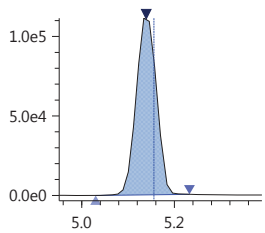
ISTD 588.80>419.00 (-) 1.12e5



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Conc 0.0431
RT 4.561 Area 3740
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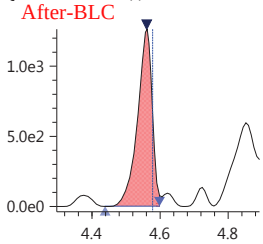
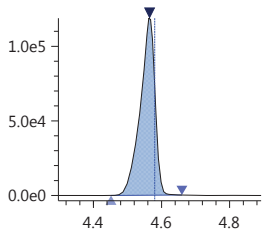


6_2-FTS-13C
Conc 5.5072
RT 4.565 Area 356978
Q 428.90>409.00 (-) 1.19e5



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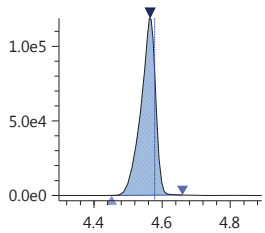
RT 4.565 Area 356978
ISTD 428.90>409.00 (-) 1.19e5



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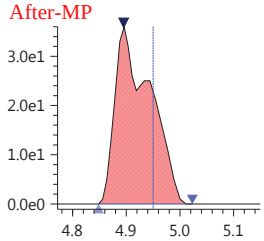
Q 527.10>506.90 (-) 3.60e1



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Conc 4.3433
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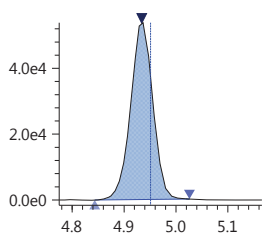

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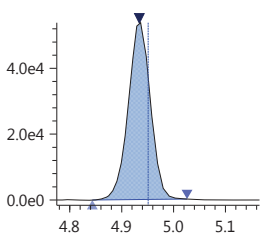

Insight Report

Printed at 8/9/2019 4:33:51 PM

190807_165

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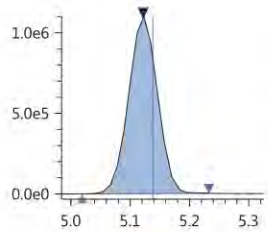
Date acquired: 8/8/2019 8:07:29 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_165.lcd
Vial: 23 | Inj. Volume: 15.0000uL | Tray: 4

13C7-PFUnDA_IS
Conc 5.0000
RT 5.122 Area 3735024
ISTD 570.00>525.00 (-) 1.10e6



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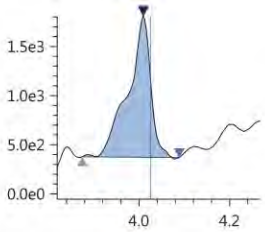

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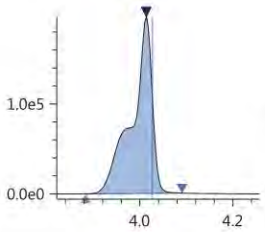

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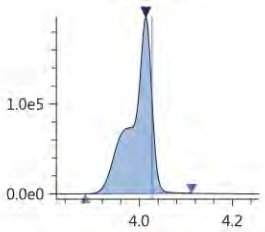
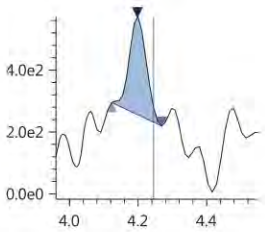


PFPeS
Conc 0.0154
RT 4.198 Area 1096
Q 349.00>99.00 (-) 5.73e2



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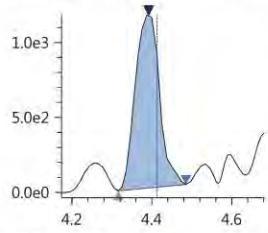
Q 399.00>80.00 (-) 1.18e3



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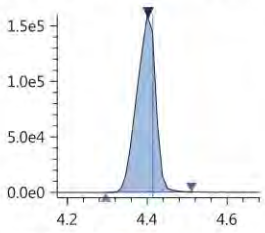

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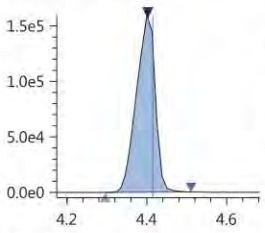

PFHpS_1
Conc ----
RT ---- Area ----
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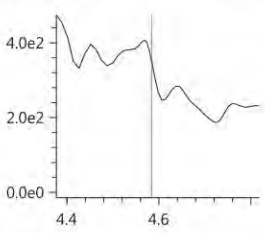

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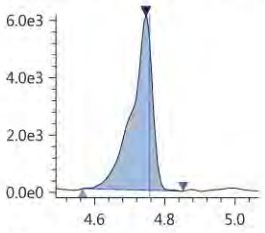
Q 499.00>80.00 (-) 6.19e3



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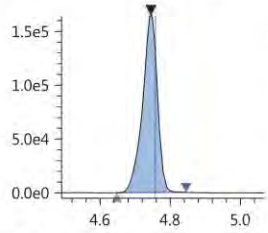
Q 502.80>80.05 (-) 1.65e5



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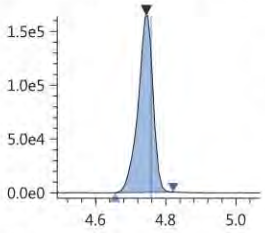

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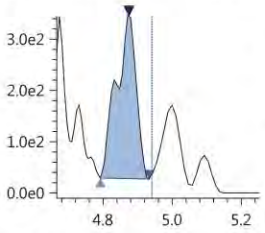
Conc -0.0602
RT 4.875 Area 1285
Q 549.00>99.00 (-) 3.46e2



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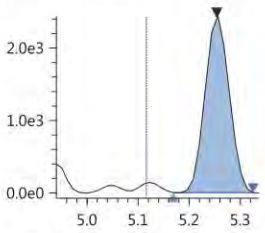
RT 5.254 Area 8031
Q 599.00>79.90 (-) 2.45e3



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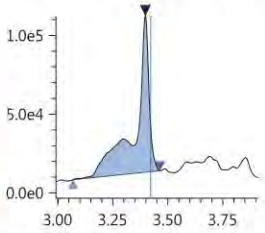
Conc 0.5772
RT 3.398 Area 433042
Q 213.00>169.10 (-) 1.13e5



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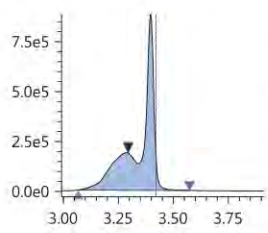
RT 3.295 Area 3665185
Q 216.90>172.15 (-) 8.88e5



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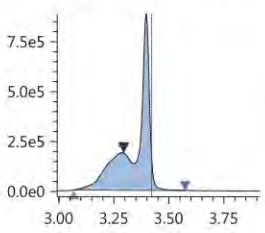

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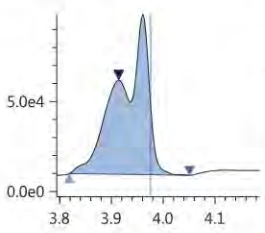
Conc 0.3006
RT 3.914 Area 350155
Q 263.05>219.10 (-) 9.86e4



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Conc 5.1923
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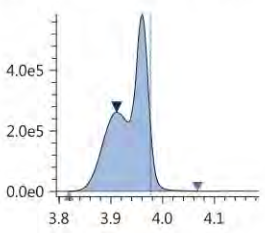
Q 267.90>223.00 (-) 5.86e5



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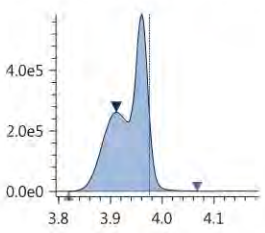

Insight Report

Printed at 8/9/2019 4:33:51 PM

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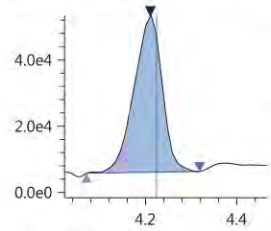
Q 313.00>269.00 (-) 5.35e4



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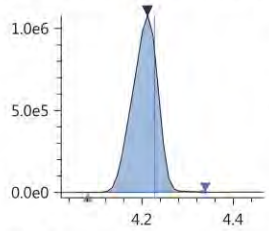
Q 314.90>270.10 (-) 1.08e6



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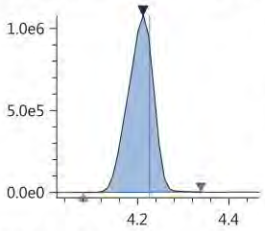

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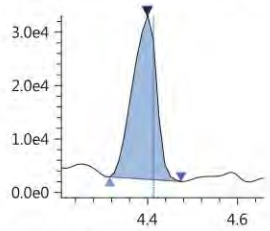
Q 362.90>319.00 (-) 3.32e4



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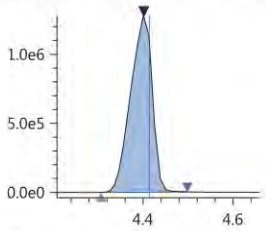

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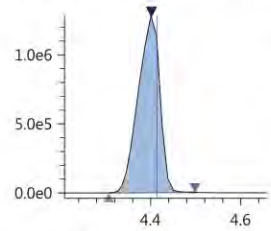

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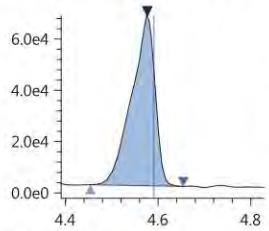
Q 413.00>369.00 (-) 6.91e4



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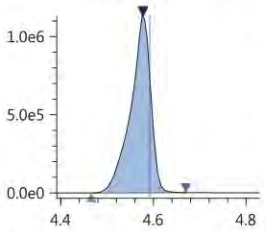

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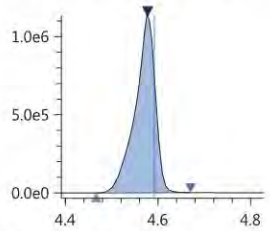

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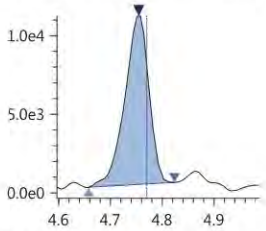
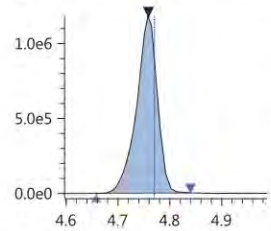
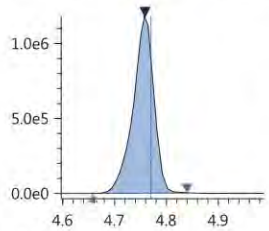


PFNA-13C
Conc 5.1889
RT 4.759 Area 3284971
Q 467.80>423.00 (-) 1.18e6



PFNA-13C_IS
Conc 5.0000
RT 4.759 Area 3284971
ISTD 467.80>423.00 (-) 1.18e6



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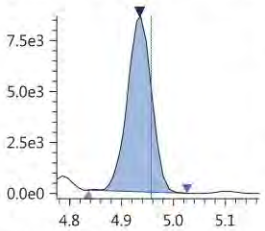
Conc 0.0507
RT 4.935 Area 28177
Q 513.00>468.80 (-) 8.70e3



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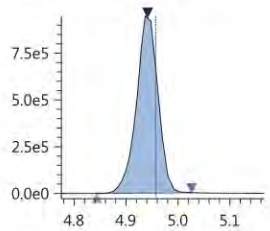
RT 4.941 Area 2742317
Q 514.80>469.95 (-) 9.48e5



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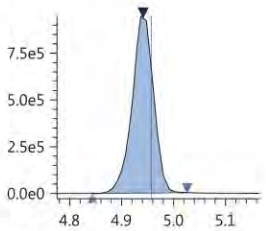
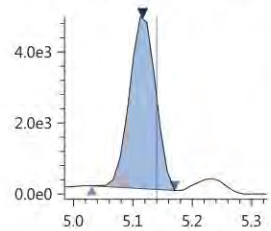
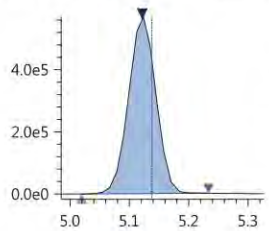
Conc 5.0000
RT 4.941 Area 2742317
ISTD 514.80>469.95 (-) 9.48e5



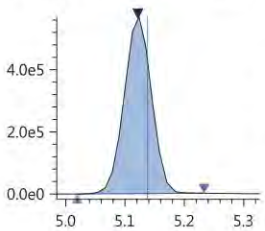
PFUnA
Conc 0.0169
RT 5.116 Area 14983
Q 563.00>518.90 (-) 4.99e3



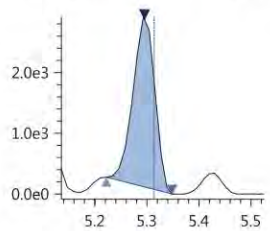
PFUnA-13C
Conc 3.1681
RT 5.122 Area 1827451
Q 564.80>519.95 (-) 5.71e5



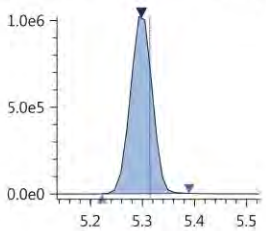
PFUnA-13C_IS
Conc 5.0000
RT 5.122 Area 1827451
ISTD 564.80>519.95 (-) 5.71e5



PFDoA
Conc 0.0121
RT 5.296 Area 8189
Q 613.05>569.00 (-) 2.92e3



PFDoA-13C
Conc 4.8654
RT 5.298 Area 3022899
Q 614.80>569.95 (-) 1.02e6



Insight Report

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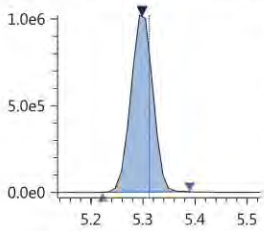
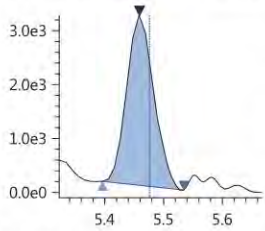
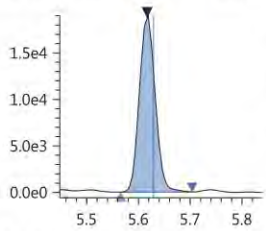
PFDoA-13C_IS
Conc 5.0000
RT 5.298 Area 3022899
ISTD 614.80>569.95 (-) 1.02e6



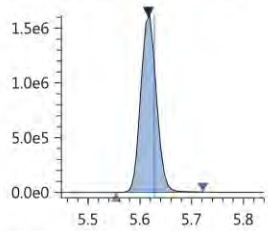
PFTrDA
Conc 0.0106
RT 5.459 Area 10116
Q 663.00>618.90 (-) 3.29e3



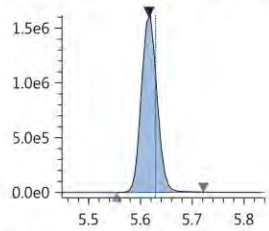
PFTeDA
Conc 0.0223
RT 5.617 Area 40413
Q 713.40>669.00 (-) 1.91e4



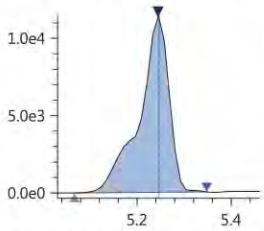
PFTeDA-13C
Conc 4.9822
RT 5.616 Area 3410397
Q 714.70>669.90 (-) 1.62e6



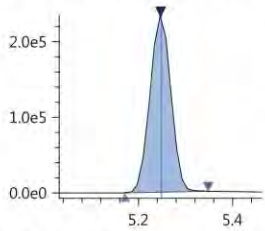
PFTeDA-13C_IS
Conc 5.0000
RT 5.616 Area 3410397
ISTD 714.70>669.90 (-) 1.62e6



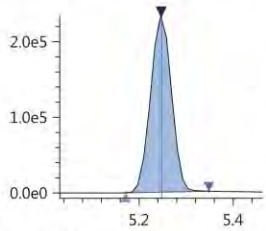
FOSA
Conc 0.2718
RT 5.245 Area 49460
Q 498.20>78.00 (-) 1.15e4



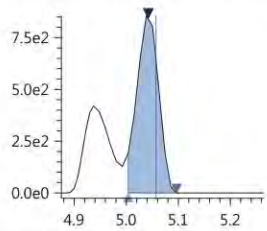
FOSA-13C
Conc 2.5416
RT 5.247 Area 722842
Q 506.00>78.05 (-) 2.34e5



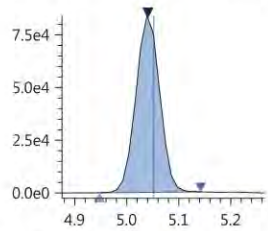
FOSA-13C_IS
Conc 5.0000
RT 5.247 Area 722842
ISTD 506.00>78.05 (-) 2.34e5



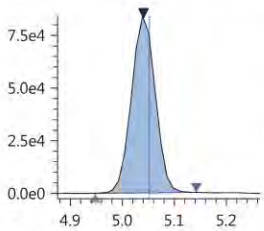
N-MeFOSAA
Conc 0.0890
RT 5.042 Area 2484
Q 570.20>419.00 (-) 8.56e2



N-MeFOSAA-d3
Conc 3.2574
RT 5.041 Area 267358
Q 572.80>419.05 (-) 8.41e4



N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.041 Area 267358
ISTD 572.80>419.05 (-) 8.41e4



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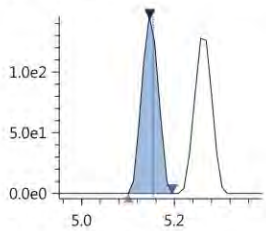
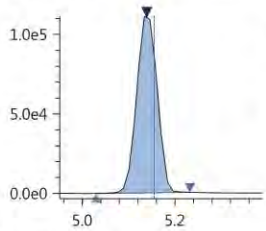
Q 584.20>418.95 (-) 1.46e2



N-EtFOSAA-d5
Conc 4.6279
RT 5.139 Area 343210
Q 588.80>419.00 (-) 1.12e5



N-EtFOSAA-d5_IS
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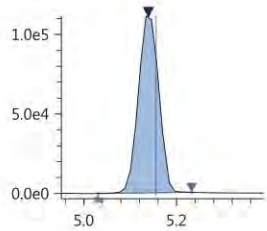
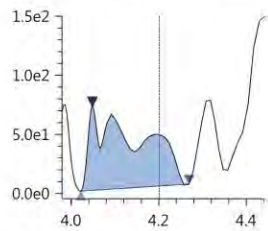
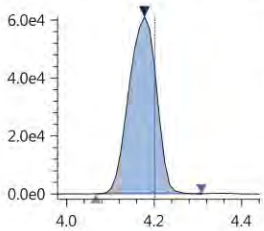
RT 5.139 Area 343210
ISTD 588.80>419.00 (-) 1.12e5



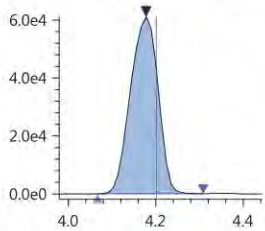
4_2-FTS_1
Conc 0.0083
RT 4.048 Area 552
Q 327.00>307.05 (-) 1.50e2



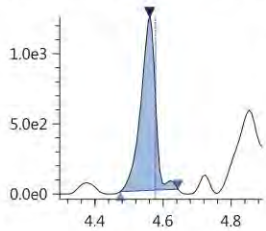
4_2-FTS-13C
Conc 3.9048
RT 4.178 Area 268510
Q 328.80>309.05 (-) 6.11e4



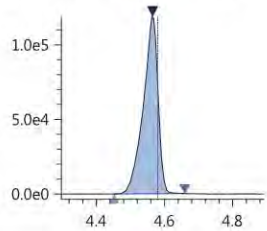
4_2-FTS-13C_IS
Conc 5.0000
RT 4.178 Area 268510
ISTD 328.80>309.05 (-) 6.11e4



6_2-FTS_1
Conc 0.0426
RT 4.561 Area 3702
Q 427.00>407.00 (-) 1.26e3



6_2-FTS-13C
Conc 5.5072
RT 4.565 Area 356978
Q 428.90>409.00 (-) 1.19e5



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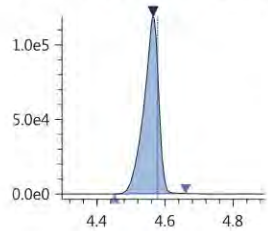
Conc 5.0000
RT 4.565 Area 356978
ISTD 428.90>409.00 (-) 1.19e5



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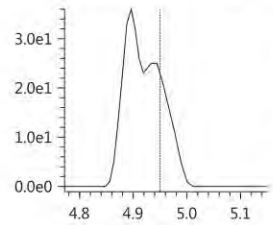
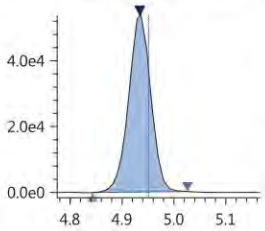
8_2-FTS_1

Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 3.60e1



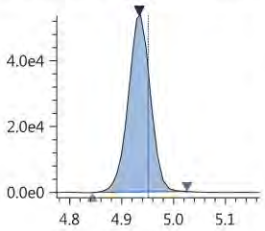
8_2-FTS-13C

Conc 4.3433
RT 4.934 Area 160466
Q 528.80>509.00 (-) 5.39e4



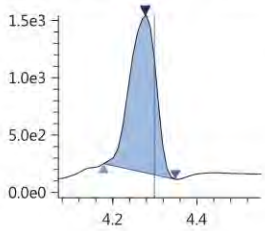
8_2-FTS-13C_IS

Conc 5.0000
RT 4.934 Area 160466
ISTD 528.80>509.00 (-) 5.39e4



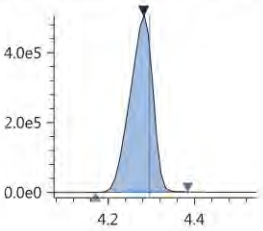
HPFO_DA

Conc 0.0172
RT 4.277 Area 5954
Q 329.00>169.00 (-) 1.55e3



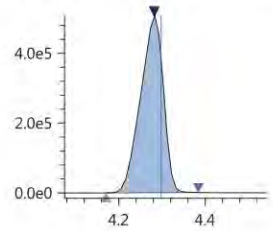
HFPO_DA-13C

Conc 4.9533
RT 4.282 Area 1857682
Q 332.00>286.80 (-) 5.08e5



HFPO_DA-13C_IS

Conc 5.0000
RT 4.282 Area 1857682
ISTD 332.00>286.80 (-) 5.08e5



1st EJD 08/09/19
2nd 08/12/19

Validation Report

Data File: J:\LCMS06\Data\190807_b8\190807_166
Lab ID: R1907111-005
RunType: N/A
Matrix: Water

Date Acquired: 8/8/19 20:17
Batch ID: 646328
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	Perfluorodecane sulfonic acid (PFDS)	136	70	130	Narrate high bias, ND
	18O2-PFHxS	137	70	130	narrate native ok
	13C4-PFHpA	132	70	130	narrate native ok
	13C5-PFNA	144	70	130	narrate native ok
	13C2-PFDA	135	70	130	narrate native ok
	D5-EtFOSAA	142	70	130	narrate native ok

Primary Review: _____

Secondary Review: _____

1st EJD 08/09/19
2nd 08/12/19

Quantitation Report

Data File:	J:\LCMS06\Data\190807_b8\190807_166	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 20:17	**Vial:**	26
Run Type:	N/A	**Dilution:**	1
Lab ID:	R1907111-005	**Raw Units:**	ng/mL

Bottle ID:	R1907111-005.01	**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/29/19	**Receive Date:**	7/29/19

Analysis Lot:	646328	**Prep Lot:**	341924	**Report Group:**	R1907111
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	8/6/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.120	-0.01	3005329	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.009	-0.01	486029	3.3771	68	20 - 109	Y
18O2-PFHxS	4.395	-0.01	326219	3.9606	79	26 - 122	Y
13C4-PFOS	4.742	-0.01	418563	4.2658	85	25 - 121	Y
13C4-PFBA	3.391	-0.02	2480174	5.0782	102	27 - 124	Y
13C5-PFPeA	3.956	-0.01	1396942	4.5461	91	27 - 138	Y
13C2-PFHxA	4.209	-0.01	2617474	4.3327	87	28 - 132	Y
13C4-PFHpA	4.396	-0.01	2558660	3.6138	72	19 - 139	Y
13C4-PFOA	4.574	-0.01	2763575	4.3099	86	22 - 130	Y
13C5-PFNA	4.755	-0.01	2518018	4.9432	99	20 - 127	Y
13C2-PFDA	4.940	0.00	1573506	3.6745	73	24 - 125	Y
13C2-PFUnDA	5.120	-0.01	1570592	3.3839	68	22 - 125	Y
13C2-PFDoDA	5.296	0.00	1708526	3.4175	68	19 - 122	Y
13C2-PFTeDA	5.612	-0.01	2238790	4.0647	81	13 - 124	Y
13C8-FOSA	5.242	+0.00	757425	3.3098	66	18 - 109	Y
D3-MeFOSAA	5.039	0.00	175940	2.6641	53	9 - 123	Y
D5-EtFOSAA	5.138	0.00	210625	3.5297	71	12 - 126	Y
13C2-6:2 FTS	4.559	-0.01	240302	4.6073	92	10 - 226	Y
13C2-8:2 FTS	4.934	0.00	137538	4.6266	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)	4.007	-0.01	5970	0.0426	1.2	J	Y
Perfluorohexane sulfonic acid (PFHxS)	4.396	-0.01	7297	0.0806	2.2	J	Y

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

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

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

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1st EJD 08/09/19

2nd 08/12/19

Data File:	J:\LCMS06\Data\190807_b8\190807_166	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 20:17	**Vial:**	26
Run Type:	N/A	**Dilution:**	1
Lab ID:	R1907111-005	**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)	4.743	-0.01	1700	0.0232	0.63	J	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.396	-0.01	507869	1.0004	27		Y
Perfluoropentanoic acid (PFPeA)	3.956	-0.01	306169	0.4005	11		Y
Perfluorohexanoic acid (PFHxA)	4.207	-0.01	156900	0.2646	7.2	U	Y
Perfluoroheptanoic acid (PFHpA)	4.391	-0.02	53425	0.1048	2.8	J	Y
Perfluorooctanoic acid (PFOA)	4.572	-0.01	71069	0.0961	2.6		Y
Perfluorononanoic acid (PFNA)	4.754	-0.01	8654	0.0070	0.19	U	Y
Perfluorodecanoic acid (PFDA)	4.937	-0.01	4391	0.0138	0.37	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.116	-0.01	17313	0.0329	0.89	U	Y
Perfluorododecanoic acid (PFDoDA)	5.298	0.00	4856	0.0132	0.36	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.460	0.00	6413	0.0099	0.27	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.611	-0.01	26500	0.0221	0.60	U	Y
Perfluorooctane sulfonamide (FOSA)	5.247	+0.01	2428	0.0127	0.34	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)	4.560	-0.01	2806	0.0480	1.3	J	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.935	0.00	39	0.0016	0.043	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

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190807_166

Sample ID: R1907111-005
Date acquired: 8/8/2019 8:17:56 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_166.lcd
Vial: 24 | Inj. Volume: 15.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.120	3005329	3005329	1	5.0000	ng/mL	----
PFBS_1	M	4.007	5970	487007	2	0.0426	ng/mL	----
PFBS-13C	Auto	4.009	486029	3005329	1	3.3771	ng/mL	----
PFBS-13C_IS	Auto	4.009	487007	487007	2	5.0000	ng/mL	----
PFHxS_1	M	4.396	7297	326219	3	0.0806	ng/mL	----
PFHxS-18O	Auto	4.395	326219	3005329	1	3.9606	ng/mL	----
PFHxS-18O_IS	Auto	4.395	326219	326219	3	5.0000	ng/mL	----
PFHpS_1	NI	----	----	326219	3	----	ng/mL	----
PFOS_1	M	4.743	1700	417739	4	0.0232	ng/mL	----
PFOS-13C	Auto	4.742	418563	3005329	1	4.2658	ng/mL	----
PFOS-13C_IS	Auto	4.742	417739	417739	4	5.0000	ng/mL	----
PFDS_1	NI	----	----	417739	4	----	ng/mL	----
PFBA	Auto	3.396	507869	2480174	5	1.0004	ng/mL	----
PFBA-13C	Auto	3.391	2480174	3005329	1	5.0782	ng/mL	----
PFBA-13C_IS	Auto	3.391	2480174	2480174	5	5.0000	ng/mL	----
PFPeA	M	3.956	306169	1396942	6	0.4005	ng/mL	----
PFPeA-13C	Auto	3.956	1396942	3005329	1	4.5461	ng/mL	----
PFPeA-13C_IS	Auto	3.956	1396942	1396942	6	5.0000	ng/mL	----
PFHxA	Auto	4.207	156900	2617474	7	0.2646	ng/mL	----
PFHxA-13C	Auto	4.209	2617474	3005329	1	4.3327	ng/mL	----
PFHxA-13C_IS	Auto	4.209	2617474	2617474	7	5.0000	ng/mL	----
PFHpA	Auto	4.391	53425	2558660	8	0.1048	ng/mL	----
PFHpA-13C	Auto	4.396	2558660	3005329	1	3.6138	ng/mL	----
PFHpA-13C_IS	Auto	4.396	2558660	2558660	8	5.0000	ng/mL	----
PFOA	Auto	4.572	71069	2763575	9	0.0961	ng/mL	----
PFOA-13C	Auto	4.574	2763575	3005329	1	4.3099	ng/mL	----
PFOA-13C_IS	Auto	4.574	2763575	2763575	9	5.0000	ng/mL	----
PFNA	M	4.754	8654	2518018	10	0.0070	ng/mL	----
PFNA-13C	Auto	4.755	2518018	3005329	1	4.9432	ng/mL	----
PFNA-13C_IS	Auto	4.755	2518018	2518018	10	5.0000	ng/mL	----
PFDA	M	4.937	4391	1573506	11	0.0138	ng/mL	----
PFDA-13C	Auto	4.940	1573506	3005329	1	3.6745	ng/mL	----
PFDA-13C_IS	Auto	4.940	1573506	1573506	11	5.0000	ng/mL	----
PFUnA	Auto	5.116	17313	1570592	12	0.0329	ng/mL	----
PFUnA-13C	Auto	5.120	1570592	3005329	1	3.3839	ng/mL	----
PFUnA-13C_IS	Auto	5.120	1570592	1570592	12	5.0000	ng/mL	----
PFDoA	Auto	5.298	4856	1708526	13	0.0132	ng/mL	----
PFDoA-13C	Auto	5.296	1708526	3005329	1	3.4175	ng/mL	----
PFDoA-13C_IS	Auto	5.296	1708526	1708526	13	5.0000	ng/mL	----
PFTrDA	M	5.460	6413	2238790	14	0.0099	ng/mL	----
PFTeDA	Auto	5.611	26500	2238790	14	0.0221	ng/mL	----
PFTeDA-13C	Auto	5.612	2238790	3005329	1	4.0647	ng/mL	----
PFTeDA-13C_IS	Auto	5.612	2238790	2238790	14	5.0000	ng/mL	----
FOSA	M	5.247	2428	757425	16	0.0127	ng/mL	----
FOSA-13C	Auto	5.242	757425	3005329	1	3.3098	ng/mL	----
FOSA-13C_IS	Auto	5.242	757425	757425	16	5.0000	ng/mL	----
N-MeFOSAA	ND(W/B)	----	----	175940	21	----	ng/mL	----
N-MeFOSAA-d3	Auto	5.039	175940	3005329	1	2.6641	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.039	175940	175940	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	210625	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.138	210625	3005329	1	3.5297	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.138	210625	210625	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.560	2806	240302	24	0.0480	ng/mL	----
6_2-FTS-13C	Auto	4.559	240302	3005329	1	4.6073	ng/mL	----
6_2-FTS-13C_IS	Auto	4.559	240302	240302	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.935	39	137538	25	0.0016	ng/mL	----
8_2-FTS-13C	Auto	4.934	137538	3005329	1	4.6266	ng/mL	----
8_2-FTS-13C_IS	Auto	4.934	137538	137538	25	5.0000	ng/mL	----

Insight Report

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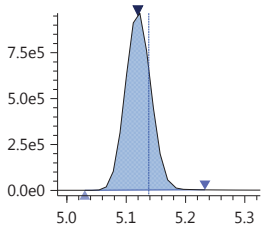
13C7-PFUnDA_IS
Conc 5.0000
RT 5.120 Area 3005329
ISTD 570.00>525.00 (-) 9.65e5



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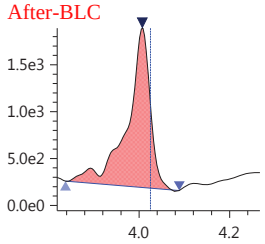
Conc 0.0426
RT 4.007 Area 5970
Q 299.00>80.00 (-) 1.89e3



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Conc 3.3771
RT 4.009 Area 486029
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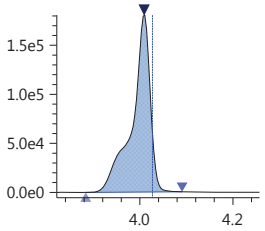

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RT 4.009 Area 487007
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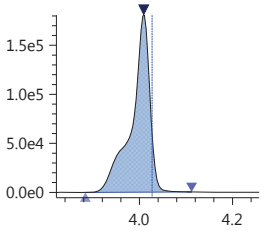

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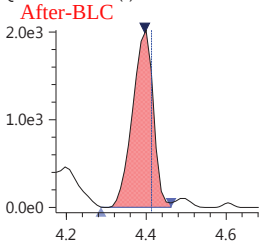
Conc 0.0806
RT 4.396 Area 7297
Q 399.00>80.00 (-) 2.02e3



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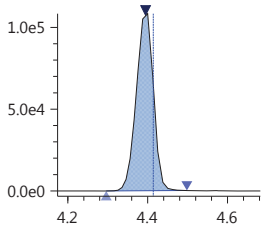
Conc 3.9606
RT 4.395 Area 326219
Q 402.70>84.05 (-) 1.08e5



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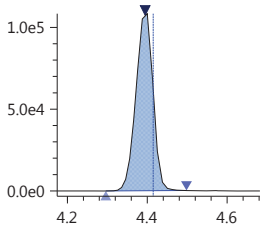
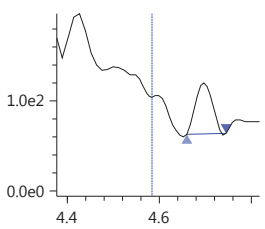
Conc 5.0000
RT 4.395 Area 326219
ISTD 402.70>84.05 (-) 1.08e5



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 1.97e2



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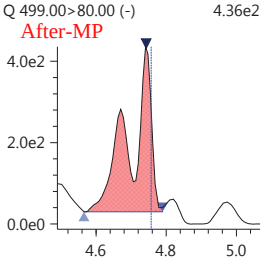
Conc 0.0232
RT 4.743 Area 1700
Q 499.00>80.00 (-) 4.36e2



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Conc 4.2658
RT 4.742 Area 418563
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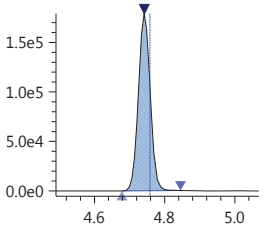

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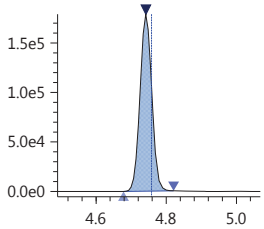
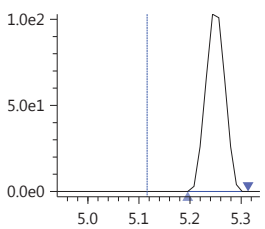
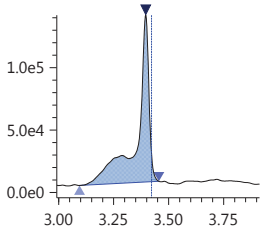


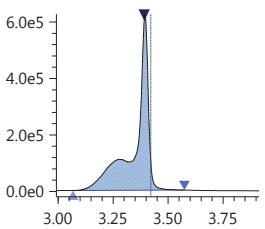
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 1.03e2



PFBA
Conc 1.0004
RT 3.396 Area 507869
Q 213.00>169.10 (-) 1.42e5



PFBA-13C
Conc 5.0782
RT 3.391 Area 2480174
Q 216.90>172.15 (-) 6.28e5



PFBA-13C_IS
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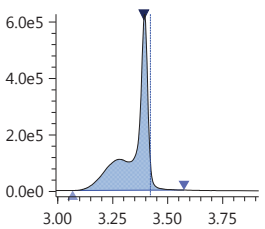
ISTD 216.90>172.15 (-) 6.28e5



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Conc 0.4005
RT 3.956 Area 306169
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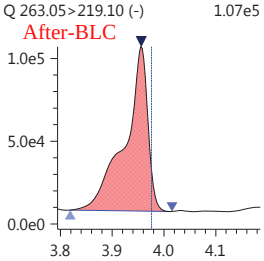

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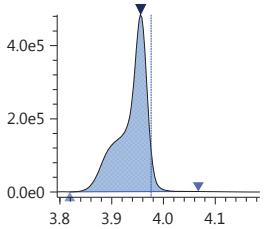
RT 3.956 Area 1396942
Q 267.90>223.00 (-) 4.85e5



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RT 3.956 Area 1396942
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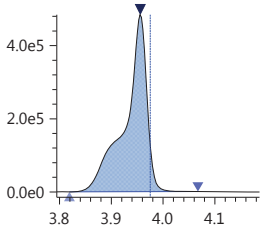
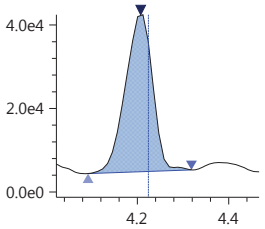
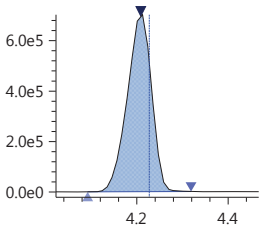


PFHxA
Conc 0.2646
RT 4.207 Area 156900
Q 313.00>269.00 (-) 4.25e4



PFHxA-13C
Conc 4.3327
RT 4.209 Area 2617474
Q 314.90>270.10 (-) 7.03e5



Insight Report

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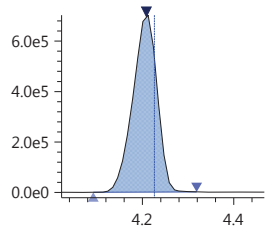
PFHxA-13C_IS
Conc 5.0000
RT 4.209 Area 2617474
ISTD 314.90>270.10 (-) 7.03e5



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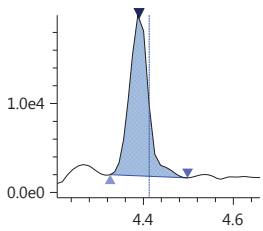
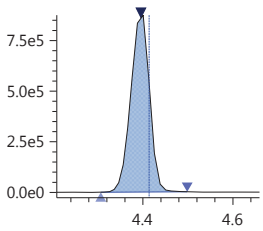
Conc 0.1048
RT 4.391 Area 53425
Q 362.90>319.00 (-) 2.00e4



PFHpA-13C
Conc 3.6138
RT 4.396 Area 2558660
Q 366.90>322.10 (-) 8.76e5



PFHpA-13C_IS
Conc 5.0000
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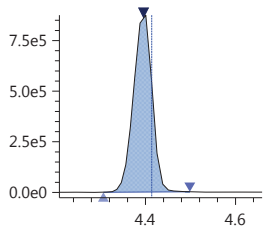
ISTD 366.90>322.10 (-) 8.76e5



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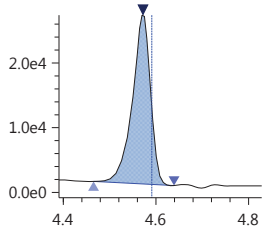
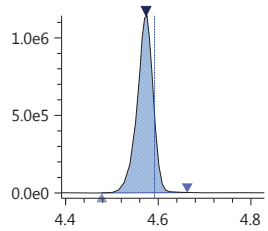


PFOA-13C
Conc 4.3099
RT 4.574 Area 2763575
Q 416.80>372.05 (-) 1.14e6



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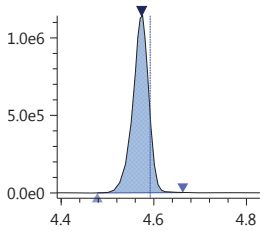
ISTD 416.80>372.05 (-) 1.14e6



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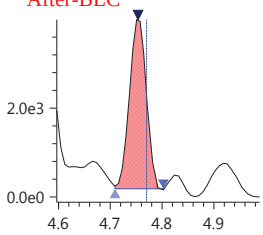
Conc 0.0070
RT 4.754 Area 8654
Q 463.00>418.90 (-) 3.99e3
After-BLC



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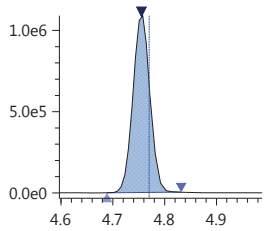

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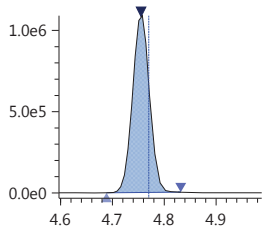

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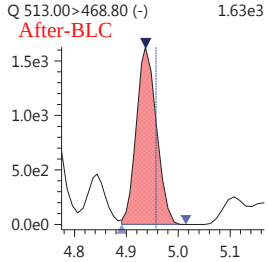
After-BLC



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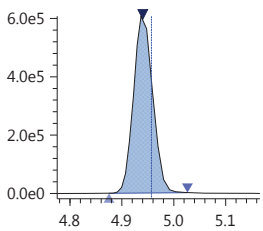
Q 514.80>469.95 (-) 6.08e5



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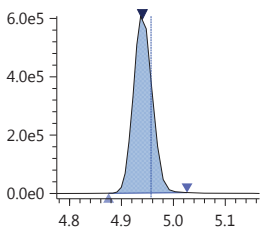

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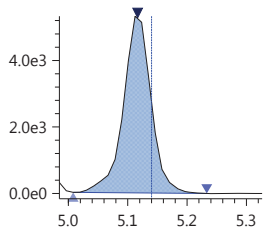
Conc 0.0329
RT 5.116 Area 17313
Q 563.00>518.90 (-) 5.33e3



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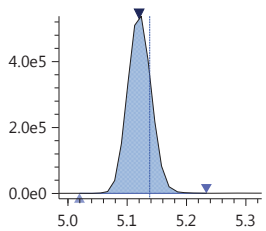
Conc 3.3839
RT 5.120 Area 1570592
Q 564.80>519.95 (-) 5.38e5



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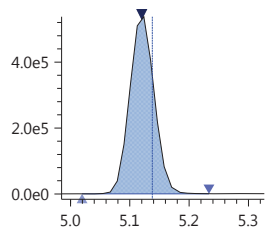
ISTD 564.80>519.95 (-) 5.38e5



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Conc 0.0132
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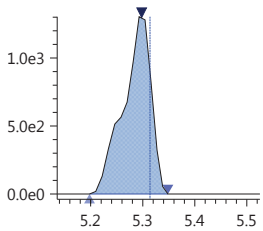
Q 613.05>569.00 (-) 1.30e3



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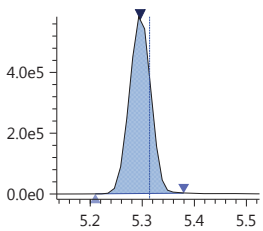

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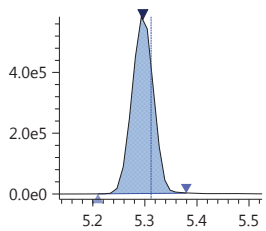
ISTD 614.80>569.95 (-) 5.84e5



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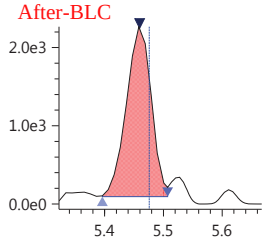
After-BLC



Insight Report

Printed at 8/9/2019 5:29:05 PM

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Conc 0.0221
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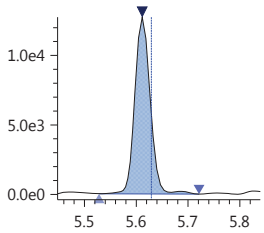
Q 713.40>669.00 (-) 1.28e4



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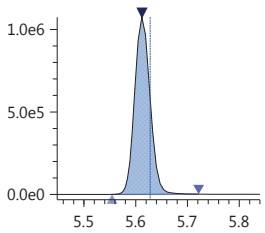
Conc 4.0647
RT 5.612 Area 2238790
Q 714.70>669.90 (-) 1.08e6



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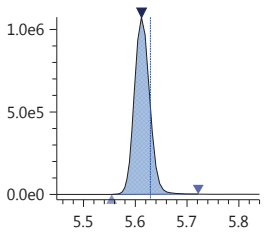
ISTD 714.70>669.90 (-) 1.08e6



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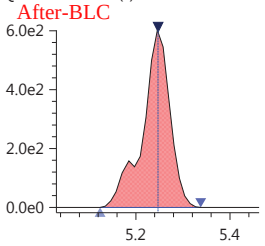
Q 498.20>78.00 (-) 6.02e2



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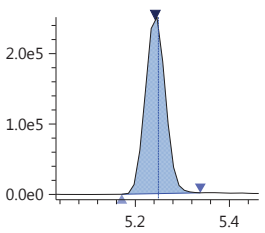
Conc 3.3098
RT 5.242 Area 757425
Q 506.00>78.05 (-) 2.52e5



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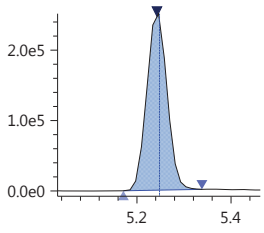
ISTD 506.00>78.05 (-) 2.52e5



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RT ---- Area ----
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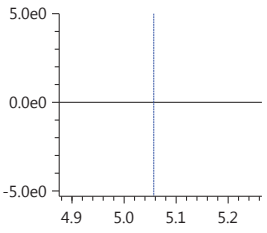

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Conc 2.6641
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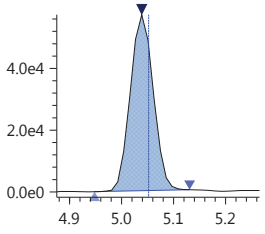

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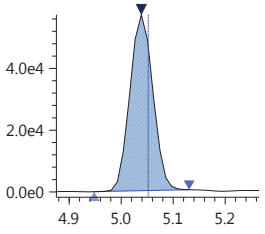

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Conc ----
RT ---- Area ----
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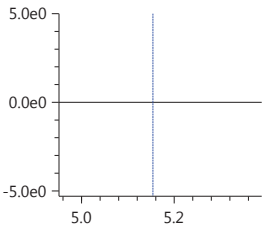

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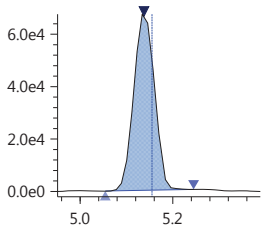

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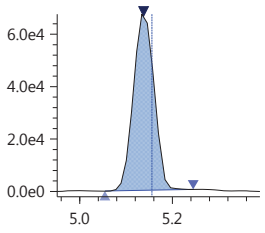

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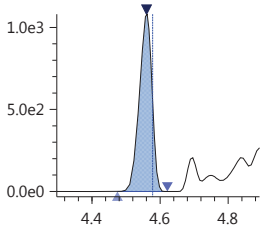
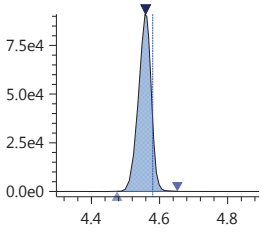


6_2-FTS-13C
Conc 4.6073
RT 4.559 Area 240302
Q 428.90>409.00 (-) 9.11e4



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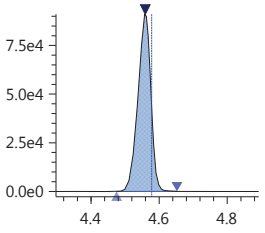
ISTD 428.90>409.00 (-) 9.11e4



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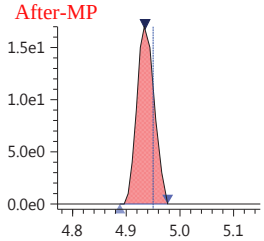

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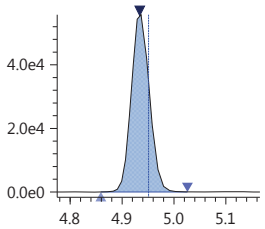

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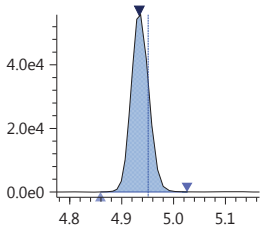

Insight Report

Printed at 8/9/2019 4:33:51 PM

190807_166

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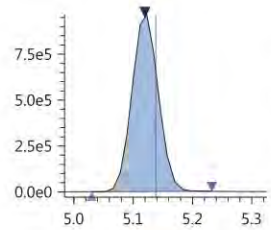
Date acquired: 8/8/2019 8:17:56 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_166.lcd
Vial: 24 | Inj. Volume: 15.0000uL | Tray: 4

13C7-PFUnDA_IS
Conc 5.0000
RT 5.120 Area 3005329
ISTD 570.00>525.00 (-) 9.65e5



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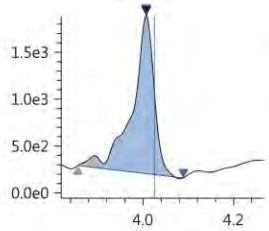

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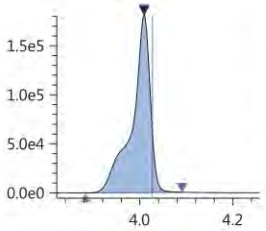

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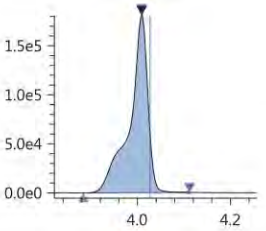

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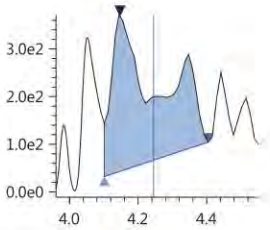
Q 349.00>99.00 (-) 3.72e2



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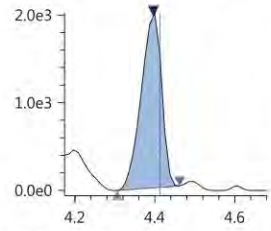

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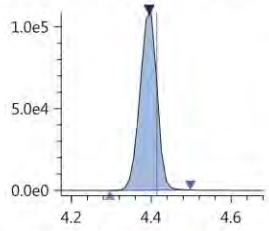

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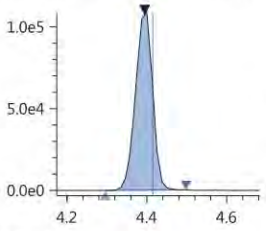

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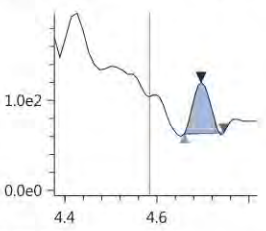
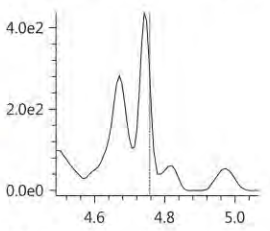


PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 4.36e2



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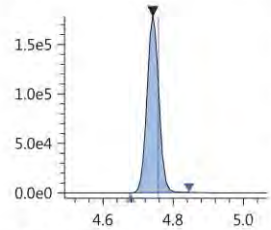

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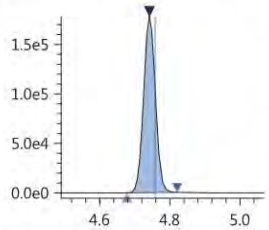

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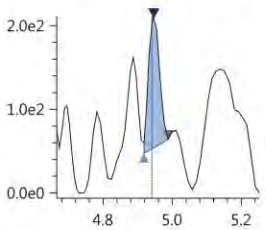
Conc -0.0767
RT 4.947 Area 348
Q 549.00>99.00 (-) 2.12e2



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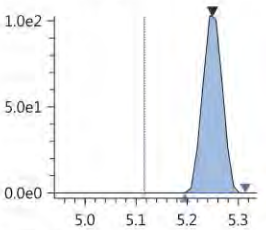
RT 5.249 Area 282
Q 599.00>79.90 (-) 1.03e2



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Conc 1.0004
RT 3.396 Area 507869
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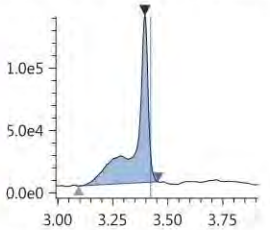

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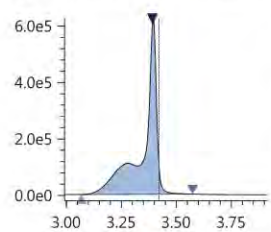
Q 216.90>172.15 (-) 6.28e5



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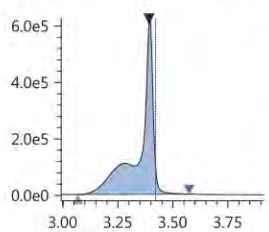

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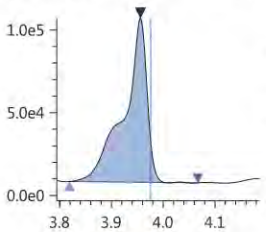

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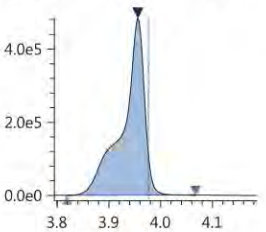

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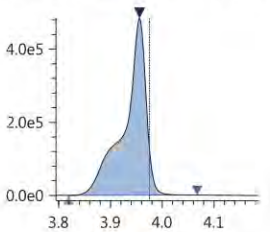

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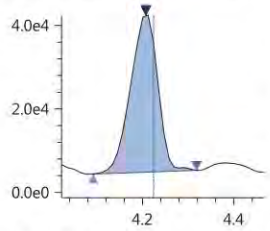

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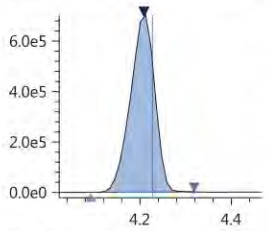

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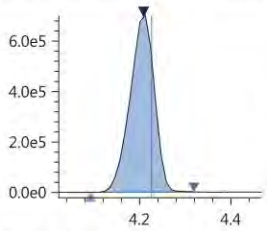

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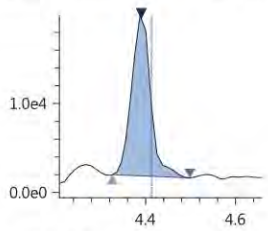

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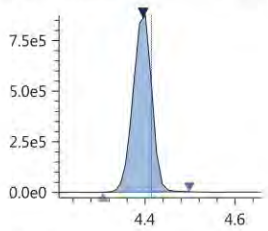
RT 4.396 Area 2558660
Q 366.90>322.10 (-) 8.76e5



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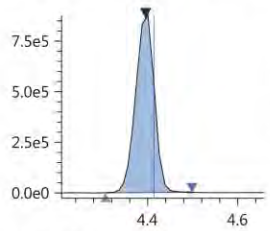

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RT 4.572 Area 71069
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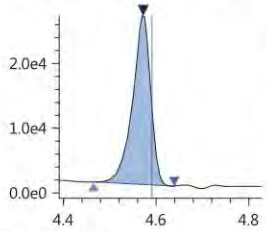

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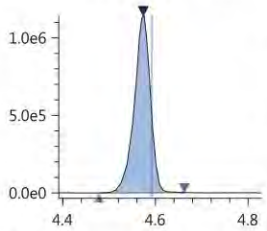

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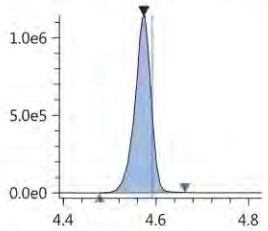

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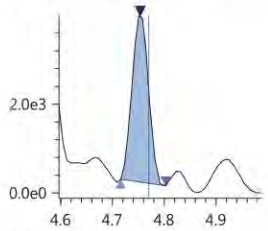

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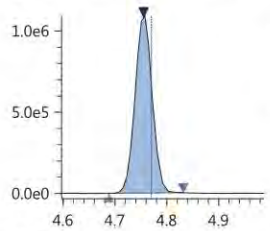
Q 467.80>423.00 (-) 1.09e6



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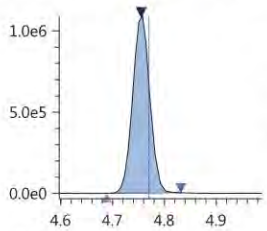

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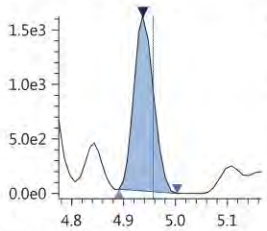
RT 4.937 Area 4263
Q 513.00>468.80 (-) 1.63e3



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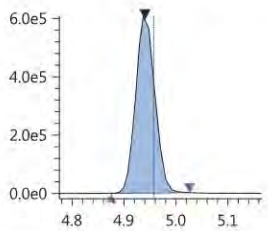
Q 514.80>469.95 (-) 6.08e5



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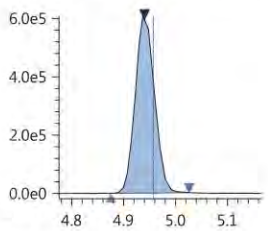

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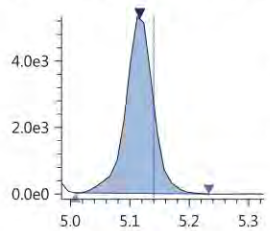

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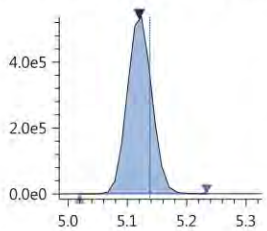

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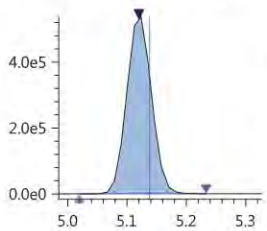

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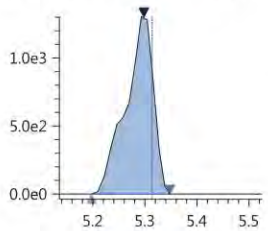
Conc 0.0132
RT 5.298 Area 4856
Q 613.05>569.00 (-) 1.30e3



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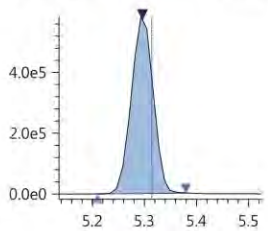
RT 5.296 Area 1708526
Q 614.80>569.95 (-) 5.84e5



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PFDoA-13C_IS
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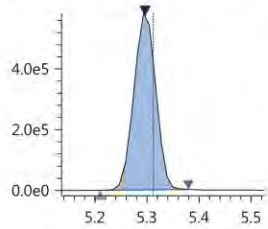
ISTD 614.80>569.95 (-) 5.84e5



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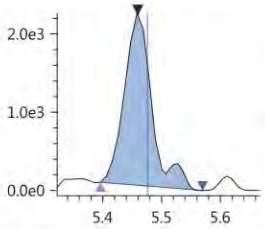
Q 663.00>618.90 (-) 2.27e3



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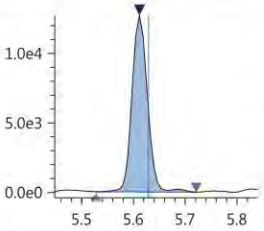
RT 5.611 Area 26500
Q 713.40>669.00 (-) 1.28e4



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Conc 4.0647
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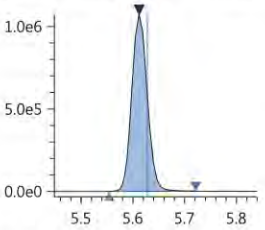
Q 714.70>669.90 (-) 1.08e6



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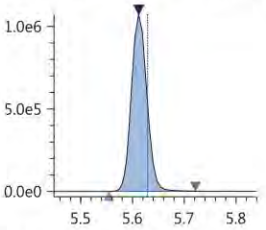

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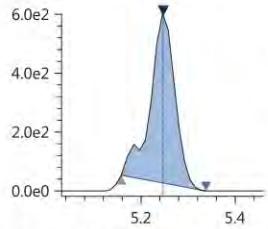

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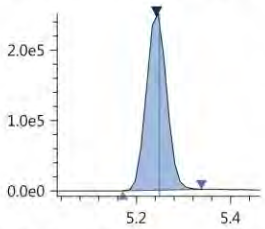
Q 506.00>78.05 (-) 2.52e5



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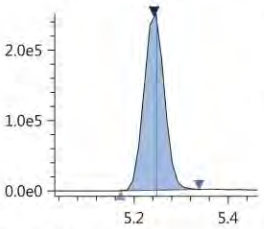

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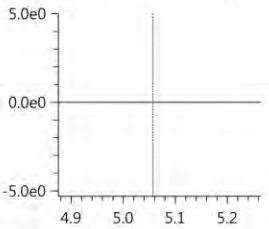
Conc ----
RT ---- Area ----
Q 570.20>419.00 (-) 0.00e0



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Conc 2.6641
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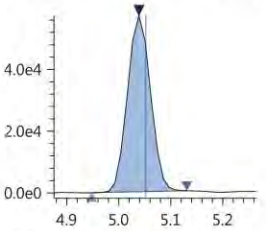
Q 572.80>419.05 (-) 5.74e4



N-MeFOSAA-d3_IS
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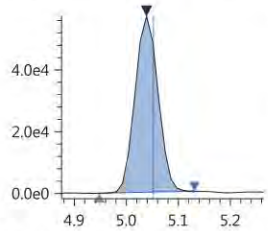
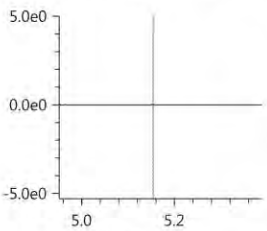
RT 5.039 Area 175940
ISTD 572.80>419.05 (-) 5.74e4



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5
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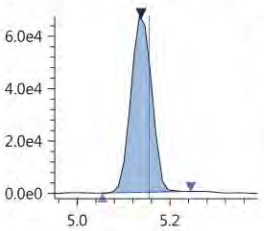
Q 588.80>419.00 (-) 6.76e4



N-EtFOSAA-d5_IS
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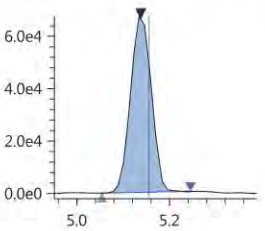
ISTD 588.80>419.00 (-) 6.76e4



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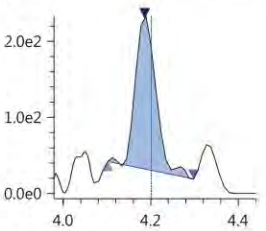
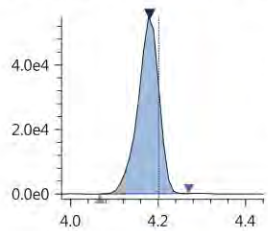
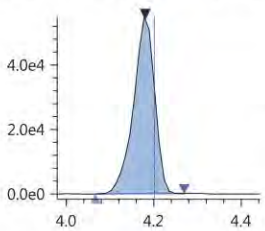
Q 327.00>307.05 (-) 2.33e2



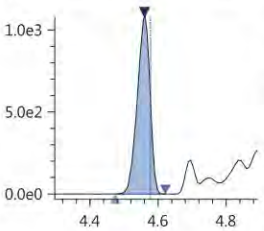
4_2-FTS-13C
Conc 3.3392
RT 4.181 Area 184758
Q 328.80>309.05 (-) 5.50e4



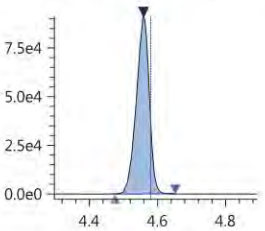
4_2-FTS-13C_IS
Conc 5.0000
RT 4.181 Area 184758
ISTD 328.80>309.05 (-) 5.50e4



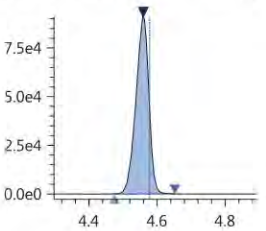
6_2-FTS_1
Conc 0.0480
RT 4.560 Area 2806
Q 427.00>407.00 (-) 1.08e3



6_2-FTS-13C
Conc 4.6073
RT 4.559 Area 240302
Q 428.90>409.00 (-) 9.11e4



6_2-FTS-13C_IS
Conc 5.0000
RT 4.559 Area 240302
ISTD 428.90>409.00 (-) 9.11e4



Insight Report

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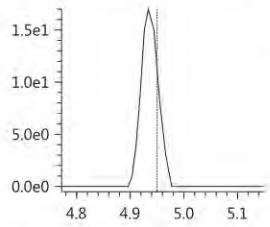
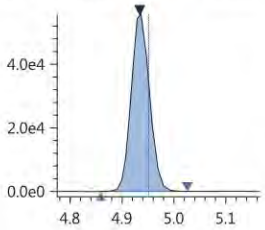
8_2-FTS_1

Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 1.70e1



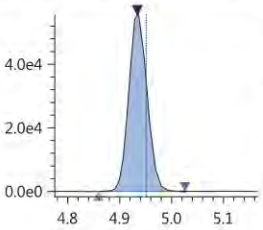
8_2-FTS-13C

Conc 4.6266
RT 4.934 Area 137538
Q 528.80>509.00 (-) 5.58e4



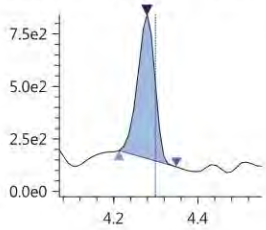
8_2-FTS-13C_IS

Conc 5.0000
RT 4.934 Area 137538
ISTD 528.80>509.00 (-) 5.58e4



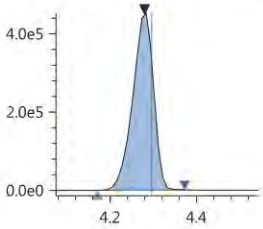
HPFO_DA

Conc 0.0070
RT 4.279 Area 1961
Q 329.00>169.00 (-) 8.44e2



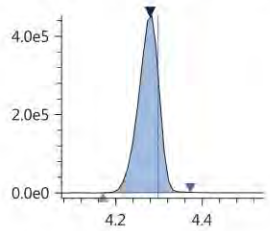
HFPO_DA-13C

Conc 5.0136
RT 4.280 Area 1512948
Q 332.00>286.80 (-) 4.53e5



HFPO_DA-13C_IS

Conc 5.0000
RT 4.280 Area 1512948
ISTD 332.00>286.80 (-) 4.53e5



1st EJD 08/09/19
2nd 08/12/19

Validation Report

Data File: J:\LCMS06\Data\190807_b8\190807_143
Lab ID: KQ1910949-06
RunType: MB
Matrix: Water

Date Acquired: 8/8/19 16:17
Batch ID: 646328
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	Perfluorodecane sulfonic acid (PFDS)	136	70	130	Narrate high bias, ND
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	149	70	130	Narrate high bias, ND
	18O2-PFHxS	137	70	130	narrate native ok
	13C4-PFHpA	132	70	130	narrate native ok
	13C5-PFNA	144	70	130	narrate native ok
	13C2-PFDA	135	70	130	narrate native ok
	D5-EtFOSAA	142	70	130	narrate native ok
	Perfluorononane sulfonic acid (PFNS)	139	70	130	Narrate high bias, ND

Primary Review: _____

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Secondary Review: _____

1st EJD 08/09/19
2nd 08/12/19

Quantitation Report

Data File:	J:\LCMS06\Data\190807_b8\190807_143	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 16:17	**Vial:**	3
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1910949-06	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/29/19	**Receive Date:**	7/29/19

Analysis Lot:	646328	**Prep Lot:**	341924	**Report Group:**	KQ1910949
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	8/6/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	20091

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.128	+0.00	5185941	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.020	+0.00	620596	2.4989	50	20 - 109	Y
18O2-PFHxS	4.406	0.00	507249	3.5689	71	26 - 122	Y
13C4-PFOS	4.751	+0.00	664823	3.9265	79	25 - 121	Y
13C4-PFBA	3.404	-0.01	2927414	3.4736	69	27 - 124	Y
13C5-PFPeA	3.966	+0.00	1837371	3.4652	69	27 - 138	Y
13C2-PFHxA	4.218	+0.00	3764829	3.6115	72	28 - 132	Y
13C4-PFHpA	4.407		4776934	3.9099	78	19 - 139	Y
13C4-PFOA	4.582	+0.00	3984424	3.6010	72	22 - 130	Y
13C5-PFNA	4.761	+0.00	3636253	4.1368	83	20 - 127	Y
13C2-PFDA	4.946	+0.00	2673547	3.6181	72	24 - 125	Y
13C2-PFUnDA	5.128	+0.00	2621742	3.2735	65	22 - 125	Y
13C2-PFDoDA	5.302	+0.00	2450430	2.8405	57	19 - 122	Y
13C2-PFTeDA	5.621	+0.00	3095766	3.2572	65	13 - 124	Y
13C8-FOSA	5.251	+0.01	1446240	3.6624	73	18 - 109	Y
D3-MeFOSAA	5.045	+0.00	424925	3.7287	75	9 - 123	Y
D5-EtFOSAA	5.143	+0.00	355207	3.4496	69	12 - 126	Y
13C2-4:2 FTS	4.190		319815	3.3496	67	10 - 197	Y
13C2-6:2 FTS	4.570	+0.00	371576	4.1286	83	10 - 226	Y
13C2-8:2 FTS	4.941	+0.00	211476	4.1226	82	10 - 202	Y
13C3-HFPO-DA	4.291	+0.01	2101818	4.0363	81	22 - 135	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	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 EJD 08/09/19

2nd 08/12/19

Data File:	J:\LCMS06\Data\190807_b8\190807_143	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 16:17	**Vial:**	3
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1910949-06	**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)	4.014	0.00	423	0.0024	0.077	U	Y
Perfluoropentane sulfonic acid (PFPeS)	4.181	-0.05	608	0.0081	0.26	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.393	-0.01	1943	0.0138	0.44	U	Y
Perfluoroheptane sulfonic acid (PFHpS)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.747	0.00	724	0.0063	0.20	U	Y
Perfluorononane sulfonic acid (PFNS)	4.905	-0.02	336	-0.0796	0	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.404	-0.01	7533	0.0126	0.40	J	Y
Perfluoropentanoic acid (PFPeA)	3.966	+0.00	97990	0.0116	0.37	U	Y
Perfluorohexanoic acid (PFHxA)	4.208	-0.01	49262	0.0374	1.2	U	Y
Perfluoroheptanoic acid (PFHpA)	4.391	-0.02	22414	0.0086	0.28	U	Y
Perfluorooctanoic acid (PFOA)	4.575	-0.01	31285	0.0153	0.49	J	Y
Perfluorononanoic acid (PFNA)	4.747	-0.01	8981	0.0016	0.051	U	Y
Perfluorodecanoic acid (PFDA)	4.939	-0.01	10693	0.0197	0.63	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.125	0.00	16118	0.0052	0.17	U	Y
Perfluorododecanoic acid (PFDoDA)	5.300	+0.00	4458	0.0049	0.16	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.462	0.00	6947	0.0056	0.18	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.620	+0.00	31663	-0.0011	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.251	+0.01	2200	0.0060	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
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.565	0.00	4222	0.0467	1.5	J	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.927	-0.01	93	0.0025	0.080	U	Y
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	4.298	+0.01	494	0.0013	0.042	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 8/9/2019 5:25:53 PM

190807_143

Sample ID: KQ1910949-06
Date acquired: 8/8/2019 4:17:32 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_143.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.128	5185941	5185941	1	5.0000	ng/mL	----
PFBS_1	M	4.014	423	621049	2	0.0024	ng/mL	----
PFBS-13C	Auto	4.020	620596	5185941	1	2.4989	ng/mL	----
PFBS-13C_IS	Auto	4.020	621049	621049	2	5.0000	ng/mL	----
PFPeS	M	4.181	608	621049	2	0.0081	ng/mL	----
PFHxS_1	Auto	4.393	1943	507249	3	0.0138	ng/mL	----
PFHxS-18O	Auto	4.406	507249	5185941	1	3.5689	ng/mL	----
PFHxS-18O_IS	Auto	4.406	507249	507249	3	5.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	507249	3	----	ng/mL	----
PFOS_1	Auto	4.747	724	660131	4	0.0063	ng/mL	----
PFOS-13C	Auto	4.751	664823	5185941	1	3.9265	ng/mL	----
PFOS-13C_IS	Auto	4.751	660131	660131	4	5.0000	ng/mL	----
PFNS	M	4.905	336	660131	4	-0.0796	ng/mL	----
PFDS_1	ND(W/B)	----	----	660131	4	----	ng/mL	----
PFBA	M	3.404	7533	2927414	5	0.0126	ng/mL	----
PFBA-13C	Auto	3.404	2927414	5185941	1	3.4736	ng/mL	----
PFBA-13C_IS	Auto	3.404	2927414	2927414	5	5.0000	ng/mL	----
PFPeA	M	3.966	97990	1837371	6	0.0116	ng/mL	----
PFPeA-13C	Auto	3.966	1837371	5185941	1	3.4652	ng/mL	----
PFPeA-13C_IS	Auto	3.966	1837371	1837371	6	5.0000	ng/mL	----
PFHxA	Auto	4.208	49262	3764829	7	0.0374	ng/mL	----
PFHxA-13C	Auto	4.218	3764829	5185941	1	3.6115	ng/mL	----
PFHxA-13C_IS	Auto	4.218	3764829	3764829	7	5.0000	ng/mL	----
PFHpA	M	4.391	22414	4776934	8	0.0086	ng/mL	----
PFHpA-13C	Auto	4.407	4776934	5185941	1	3.9099	ng/mL	----
PFHpA-13C_IS	Auto	4.407	4776934	4776934	8	5.0000	ng/mL	----
PFOA	M	4.575	31285	3984424	9	0.0153	ng/mL	----
PFOA-13C	Auto	4.582	3984424	5185941	1	3.6010	ng/mL	----
PFOA-13C_IS	Auto	4.582	3984424	3984424	9	5.0000	ng/mL	----
PFNA	M	4.747	8981	3636253	10	0.0016	ng/mL	----
PFNA-13C	Auto	4.761	3636253	5185941	1	4.1368	ng/mL	----
PFNA-13C_IS	Auto	4.761	3636253	3636253	10	5.0000	ng/mL	----
PFDA	M	4.939	10693	2673547	11	0.0197	ng/mL	----
PFDA-13C	Auto	4.946	2673547	5185941	1	3.6181	ng/mL	----
PFDA-13C_IS	Auto	4.946	2673547	2673547	11	5.0000	ng/mL	----
PFUnA	Auto	5.125	16118	2621742	12	0.0052	ng/mL	----
PFUnA-13C	Auto	5.128	2621742	5185941	1	3.2735	ng/mL	----
PFUnA-13C_IS	Auto	5.128	2621742	2621742	12	5.0000	ng/mL	----
PFDoA	Auto	5.300	4458	2450430	13	0.0049	ng/mL	----
PFDoA-13C	Auto	5.302	2450430	5185941	1	2.8405	ng/mL	----
PFDoA-13C_IS	Auto	5.302	2450430	2450430	13	5.0000	ng/mL	----
PFTrDA	M	5.462	6947	3095766	14	0.0056	ng/mL	----
PFTeDA	Auto	5.620	31663	3095766	14	-0.0011	ng/mL	----
PFTeDA-13C	Auto	5.621	3095766	5185941	1	3.2572	ng/mL	----
PFTeDA-13C_IS	Auto	5.621	3095766	3095766	14	5.0000	ng/mL	----
FOSA	Auto	5.251	2200	1446240	16	0.0060	ng/mL	----
FOSA-13C	Auto	5.251	1446240	5185941	1	3.6624	ng/mL	----
FOSA-13C_IS	Auto	5.251	1446240	1446240	16	5.0000	ng/mL	----
N-MeFOSAA	ND(W/B)	----	----	424925	21	----	ng/mL	----
N-MeFOSAA-d3	Auto	5.045	424925	5185941	1	3.7287	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.045	424925	424925	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	355207	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.143	355207	5185941	1	3.4496	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.143	355207	355207	22	5.0000	ng/mL	----
4_2-FTS_1	NI	----	----	319815	23	----	ng/mL	----
4_2-FTS-13C	Auto	4.190	319815	5185941	1	3.3496	ng/mL	----
4_2-FTS-13C_IS	Auto	4.190	319815	319815	23	5.0000	ng/mL	----
6_2-FTS_1	M	4.565	4222	371576	24	0.0467	ng/mL	----
6_2-FTS-13C	Auto	4.570	371576	5185941	1	4.1286	ng/mL	----
6_2-FTS-13C_IS	Auto	4.570	371576	371576	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.927	93	211476	25	0.0025	ng/mL	----
8_2-FTS-13C	Auto	4.941	211476	5185941	1	4.1226	ng/mL	----
8_2-FTS-13C_IS	Auto	4.941	211476	211476	25	5.0000	ng/mL	----
HPFO_DA	Auto	4.298	494	2101818	26	0.0013	ng/mL	----
HFPO_DA-13C	Auto	4.291	2101818	5185941	1	4.0363	ng/mL	----
HFPO_DA-13C_IS	Auto	4.291	2101818	2101818	26	5.0000	ng/mL	----

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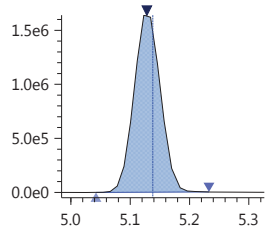
13C7-PFUnDA_IS
Conc 5.0000
RT 5.128 Area 5185941
ISTD 570.00>525.00 (-) 1.64e6



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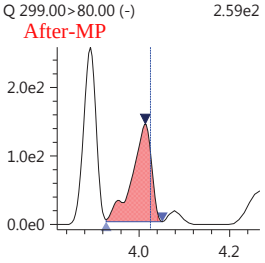
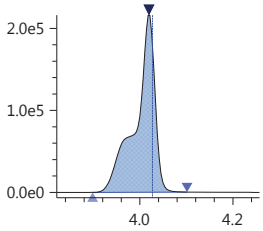
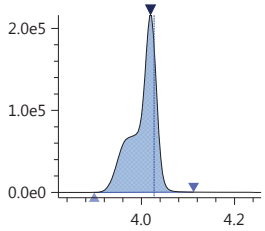
Conc 0.0024
RT 4.014 Area 423
Q 299.00>80.00 (-) 2.59e2



PFBS-13C
Conc 2.4989
RT 4.020 Area 620596
Q 301.80>80.00 (-) 2.16e5



PFBS-13C_IS
Conc 5.0000
RT 4.020 Area 621049
ISTD 301.80>80.00 (-) 2.16e5



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RT 4.181 Area 608
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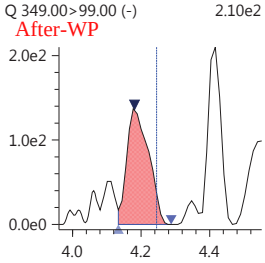

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RT 4.393 Area 1943
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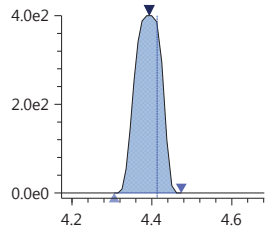

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RT 4.406 Area 507249
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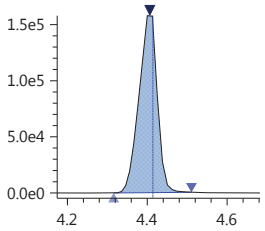

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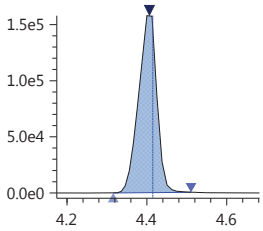
RT 4.406 Area 507249
ISTD 402.70>84.05 (-) 1.58e5



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RT ---- Area ----
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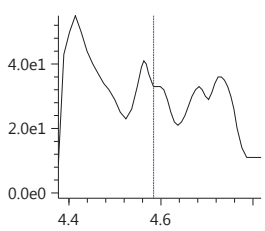

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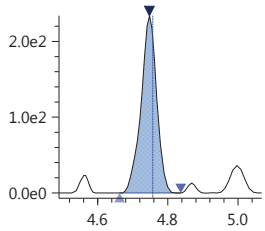

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RT 4.751 Area 664823
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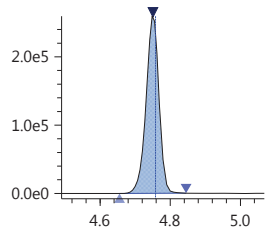

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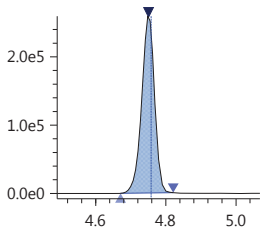

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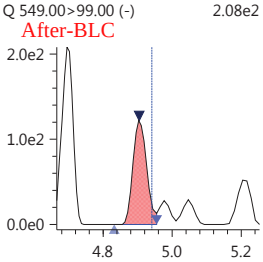

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RT ---- Area ----
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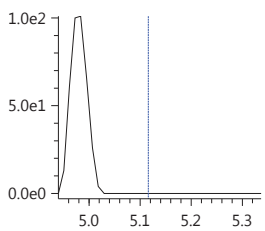

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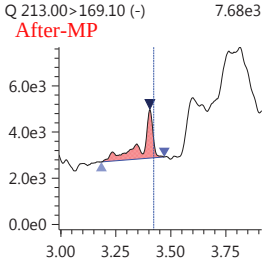

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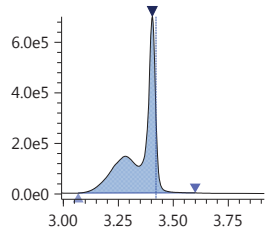

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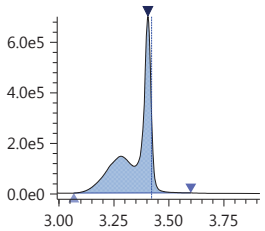

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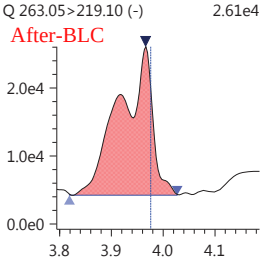

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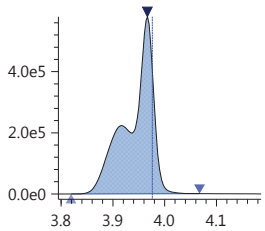

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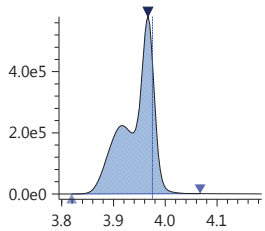

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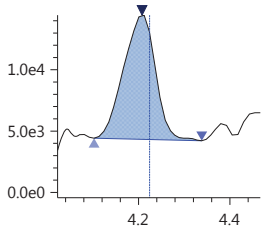

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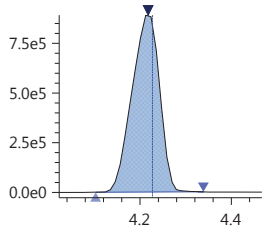

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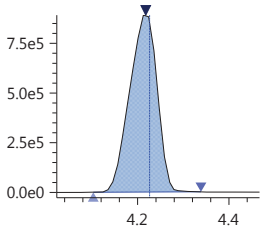

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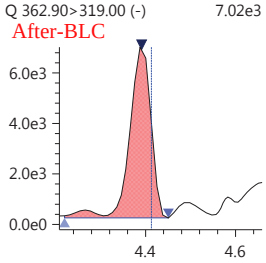

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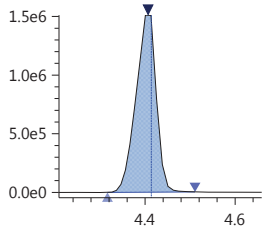

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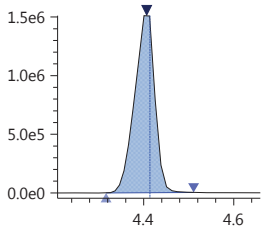

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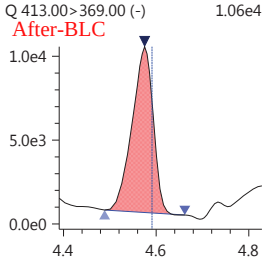

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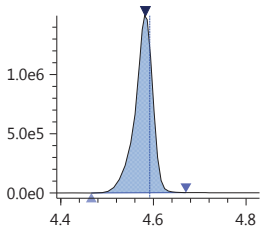

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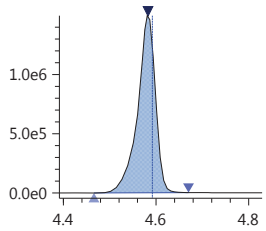

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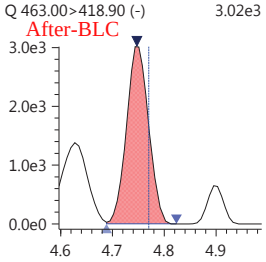

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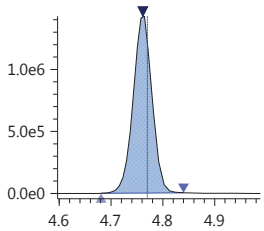

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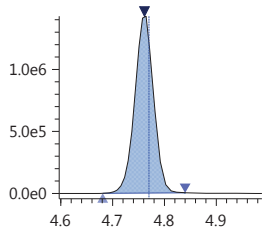

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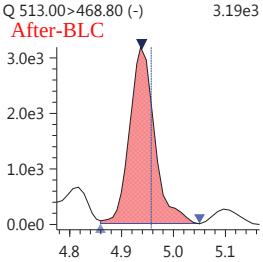

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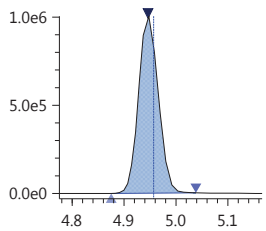

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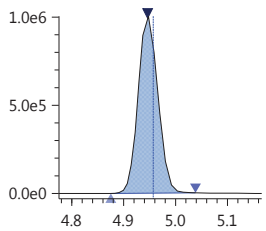

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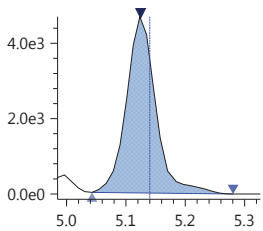
Q 563.00>518.90 (-) 4.71e3



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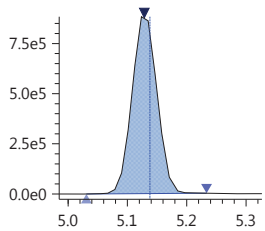

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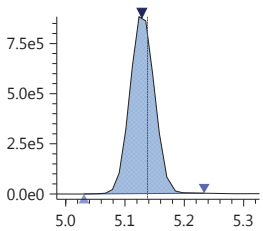

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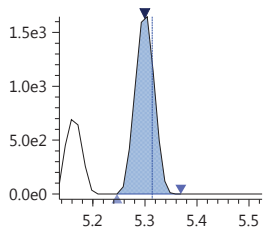

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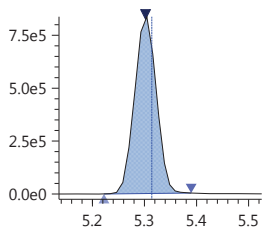

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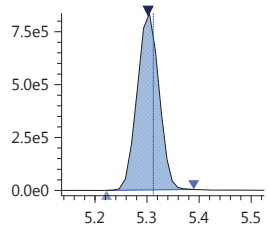

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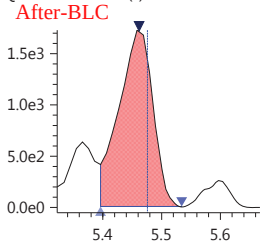

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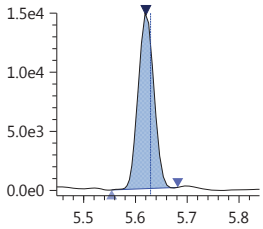

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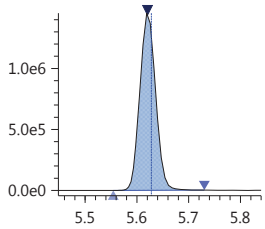

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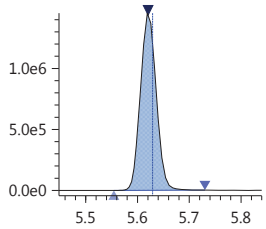

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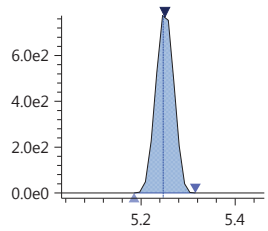

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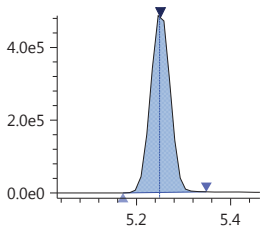
Q 506.00>78.05 (-) 4.87e5



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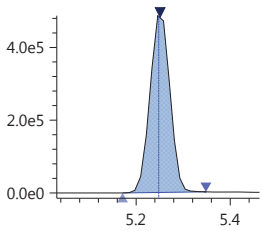
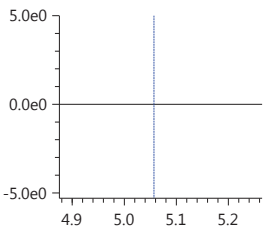
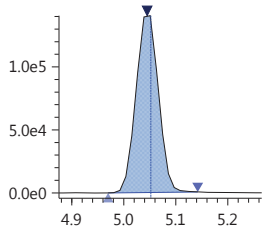
RT 5.251 Area 1446240
ISTD 506.00>78.05 (-) 4.87e5



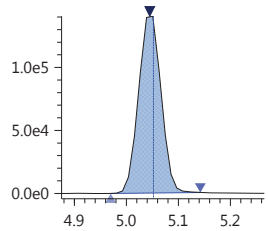
N-MeFOSAA
Conc ----
RT ---- Area ----
Q 570.20>419.00 (-) 0.00e0



N-MeFOSAA-d3
Conc 3.7287
RT 5.045 Area 424925
Q 572.80>419.05 (-) 1.41e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.045 Area 424925
ISTD 572.80>419.05 (-) 1.41e5



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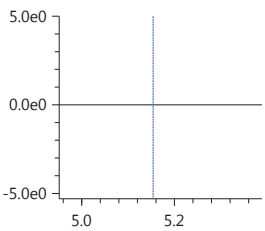
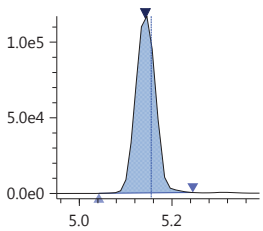
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5
Conc 3.4496
RT 5.143 Area 355207
Q 588.80>419.00 (-) 1.17e5



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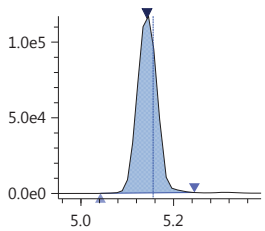
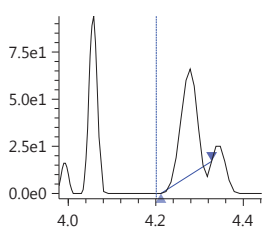
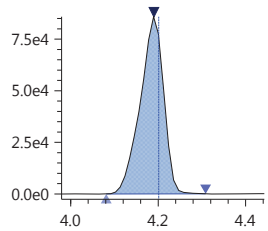
RT 5.143 Area 355207
ISTD 588.80>419.00 (-) 1.17e5



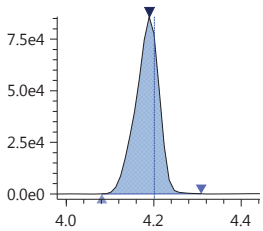
4_2-FTS_1
Conc ----
RT ---- Area ----
Q 327.00>307.05 (-) 9.40e1



4_2-FTS-13C
Conc 3.3496
RT 4.190 Area 319815
Q 328.80>309.05 (-) 8.59e4



4_2-FTS-13C_IS
Conc 5.0000
RT 4.190 Area 319815
ISTD 328.80>309.05 (-) 8.59e4



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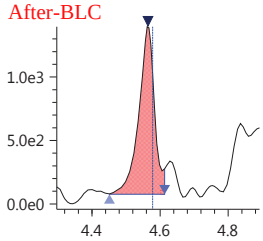
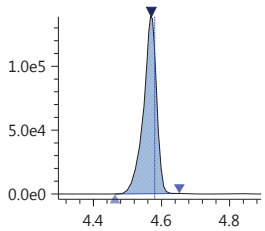
Conc 0.0467
RT 4.565 Area 4222
Q 427.00>407.00 (-) 1.40e3



6_2-FTS-13C
Conc 4.1286
RT 4.570 Area 371576
Q 428.90>409.00 (-) 1.39e5



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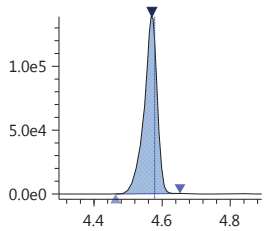
ISTD 428.90>409.00 (-) 1.39e5



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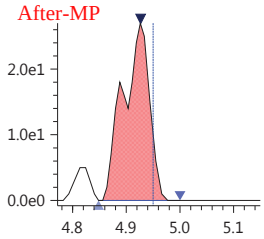
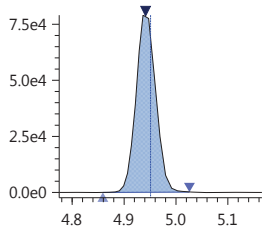
8_2-FTS_1

Conc 0.0025
RT 4.927 Area 93
Q 527.10>506.90 (-) 2.70e1



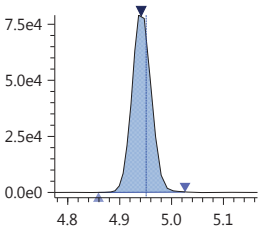
8_2-FTS-13C

Conc 4.1226
RT 4.941 Area 211476
Q 528.80>509.00 (-) 7.91e4



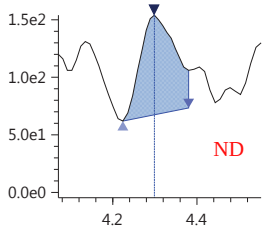
8_2-FTS-13C_IS

Conc 5.0000
RT 4.941 Area 211476
ISTD 528.80>509.00 (-) 7.91e4



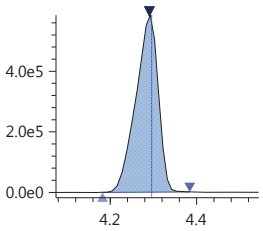
HPFO_DA

Conc 0.0013
RT 4.298 Area 494
Q 329.00>169.00 (-) 1.54e2



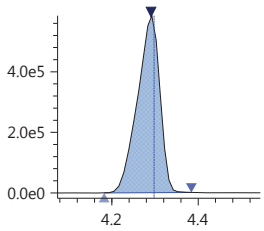
HFPO_DA-13C

Conc 4.0363
RT 4.291 Area 2101818
Q 332.00>286.80 (-) 5.85e5



HFPO_DA-13C_IS

Conc 5.0000
RT 4.291 Area 2101818
ISTD 332.00>286.80 (-) 5.85e5



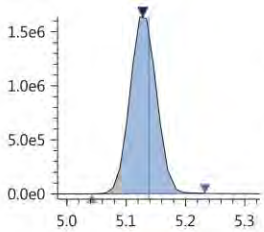
Insight Report

Printed at 8/9/2019 4:33:51 PM

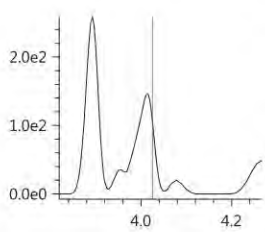
190807_143

Sample ID: KQ1910949-06
Date acquired: 8/8/2019 4:17:32 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_143.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 4

13C7-PFUnDA_IS
Conc 5.0000
RT 5.128 Area 5185941
ISTD 570.00>525.00 (-) 1.64e6



PFBS_1
Conc ----
RT ---- Area ----
Q 299.00>80.00 (-) 2.59e2



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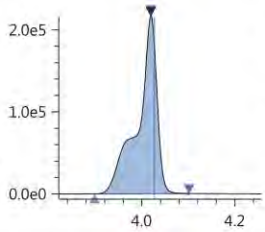
Conc 2.4989
RT 4.020 Area 620596
Q 301.80>80.00 (-) 2.16e5



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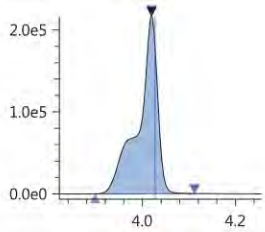

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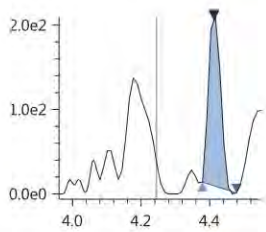
Conc 0.0066
RT 4.413 Area 495
Q 349.00>99.00 (-) 2.10e2



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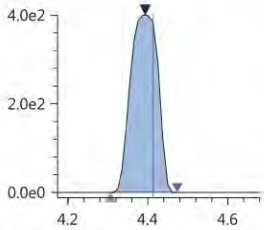
Conc 0.0138
RT 4.393 Area 1943
Q 399.00>80.00 (-) 4.00e2



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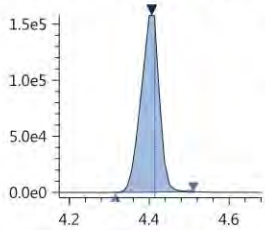
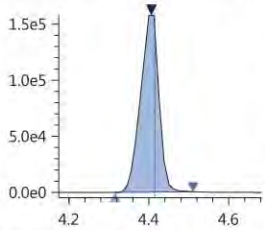
Conc 3.5689
RT 4.406 Area 507249
Q 402.70>84.05 (-) 1.58e5



PFHxS-18O_IS
Conc 5.0000
RT 4.406 Area 507249
ISTD 402.70>84.05 (-) 1.58e5



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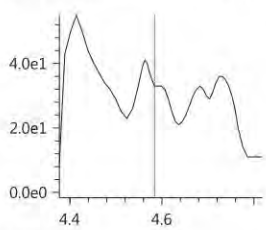
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 5.50e1



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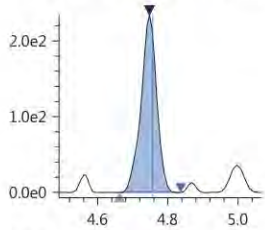
RT 4.747 Area 724
Q 499.00>80.00 (-) 2.34e2



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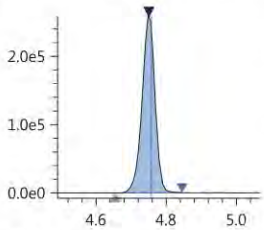
RT 4.751 Area 664823
Q 502.80>80.05 (-) 2.60e5



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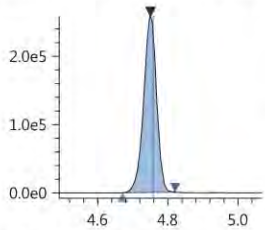
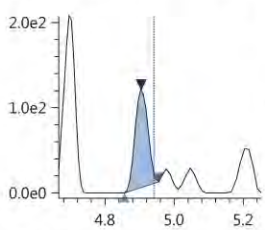
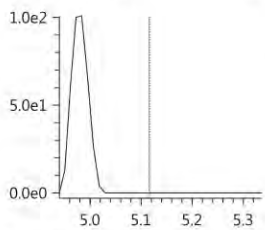


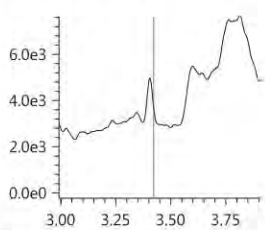
PFNS
Conc -0.0802
RT 4.905 Area 298
Q 549.00>99.00 (-) 2.08e2



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 1.01e2



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 7.68e3



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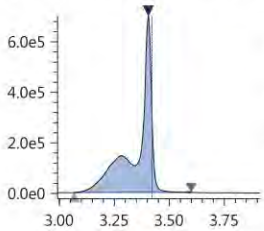
RT 3.404 Area 2927414
Q 216.90>172.15 (-) 7.01e5



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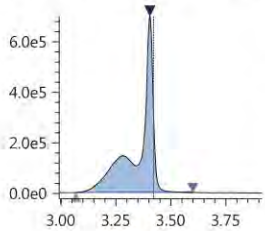

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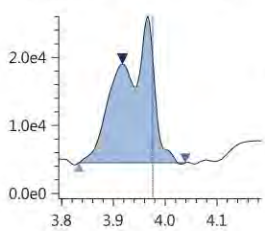
Conc 0.0069
RT 3.918 Area 94376
Q 263.05>219.10 (-) 2.61e4



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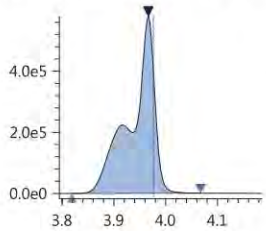
Conc 3.4652
RT 3.966 Area 1837371
Q 267.90>223.00 (-) 5.80e5



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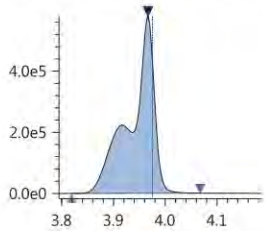
ISTD 267.90>223.00 (-) 5.80e5



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PFHxA
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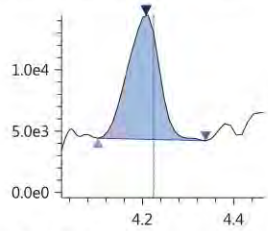
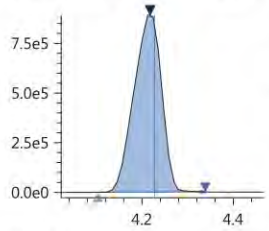
RT 4.208 Area 49262
Q 313.00>269.00 (-) 1.45e4



PFHxA-13C
Conc 3.6115
RT 4.218 Area 3764829
Q 314.90>270.10 (-) 8.92e5



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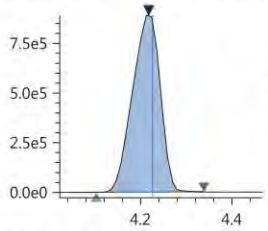

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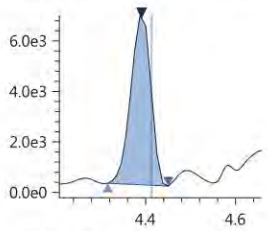
RT 4.391 Area 20960
Q 362.90>319.00 (-) 7.02e3



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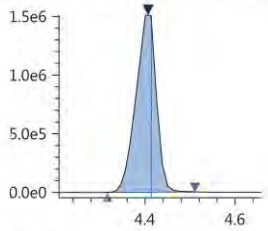
RT 4.407 Area 4776934
Q 366.90>322.10 (-) 1.51e6



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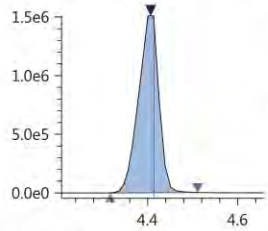
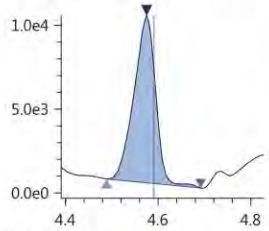
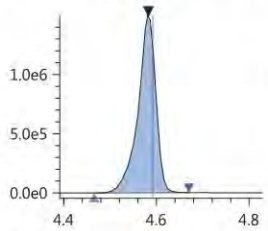
Conc 5.0000
RT 4.407 Area 4776934
ISTD 366.90>322.10 (-) 1.51e6



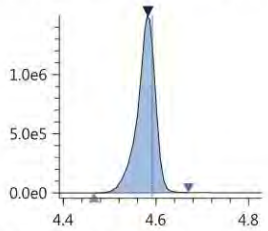
PFOA
Conc 0.0165
RT 4.575 Area 32309
Q 413.00>369.00 (-) 1.06e4



PFOA-13C
Conc 3.6010
RT 4.582 Area 3984424
Q 416.80>372.05 (-) 1.50e6



PFOA-13C_IS
Conc 5.0000
RT 4.582 Area 3984424
ISTD 416.80>372.05 (-) 1.50e6



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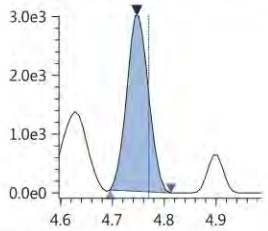
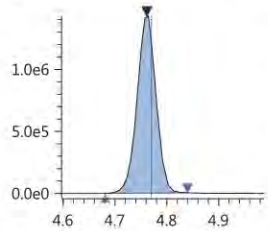
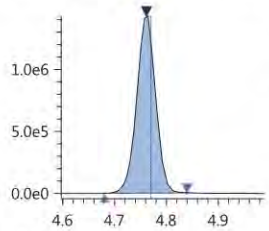
Conc 0.0013
RT 4.747 Area 8793
Q 463.00>418.90 (-) 3.02e3



PFNA-13C
Conc 4.1368
RT 4.761 Area 3636253
Q 467.80>423.00 (-) 1.43e6



PFNA-13C_IS
Conc 5.0000
RT 4.761 Area 3636253
ISTD 467.80>423.00 (-) 1.43e6



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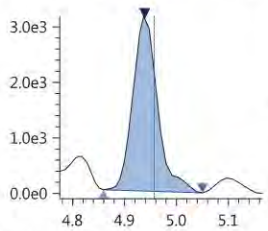
Conc 0.0193
RT 4.939 Area 10436
Q 513.00>468.80 (-) 3.19e3



PFDA-13C
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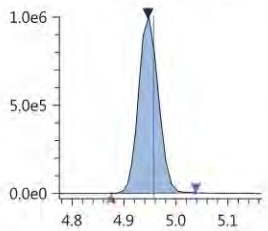
Q 514.80>469.95 (-) 1.01e6



PFDA-13C_IS
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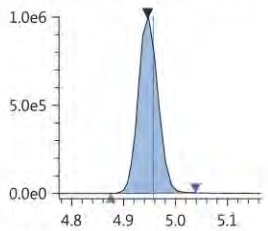
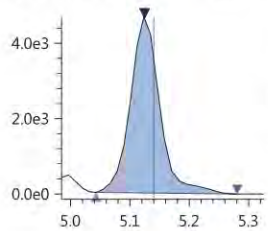
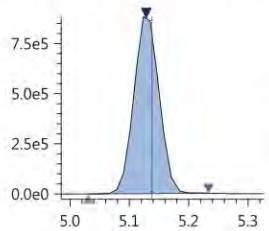
RT 4.946 Area 2673547
ISTD 514.80>469.95 (-) 1.01e6



PFUnA
Conc 0.0052
RT 5.125 Area 16118
Q 563.00>518.90 (-) 4.71e3



PFUnA-13C
Conc 3.2735
RT 5.128 Area 2621742
Q 564.80>519.95 (-) 8.84e5



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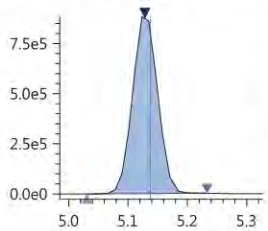
Conc 5.0000
RT 5.128 Area 2621742
ISTD 564.80>519.95 (-) 8.84e5



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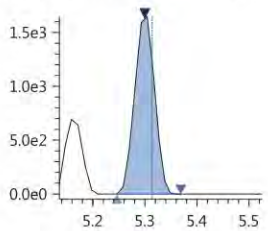
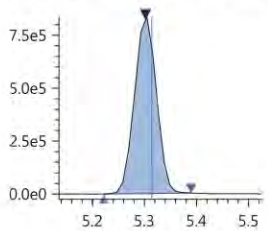
Conc 0.0049
RT 5.300 Area 4458
Q 613.05>569.00 (-) 1.65e3



PFDoA-13C
Conc 2.8405
RT 5.302 Area 2450430
Q 614.80>569.95 (-) 8.38e5



Insight Report

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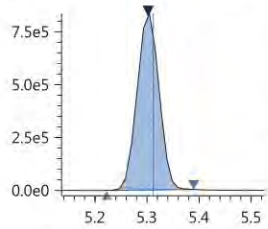
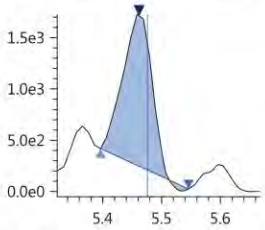
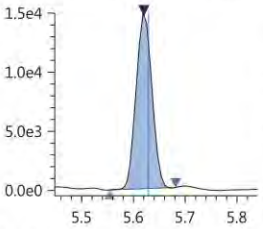
PFDoA-13C_IS
Conc 5.0000
RT 5.302 Area 2450430
ISTD 614.80>569.95 (-) 8.38e5



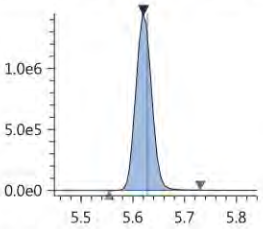
PFTrDA
Conc 0.0012
RT 5.462 Area 5043
Q 663.00>618.90 (-) 1.73e3



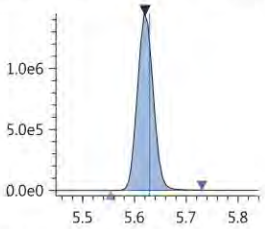
PFTeDA
Conc -0.0011
RT 5.620 Area 31663
Q 713.40>669.00 (-) 1.50e4



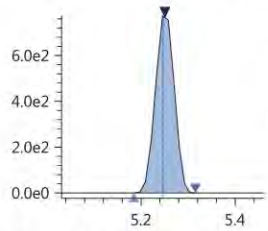
PFTeDA-13C
Conc 3.2572
RT 5.621 Area 3095766
Q 714.70>669.90 (-) 1.45e6



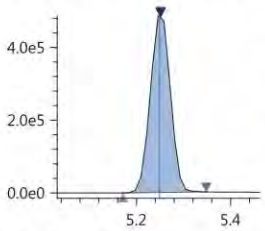
PFTeDA-13C_IS
Conc 5.0000
RT 5.621 Area 3095766
ISTD 714.70>669.90 (-) 1.45e6



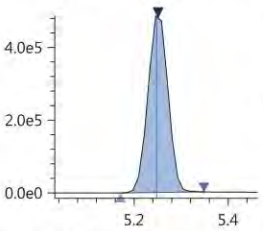
FOSA
Conc 0.0060
RT 5.251 Area 2200
Q 498.20>78.00 (-) 7.74e2



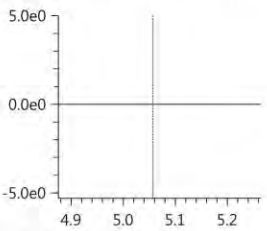
FOSA-13C
Conc 3.6624
RT 5.251 Area 1446240
Q 506.00>78.05 (-) 4.87e5



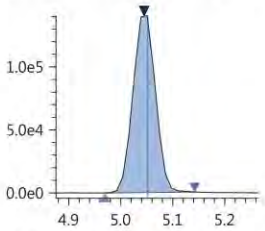
FOSA-13C_IS
Conc 5.0000
RT 5.251 Area 1446240
ISTD 506.00>78.05 (-) 4.87e5



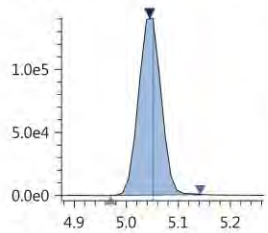
N-MeFOSAA
Conc ----
RT ---- Area ----
Q 570.20>419.00 (-) 0.00e0



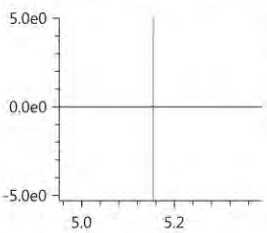
N-MeFOSAA-d3
Conc 3.7287
RT 5.045 Area 424925
Q 572.80>419.05 (-) 1.41e5



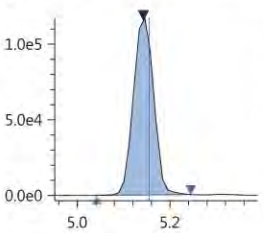
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.045 Area 424925
ISTD 572.80>419.05 (-) 1.41e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5
Conc 3.4496
RT 5.143 Area 355207
Q 588.80>419.00 (-) 1.17e5



N-EtFOSAA-d5_IS
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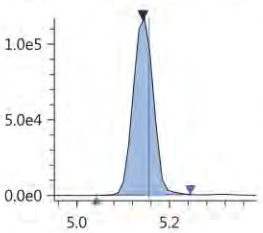
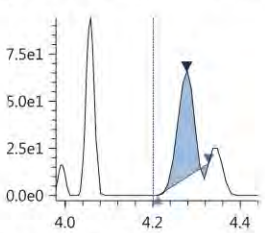
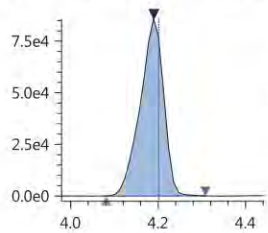
RT 5.143 Area 355207
ISTD 588.80>419.00 (-) 1.17e5



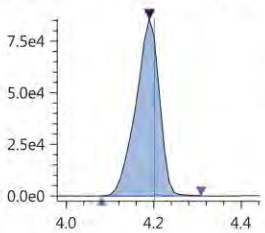
4_2-FTS_1
Conc 0.0017
RT 4.278 Area 133
Q 327.00>307.05 (-) 9.40e1



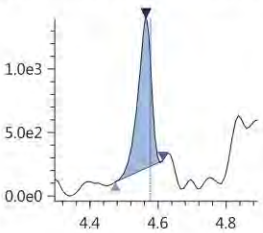
4_2-FTS-13C
Conc 3.3496
RT 4.190 Area 319815
Q 328.80>309.05 (-) 8.59e4



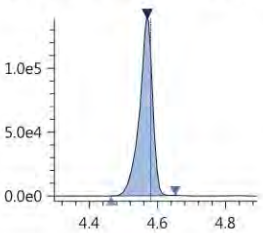
4_2-FTS-13C_IS
Conc 5.0000
RT 4.190 Area 319815
ISTD 328.80>309.05 (-) 8.59e4



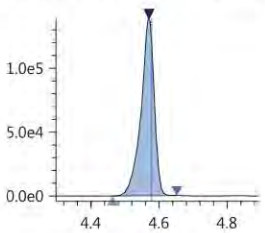
6_2-FTS_1
Conc 0.0358
RT 4.565 Area 3231
Q 427.00>407.00 (-) 1.40e3



6_2-FTS-13C
Conc 4.1286
RT 4.570 Area 371576
Q 428.90>409.00 (-) 1.39e5



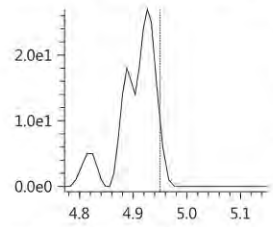
6_2-FTS-13C_IS
Conc 5.0000
RT 4.570 Area 371576
ISTD 428.90>409.00 (-) 1.39e5



Insight Report

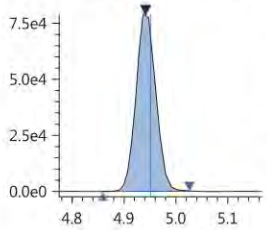
8_2-FTS_1

Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 2.70e1



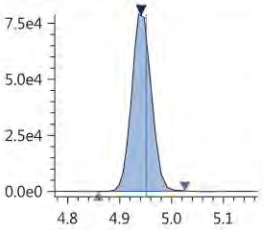
8_2-FTS-13C

Conc 4.1226
RT 4.941 Area 211476
Q 528.80>509.00 (-) 7.91e4



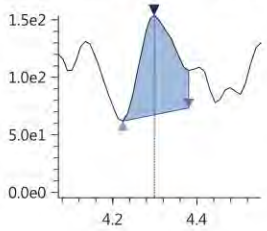
8_2-FTS-13C_IS

Conc 5.0000
RT 4.941 Area 211476
ISTD 528.80>509.00 (-) 7.91e4



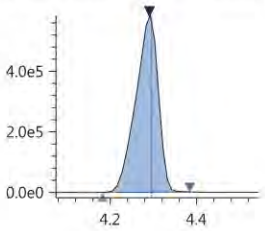
HPFO_DA

Conc 0.0013
RT 4.298 Area 494
Q 329.00>169.00 (-) 1.54e2



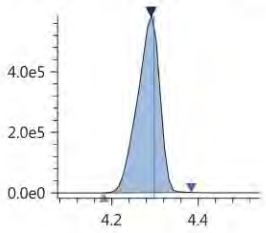
HFPO_DA-13C

Conc 4.0363
RT 4.291 Area 2101818
Q 332.00>286.80 (-) 5.85e5



HFPO_DA-13C_IS

Conc 5.0000
RT 4.291 Area 2101818
ISTD 332.00>286.80 (-) 5.85e5



1st EJD 08/13/19
2nd 08/13/19

Validation Report

Data File: J:\LCMS06\Data\190812_b1\190812_009
Lab ID: KQ1911251-06
RunType: MB
Matrix: Water

Date Acquired: 8/12/19 20:49
Batch ID: 646922
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	Perfluoroheptane sulfonic acid (PFHpS)	138	70	130	Narrate high bias, ND
	Perfluorononane sulfonic acid (PFNS)	172	70	130	Narrate high bias, ND
	Perfluorodecane sulfonic acid (PFDS)	168	70	130	Narrate high bias, ND
	13C2-PFDA	144	70	130	Narrate native ok
	13C2-PFDoDA	145	70	130	Narrate native ok
	D3-MeFOSAA	140	70	130	Narrate native ok
	D5-EtFOSAA	131	70	130	Narrate native ok
	13C2-8:2 FTS	185	70	130	Narrate native ok

Primary Review: _____

Secondary Review: _____

1st ESD 08/13/19
2nd 08/13/19

Quantitation Report

Data File:	J:\LCMS06\Data\190812_b1\190812_009	**Instrument:**	K-LCMS-06
Acqu Date:	8/12/19 20:49	**Vial:**	3
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1911251-06	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/29/19	**Receive Date:**	7/29/19

Analysis Lot:	646922	**Prep Lot:**	342310	**Report Group:**	KQ1911251
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	8/12/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	20091

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.140	-0.01	6837841	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.031	-0.01	753062	2.2998	46	20 - 109	Y
18O2-PFHxS	4.416	-0.01	893872	4.7698	95	26 - 122	Y
13C4-PFOS	4.758	-0.01	874865	3.9188	78	25 - 121	Y
13C4-PFBA	3.345	-0.09	4275270	3.8474	77	27 - 124	Y
13C5-PFPeA	3.979	-0.01	2176839	3.1136	62	27 - 138	Y
13C2-PFHxA	4.224	-0.01	5816669	4.2318	85	28 - 132	Y
13C4-PFHpA	4.416	-0.01	7783126	4.8314	97	19 - 139	Y
13C4-PFOA	4.592	-0.01	6671487	4.5729	91	22 - 130	Y
13C5-PFNA	4.770	-0.01	5460778	4.7116	94	20 - 127	Y
13C2-PFDA	4.955	-0.01	4604065	4.7254	95	24 - 125	Y
13C2-PFUnDA	5.140	-0.01	4861712	4.6039	92	22 - 125	Y
13C2-PFDoDA	5.315	-0.01	4738181	4.1656	83	19 - 122	Y
13C2-PFTeDA	5.631	-0.01	5095666	4.0662	81	13 - 124	Y
13C8-FOSA	5.248		1417337	2.7221	54	18 - 109	Y
D3-MeFOSA	5.628	0.00	521711	2.5538	51	15 - 153	Y
D5-EtFOSA	5.763	0.00	847196	2.7848	56	25 - 107	Y
D7-MeFOSE	5.597	0.00	703291	2.8025	56	24 - 112	Y
D9-EtFOSE	5.724	0.00	700505	2.7709	55	19 - 109	Y
D3-MeFOSAA	5.056	-0.01	661838	4.4046	88	9 - 123	Y
D5-EtFOSAA	5.155	-0.01	533006	3.9258	79	12 - 126	Y
13C2-4:2 FTS	4.200	-0.01	524998	4.1703	83	10 - 197	Y
13C2-6:2 FTS	4.580	-0.01	550805	4.6416	93	10 - 226	Y
13C2-8:2 FTS	4.951	-0.01	358820	5.3051	106	10 - 202	Y
13C3-HFPO-DA	4.301	-0.01	2307231	3.3604	67	22 - 135	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 EJD 08/13/19

2nd 08/13/19

Data File:	J:\LCMS06\Data\190812_b1\190812_009	**Instrument:**	K-LCMS-06
Acqu Date:	8/12/19 20:49	**Vial:**	3
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1911251-06	**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)	4.025	-0.01	280	0.0013	0.042	U	Y
Perfluoropentane sulfonic acid (PFPeS)	0		0	0	0	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.415	-0.01	4246	0.0171	0.55	U	Y
Perfluoroheptane sulfonic acid (PFHpS)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.738	-0.03	726	0.0048	0.15	U	Y
Perfluorononane sulfonic acid (PFNS)	4.935	-0.02	308	-0.0810	0	U	Y
Perfluorodecane sulfonic acid (PFDS)	5.128		405	0.0028	0.090	U	Y
Perfluorobutanoic acid (PFBA)	3.434	+0.00	1759	0.0020	0.064	U	Y
Perfluoropentanoic acid (PFPeA)	3.932	-0.06	118693	0.0144	0.46	U	Y
Perfluorohexanoic acid (PFHxA)	4.210	-0.03	35561	0.0036	0.12	U	Y
Perfluoroheptanoic acid (PFHpA)	4.402	-0.02	18690	-0.0050	0	U	Y
Perfluorooctanoic acid (PFOA)	4.584	-0.02	36972	0.0049	0.16	U	Y
Perfluorononanoic acid (PFNA)	4.752	-0.03	11298	-0.0007	0	U	Y
Perfluorodecanoic acid (PFDA)	4.944	-0.02	10334	0.0111	0.36	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.132	-0.02	15222	-0.0119	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.313	-0.01	7284	0.0026	0.083	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.478	-0.01	8442	0.0014	0.045	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.630	-0.01	51088	-0.0040	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.250	+0.00	2706	0.0076	0.24	U	Y
N-Methyl perfluorooctane sulfonamide (MeFOSA)	5.630	-0.01	2350	0.0143	0.46	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	5.068		692	0.0328	1.0	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	4.208	-0.01	299	0.0023	0.074	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.567	-0.02	1338	0.0100	0.32	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.947	-0.01	38	0.0006	0.019	U	Y
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	0		0	0	0	U	Y
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0		0	0	0	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

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190812_009

Sample ID: KQ1911251-06
Date acquired: 8/12/2019 8:49:20 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b1\190812_009.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.140	6837841	6837841	1	5.0000	ng/mL	----
PFBS_1	M	4.025	280	753084	2	0.0013	ng/mL	----
PFBS-13C	Auto	4.031	753062	6837841	1	2.2998	ng/mL	----
PFBS-13C_IS	Auto	4.031	753084	753084	2	5.0000	ng/mL	----
PFPeS	NI	----	----	753084	2	----	ng/mL	----
PFHxS_1	M	4.415	4246	893872	3	0.0171	ng/mL	----
PFHxS-18O	Auto	4.416	893872	6837841	1	4.7698	ng/mL	----
PFHxS-18O_IS	Auto	4.416	893872	893872	3	5.0000	ng/mL	----
PFHpS_1	NI	----	----	893872	3	----	ng/mL	----
PFOS_1	Auto	4.738	726	870891	4	0.0048	ng/mL	----
PFOS-13C	Auto	4.758	874865	6837841	1	3.9188	ng/mL	----
PFOS-13C_IS	Auto	4.758	870891	870891	4	5.0000	ng/mL	----
PFNS	Auto	4.935	308	870891	4	-0.0810	ng/mL	----
PFDS_1	M	5.128	405	870891	4	0.0028	ng/mL	----
PFBA	M	3.434	1759	4275270	5	0.0020	ng/mL	----
PFBA-13C	Auto	3.345	4275270	6837841	1	3.8474	ng/mL	----
PFBA-13C_IS	Auto	3.345	4275270	4275270	5	5.0000	ng/mL	----
PFPeA	M	3.932	118693	2176839	6	0.0144	ng/mL	----
PFPeA-13C	Auto	3.979	2176839	6837841	1	3.1136	ng/mL	----
PFPeA-13C_IS	Auto	3.979	2176839	2176839	6	5.0000	ng/mL	----
PFHxA	M	4.210	35561	5816669	7	0.0036	ng/mL	----
PFHxA-13C	Auto	4.224	5816669	6837841	1	4.2318	ng/mL	----
PFHxA-13C_IS	Auto	4.224	5816669	5816669	7	5.0000	ng/mL	----
PFHpA	M	4.402	18690	7783126	8	-0.0050	ng/mL	----
PFHpA-13C	Auto	4.416	7783126	6837841	1	4.8314	ng/mL	----
PFHpA-13C_IS	Auto	4.416	7783126	7783126	8	5.0000	ng/mL	----
PFOA	M	4.584	36972	6671487	9	0.0049	ng/mL	----
PFOA-13C	Auto	4.592	6671487	6837841	1	4.5729	ng/mL	----
PFOA-13C_IS	Auto	4.592	6671487	6671487	9	5.0000	ng/mL	----
PFNA	M	4.752	11298	5460778	10	-0.0007	ng/mL	----
PFNA-13C	Auto	4.770	5460778	6837841	1	4.7116	ng/mL	----
PFNA-13C_IS	Auto	4.770	5460778	5460778	10	5.0000	ng/mL	----
PFDA	M	4.944	10334	4604065	11	0.0111	ng/mL	----
PFDA-13C	Auto	4.955	4604065	6837841	1	4.7254	ng/mL	----
PFDA-13C_IS	Auto	4.955	4604065	4604065	11	5.0000	ng/mL	----
PFUnA	M	5.132	15222	4861712	12	-0.0119	ng/mL	----
PFUnA-13C	Auto	5.140	4861712	6837841	1	4.6039	ng/mL	----
PFUnA-13C_IS	Auto	5.140	4861712	4861712	12	5.0000	ng/mL	----
PFDoA	M	5.313	7284	4738181	13	0.0026	ng/mL	----
PFDoA-13C	Auto	5.315	4738181	6837841	1	4.1656	ng/mL	----
PFDoA-13C_IS	Auto	5.315	4738181	4738181	13	5.0000	ng/mL	----
PFTrDA	M	5.478	8442	5095666	14	0.0014	ng/mL	----
PFTeDA	Auto	5.630	51088	5095666	14	-0.0040	ng/mL	----
PFTeDA-13C	Auto	5.631	5095666	6837841	1	4.0662	ng/mL	----
PFTeDA-13C_IS	Auto	5.631	5095666	5095666	14	5.0000	ng/mL	----
FOSA	Auto	5.250	2706	1417337	16	0.0076	ng/mL	----
FOSA-13C	Auto	5.248	1417337	6837841	1	2.7221	ng/mL	----
FOSA-13C_IS	Auto	5.248	1417337	1417337	16	5.0000	ng/mL	----
N-MeFOSA	M	5.630	2350	521711	17	0.0143	ng/mL	----
N-MeFOSA-d3	Auto	5.628	521711	6837841	1	2.5538	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.628	521711	521711	17	5.0000	ng/mL	----
N-EtFOSA	NI	----	----	847196	18	----	ng/mL	----
N-EtFOSA-d9	Auto	5.763	847196	6837841	1	2.7848	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.763	847196	847196	18	5.0000	ng/mL	----
N-MeFOSE	NI	----	----	703291	19	----	ng/mL	----
N-MeFOSE-d7	Auto	5.597	703291	6837841	1	2.8025	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.597	703291	703291	19	5.0000	ng/mL	----
N-EtFOSE	NI	----	----	700505	20	----	ng/mL	----
N-EtFOSE-d9	Auto	5.724	700505	6837841	1	2.7709	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.724	700505	700505	20	5.0000	ng/mL	----
N-MeFOSAA	M	5.068	692	661838	21	0.0328	ng/mL	----
N-MeFOSAA-d3	Auto	5.056	661838	6837841	1	4.4046	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.056	661838	661838	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	533006	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.155	533006	6837841	1	3.9258	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.155	533006	533006	22	5.0000	ng/mL	----
4_2-FTS_1	M	4.208	299	524998	23	0.0023	ng/mL	----
4_2-FTS-13C	Auto	4.200	524998	6837841	1	4.1703	ng/mL	----

Insight Report

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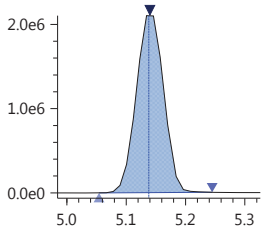
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.200	524998	524998	23	5.0000	ng/mL	----
6_2-FTS_1	M	4.567	1338	550805	24	0.0100	ng/mL	----
6_2-FTS-13C	Auto	4.580	550805	6837841	1	4.6416	ng/mL	----
6_2-FTS-13C_IS	Auto	4.580	550805	550805	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.947	38	358820	25	0.0006	ng/mL	----
8_2-FTS-13C	Auto	4.951	358820	6837841	1	5.3051	ng/mL	----
8_2-FTS-13C_IS	Auto	4.951	358820	358820	25	5.0000	ng/mL	----
10_2-FtS_1	ND(W/B)	----	----	358820	25	----	ng/mL	----
HPFO_DA	NI	----	----	2307231	26	----	ng/mL	----
HFPO_DA-13C	Auto	4.301	2307231	6837841	1	3.3604	ng/mL	----
HFPO_DA-13C_IS	Auto	4.301	2307231	2307231	26	5.0000	ng/mL	----

13C7-PFUnDA_IS
Conc 5.0000
RT 5.140 Area 6837841
ISTD 570.00>525.00 (-) 2.10e6



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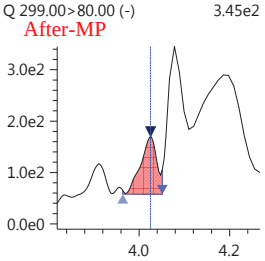
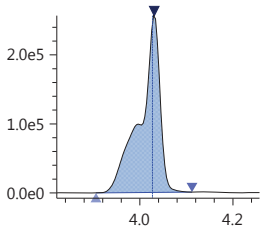
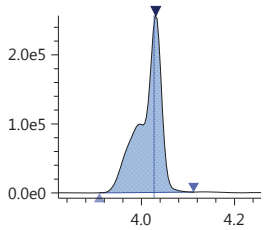
Conc 0.0013
RT 4.025 Area 280
Q 299.00>80.00 (-) 3.45e2



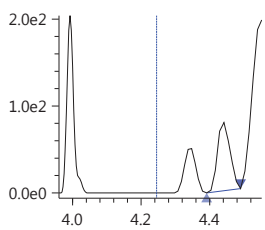
PFBS-13C
Conc 2.2998
RT 4.031 Area 753062
Q 301.80>80.00 (-) 2.57e5



PFBS-13C_IS
Conc 5.0000
RT 4.031 Area 753084
ISTD 301.80>80.00 (-) 2.57e5



PFPeS
Conc ----
RT ---- Area ----
Q 349.00>99.00 (-) 2.04e2



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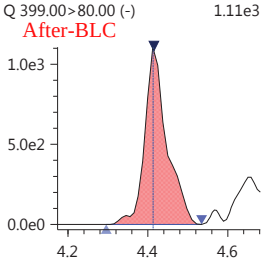
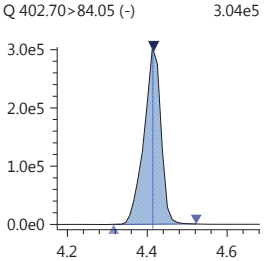
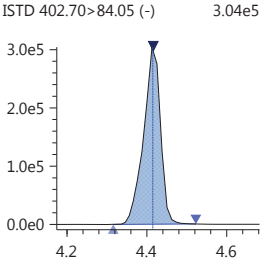
Conc 0.0171
RT 4.415 Area 4246
Q 399.00>80.00 (-) 1.11e3



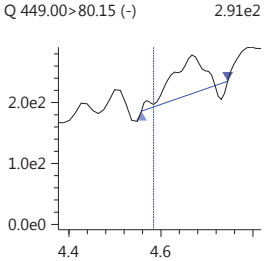
PFHxS-18O
Conc 4.7698
RT 4.416 Area 893872
Q 402.70>84.05 (-) 3.04e5



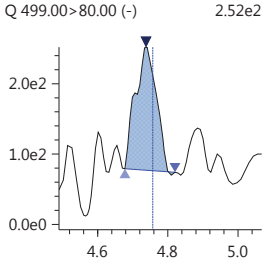
PFHxS-18O_IS
Conc 5.0000
RT 4.416 Area 893872
ISTD 402.70>84.05 (-) 3.04e5



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 2.91e2



PFOS_1
Conc 0.0048
RT 4.738 Area 726
Q 499.00>80.00 (-) 2.52e2



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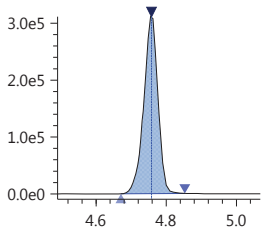
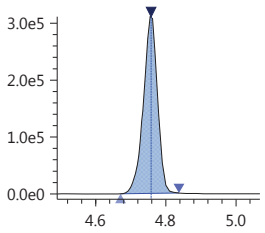
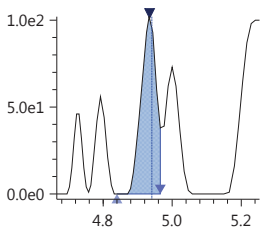
Conc 3.9188
RT 4.758 Area 874865
Q 502.80>80.05 (-) 3.12e5



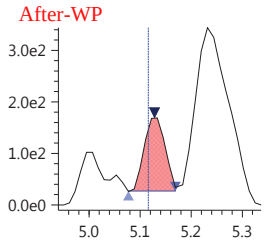
PFOS-13C_IS
Conc 5.0000
RT 4.758 Area 870891
ISTD 502.80>80.05 (-) 3.12e5



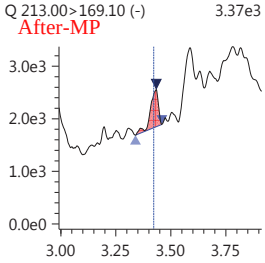
PFNS
Conc -0.0810
RT 4.935 Area 308
Q 549.00>99.00 (-) 1.02e2



PFDS_1
Conc 0.0028
RT 5.128 Area 405
Q 599.00>79.90 (-) 3.44e2



PFBA
Conc 0.0020
RT 3.434 Area 1759
Q 213.00>169.10 (-) 3.37e3



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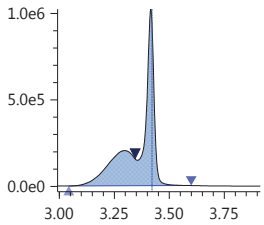
PFBA-13C
Conc 3.8474
RT 3.345 Area 4275270
Q 216.90>172.15 (-) 1.02e6



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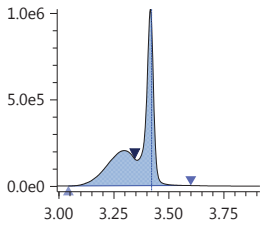
RT 3.345 Area 4275270
ISTD 216.90>172.15 (-) 1.02e6



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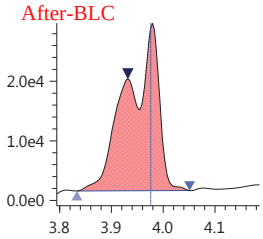
Q 263.05>219.10 (-) 2.98e4



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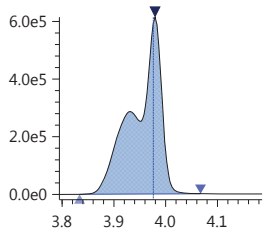
Q 267.90>223.00 (-) 6.15e5



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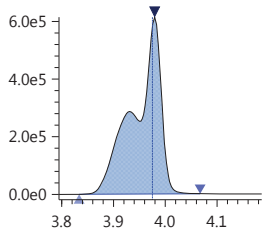

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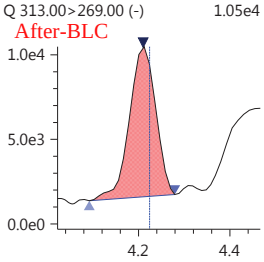
Conc 0.0036
RT 4.210 Area 35561
Q 313.00>269.00 (-) 1.05e4



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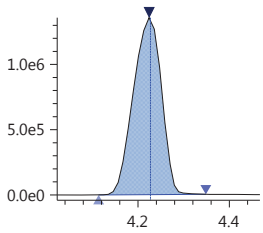
RT 4.224 Area 5816669
Q 314.90>270.10 (-) 1.36e6



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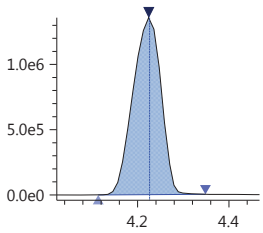

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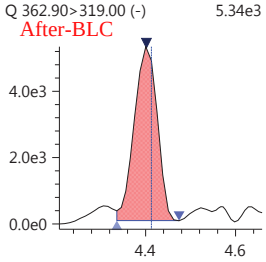

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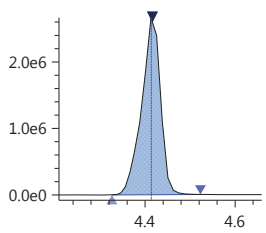

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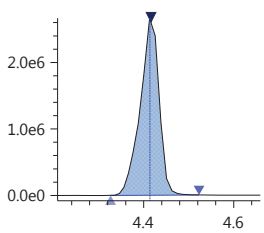

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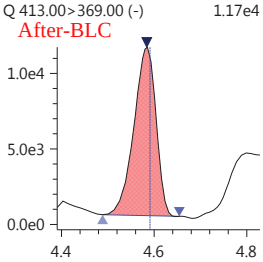
Q 413.00>369.00 (-) 1.17e4



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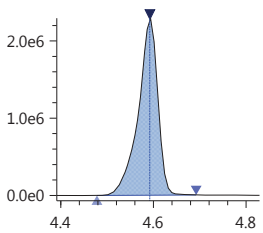
RT 4.592 Area 6671487
Q 416.80>372.05 (-) 2.29e6



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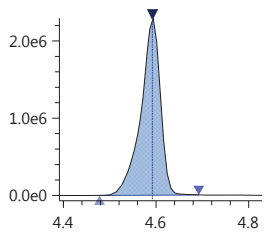

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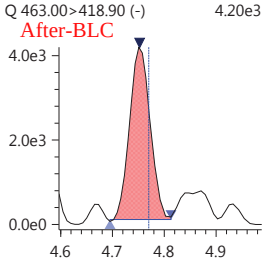

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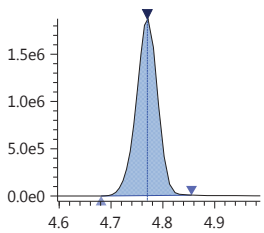
RT 4.770 Area 5460778
Q 467.80>423.00 (-) 1.88e6



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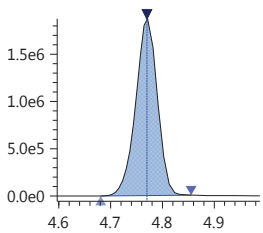

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Conc 0.0111
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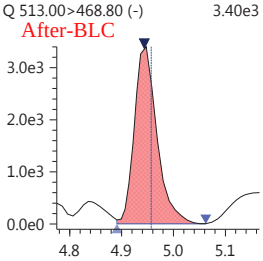

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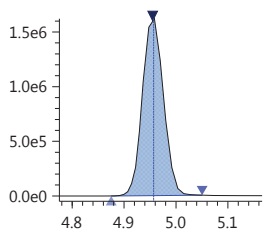
Q 514.80>469.95 (-) 1.62e6



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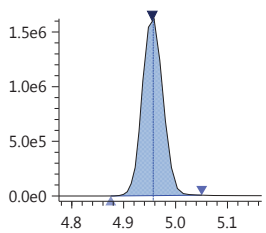

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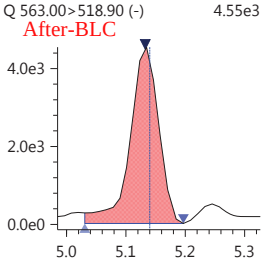

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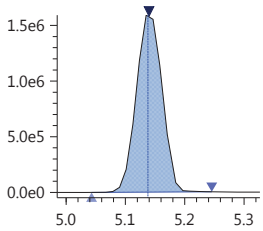

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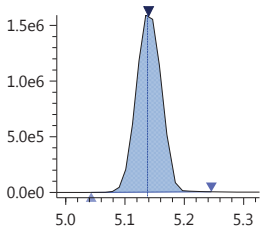

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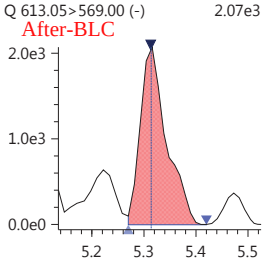

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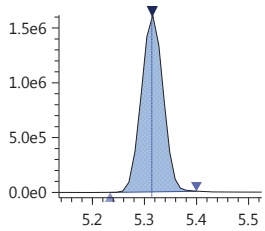
RT 5.315 Area 4738181
Q 614.80>569.95 (-) 1.62e6



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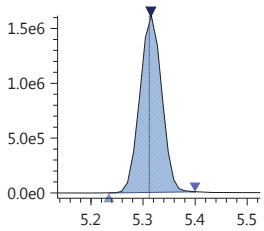
ISTD 614.80>569.95 (-) 1.62e6



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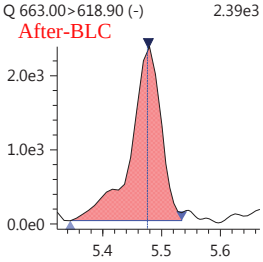

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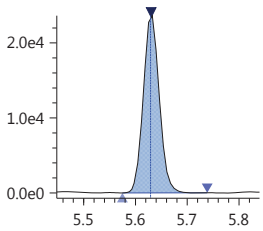
RT 5.630 Area 51088
Q 713.40>669.00 (-) 2.36e4



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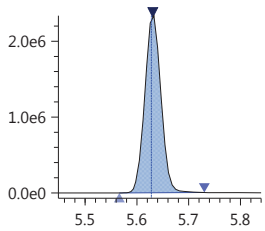
RT 5.631 Area 5095666
Q 714.70>669.90 (-) 2.34e6



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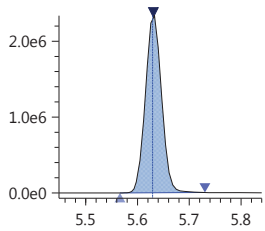

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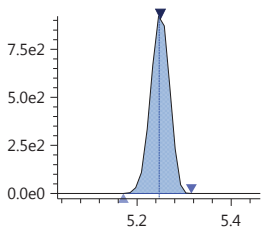

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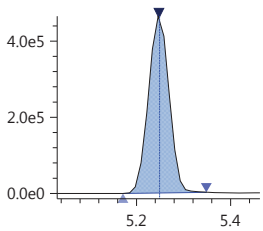
Conc 2.7221
RT 5.248 Area 1417337
Q 506.00>78.05 (-) 4.66e5



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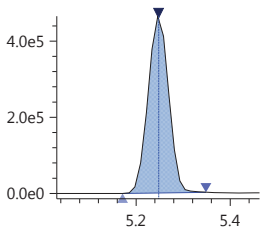

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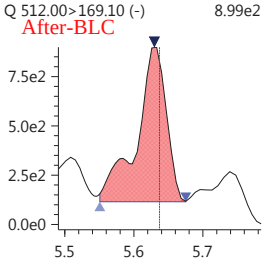

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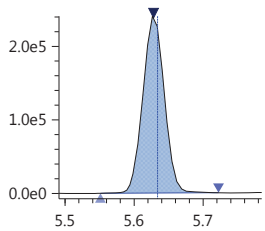
Conc 2.5538
RT 5.628 Area 521711
Q 514.90>168.90 (-) 2.41e5



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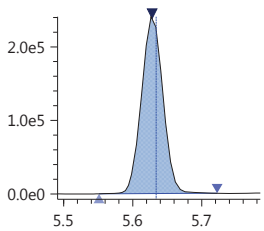
ISTD 514.90>168.90 (-) 2.41e5



N-EtFOSA
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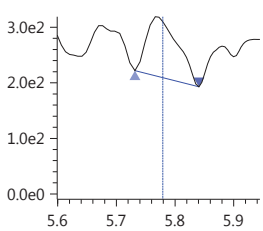
RT ---- Area ----
Q 526.90>169.10 (-) 3.19e2



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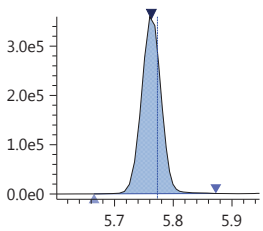
Conc 2.7848
RT 5.763 Area 847196
Q 530.90>169.15 (-) 3.60e5



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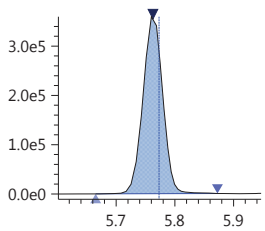
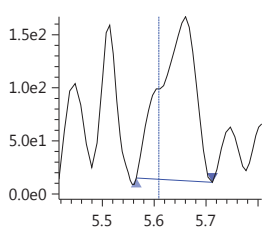


N-MeFOSE
Conc ----
RT ---- Area ----
Q 616.00>59.00 (-) 1.67e2



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N-MeFOSE-d7
Conc 2.8025
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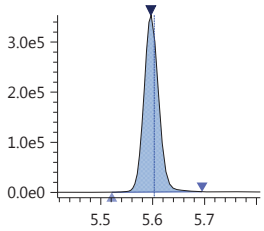
Q 622.70>59.10 (-) 3.54e5



N-MeFOSE-d7_IS
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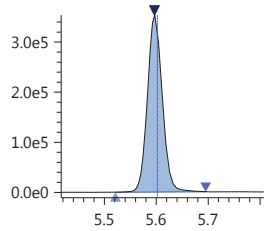
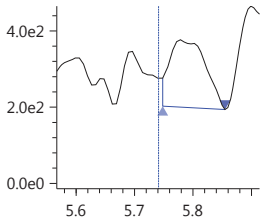
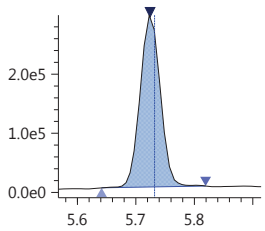
ISTD 622.70>59.10 (-) 3.54e5



N-EtFOSE
Conc ----
RT ---- Area ----
Q 630.00>58.90 (-) 4.65e2



N-EtFOSE-d9
Conc 2.7709
RT 5.724 Area 700505
Q 638.70>59.10 (-) 3.00e5



N-EtFOSE-d9_IS
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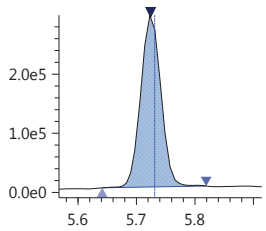
RT 5.724 Area 700505
ISTD 638.70>59.10 (-) 3.00e5



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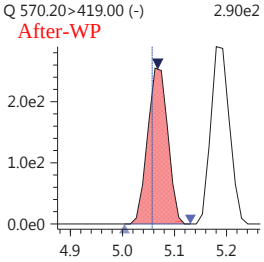
Conc 0.0328
RT 5.068 Area 692
Q 570.20>419.00 (-) 2.90e2



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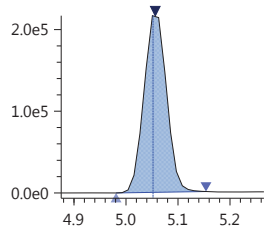
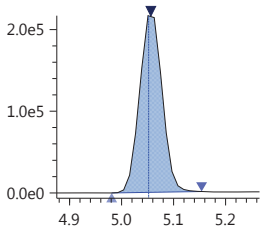
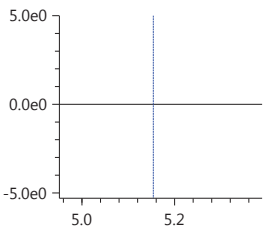
Conc 4.4046
RT 5.056 Area 661838
Q 572.80>419.05 (-) 2.17e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.056 Area 661838
ISTD 572.80>419.05 (-) 2.17e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



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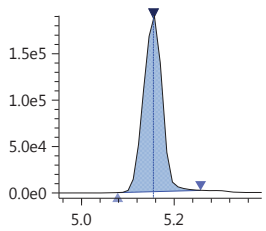
Conc 3.9258
RT 5.155 Area 533006
Q 588.80>419.00 (-) 1.91e5



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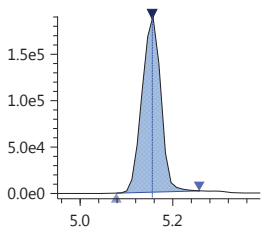
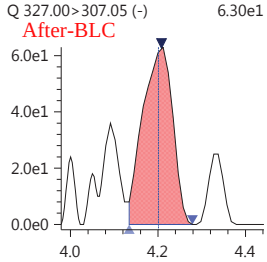


4_2-FTS_1
Conc 0.0023
RT 4.208 Area 299
Q 327.00>307.05 (-) 6.30e1



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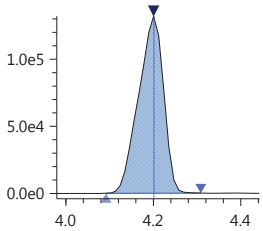
RT 4.200 Area 524998
Q 328.80>309.05 (-) 1.32e5



4_2-FTS-13C_IS
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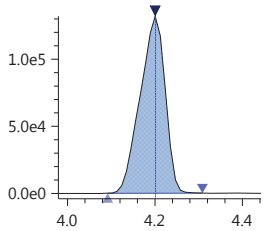

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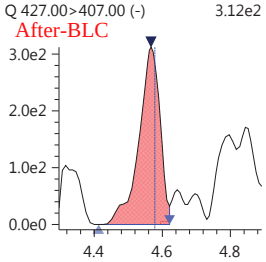
Conc 0.0100
RT 4.567 Area 1338
Q 427.00>407.00 (-) 3.12e2



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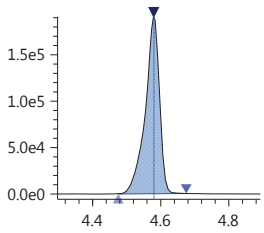
Conc 4.6416
RT 4.580 Area 550805
Q 428.90>409.00 (-) 1.91e5



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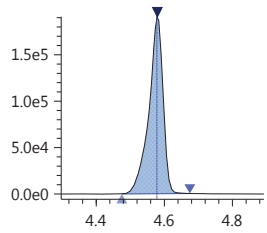
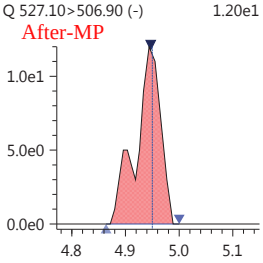
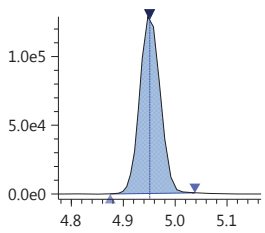


8_2-FTS_1
Conc 0.0006
RT 4.947 Area 38
Q 527.10>506.90 (-) 1.20e1



8_2-FTS-13C
Conc 5.3051
RT 4.951 Area 358820
Q 528.80>509.00 (-) 1.29e5



8_2-FTS-13C_IS
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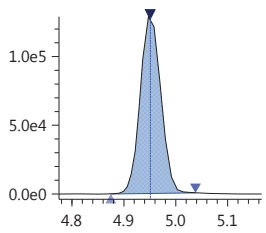
ISTD 528.80>509.00 (-) 1.29e5



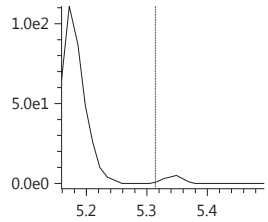
Insight Report

10_2-FtS_1

Conc ----

RT ---- Area ----

Q 627.00>606.95 (-) 1.11e2

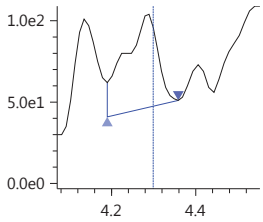


HPFO_DA

Conc ----

RT ---- Area ----

Q 329.00>169.00 (-) 1.09e2

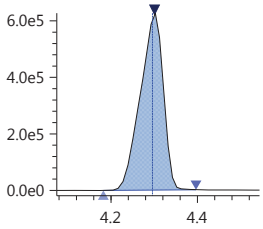


HFPO_DA-13C

Conc 3.3604

RT 4.301 Area 2307231

Q 332.00>286.80 (-) 6.27e5

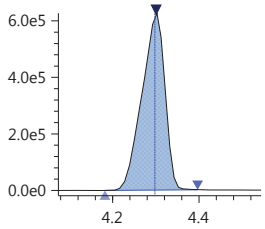


HFPO_DA-13C_IS

Conc 5.0000

RT 4.301 Area 2307231

ISTD 332.00>286.80 (-) 6.27e5



Insight Report

Printed at 8/13/2019 10:42:21 AM

190812_009

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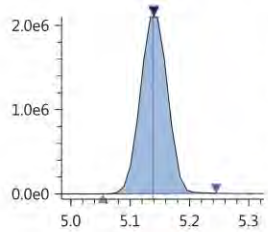
Date acquired: 8/12/2019 8:49:20 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b1\190812_009.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 5

13C7-PFUnDA_IS
Conc 5.0000
RT 5.140 Area 6837841
ISTD 570.00>525.00 (-) 2.10e6



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Conc ----
RT ---- Area ----
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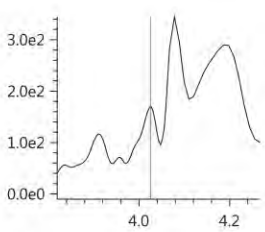

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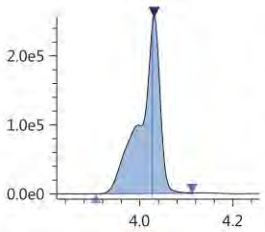
Conc 2.2998
RT 4.031 Area 753062
Q 301.80>80.00 (-) 2.57e5



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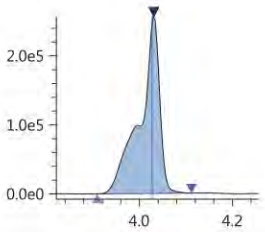

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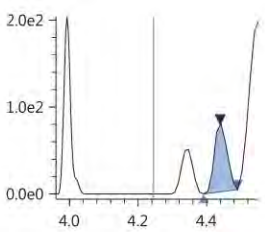
Q 349.00>99.00 (-) 2.04e2



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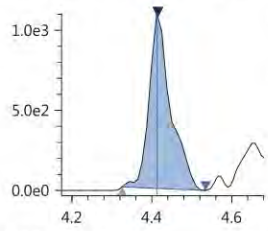
Q 399.00>80.00 (-) 1.11e3



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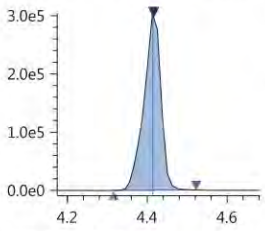
Conc 4.7698
RT 4.416 Area 893872
Q 402.70>84.05 (-) 3.04e5



PFHxS-18O_IS
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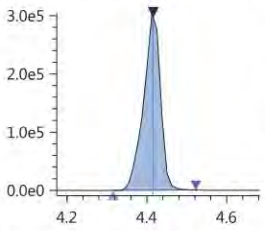

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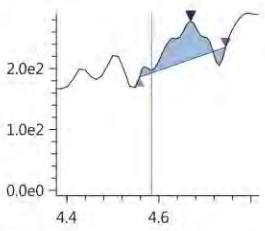
Q 449.00>80.15 (-) 2.91e2



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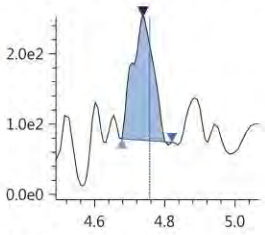
Q 499.00>80.00 (-) 2.52e2



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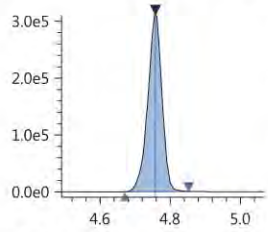

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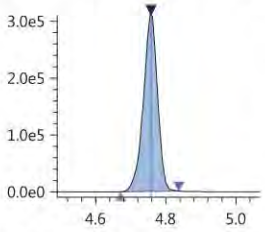

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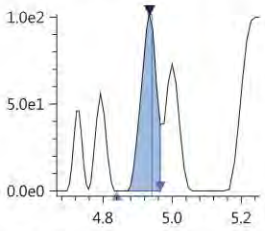
Conc -0.0810
RT 4.935 Area 308
Q 549.00>99.00 (-) 1.02e2



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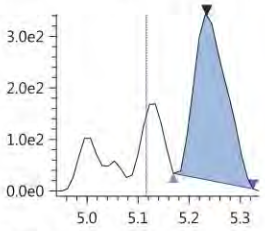
Q 599.00>79.90 (-) 3.44e2



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RT ---- Area ----
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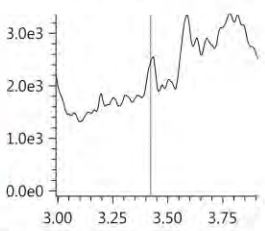

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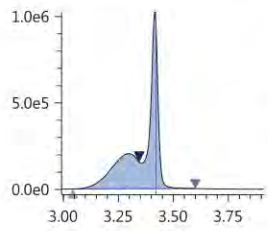
RT 3.345 Area 4275270
Q 216.90>172.15 (-) 1.02e6



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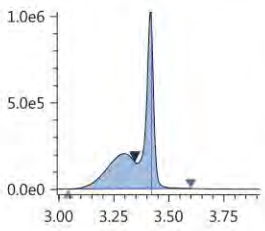

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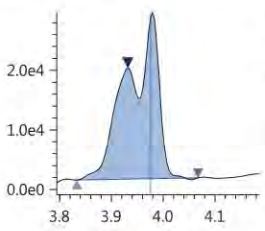
Q 263.05>219.10 (-) 2.98e4



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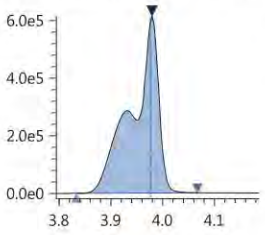

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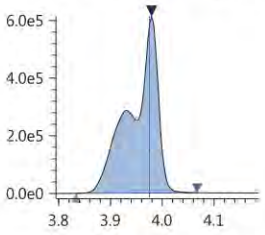

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PFHxA
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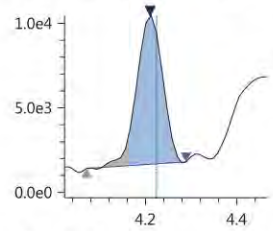
Q 313.00>269.00 (-) 1.05e4



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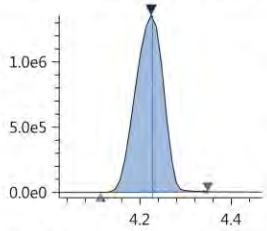
Q 314.90>270.10 (-) 1.36e6



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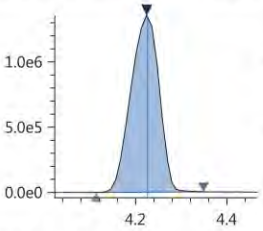

PFHpA
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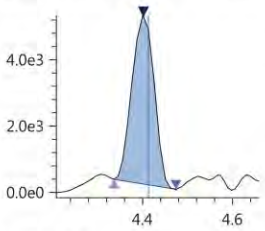
Q 362.90>319.00 (-) 5.34e3



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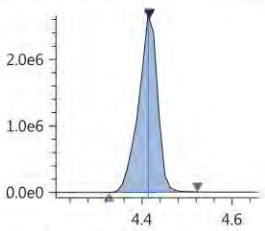
Conc 4.8314
RT 4.416 Area 7783126
Q 366.90>322.10 (-) 2.67e6



PFHpA-13C_IS
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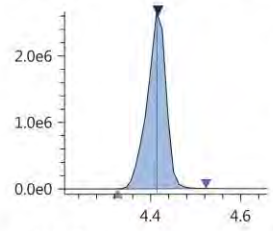
RT 4.416 Area 7783126
ISTD 366.90>322.10 (-) 2.67e6



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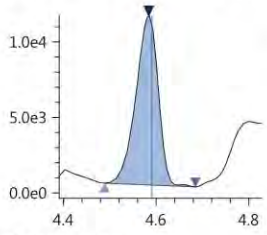
Q 413.00>369.00 (-) 1.17e4



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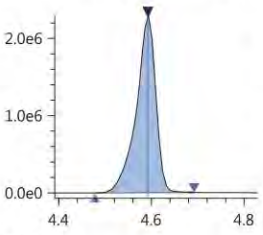

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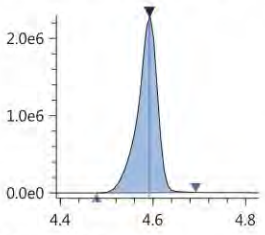

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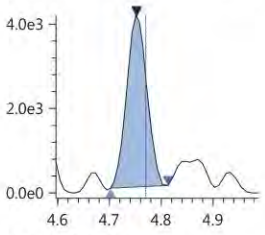

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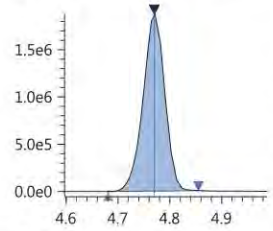

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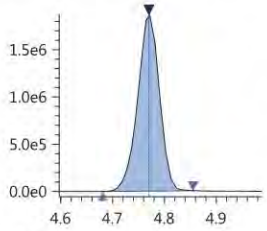

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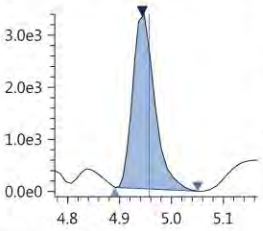

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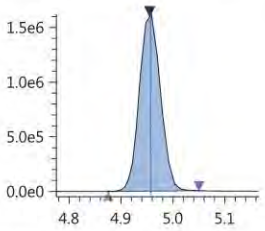

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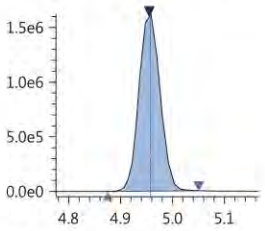

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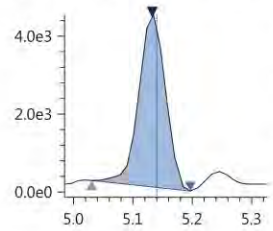

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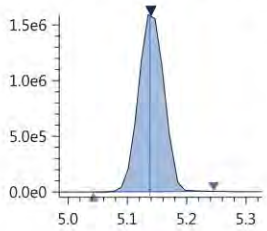

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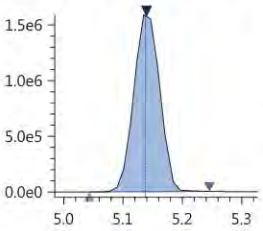

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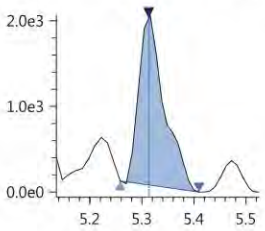

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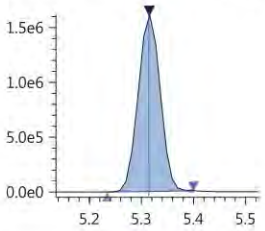

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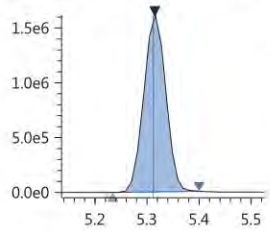
ISTD 614.80>569.95 (-) 1.62e6



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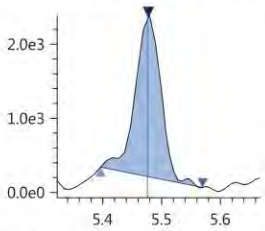

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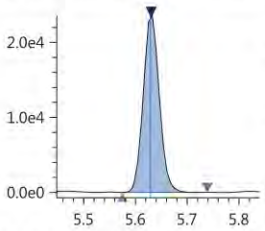

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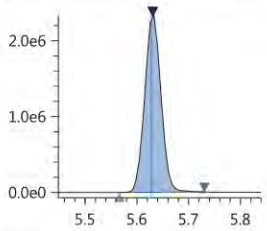
Q 714.70>669.90 (-) 2.34e6



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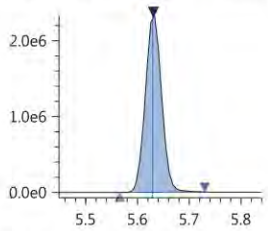

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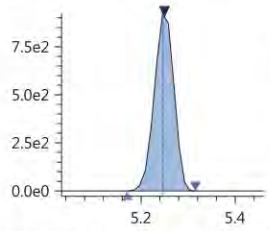

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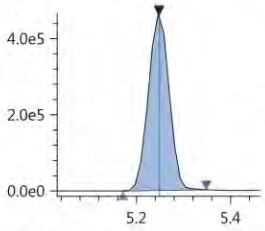
RT 5.248 Area 1417337
Q 506.00>78.05 (-) 4.66e5



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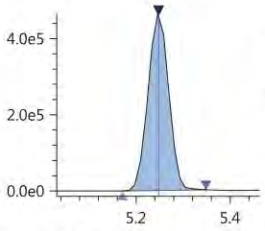

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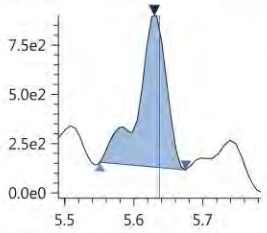

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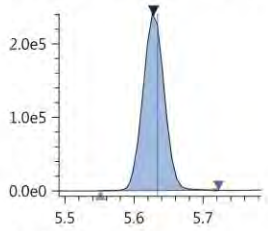
Q 514.90>168.90 (-) 2.41e5



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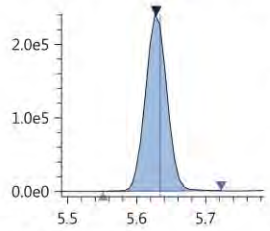

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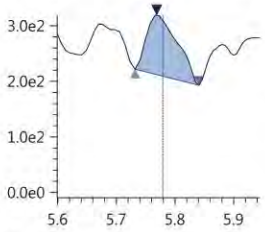
Q 526.90>169.10 (-) 3.19e2



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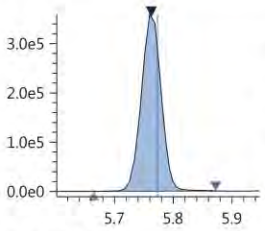
Q 530.90>169.15 (-) 3.60e5



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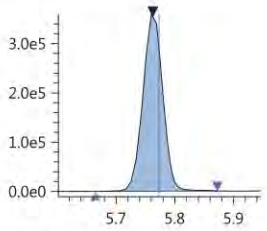
ISTD 530.90>169.15 (-) 3.60e5



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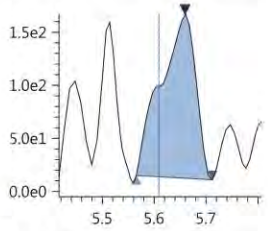
RT 5.659 Area 723
Q 616.00>59.00 (-) 1.67e2



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Conc 2.8025
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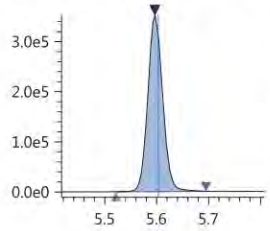
Q 622.70>59.10 (-) 3.54e5



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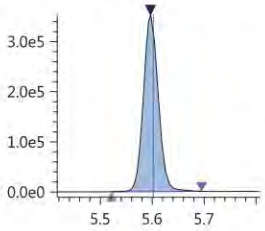

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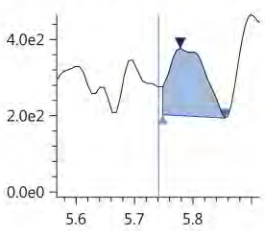
RT 5.778 Area 763
Q 630.00>58.90 (-) 4.65e2



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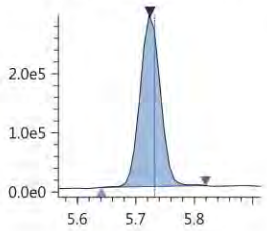

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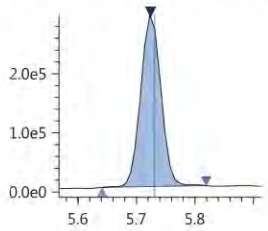

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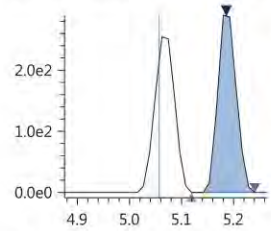
Q 570.20>419.00 (-) 2.90e2



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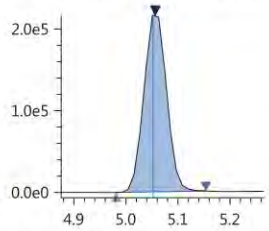
Conc 4.4046
RT 5.056 Area 661838
Q 572.80>419.05 (-) 2.17e5



N-MeFOSAA-d3_IS
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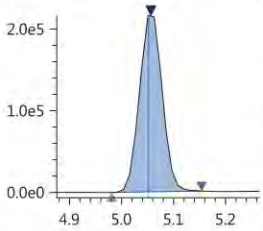
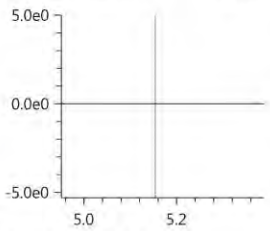


N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



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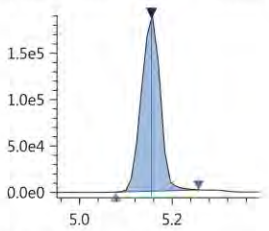
Q 588.80>419.00 (-) 1.91e5



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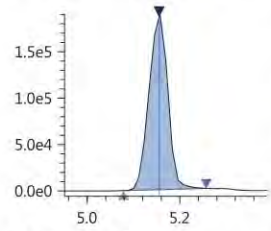

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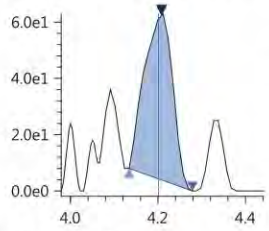
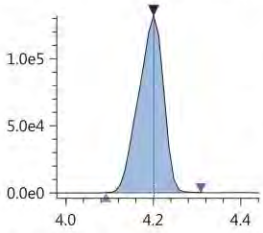
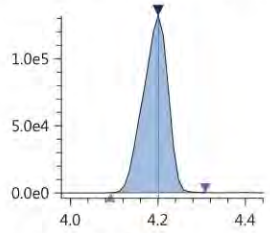


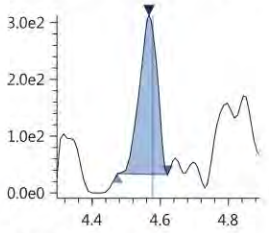
4_2-FTS-13C
Conc 4.1703
RT 4.200 Area 524998
Q 328.80>309.05 (-) 1.32e5



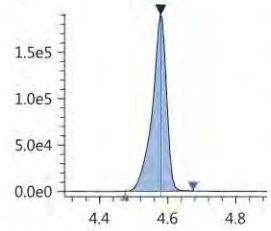
4_2-FTS-13C_IS
Conc 5.0000
RT 4.200 Area 524998
ISTD 328.80>309.05 (-) 1.32e5



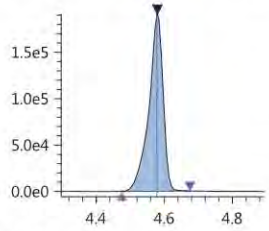
6_2-FTS_1
Conc 0.0076
RT 4.567 Area 1013
Q 427.00>407.00 (-) 3.12e2



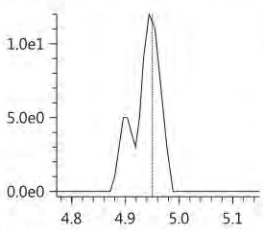
6_2-FTS-13C
Conc 4.6416
RT 4.580 Area 550805
Q 428.90>409.00 (-) 1.91e5



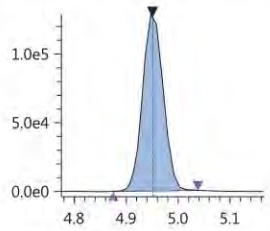
6_2-FTS-13C_IS
Conc 5.0000
RT 4.580 Area 550805
ISTD 428.90>409.00 (-) 1.91e5



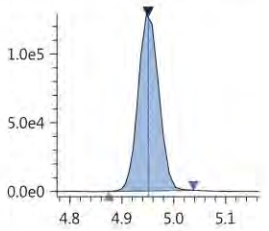
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 1.20e1



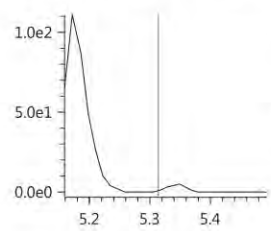
8_2-FTS-13C
Conc 5.3051
RT 4.951 Area 358820
Q 528.80>509.00 (-) 1.29e5



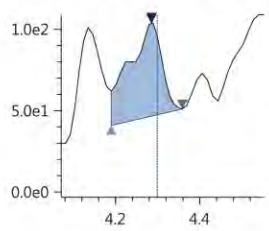
8_2-FTS-13C_IS
Conc 5.0000
RT 4.951 Area 358820
ISTD 528.80>509.00 (-) 1.29e5



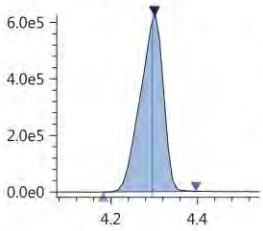
10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 1.11e2



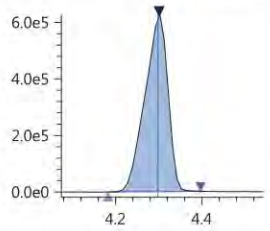
HPFO_DA
Conc 0.0007
RT 4.285 Area 316
Q 329.00>169.00 (-) 1.09e2



HFPO_DA-13C
Conc 3.3604
RT 4.301 Area 2307231
Q 332.00>286.80 (-) 6.27e5



HFPO_DA-13C_IS
Conc 5.0000
RT 4.301 Area 2307231
ISTD 332.00>286.80 (-) 6.27e5



1st EJD 08/09/19
2nd 08/12/19

Validation Report

Data File: J:\LCMS06\Data\190807_b8\190807_144
Lab ID: KQ1910949-05
RunType: LCS
Matrix: Water

Date Acquired: 8/8/19 16:28
Batch ID: 646328
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	Perfluorodecane sulfonic acid (PFDS)	136	70	130	samples ND, LCS in control
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	149	70	130	samples ND, LCS in control
	18O2-PFHxS	137	70	130	narrate native ok
	13C4-PFHpA	132	70	130	narrate native ok
	13C5-PFNA	144	70	130	narrate native ok
	13C2-PFDA	135	70	130	narrate native ok
	D5-EtFOSAA	142	70	130	narrate native ok
	Perfluorononane sulfonic acid (PFNS)	139	70	130	samples ND, LCS in control

Primary Review: _____

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Secondary Review: _____

1st EJD 08/09/19
2nd 08/12/19

Quantitation Report

Data File:	J:\LCMS06\Data\190807_b8\190807_144	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 16:28	**Vial:**	4
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1910949-05	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/29/19	**Receive Date:**	7/29/19

Analysis Lot:	646328	**Prep Lot:**	341924	**Report Group:**	KQ1910949
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	8/6/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	20091

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.127	+0.00	4411598	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.016	0.00	607577	2.8759	58	20 - 109	Y
18O2-PFHxS	4.406	0.00	632521	5.2314	105	26 - 122	Y
13C4-PFOS	4.747	0.00	648528	4.5026	90	25 - 121	Y
13C4-PFBA	3.402	-0.01	3055667	4.2622	85	27 - 124	Y
13C5-PFPeA	3.963	0.00	1724062	3.8222	76	27 - 138	Y
13C2-PFHxA	4.214	0.00	4078318	4.5989	92	28 - 132	Y
13C4-PFHpA	4.406	0.00	5418436	5.2134	104	19 - 139	Y
13C4-PFOA	4.579	0.00	4086067	4.3411	87	22 - 130	Y
13C5-PFNA	4.760		4220286	5.6440	113	20 - 127	Y
13C2-PFDA	4.944		3089388	4.9147	98	24 - 125	Y
13C2-PFUnDA	5.127	+0.00	2273488	3.3369	67	22 - 125	Y
13C2-PFDoDA	5.300	+0.00	2900981	3.9531	79	19 - 122	Y
13C2-PFTeDA	5.618	+0.00	3234853	4.0010	80	13 - 124	Y
13C8-FOSA	5.250	+0.01	1182568	3.5204	70	18 - 109	Y
D3-MeFOSAA	5.044	+0.00	361054	3.7243	74	9 - 123	Y
D5-EtFOSAA	5.141	+0.00	416576	4.7557	95	12 - 126	Y
13C2-4:2 FTS	4.188	0.00	292978	3.6072	72	10 - 197	Y
13C2-6:2 FTS	4.567		369912	4.8316	97	10 - 226	Y
13C2-8:2 FTS	4.939		157295	3.6046	72	10 - 202	Y
13C3-HFPO-DA	4.285	0.00	1916997	4.3276	87	22 - 135	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	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 EJD 08/09/19
2nd 08/12/19

Data File:	J:\LCMS06\Data\190807_b8\190807_144	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 16:28	**Vial:**	4
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1910949-05	**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)	4.014	0.00	191362	1.0921	34.9		Y
Perfluoropentane sulfonic acid (PFPeS)	4.228	-0.01	82472	1.1184	35.8		Y
Perfluorohexane sulfonic acid (PFHxS)	4.403	0.00	128426	0.7312	23.4		Y
Perfluoroheptane sulfonic acid (PFHpS)	4.572	0.00	186747	0.9969	31.9		Y
Perfluorooctane sulfonic acid (PFOS)	4.747	0.00	101254	0.8931	28.6		Y
Perfluorononane sulfonic acid (PFNS)	4.927	0.00	78891	1.0253	32.8		Y
Perfluorodecane sulfonic acid (PFDS)	5.105		112507	1.0620	34.0		Y
Perfluorobutanoic acid (PFBA)	3.402	-0.01	626479	1.0016	32.1		Y
Perfluoropentanoic acid (PFPeA)	3.914	-0.05	835790	1.0235	32.8		Y
Perfluorohexanoic acid (PFHxA)	4.214	0.00	801284	0.9266	29.7		Y
Perfluoroheptanoic acid (PFHpA)	4.406	0.00	813274	0.8720	27.9		Y
Perfluorooctanoic acid (PFOA)	4.579	0.00	1078542	1.1732	37.5		Y
Perfluorononanoic acid (PFNA)	4.760		739948	0.9631	30.8		Y
Perfluorodecanoic acid (PFDA)	4.944		575985	0.9197	29.4		Y
Perfluoroundecanoic acid (PFUnDA)	5.127	+0.00	455274	1.1073	35.4		Y
Perfluorododecanoic acid (PFDoDA)	5.301	+0.00	402928	1.1112	35.6		Y
Perfluorotridecanoic acid (PFTrDA)	5.465	+0.00	477320	1.0245	32.8		Y
Perfluorotetradecanoic acid (PFTeDA)	5.617		264216	1.0310	33.0		Y
Perfluorooctane sulfonamide (FOSA)	5.250	+0.01	305842	1.0274	32.9		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.045	+0.00	52261	1.0265	32.8		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.144	+0.00	50832	1.0066	32.2		Y
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	4.188	0.00	94521	1.2974	41.5		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.566	0.00	101690	1.1305	36.2		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.938		28106	1.0208	32.7		Y
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	4.287	0.00	336858	0.9433	30.2		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 8/9/2019 5:25:53 PM

190807_144

Sample ID: KQ1910949-05
Date acquired: 8/8/2019 4:28:01 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_144.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.127	4411598	4411598	1	5.0000	ng/mL	----
PFBS_1	Auto	4.014	191362	608264	2	1.0921	ng/mL	----
PFBS-13C	Auto	4.016	607577	4411598	1	2.8759	ng/mL	----
PFBS-13C_IS	Auto	4.016	608264	608264	2	5.0000	ng/mL	----
PFPeS	Auto	4.228	82472	608264	2	1.1184	ng/mL	----
PFHxS_1	Auto	4.403	128426	632521	3	0.7312	ng/mL	----
PFHxS-18O	Auto	4.406	632521	4411598	1	5.2314	ng/mL	----
PFHxS-18O_IS	Auto	4.406	632521	632521	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.572	186747	632521	3	0.9969	ng/mL	----
PFOS_1	Auto	4.747	101254	646558	4	0.8931	ng/mL	----
PFOS-13C	Auto	4.747	648528	4411598	1	4.5026	ng/mL	----
PFOS-13C_IS	Auto	4.747	646558	646558	4	5.0000	ng/mL	----
PFNS	M	4.927	78891	646558	4	1.0253	ng/mL	----
PFDS_1	Auto	5.105	112507	646558	4	1.0620	ng/mL	----
PFBA	Auto	3.402	626479	3055667	5	1.0016	ng/mL	----
PFBA-13C	Auto	3.402	3055667	4411598	1	4.2622	ng/mL	----
PFBA-13C_IS	Auto	3.402	3055667	3055667	5	5.0000	ng/mL	----
PFPeA	Auto	3.914	835790	1724062	6	1.0235	ng/mL	----
PFPeA-13C	Auto	3.963	1724062	4411598	1	3.8222	ng/mL	----
PFPeA-13C_IS	Auto	3.963	1724062	1724062	6	5.0000	ng/mL	----
PFHxA	Auto	4.214	801284	4078318	7	0.9266	ng/mL	----
PFHxA-13C	Auto	4.214	4078318	4411598	1	4.5989	ng/mL	----
PFHxA-13C_IS	Auto	4.214	4078318	4078318	7	5.0000	ng/mL	----
PFHpA	Auto	4.406	813274	5418436	8	0.8720	ng/mL	----
PFHpA-13C	Auto	4.406	5418436	4411598	1	5.2134	ng/mL	----
PFHpA-13C_IS	Auto	4.406	5418436	5418436	8	5.0000	ng/mL	----
PFOA	Auto	4.579	1078542	4086067	9	1.1732	ng/mL	----
PFOA-13C	Auto	4.579	4086067	4411598	1	4.3411	ng/mL	----
PFOA-13C_IS	Auto	4.579	4086067	4086067	9	5.0000	ng/mL	----
PFNA	Auto	4.760	739948	4220286	10	0.9631	ng/mL	----
PFNA-13C	Auto	4.760	4220286	4411598	1	5.6440	ng/mL	----
PFNA-13C_IS	Auto	4.760	4220286	4220286	10	5.0000	ng/mL	----
PFDA	Auto	4.944	575985	3089388	11	0.9197	ng/mL	----
PFDA-13C	Auto	4.944	3089388	4411598	1	4.9147	ng/mL	----
PFDA-13C_IS	Auto	4.944	3089388	3089388	11	5.0000	ng/mL	----
PFUnA	Auto	5.127	455274	2273488	12	1.1073	ng/mL	----
PFUnA-13C	Auto	5.127	2273488	4411598	1	3.3369	ng/mL	----
PFUnA-13C_IS	Auto	5.127	2273488	2273488	12	5.0000	ng/mL	----
PFDoA	Auto	5.301	402928	2900981	13	1.1112	ng/mL	----
PFDoA-13C	Auto	5.300	2900981	4411598	1	3.9531	ng/mL	----
PFDoA-13C_IS	Auto	5.300	2900981	2900981	13	5.0000	ng/mL	----
PFTrDA	Auto	5.465	477320	3234853	14	1.0245	ng/mL	----
PFTeDA	Auto	5.617	264216	3234853	14	1.0310	ng/mL	----
PFTeDA-13C	Auto	5.618	3234853	4411598	1	4.0010	ng/mL	----
PFTeDA-13C_IS	Auto	5.618	3234853	3234853	14	5.0000	ng/mL	----
FOSA	Auto	5.250	305842	1182568	16	1.0274	ng/mL	----
FOSA-13C	Auto	5.250	1182568	4411598	1	3.5204	ng/mL	----
FOSA-13C_IS	Auto	5.250	1182568	1182568	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.045	52261	361054	21	1.0265	ng/mL	----
N-MeFOSAA-d3	Auto	5.044	361054	4411598	1	3.7243	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.044	361054	361054	21	5.0000	ng/mL	----
N-EtFOSAA	M	5.144	50832	416576	22	1.0066	ng/mL	----
N-EtFOSAA-d5	Auto	5.141	416576	4411598	1	4.7557	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.141	416576	416576	22	5.0000	ng/mL	----
4_2-FTS_1	Auto	4.188	94521	292978	23	1.2974	ng/mL	----
4_2-FTS-13C	Auto	4.188	292978	4411598	1	3.6072	ng/mL	----
4_2-FTS-13C_IS	Auto	4.188	292978	292978	23	5.0000	ng/mL	----
6_2-FTS_1	M	4.566	101690	369912	24	1.1305	ng/mL	----
6_2-FTS-13C	Auto	4.567	369912	4411598	1	4.8316	ng/mL	----
6_2-FTS-13C_IS	Auto	4.567	369912	369912	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.938	28106	157295	25	1.0208	ng/mL	----
8_2-FTS-13C	Auto	4.939	157295	4411598	1	3.6046	ng/mL	----
8_2-FTS-13C_IS	Auto	4.939	157295	157295	25	5.0000	ng/mL	----
HPFO_DA	Auto	4.287	336858	1916997	26	0.9433	ng/mL	----
HFPO_DA-13C	Auto	4.285	1916997	4411598	1	4.3276	ng/mL	----
HFPO_DA-13C_IS	Auto	4.285	1916997	1916997	26	5.0000	ng/mL	----

Insight Report

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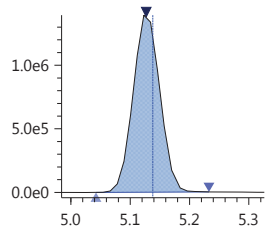
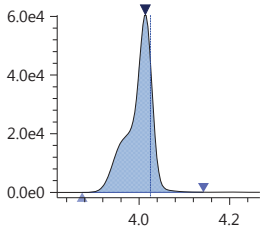
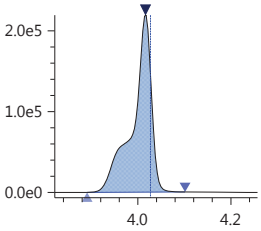
13C7-PFUnDA_IS
Conc 5.0000
RT 5.127 Area 4411598
ISTD 570.00>525.00 (-) 1.39e6



PFBS_1
Conc 1.0921
RT 4.014 Area 191362
Q 299.00>80.00 (-) 6.04e4



PFBS-13C
Conc 2.8759
RT 4.016 Area 607577
Q 301.80>80.00 (-) 2.19e5



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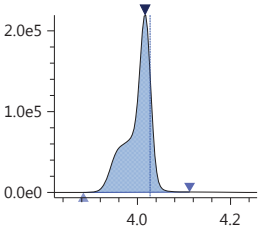

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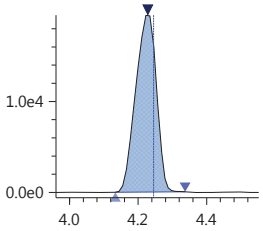
RT 4.228 Area 82472
Q 349.00>99.00 (-) 1.95e4



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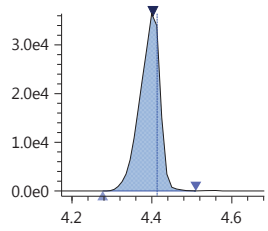

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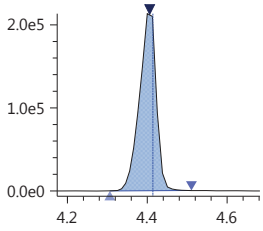

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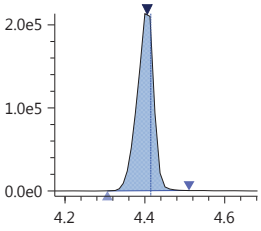

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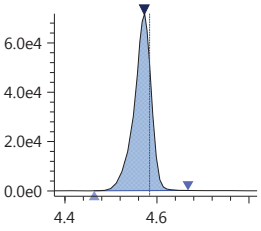

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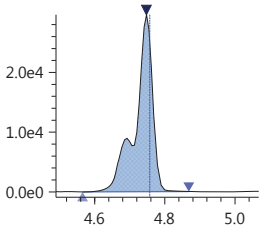

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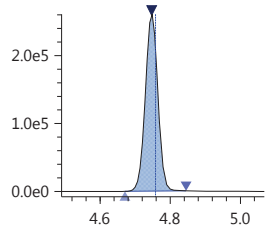

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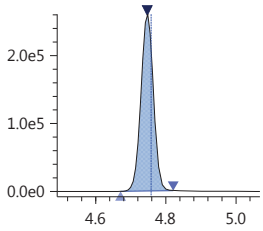

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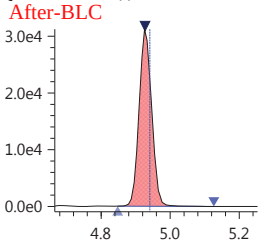

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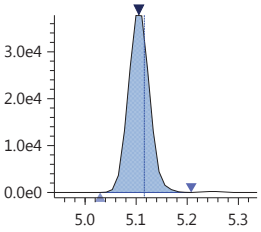

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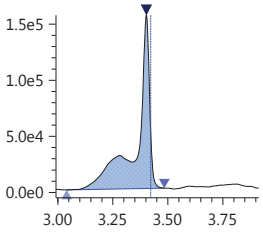

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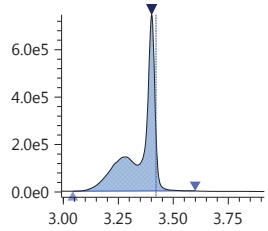

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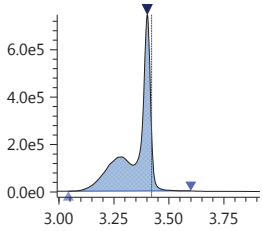

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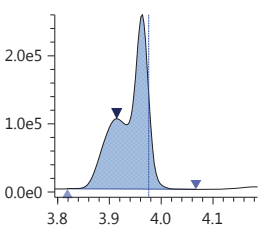

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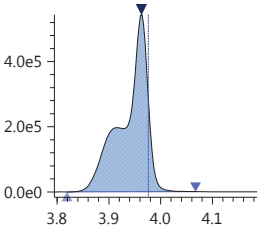

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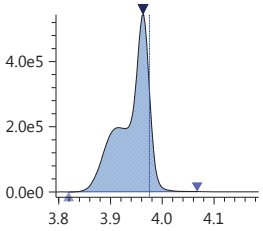

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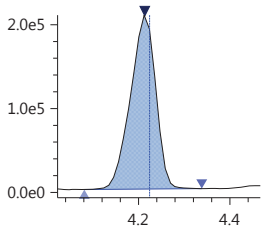

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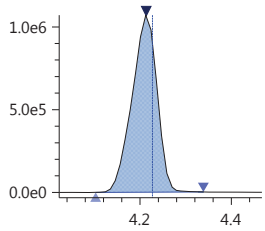

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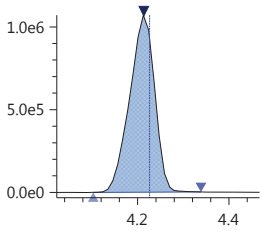

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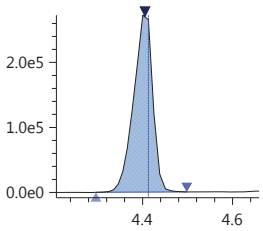

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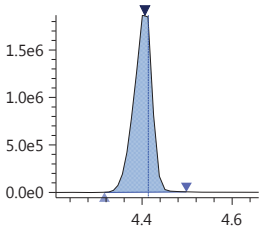

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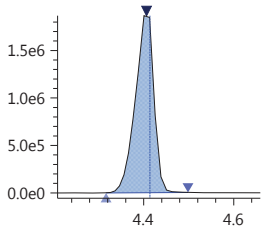

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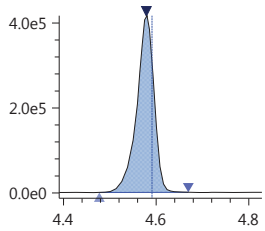

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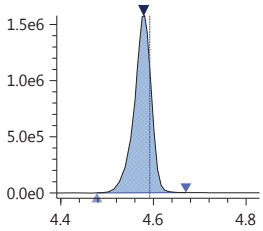

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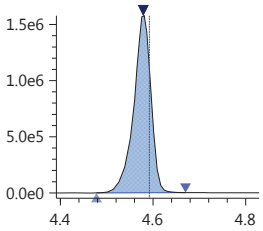

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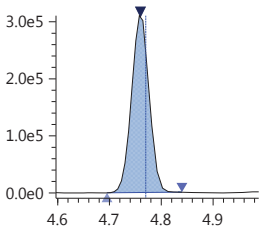

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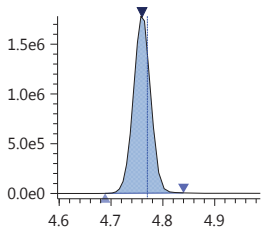

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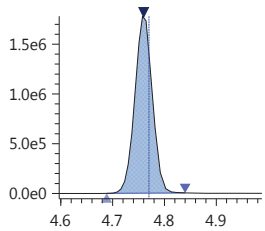

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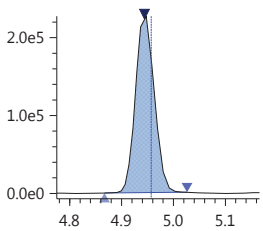

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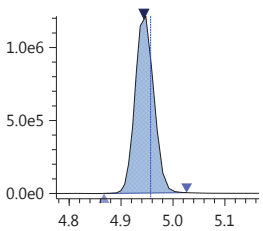

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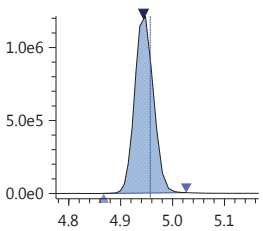

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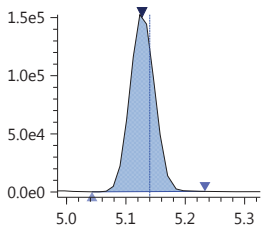

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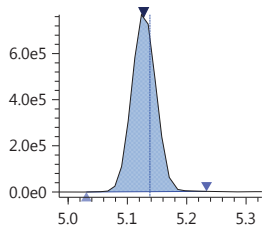

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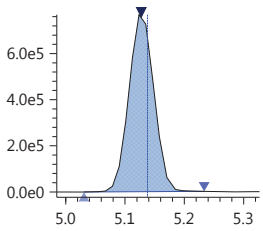

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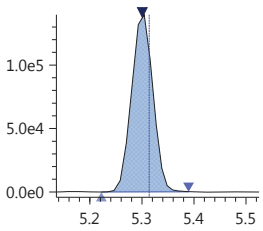

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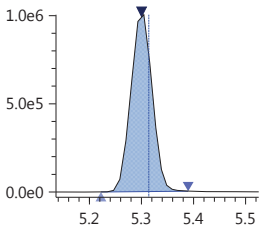

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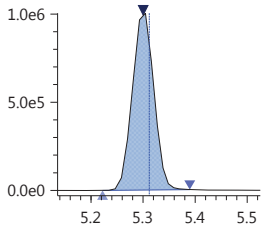

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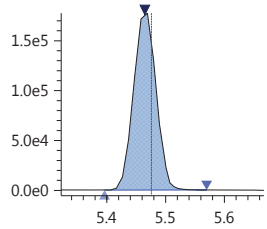

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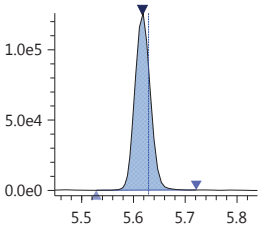

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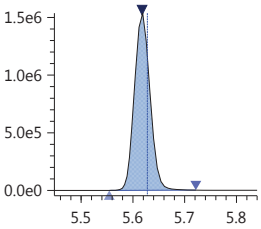

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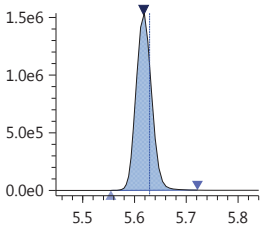

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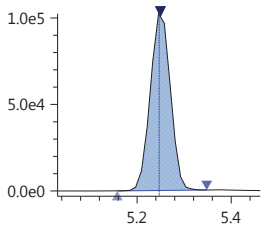
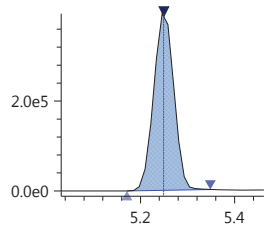
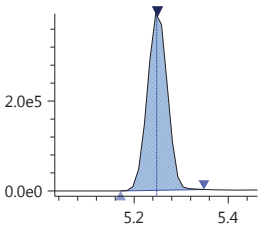


FOSA-13C
Conc 3.5204
RT 5.250 Area 1182568
Q 506.00>78.05 (-) 3.95e5



FOSA-13C_IS
Conc 5.0000
RT 5.250 Area 1182568
ISTD 506.00>78.05 (-) 3.95e5



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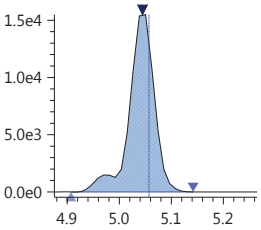
Conc 1.0265
RT 5.045 Area 52261
Q 570.20>419.00 (-) 1.55e4



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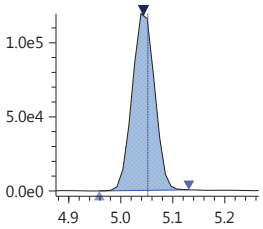
RT 5.044 Area 361054
Q 572.80>419.05 (-) 1.20e5



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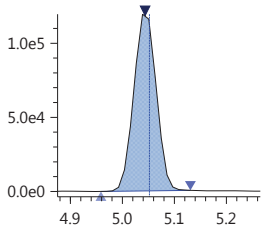

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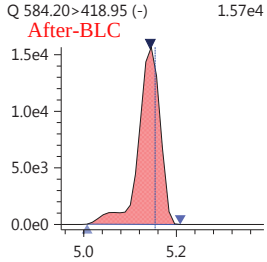

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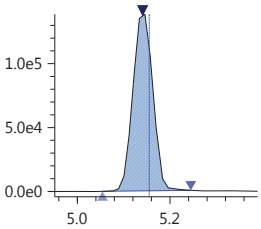
Conc 4.7557
RT 5.141 Area 416576
Q 588.80>419.00 (-) 1.39e5



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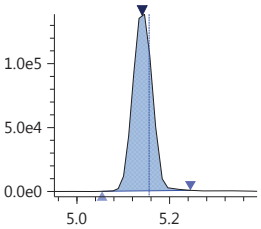
RT 5.141 Area 416576
ISTD 588.80>419.00 (-) 1.39e5



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Conc 1.2974
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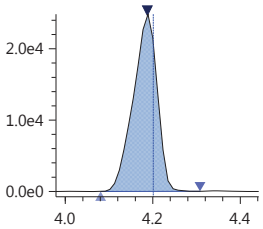
Q 327.00>307.05 (-) 2.49e4



4_2-FTS-13C
Conc 3.6072
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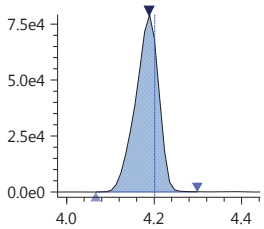
Q 328.80>309.05 (-) 7.92e4



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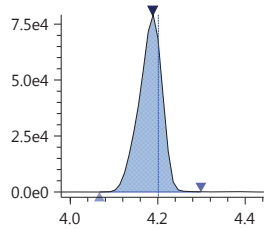

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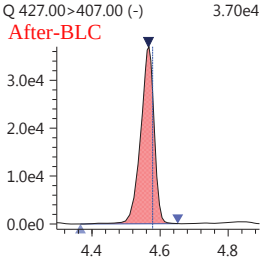

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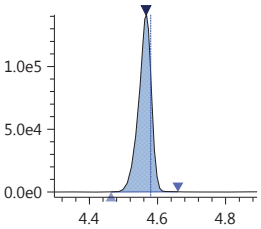
Q 428.90>409.00 (-) 1.41e5



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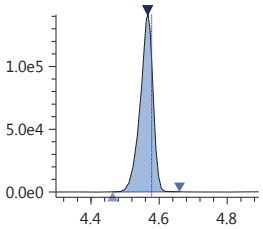
ISTD 428.90>409.00 (-) 1.41e5



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8_2-FTS_1

Conc 1.0208
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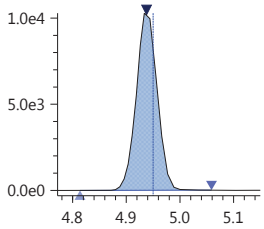
Q 527.10>506.90 (-) 1.03e4



8_2-FTS-13C

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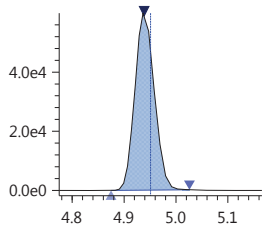
Q 528.80>509.00 (-) 6.00e4



8_2-FTS-13C_IS

Conc 5.0000
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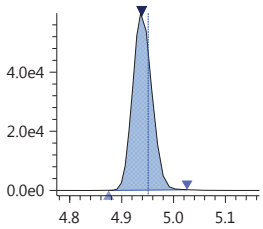

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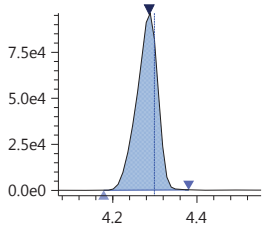
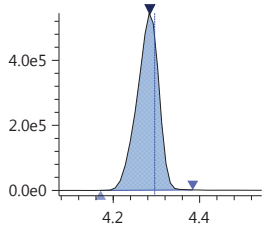
RT 4.287 Area 336858
Q 329.00>169.00 (-) 9.62e4



HFPO_DA-13C

Conc 4.3276
RT 4.285 Area 1916997
Q 332.00>286.80 (-) 5.45e5



HFPO_DA-13C_IS

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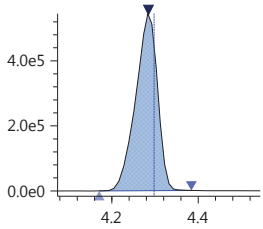

Insight Report

Printed at 8/9/2019 4:33:51 PM

190807_144

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Date acquired: 8/8/2019 4:28:01 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_144.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 4

13C7-PFUnDA_IS
Conc 5.0000
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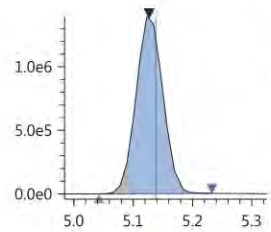
ISTD 570.00>525.00 (-) 1.39e6



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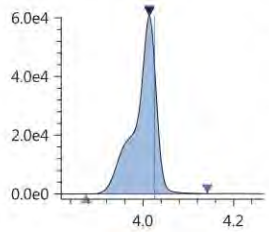
Q 299.00>80.00 (-) 6.04e4



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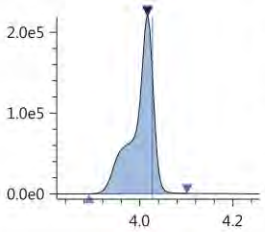

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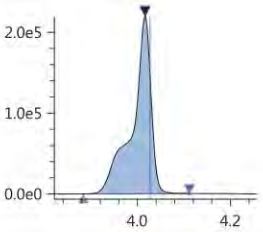

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Conc 1.1184
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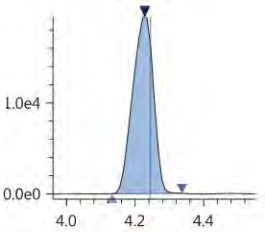
Q 349.00>99.00 (-) 1.95e4



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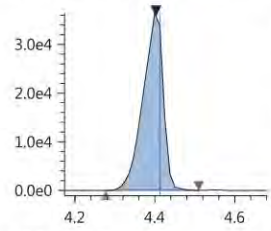

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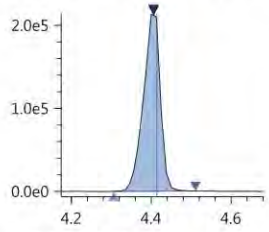
Q 402.70>84.05 (-) 2.13e5



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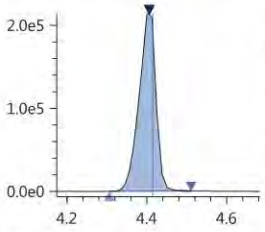

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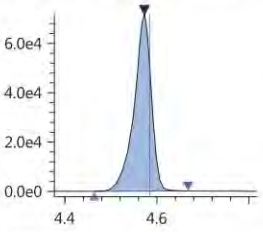

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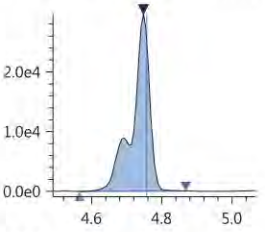

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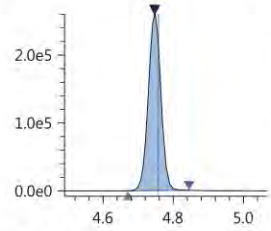
RT 4.747 Area 648528
Q 502.80>80.05 (-) 2.61e5



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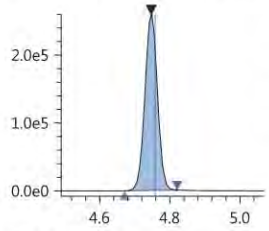

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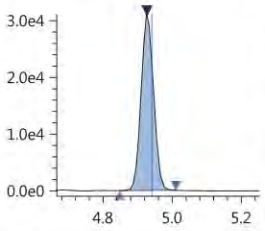
Q 549.00>99.00 (-) 3.12e4



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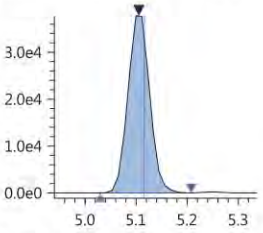
RT 5.105 Area 112507
Q 599.00>79.90 (-) 3.78e4



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Conc 1.0016
RT 3.402 Area 626479
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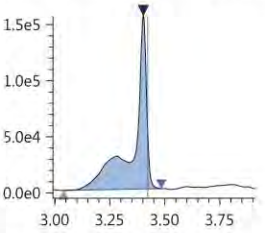

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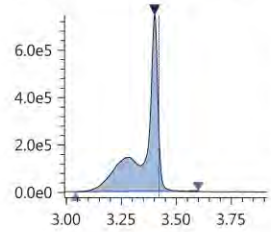
Q 216.90>172.15 (-) 7.47e5



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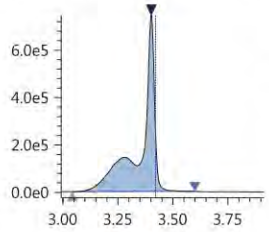

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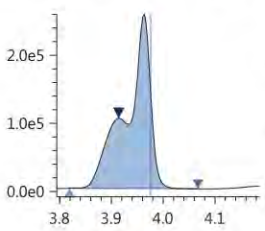

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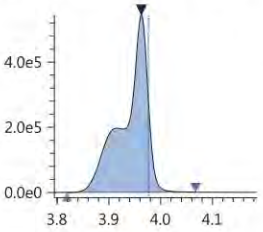

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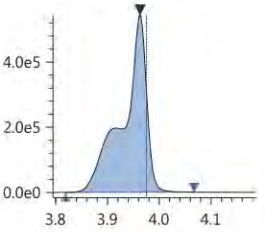

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PFHxA
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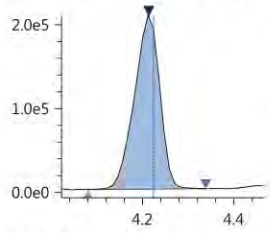
Q 313.00>269.00 (-) 2.11e5



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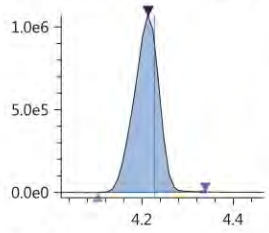

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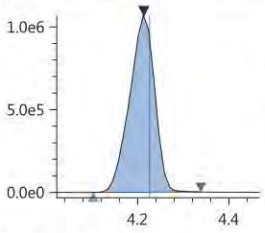

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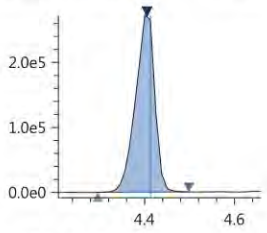
Q 362.90>319.00 (-) 2.73e5



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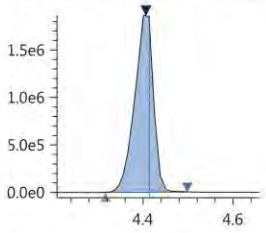
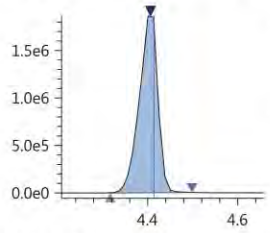
Conc 5.2134
RT 4.406 Area 5418436
Q 366.90>322.10 (-) 1.87e6



PFHpA-13C_IS
Conc 5.0000
RT 4.406 Area 5418436
ISTD 366.90>322.10 (-) 1.87e6



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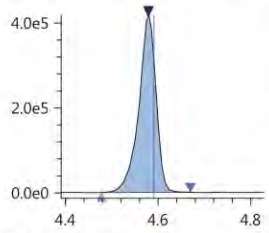
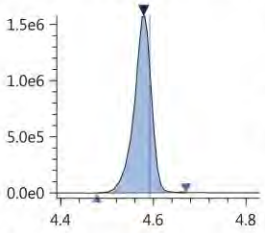
Conc 1.1732
RT 4.579 Area 1078542
Q 413.00>369.00 (-) 4.17e5



PFOA-13C
Conc 4.3411
RT 4.579 Area 4086067
Q 416.80>372.05 (-) 1.58e6



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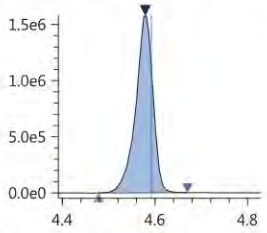
Conc 5.0000
RT 4.579 Area 4086067
ISTD 416.80>372.05 (-) 1.58e6



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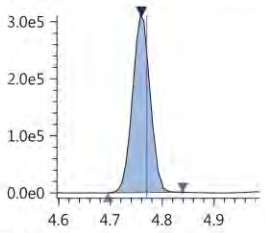
RT 4.760 Area 739948
Q 463.00>418.90 (-) 3.11e5



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RT 4.760 Area 4220286
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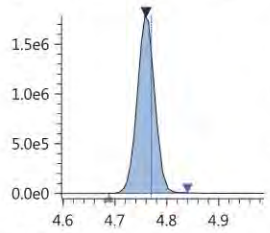

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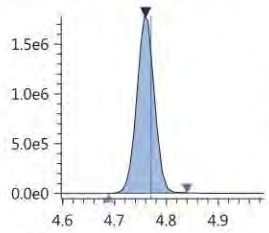

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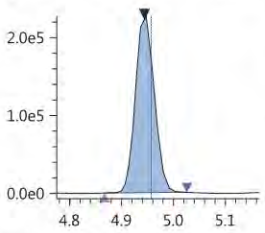
Conc 0.9197
RT 4.944 Area 575985
Q 513.00>468.80 (-) 2.28e5



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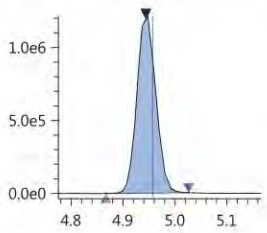

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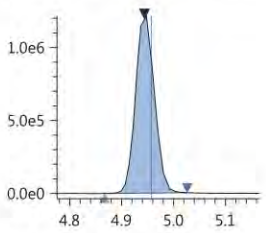

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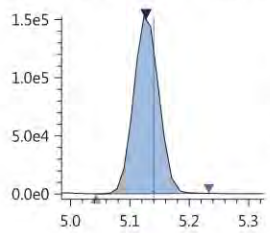
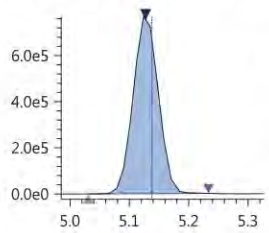
Conc 1.1073
RT 5.127 Area 455274
Q 563.00>518.90 (-) 1.53e5



PFUnA-13C
Conc 3.3369
RT 5.127 Area 2273488
Q 564.80>519.95 (-) 7.68e5



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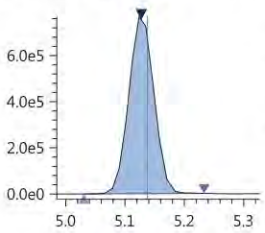

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Conc 1.1112
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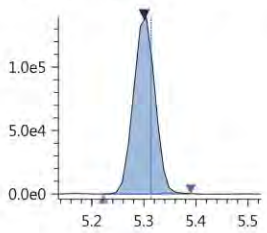
Q 613.05>569.00 (-) 1.40e5



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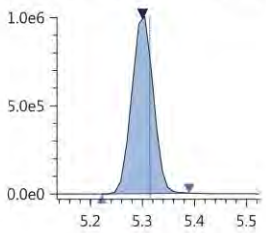
Q 614.80>569.95 (-) 1.00e6



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PFDoA-13C_IS
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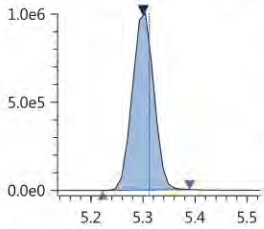
RT 5.300 Area 2900981
ISTD 614.80>569.95 (-) 1.00e6



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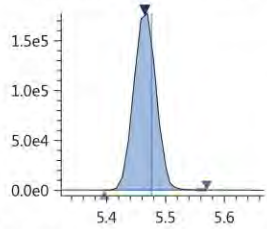
RT 5.465 Area 477320
Q 663.00>618.90 (-) 1.78e5



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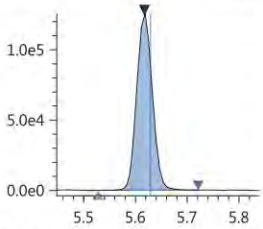
RT 5.617 Area 264216
Q 713.40>669.00 (-) 1.26e5



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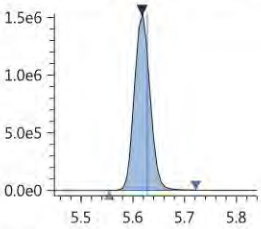
RT 5.618 Area 3234853
Q 714.70>669.90 (-) 1.54e6



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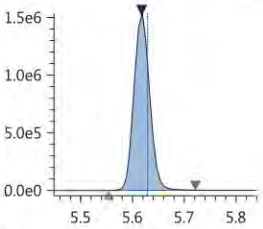
ISTD 714.70>669.90 (-) 1.54e6



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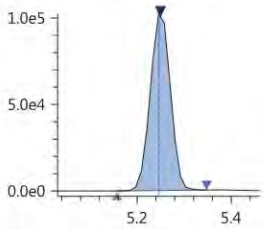
Conc 1.0274
RT 5.250 Area 305842
Q 498.20>78.00 (-) 1.03e5



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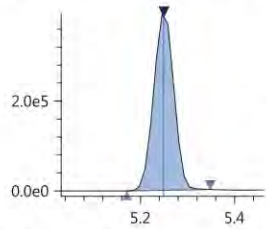
Conc 3.5204
RT 5.250 Area 1182568
Q 506.00>78.05 (-) 3.95e5



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Conc 5.0000
RT 5.250 Area 1182568
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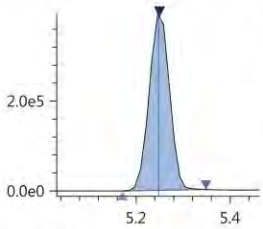

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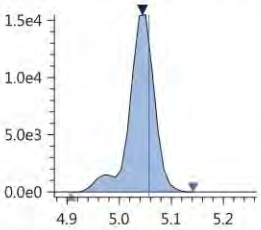
Q 570.20>419.00 (-) 1.55e4



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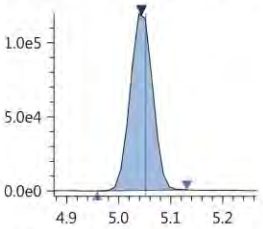
Q 572.80>419.05 (-) 1.20e5



N-MeFOSAA-d3_IS
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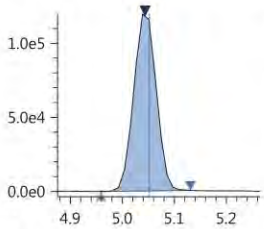
ISTD 572.80>419.05 (-) 1.20e5



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Conc 0.9168
RT 5.144 Area 45903
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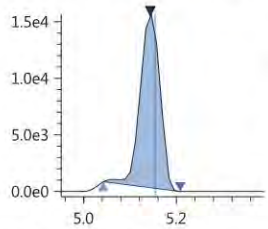
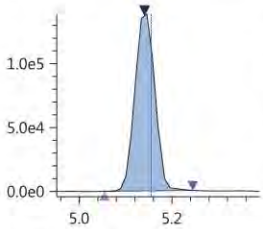


N-EtFOSAA-d5
Conc 4.7557
RT 5.141 Area 416576
Q 588.80>419.00 (-) 1.39e5



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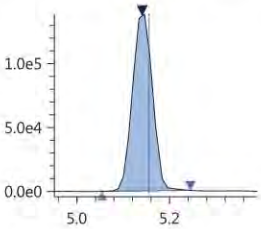
ISTD 588.80>419.00 (-) 1.39e5



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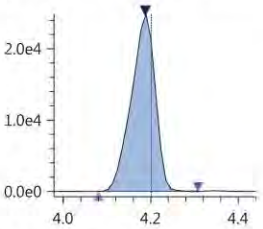
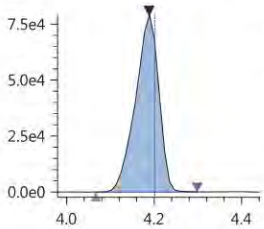
Conc 1.2974
RT 4.188 Area 94521
Q 327.00>307.05 (-) 2.49e4



4_2-FTS-13C
Conc 3.6072
RT 4.188 Area 292978
Q 328.80>309.05 (-) 7.92e4



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Conc 5.0000
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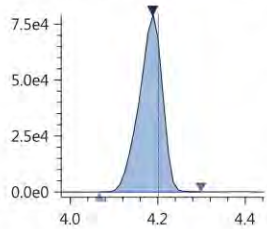
ISTD 328.80>309.05 (-) 7.92e4



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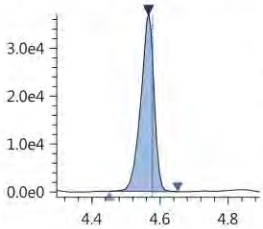
Conc 1.1157
RT 4.566 Area 100356
Q 427.00>407.00 (-) 3.70e4



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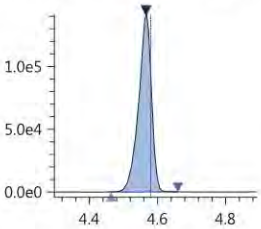
Conc 4.8316
RT 4.567 Area 369912
Q 428.90>409.00 (-) 1.41e5



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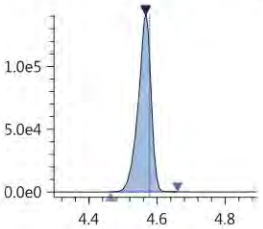

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8_2-FTS_1

Conc 1.0208
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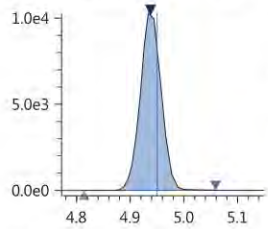
Q 527.10>506.90 (-) 1.03e4



8_2-FTS-13C

Conc 3.6046
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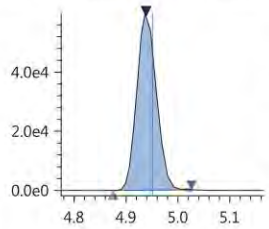
Q 528.80>509.00 (-) 6.00e4



8_2-FTS-13C_IS

Conc 5.0000
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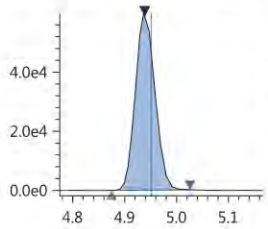
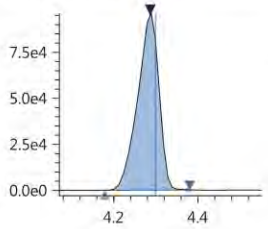
ISTD 528.80>509.00 (-) 6.00e4



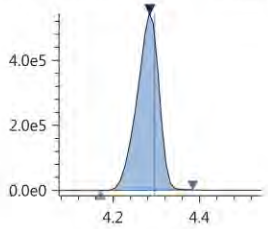
HPFO_DA

Conc 0.9433
RT 4.287 Area 336858
Q 329.00>169.00 (-) 9.62e4



HFPO_DA-13C

Conc 4.3276
RT 4.285 Area 1916997
Q 332.00>286.80 (-) 5.45e5



HFPO_DA-13C_IS

Conc 5.0000
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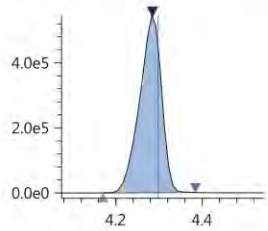

1st EJD 08/13/19
2nd 08/13/19

Validation Report

Data File: J:\LCMS06\Data\190812_b1\190812_010
Lab ID: KQ1911251-05
RunType: LCS
Matrix: Water

Date Acquired: 8/12/19 20:59
Batch ID: 646922
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	Perfluoroheptane sulfonic acid (PFHpS)	138	70	130	High bias, samples ND
	Perfluorononane sulfonic acid (PFNS)	172	70	130	High bias, samples ND
	Perfluorodecane sulfonic acid (PFDS)	168	70	130	High bias, samples ND
	13C2-PFDA	144	70	130	Narrate native ok
	13C2-PFDoDA	145	70	130	Narrate native ok
	D3-MeFOSAA	140	70	130	Narrate native ok
	D5-EtFOSAA	131	70	130	Narrate native ok
	13C2-8:2 FTS	185	70	130	Narrate native ok

Primary Review: _____

Secondary Review: _____

1st ESD 08/13/19
2nd 08/13/19

Quantitation Report

Data File:	J:\LCMS06\Data\190812_b1\190812_010	**Instrument:**	K-LCMS-06
Acqu Date:	8/12/19 20:59	**Vial:**	4
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1911251-05	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/29/19	**Receive Date:**	7/29/19

Analysis Lot:	646922	**Prep Lot:**	342310	**Report Group:**	KQ1911251
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	8/12/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	20091

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.139	-0.01	6161415	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.027	-0.01	709175	2.4035	48	20 - 109	Y
18O2-PFHxS	4.413	-0.01	731229	4.3303	87	26 - 122	Y
13C4-PFOS	4.757	-0.01	941376	4.6796	94	25 - 121	Y
13C4-PFBA	3.410	-0.02	4301296	4.2957	86	27 - 124	Y
13C5-PFPeA	3.926	-0.06	2021554	3.2089	64	27 - 138	Y
13C2-PFHxA	4.224	-0.01	6177101	4.9874	100	28 - 132	Y
13C4-PFHpA	4.415	-0.01	6343981	4.3704	87	19 - 139	Y
13C4-PFOA	4.590	-0.01	6740150	5.1272	103	22 - 130	Y
13C5-PFNA	4.769	-0.01	5337304	5.1107	102	20 - 127	Y
13C2-PFDA	4.955	-0.01	4856701	5.5319	111	24 - 125	Y
13C2-PFUnDA	5.139	-0.01	4162480	4.3745	87	22 - 125	Y
13C2-PFDoDA	5.312	-0.01	5073506	4.9501	99	19 - 122	Y
13C2-PFTeDA	5.628	-0.01	4628629	4.0990	82	13 - 124	Y
13C8-FOSA	5.246	0.00	1162586	2.4780	50	18 - 109	Y
D3-MeFOSA	5.626	-0.01	490965	2.6672	53	15 - 153	Y
D5-EtFOSA	5.761	-0.01	773955	2.8233	56	25 - 107	Y
D7-MeFOSE	5.595	-0.01	696945	3.0821	62	24 - 112	Y
D9-EtFOSE	5.722	-0.01	629224	2.7622	55	19 - 109	Y
D3-MeFOSAA	5.056	-0.01	620706	4.5843	92	9 - 123	Y
D5-EtFOSAA	5.155	-0.01	607086	4.9624	99	12 - 126	Y
13C2-4:2 FTS	4.200	-0.01	538558	4.7477	95	10 - 197	Y
13C2-6:2 FTS	4.576	-0.01	523665	4.8973	98	10 - 226	Y
13C2-8:2 FTS	4.951	-0.01	298272	4.8940	98	10 - 202	Y
13C3-HFPO-DA	4.296	-0.01	1975217	3.1927	64	22 - 135	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 EJD 08/13/19

2nd 08/13/19

Data File:	J:\LCMS06\Data\190812_b1\190812_010	**Instrument:**	K-LCMS-06
Acqu Date:	8/12/19 20:59	**Vial:**	4
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1911251-05	**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)	4.025	-0.01	225057	1.0978	35.1		Y
Perfluoropentane sulfonic acid (PFPeS)	4.238	-0.02	107662	1.2479	39.9		Y
Perfluorohexane sulfonic acid (PFHxS)	4.411	-0.01	174672	0.8603	27.5		Y
Perfluoroheptane sulfonic acid (PFHpS)	4.581	-0.01	211056	0.9746	31.2		Y
Perfluorooctane sulfonic acid (PFOS)	4.757	-0.01	134132	0.8158	26.1		Y
Perfluorononane sulfonic acid (PFNS)	4.939	-0.01	111077	0.9929	31.8		Y
Perfluorodecane sulfonic acid (PFDS)	5.117	-0.01	161475	1.0509	33.6		Y
Perfluorobutanoic acid (PFBA)	3.412	-0.02	893249	1.0145	32.5		Y
Perfluoropentanoic acid (PFPeA)	3.926	-0.06	1130668	1.1983	38.3		Y
Perfluorohexanoic acid (PFHxA)	4.224	-0.01	1200423	0.9163	29.3		Y
Perfluoroheptanoic acid (PFHpA)	4.415	-0.01	1140605	1.0483	33.5		Y
Perfluorooctanoic acid (PFOA)	4.590	-0.01	1508741	0.9919	31.7		Y
Perfluorononanoic acid (PFNA)	4.769	-0.01	916263	0.9428	30.2		Y
Perfluorodecanoic acid (PFDA)	4.955	-0.01	853232	0.8666	27.7		Y
Perfluoroundecanoic acid (PFUnDA)	5.139	-0.01	704116	0.9307	29.8		Y
Perfluorododecanoic acid (PFDoDA)	5.312	-0.01	637247	1.0039	32.1		Y
Perfluorotridecanoic acid (PFTrDA)	5.476	-0.01	845971	1.2714	40.7		Y
Perfluorotetradecanoic acid (PFTeDA)	5.628	-0.01	399306	1.0973	35.1		Y
Perfluorooctane sulfonamide (FOSA)	5.247	0.00	306123	1.0460	33.5		Y
N-Methyl perfluorooctane sulfonamide (MeFOSA)	5.629	-0.01	186103	1.2032	38.5		Y
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	5.766	-0.01	33608	1.1332	36.3		Y
N-Methyl perfluorooctane sulfonamidoethanol	5.603	-0.01	172175	0.9841	31.5		Y
N-Ethyl perfluorooctane sulfonamidoethanol	5.733	-0.01	182935	1.1888	38.0		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.057	-0.01	92718	1.0590	33.9		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.157	-0.01	58954	0.8176	26.2		Y
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	4.200	-0.01	154016	1.1500	36.8		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.577	-0.01	151160	1.1871	38.0		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.950	-0.01	62765	1.2022	38.5		Y
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	5.315	-0.01	41592	0.8820	28.2		Y
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	4.299	-0.01	447630	1.2165	38.9		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

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190812_010

Sample ID: KQ1911251-05
Date acquired: 8/12/2019 8:59:45 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b1\190812_010.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.139	6161415	6161415	1	5.0000	ng/mL	----
PFBS_1	Auto	4.025	225057	711664	2	1.0978	ng/mL	----
PFBS-13C	Auto	4.027	709175	6161415	1	2.4035	ng/mL	----
PFBS-13C_IS	Auto	4.027	711664	711664	2	5.0000	ng/mL	----
PFPeS	M	4.238	107662	711664	2	1.2479	ng/mL	----
PFHxS_1	Auto	4.411	174672	731229	3	0.8603	ng/mL	----
PFHxS-18O	Auto	4.413	731229	6161415	1	4.3303	ng/mL	----
PFHxS-18O_IS	Auto	4.413	731229	731229	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.581	211056	731229	3	0.9746	ng/mL	----
PFOS_1	Auto	4.757	134132	937704	4	0.8158	ng/mL	----
PFOS-13C	Auto	4.757	941376	6161415	1	4.6796	ng/mL	----
PFOS-13C_IS	Auto	4.757	937704	937704	4	5.0000	ng/mL	----
PFNS	M	4.939	111077	937704	4	0.9929	ng/mL	----
PFDS_1	Auto	5.117	161475	937704	4	1.0509	ng/mL	----
PFBA	Auto	3.412	893249	4301296	5	1.0145	ng/mL	----
PFBA-13C	Auto	3.410	4301296	6161415	1	4.2957	ng/mL	----
PFBA-13C_IS	Auto	3.410	4301296	4301296	5	5.0000	ng/mL	----
PFPeA	Auto	3.926	1130668	2021554	6	1.1983	ng/mL	----
PFPeA-13C	Auto	3.926	2021554	6161415	1	3.2089	ng/mL	----
PFPeA-13C_IS	Auto	3.926	2021554	2021554	6	5.0000	ng/mL	----
PFHxA	Auto	4.224	1200423	6177101	7	0.9163	ng/mL	----
PFHxA-13C	Auto	4.224	6177101	6161415	1	4.9874	ng/mL	----
PFHxA-13C_IS	Auto	4.224	6177101	6177101	7	5.0000	ng/mL	----
PFHpA	Auto	4.415	1140605	6343981	8	1.0483	ng/mL	----
PFHpA-13C	Auto	4.415	6343981	6161415	1	4.3704	ng/mL	----
PFHpA-13C_IS	Auto	4.415	6343981	6343981	8	5.0000	ng/mL	----
PFOA	Auto	4.590	1508741	6740150	9	0.9919	ng/mL	----
PFOA-13C	Auto	4.590	6740150	6161415	1	5.1272	ng/mL	----
PFOA-13C_IS	Auto	4.590	6740150	6740150	9	5.0000	ng/mL	----
PFNA	M	4.769	916263	5337304	10	0.9428	ng/mL	----
PFNA-13C	Auto	4.769	5337304	6161415	1	5.1107	ng/mL	----
PFNA-13C_IS	Auto	4.769	5337304	5337304	10	5.0000	ng/mL	----
PFDA	Auto	4.955	853232	4856701	11	0.8666	ng/mL	----
PFDA-13C	Auto	4.955	4856701	6161415	1	5.5319	ng/mL	----
PFDA-13C_IS	Auto	4.955	4856701	4856701	11	5.0000	ng/mL	----
PFUnA	Auto	5.139	704116	4162480	12	0.9307	ng/mL	----
PFUnA-13C	Auto	5.139	4162480	6161415	1	4.3745	ng/mL	----
PFUnA-13C_IS	Auto	5.139	4162480	4162480	12	5.0000	ng/mL	----
PFDoA	Auto	5.312	637247	5073506	13	1.0039	ng/mL	----
PFDoA-13C	Auto	5.312	5073506	6161415	1	4.9501	ng/mL	----
PFDoA-13C_IS	Auto	5.312	5073506	5073506	13	5.0000	ng/mL	----
PFTrDA	Auto	5.476	845971	4628629	14	1.2714	ng/mL	----
PFTeDA	Auto	5.628	399306	4628629	14	1.0973	ng/mL	----
PFTeDA-13C	Auto	5.628	4628629	6161415	1	4.0990	ng/mL	----
PFTeDA-13C_IS	Auto	5.628	4628629	4628629	14	5.0000	ng/mL	----
FOSA	Auto	5.247	306123	1162586	16	1.0460	ng/mL	----
FOSA-13C	Auto	5.246	1162586	6161415	1	2.4780	ng/mL	----
FOSA-13C_IS	Auto	5.246	1162586	1162586	16	5.0000	ng/mL	----
N-MeFOSA	Auto	5.629	186103	490965	17	1.2032	ng/mL	----
N-MeFOSA-d3	Auto	5.626	490965	6161415	1	2.6672	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.626	490965	490965	17	5.0000	ng/mL	----
N-EtFOSA	M	5.766	33608	773955	18	1.1332	ng/mL	----
N-EtFOSA-d9	Auto	5.761	773955	6161415	1	2.8233	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.761	773955	773955	18	5.0000	ng/mL	----
N-MeFOSE	Auto	5.603	172175	696945	19	0.9841	ng/mL	----
N-MeFOSE-d7	Auto	5.595	696945	6161415	1	3.0821	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.595	696945	696945	19	5.0000	ng/mL	----
N-EtFOSE	Auto	5.733	182935	629224	20	1.1888	ng/mL	----
N-EtFOSE-d9	Auto	5.722	629224	6161415	1	2.7622	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.722	629224	629224	20	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.057	92718	620706	21	1.0590	ng/mL	----
N-MeFOSAA-d3	Auto	5.056	620706	6161415	1	4.5843	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.056	620706	620706	21	5.0000	ng/mL	----
N-EtFOSAA	M	5.157	58954	607086	22	0.8176	ng/mL	----
N-EtFOSAA-d5	Auto	5.155	607086	6161415	1	4.9624	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.155	607086	607086	22	5.0000	ng/mL	----
4_2-FTS_1	Auto	4.200	154016	538558	23	1.1500	ng/mL	----
4_2-FTS-13C	Auto	4.200	538558	6161415	1	4.7477	ng/mL	----

Insight Report

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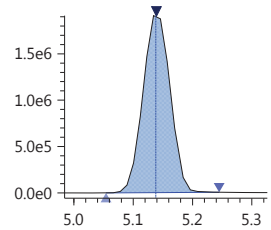
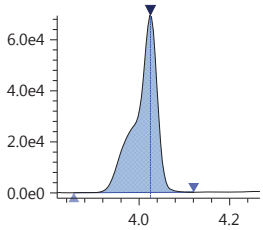
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.200	538558	538558	23	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.577	151160	523665	24	1.1871	ng/mL	----
6_2-FTS-13C	Auto	4.576	523665	6161415	1	4.8973	ng/mL	----
6_2-FTS-13C_IS	Auto	4.576	523665	523665	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.950	62765	298272	25	1.2022	ng/mL	----
8_2-FTS-13C	Auto	4.951	298272	6161415	1	4.8940	ng/mL	----
8_2-FTS-13C_IS	Auto	4.951	298272	298272	25	5.0000	ng/mL	----
10_2-FtS_1	Auto	5.315	41592	298272	25	0.8820	ng/mL	----
HPFO_DA	Auto	4.299	447630	1975217	26	1.2165	ng/mL	----
HFPO_DA-13C	Auto	4.296	1975217	6161415	1	3.1927	ng/mL	----
HFPO_DA-13C_IS	Auto	4.296	1975217	1975217	26	5.0000	ng/mL	----

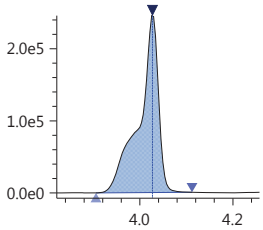
13C7-PFUnDA_IS
Conc 5.0000
RT 5.139 Area 6161415
ISTD 570.00>525.00 (-) 1.91e6



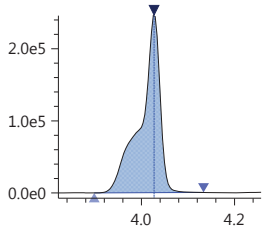
PFBS_1
Conc 1.0978
RT 4.025 Area 225057
Q 299.00>80.00 (-) 6.94e4



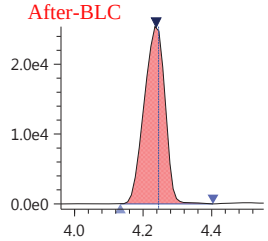
PFBS-13C
Conc 2.4035
RT 4.027 Area 709175
Q 301.80>80.00 (-) 2.46e5



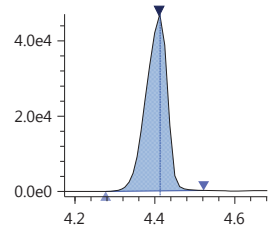
PFBS-13C_IS
Conc 5.0000
RT 4.027 Area 711664
ISTD 301.80>80.00 (-) 2.46e5



PFPeS
Conc 1.2479
RT 4.238 Area 107662
Q 349.00>99.00 (-) 2.54e4



PFHxS_1
Conc 0.8603
RT 4.411 Area 174672
Q 399.00>80.00 (-) 4.71e4



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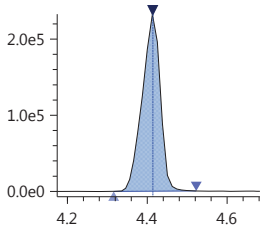
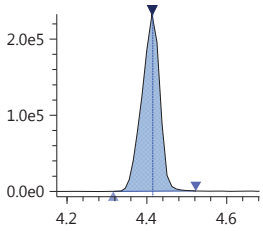
Conc 4.3303
RT 4.413 Area 731229
Q 402.70>84.05 (-) 2.33e5



PFHxS-18O_IS
Conc 5.0000
RT 4.413 Area 731229
ISTD 402.70>84.05 (-) 2.33e5



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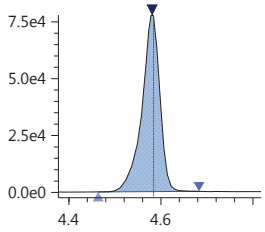
Conc 0.9746
RT 4.581 Area 211056
Q 449.00>80.15 (-) 7.79e4



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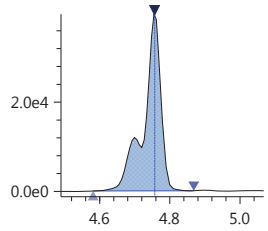
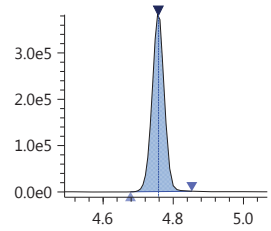
Q 499.00>80.00 (-) 3.97e4



PFOS-13C
Conc 4.6796
RT 4.757 Area 941376
Q 502.80>80.05 (-) 3.83e5



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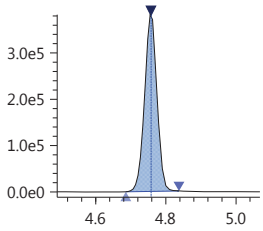

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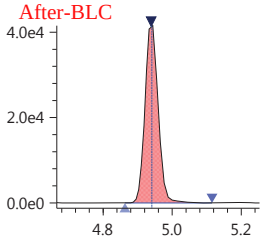

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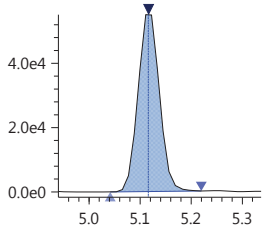
Q 599.00>79.90 (-) 5.51e4



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RT 3.412 Area 893249
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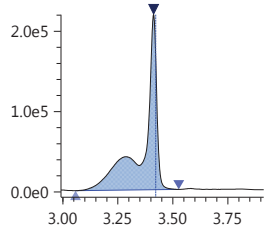

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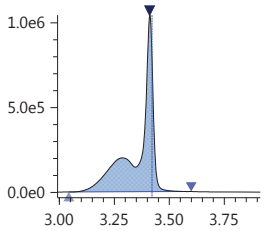

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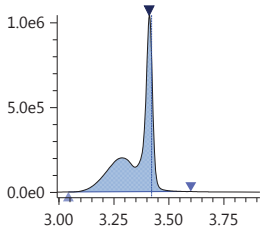

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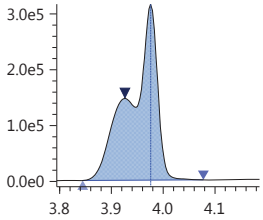
Q 263.05>219.10 (-) 3.18e5



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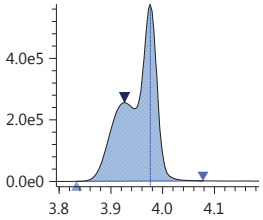

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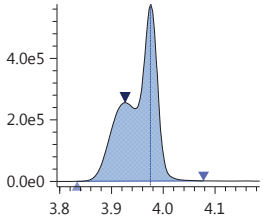

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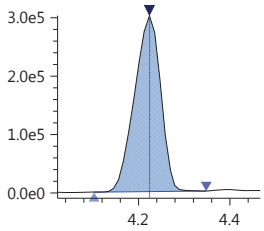

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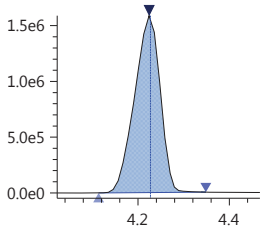

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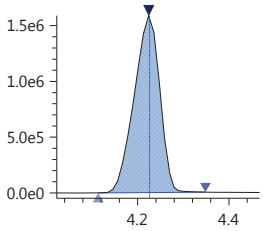

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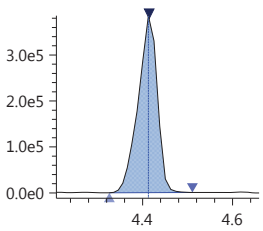

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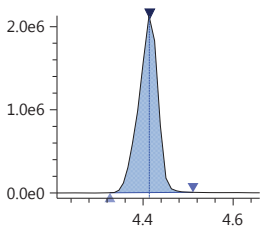

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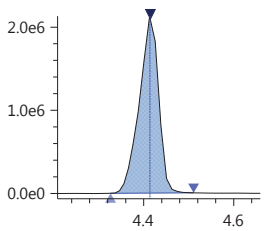

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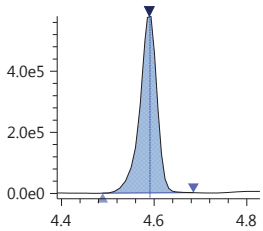

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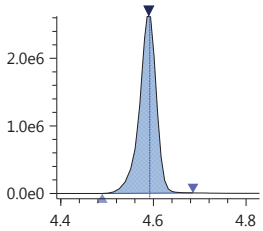

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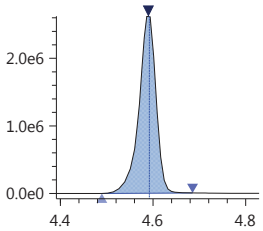

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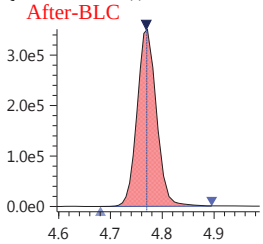

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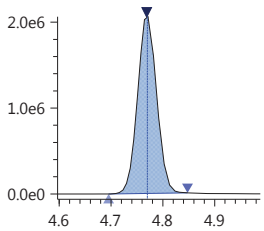
Q 467.80>423.00 (-) 2.06e6



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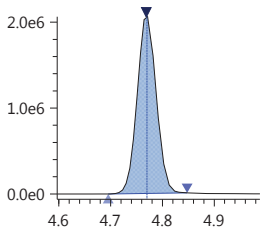

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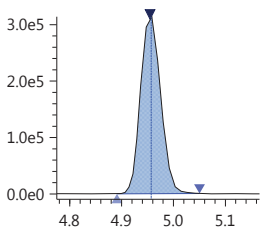

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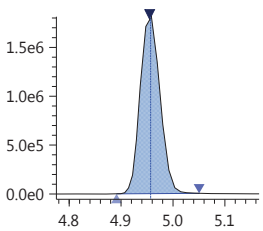

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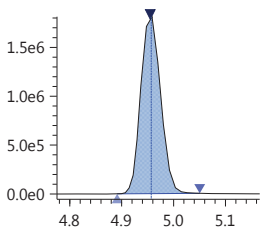

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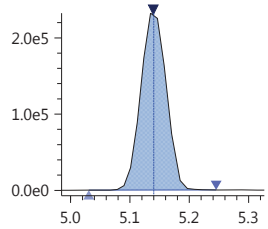

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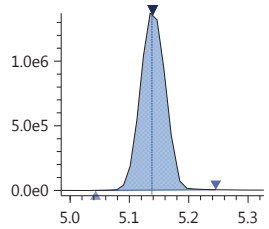

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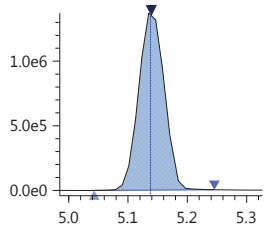

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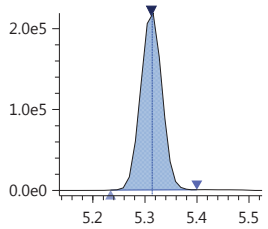

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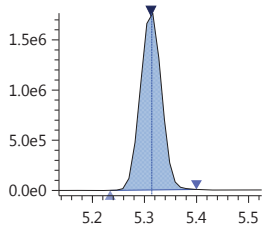

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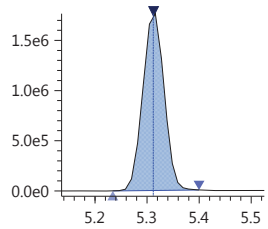

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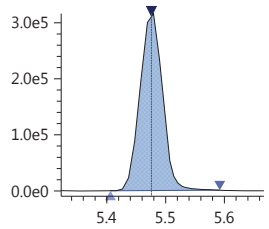

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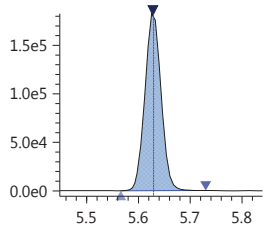

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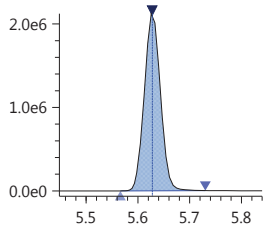
Q 714.70>669.90 (-) 2.12e6



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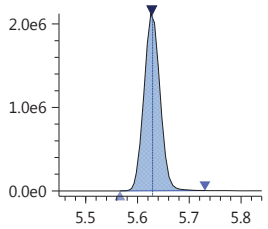

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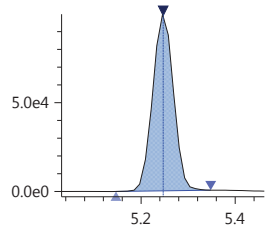

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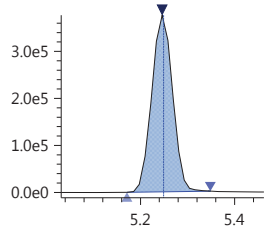

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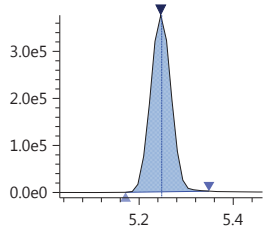

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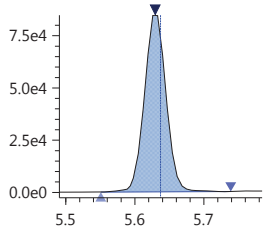

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Conc 2.6672
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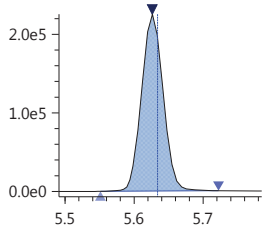
Q 514.90>168.90 (-) 2.26e5



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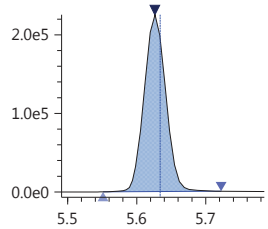

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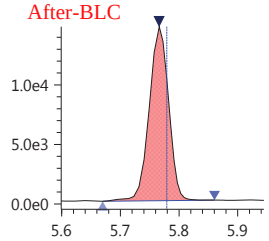
After-BLC



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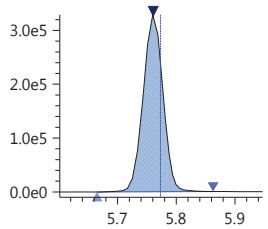

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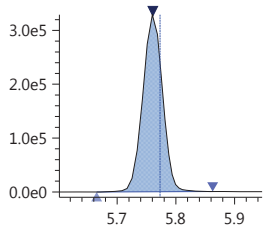

N-MeFOSE
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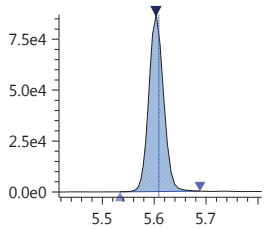
RT 5.603 Area 172175
Q 616.00>59.00 (-) 8.70e4



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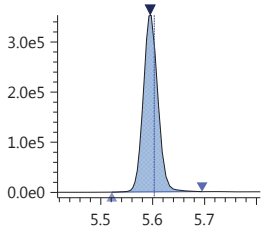
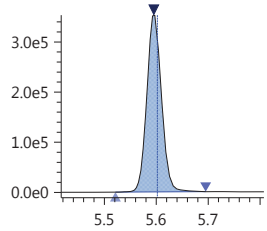
N-MeFOSE-d7
Conc 3.0821
RT 5.595 Area 696945
Q 622.70>59.10 (-) 3.53e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.595 Area 696945
ISTD 622.70>59.10 (-) 3.53e5



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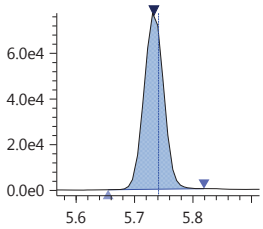
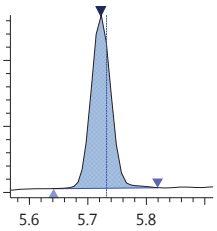
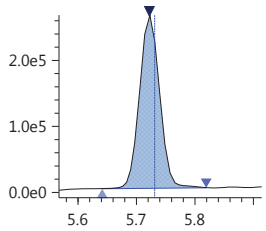
RT 5.733 Area 182935
Q 630.00>58.90 (-) 7.76e4



N-EtFOSE-d9
Conc 2.7622
RT 5.722 Area 629224
Q 638.70>59.10 (-) 2.69e5



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.722 Area 629224
ISTD 638.70>59.10 (-) 2.69e5



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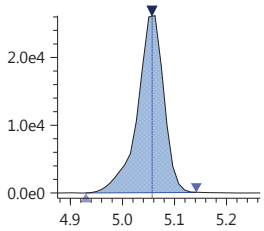
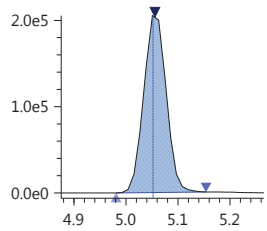
Conc 1.0590
RT 5.057 Area 92718
Q 570.20>419.00 (-) 2.62e4



N-MeFOSAA-d3
Conc 4.5843
RT 5.056 Area 620706
Q 572.80>419.05 (-) 2.06e5



N-MeFOSAA-d3_IS
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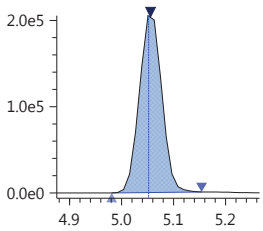
ISTD 572.80>419.05 (-) 2.06e5



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RT 5.157 Area 58954
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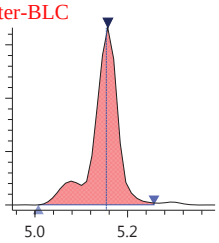

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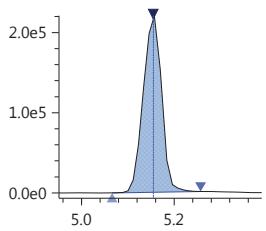
Conc 4.9624
RT 5.155 Area 607086
Q 588.80>419.00 (-) 2.21e5



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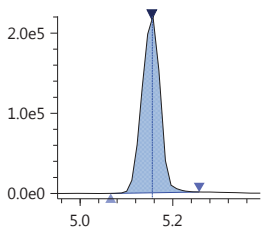

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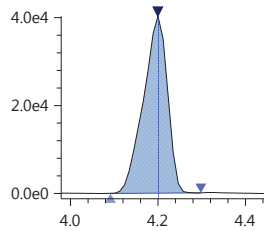
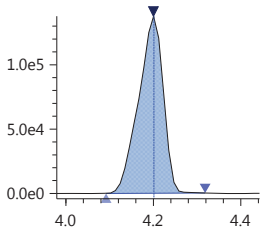
Conc 1.1500
RT 4.200 Area 154016
Q 327.00>307.05 (-) 4.03e4



4_2-FTS-13C
Conc 4.7477
RT 4.200 Area 538558
Q 328.80>309.05 (-) 1.38e5



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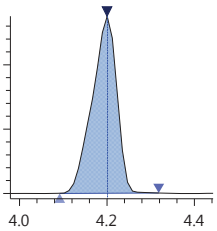

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Conc 1.1871
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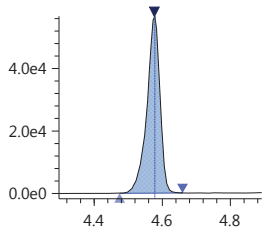
Q 427.00>407.00 (-) 5.68e4



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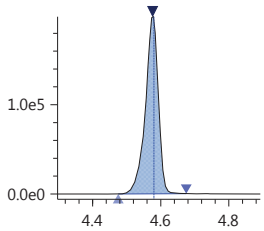
Conc 4.8973
RT 4.576 Area 523665
Q 428.90>409.00 (-) 1.99e5



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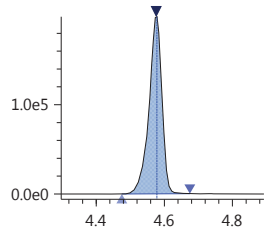

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Conc 1.2022
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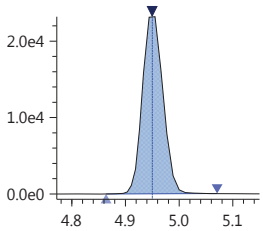
Q 527.10>506.90 (-) 2.32e4



8_2-FTS-13C
Conc 4.8940
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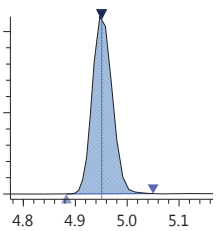
Q 528.80>509.00 (-) 1.09e5



8_2-FTS-13C_IS
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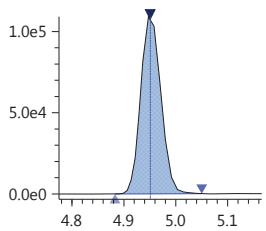

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10_2-FtS_1
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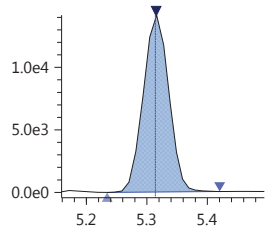
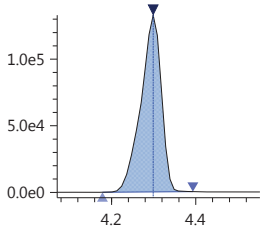
Q 627.00>606.95 (-) 1.42e4



HPFO_DA
Conc 1.2165
RT 4.299 Area 447630
Q 329.00>169.00 (-) 1.33e5



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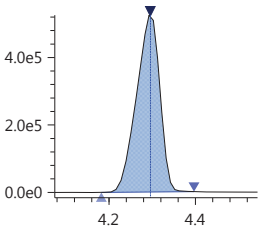
Conc 3.1927
RT 4.296 Area 1975217
Q 332.00>286.80 (-) 5.26e5



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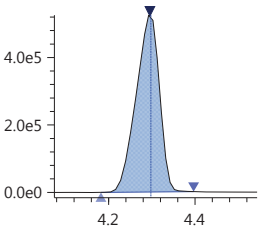

Insight Report

Printed at 8/13/2019 10:42:21 AM

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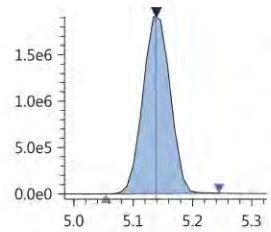
Date acquired: 8/12/2019 8:59:45 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b1\190812_010.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 5

13C7-PFUnDA_IS
Conc 5.0000
RT 5.139 Area 6161415
ISTD 570.00>525.00 (-) 1.91e6



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Conc 1.0978
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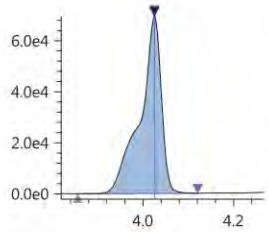

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RT 4.027 Area 709175
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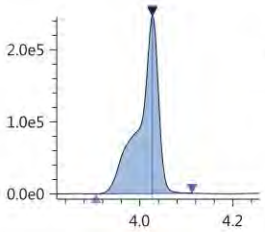

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RT 4.027 Area 711664
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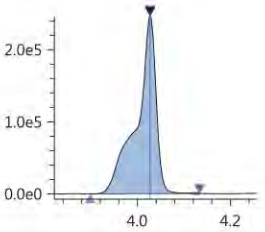

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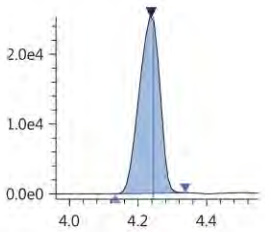
Conc 1.2326
RT 4.238 Area 106341
Q 349.00>99.00 (-) 2.54e4



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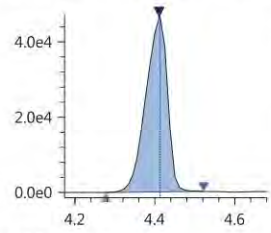

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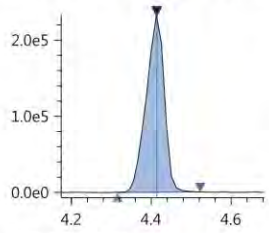
Q 402.70>84.05 (-) 2.33e5



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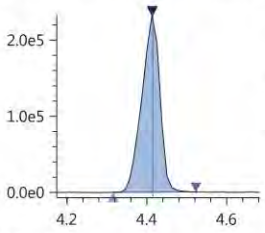

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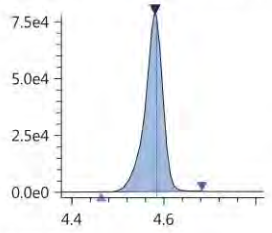

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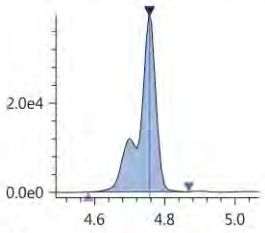
Q 499.00>80.00 (-) 3.97e4



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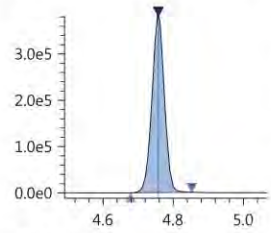

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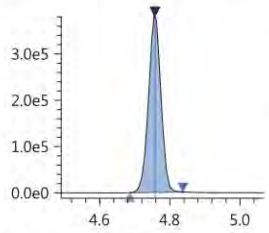

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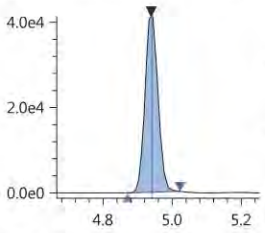
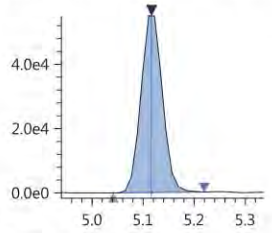
RT 4.939 Area 108859
Q 549.00>99.00 (-) 4.15e4



PFDS_1
Conc 1.0509
RT 5.117 Area 161475
Q 599.00>79.90 (-) 5.51e4



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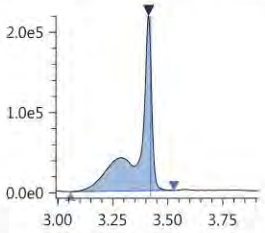
Conc 1.0145
RT 3.412 Area 893249
Q 213.00>169.10 (-) 2.21e5



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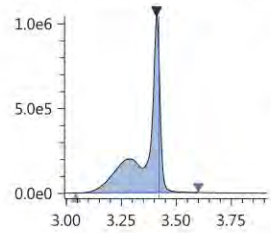
RT 3.410 Area 4301296
Q 216.90>172.15 (-) 1.05e6



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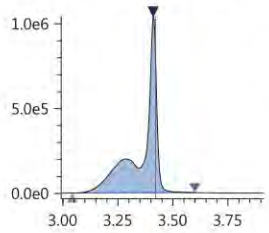

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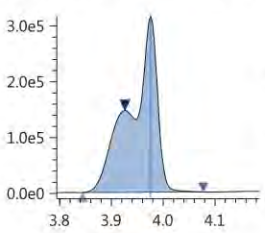
Conc 1.1983
RT 3.926 Area 1130668
Q 263.05>219.10 (-) 3.18e5



PFPeA-13C
Conc 3.2089
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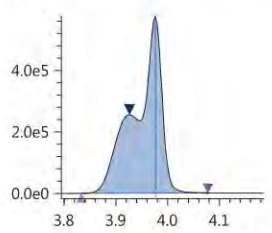
Q 267.90>223.00 (-) 5.76e5



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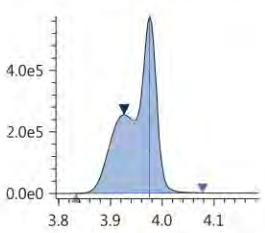

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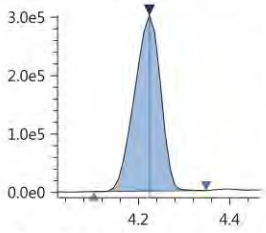

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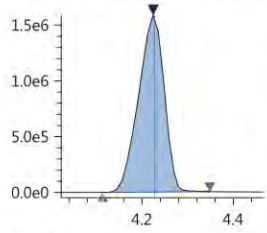

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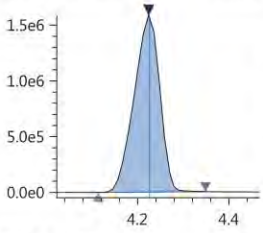

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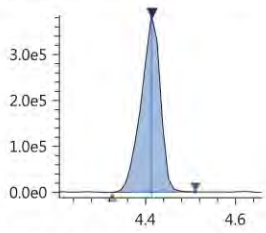

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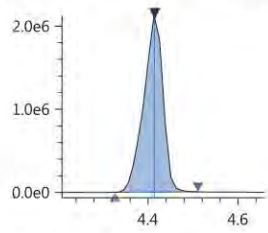

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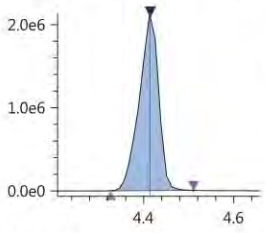

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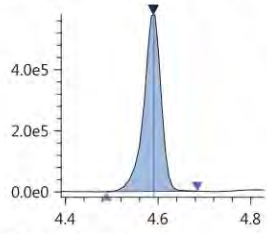

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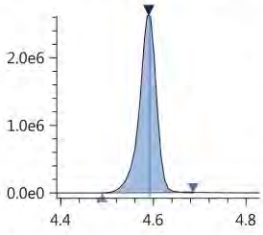

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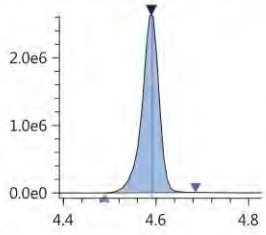

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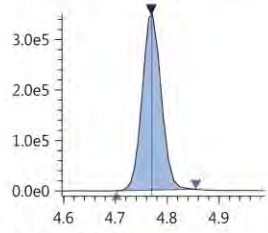

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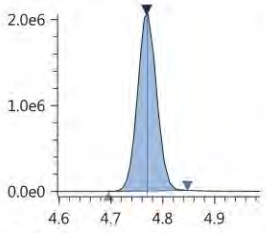

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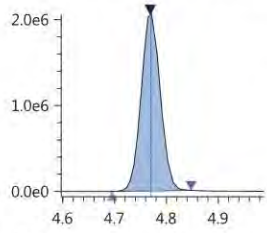

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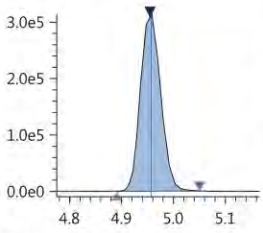

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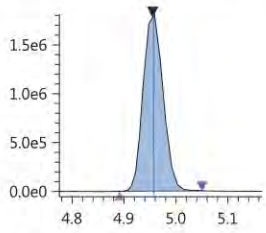

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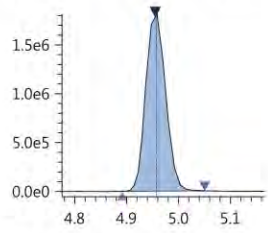

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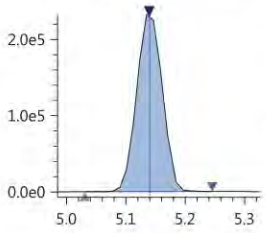

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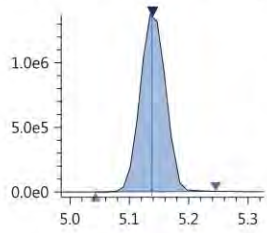

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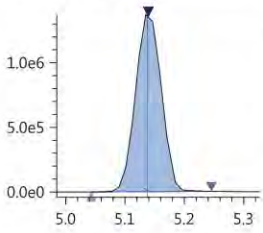

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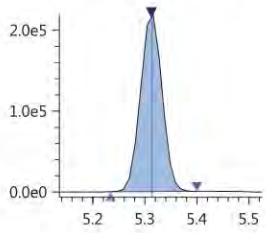

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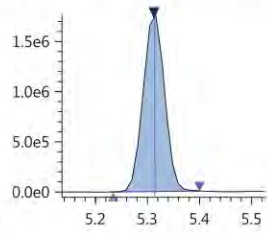

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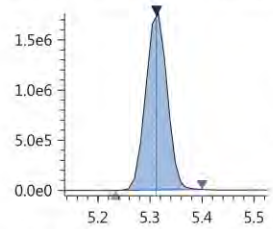

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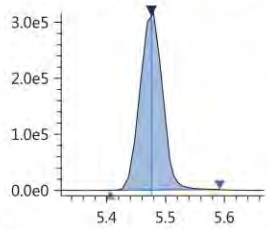

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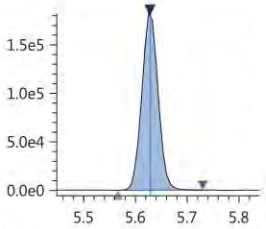

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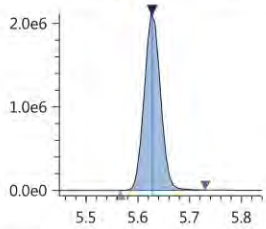

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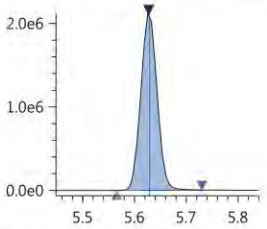

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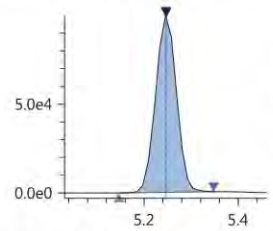

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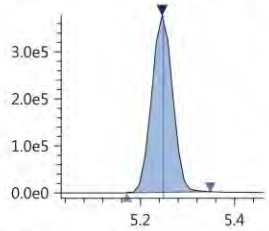

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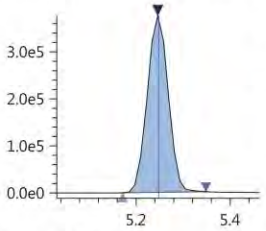

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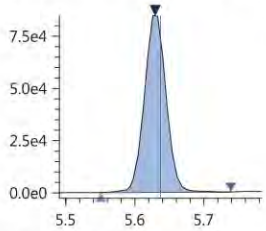

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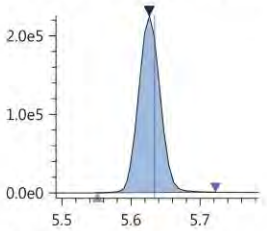
Q 514.90>168.90 (-) 2.26e5



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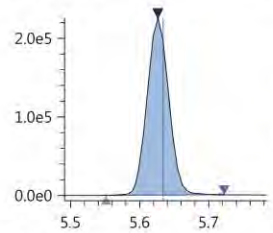

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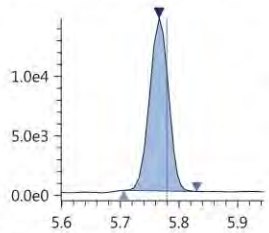

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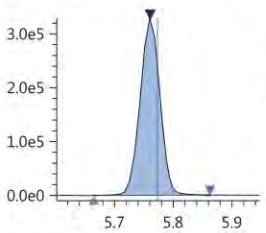
Q 530.90>169.15 (-) 3.29e5



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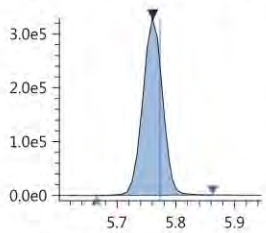

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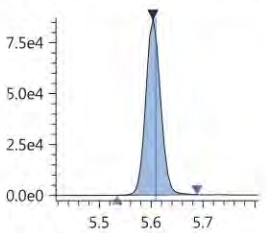

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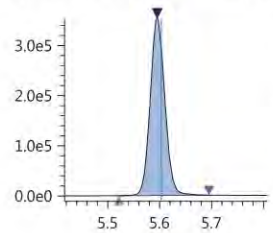
Q 622.70>59.10 (-) 3.53e5



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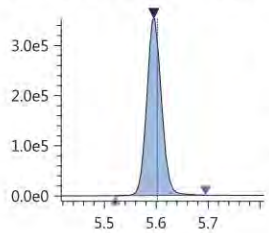

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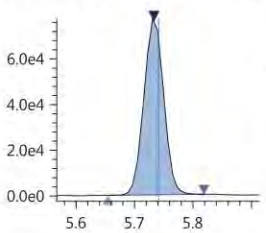
Conc 1.1888
RT 5.733 Area 182935
Q 630.00>58.90 (-) 7.76e4



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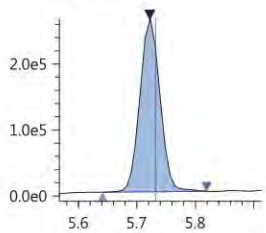
Q 638.70>59.10 (-) 2.69e5



N-EtFOSE-d9_IS
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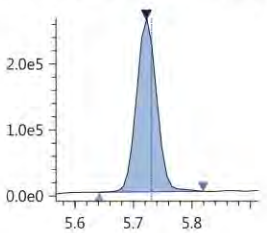

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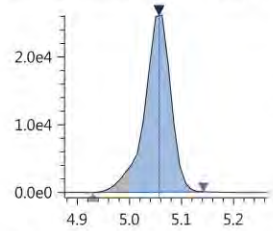
Q 570.20>419.00 (-) 2.62e4



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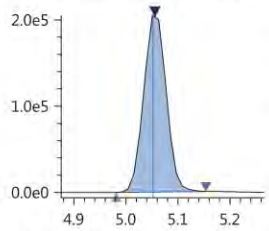

N-MeFOSAA-d3_IS
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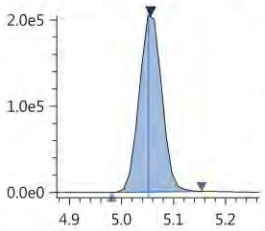
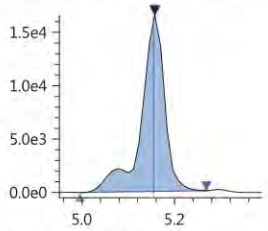
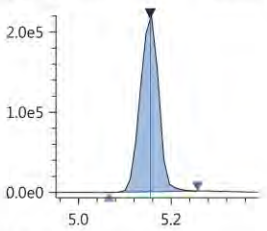
RT 5.056 Area 620706
ISTD 572.80>419.05 (-) 2.06e5



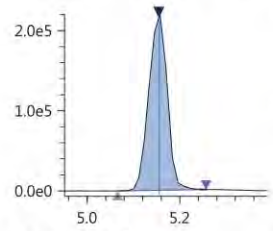
N-EtFOSAA
Conc 0.8045
RT 5.157 Area 57902
Q 584.20>418.95 (-) 1.66e4



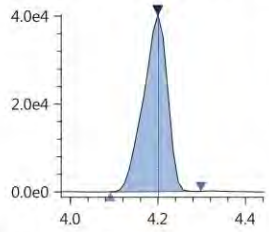
N-EtFOSAA-d5
Conc 4.9624
RT 5.155 Area 607086
Q 588.80>419.00 (-) 2.21e5



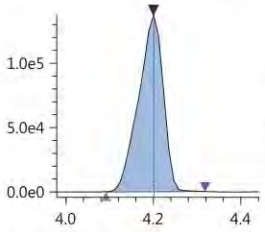
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.155 Area 607086
ISTD 588.80>419.00 (-) 2.21e5



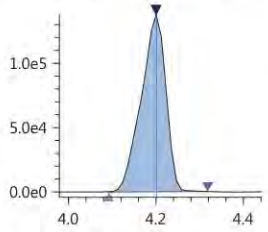
4_2-FTS_1
Conc 1.1500
RT 4.200 Area 154016
Q 327.00>307.05 (-) 4.03e4



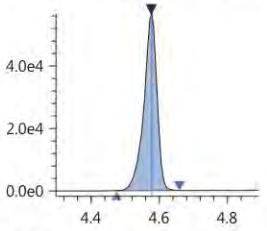
4_2-FTS-13C
Conc 4.7477
RT 4.200 Area 538558
Q 328.80>309.05 (-) 1.38e5



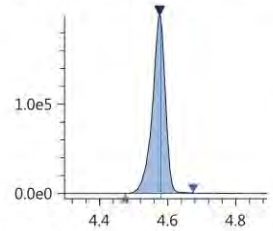
4_2-FTS-13C_IS
Conc 5.0000
RT 4.200 Area 538558
ISTD 328.80>309.05 (-) 1.38e5



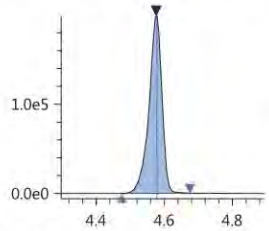
6_2-FTS_1
Conc 1.1871
RT 4.577 Area 151160
Q 427.00>407.00 (-) 5.68e4



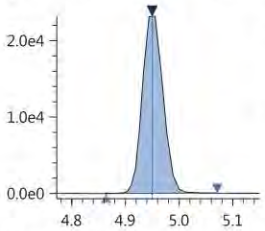
6_2-FTS-13C
Conc 4.8973
RT 4.576 Area 523665
Q 428.90>409.00 (-) 1.99e5



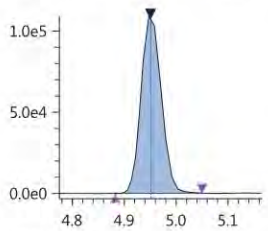
6_2-FTS-13C_IS
Conc 5.0000
RT 4.576 Area 523665
ISTD 428.90>409.00 (-) 1.99e5



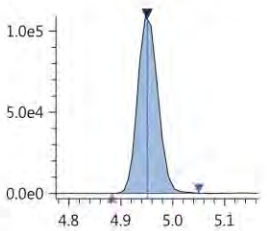
8_2-FTS_1
Conc 1.2022
RT 4.950 Area 62765
Q 527.10>506.90 (-) 2.32e4



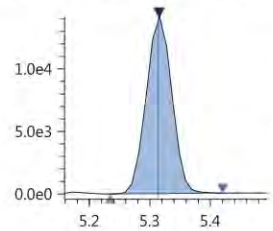
8_2-FTS-13C
Conc 4.8940
RT 4.951 Area 298272
Q 528.80>509.00 (-) 1.09e5



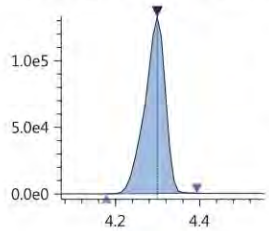
8_2-FTS-13C_IS
Conc 5.0000
RT 4.951 Area 298272
ISTD 528.80>509.00 (-) 1.09e5



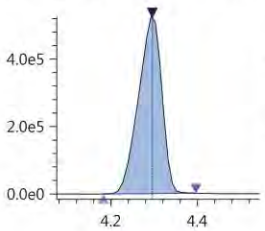
10_2-FtS_1
Conc 0.8820
RT 5.315 Area 41592
Q 627.00>606.95 (-) 1.42e4



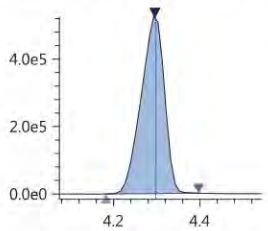
HPFO_DA
Conc 1.2165
RT 4.299 Area 447630
Q 329.00>169.00 (-) 1.33e5



HFPO_DA-13C
Conc 3.1927
RT 4.296 Area 1975217
Q 332.00>286.80 (-) 5.26e5



HFPO_DA-13C_IS
Conc 5.0000
RT 4.296 Area 1975217
ISTD 332.00>286.80 (-) 5.26e5



1st EJD 08/13/19
2nd 08/13/19

Validation Report

Data File: J:\LCMS06\Data\190812_b1\190812_019
Lab ID: KQ1911251-03
RunType: MS
Matrix: Water

Date Acquired: 8/12/19 22:33
Batch ID: 646922
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	Perfluoroheptane sulfonic acid (PFHpS)	138	70	130	High bias, samples ND
	Perfluorodecane sulfonic acid (PFDS)	168	70	130	High bias, samples ND
	13C2-PFDA	144	70	130	Narrate native ok
	13C2-PFDoDA	145	70	130	Narrate native ok
	D3-MeFOSAA	140	70	130	Narrate native ok
	D5-EtFOSAA	131	70	130	Narrate native ok
	13C2-8:2 FTS	185	70	130	Narrate native ok

Primary Review: _____

Printed: 8/13/19 13:24
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Secondary Review: _____

Quantitation Report

Data File:	J:\LCMS06\Data\190812_b1\190812_019	**Instrument:**	K-LCMS-06
Acqu Date:	8/12/19 22:33	**Vial:**	13
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1911251-03	**Raw Units:**	ng/mL

Bottle ID:	R1907111-001.05	**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/29/19	**Receive Date:**	7/29/19

Analysis Lot:	646922	**Prep Lot:**	342310	**Report Group:**	KQ1911251
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	8/12/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.128	-0.02	4432809	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.022	-0.02	600448	2.8286	57	20 - 109	Y
18O2-PFHxS	4.406	-0.02	565024	4.6508	93	26 - 122	Y
13C4-PFOS	4.750	-0.02	738124	5.1001	102	25 - 121	Y
13C4-PFBA	3.405	-0.03	3974456	5.5172	110	27 - 124	Y
13C5-PFPeA	3.969	-0.02	1748551	3.8579	77	27 - 138	Y
13C2-PFHxA	4.222	-0.02	5016293	5.6296	113	28 - 132	Y
13C4-PFHpA	4.407	-0.02	4361767	4.1766	84	19 - 139	Y
13C4-PFOA	4.583	-0.02	4737470	5.0091	100	22 - 130	Y
13C5-PFNA	4.762	-0.02	4091802	5.4459	109	20 - 127	Y
13C2-PFDA	4.946	-0.02	3107620	4.9200	98	24 - 125	Y
13C2-PFUnDA	5.128	-0.03	3340145	4.8791	98	22 - 125	Y
13C2-PFDoDA	5.303	-0.02	3225136	4.3737	87	19 - 122	Y
13C2-PFTeDA	5.620	-0.02	3314824	4.0803	82	13 - 124	Y
13C8-FOSA	5.240	-0.01	1287469	3.8143	76	18 - 109	Y
D3-MeFOSAA	5.046	-0.02	480012	4.9277	99	9 - 123	Y
D5-EtFOSAA	5.145	-0.02	367483	4.1752	84	12 - 126	Y
13C2-6:2 FTS	4.570	-0.02	436545	5.6746	113	10 - 226	Y
13C2-8:2 FTS	4.942	-0.02	248236	5.6614	113	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)	4.020	-0.02	196319	1.1292	30.1		Y
Perfluorohexane sulfonic acid (PFHxS)	4.403	-0.02	134803	0.8592	22.9		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 EJD 08/13/19

2nd 08/13/19

Data File:	J:\LCMS06\Data\190812_b1\190812_019	**Instrument:**	K-LCMS-06
Acqu Date:	8/12/19 22:33	**Vial:**	13
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1911251-03	**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)	4.574	-0.02	188686	1.1275	30.1		Y
Perfluorooctane sulfonic acid (PFOS)	4.750	-0.02	111407	0.8660	23.1		Y
Perfluorodecane sulfonic acid (PFDS)	5.105	-0.02	122786	1.0214	27.2		Y
Perfluorobutanoic acid (PFBA)	3.406	-0.03	1628237	2.0014	53.4		Y
Perfluoropentanoic acid (PFPeA)	3.969	-0.02	1272089	1.5928	42.5		Y
Perfluorohexanoic acid (PFHxA)	4.223	-0.02	1259001	1.1910	31.8		Y
Perfluoroheptanoic acid (PFHpA)	4.408	-0.02	769543	1.0284	27.4		Y
Perfluorooctanoic acid (PFOA)	4.582	-0.02	1205425	1.1284	30.1		Y
Perfluorononanoic acid (PFNA)	4.762	-0.02	671758	0.9011	24.0		Y
Perfluorodecanoic acid (PFDA)	4.946	-0.02	542644	0.8614	23.0		Y
Perfluoroundecanoic acid (PFUnDA)	5.128	-0.02	564846	0.9305	24.8		Y
Perfluorododecanoic acid (PFDoDA)	5.302	-0.02	418596	1.0377	27.7		Y
Perfluorotridecanoic acid (PFTrDA)	5.467	-0.02	537317	1.1264	30.0		Y
Perfluorotetradecanoic acid (PFTeDA)	5.620	-0.02	304920	1.1799	31.5		Y
Perfluorooctane sulfonamide (FOSA)	5.240	-0.01	303934	0.9378	25.0		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.047	-0.02	65911	0.9744	26.0		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.151	-0.01	38814	0.8822	23.5		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.570	-0.02	122122	1.1504	30.7		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.941	-0.02	42014	0.9670	25.8		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

Insight Report

Printed at 8/13/2019 12:29:09 PM

190812_019

Sample ID: KQ1911251-03
Date acquired: 8/12/2019 10:33:43 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b1\190812_019.lcd
Vial: 11 | Inj. Volume: 15.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.128	4432809	4432809	1	5.0000	ng/mL	----
PFBS_1	Auto	4.020	196319	603557	2	1.1292	ng/mL	----
PFBS-13C	Auto	4.022	600448	4432809	1	2.8286	ng/mL	----
PFBS-13C_IS	Auto	4.022	603557	603557	2	5.0000	ng/mL	----
PFHxS_1	Auto	4.403	134803	565024	3	0.8592	ng/mL	----
PFHxS-18O	Auto	4.406	565024	4432809	1	4.6508	ng/mL	----
PFHxS-18O_IS	Auto	4.406	565024	565024	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.574	188686	565024	3	1.1275	ng/mL	----
PFOS_1	M	4.750	111407	733650	4	0.8660	ng/mL	----
PFOS-13C	Auto	4.750	738124	4432809	1	5.1001	ng/mL	----
PFOS-13C_IS	Auto	4.750	733650	733650	4	5.0000	ng/mL	----
PFDS_1	Auto	5.105	122786	733650	4	1.0214	ng/mL	----
PFBA	Auto	3.406	1628237	3974456	5	2.0014	ng/mL	----
PFBA-13C	Auto	3.405	3974456	4432809	1	5.5172	ng/mL	----
PFBA-13C_IS	Auto	3.405	3974456	3974456	5	5.0000	ng/mL	----
PFPeA	Auto	3.969	1272089	1748551	6	1.5928	ng/mL	----
PFPeA-13C	Auto	3.969	1748551	4432809	1	3.8579	ng/mL	----
PFPeA-13C_IS	Auto	3.969	1748551	1748551	6	5.0000	ng/mL	----
PFHxA	Auto	4.223	1259001	5016293	7	1.1910	ng/mL	----
PFHxA-13C	Auto	4.222	5016293	4432809	1	5.6296	ng/mL	----
PFHxA-13C_IS	Auto	4.222	5016293	5016293	7	5.0000	ng/mL	----
PFHpA	Auto	4.408	769543	4361767	8	1.0284	ng/mL	----
PFHpA-13C	Auto	4.407	4361767	4432809	1	4.1766	ng/mL	----
PFHpA-13C_IS	Auto	4.407	4361767	4361767	8	5.0000	ng/mL	----
PFOA	Auto	4.582	1205425	4745106	9	1.1284	ng/mL	----
PFOA-13C	Auto	4.583	4737470	4432809	1	5.0091	ng/mL	----
PFOA-13C_IS	Auto	4.583	4745106	4745106	9	5.0000	ng/mL	----
PFNA	M	4.762	671758	4091802	10	0.9011	ng/mL	----
PFNA-13C	Auto	4.762	4091802	4432809	1	5.4459	ng/mL	----
PFNA-13C_IS	Auto	4.762	4091802	4091802	10	5.0000	ng/mL	----
PFDA	M	4.946	542644	3107620	11	0.8614	ng/mL	----
PFDA-13C	Auto	4.946	3107620	4432809	1	4.9200	ng/mL	----
PFDA-13C_IS	Auto	4.946	3107620	3107620	11	5.0000	ng/mL	----
PFUnA	Auto	5.128	564846	3340145	12	0.9305	ng/mL	----
PFUnA-13C	Auto	5.128	3340145	4432809	1	4.8791	ng/mL	----
PFUnA-13C_IS	Auto	5.128	3340145	3340145	12	5.0000	ng/mL	----
PFDoA	Auto	5.302	418596	3225136	13	1.0377	ng/mL	----
PFDoA-13C	Auto	5.303	3225136	4432809	1	4.3737	ng/mL	----
PFDoA-13C_IS	Auto	5.303	3225136	3225136	13	5.0000	ng/mL	----
PFTrDA	Auto	5.467	537317	3314824	14	1.1264	ng/mL	----
PFTeDA	Auto	5.620	304920	3314824	14	1.1799	ng/mL	----
PFTeDA-13C	Auto	5.620	3314824	4432809	1	4.0803	ng/mL	----
PFTeDA-13C_IS	Auto	5.620	3314824	3314824	14	5.0000	ng/mL	----
FOSA	Auto	5.240	303934	1287469	16	0.9378	ng/mL	----
FOSA-13C	Auto	5.240	1287469	4432809	1	3.8143	ng/mL	----
FOSA-13C_IS	Auto	5.240	1287469	1287469	16	5.0000	ng/mL	----
N-MeFOSAA	M	5.047	65911	480012	21	0.9744	ng/mL	----
N-MeFOSAA-d3	Auto	5.046	480012	4432809	1	4.9277	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.046	480012	480012	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.151	38814	367483	22	0.8822	ng/mL	----
N-EtFOSAA-d5	Auto	5.145	367483	4432809	1	4.1752	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.145	367483	367483	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.570	122122	436545	24	1.1504	ng/mL	----
6_2-FTS-13C	Auto	4.570	436545	4432809	1	5.6746	ng/mL	----
6_2-FTS-13C_IS	Auto	4.570	436545	436545	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.941	42014	248236	25	0.9670	ng/mL	----
8_2-FTS-13C	Auto	4.942	248236	4432809	1	5.6614	ng/mL	----
8_2-FTS-13C_IS	Auto	4.942	248236	248236	25	5.0000	ng/mL	----

Insight Report

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13C7-PFUnDA_IS
Conc 5.0000
RT 5.128 Area 4432809
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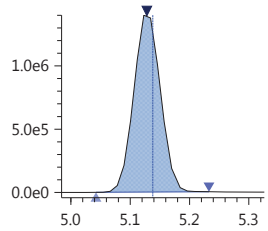

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RT 4.020 Area 196319
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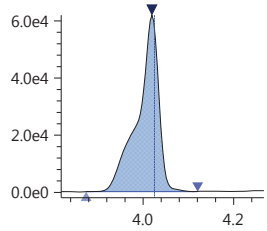

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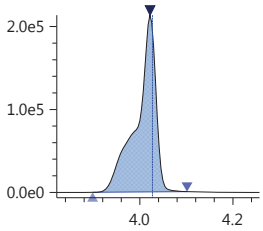
RT 4.022 Area 600448
Q 301.80>80.00 (-) 2.14e5



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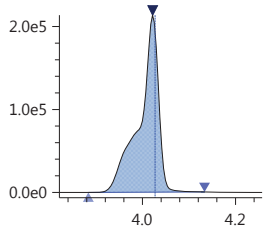

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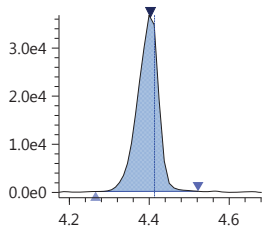

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Conc 4.6508
RT 4.406 Area 565024
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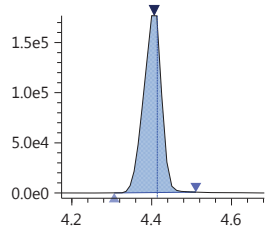

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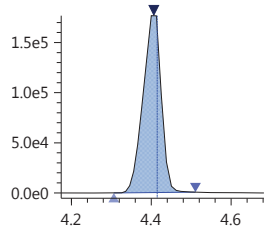

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RT 4.574 Area 188686
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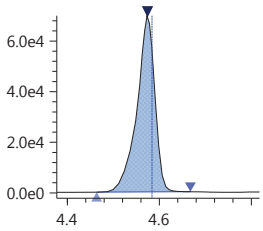

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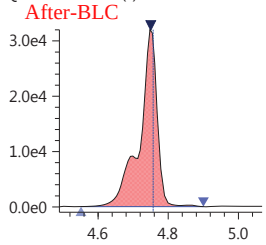
After-BLC



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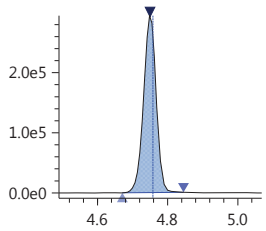

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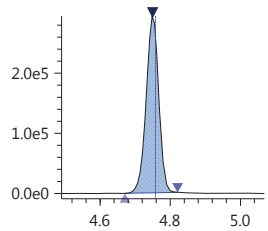

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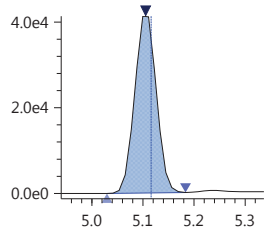

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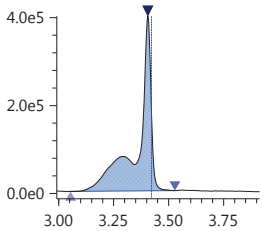

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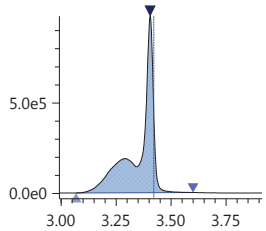
RT 3.405 Area 3974456
Q 216.90>172.15 (-) 9.80e5



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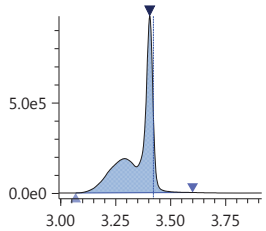

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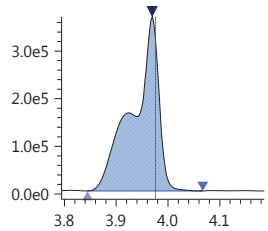
RT 3.969 Area 1272089
Q 263.05>219.10 (-) 3.72e5



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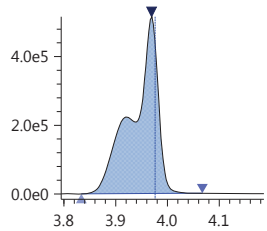

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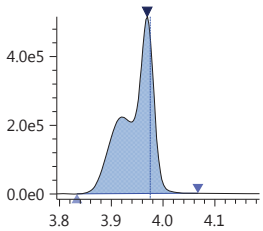

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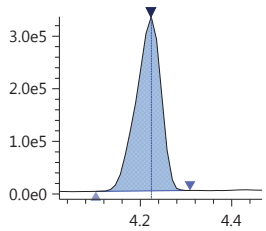

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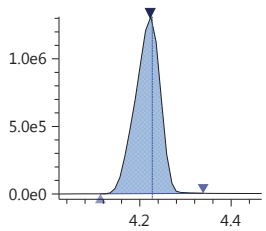

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PFHxA-13C_IS
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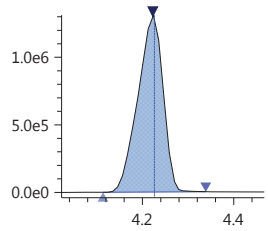

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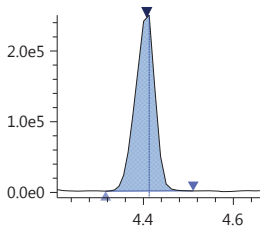
Q 362.90>319.00 (-) 2.51e5



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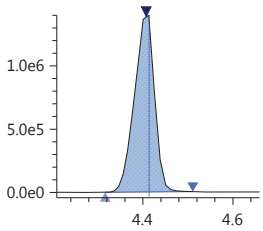
RT 4.407 Area 4361767
Q 366.90>322.10 (-) 1.40e6



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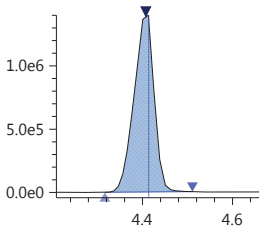

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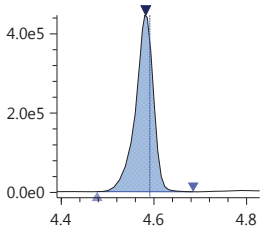

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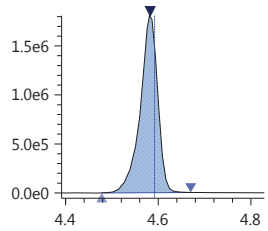

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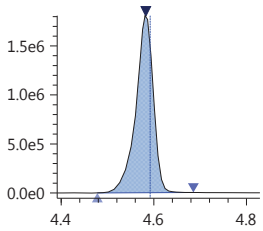

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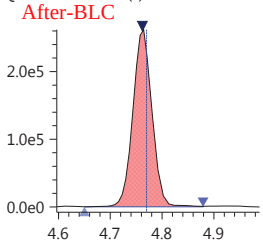
RT 4.762 Area 671758
Q 463.00>418.90 (-) 2.62e5
After-BLC



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RT 4.762 Area 4091802
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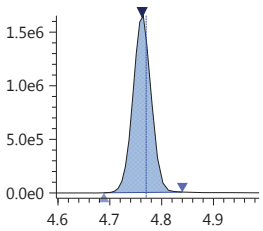

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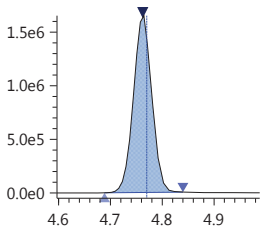

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RT 4.946 Area 542644
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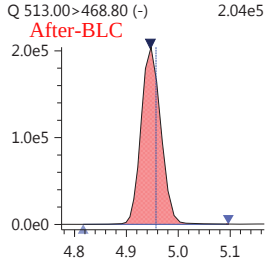

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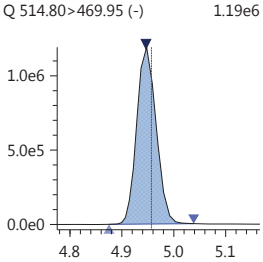

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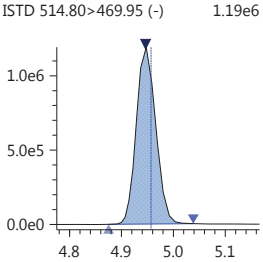

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Conc 0.9305
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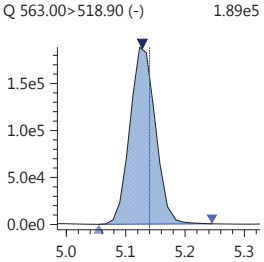
Q 563.00>518.90 (-) 1.89e5



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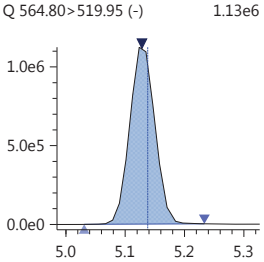
Conc 4.8791
RT 5.128 Area 3340145
Q 564.80>519.95 (-) 1.13e6



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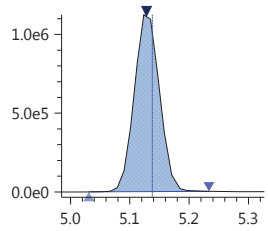

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Conc 1.0377
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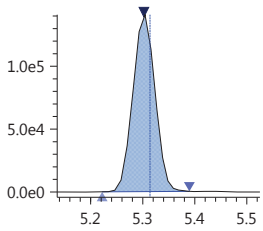

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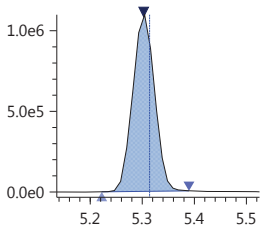

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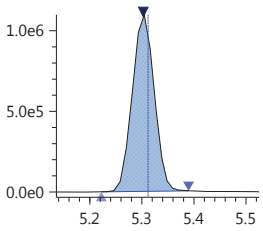

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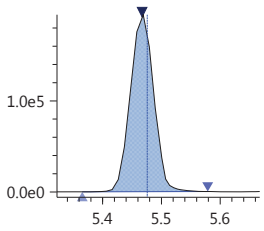
RT 5.467 Area 537317
Q 663.00>618.90 (-) 1.95e5



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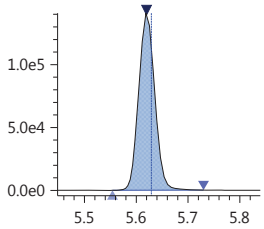

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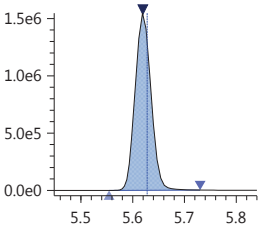

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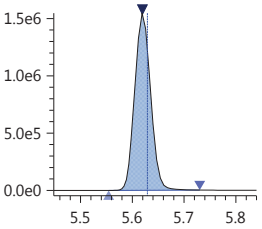

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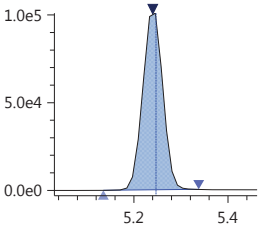
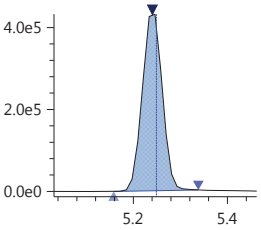
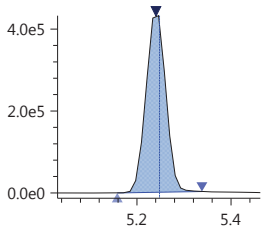
Q 498.20>78.00 (-) 1.01e5



FOSA-13C
Conc 3.8143
RT 5.240 Area 1287469
Q 506.00>78.05 (-) 4.33e5



FOSA-13C_IS
Conc 5.0000
RT 5.240 Area 1287469
ISTD 506.00>78.05 (-) 4.33e5



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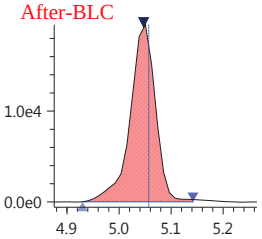
Q 570.20>419.00 (-) 1.95e4



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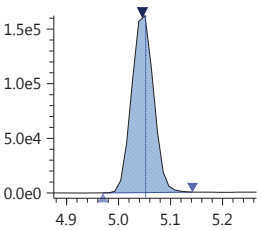
Q 572.80>419.05 (-) 1.62e5



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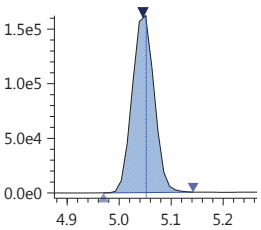

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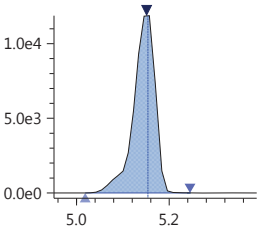

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Conc 4.1752
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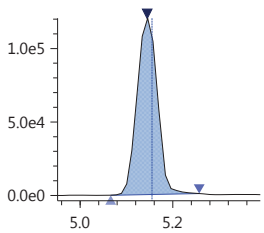
Q 588.80>419.00 (-) 1.21e5



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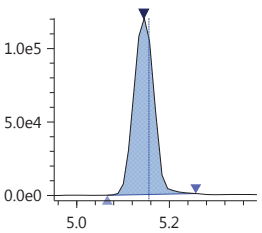
ISTD 588.80>419.00 (-) 1.21e5



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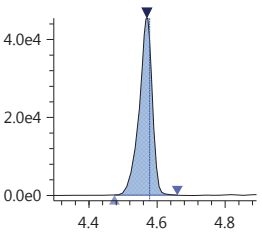
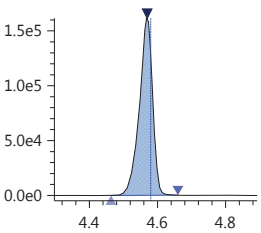
RT 4.570 Area 122122
Q 427.00>407.00 (-) 4.55e4



6_2-FTS-13C
Conc 5.6746
RT 4.570 Area 436545
Q 428.90>409.00 (-) 1.62e5



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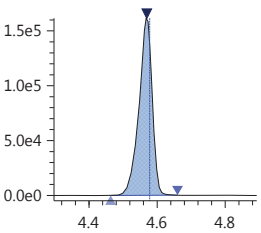

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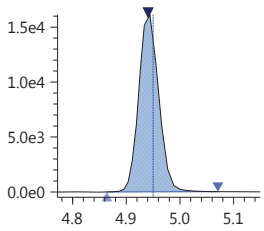

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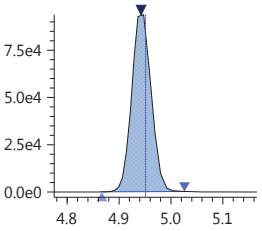
Q 528.80>509.00 (-) 9.38e4



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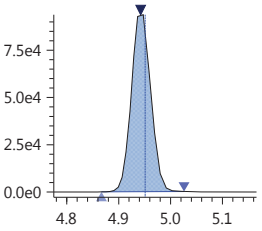

Insight Report

Printed at 8/13/2019 10:42:21 AM

190812_019

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Date acquired: 8/12/2019 10:33:43 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b1\190812_019.lcd
Vial: 11 | Inj. Volume: 15.0000uL | Tray: 5

13C7-PFUnDA_IS
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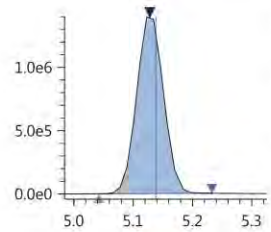
ISTD 570.00>525.00 (-) 1.40e6



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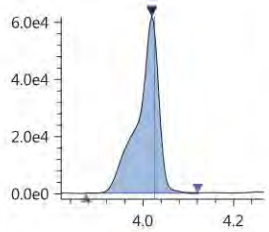
Q 299.00>80.00 (-) 6.20e4



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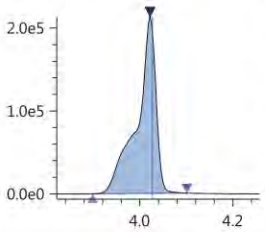

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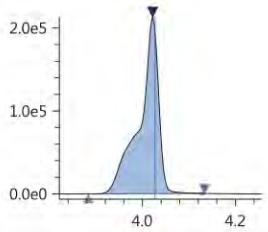

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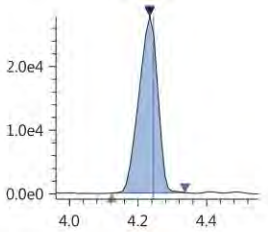

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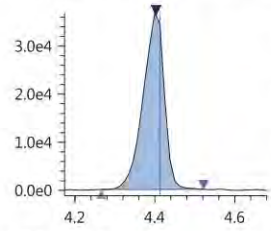

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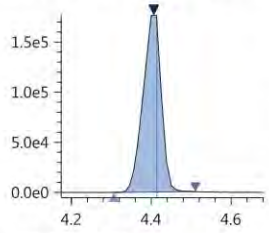

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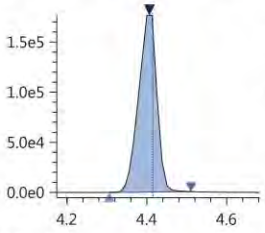

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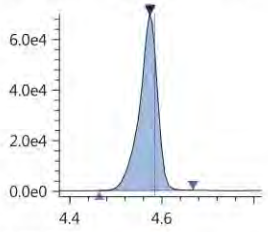

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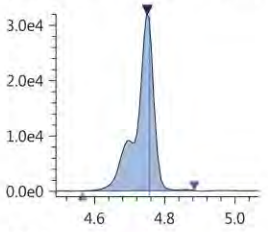

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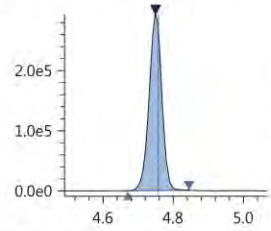

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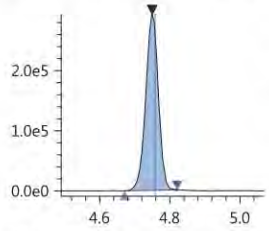

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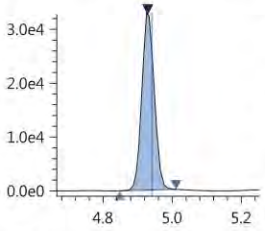

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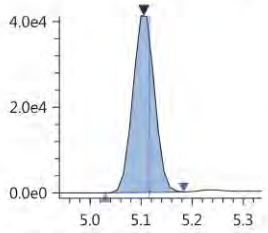

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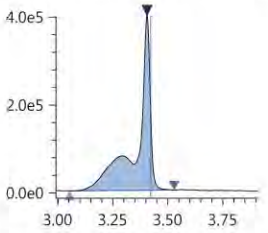

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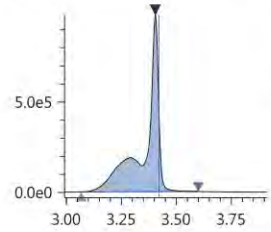

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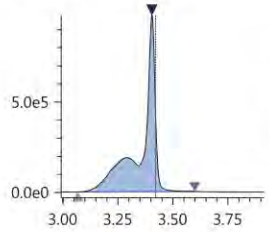

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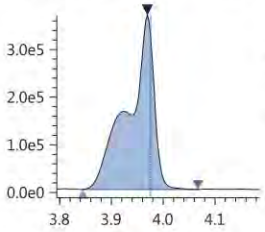

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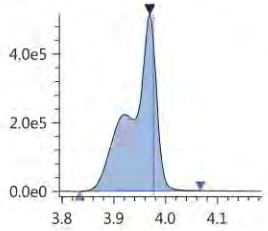

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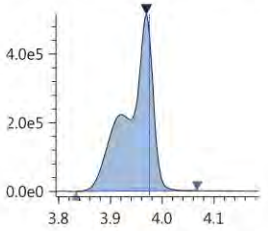

Insight Report

Printed at 8/13/2019 10:42:21 AM

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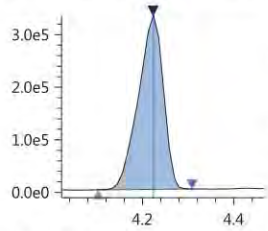

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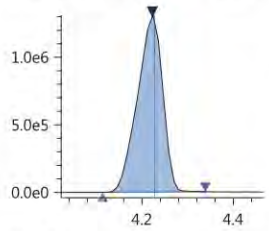

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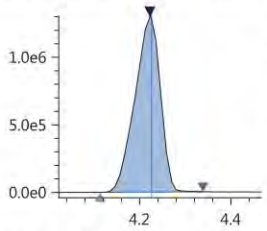

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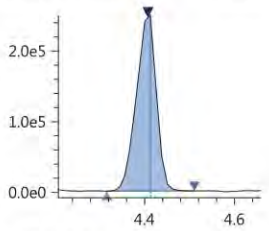

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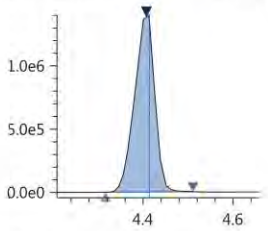

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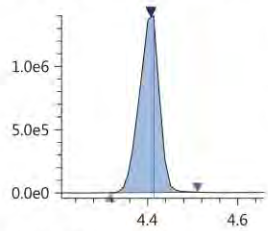

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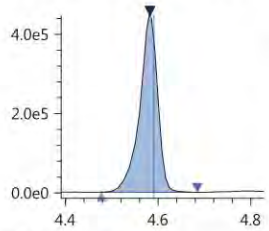

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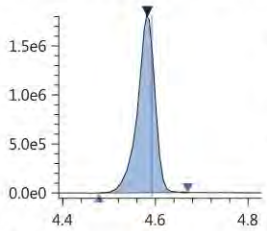

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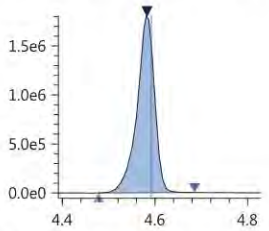

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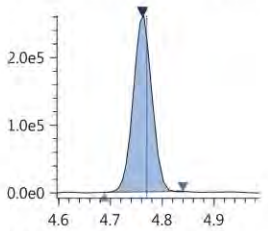
Conc 0.8784
RT 4.762 Area 655116
Q 463.00>418.90 (-) 2.62e5



PFNA-13C
Conc 5.4459
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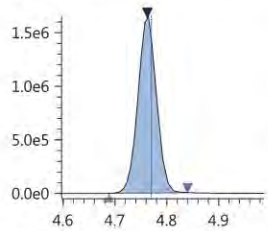
Q 467.80>423.00 (-) 1.65e6



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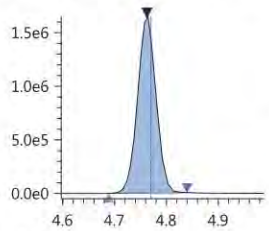
RT 4.762 Area 4091802
ISTD 467.80>423.00 (-) 1.65e6



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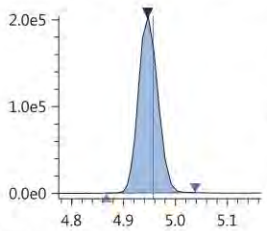
Conc 0.8502
RT 4.946 Area 535621
Q 513.00>468.80 (-) 2.04e5



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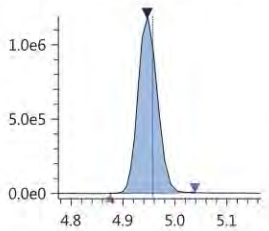
RT 4.946 Area 3107620
Q 514.80>469.95 (-) 1.19e6



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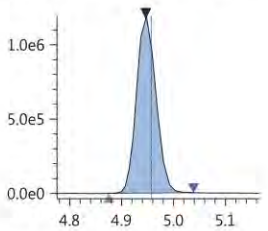

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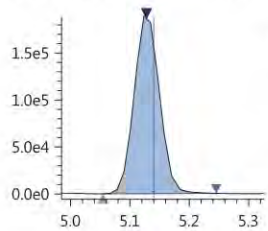
Conc 0.9305
RT 5.128 Area 564846
Q 563.00>518.90 (-) 1.89e5



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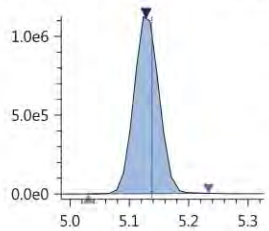

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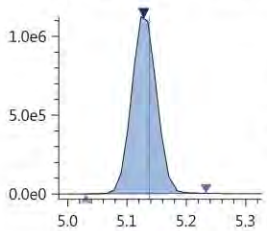

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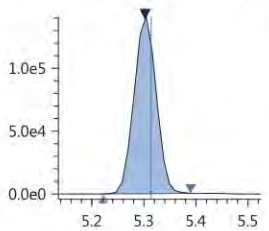

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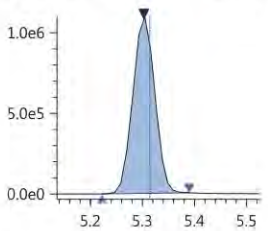

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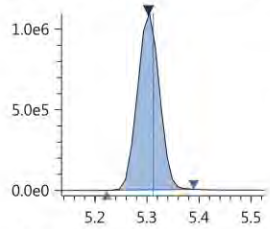
ISTD 614.80>569.95 (-) 1.10e6



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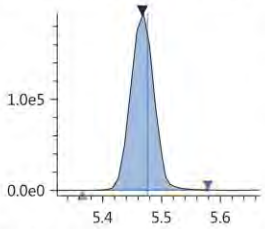

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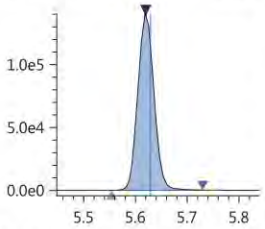

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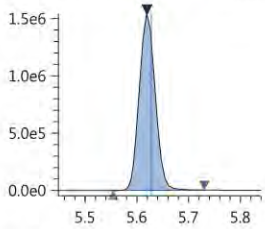

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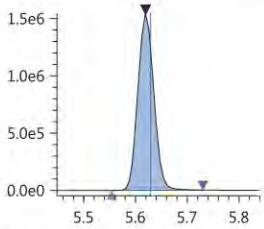

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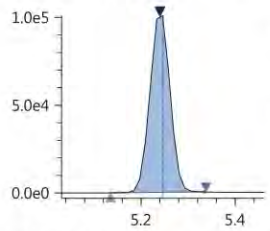

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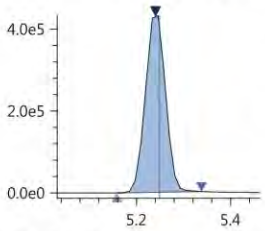

FOSA-13C_IS
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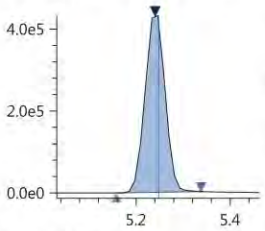
ISTD 506.00>78.05 (-) 4.33e5



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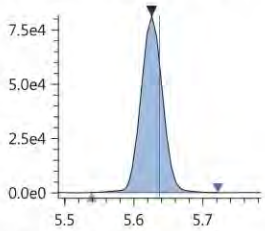

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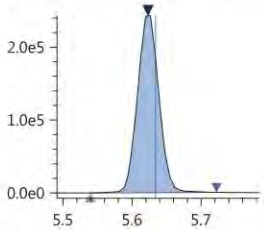
Conc 3.9712
RT 5.623 Area 525919
Q 514.90>168.90 (-) 2.43e5



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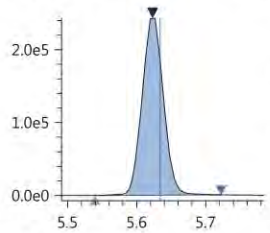

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Conc 1.0879
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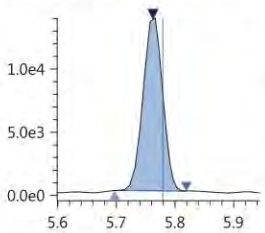

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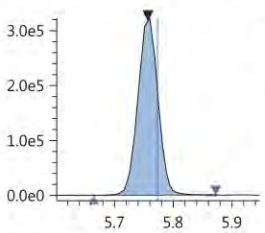
RT 5.757 Area 768729
Q 530.90>169.15 (-) 3.23e5



N-EtFOSA-d9_IS
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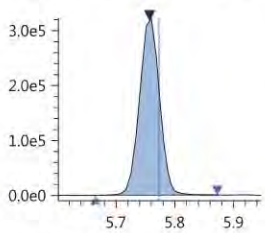
RT 5.757 Area 768729
ISTD 530.90>169.15 (-) 3.23e5



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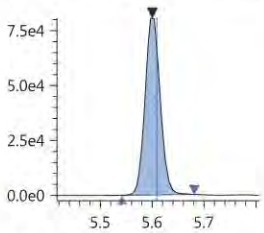
RT 5.600 Area 164347
Q 616.00>59.00 (-) 8.07e4



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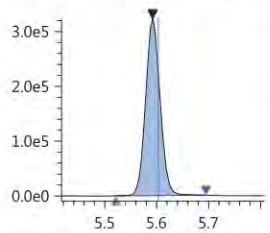
Conc 3.8550
RT 5.592 Area 627156
Q 622.70>59.10 (-) 3.23e5



N-MeFOSE-d7_IS
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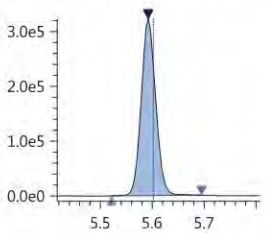
RT 5.592 Area 627156
ISTD 622.70>59.10 (-) 3.23e5



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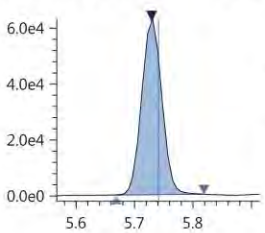
RT 5.729 Area 150913
Q 630.00>58.90 (-) 6.34e4



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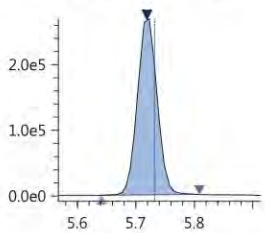
Q 638.70>59.10 (-) 2.70e5



N-EtFOSE-d9_IS
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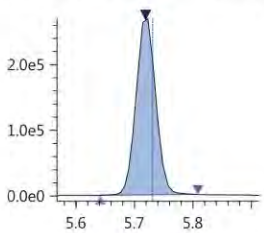

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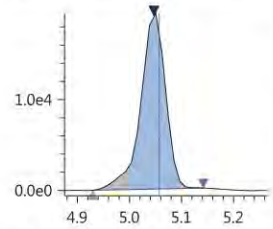
Q 570.20>419.00 (-) 1.95e4



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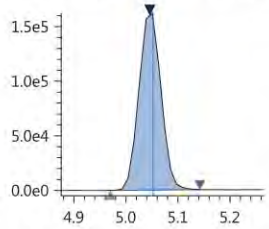
Conc 4.9277
RT 5.046 Area 480012
Q 572.80>419.05 (-) 1.62e5



N-MeFOSAA-d3_IS
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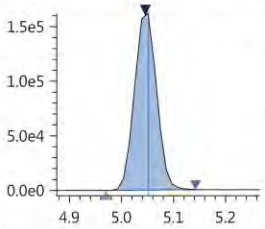

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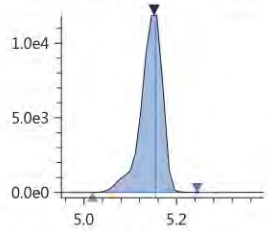
Q 584.20>418.95 (-) 1.19e4



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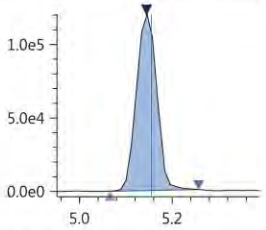
Q 588.80>419.00 (-) 1.21e5



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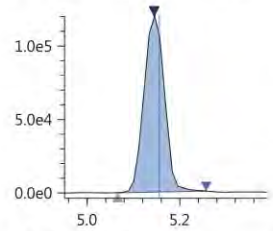

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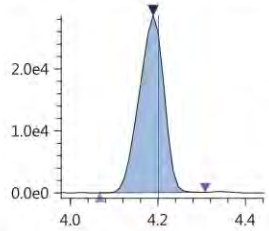
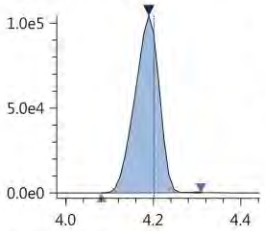
Q 327.00>307.05 (-) 2.86e4



4_2-FTS-13C
Conc 4.9612
RT 4.190 Area 404891
Q 328.80>309.05 (-) 1.04e5



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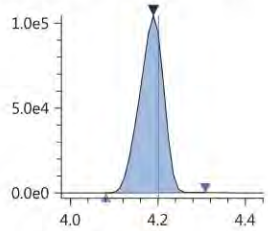

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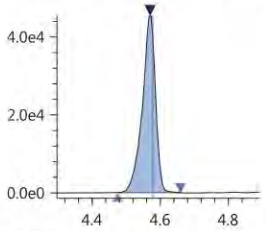

6_2-FTS-13C
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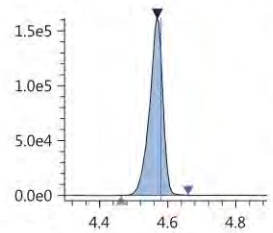
Q 428.90>409.00 (-) 1.62e5



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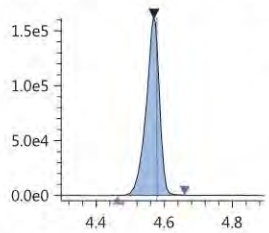

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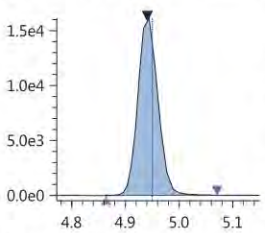
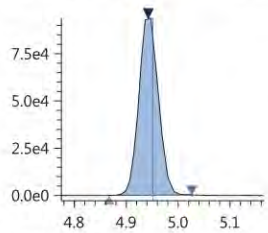
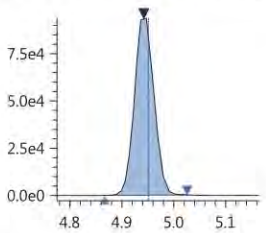


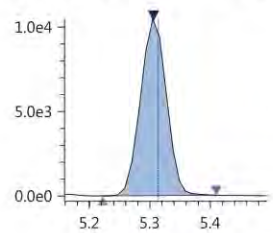
8_2-FTS-13C
Conc 5.6614
RT 4.942 Area 248236
Q 528.80>509.00 (-) 9.38e4



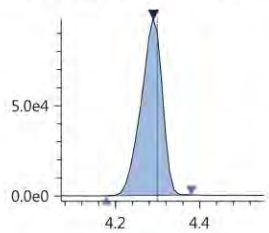
8_2-FTS-13C_IS
Conc 5.0000
RT 4.942 Area 248236
ISTD 528.80>509.00 (-) 9.38e4



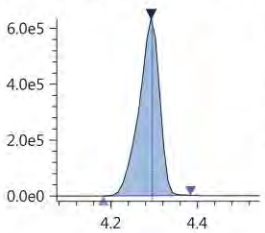
10_2-FtS_1
Conc 0.7933
RT 5.306 Area 31135
Q 627.00>606.95 (-) 1.05e4



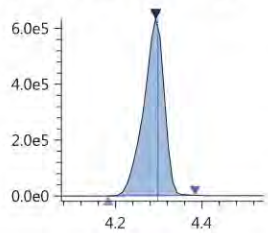
HPFO_DA
Conc 0.8800
RT 4.290 Area 343722
Q 329.00>169.00 (-) 9.82e4



HFPO_DA-13C
Conc 4.7107
RT 4.293 Area 2096753
Q 332.00>286.80 (-) 6.35e5



HFPO_DA-13C_IS
Conc 5.0000
RT 4.293 Area 2096753
ISTD 332.00>286.80 (-) 6.35e5



1st EJD 08/13/19
2nd [illegible] 08/13/19

Validation Report

Data File: J:\LCMS06\Data\190812_b1\190812_020
Lab ID: KQ1911251-04
RunType: DMS
Matrix: Water

Date Acquired: 8/12/19 22:44
Batch ID: 646922
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	Perfluoroheptane sulfonic acid (PFHpS)	138	70	130	High bias, samples ND
	Perfluorodecane sulfonic acid (PFDS)	168	70	130	High bias, samples ND
	13C2-PFDA	144	70	130	Narrate native ok
	13C2-PFDoDA	145	70	130	Narrate native ok
	D3-MeFOSAA	140	70	130	Narrate native ok
	D5-EtFOSAA	131	70	130	Narrate native ok
	13C2-8:2 FTS	185	70	130	Narrate native ok
Surrogates	13C4-PFBA	132	27	124	Narrate native ok
	13C2-PFHxA	142	28	132	Narrate native ok
	13C5-PFNA	128	20	127	Narrate native ok

Primary Review: _____

Printed: 8/13/19 13:24
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

Quantitation Report

Data File:	J:\LCMS06\Data\190812_b1\190812_020	**Instrument:**	K-LCMS-06
Acqu Date:	8/12/19 22:44	**Vial:**	14
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1911251-04	**Raw Units:**	ng/mL

Bottle ID:	R1907111-001.06	**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/29/19	**Receive Date:**	7/29/19

Analysis Lot:	646922	**Prep Lot:**	342310	**Report Group:**	KQ1911251
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	8/12/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.132	-0.02	3579159	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
13C3-PFBS	4.024	-0.02	572760	3.3417	67		20 - 109	Y
18O2-PFHxS	4.409	-0.02	501602	5.1135	102		26 - 122	Y
13C4-PFOS	4.753	-0.01	634574	5.4304	109		25 - 121	Y
13C4-PFBA	3.406	-0.03	3833426	6.5906	132	*	27 - 124	Y
13C5-PFPeA	3.971	-0.02	1732327	4.7338	95		27 - 138	Y
13C2-PFHxA	4.225	-0.01	5098546	7.0866	142	*	28 - 132	Y
13C4-PFHpA	4.411	-0.01	4081350	4.8402	97		19 - 139	Y
13C4-PFOA	4.586	-0.02	4168718	5.4590	109		22 - 130	Y
13C5-PFNA	4.766	-0.02	3878126	6.3926	128	*	20 - 127	Y
13C2-PFDA	4.951	-0.01	2899774	5.6859	114		24 - 125	Y
13C2-PFUnDA	5.132	-0.02	2688517	4.8639	97		22 - 125	Y
13C2-PFDoDA	5.308	-0.02	3256541	5.4697	109		19 - 122	Y
13C2-PFTeDA	5.624	-0.02	3465161	5.2826	106		13 - 124	Y
13C8-FOSA	5.246	0.00	901190	3.3067	66		18 - 109	Y
D3-MeFOSAA	5.051	-0.01	339627	4.3181	86		9 - 123	Y
D5-EtFOSAA	5.152	-0.01	345909	4.8674	97		12 - 126	Y
13C2-6:2 FTS	4.574	-0.02	416153	6.6997	134		10 - 226	Y
13C2-8:2 FTS	4.946	-0.02	227468	6.4250	129		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)	4.022	-0.02	195165	1.1774	30.9		Y
Perfluorohexane sulfonic acid (PFHxS)	4.403	-0.02	133834	0.9609	25.2		Y

1st LJD 08/13/19

2nd 08/13/19

Data File:	J:\LCMS06\Data\190812_b1\190812_020	**Instrument:**	K-LCMS-06
Acqu Date:	8/12/19 22:44	**Vial:**	14
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1911251-04	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.578	-0.02	176981	1.1913	31.2		Y
Perfluorooctane sulfonic acid (PFOS)	4.752	-0.02	105786	0.9567	25.1		Y
Perfluorodecane sulfonic acid (PFDS)	5.111	-0.02	83367	0.8068	21.2		Y
Perfluorobutanoic acid (PFBA)	3.407	-0.03	1622678	2.0680	54.2		Y
Perfluoropentanoic acid (PFPeA)	3.972	-0.02	1250344	1.5793	41.4		Y
Perfluorohexanoic acid (PFHxA)	4.224	-0.01	1254664	1.1672	30.6		Y
Perfluoroheptanoic acid (PFHpA)	4.411	-0.01	761191	1.0882	28.5		Y
Perfluorooctanoic acid (PFOA)	4.586	-0.02	1132379	1.2080	31.7		Y
Perfluorononanoic acid (PFNA)	4.765	-0.02	679307	0.9622	25.2		Y
Perfluorodecanoic acid (PFDA)	4.951	-0.01	537872	0.9150	24.0		Y
Perfluoroundecanoic acid (PFUnDA)	5.132	-0.02	456223	0.9338	24.5		Y
Perfluorododecanoic acid (PFDoDA)	5.309	-0.02	419860	1.0307	27.0		Y
Perfluorotridecanoic acid (PFTrDA)	5.472	-0.02	517173	1.0364	27.2		Y
Perfluorotetradecanoic acid (PFTeDA)	5.624	-0.02	305149	1.1232	29.5		Y
Perfluorooctane sulfonamide (FOSA)	5.246	0.00	225019	0.9919	26.0		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.054	-0.01	62168	1.2962	34.0		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.154	-0.01	44775	1.0628	27.9		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.573	-0.02	116249	1.1488	30.1		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.945	-0.02	33302	0.8364	21.9		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 8/13/2019 12:29:09 PM

190812_020

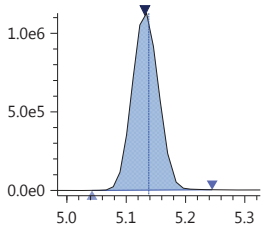
Sample ID: KQ1911251-04
Date acquired: 8/12/2019 10:44:08 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b1\190812_020.lcd
Vial: 12 | Inj. Volume: 15.0000uL | Tray: 5

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.132	3579159	3579159	1	5.0000	ng/mL	----
PFBS_1	Auto	4.022	195165	575400	2	1.1774	ng/mL	----
PFBS-13C	Auto	4.024	572760	3579159	1	3.3417	ng/mL	----
PFBS-13C_IS	Auto	4.024	575400	575400	2	5.0000	ng/mL	----
PFHxS_1	Auto	4.403	133834	501602	3	0.9609	ng/mL	----
PFHxS-18O	Auto	4.409	501602	3579159	1	5.1135	ng/mL	----
PFHxS-18O_IS	Auto	4.409	501602	501602	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.578	176981	501602	3	1.1913	ng/mL	----
PFOS_1	Auto	4.752	105786	630606	4	0.9567	ng/mL	----
PFOS-13C	Auto	4.753	634574	3579159	1	5.4304	ng/mL	----
PFOS-13C_IS	Auto	4.753	630606	630606	4	5.0000	ng/mL	----
PFDS_1	Auto	5.111	83367	630606	4	0.8068	ng/mL	----
PFBA	Auto	3.407	1622678	3833426	5	2.0680	ng/mL	----
PFBA-13C	Auto	3.406	3833426	3579159	1	6.5906	ng/mL	----
PFBA-13C_IS	Auto	3.406	3833426	3833426	5	5.0000	ng/mL	----
PFPeA	Auto	3.972	1250344	1732327	6	1.5793	ng/mL	----
PFPeA-13C	Auto	3.971	1732327	3579159	1	4.7338	ng/mL	----
PFPeA-13C_IS	Auto	3.971	1732327	1732327	6	5.0000	ng/mL	----
PFHxA	Auto	4.224	1254664	5098546	7	1.1672	ng/mL	----
PFHxA-13C	Auto	4.225	5098546	3579159	1	7.0866	ng/mL	----
PFHxA-13C_IS	Auto	4.225	5098546	5098546	7	5.0000	ng/mL	----
PFHpA	Auto	4.411	761191	4081350	8	1.0882	ng/mL	----
PFHpA-13C	Auto	4.411	4081350	3579159	1	4.8402	ng/mL	----
PFHpA-13C_IS	Auto	4.411	4081350	4081350	8	5.0000	ng/mL	----
PFOA	M	4.586	1132379	4168718	9	1.2080	ng/mL	----
PFOA-13C	Auto	4.586	4168718	3579159	1	5.4590	ng/mL	----
PFOA-13C_IS	Auto	4.586	4168718	4168718	9	5.0000	ng/mL	----
PFNA	M	4.765	679307	3878126	10	0.9622	ng/mL	----
PFNA-13C	Auto	4.766	3878126	3579159	1	6.3926	ng/mL	----
PFNA-13C_IS	Auto	4.766	3878126	3878126	10	5.0000	ng/mL	----
PFDA	M	4.951	537872	2899774	11	0.9150	ng/mL	----
PFDA-13C	Auto	4.951	2899774	3579159	1	5.6859	ng/mL	----
PFDA-13C_IS	Auto	4.951	2899774	2899774	11	5.0000	ng/mL	----
PFUnA	Auto	5.132	456223	2688517	12	0.9338	ng/mL	----
PFUnA-13C	Auto	5.132	2688517	3579159	1	4.8639	ng/mL	----
PFUnA-13C_IS	Auto	5.132	2688517	2688517	12	5.0000	ng/mL	----
PFDoA	Auto	5.309	419860	3256541	13	1.0307	ng/mL	----
PFDoA-13C	Auto	5.308	3256541	3579159	1	5.4697	ng/mL	----
PFDoA-13C_IS	Auto	5.308	3256541	3256541	13	5.0000	ng/mL	----
PFTrDA	Auto	5.472	517173	3465161	14	1.0364	ng/mL	----
PFTeDA	Auto	5.624	305149	3465161	14	1.1232	ng/mL	----
PFTeDA-13C	Auto	5.624	3465161	3579159	1	5.2826	ng/mL	----
PFTeDA-13C_IS	Auto	5.624	3465161	3465161	14	5.0000	ng/mL	----
FOSA	Auto	5.246	225019	901190	16	0.9919	ng/mL	----
FOSA-13C	Auto	5.246	901190	3579159	1	3.3067	ng/mL	----
FOSA-13C_IS	Auto	5.246	901190	901190	16	5.0000	ng/mL	----
N-MeFOSAA	M	5.054	62168	339627	21	1.2962	ng/mL	----
N-MeFOSAA-d3	Auto	5.051	339627	3579159	1	4.3181	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.051	339627	339627	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.154	44775	345909	22	1.0628	ng/mL	----
N-EtFOSAA-d5	Auto	5.152	345909	3579159	1	4.8674	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.152	345909	345909	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.573	116249	416153	24	1.1488	ng/mL	----
6_2-FTS-13C	Auto	4.574	416153	3579159	1	6.6997	ng/mL	----
6_2-FTS-13C_IS	Auto	4.574	416153	416153	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.945	33302	227468	25	0.8364	ng/mL	----
8_2-FTS-13C	Auto	4.946	227468	3579159	1	6.4250	ng/mL	----
8_2-FTS-13C_IS	Auto	4.946	227468	227468	25	5.0000	ng/mL	----

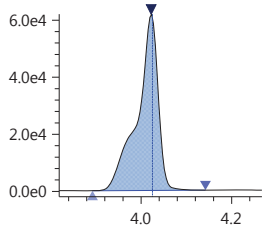
Insight Report

Printed at 8/13/2019 12:29:09 PM

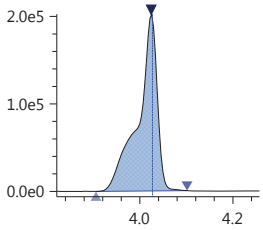
13C7-PFUnDA_IS
Conc 5.0000
RT 5.132 Area 3579159
ISTD 570.00>525.00 (-) 1.13e6



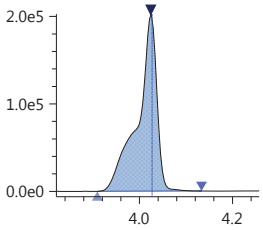
PFBS_1
Conc 1.1774
RT 4.022 Area 195165
Q 299.00>80.00 (-) 6.21e4



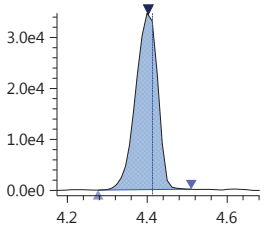
PFBS-13C
Conc 3.3417
RT 4.024 Area 572760
Q 301.80>80.00 (-) 2.03e5



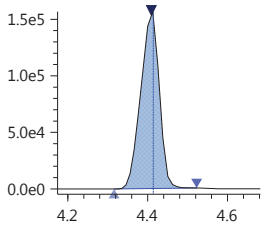
PFBS-13C_IS
Conc 5.0000
RT 4.024 Area 575400
ISTD 301.80>80.00 (-) 2.03e5



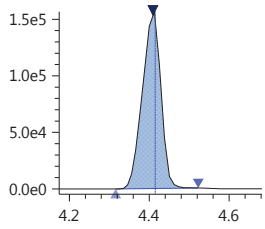
PFHxS_1
Conc 0.9609
RT 4.403 Area 133834
Q 399.00>80.00 (-) 3.48e4



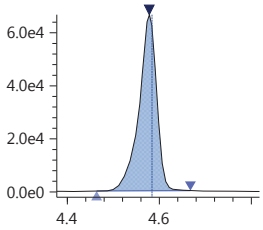
PFHxS-18O
Conc 5.1135
RT 4.409 Area 501602
Q 402.70>84.05 (-) 1.57e5



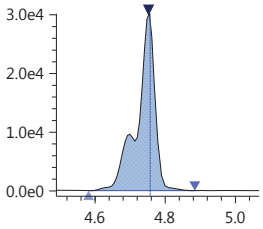
PFHxS-18O_IS
Conc 5.0000
RT 4.409 Area 501602
ISTD 402.70>84.05 (-) 1.57e5



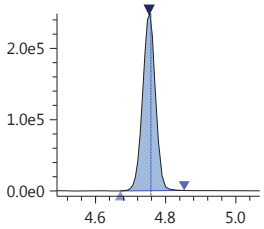
PFHpS_1
Conc 1.1913
RT 4.578 Area 176981
Q 449.00>80.15 (-) 6.68e4



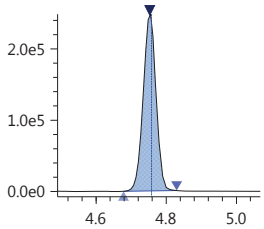
PFOS_1
Conc 0.9567
RT 4.752 Area 105786
Q 499.00>80.00 (-) 3.02e4



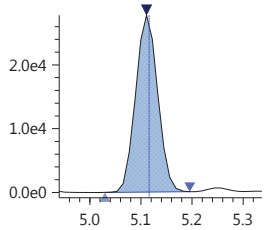
PFOS-13C
Conc 5.4304
RT 4.753 Area 634574
Q 502.80>80.05 (-) 2.49e5



PFOS-13C_IS
Conc 5.0000
RT 4.753 Area 630606
ISTD 502.80>80.05 (-) 2.49e5



PFDS_1
Conc 0.8068
RT 5.111 Area 83367
Q 599.00>79.90 (-) 2.78e4



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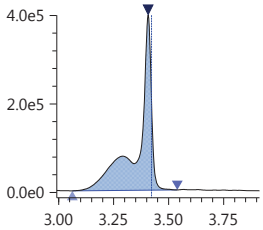
Conc 2.0680
RT 3.407 Area 1622678
Q 213.00>169.10 (-) 4.01e5



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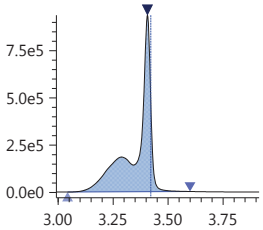
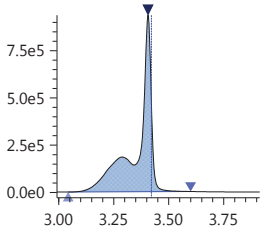
RT 3.406 Area 3833426
Q 216.90>172.15 (-) 9.38e5



PFBA-13C_IS
Conc 5.0000
RT 3.406 Area 3833426
ISTD 216.90>172.15 (-) 9.38e5



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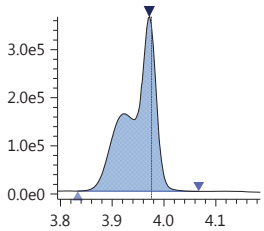

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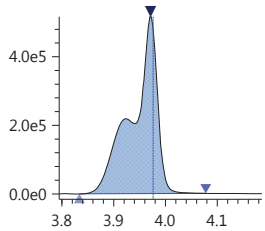
Conc 4.7338
RT 3.971 Area 1732327
Q 267.90>223.00 (-) 5.17e5



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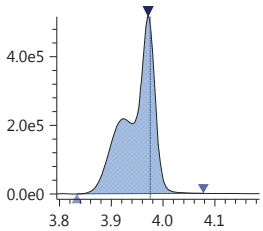

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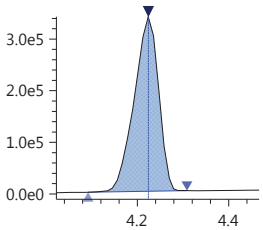

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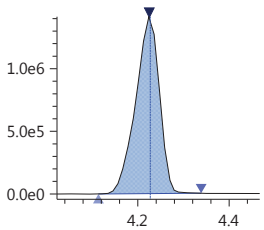

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PFHxA-13C_IS
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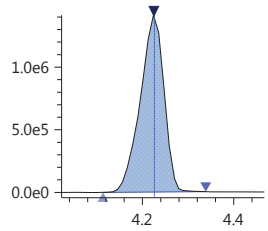

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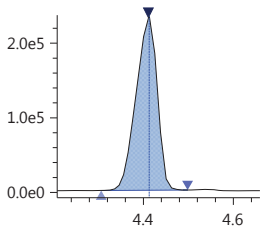

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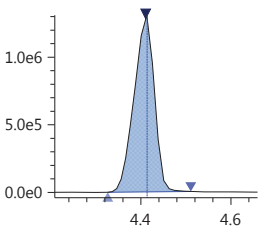

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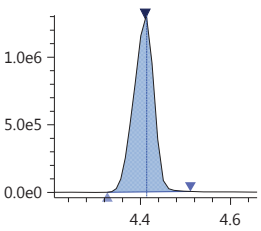

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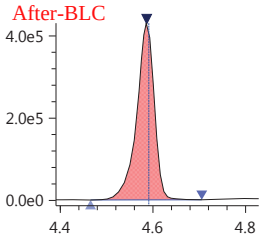
Q 413.00>369.00 (-) 4.31e5



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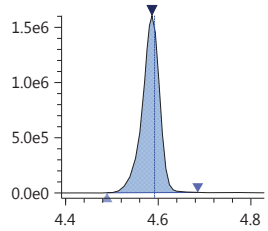

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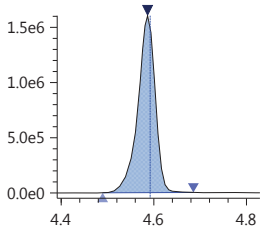

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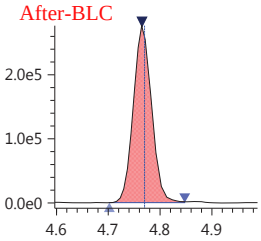
Q 463.00>418.90 (-) 2.77e5



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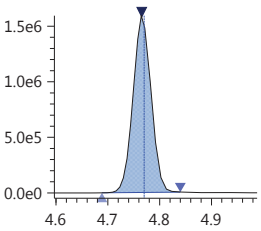
Q 467.80>423.00 (-) 1.59e6



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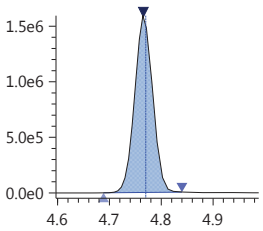

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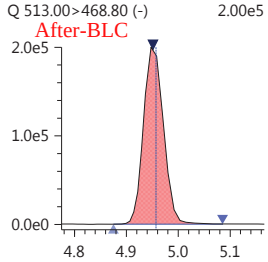
Q 513.00>468.80 (-) 2.00e5



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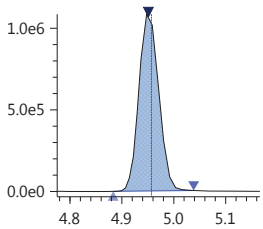
Q 514.80>469.95 (-) 1.09e6



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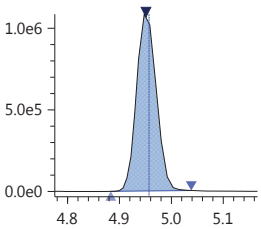

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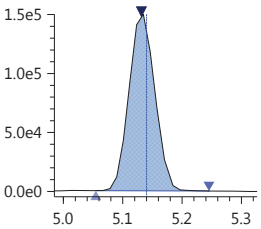
Q 563.00>518.90 (-) 1.50e5



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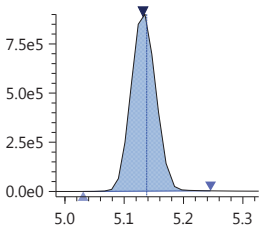

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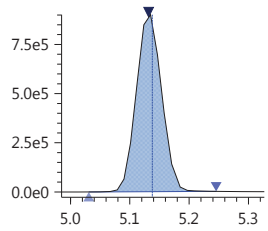

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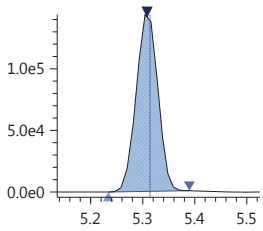

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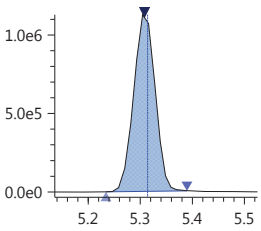
Q 614.80>569.95 (-) 1.13e6



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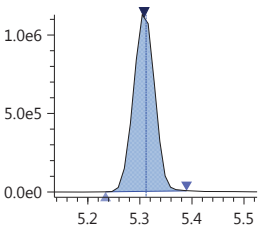

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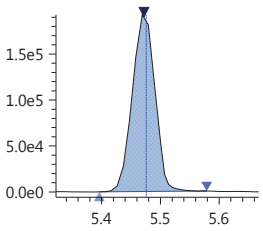
Conc 1.0364
RT 5.472 Area 517173
Q 663.00>618.90 (-) 1.93e5



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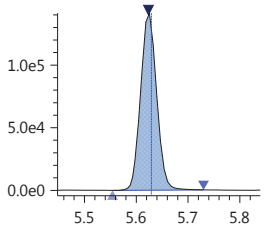

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Conc 5.2826
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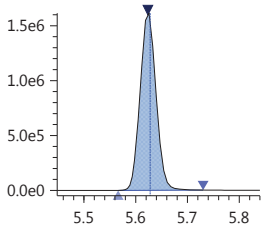
Q 714.70>669.90 (-) 1.61e6



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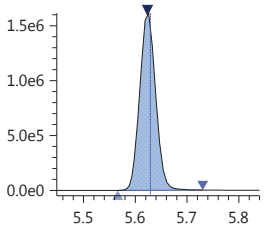

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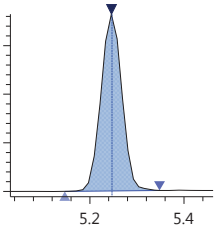
Q 498.20>78.00 (-) 7.29e4



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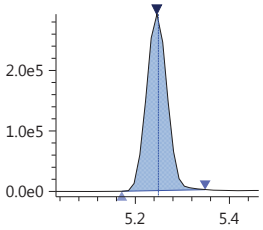

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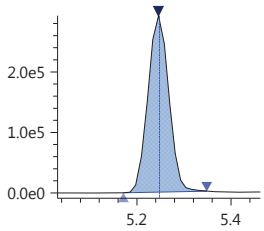

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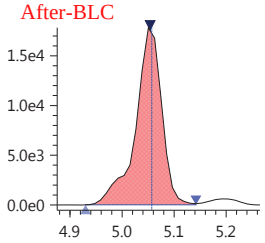
Q 570.20>419.00 (-) 1.78e4

After-BLC



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Conc 4.3181
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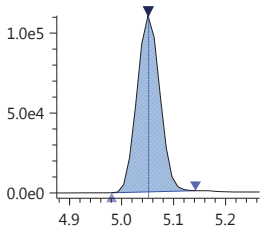
Q 572.80>419.05 (-) 1.11e5



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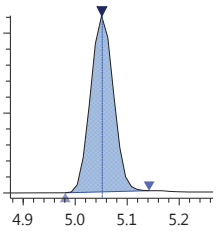

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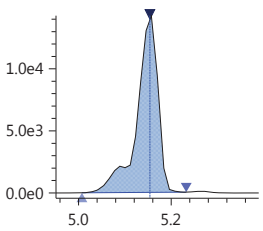

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Conc 4.8674
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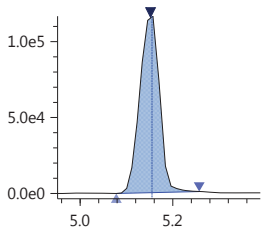
Q 588.80>419.00 (-) 1.17e5



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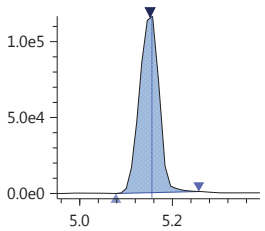

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Conc 1.1488
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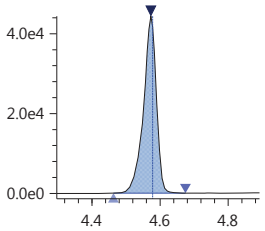
Q 427.00>407.00 (-) 4.44e4



6_2-FTS-13C
Conc 6.6997
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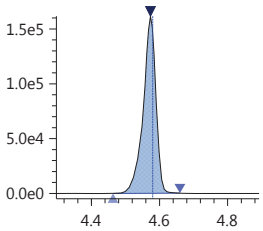
Q 428.90>409.00 (-) 1.62e5



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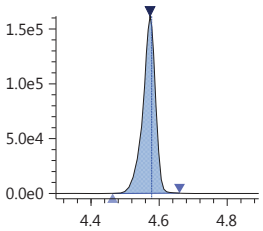
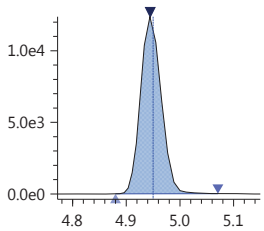
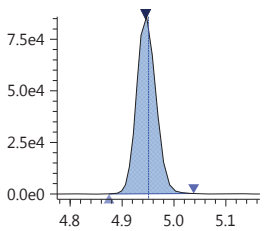


8_2-FTS_1
Conc 0.8364
RT 4.945 Area 33302
Q 527.10>506.90 (-) 1.24e4



8_2-FTS-13C
Conc 6.4250
RT 4.946 Area 227468
Q 528.80>509.00 (-) 8.59e4



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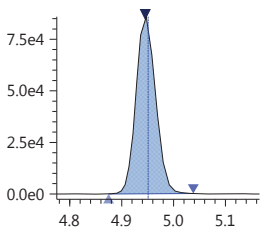
ISTD 528.80>509.00 (-) 8.59e4



Insight Report

Printed at 8/13/2019 10:42:21 AM

190812_020

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Date acquired: 8/12/2019 10:44:08 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b1\190812_020.lcd
Vial: 12 | Inj. Volume: 15.0000uL | Tray: 5

13C7-PFUnDA_IS
Conc 5.0000
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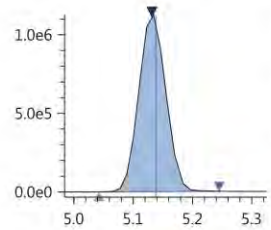
ISTD 570.00>525.00 (-) 1.13e6



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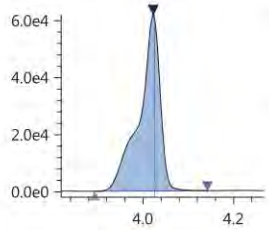

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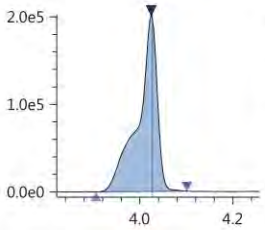

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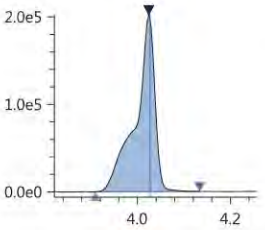

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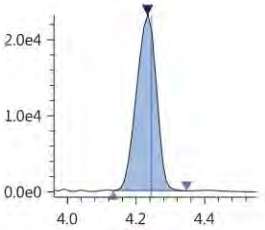

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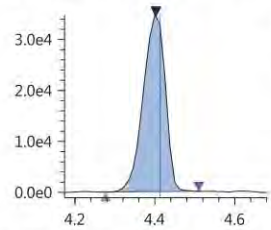

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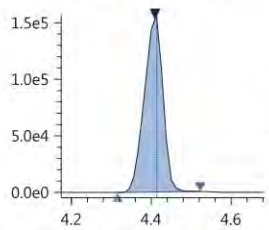

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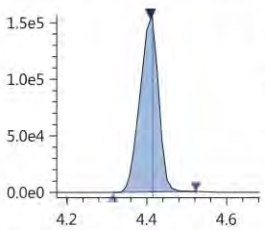

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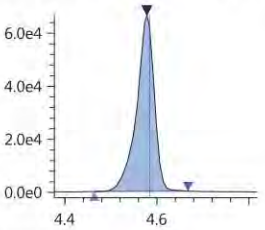

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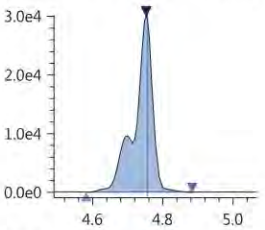

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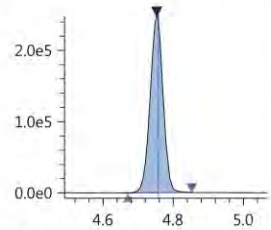

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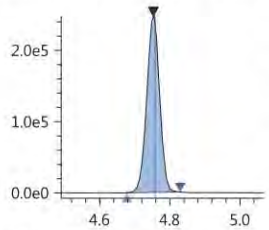

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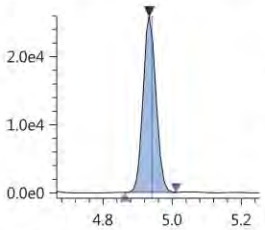

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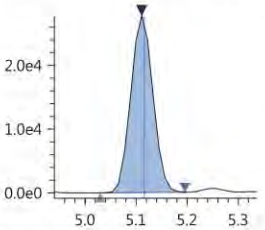

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Conc 2.0680
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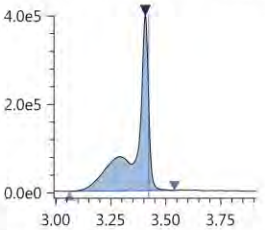

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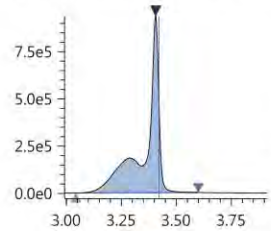

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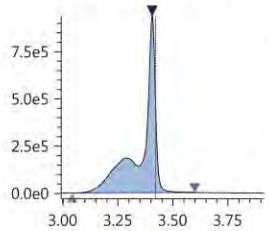

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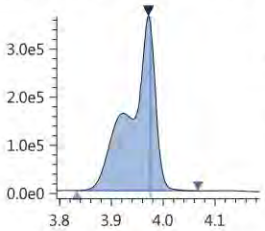

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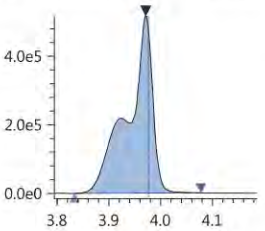

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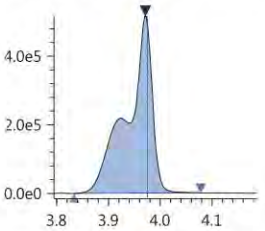

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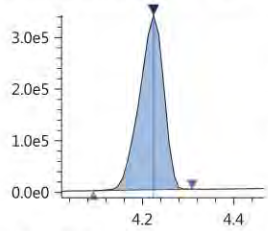

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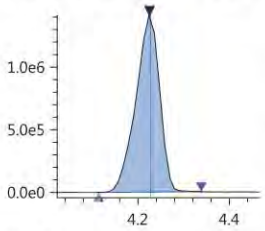

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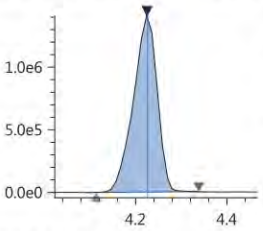

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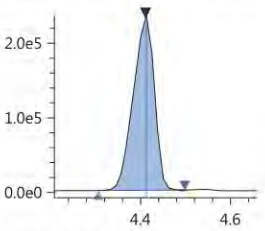

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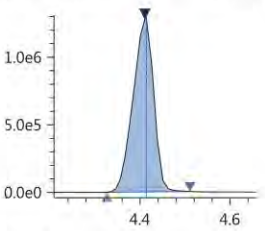

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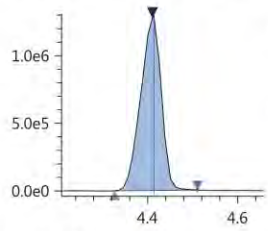

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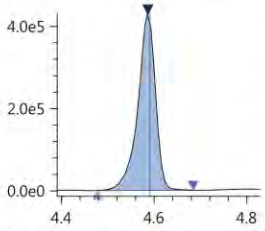

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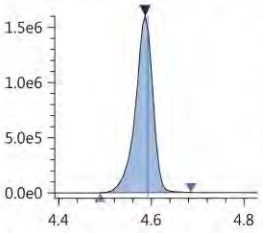

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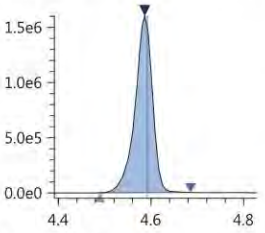

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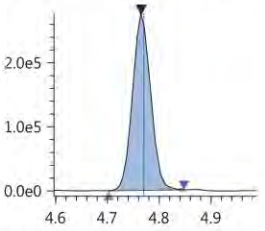

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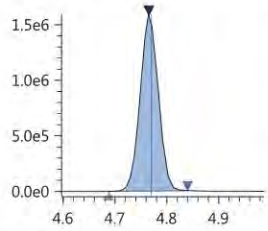

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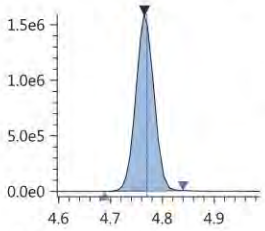

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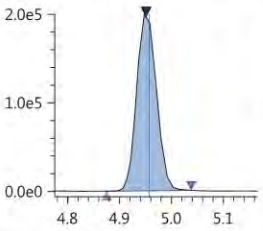
Q 513.00>468.80 (-) 2.00e5



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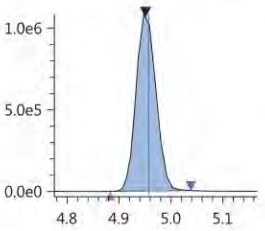

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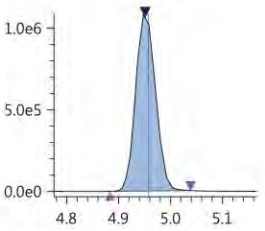

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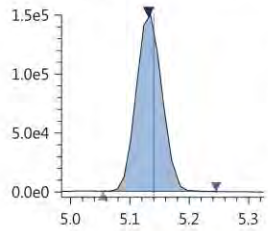

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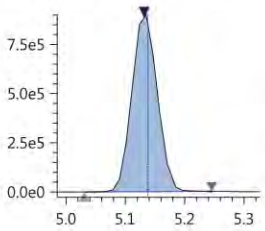

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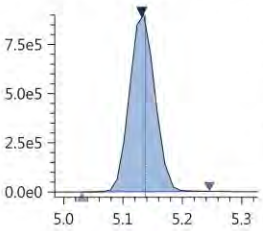

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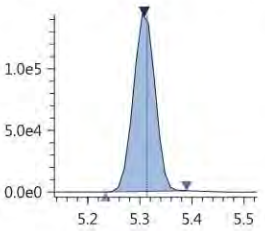

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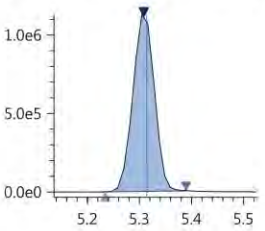

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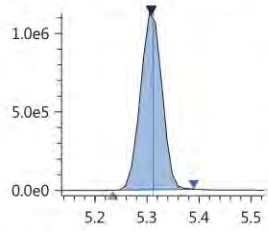
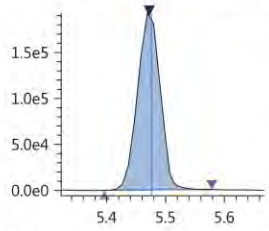
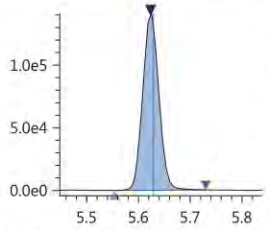


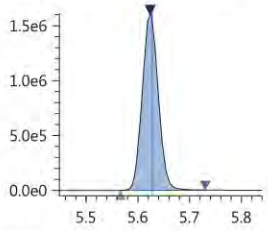
PFTrDA
Conc 1.0364
RT 5.472 Area 517173
Q 663.00>618.90 (-) 1.93e5



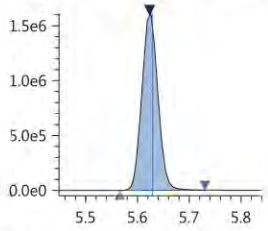
PFTeDA
Conc 1.1232
RT 5.624 Area 305149
Q 713.40>669.00 (-) 1.41e5



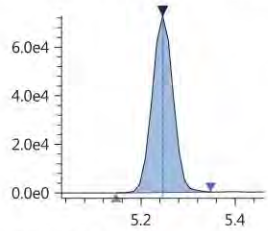
PFTeDA-13C
Conc 5.2826
RT 5.624 Area 3465161
Q 714.70>669.90 (-) 1.61e6



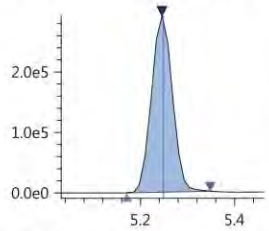
PFTeDA-13C_IS
Conc 5.0000
RT 5.624 Area 3465161
ISTD 714.70>669.90 (-) 1.61e6



FOSA
Conc 0.9919
RT 5.246 Area 225019
Q 498.20>78.00 (-) 7.29e4



FOSA-13C
Conc 3.3067
RT 5.246 Area 901190
Q 506.00>78.05 (-) 2.93e5



FOSA-13C_IS
Conc 5.0000
RT 5.246 Area 901190
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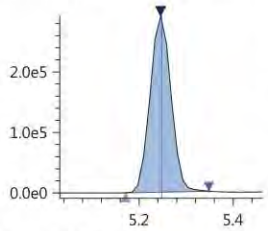

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Conc 1.1394
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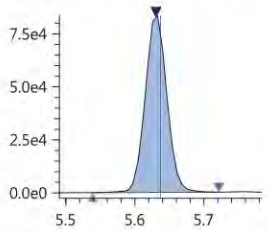
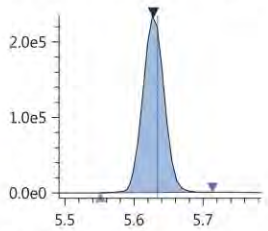


N-MeFOSA-d3
Conc 4.7534
RT 5.628 Area 508280
Q 514.90>168.90 (-) 2.35e5



N-MeFOSA-d3_IS
Conc 5.0000
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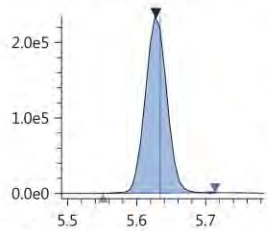

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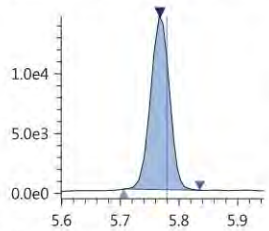

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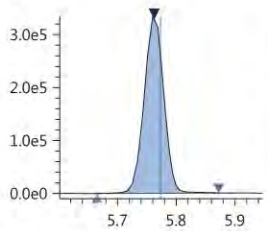
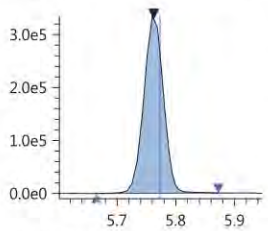
Conc 4.8968
RT 5.762 Area 779773
Q 530.90>169.15 (-) 3.35e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.762 Area 779773
ISTD 530.90>169.15 (-) 3.35e5



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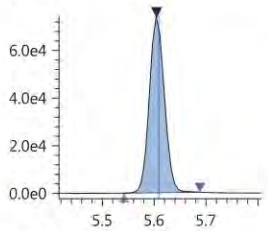
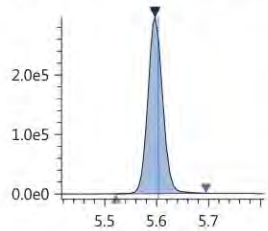
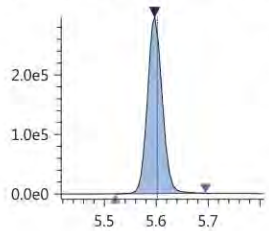
Conc 1.0066
RT 5.605 Area 148734
Q 616.00>59.00 (-) 7.44e4



N-MeFOSE-d7
Conc 4.4812
RT 5.597 Area 588633
Q 622.70>59.10 (-) 2.98e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.597 Area 588633
ISTD 622.70>59.10 (-) 2.98e5



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RT 5.735 Area 162539
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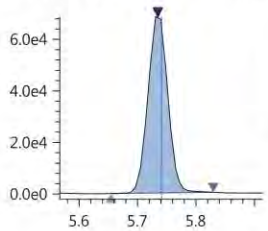
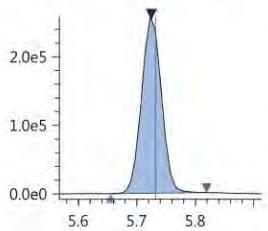


N-EtFOSE-d9
Conc 4.6156
RT 5.725 Area 610760
Q 638.70>59.10 (-) 2.58e5



N-EtFOSE-d9_IS
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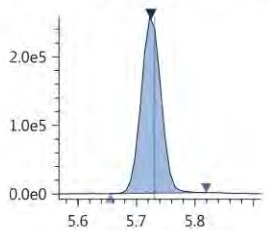
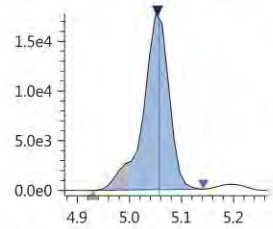
RT 5.725 Area 610760
ISTD 638.70>59.10 (-) 2.58e5



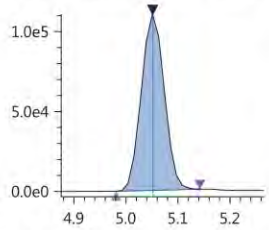
Insight Report

Printed at 8/13/2019 10:42:21 AM

N-MeFOSAA
Conc 1.2811
RT 5.054 Area 61442
Q 570.20>419.00 (-) 1.78e4



N-MeFOSAA-d3
Conc 4.3181
RT 5.051 Area 339627
Q 572.80>419.05 (-) 1.11e5



N-MeFOSAA-d3_IS
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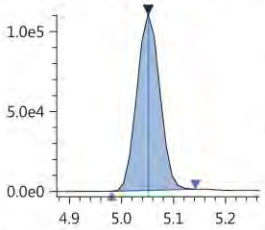
RT 5.051 Area 339627
ISTD 572.80>419.05 (-) 1.11e5



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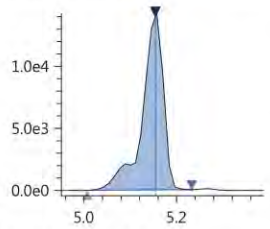
Q 584.20>418.95 (-) 1.43e4



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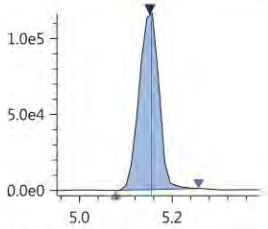
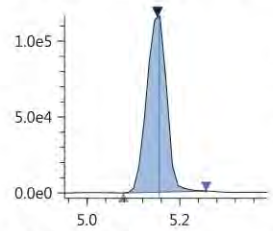
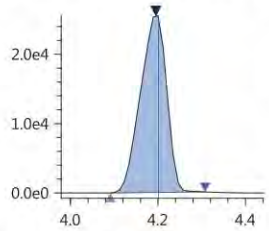
Conc 4.8674
RT 5.152 Area 345909
Q 588.80>419.00 (-) 1.17e5



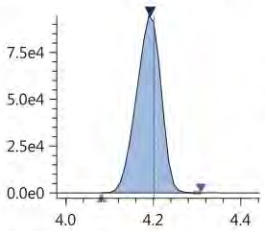
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.152 Area 345909
ISTD 588.80>419.00 (-) 1.17e5



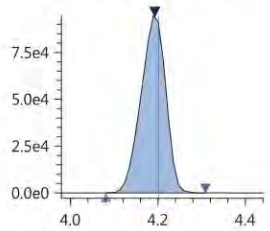
4_2-FTS_1
Conc 1.1441
RT 4.195 Area 106503
Q 327.00>307.05 (-) 2.56e4



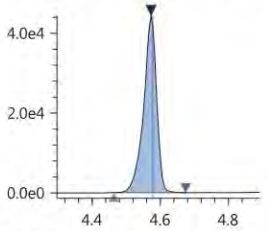
4_2-FTS-13C
Conc 5.6808
RT 4.193 Area 374340
Q 328.80>309.05 (-) 9.46e4



4_2-FTS-13C_IS
Conc 5.0000
RT 4.193 Area 374340
ISTD 328.80>309.05 (-) 9.46e4



6_2-FTS_1
Conc 1.1488
RT 4.573 Area 116249
Q 427.00>407.00 (-) 4.44e4



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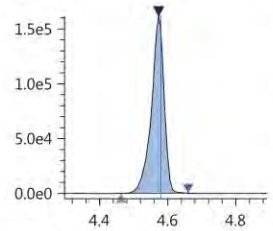
Conc 6.6997
RT 4.574 Area 416153
Q 428.90>409.00 (-) 1.62e5



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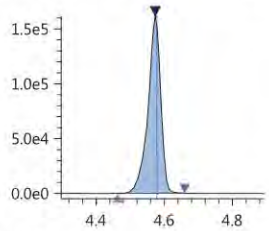
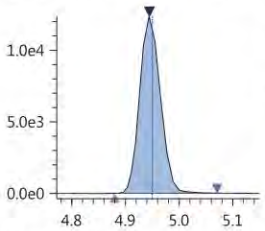
RT 4.574 Area 416153
ISTD 428.90>409.00 (-) 1.62e5



8_2-FTS_1
Conc 0.8364
RT 4.945 Area 33302
Q 527.10>506.90 (-) 1.24e4



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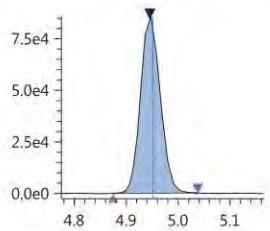
Conc 6.4250
RT 4.946 Area 227468
Q 528.80>509.00 (-) 8.59e4



8_2-FTS-13C_IS
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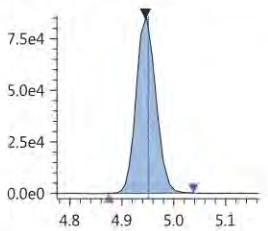
RT 4.946 Area 227468
ISTD 528.80>509.00 (-) 8.59e4



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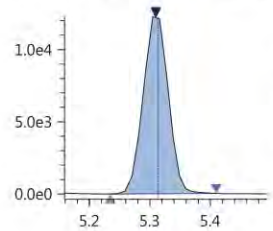
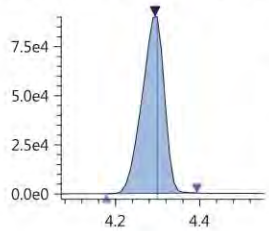
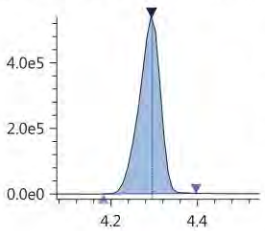
Conc 0.9876
RT 5.310 Area 35517
Q 627.00>606.95 (-) 1.23e4



HPFO_DA
Conc 0.9669
RT 4.294 Area 332902
Q 329.00>169.00 (-) 9.03e4



HFPO_DA-13C
Conc 5.1427
RT 4.294 Area 1848228
Q 332.00>286.80 (-) 5.41e5



HFPO_DA-13C_IS
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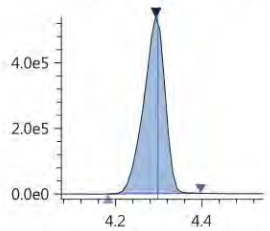
RT 4.294 Area 1848228
ISTD 332.00>286.80 (-) 5.41e5



1st EJD 08/09/19
2nd 08/12/19

Validation Report

Data File: J:\LCMS06\Data\190807_b8\190807_142
Lab ID: KQ1911078-02
RunType: CCB
Matrix: Water

Date Acquired: 8/8/19 16:07
Batch ID: 646328
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	Perfluorodecane sulfonic acid (PFDS)	136	70	130	Narrate high bias, ND
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	149	70	130	Narrate high bias, ND
	18O2-PFHxS	137	70	130	narrate native ok
	13C4-PFHpA	132	70	130	narrate native ok
	13C5-PFNA	144	70	130	narrate native ok
	13C2-PFDA	135	70	130	narrate native ok
	D5-EtFOSAA	142	70	130	narrate native ok
	Perfluorononane sulfonic acid (PFNS)	139	70	130	Narrate high bias, ND
Surrogates	13C4-PFOS	136	25	121	Narrate high bias, ND
	13C2-PFHxA	157	28	132	Narrate high bias, ND
	13C5-PFNA	151	20	127	Narrate high bias, ND
	13C2-PFDA	138	24	125	Narrate high bias, ND
	13C2-PFDoDA	137	19	122	Narrate high bias, ND
	13C8-FOSA	129	18	109	Narrate high bias, ND
	D5-EtFOSAA	130	12	126	Narrate high bias, < MRL
	13C3-HFPO-DA	140	22	135	Narrate high bias, ND

Primary Review: _____

Printed: 8/9/19 17:47
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st EJD 08/09/19
2nd 08/12/19

Quantitation Report

Data File:	J:\LCMS06\Data\190807_b8\190807_142	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 16:07	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1911078-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/27/19	**Receive Date:**	7/30/19

Analysis Lot:	646328	**Prep Lot:**		**Report Group:**	KQ1911078
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	20091

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.122	0.00	2903351	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
13C3-PFBS	4.013	0.00	707776	5.0906	102		20 - 109	Y
18O2-PFHxS	4.405	0.00	480420	6.0376	121		26 - 122	Y
13C4-PFOS	4.746	0.00	644866	6.8029	136	*	25 - 121	Y
13C4-PFBA	3.405	0.00	2754229	5.8374	117		27 - 124	Y
13C5-PFPeA	3.961	0.00	1809679	6.0962	122		27 - 138	Y
13C2-PFHxA	4.216		4575341	7.8396	157	*	28 - 132	Y
13C4-PFHpA	4.404	0.00	3885114	5.6799	114		19 - 139	Y
13C4-PFOA	4.577	0.00	4007444	6.4693	129		22 - 130	Y
13C5-PFNA	4.758	0.00	3713151	7.5454	151	*	20 - 127	Y
13C2-PFDA	4.942	0.00	2857664	6.9076	138	*	24 - 125	Y
13C2-PFUnDA	5.122	0.00	2203318	4.9139	98		22 - 125	Y
13C2-PFDoDA	5.298	0.00	3301362	6.8356	137	*	19 - 122	Y
13C2-PFTeDA	5.615	0.00	3046339	5.7252	115		13 - 124	Y
13C8-FOSA	5.238	0.00	1426776	6.4537	129	*	18 - 109	Y
D3-MeFOSAA	5.038	0.00	349086	5.4714	109		9 - 123	Y
D5-EtFOSAA	5.136	0.00	373961	6.4870	130	*	12 - 126	Y
13C2-4:2 FTS	4.184	-0.01	213417	3.9926	80		10 - 197	Y
13C2-6:2 FTS	4.565	0.00	333122	6.6113	132		10 - 226	Y
13C2-8:2 FTS	4.936	0.00	158837	5.5308	111		10 - 202	Y
13C3-HFPO-DA	4.285	0.00	2036286	6.9848	140	*	22 - 135	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?

1st EJD 08/09/19
2nd 08/12/19

Data File:	J:\LCMS06\Data\190807_b8\190807_142	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 16:07	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1911078-02	**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)	4.004	-0.01	635	0.0031	0.099	U	Y
Perfluoropentane sulfonic acid (PFPeS)	4.233		332	0.0039	0.12	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.398	-0.01	2102	0.0158	0.51	U	Y
Perfluoroheptane sulfonic acid (PFHpS)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.745	0.00	733	0.0065	0.21	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)	3.916	-0.05	99774	0.0158	0.51	U	Y
Perfluorohexanoic acid (PFHxA)	4.195	-0.02	48679	0.0255	0.82	U	Y
Perfluoroheptanoic acid (PFHpA)	4.389	-0.02	14283	0.0026	0.083	U	Y
Perfluorooctanoic acid (PFOA)	4.572	-0.01	30879	0.0146	0.47	J	Y
Perfluorononanoic acid (PFNA)	4.749	-0.01	12871	0.0071	0.23	U	Y
Perfluorodecanoic acid (PFDA)	4.932	-0.01	10173	0.0176	0.56	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.120	-0.01	13371	0.0048	0.15	U	Y
Perfluorododecanoic acid (PFDoDA)	5.293	-0.01	1741	-0.0055	0	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.455	-0.01	3682	-0.0017	0	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.615	0.00	35092	0.0175	0.56	U	Y
Perfluorooctane sulfonamide (FOSA)	5.232	-0.01	2109	0.0059	0.19	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.045	+0.00	702	0.0394	1.3	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.128	-0.01	344	0.0880	2.8	J	Y
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	4.200	+0.01	131	0.0025	0.080	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.561	-0.01	3392	0.0419	1.3	J	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.950	+0.01	33	0.0012	0.038	U	Y
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	4.282	-0.01	561	0.0015	0.048	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 8/9/2019 5:25:53 PM

190807_142

Sample ID: IB
Date acquired: 8/8/2019 4:07:04 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_142.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.122	2903351	2903351	1	5.0000	ng/mL	----
PFBS_1	M	4.004	635	708397	2	0.0031	ng/mL	----
PFBS-13C	Auto	4.013	707776	2903351	1	5.0906	ng/mL	----
PFBS-13C_IS	Auto	4.013	708397	708397	2	5.0000	ng/mL	----
PFPeS	M	4.233	332	708397	2	0.0039	ng/mL	----
PFHxS_1	Auto	4.398	2102	480420	3	0.0158	ng/mL	----
PFHxS-18O	Auto	4.405	480420	2903351	1	6.0376	ng/mL	----
PFHxS-18O_IS	Auto	4.405	480420	480420	3	5.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	480420	3	----	ng/mL	----
PFOS_1	Auto	4.745	733	640237	4	0.0065	ng/mL	----
PFOS-13C	Auto	4.746	644866	2903351	1	6.8029	ng/mL	----
PFOS-13C_IS	Auto	4.746	640237	640237	4	5.0000	ng/mL	----
PFNS	NI	----	----	640237	4	----	ng/mL	----
PFDS_1	ND(W/B)	----	----	640237	4	----	ng/mL	----
PFBA	ND(W/B)	----	----	2754229	5	----	ng/mL	----
PFBA-13C	Auto	3.405	2754229	2903351	1	5.8374	ng/mL	----
PFBA-13C_IS	Auto	3.405	2754229	2754229	5	5.0000	ng/mL	----
PFPeA	M	3.916	99774	1809679	6	0.0158	ng/mL	----
PFPeA-13C	Auto	3.961	1809679	2903351	1	6.0962	ng/mL	----
PFPeA-13C_IS	Auto	3.961	1809679	1809679	6	5.0000	ng/mL	----
PFHxA	M	4.195	48679	4575341	7	0.0255	ng/mL	----
PFHxA-13C	Auto	4.216	4575341	2903351	1	7.8396	ng/mL	----
PFHxA-13C_IS	Auto	4.216	4575341	4575341	7	5.0000	ng/mL	----
PFHpA	M	4.389	14283	3885114	8	0.0026	ng/mL	----
PFHpA-13C	Auto	4.404	3885114	2903351	1	5.6799	ng/mL	----
PFHpA-13C_IS	Auto	4.404	3885114	3885114	8	5.0000	ng/mL	----
PFOA	M	4.572	30879	4007444	9	0.0146	ng/mL	----
PFOA-13C	Auto	4.577	4007444	2903351	1	6.4693	ng/mL	----
PFOA-13C_IS	Auto	4.577	4007444	4007444	9	5.0000	ng/mL	----
PFNA	M	4.749	12871	3713151	10	0.0071	ng/mL	----
PFNA-13C	Auto	4.758	3713151	2903351	1	7.5454	ng/mL	----
PFNA-13C_IS	Auto	4.758	3713151	3713151	10	5.0000	ng/mL	----
PFDA	M	4.932	10173	2857664	11	0.0176	ng/mL	----
PFDA-13C	Auto	4.942	2857664	2903351	1	6.9076	ng/mL	----
PFDA-13C_IS	Auto	4.942	2857664	2857664	11	5.0000	ng/mL	----
PFUnA	Auto	5.120	13371	2203318	12	0.0048	ng/mL	----
PFUnA-13C	Auto	5.122	2203318	2903351	1	4.9139	ng/mL	----
PFUnA-13C_IS	Auto	5.122	2203318	2203318	12	5.0000	ng/mL	----
PFDoA	M	5.293	1741	3301362	13	-0.0055	ng/mL	----
PFDoA-13C	Auto	5.298	3301362	2903351	1	6.8356	ng/mL	----
PFDoA-13C_IS	Auto	5.298	3301362	3301362	13	5.0000	ng/mL	----
PFTrDA	M	5.455	3682	3046339	14	-0.0017	ng/mL	----
PFTeDA	M	5.615	35092	3046339	14	0.0175	ng/mL	----
PFTeDA-13C	Auto	5.615	3046339	2903351	1	5.7252	ng/mL	----
PFTeDA-13C_IS	Auto	5.615	3046339	3046339	14	5.0000	ng/mL	----
FOSA	Auto	5.232	2109	1426776	16	0.0059	ng/mL	----
FOSA-13C	Auto	5.238	1426776	2903351	1	6.4537	ng/mL	----
FOSA-13C_IS	Auto	5.238	1426776	1426776	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.045	702	349086	21	0.0394	ng/mL	----
N-MeFOSAA-d3	Auto	5.038	349086	2903351	1	5.4714	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.038	349086	349086	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.128	344	373961	22	0.0880	ng/mL	----
N-EtFOSAA-d5	Auto	5.136	373961	2903351	1	6.4870	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.136	373961	373961	22	5.0000	ng/mL	----
4_2-FTS_1	M	4.200	131	213417	23	0.0025	ng/mL	----
4_2-FTS-13C	Auto	4.184	213417	2903351	1	3.9926	ng/mL	----
4_2-FTS-13C_IS	Auto	4.184	213417	213417	23	5.0000	ng/mL	----
6_2-FTS_1	M	4.561	3392	333122	24	0.0419	ng/mL	----
6_2-FTS-13C	Auto	4.565	333122	2903351	1	6.6113	ng/mL	----
6_2-FTS-13C_IS	Auto	4.565	333122	333122	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.950	33	158837	25	0.0012	ng/mL	----
8_2-FTS-13C	Auto	4.936	158837	2903351	1	5.5308	ng/mL	----
8_2-FTS-13C_IS	Auto	4.936	158837	158837	25	5.0000	ng/mL	----
HPFO_DA	Auto	4.282	561	2036286	26	0.0015	ng/mL	----
HFPO_DA-13C	Auto	4.285	2036286	2903351	1	6.9848	ng/mL	----
HFPO_DA-13C_IS	Auto	4.285	2036286	2036286	26	5.0000	ng/mL	----

Insight Report

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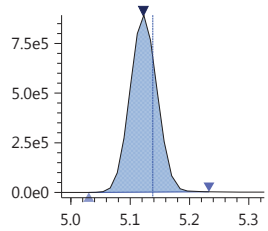
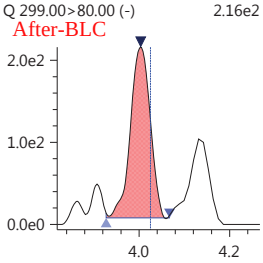
13C7-PFUnDA_IS
Conc 5.0000
RT 5.122 Area 2903351
ISTD 570.00>525.00 (-) 8.93e5



PFBS_1
Conc 0.0031
RT 4.004 Area 635
Q 299.00>80.00 (-) 2.16e2



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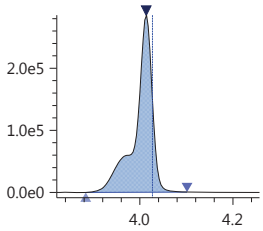
Conc 5.0906
RT 4.013 Area 707776
Q 301.80>80.00 (-) 2.86e5



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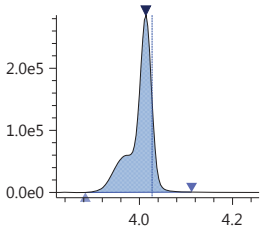
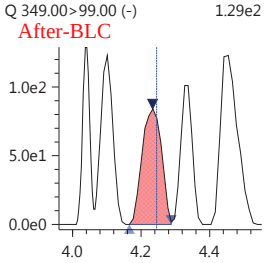


PFPeS
Conc 0.0039
RT 4.233 Area 332
Q 349.00>99.00 (-) 1.29e2



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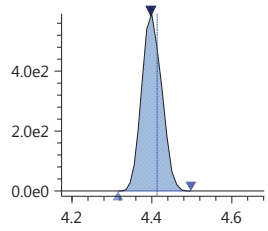
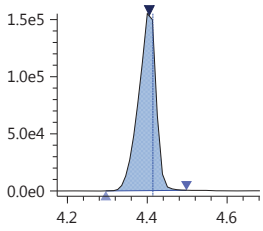
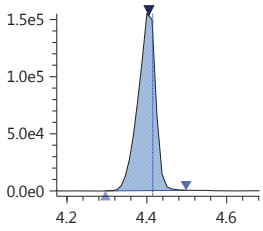
Conc 0.0158
RT 4.398 Area 2102
Q 399.00>80.00 (-) 5.92e2



PFHxS-18O
Conc 6.0376
RT 4.405 Area 480420
Q 402.70>84.05 (-) 1.55e5



PFHxS-18O_IS
Conc 5.0000
RT 4.405 Area 480420
ISTD 402.70>84.05 (-) 1.55e5



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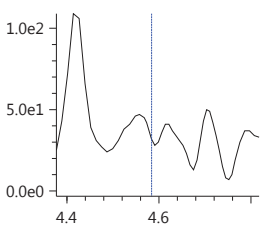
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 1.09e2



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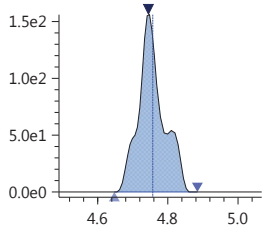
Conc 0.0065
RT 4.745 Area 733
Q 499.00>80.00 (-) 1.56e2



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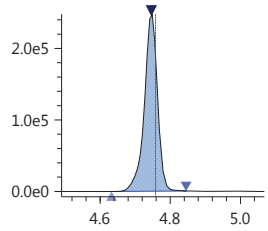
Conc 6.8029
RT 4.746 Area 644866
Q 502.80>80.05 (-) 2.48e5



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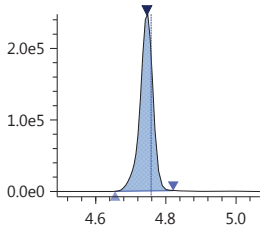
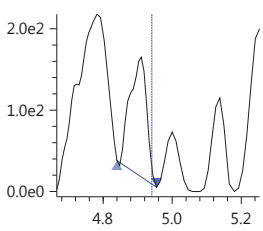
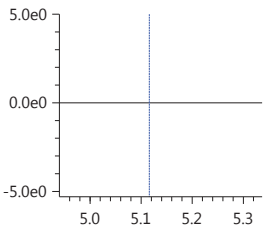
ISTD 502.80>80.05 (-) 2.48e5



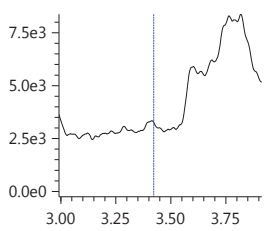
PFNS
Conc ----
RT ---- Area ----
Q 549.00>99.00 (-) 2.18e2



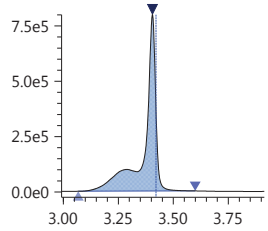
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



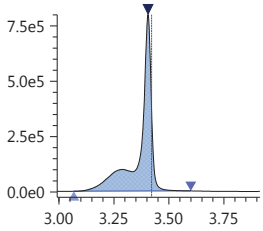
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 8.38e3



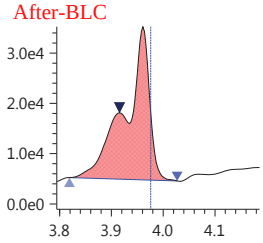
PFBA-13C
Conc 5.8374
RT 3.405 Area 2754229
Q 216.90>172.15 (-) 8.01e5



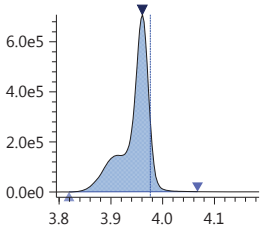
PFBA-13C_IS
Conc 5.0000
RT 3.405 Area 2754229
ISTD 216.90>172.15 (-) 8.01e5



PFPeA
Conc 0.0158
RT 3.916 Area 99774
Q 263.05>219.10 (-) 3.52e4



PFPeA-13C
Conc 6.0962
RT 3.961 Area 1809679
Q 267.90>223.00 (-) 7.08e5



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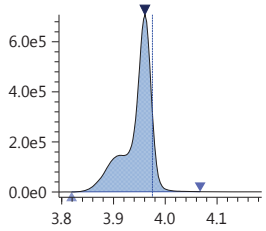

Insight Report

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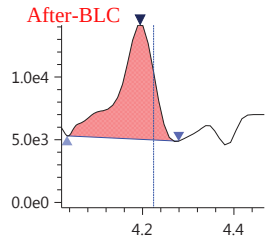
PFHxA
Conc 0.0255
RT 4.195 Area 48679
Q 313.00>269.00 (-) 1.41e4



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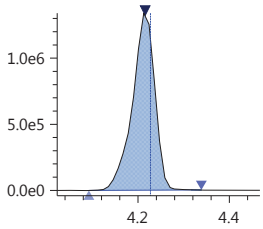
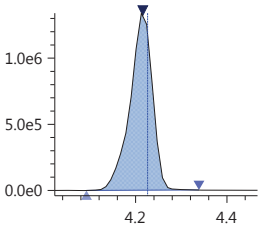
RT 4.216 Area 4575341
Q 314.90>270.10 (-) 1.34e6



PFHxA-13C_IS
Conc 5.0000
RT 4.216 Area 4575341
ISTD 314.90>270.10 (-) 1.34e6



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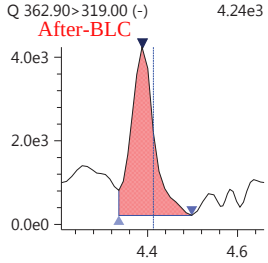
Conc 0.0026
RT 4.389 Area 14283
Q 362.90>319.00 (-) 4.24e3



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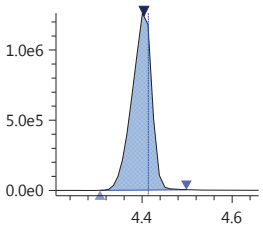
Conc 5.6799
RT 4.404 Area 3885114
Q 366.90>322.10 (-) 1.26e6



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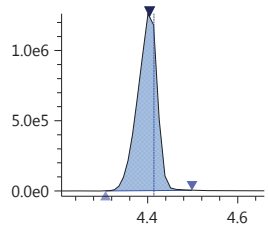
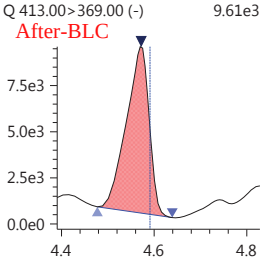
RT 4.404 Area 3885114
ISTD 366.90>322.10 (-) 1.26e6



PFOA
Conc 0.0146
RT 4.572 Area 30879
Q 413.00>369.00 (-) 9.61e3



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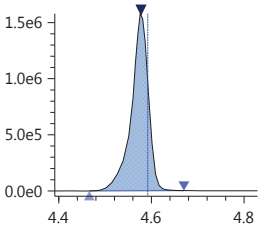
Conc 6.4693
RT 4.577 Area 4007444
Q 416.80>372.05 (-) 1.58e6



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RT 4.577 Area 4007444
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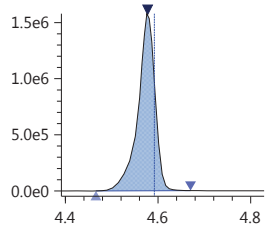

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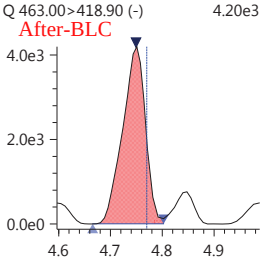
Conc 0.0071
RT 4.749 Area 12871
Q 463.00>418.90 (-) 4.20e3



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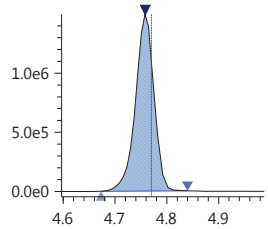
Q 467.80>423.00 (-) 1.50e6



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Conc 5.0000
RT 4.758 Area 3713151
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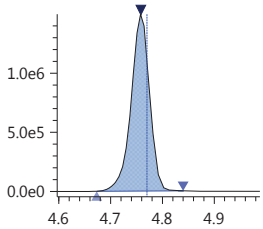

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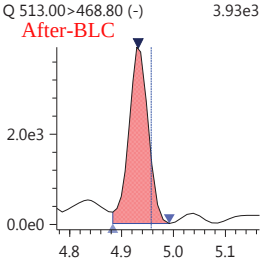
Conc 0.0176
RT 4.932 Area 10173
Q 513.00>468.80 (-) 3.93e3



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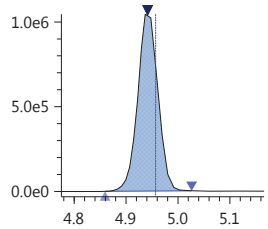
RT 4.942 Area 2857664
Q 514.80>469.95 (-) 1.05e6



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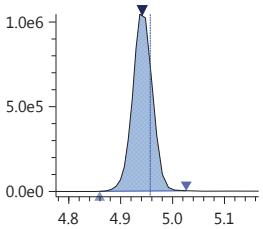

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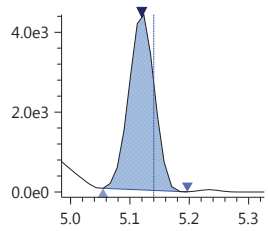
Conc 0.0048
RT 5.120 Area 13371
Q 563.00>518.90 (-) 4.44e3



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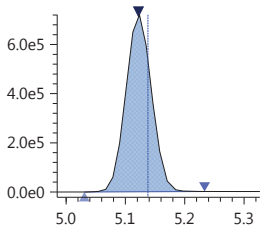
Conc 4.9139
RT 5.122 Area 2203318
Q 564.80>519.95 (-) 7.21e5



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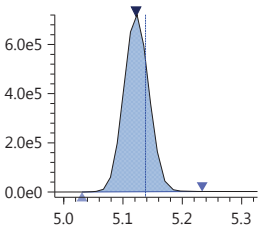
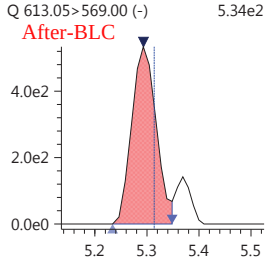
ISTD 564.80>519.95 (-) 7.21e5



PFDoA
Conc -0.0055
RT 5.293 Area 1741
Q 613.05>569.00 (-) 5.34e2



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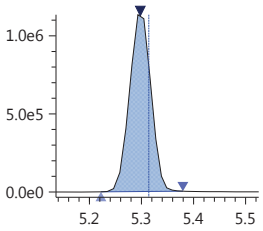
Q 614.80>569.95 (-) 1.14e6



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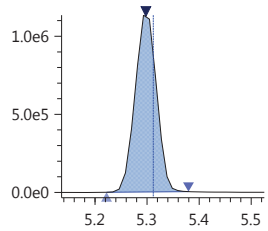
PFDoA-13C_IS
Conc 5.0000
RT 5.298 Area 3301362
ISTD 614.80>569.95 (-) 1.14e6



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Conc -0.0017
RT 5.455 Area 3682
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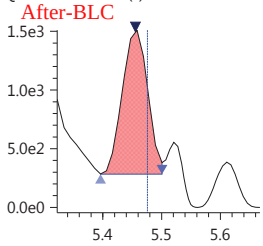

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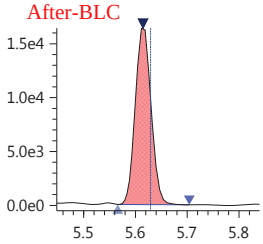
Q 713.40>669.00 (-) 1.64e4



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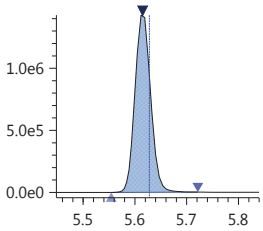
Q 714.70>669.90 (-) 1.43e6



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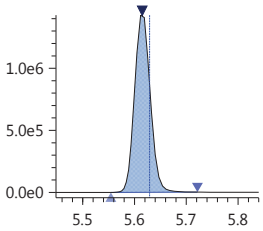

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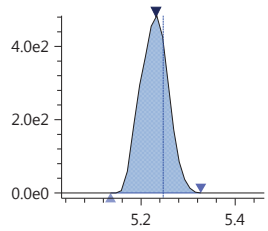
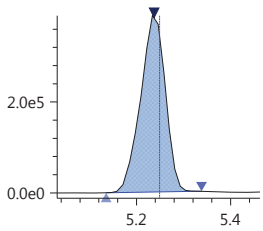
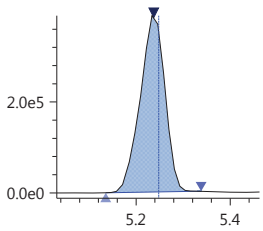
RT 5.232 Area 2109
Q 498.20>78.00 (-) 4.84e2



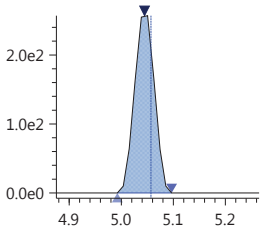
FOSA-13C
Conc 6.4537
RT 5.238 Area 1426776
Q 506.00>78.05 (-) 3.90e5



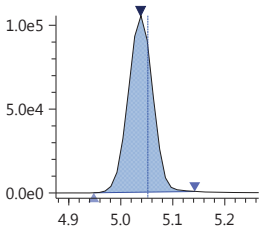
FOSA-13C_IS
Conc 5.0000
RT 5.238 Area 1426776
ISTD 506.00>78.05 (-) 3.90e5



N-MeFOSAA
Conc 0.0394
RT 5.045 Area 702
Q 570.20>419.00 (-) 2.57e2



N-MeFOSAA-d3
Conc 5.4714
RT 5.038 Area 349086
Q 572.80>419.05 (-) 1.06e5



N-MeFOSAA-d3_IS
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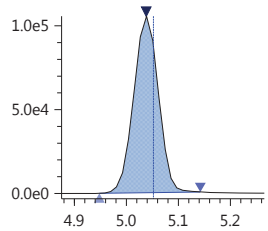
ISTD 572.80>419.05 (-) 1.06e5



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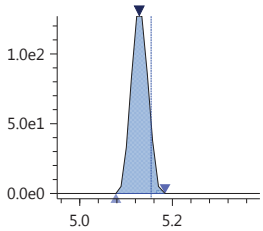
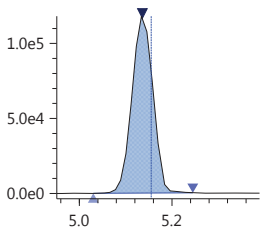
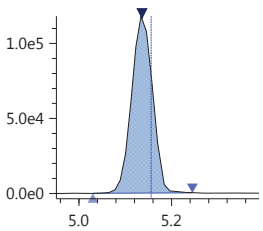
Conc 0.0880
RT 5.128 Area 344
Q 584.20>418.95 (-) 1.27e2



N-EtFOSAA-d5
Conc 6.4870
RT 5.136 Area 373961
Q 588.80>419.00 (-) 1.18e5



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.136 Area 373961
ISTD 588.80>419.00 (-) 1.18e5



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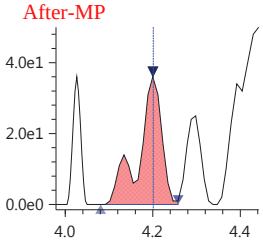
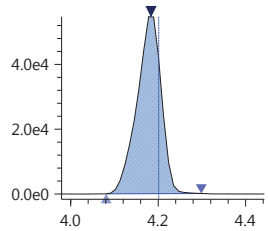
Conc 0.0025
RT 4.200 Area 131
Q 327.00>307.05 (-) 5.00e1



4_2-FTS-13C
Conc 3.9926
RT 4.184 Area 213417
Q 328.80>309.05 (-) 5.47e4



4_2-FTS-13C_IS
Conc 5.0000
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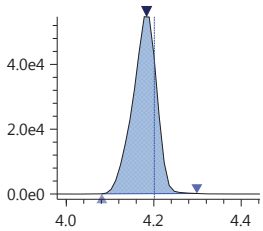
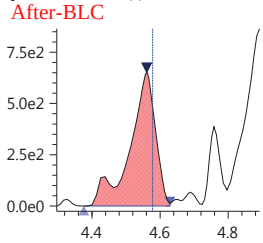
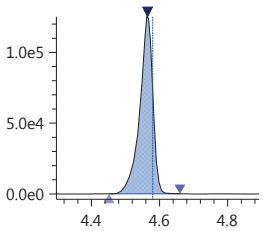


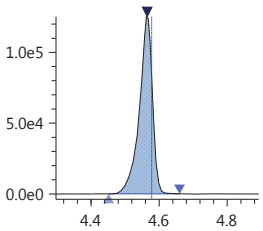
6_2-FTS_1
Conc 0.0419
RT 4.561 Area 3392
Q 427.00>407.00 (-) 8.65e2



6_2-FTS-13C
Conc 6.6113
RT 4.565 Area 333122
Q 428.90>409.00 (-) 1.25e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.565 Area 333122
ISTD 428.90>409.00 (-) 1.25e5



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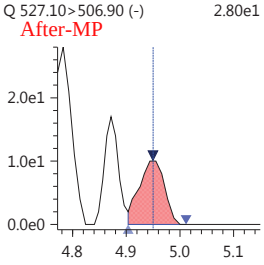
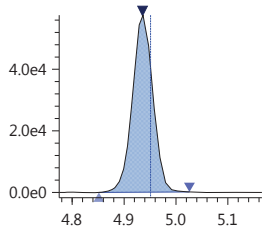
8_2-FTS_1

Conc 0.0012
RT 4.950 Area 33
Q 527.10>506.90 (-) 2.80e1



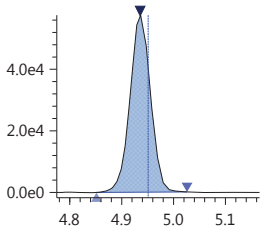
8_2-FTS-13C

Conc 5.5308
RT 4.936 Area 158837
Q 528.80>509.00 (-) 5.76e4



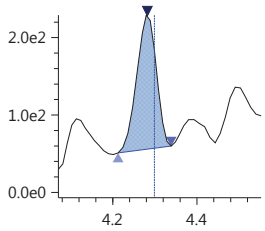
8_2-FTS-13C_IS

Conc 5.0000
RT 4.936 Area 158837
ISTD 528.80>509.00 (-) 5.76e4



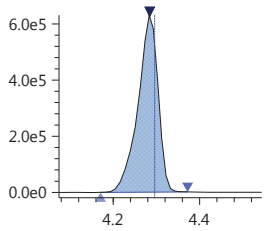
HPFO_DA

Conc 0.0015
RT 4.282 Area 561
Q 329.00>169.00 (-) 2.29e2



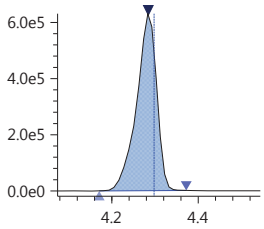
HFPO_DA-13C

Conc 6.9848
RT 4.285 Area 2036286
Q 332.00>286.80 (-) 6.31e5



HFPO_DA-13C_IS

Conc 5.0000
RT 4.285 Area 2036286
ISTD 332.00>286.80 (-) 6.31e5



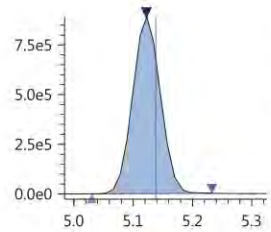
Insight Report

Printed at 8/9/2019 4:33:51 PM

190807_142

Sample ID: IB
Date acquired: 8/8/2019 4:07:04 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_142.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 1

13C7-PFUnDA_IS
Conc 5.0000
RT 5.122 Area 2903351
ISTD 570.00>525.00 (-) 8.93e5



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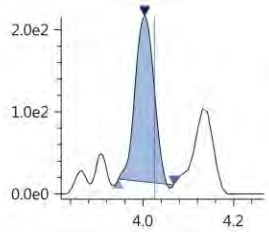
Q 299.00>80.00 (-) 2.16e2



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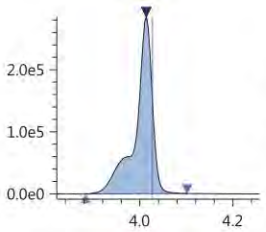

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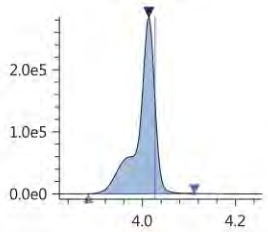

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Conc 0.0067
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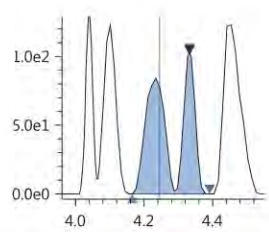
Q 349.00>99.00 (-) 1.29e2



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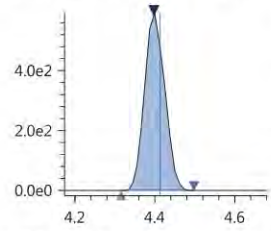

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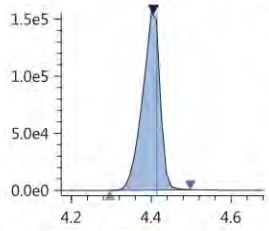
Q 402.70>84.05 (-) 1.55e5



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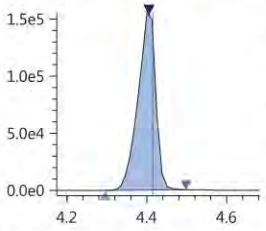
Conc 5.0000
RT 4.405 Area 480420
ISTD 402.70>84.05 (-) 1.55e5



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Conc ----
RT ---- Area ----
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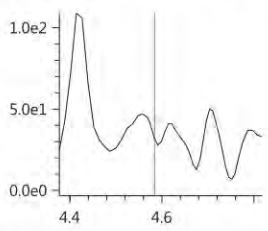

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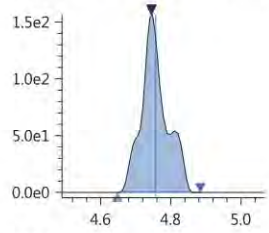

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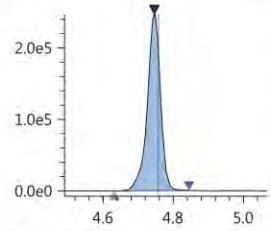

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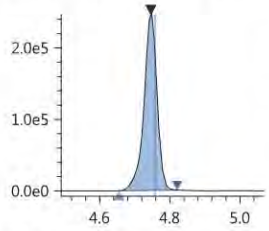

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RT 4.909 Area 489
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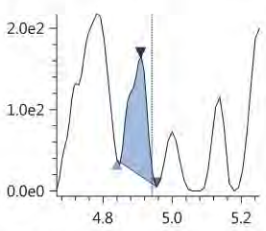

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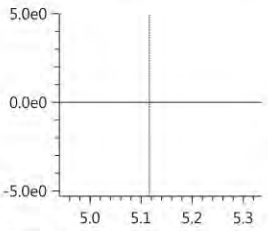
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



PFBA
Conc ----
RT ---- Area ----
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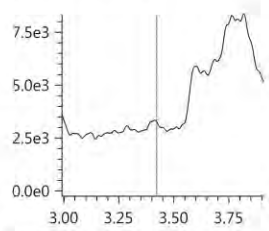

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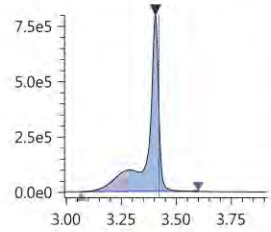
RT 3.405 Area 2754229
Q 216.90>172.15 (-) 8.01e5



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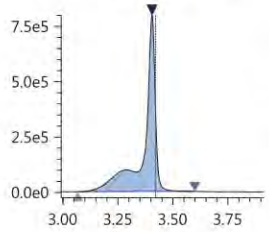

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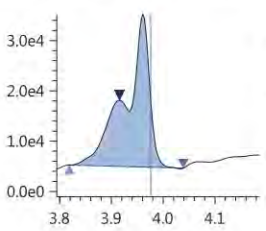

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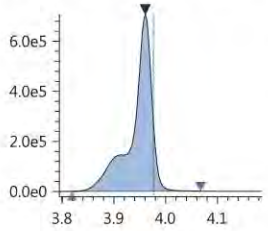

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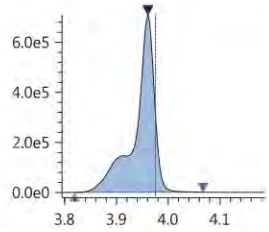

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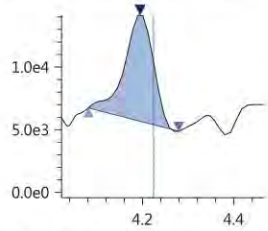

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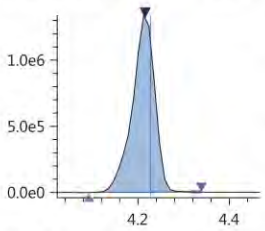
RT 4.216 Area 4575341
Q 314.90>270.10 (-) 1.34e6



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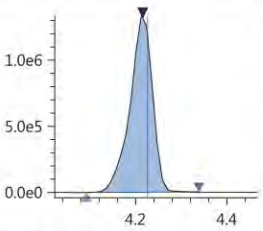

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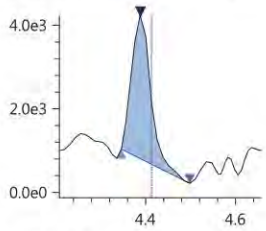

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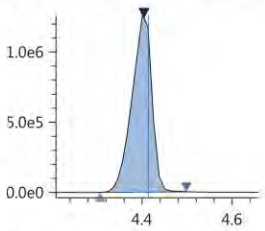

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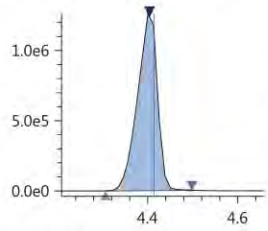

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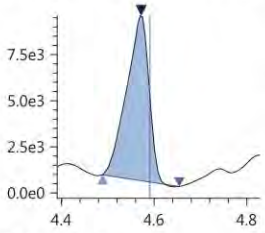

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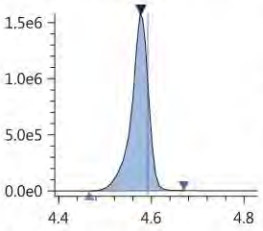

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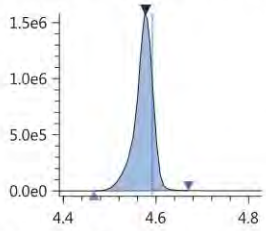

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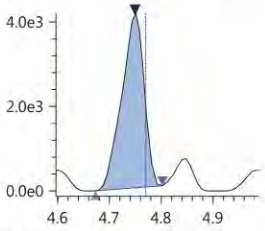

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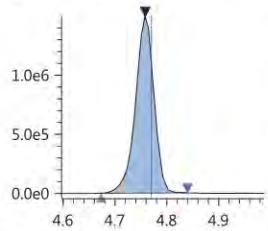

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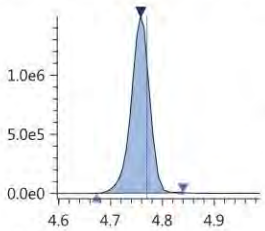

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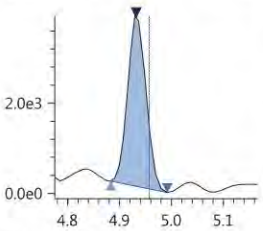

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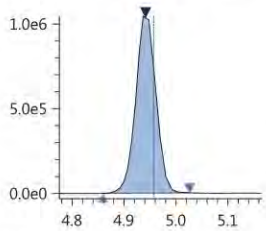

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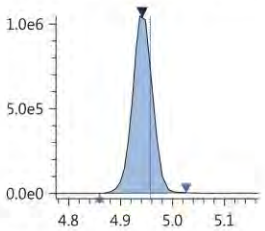

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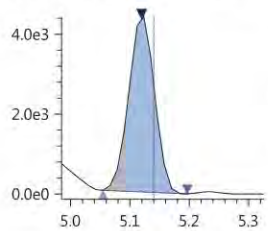

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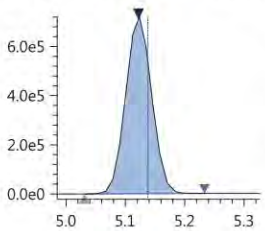
Q 564.80>519.95 (-) 7.21e5



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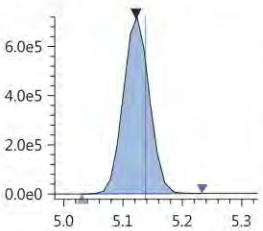

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Conc -0.0061
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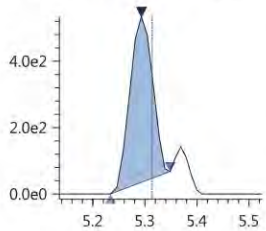
Q 613.05>569.00 (-) 5.34e2



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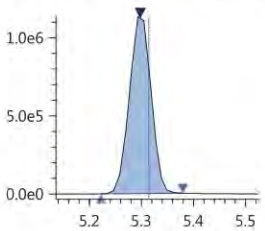

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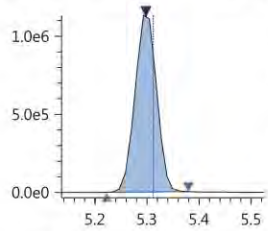

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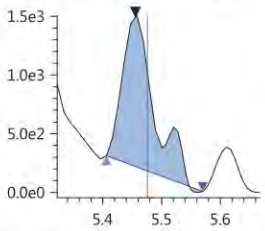

PFTeDA
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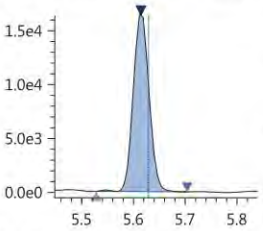
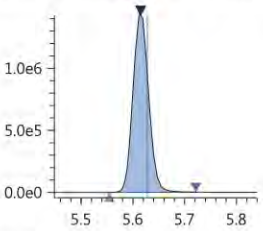
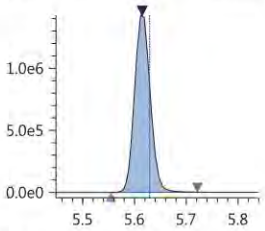
RT 5.615 Area 35250
Q 713.40>669.00 (-) 1.64e4



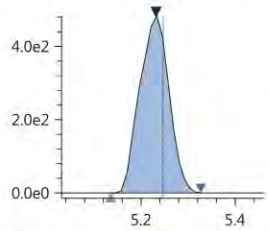
PFTeDA-13C
Conc 5.7252
RT 5.615 Area 3046339
Q 714.70>669.90 (-) 1.43e6



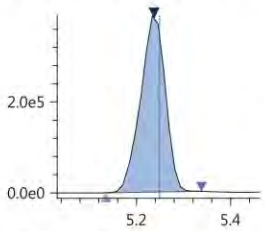
PFTeDA-13C_IS
Conc 5.0000
RT 5.615 Area 3046339
ISTD 714.70>669.90 (-) 1.43e6



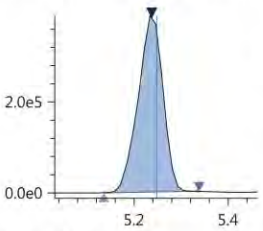
FOSA
Conc 0.0059
RT 5.232 Area 2109
Q 498.20>78.00 (-) 4.84e2



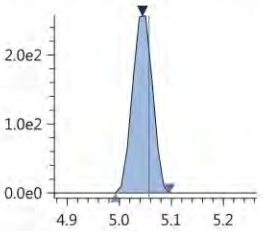
FOSA-13C
Conc 6.4537
RT 5.238 Area 1426776
Q 506.00>78.05 (-) 3.90e5



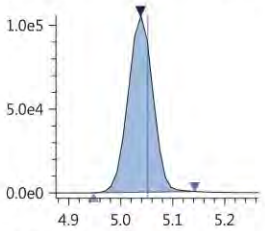
FOSA-13C_IS
Conc 5.0000
RT 5.238 Area 1426776
ISTD 506.00>78.05 (-) 3.90e5



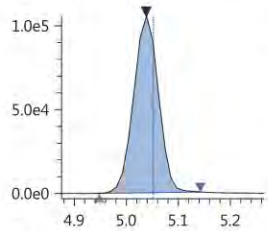
N-MeFOSAA
Conc 0.0394
RT 5.045 Area 702
Q 570.20>419.00 (-) 2.57e2



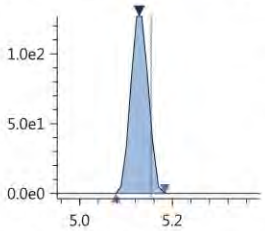
N-MeFOSAA-d3
Conc 5.4714
RT 5.038 Area 349086
Q 572.80>419.05 (-) 1.06e5



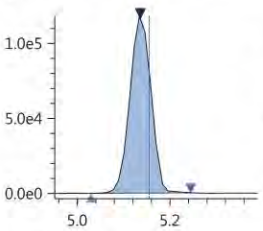
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.038 Area 349086
ISTD 572.80>419.05 (-) 1.06e5



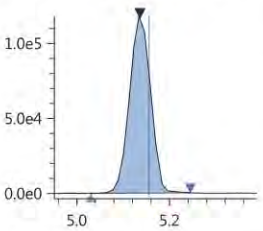
N-EtFOSAA
Conc 0.0880
RT 5.128 Area 344
Q 584.20>418.95 (-) 1.27e2



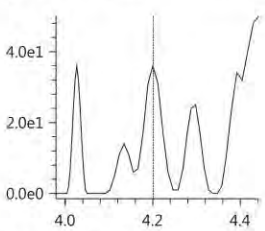
N-EtFOSAA-d5
Conc 6.4870
RT 5.136 Area 373961
Q 588.80>419.00 (-) 1.18e5



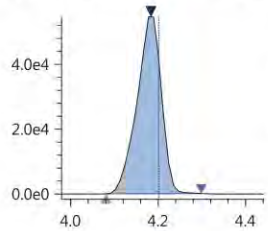
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.136 Area 373961
ISTD 588.80>419.00 (-) 1.18e5



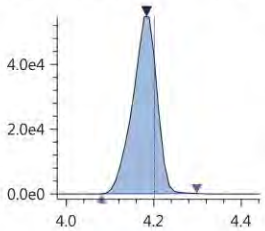
4_2-FTS_1
Conc ----
RT ---- Area ----
Q 327.00>307.05 (-) 5.00e1



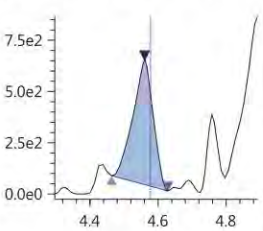
4_2-FTS-13C
Conc 3.9926
RT 4.184 Area 213417
Q 328.80>309.05 (-) 5.47e4



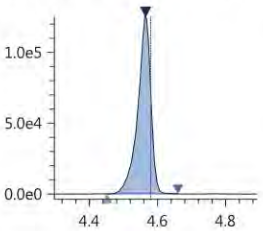
4_2-FTS-13C_IS
Conc 5.0000
RT 4.184 Area 213417
ISTD 328.80>309.05 (-) 5.47e4



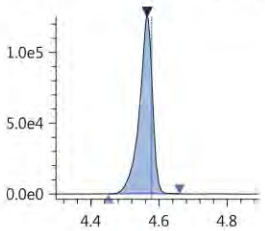
6_2-FTS_1
Conc 0.0309
RT 4.561 Area 2503
Q 427.00>407.00 (-) 8.65e2



6_2-FTS-13C
Conc 6.6113
RT 4.565 Area 333122
Q 428.90>409.00 (-) 1.25e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.565 Area 333122
ISTD 428.90>409.00 (-) 1.25e5



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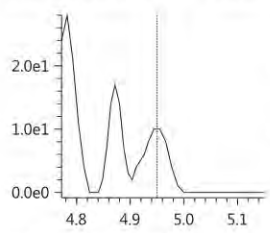
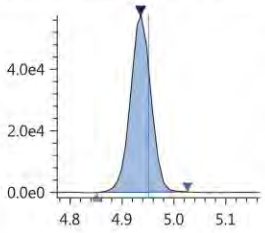
8_2-FTS_1

Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 2.80e1



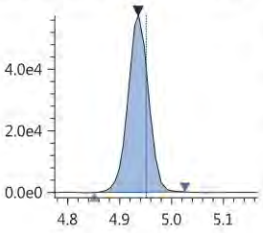
8_2-FTS-13C

Conc 5.5308
RT 4.936 Area 158837
Q 528.80>509.00 (-) 5.76e4



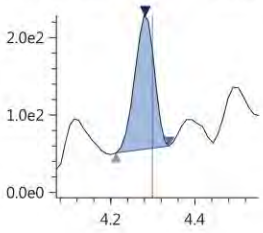
8_2-FTS-13C_IS

Conc 5.0000
RT 4.936 Area 158837
ISTD 528.80>509.00 (-) 5.76e4



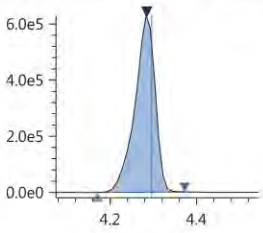
HPFO_DA

Conc 0.0015
RT 4.282 Area 561
Q 329.00>169.00 (-) 2.29e2



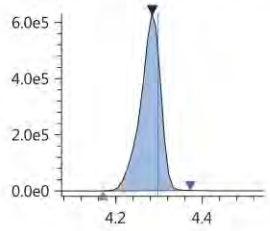
HFPO_DA-13C

Conc 6.9848
RT 4.285 Area 2036286
Q 332.00>286.80 (-) 6.31e5



HFPO_DA-13C_IS

Conc 5.0000
RT 4.285 Area 2036286
ISTD 332.00>286.80 (-) 6.31e5



1st EJD 08/13/19
2nd 08/13/19

Validation Report

Data File: J:\LCMS06\Data\190812_b1\190812_008
Lab ID: KQ1911320-02
RunType: CCB
Matrix: Water

Date Acquired: 8/12/19 20:38
Batch ID: 646922
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	Perfluoroheptane sulfonic acid (PFHpS)	138	70	130	Narrate high bias, ND
	Perfluorononane sulfonic acid (PFNS)	172	70	130	Narrate high bias, ND
	Perfluorodecane sulfonic acid (PFDS)	168	70	130	Narrate high bias, ND
	13C2-PFDA	144	70	130	Narrate high bias, ND
	13C2-PFDoDA	145	70	130	Narrate high bias, ND
	D3-MeFOSAA	140	70	130	Narrate high bias, ND
	D5-EtFOSAA	131	70	130	Narrate high bias, ND
	13C2-8:2 FTS	185	70	130	Narrate native ok
Surrogates	13C2-PFHxA	139	28	132	Narrate high bias, ND
	13C5-PFNA	131	20	127	Narrate high bias, ND
	13C2-PFDA	168	24	125	Narrate high bias, ND
	13C2-PFDoDA	170	19	122	Narrate high bias, ND
	13C2-PFTeDA	134	13	124	Narrate high bias, ND
	13C8-FOSA	127	18	109	Narrate high bias, ND
	D3-MeFOSAA	133	9	123	Narrate high bias, ND
	D5-EtFOSAA	127	12	126	Narrate high bias, ND

Primary Review: _____

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Secondary Review: _____

1st EJD 08/13/19
2nd 08/13/19

Quantitation Report

Data File:	J:\LCMS06\Data\190812_b1\190812_008	**Instrument:**	K-LCMS-06
Acqu Date:	8/12/19 20:38	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1911320-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	8/7/19	**Receive Date:**	8/8/19

Analysis Lot:	646922	**Prep Lot:**		**Report Group:**	KQ1911320
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	20091

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.150	0.00	4037034	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
13C3-PFBS	4.038	0.00	1033261	5.3447	107		20 - 109	Y
18O2-PFHxS	4.421	0.00	497186	4.4936	90		26 - 122	Y
13C4-PFOS	4.767	0.00	648632	4.9211	98		25 - 121	Y
13C4-PFBA	3.429	0.00	3820496	5.8234	116		27 - 124	Y
13C5-PFPeA	3.986	0.00	2264401	5.4859	110		27 - 138	Y
13C2-PFHxA	4.239		5654028	6.9674	139	*	28 - 132	Y
13C4-PFHpA	4.422	0.00	4687049	4.9281	99		19 - 139	Y
13C4-PFOA	4.600	0.00	5508023	6.3947	128		22 - 130	Y
13C5-PFNA	4.780	0.00	4472085	6.5356	131	*	20 - 127	Y
13C2-PFDA	4.964	0.00	4843615	8.4202	168	*	24 - 125	Y
13C2-PFUnDA	5.151	0.00	3095322	4.9647	99		22 - 125	Y
13C2-PFDoDA	5.323	0.00	5695523	8.4812	170	*	19 - 122	Y
13C2-PFTeDA	5.639	0.00	4971601	6.7196	134	*	13 - 124	Y
13C8-FOSA	5.249	+0.00	1959205	6.3734	127	*	18 - 109	Y
D3-MeFOSA	5.631	0.00	597963	4.9578	99		15 - 153	Y
D5-EtFOSA	5.766		945734	5.2654	105		25 - 107	Y
D7-MeFOSE	5.600	0.00	693932	4.6836	94		24 - 112	Y
D9-EtFOSE	5.727	0.00	793984	5.3197	106		19 - 109	Y
D3-MeFOSAA	5.064	0.00	588235	6.6307	133	*	9 - 123	Y
D5-EtFOSAA	5.162		507332	6.3292	127	*	12 - 126	Y
13C2-4:2 FTS	4.213	0.00	415403	5.5890	112		10 - 197	Y
13C2-6:2 FTS	4.588	0.00	447871	6.3926	128		10 - 226	Y
13C2-8:2 FTS	4.959	0.00	303971	7.6121	152		10 - 202	Y
13C3-HFPO-DA	4.308	0.00	1849993	4.5638	91		22 - 135	Y

1st EJD 08/13/19

2nd 08/13/19

Data File:	J:\LCMS06\Data\190812_b1\190812_008	**Instrument:**	K-LCMS-06
Acqu Date:	8/12/19 20:38	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1911320-02	**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)	0		0	0	0	U	Y
Perfluoropentane sulfonic acid (PFPeS)	0		0	0	0	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.425	+0.00	3307	0.0240	0.77	U	Y
Perfluoroheptane sulfonic acid (PFHpS)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	0		0	0	0	U	Y
Perfluorononane sulfonic acid (PFNS)	4.960	+0.01	558	-0.0764	0	U	Y
Perfluorodecane sulfonic acid (PFDS)	5.112	-0.02	450	0.0042	0.13	U	Y
Perfluorobutanoic acid (PFBA)	3.433		4600	0.0059	0.19	U	Y
Perfluoropentanoic acid (PFPeA)	3.986	0.00	126628	0.0176	0.56	U	Y
Perfluorohexanoic acid (PFHxA)	4.228	-0.01	30208	-0.0002	0	U	Y
Perfluoroheptanoic acid (PFHpA)	4.409	-0.02	14063	-0.0014	0	U	Y
Perfluorooctanoic acid (PFOA)	4.594	-0.01	27919	0.0027	0.086	U	Y
Perfluorononanoic acid (PFNA)	4.774	-0.01	7240	-0.0032	0	U	Y
Perfluorodecanoic acid (PFDA)	4.956	-0.01	10797	0.0110	0.35	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.142	-0.01	18925	0.0050	0.16	U	Y
Perfluorododecanoic acid (PFDoDA)	5.327	+0.00	5255	-0.0023	0	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.484	-0.01	8607	0.0020	0.064	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.638	0.00	47138	-0.0119	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.250	+0.00	2708	0.0055	0.18	U	Y
N-Methyl perfluorooctane sulfonamide (MeFOSA)	5.642	+0.01	1593	0.0085	0.27	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	5.074	+0.01	342	0.0296	0.95	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	4.235	+0.02	132	0.0013	0.042	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.586	0.00	1543	0.0142	0.45	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.969	+0.01	33	0.0006	0.019	U	Y
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	5.317	-0.01	25	0.0005	0.016	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

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Insight Report

Printed at 8/13/2019 12:26:34 PM

190812_008

Sample ID: IB
Date acquired: 8/12/2019 8:38:53 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b1\190812_008.lcd
Vial: 54 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.150	4037034	4037034	1	5.0000	ng/mL	----
PFBS_1	NI	----	----	1034662	2	----	ng/mL	----
PFBS-13C	Auto	4.038	1033261	4037034	1	5.3447	ng/mL	----
PFBS-13C_IS	Auto	4.038	1034662	1034662	2	5.0000	ng/mL	----
PFPeS	NI	----	----	1034662	2	----	ng/mL	----
PFHxS_1	M	4.425	3307	497186	3	0.0240	ng/mL	----
PFHxS-18O	Auto	4.421	497186	4037034	1	4.4936	ng/mL	----
PFHxS-18O_IS	Auto	4.421	497186	497186	3	5.0000	ng/mL	----
PFHpS_1	NI	----	----	497186	3	----	ng/mL	----
PFOS_1	NI	----	----	646598	4	----	ng/mL	----
PFOS-13C	Auto	4.767	648632	4037034	1	4.9211	ng/mL	----
PFOS-13C_IS	Auto	4.767	646598	646598	4	5.0000	ng/mL	----
PFNS	M	4.960	558	646598	4	-0.0764	ng/mL	----
PFDS_1	M	5.112	450	646598	4	0.0042	ng/mL	----
PFBA	M	3.433	4600	3820496	5	0.0059	ng/mL	----
PFBA-13C	Auto	3.429	3820496	4037034	1	5.8234	ng/mL	----
PFBA-13C_IS	Auto	3.429	3820496	3820496	5	5.0000	ng/mL	----
PFPeA	M	3.986	126628	2264401	6	0.0176	ng/mL	----
PFPeA-13C	Auto	3.986	2264401	4037034	1	5.4859	ng/mL	----
PFPeA-13C_IS	Auto	3.986	2264401	2264401	6	5.0000	ng/mL	----
PFHxA	Auto	4.228	30208	5654028	7	-0.0002	ng/mL	----
PFHxA-13C	Auto	4.239	5654028	4037034	1	6.9674	ng/mL	----
PFHxA-13C_IS	Auto	4.239	5654028	5654028	7	5.0000	ng/mL	----
PFHpA	M	4.409	14063	4687049	8	-0.0014	ng/mL	----
PFHpA-13C	Auto	4.422	4687049	4037034	1	4.9281	ng/mL	----
PFHpA-13C_IS	Auto	4.422	4687049	4687049	8	5.0000	ng/mL	----
PFOA	Auto	4.594	27919	5508023	9	0.0027	ng/mL	----
PFOA-13C	Auto	4.600	5508023	4037034	1	6.3947	ng/mL	----
PFOA-13C_IS	Auto	4.600	5508023	5508023	9	5.0000	ng/mL	----
PFNA	M	4.774	7240	4472085	10	-0.0032	ng/mL	----
PFNA-13C	Auto	4.780	4472085	4037034	1	6.5356	ng/mL	----
PFNA-13C_IS	Auto	4.780	4472085	4472085	10	5.0000	ng/mL	----
PFDA	M	4.956	10797	4843615	11	0.0110	ng/mL	----
PFDA-13C	Auto	4.964	4843615	4037034	1	8.4202	ng/mL	----
PFDA-13C_IS	Auto	4.964	4843615	4843615	11	5.0000	ng/mL	----
PFUnA	M	5.142	18925	3095322	12	0.0050	ng/mL	----
PFUnA-13C	Auto	5.151	3095322	4037034	1	4.9647	ng/mL	----
PFUnA-13C_IS	Auto	5.151	3095322	3095322	12	5.0000	ng/mL	----
PFDoA	M	5.327	5255	5695523	13	-0.0023	ng/mL	----
PFDoA-13C	Auto	5.323	5695523	4037034	1	8.4812	ng/mL	----
PFDoA-13C_IS	Auto	5.323	5695523	5695523	13	5.0000	ng/mL	----
PFTrDA	M	5.484	8607	4971601	14	0.0020	ng/mL	----
PFTeDA	Auto	5.638	47138	4971601	14	-0.0119	ng/mL	----
PFTeDA-13C	Auto	5.639	4971601	4037034	1	6.7196	ng/mL	----
PFTeDA-13C_IS	Auto	5.639	4971601	4971601	14	5.0000	ng/mL	----
FOSA	Auto	5.250	2708	1959205	16	0.0055	ng/mL	----
FOSA-13C	Auto	5.249	1959205	4037034	1	6.3734	ng/mL	----
FOSA-13C_IS	Auto	5.249	1959205	1959205	16	5.0000	ng/mL	----
N-MeFOSA	M	5.642	1593	597963	17	0.0085	ng/mL	----
N-MeFOSA-d3	Auto	5.631	597963	4037034	1	4.9578	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.631	597963	597963	17	5.0000	ng/mL	----
N-EtFOSA	NI	----	----	945734	18	----	ng/mL	----
N-EtFOSA-d9	Auto	5.766	945734	4037034	1	5.2654	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.766	945734	945734	18	5.0000	ng/mL	----
N-MeFOSE	NI	----	----	693932	19	----	ng/mL	----
N-MeFOSE-d7	Auto	5.600	693932	4037034	1	4.6836	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.600	693932	693932	19	5.0000	ng/mL	----
N-EtFOSE	NI	----	----	793984	20	----	ng/mL	----
N-EtFOSE-d9	Auto	5.727	793984	4037034	1	5.3197	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.727	793984	793984	20	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.074	342	588235	21	0.0296	ng/mL	----
N-MeFOSAA-d3	Auto	5.064	588235	4037034	1	6.6307	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.064	588235	588235	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	507332	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.162	507332	4037034	1	6.3292	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.162	507332	507332	22	5.0000	ng/mL	----
4_2-FTS_1	M	4.235	132	415403	23	0.0013	ng/mL	----
4_2-FTS-13C	Auto	4.213	415403	4037034	1	5.5890	ng/mL	----

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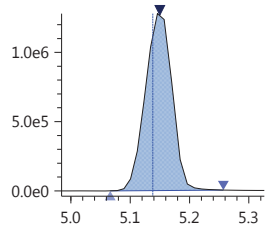
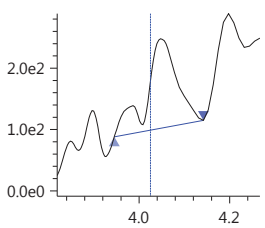
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.213	415403	415403	23	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.586	1543	447871	24	0.0142	ng/mL	----
6_2-FTS-13C	Auto	4.588	447871	4037034	1	6.3926	ng/mL	----
6_2-FTS-13C_IS	Auto	4.588	447871	447871	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.969	33	303971	25	0.0006	ng/mL	----
8_2-FTS-13C	Auto	4.959	303971	4037034	1	7.6121	ng/mL	----
8_2-FTS-13C_IS	Auto	4.959	303971	303971	25	5.0000	ng/mL	----
10_2-FtS_1	M	5.317	25	303971	25	0.0005	ng/mL	----
HPFO_DA	NI	----	----	1849993	26	----	ng/mL	----
HFPO_DA-13C	Auto	4.308	1849993	4037034	1	4.5638	ng/mL	----
HFPO_DA-13C_IS	Auto	4.308	1849993	1849993	26	5.0000	ng/mL	----

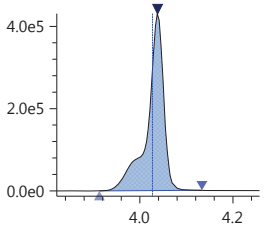
13C7-PFUnDA_IS
Conc 5.0000
RT 5.150 Area 4037034
ISTD 570.00>525.00 (-) 1.28e6



PFBS_1
Conc ----
RT ---- Area ----
Q 299.00>80.00 (-) 2.89e2



PFBS-13C
Conc 5.3447
RT 4.038 Area 1033261
Q 301.80>80.00 (-) 4.31e5



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Conc 5.0000
RT 4.038 Area 1034662
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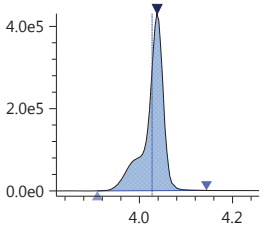
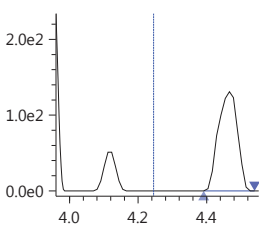
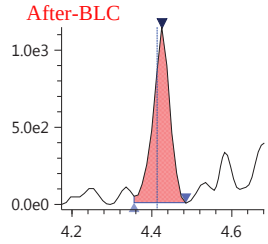


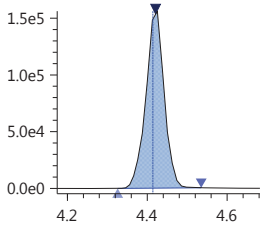
PFPeS
Conc ----
RT ---- Area ----
Q 349.00>99.00 (-) 2.34e2



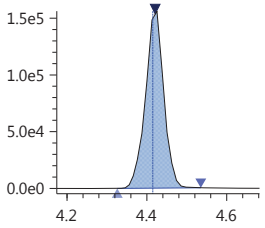
PFHxS_1
Conc 0.0240
RT 4.425 Area 3307
Q 399.00>80.00 (-) 1.15e3



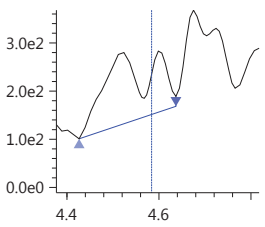
PFHxS-18O
Conc 4.4936
RT 4.421 Area 497186
Q 402.70>84.05 (-) 1.56e5



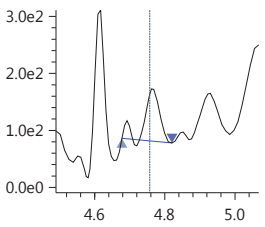
PFHxS-18O_IS
Conc 5.0000
RT 4.421 Area 497186
ISTD 402.70>84.05 (-) 1.56e5



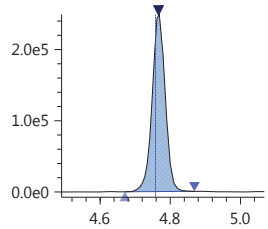
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 3.68e2



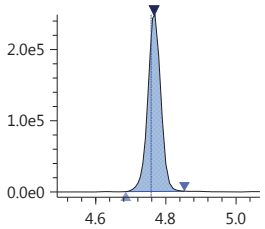
PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 3.11e2



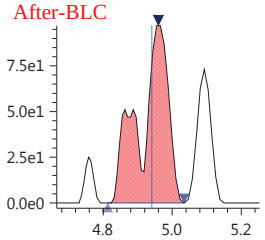
PFOS-13C
Conc 4.9211
RT 4.767 Area 648632
Q 502.80>80.05 (-) 2.49e5



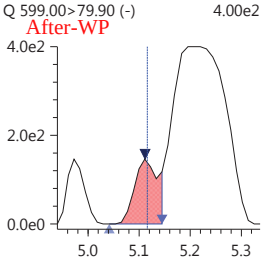
PFOS-13C_IS
Conc 5.0000
RT 4.767 Area 646598
ISTD 502.80>80.05 (-) 2.49e5



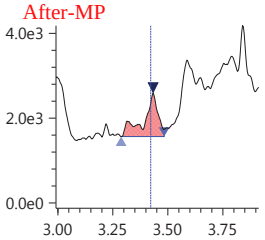
PFNS
Conc -0.0764
RT 4.960 Area 558
Q 549.00>99.00 (-) 9.70e1



PFDS_1
Conc 0.0042
RT 5.112 Area 450
Q 599.00>79.90 (-) 4.00e2



PFBA
Conc 0.0059
RT 3.433 Area 4600
Q 213.00>169.10 (-) 4.18e3



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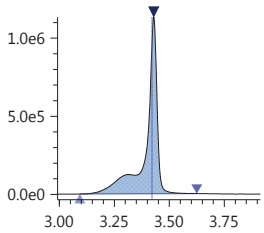
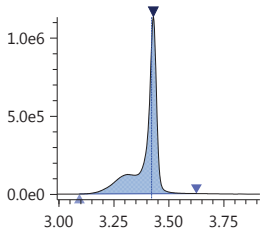
PFBA-13C
Conc 5.8234
RT 3.429 Area 3820496
Q 216.90>172.15 (-) 1.13e6



PFBA-13C_IS
Conc 5.0000
RT 3.429 Area 3820496
ISTD 216.90>172.15 (-) 1.13e6



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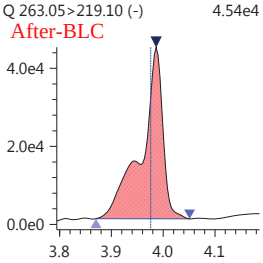
Conc 0.0176
RT 3.986 Area 126628
Q 263.05>219.10 (-) 4.54e4



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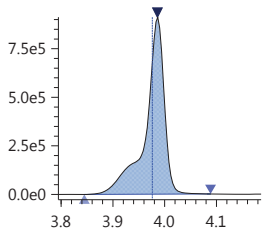
Conc 5.4859
RT 3.986 Area 2264401
Q 267.90>223.00 (-) 9.13e5



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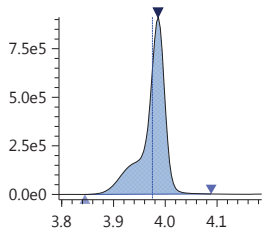
ISTD 267.90>223.00 (-) 9.13e5



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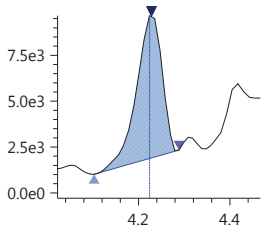
Conc -0.0002
RT 4.228 Area 30208
Q 313.00>269.00 (-) 9.66e3



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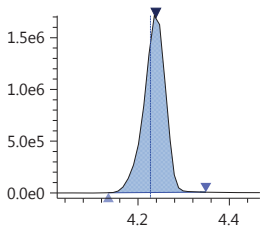
Conc 6.9674
RT 4.239 Area 5654028
Q 314.90>270.10 (-) 1.71e6



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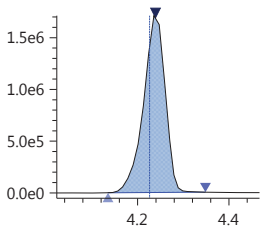
Conc 5.0000
RT 4.239 Area 5654028
ISTD 314.90>270.10 (-) 1.71e6



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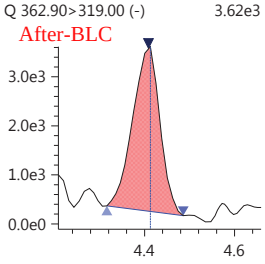
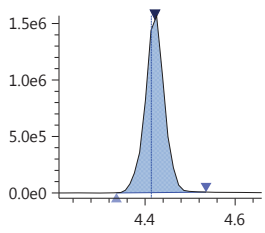
Conc -0.0014
RT 4.409 Area 14063
Q 362.90>319.00 (-) 3.62e3



PFHpA-13C
Conc 4.9281
RT 4.422 Area 4687049
Q 366.90>322.10 (-) 1.57e6



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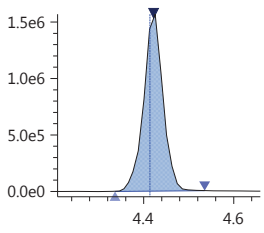
Conc 5.0000
RT 4.422 Area 4687049
ISTD 366.90>322.10 (-) 1.57e6



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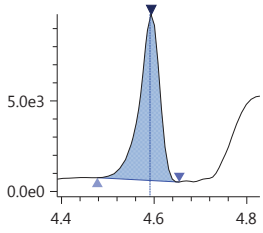
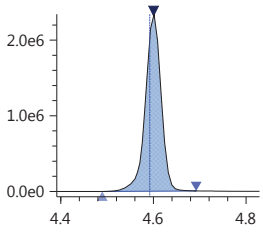
Conc 0.0027
RT 4.594 Area 27919
Q 413.00>369.00 (-) 9.80e3



PFOA-13C
Conc 6.3947
RT 4.600 Area 5508023
Q 416.80>372.05 (-) 2.34e6



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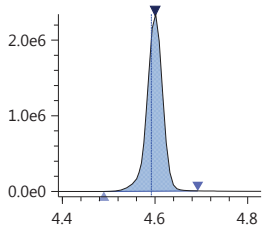
Conc 5.0000
RT 4.600 Area 5508023
ISTD 416.80>372.05 (-) 2.34e6



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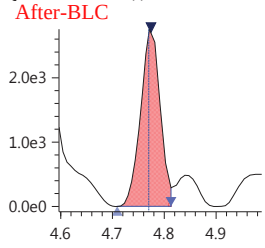
Conc -0.0032
RT 4.774 Area 7240
Q 463.00>418.90 (-) 2.76e3



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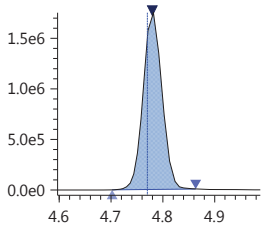
Conc 6.5356
RT 4.780 Area 4472085
Q 467.80>423.00 (-) 1.75e6



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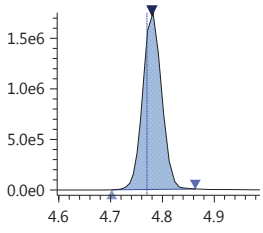
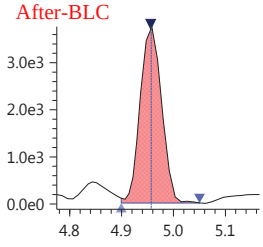
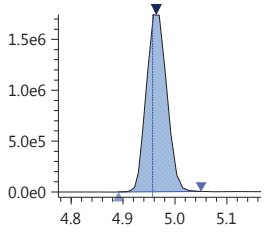
Conc 5.0000
RT 4.780 Area 4472085
ISTD 467.80>423.00 (-) 1.75e6



PFDA
Conc 0.0110
RT 4.956 Area 10797
Q 513.00>468.80 (-) 3.77e3



PFDA-13C
Conc 8.4202
RT 4.964 Area 4843615
Q 514.80>469.95 (-) 1.74e6



PFDA-13C_IS
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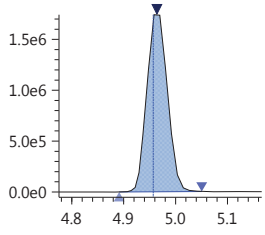
RT 4.964 Area 4843615
ISTD 514.80>469.95 (-) 1.74e6



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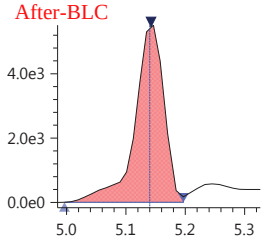
PFUnA
Conc 0.0050
RT 5.142 Area 18925
Q 563.00>518.90 (-) 5.51e3



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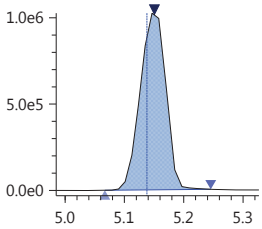
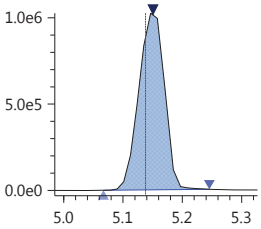
Conc 4.9647
RT 5.151 Area 3095322
Q 564.80>519.95 (-) 1.03e6



PFUnA-13C_IS
Conc 5.0000
RT 5.151 Area 3095322
ISTD 564.80>519.95 (-) 1.03e6



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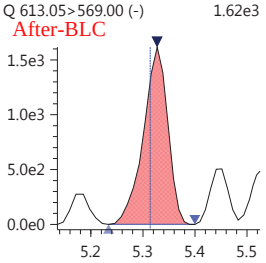
Conc -0.0023
RT 5.327 Area 5255
Q 613.05>569.00 (-) 1.62e3



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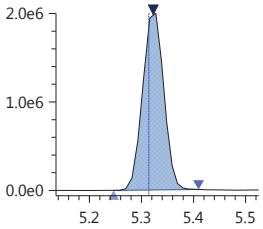
RT 5.323 Area 5695523
Q 614.80>569.95 (-) 2.00e6



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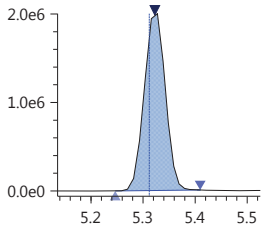
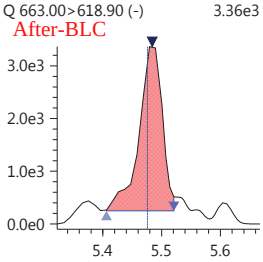
Conc 5.0000
RT 5.323 Area 5695523
ISTD 614.80>569.95 (-) 2.00e6



PFTrDA
Conc 0.0020
RT 5.484 Area 8607
Q 663.00>618.90 (-) 3.36e3



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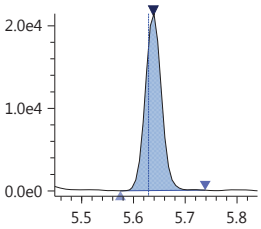
RT 5.638 Area 47138
Q 713.40>669.00 (-) 2.15e4



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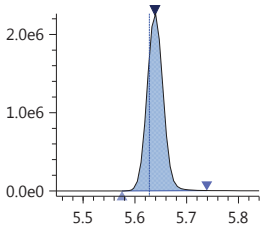
Conc 6.7196
RT 5.639 Area 4971601
Q 714.70>669.90 (-) 2.27e6



PFTeDA-13C_IS
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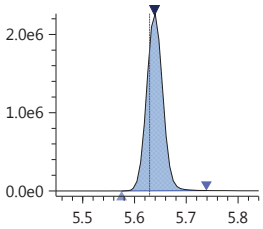
RT 5.639 Area 4971601
ISTD 714.70>669.90 (-) 2.27e6



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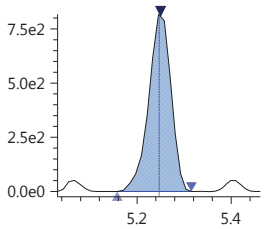
Conc 0.0055
RT 5.250 Area 2708
Q 498.20>78.00 (-) 8.18e2



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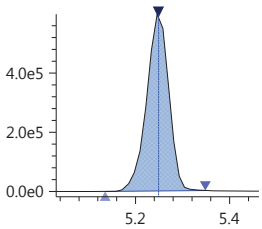
Conc 6.3734
RT 5.249 Area 1959205
Q 506.00>78.05 (-) 5.99e5



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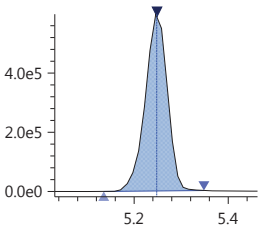
RT 5.249 Area 1959205
ISTD 506.00>78.05 (-) 5.99e5



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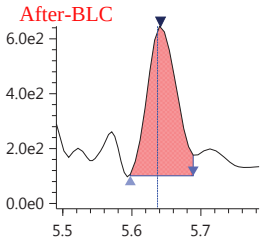
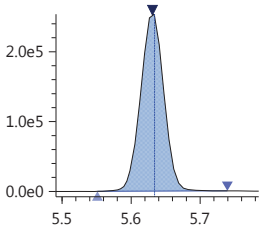
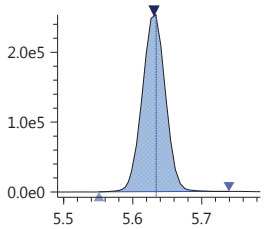
RT 5.642 Area 1593
Q 512.00>169.10 (-) 6.46e2



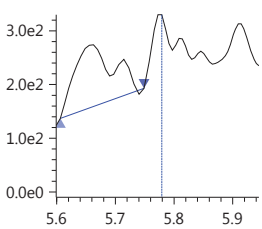
N-MeFOSA-d3
Conc 4.9578
RT 5.631 Area 597963
Q 514.90>168.90 (-) 2.54e5



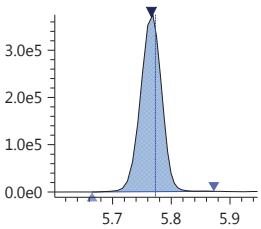
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.631 Area 597963
ISTD 514.90>168.90 (-) 2.54e5



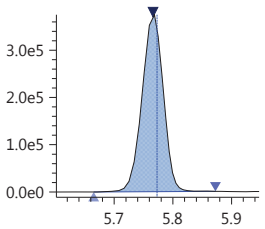
N-EtFOSA
Conc ----
RT ---- Area ----
Q 526.90>169.10 (-) 3.30e2



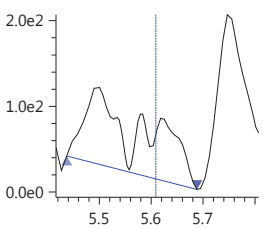
N-EtFOSA-d9
Conc 5.2654
RT 5.766 Area 945734
Q 530.90>169.15 (-) 3.75e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.766 Area 945734
ISTD 530.90>169.15 (-) 3.75e5



N-MeFOSE
Conc ----
RT ---- Area ----
Q 616.00>59.00 (-) 2.07e2



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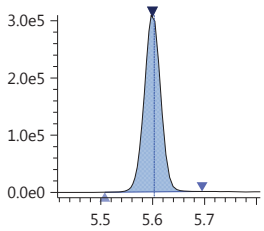
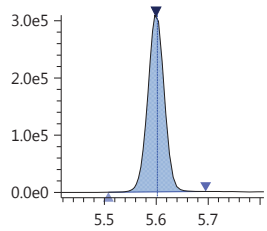
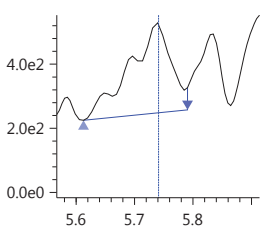
N-MeFOSE-d7
Conc 4.6836
RT 5.600 Area 693932
Q 622.70>59.10 (-) 3.10e5



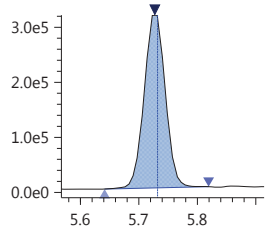
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.600 Area 693932
ISTD 622.70>59.10 (-) 3.10e5



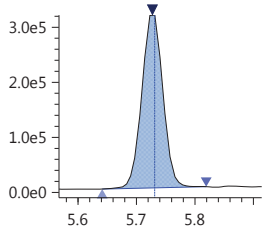
N-EtFOSE
Conc ----
RT ---- Area ----
Q 630.00>58.90 (-) 5.53e2



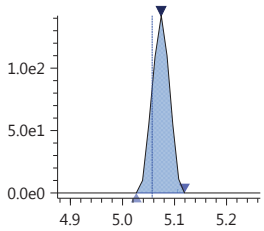
N-EtFOSE-d9
Conc 5.3197
RT 5.727 Area 793984
Q 638.70>59.10 (-) 3.22e5



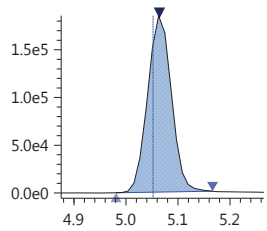
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.727 Area 793984
ISTD 638.70>59.10 (-) 3.22e5



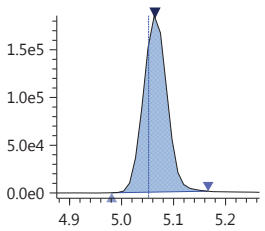
N-MeFOSAA
Conc 0.0296
RT 5.074 Area 342
Q 570.20>419.00 (-) 1.42e2



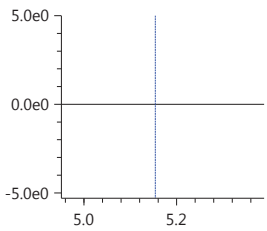
N-MeFOSAA-d3
Conc 6.6307
RT 5.064 Area 588235
Q 572.80>419.05 (-) 1.86e5



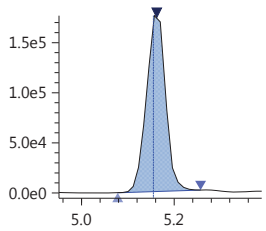
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.064 Area 588235
ISTD 572.80>419.05 (-) 1.86e5



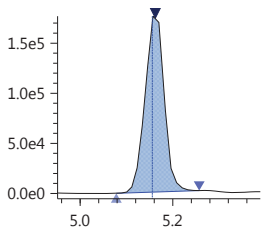
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5
Conc 6.3292
RT 5.162 Area 507332
Q 588.80>419.00 (-) 1.77e5



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.162 Area 507332
ISTD 588.80>419.00 (-) 1.77e5



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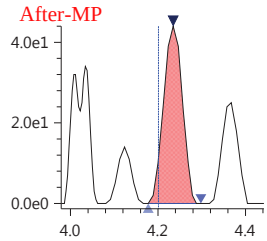
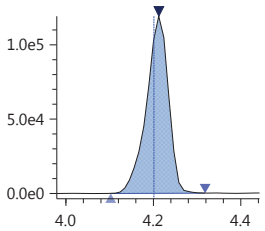
Conc 0.0013
RT 4.235 Area 132
Q 327.00>307.05 (-) 4.40e1



4_2-FTS-13C
Conc 5.5890
RT 4.213 Area 415403
Q 328.80>309.05 (-) 1.19e5



4_2-FTS-13C_IS
Conc 5.0000
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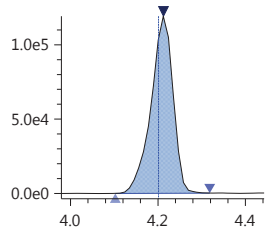
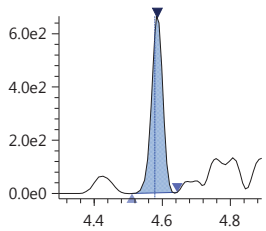
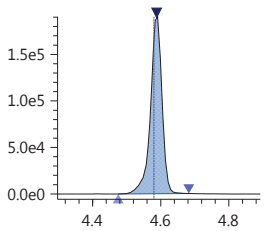
ISTD 328.80>309.05 (-) 1.19e5



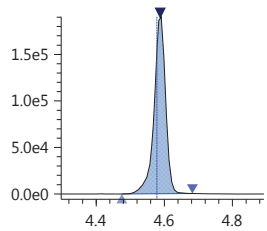
6_2-FTS_1
Conc 0.0142
RT 4.586 Area 1543
Q 427.00>407.00 (-) 6.66e2



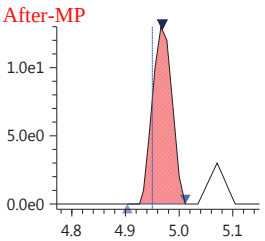
6_2-FTS-13C
Conc 6.3926
RT 4.588 Area 447871
Q 428.90>409.00 (-) 1.91e5



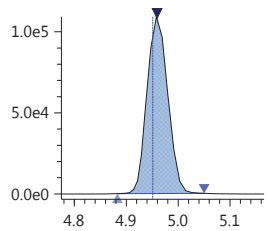
6_2-FTS-13C_IS
Conc 5.0000
RT 4.588 Area 447871
ISTD 428.90>409.00 (-) 1.91e5



8_2-FTS_1
Conc 0.0006
RT 4.969 Area 33
Q 527.10>506.90 (-) 1.30e1



8_2-FTS-13C
Conc 7.6121
RT 4.959 Area 303971
Q 528.80>509.00 (-) 1.09e5



8_2-FTS-13C_IS
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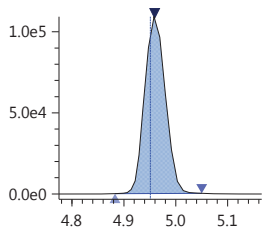
RT 4.959 Area 303971
ISTD 528.80>509.00 (-) 1.09e5



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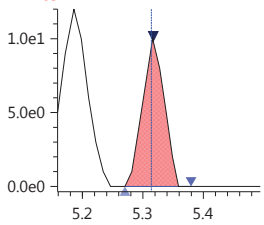
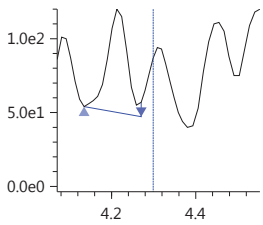
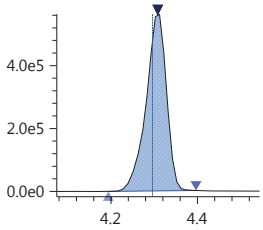
10_2-FtS_1
Conc 0.0005
RT 5.317 Area 25
Q 627.00>606.95 (-) 1.20e1
After-MP



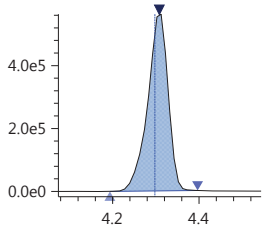
HPFO_DA
Conc ----
RT ---- Area ----
Q 329.00>169.00 (-) 1.20e2



HFPO_DA-13C
Conc 4.5638
RT 4.308 Area 1849993
Q 332.00>286.80 (-) 5.64e5



HFPO_DA-13C_IS
Conc 5.0000
RT 4.308 Area 1849993
ISTD 332.00>286.80 (-) 5.64e5



Insight Report

Printed at 8/13/2019 10:42:21 AM

190812_008

Sample ID: IB
Date acquired: 8/12/2019 8:38:53 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b1\190812_008.lcd
Vial: 54 | Inj. Volume: 15.0000uL | Tray: 1

13C7-PFUnDA_IS
Conc 5.0000
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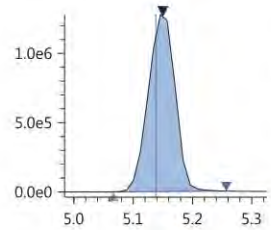
ISTD 570.00>525.00 (-) 1.28e6



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Conc 0.0023
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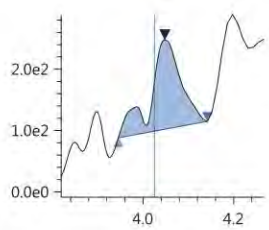
Q 299.00>80.00 (-) 2.89e2



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Conc 5.3447
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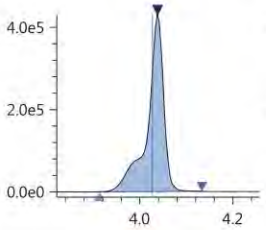
Q 301.80>80.00 (-) 4.31e5



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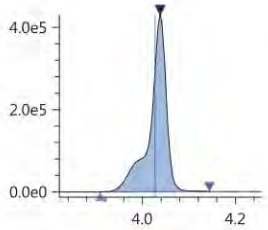

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Conc 0.0041
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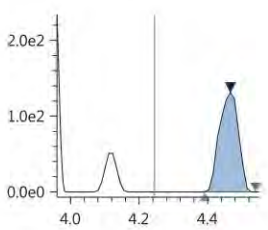
Q 349.00>99.00 (-) 2.34e2



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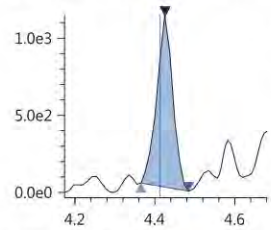
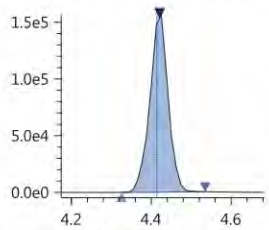
RT 4.425 Area 3110
Q 399.00>80.00 (-) 1.15e3



PFHxS-18O
Conc 4.4936
RT 4.421 Area 497186
Q 402.70>84.05 (-) 1.56e5



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Conc 5.0000
RT 4.421 Area 497186
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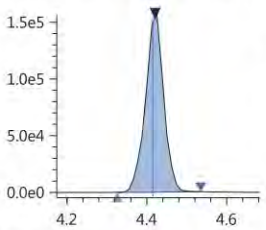

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RT 4.520 Area 1057
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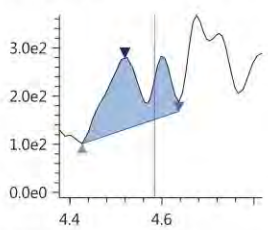

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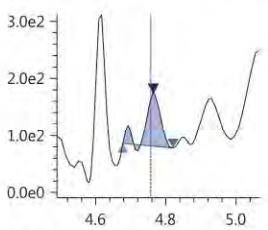
Q 499.00>80.00 (-) 3.11e2



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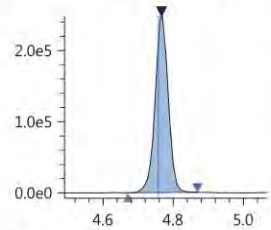

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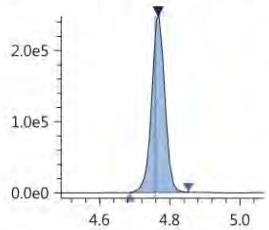

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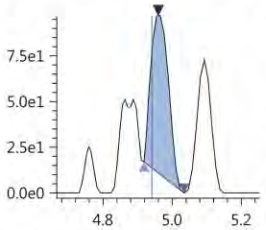
Conc -0.0799
RT 4.960 Area 309
Q 549.00>99.00 (-) 9.70e1



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Conc 0.0221
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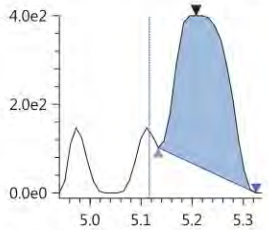
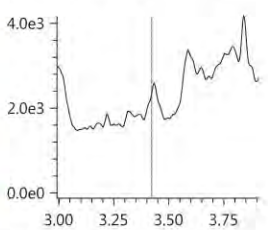
Q 599.00>79.90 (-) 4.00e2



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 4.18e3



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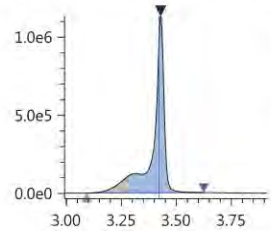
RT 3.429 Area 3820496
Q 216.90>172.15 (-) 1.13e6



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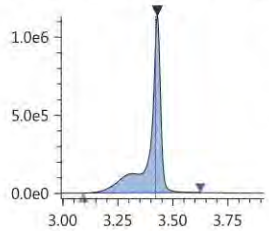

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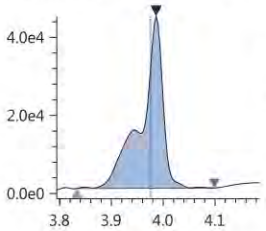

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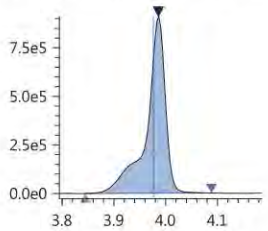
Q 267.90>223.00 (-) 9.13e5



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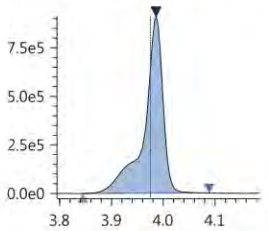

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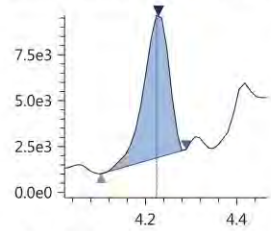
Q 313.00>269.00 (-) 9.66e3



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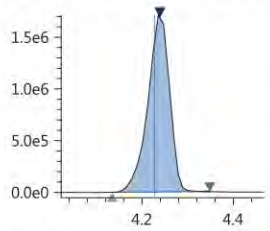
Conc 6.9674
RT 4.239 Area 5654028
Q 314.90>270.10 (-) 1.71e6



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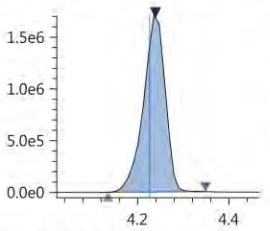

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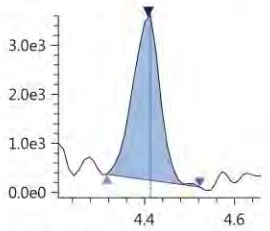
Q 362.90>319.00 (-) 3.62e3



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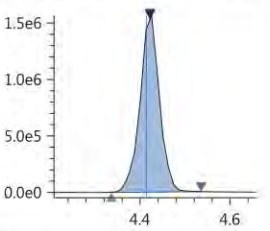
RT 4.422 Area 4687049
Q 366.90>322.10 (-) 1.57e6



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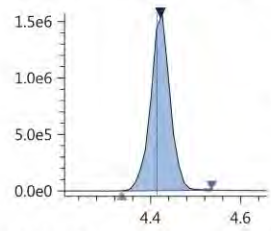

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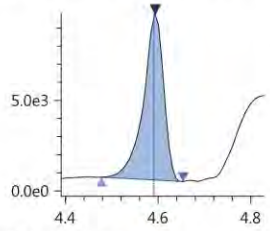
RT 4.594 Area 27919
Q 413.00>369.00 (-) 9.80e3



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Conc 6.3947
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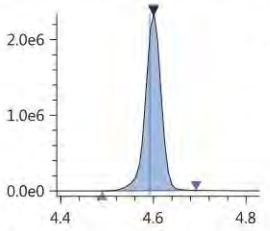
Q 416.80>372.05 (-) 2.34e6



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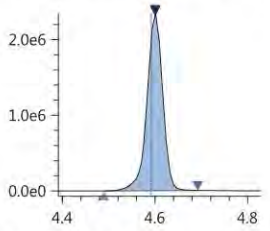
ISTD 416.80>372.05 (-) 2.34e6



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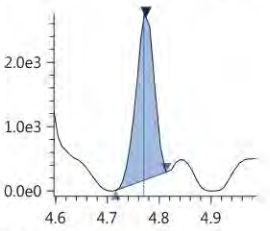
Q 463.00>418.90 (-) 2.76e3



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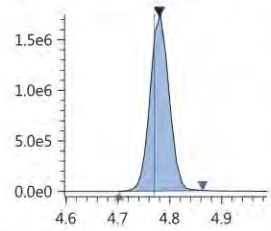

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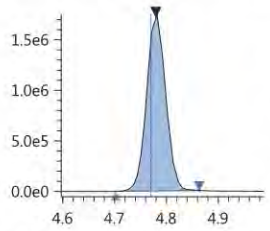

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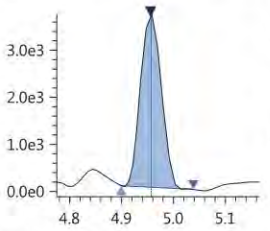
Conc 0.0104
RT 4.956 Area 10249
Q 513.00>468.80 (-) 3.77e3



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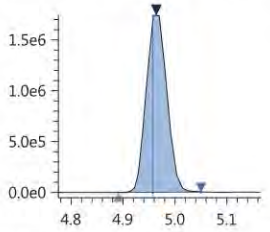

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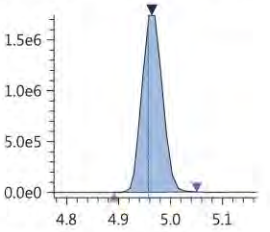

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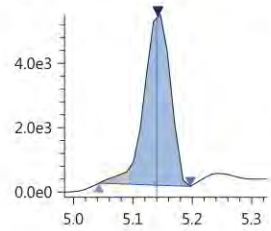
RT 5.142 Area 16612
Q 563.00>518.90 (-) 5.51e3



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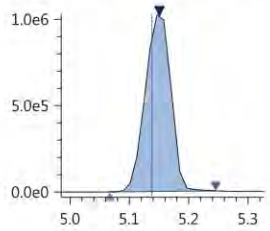

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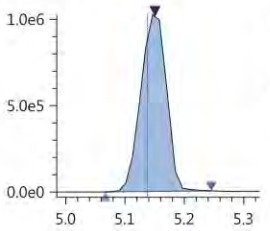

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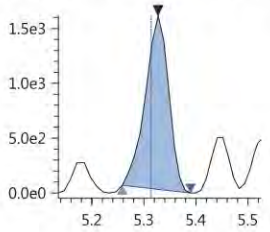
RT 5.327 Area 4957
Q 613.05>569.00 (-) 1.62e3



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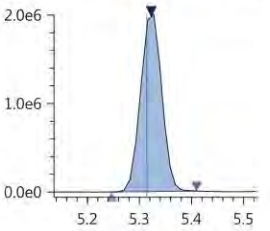

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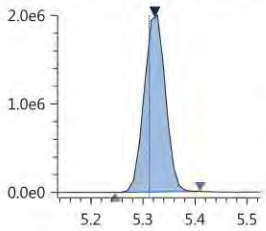
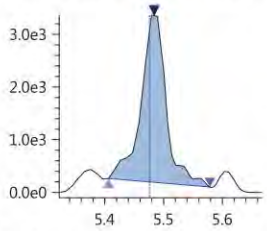
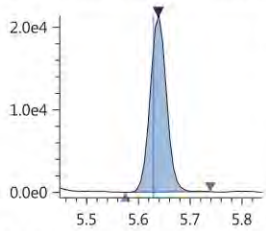
RT 5.323 Area 5695523
ISTD 614.80>569.95 (-) 2.00e6



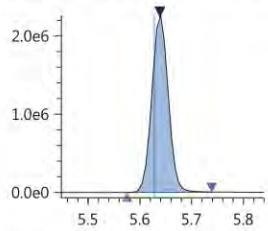
PFTrDA
Conc 0.0033
RT 5.484 Area 9535
Q 663.00>618.90 (-) 3.36e3



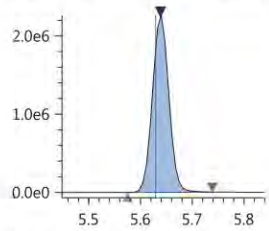
PFTeDA
Conc -0.0119
RT 5.638 Area 47138
Q 713.40>669.00 (-) 2.15e4



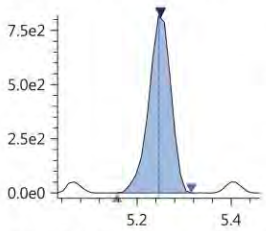
PFTeDA-13C
Conc 6.7196
RT 5.639 Area 4971601
Q 714.70>669.90 (-) 2.27e6



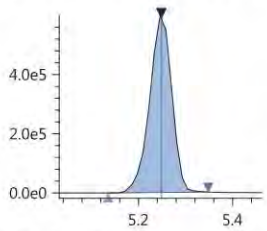
PFTeDA-13C_IS
Conc 5.0000
RT 5.639 Area 4971601
ISTD 714.70>669.90 (-) 2.27e6



FOSA
Conc 0.0055
RT 5.250 Area 2708
Q 498.20>78.00 (-) 8.18e2



FOSA-13C
Conc 6.3734
RT 5.249 Area 1959205
Q 506.00>78.05 (-) 5.99e5



FOSA-13C_IS
Conc 5.0000
RT 5.249 Area 1959205
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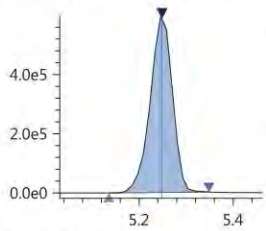
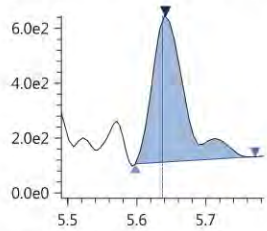
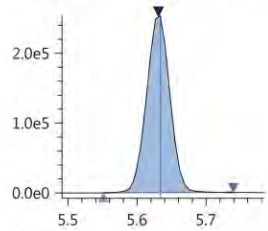


N-MeFOSA
Conc 0.0092
RT 5.642 Area 1726
Q 512.00>169.10 (-) 6.46e2



N-MeFOSA-d3
Conc 4.9578
RT 5.631 Area 597963
Q 514.90>168.90 (-) 2.54e5



N-MeFOSA-d3_IS
Conc 5.0000
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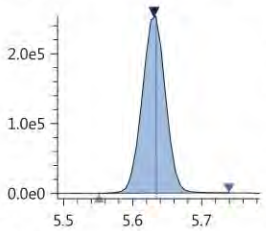
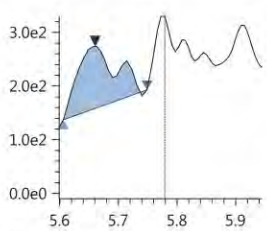
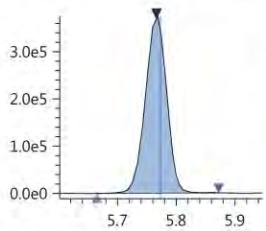
ISTD 514.90>168.90 (-) 2.54e5



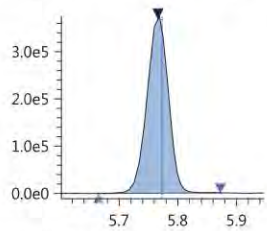
N-EtFOSA
Conc 0.0145
RT 5.660 Area 526
Q 526.90>169.10 (-) 3.30e2



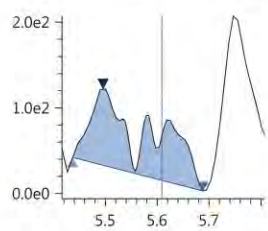
N-EtFOSA-d9
Conc 5.2654
RT 5.766 Area 945734
Q 530.90>169.15 (-) 3.75e5



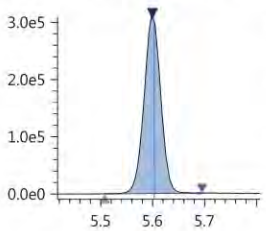
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.766 Area 945734
ISTD 530.90>169.15 (-) 3.75e5



N-MeFOSE
Conc 0.0042
RT 5.496 Area 729
Q 616.00>59.00 (-) 2.07e2



N-MeFOSE-d7
Conc 4.6836
RT 5.600 Area 693932
Q 622.70>59.10 (-) 3.10e5



N-MeFOSE-d7_IS
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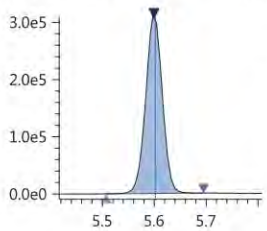
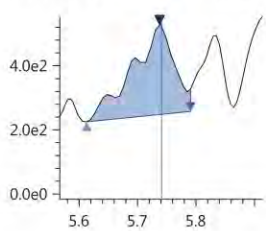
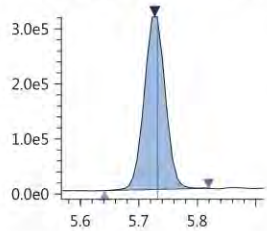
RT 5.600 Area 693932
ISTD 622.70>59.10 (-) 3.10e5



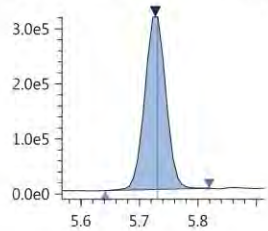
N-EtFOSE
Conc 0.0072
RT 5.738 Area 1399
Q 630.00>58.90 (-) 5.53e2



N-EtFOSE-d9
Conc 5.3197
RT 5.727 Area 793984
Q 638.70>59.10 (-) 3.22e5



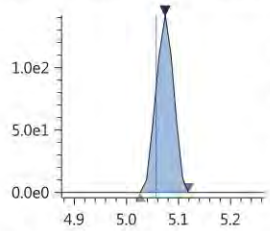
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.727 Area 793984
ISTD 638.70>59.10 (-) 3.22e5



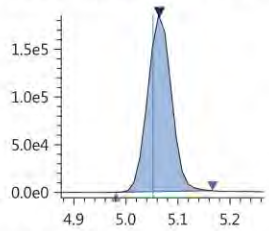
Insight Report

Printed at 8/13/2019 10:42:21 AM

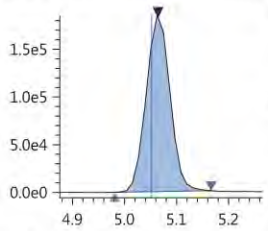
N-MeFOSAA
Conc 0.0296
RT 5.074 Area 342
Q 570.20>419.00 (-) 1.42e2



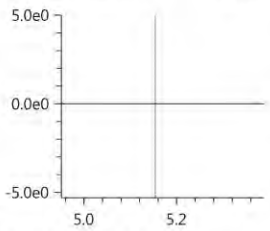
N-MeFOSAA-d3
Conc 6.6307
RT 5.064 Area 588235
Q 572.80>419.05 (-) 1.86e5



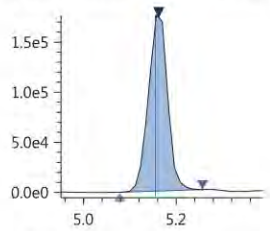
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.064 Area 588235
ISTD 572.80>419.05 (-) 1.86e5



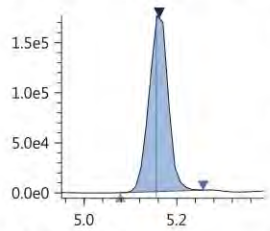
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



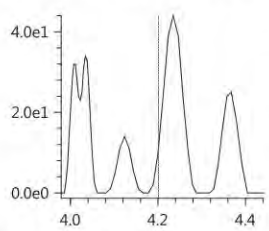
N-EtFOSAA-d5
Conc 6.3292
RT 5.162 Area 507332
Q 588.80>419.00 (-) 1.77e5



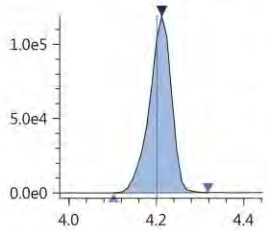
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.162 Area 507332
ISTD 588.80>419.00 (-) 1.77e5



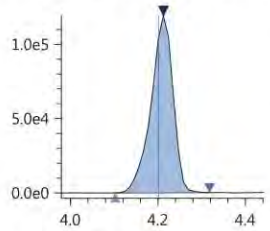
4_2-FTS_1
Conc ----
RT ---- Area ----
Q 327.00>307.05 (-) 4.40e1



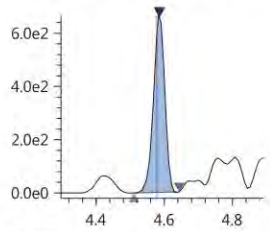
4_2-FTS-13C
Conc 5.5890
RT 4.213 Area 415403
Q 328.80>309.05 (-) 1.19e5



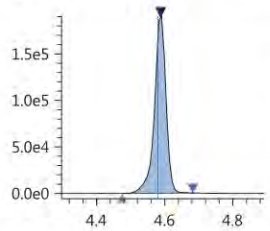
4_2-FTS-13C_IS
Conc 5.0000
RT 4.213 Area 415403
ISTD 328.80>309.05 (-) 1.19e5



6_2-FTS_1
Conc 0.0142
RT 4.586 Area 1543
Q 427.00>407.00 (-) 6.66e2



6_2-FTS-13C
Conc 6.3926
RT 4.588 Area 447871
Q 428.90>409.00 (-) 1.91e5



6_2-FTS-13C_IS
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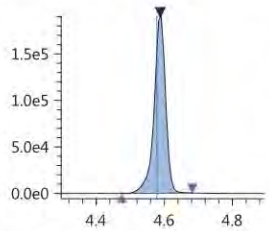
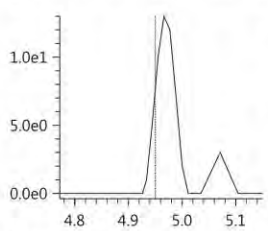
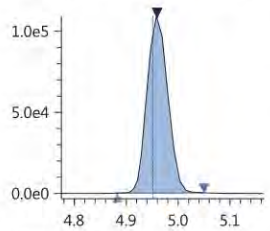
RT 4.588 Area 447871
ISTD 428.90>409.00 (-) 1.91e5



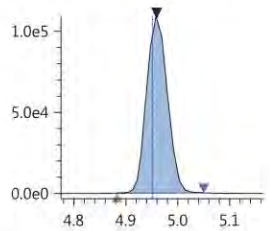
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 1.30e1



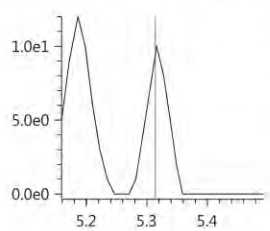
8_2-FTS-13C
Conc 7.6121
RT 4.959 Area 303971
Q 528.80>509.00 (-) 1.09e5



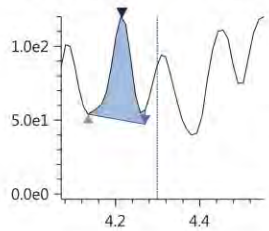
8_2-FTS-13C_IS
Conc 5.0000
RT 4.959 Area 303971
ISTD 528.80>509.00 (-) 1.09e5



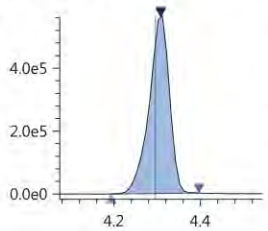
10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 1.20e1



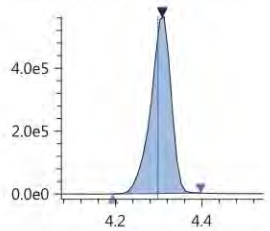
HPFO_DA
Conc 0.0007
RT 4.215 Area 229
Q 329.00>169.00 (-) 1.20e2



HFPO_DA-13C
Conc 4.5638
RT 4.308 Area 1849993
Q 332.00>286.80 (-) 5.64e5



HFPO_DA-13C_IS
Conc 5.0000
RT 4.308 Area 1849993
ISTD 332.00>286.80 (-) 5.64e5



1st CM 08/14/19
2nd 08/14/19

Validation Report

Data File: J:\LCMS06\Data\190812_b4\190812_055
Lab ID: KQ1911327-02
RunType: CCB
Matrix: Water

Date Acquired: 8/13/19 04:49
Batch ID: 646926
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: 8/14/19 10:33
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st CM 08/14/19
2nd 08/14/19

Quantitation Report

Data File:	J:\LCMS06\Data\190812_b4\190812_055	**Instrument:**	K-LCMS-06
Acqu Date:	8/13/19 04:49	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1911327-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/13/19	**Receive Date:**	7/15/19

Analysis Lot:	646926	**Prep Lot:**		**Report Group:**	KQ1911327
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	19837

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.126	+0.00	5081952	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C4-PFBA	3.409	+0.00	3498047	4.2356	85	27 - 124	Y
13C2-PFTeDA	5.617	+0.00	4590023	4.9283	99	13 - 124	Y
D5-EtFOSA	5.756	+0.00	914615	4.0451	81	25 - 107	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.464	+0.00	7314	0.0010	0.032	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.617	+0.00	48960	0.0052	0.17	U	Y
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	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

Printed: 8/14/19 10:33
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Insight Report

Printed at 8/14/2019 10:21:14 AM

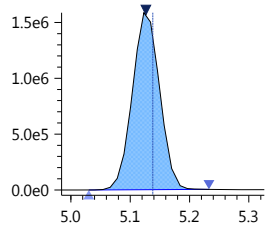
190812_055

Sample ID: IB
Date acquired: 8/13/2019 4:49:53 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b4\190812_055.lcd
Vial: 54 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.126	5081952	5081952	1	5.0000	ng/mL	----
PFBA	ND(W/B)	----	----	3498047	5	----	ng/mL	----
PFBA-13C	Auto	3.409	3498047	5081952	1	4.2356	ng/mL	----
PFBA-13C_IS	Auto	3.409	3498047	3498047	5	5.0000	ng/mL	----
PFTrDA	Auto	5.464	7314	4590023	14	0.0010	ng/mL	----
PFTeDA	Auto	5.617	48960	4590023	14	0.0052	ng/mL	----
PFTeDA-13C	Auto	5.617	4590023	5081952	1	4.9283	ng/mL	----
PFTeDA-13C_IS	Auto	5.617	4590023	4590023	14	5.0000	ng/mL	----
N-EtFOSA	ND(W/B)	----	----	914615	18	----	ng/mL	----
N-EtFOSA-d9	Auto	5.756	914615	5081952	1	4.0451	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.756	914615	914615	18	5.0000	ng/mL	----

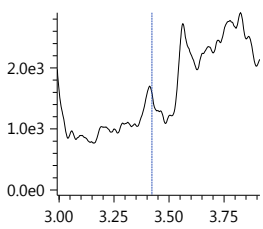
13C7-PFUnDA_IS

Conc 5.0000
RT 5.126 Area 5081952
ISTD 570.00>525.00 (-) 1.59e6



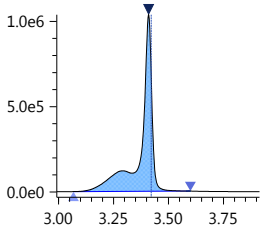
PFBA

Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 2.91e3



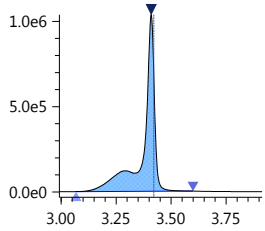
PFBA-13C

Conc 4.2356
RT 3.409 Area 3498047
Q 216.90>172.15 (-) 1.04e6



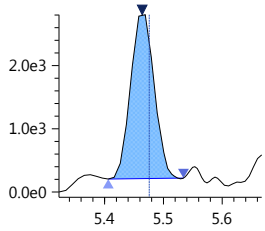
PFBA-13C_IS

Conc 5.0000
RT 3.409 Area 3498047
ISTD 216.90>172.15 (-) 1.04e6



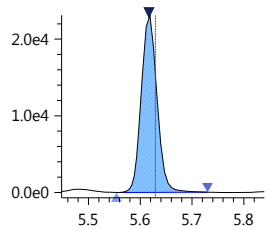
PFTrDA

Conc 0.0010
RT 5.464 Area 7314
Q 663.00>618.90 (-) 2.81e3



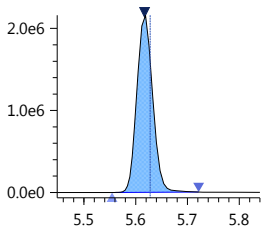
PFTeDA

Conc 0.0052
RT 5.617 Area 48960
Q 713.40>669.00 (-) 2.31e4



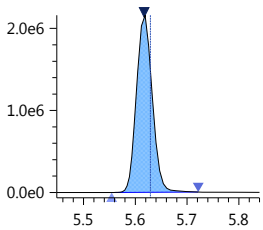
PFTeDA-13C

Conc 4.9283
RT 5.617 Area 4590023
Q 714.70>669.90 (-) 2.16e6



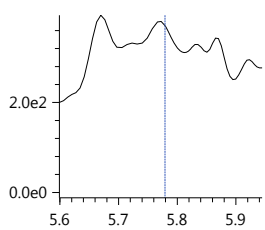
PFTeDA-13C_IS

Conc 5.0000
RT 5.617 Area 4590023
ISTD 714.70>669.90 (-) 2.16e6



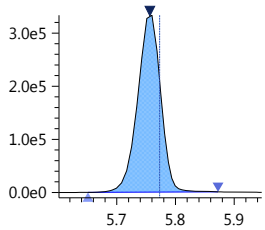
N-EtFOSA

Conc ----
RT ---- Area ----
Q 526.90>169.10 (-) 3.94e2



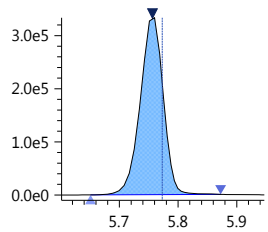
N-EtFOSA-d9

Conc 4.0451
RT 5.756 Area 914615
Q 530.90>169.15 (-) 3.34e5



N-EtFOSA-d9_IS

Conc 5.0000
RT 5.756 Area 914615
ISTD 530.90>169.15 (-) 3.34e5



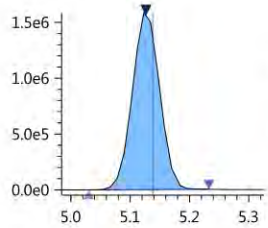
Insight Report

Printed at 8/14/2019 10:19:16 AM

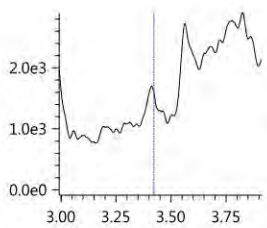
190812_055

Sample ID: IB
Date acquired: 8/13/2019 4:49:53 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b4\190812_055.lcd
Vial: 54 | Inj. Volume: 15.0000uL | Tray: 1

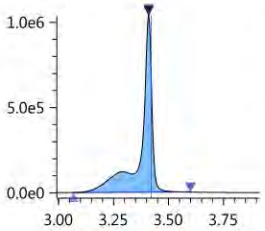
13C7-PFUnDA_IS
Conc 5.0000
RT 5.126 Area 5081952
ISTD 570.00>525.00 (-) 1.59e6



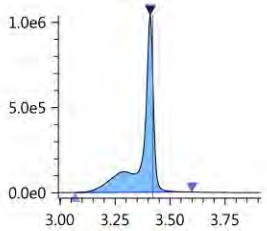
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 2.91e3



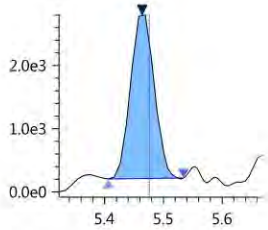
PFBA-13C
Conc 4.2356
RT 3.409 Area 3498047
Q 216.90>172.15 (-) 1.04e6



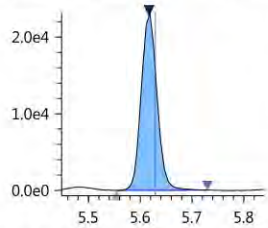
PFBA-13C_IS
Conc 5.0000
RT 3.409 Area 3498047
ISTD 216.90>172.15 (-) 1.04e6



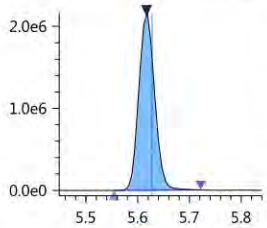
PFTrDA
Conc 0.0010
RT 5.464 Area 7314
Q 663.00>618.90 (-) 2.81e3



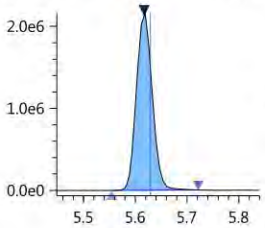
PFTeDA
Conc 0.0052
RT 5.617 Area 48960
Q 713.40>669.00 (-) 2.31e4



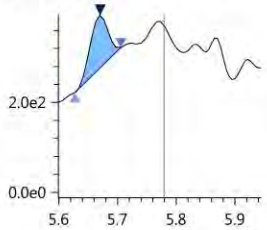
PFTeDA-13C
Conc 4.9283
RT 5.617 Area 4590023
Q 714.70>669.90 (-) 2.16e6



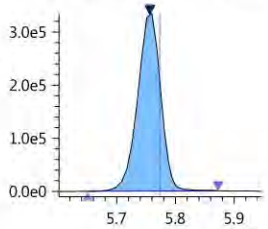
PFTeDA-13C_IS
Conc 5.0000
RT 5.617 Area 4590023
ISTD 714.70>669.90 (-) 2.16e6



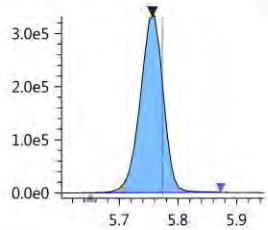
N-EtFOSA
Conc 0.0071
RT 5.670 Area 248
Q 526.90>169.10 (-) 3.94e2



N-EtFOSA-d9
Conc 4.0451
RT 5.756 Area 914615
Q 530.90>169.15 (-) 3.34e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.756 Area 914615
ISTD 530.90>169.15 (-) 3.34e5



1st EJD 08/09/19
2nd 08/12/19

Validation Report

Data File: J:\LCMS06\Data\190807_b8\190807_141
Lab ID: KQ1911078-01
RunType: CCV
Matrix: Water

Date Acquired: 8/8/19 15:56
Batch ID: 646328
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 08/09/19
2nd 08/12/19

Quantitation Report

Data File:	J:\LCMS06\Data\190807_b8\190807_141	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 15:56	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1911078-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/27/19	**Receive Date:**	7/30/19

Analysis Lot:	646328	**Prep Lot:**		**Report Group:**	KQ1911078
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	20091

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.126		3172618	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
13C3-PFBS	4.017		748084	4.9239	Y
18O2-PFHxS	4.407		594902	6.8418	Y
13C4-PFOS	4.749		640263	6.1811	Y
13C4-PFBA	3.409		2895448	5.6159	Y
13C5-PFPeA	3.964		1878807	5.7919	Y
13C2-PFHxA	4.216		3938351	6.1755	Y
13C4-PFHpA	4.407		4914955	6.5757	Y
13C4-PFOA	4.580		3819660	5.6428	Y
13C5-PFNA	4.760		3867523	7.1920	Y
13C2-PFDA	4.944		3057036	6.7624	Y
13C2-PFUnDA	5.126		2436235	4.9723	Y
13C2-PFDoDA	5.299		3380017	6.4045	Y
13C2-PFTeDA	5.617		3525646	6.0636	Y
13C8-FOSA	5.240		1373119	5.6839	Y
D3-MeFOSAA	5.042		389875	5.5921	Y
D5-EtFOSAA	5.139		448719	7.1232	Y
13C2-4:2 FTS	4.190		254220	4.3523	Y
13C2-6:2 FTS	4.567		348689	6.3329	Y
13C2-8:2 FTS	4.939		173417	5.5260	Y
13C3-HFPO-DA	4.286		1808840	5.6781	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

Printed: 8/9/19 17:47
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Data File:	J:\LCMS06\Data\190807_b8\190807_141	**Instrument:**	K-LCMS-06
Acqu Date:	8/8/19 15:56	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1911078-01	**Raw Units:**	ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluorobutane sulfonic acid (PFBS)	4.015		243375	1.1270	Y
Perfluoropentane sulfonic acid (PFPeS)	4.233		87451	0.9623	Y
Perfluorohexane sulfonic acid (PFHxS)	4.404		141091	0.8541	Y
Perfluoroheptane sulfonic acid (PFHpS)	4.574		199926	1.1347	Y
Perfluorooctane sulfonic acid (PFOS)	4.749		115675	1.0388	Y
Perfluorononane sulfonic acid (PFNS)	4.928		99274	1.3372	Y
Perfluorodecane sulfonic acid (PFDS)	5.105		136737	1.3141	Y
Perfluorobutanoic acid (PFBA)	3.410		661908	1.1168	Y
Perfluoropentanoic acid (PFPeA)	3.964		996155	1.1300	Y
Perfluorohexanoic acid (PFHxA)	4.215		823109	0.9874	Y
Perfluoroheptanoic acid (PFHpA)	4.407		807010	0.9557	Y
Perfluorooctanoic acid (PFOA)	4.580		1095603	1.2767	Y
Perfluorononanoic acid (PFNA)	4.760		755562	1.0746	Y
Perfluorodecanoic acid (PFDA)	4.944		632253	1.0202	Y
Perfluoroundecanoic acid (PFUnDA)	5.126		521451	1.1856	Y
Perfluorododecanoic acid (PFDoDA)	5.299		529219	1.2538	Y
Perfluorotridecanoic acid (PFTrDA)	5.464		647941	1.2785	Y
Perfluorotetradecanoic acid (PFTeDA)	5.617		325094	1.1831	Y
Perfluorooctane sulfonamide (FOSA)	5.240		358766	1.0380	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.043		71711	1.3024	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.142		53397	0.9836	Y
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	4.190		88451	1.3992	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.568		97752	1.1529	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.938		32365	1.0663	Y
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	4.288		350218	1.0393	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 8/9/2019 5:25:53 PM

Method File: J:\LCMS06\Data\190807_b8\190807_b8.lcm
Project File: J:\LCMS06\Data\190807_b8\190807_b8.damlp
Flags File: J:\LCMS06\Data\190807_b8\190807_b8.damlp

190807_141

Sample ID: 1.0 PPB CCV
Date acquired: 8/8/2019 3:56:39 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_141.lcd
Vial: 8 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.126	3172618	3172618	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.015	243375	749630	2	1.1270	ng/mL	0.8874
PFBS-13C	Auto	4.017	748084	3172618	1	4.9239	ng/mL	5.0000
PFBS-13C_IS	Auto	4.017	749630	749630	2	5.0000	ng/mL	5.0000
PFPeS	M	4.233	87451	749630	2	0.9623	ng/mL	0.9409
PFHxS_1	Auto	4.404	141091	594902	3	0.8541	ng/mL	0.9131
PFHxS-18O	Auto	4.407	594902	3172618	1	6.8418	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.407	594902	594902	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.574	199926	594902	3	1.1347	ng/mL	0.9534
PFOS_1	Auto	4.749	115675	635045	4	1.0388	ng/mL	0.9292
PFOS-13C	Auto	4.749	640263	3172618	1	6.1811	ng/mL	5.0000
PFOS-13C_IS	Auto	4.749	635045	635045	4	5.0000	ng/mL	5.0000
PFNS	M	4.928	99274	635045	4	1.3372	ng/mL	0.9616
PFDS_1	Auto	5.105	136737	635045	4	1.3141	ng/mL	0.9647
PFBA	Auto	3.410	661908	2895448	5	1.1168	ng/mL	1.0000
PFBA-13C	Auto	3.409	2895448	3172618	1	5.6159	ng/mL	5.0000
PFBA-13C_IS	Auto	3.409	2895448	2895448	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.964	996155	1878807	6	1.1300	ng/mL	1.0000
PFPeA-13C	Auto	3.964	1878807	3172618	1	5.7919	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.964	1878807	1878807	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.215	823109	3938351	7	0.9874	ng/mL	1.0000
PFHxA-13C	Auto	4.216	3938351	3172618	1	6.1755	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.216	3938351	3938351	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.407	807010	4914955	8	0.9557	ng/mL	1.0000
PFHpA-13C	Auto	4.407	4914955	3172618	1	6.5757	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.407	4914955	4914955	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.580	1095603	3819660	9	1.2767	ng/mL	1.0000
PFOA-13C	Auto	4.580	3819660	3172618	1	5.6428	ng/mL	5.0000
PFOA-13C_IS	Auto	4.580	3819660	3819660	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.760	755562	3867523	10	1.0746	ng/mL	1.0000
PFNA-13C	Auto	4.760	3867523	3172618	1	7.1920	ng/mL	5.0000
PFNA-13C_IS	Auto	4.760	3867523	3867523	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.944	632253	3057036	11	1.0202	ng/mL	1.0000
PFDA-13C	Auto	4.944	3057036	3172618	1	6.7624	ng/mL	5.0000
PFDA-13C_IS	Auto	4.944	3057036	3057036	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.126	521451	2436235	12	1.1856	ng/mL	1.0000
PFUnA-13C	Auto	5.126	2436235	3172618	1	4.9723	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.126	2436235	2436235	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.299	529219	3380017	13	1.2538	ng/mL	1.0000
PFDoA-13C	Auto	5.299	3380017	3172618	1	6.4045	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.299	3380017	3380017	13	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.464	647941	3525646	14	1.2785	ng/mL	1.0000
PFTeDA	Auto	5.617	325094	3525646	14	1.1831	ng/mL	1.0000
PFTeDA-13C	Auto	5.617	3525646	3172618	1	6.0636	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.617	3525646	3525646	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.240	358766	1373119	16	1.0380	ng/mL	1.0000
FOSA-13C	Auto	5.240	1373119	3172618	1	5.6839	ng/mL	5.0000
FOSA-13C_IS	Auto	5.240	1373119	1373119	16	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.043	71711	389875	21	1.3024	ng/mL	1.0000
N-MeFOSAA-d3	Auto	5.042	389875	3172618	1	5.5921	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.042	389875	389875	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.142	53397	448719	22	0.9836	ng/mL	1.0000
N-EtFOSAA-d5	Auto	5.139	448719	3172618	1	7.1232	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.139	448719	448719	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.190	88451	254220	23	1.3992	ng/mL	0.9372
4_2-FTS-13C	Auto	4.190	254220	3172618	1	4.3523	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.190	254220	254220	23	5.0000	ng/mL	5.0000
6_2-FTS_1	M	4.568	97752	348689	24	1.1529	ng/mL	0.9512
6_2-FTS-13C	Auto	4.567	348689	3172618	1	6.3329	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.567	348689	348689	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.938	32365	173417	25	1.0663	ng/mL	0.9600
8_2-FTS-13C	Auto	4.939	173417	3172618	1	5.5260	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.939	173417	173417	25	5.0000	ng/mL	5.0000
HPFO_DA	Auto	4.288	350218	1808840	26	1.0393	ng/mL	1.0000

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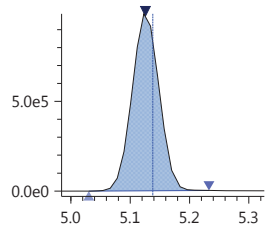
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
HFPO_DA-13C	Auto	4.286	1808840	3172618	1	5.6781	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.286	1808840	1808840	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS
Conc 5.0000
RT 5.126 Area 3172618
ISTD 570.00>525.00 (-) 9.88e5



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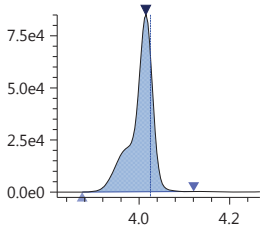
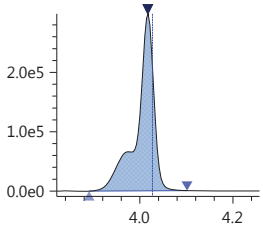
Conc 1.1270
RT 4.015 Area 243375
Q 299.00>80.00 (-) 8.51e4



PFBS-13C
Conc 4.9239
RT 4.017 Area 748084
Q 301.80>80.00 (-) 2.99e5



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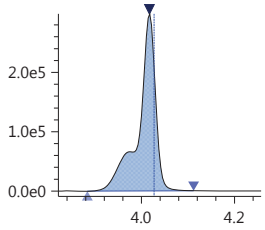
RT 4.017 Area 749630
ISTD 301.80>80.00 (-) 2.99e5



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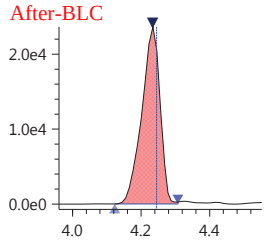
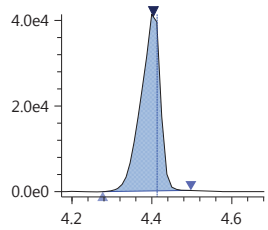
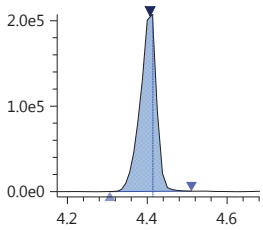
Conc 0.9623
RT 4.233 Area 87451
Q 349.00>99.00 (-) 2.36e4



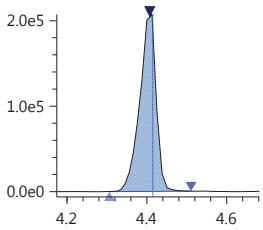
PFHxS_1
Conc 0.8541
RT 4.404 Area 141091
Q 399.00>80.00 (-) 4.14e4



PFHxS-18O
Conc 6.8418
RT 4.407 Area 594902
Q 402.70>84.05 (-) 2.07e5



PFHxS-18O_IS
Conc 5.0000
RT 4.407 Area 594902
ISTD 402.70>84.05 (-) 2.07e5



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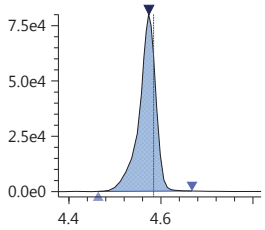
Conc 1.1347
RT 4.574 Area 199926
Q 449.00>80.15 (-) 8.01e4



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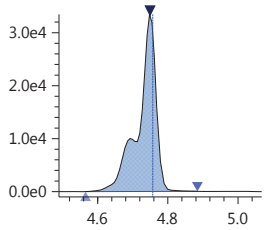
Conc 1.0388
RT 4.749 Area 115675
Q 499.00>80.00 (-) 3.35e4



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Conc 6.1811
RT 4.749 Area 640263
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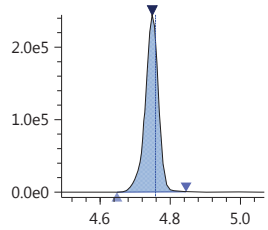

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Conc 5.0000
RT 4.749 Area 635045
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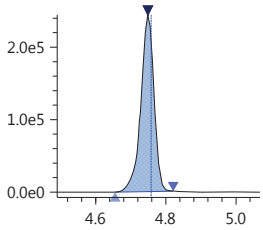

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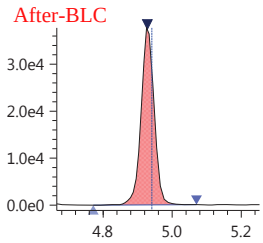
Conc 1.3372
RT 4.928 Area 99274
Q 549.00>99.00 (-) 3.77e4



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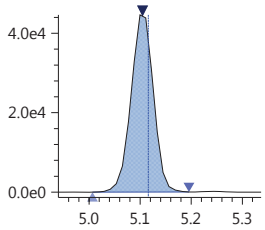
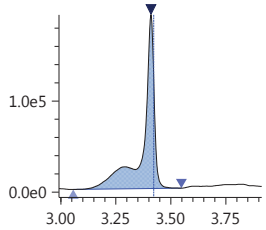
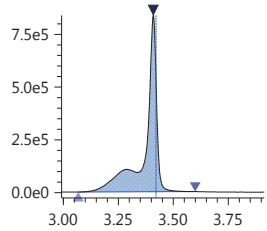
Conc 1.3141
RT 5.105 Area 136737
Q 599.00>79.90 (-) 4.46e4



PFBA
Conc 1.1168
RT 3.410 Area 661908
Q 213.00>169.10 (-) 1.95e5



PFBA-13C
Conc 5.6159
RT 3.409 Area 2895448
Q 216.90>172.15 (-) 8.40e5



PFBA-13C_IS
Conc 5.0000
RT 3.409 Area 2895448
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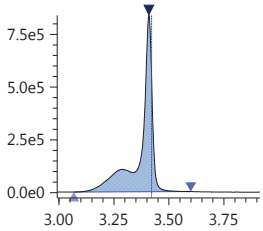

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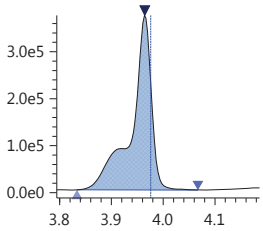
Conc 1.1300
RT 3.964 Area 996155
Q 263.05>219.10 (-) 3.77e5



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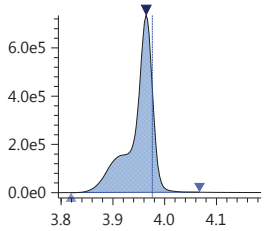
Conc 5.7919
RT 3.964 Area 1878807
Q 267.90>223.00 (-) 7.35e5



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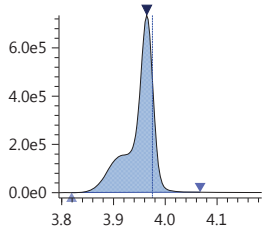
RT 3.964 Area 1878807
ISTD 267.90>223.00 (-) 7.35e5



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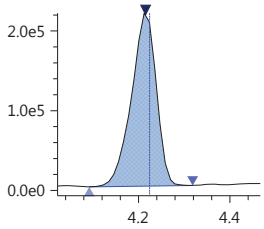
PFHxA
Conc 0.9874
RT 4.215 Area 823109
Q 313.00>269.00 (-) 2.22e5



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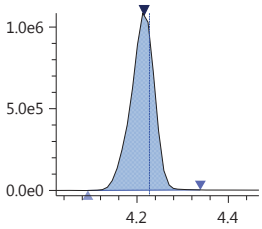
Conc 6.1755
RT 4.216 Area 3938351
Q 314.90>270.10 (-) 1.09e6



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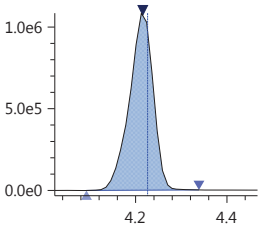
Conc 5.0000
RT 4.216 Area 3938351
ISTD 314.90>270.10 (-) 1.09e6



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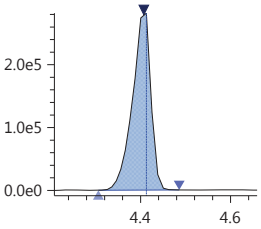
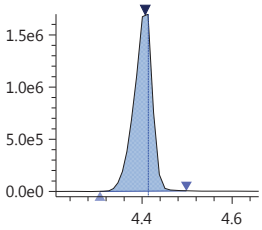
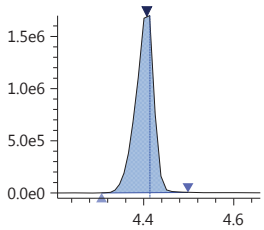
Conc 0.9557
RT 4.407 Area 807010
Q 362.90>319.00 (-) 2.82e5



PFHpA-13C
Conc 6.5757
RT 4.407 Area 4914955
Q 366.90>322.10 (-) 1.70e6



PFHpA-13C_IS
Conc 5.0000
RT 4.407 Area 4914955
ISTD 366.90>322.10 (-) 1.70e6



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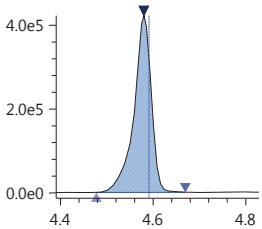
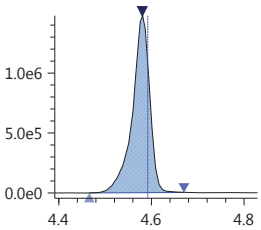
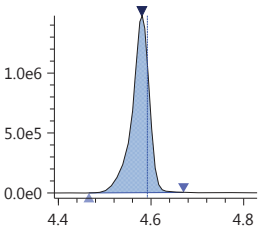
Conc 1.2767
RT 4.580 Area 1095603
Q 413.00>369.00 (-) 4.23e5



PFOA-13C
Conc 5.6428
RT 4.580 Area 3819660
Q 416.80>372.05 (-) 1.48e6



PFOA-13C_IS
Conc 5.0000
RT 4.580 Area 3819660
ISTD 416.80>372.05 (-) 1.48e6



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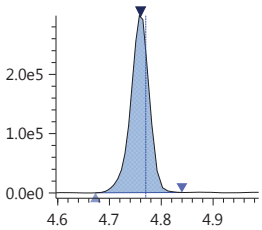
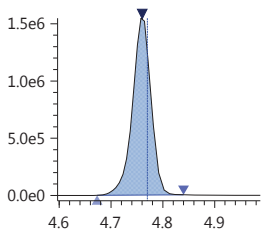
Conc 1.0746
RT 4.760 Area 755562
Q 463.00>418.90 (-) 2.99e5



PFNA-13C
Conc 7.1920
RT 4.760 Area 3867523
Q 467.80>423.00 (-) 1.55e6



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Conc 5.0000
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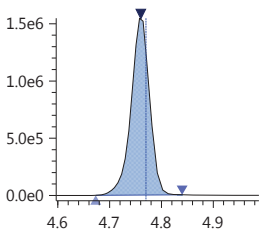
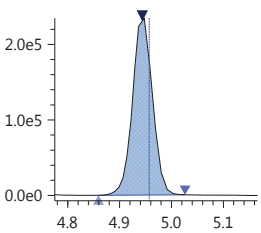
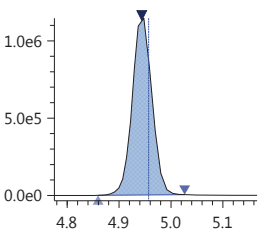
ISTD 467.80>423.00 (-) 1.55e6



PFDA
Conc 1.0202
RT 4.944 Area 632253
Q 513.00>468.80 (-) 2.35e5



PFDA-13C
Conc 6.7624
RT 4.944 Area 3057036
Q 514.80>469.95 (-) 1.15e6



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Conc 5.0000
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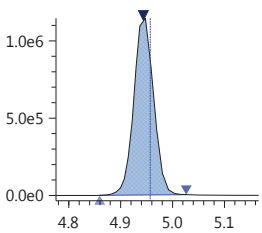
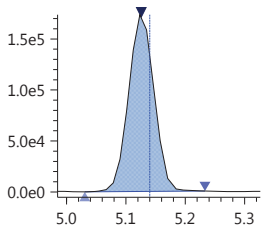
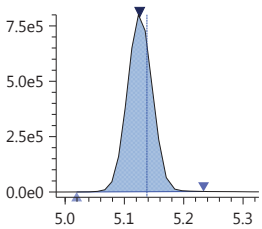
ISTD 514.80>469.95 (-) 1.15e6



PFUnA
Conc 1.1856
RT 5.126 Area 521451
Q 563.00>518.90 (-) 1.74e5



PFUnA-13C
Conc 4.9723
RT 5.126 Area 2436235
Q 564.80>519.95 (-) 8.01e5



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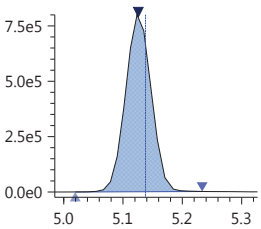

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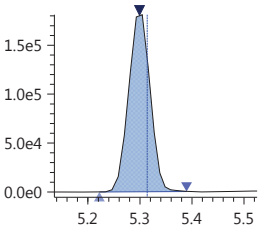
Q 613.05>569.00 (-) 1.81e5



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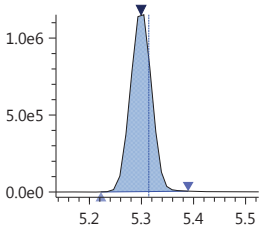
RT 5.299 Area 3380017
Q 614.80>569.95 (-) 1.15e6



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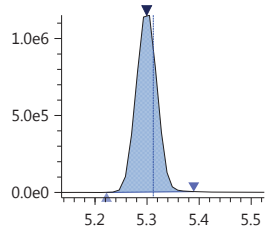
ISTD 614.80>569.95 (-) 1.15e6



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RT 5.464 Area 647941
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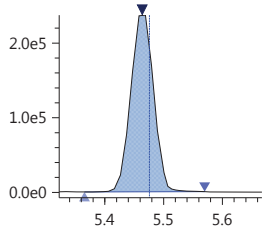

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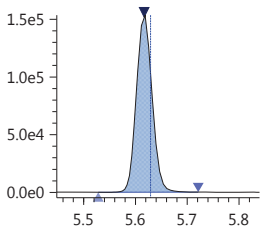
Q 713.40>669.00 (-) 1.54e5



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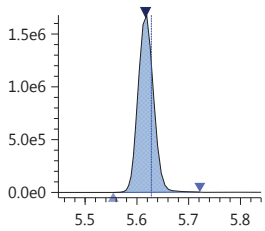

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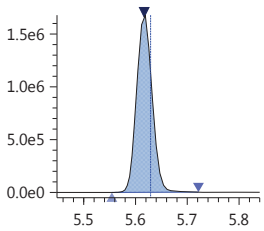

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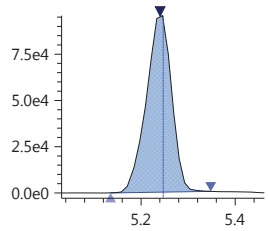

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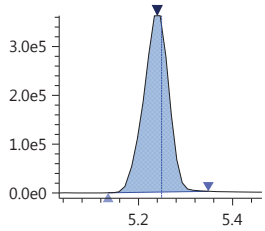
Q 506.00>78.05 (-) 3.63e5



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RT 5.240 Area 1373119
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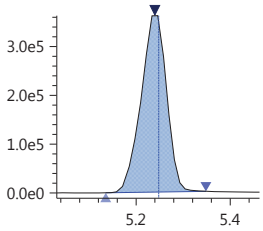

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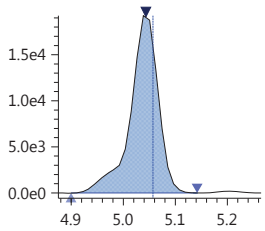

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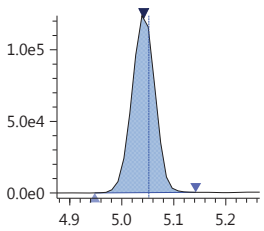
Q 572.80>419.05 (-) 1.24e5



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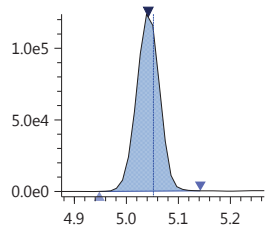

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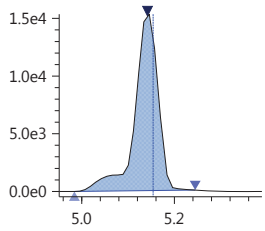

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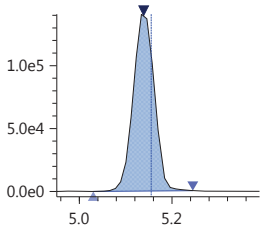

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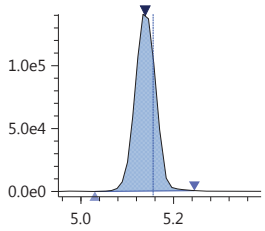
ISTD 588.80>419.00 (-) 1.41e5



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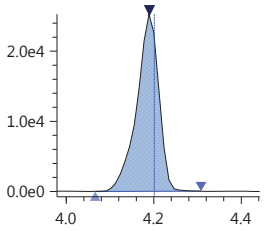
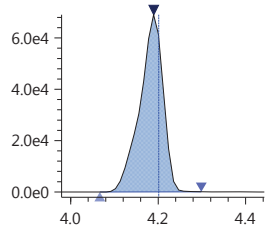


4_2-FTS-13C
Conc 4.3523
RT 4.190 Area 254220
Q 328.80>309.05 (-) 6.91e4



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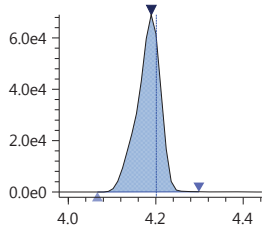

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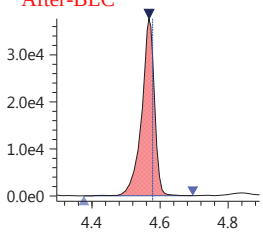

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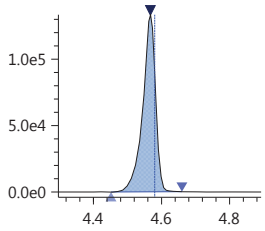

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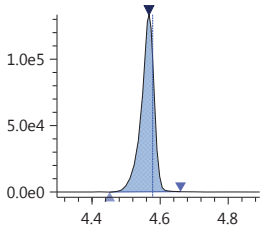

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8_2-FTS_1

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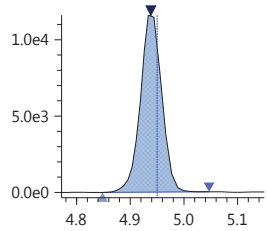

8_2-FTS-13C

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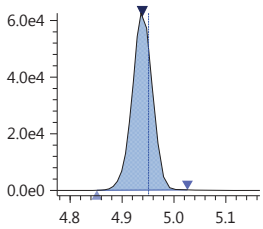
Q 528.80>509.00 (-) 6.26e4



8_2-FTS-13C_IS

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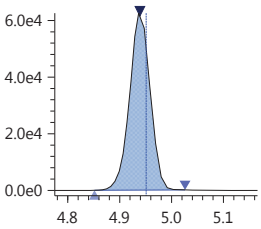

HPFO_DA

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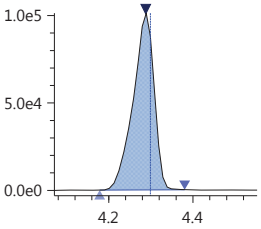

HFPO_DA-13C

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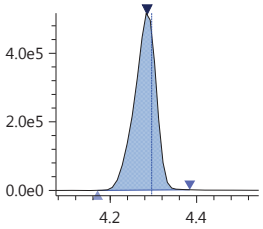
Q 332.00>286.80 (-) 5.17e5



HFPO_DA-13C_IS

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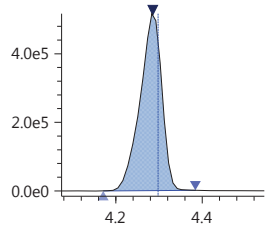

Insight Report

Printed at 8/9/2019 4:33:51 PM

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Project File: J:\LCMS06\Data\190807_b8\190807_b8.damlp
Flags File: J:\LCMS06\Data\190807_b8\190807_b8.damlp

190807_141

Sample ID: 1.0 PPB CCV
Date acquired: 8/8/2019 3:56:39 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_b8\190807_141.lcd
Vial: 8 | Inj. Volume: 15.0000uL | Tray: 1

13C7-PFUnDA_IS
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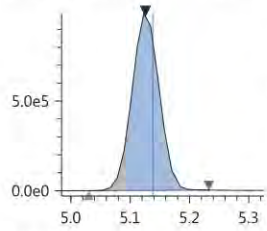
RT 5.126 Area 3172618
ISTD 570.00>525.00 (-) 9.88e5



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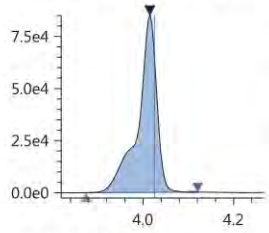

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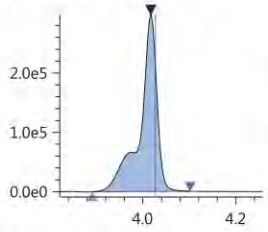

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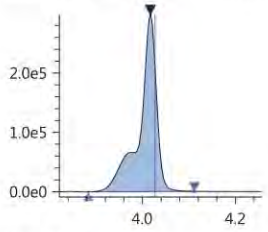

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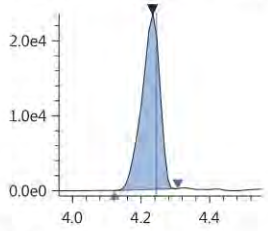
Q 349.00>99.00 (-) 2.36e4



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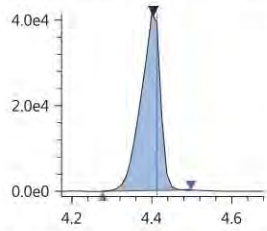

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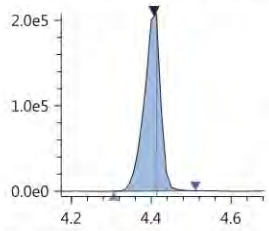

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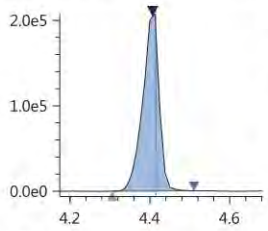

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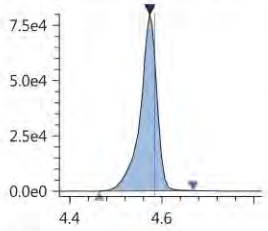

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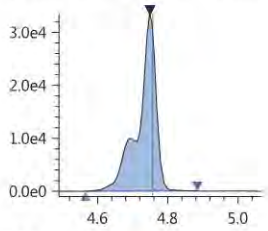
Q 499.00>80.00 (-) 3.35e4



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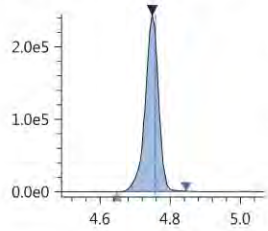

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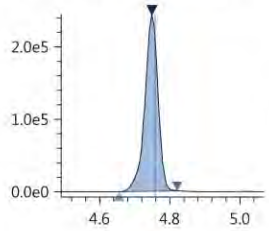

PFNS
Conc 1.3200
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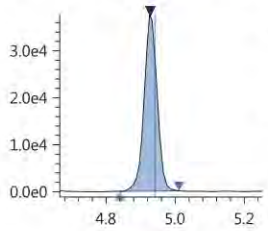

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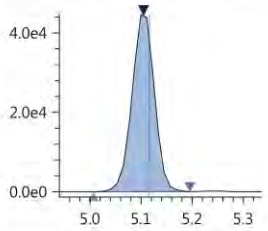

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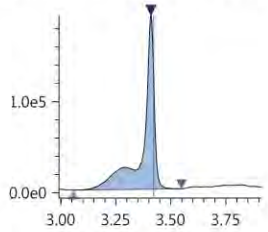
RT 3.410 Area 661908
Q 213.00>169.10 (-) 1.95e5



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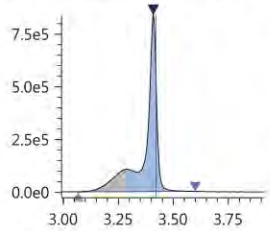

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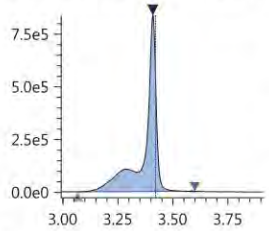

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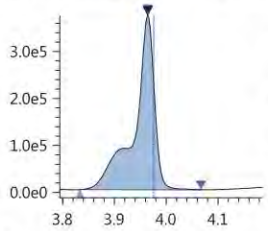
Q 263.05>219.10 (-) 3.77e5



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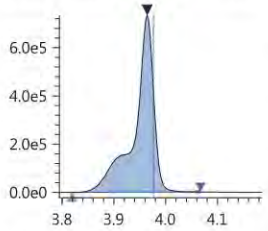

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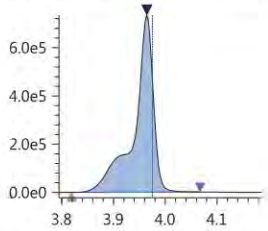

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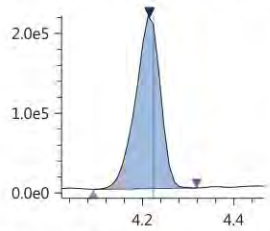

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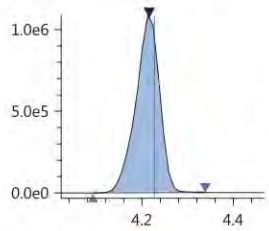

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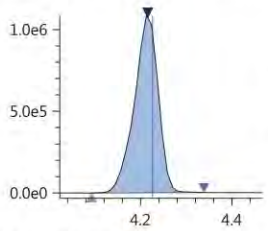

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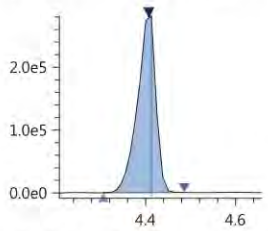
Q 362.90>319.00 (-) 2.82e5



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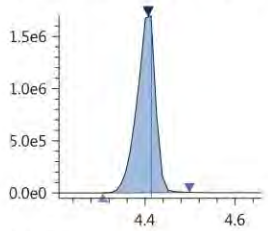

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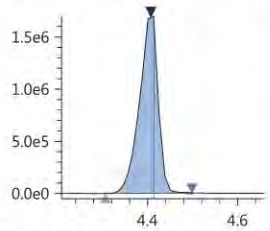

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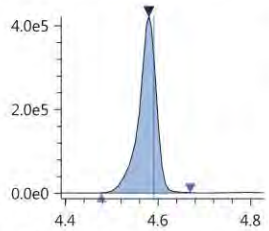

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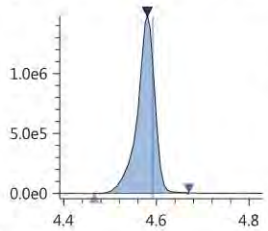

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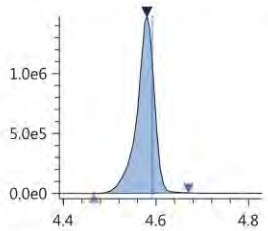

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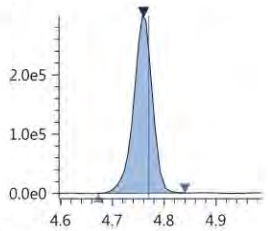

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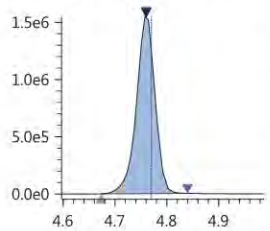
Q 467.80>423.00 (-) 1.55e6



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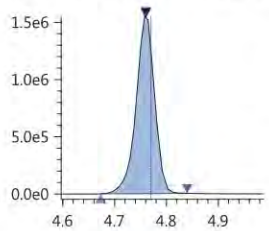

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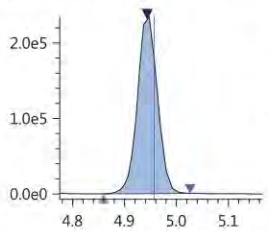

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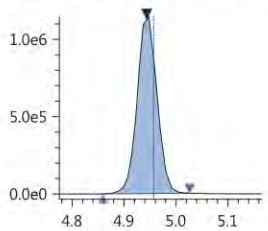

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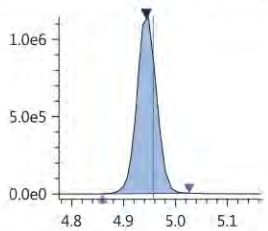

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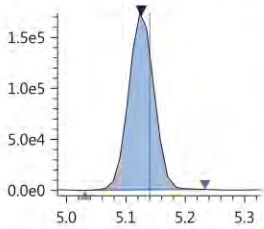

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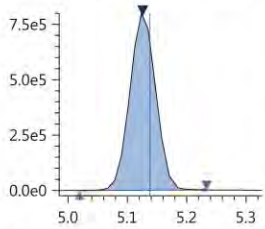

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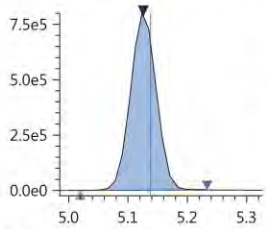

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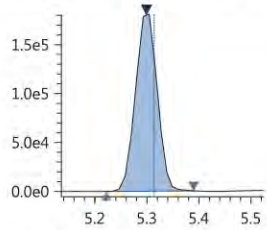

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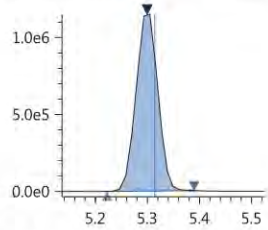

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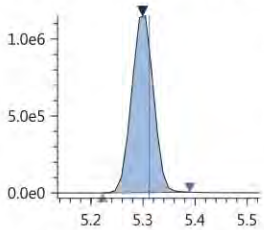
ISTD 614.80>569.95 (-) 1.15e6



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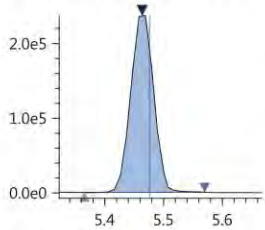

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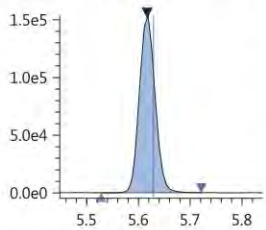

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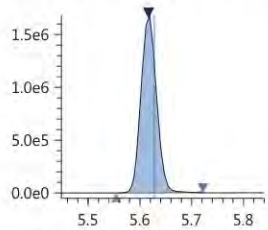

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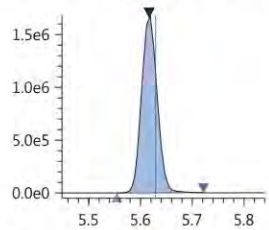

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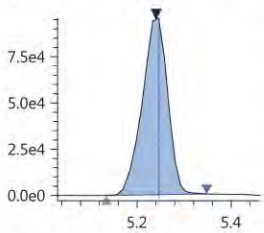

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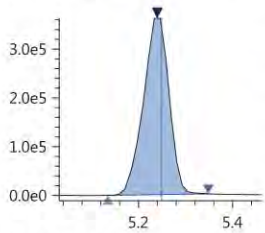

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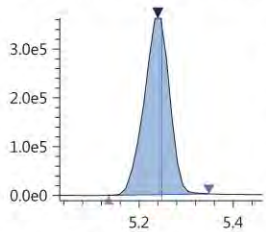

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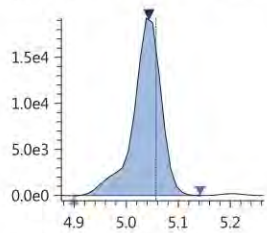

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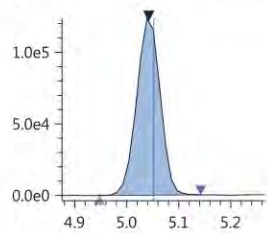
Q 572.80>419.05 (-) 1.24e5



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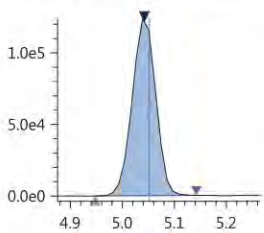

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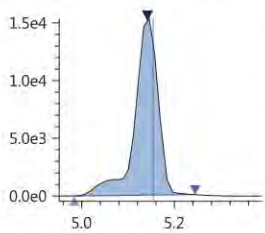

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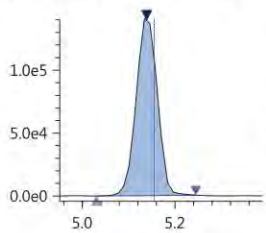
Q 588.80>419.00 (-) 1.41e5



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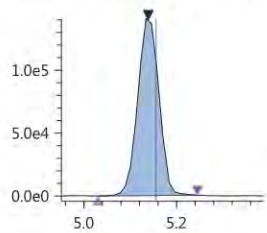

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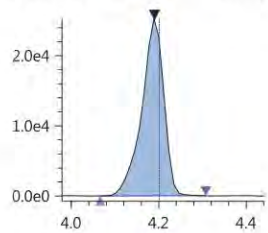
Q 327.00>307.05 (-) 2.53e4



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4_2-FTS-13C
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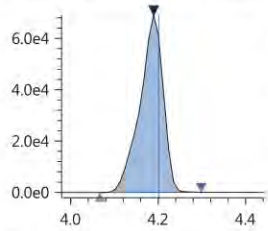

4_2-FTS-13C_IS
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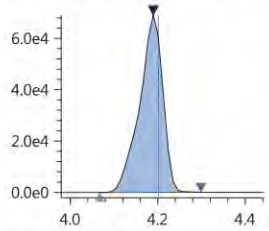
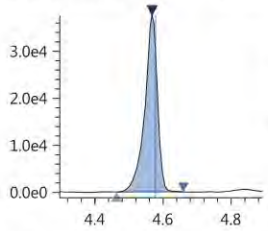
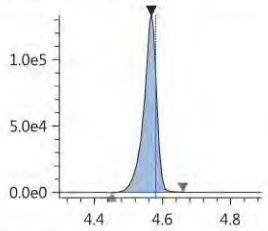
RT 4.190 Area 254220
ISTD 328.80>309.05 (-) 6.91e4



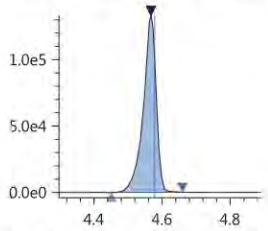
6_2-FTS_1
Conc 1.1399
RT 4.568 Area 96656
Q 427.00>407.00 (-) 3.77e4



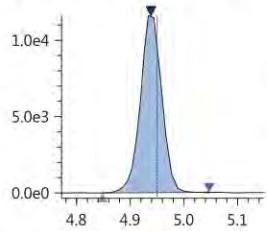
6_2-FTS-13C
Conc 6.3329
RT 4.567 Area 348689
Q 428.90>409.00 (-) 1.34e5



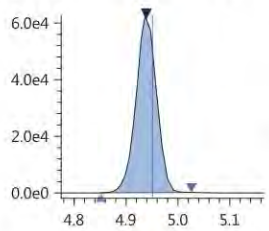
6_2-FTS-13C_IS
Conc 5.0000
RT 4.567 Area 348689
ISTD 428.90>409.00 (-) 1.34e5



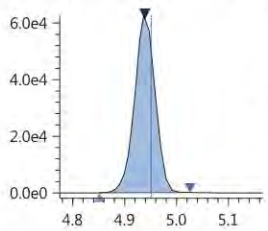
8_2-FTS_1
Conc 1.0663
RT 4.938 Area 32365
Q 527.10>506.90 (-) 1.16e4



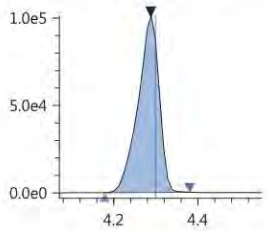
8_2-FTS-13C
Conc 5.5260
RT 4.939 Area 173417
Q 528.80>509.00 (-) 6.26e4



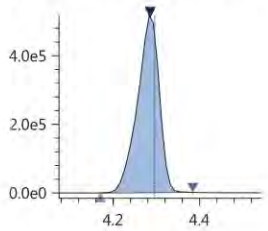
8_2-FTS-13C_IS
Conc 5.0000
RT 4.939 Area 173417
ISTD 528.80>509.00 (-) 6.26e4



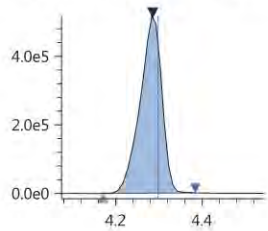
HPFO_DA
Conc 1.0393
RT 4.288 Area 350218
Q 329.00>169.00 (-) 1.01e5



HFPO_DA-13C
Conc 5.6781
RT 4.286 Area 1808840
Q 332.00>286.80 (-) 5.17e5



HFPO_DA-13C_IS
Conc 5.0000
RT 4.286 Area 1808840
ISTD 332.00>286.80 (-) 5.17e5



1st EJD 08/13/19
2nd 08/13/19

Validation Report

Data File: J:\LCMS06\Data\190812_b1\190812_007
Lab ID: KQ1911320-01
RunType: CCV
Matrix: Water

Date Acquired: 8/12/19 20:28
Batch ID: 646922
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 08/13/19
2nd 08/13/19

Quantitation Report

Data File:	J:\LCMS06\Data\190812_b1\190812_007	**Instrument:**	K-LCMS-06
Acqu Date:	8/12/19 20:28	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1911320-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	8/7/19	**Receive Date:**	8/8/19

Analysis Lot:	646922	**Prep Lot:**		**Report Group:**	KQ1911320
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	20091

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.152		3877746	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
13C3-PFBS	4.039		981624	5.2862	Y
18O2-PFHxS	4.424		484614	4.5599	Y
13C4-PFOS	4.768		590311	4.6626	Y
13C4-PFBA	3.432		3707034	5.8826	Y
13C5-PFPeA	3.987		2177966	5.4932	Y
13C2-PFHxA	4.239		4929762	6.3244	Y
13C4-PFHpA	4.425		4702820	5.1478	Y
13C4-PFOA	4.602		5304282	6.4111	Y
13C5-PFNA	4.782		3931054	5.9809	Y
13C2-PFDA	4.965		3966520	7.1787	Y
13C2-PFUnDA	5.153		3218013	5.3735	Y
13C2-PFDoDA	5.324		4675516	7.2483	Y
13C2-PFTeDA	5.642		4562032	6.4193	Y
13C8-FOSA	5.248		1691517	5.7287	Y
D3-MeFOSA	5.632		577970	4.9889	Y
D5-EtFOSA	5.766		930682	5.3945	Y
D7-MeFOSE	5.601		697034	4.8978	Y
D9-EtFOSE	5.728		732528	5.1095	Y
D3-MeFOSAA	5.065		596633	7.0016	Y
D5-EtFOSAA	5.162		505431	6.5645	Y
13C2-4:2 FTS	4.214		444448	6.2254	Y
13C2-6:2 FTS	4.590		398172	5.9167	Y
13C2-8:2 FTS	4.962		354654	9.2462	Y
13C3-HFPO-DA	4.310		1754568	4.5062	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 ESD 08/13/19

2nd 08/13/19

Data File:	J:\LCMS06\Data\190812_b1\190812_007	**Instrument:**	K-LCMS-06
Acqu Date:	8/12/19 20:28	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1911320-01	**Raw Units:**	ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluorobutane sulfonic acid (PFBS)	4.038		271734	0.9594	Y
Perfluoropentane sulfonic acid (PFPeS)	4.256		103171	0.8655	Y
Perfluorohexane sulfonic acid (PFHxS)	4.421		128817	0.9573	Y
Perfluoroheptane sulfonic acid (PFHpS)	4.595		188188	1.3112	Y
Perfluorooctane sulfonic acid (PFOS)	4.768		96571	0.9417	Y
Perfluorononane sulfonic acid (PFNS)	4.950		111836	1.6545	Y
Perfluorodecane sulfonic acid (PFDS)	5.128		155714	1.6249	Y
Perfluorobutanoic acid (PFBA)	3.433		792004	1.0438	Y
Perfluoropentanoic acid (PFPeA)	3.988		1147465	1.1222	Y
Perfluorohexanoic acid (PFHxA)	4.239		1038741	0.9957	Y
Perfluoroheptanoic acid (PFHpA)	4.425		791292	0.9798	Y
Perfluorooctanoic acid (PFOA)	4.602		1245809	1.0417	Y
Perfluorononanoic acid (PFNA)	4.781		697514	0.9749	Y
Perfluorodecanoic acid (PFDA)	4.965		750043	0.9328	Y
Perfluoroundecanoic acid (PFUnDA)	5.152		580337	0.9942	Y
Perfluorododecanoic acid (PFDoDA)	5.324		535234	0.9141	Y
Perfluorotridecanoic acid (PFTrDA)	5.491		812363	1.2385	Y
Perfluorotetradecanoic acid (PFTeDA)	5.642		372124	1.0295	Y
Perfluorooctane sulfonamide (FOSA)	5.248		403899	0.9486	Y
N-Methyl perfluorooctane sulfonamide (MeFOSA)	5.635		205524	1.1287	Y
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	5.772		37059	1.0392	Y
N-Methyl perfluorooctane sulfonamidoethanol	5.608		180038	1.0290	Y
N-Ethyl perfluorooctane sulfonamidoethanol	5.738		168843	0.9425	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.068		92382	1.0974	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.165		65706	1.0671	Y
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	4.214		116994	1.0586	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.589		99681	1.0295	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.960		58471	0.9419	Y
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	5.327		41537	0.7408	Y
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	4.311		388807	1.1895	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 8/13/2019 12:26:34 PM

Method File: J:\LCMS06\Data\190812_b1\190812_b1.lcm
Project File: J:\LCMS06\Data\190812_b1\190812_b1.damlp
Flags File: J:\LCMS06\Data\190812_b1\190812_b1.damlp

190812_007

Sample ID: 1.0 PPB CCV
Date acquired: 8/12/2019 8:28:26 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b1\190812_007.lcd
Vial: 53 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.152	3877746	3877746	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.038	271734	983253	2	0.9594	ng/mL	0.8874
PFBS-13C	Auto	4.039	981624	3877746	1	5.2862	ng/mL	5.0000
PFBS-13C_IS	Auto	4.039	983253	983253	2	5.0000	ng/mL	5.0000
PFPeS	M	4.256	103171	983253	2	0.8655	ng/mL	0.9409
PFHxS_1	Auto	4.421	128817	484614	3	0.9573	ng/mL	0.9131
PFHxS-18O	Auto	4.424	484614	3877746	1	4.5599	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.424	484614	484614	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.595	188188	484614	3	1.3112	ng/mL	0.9534
PFOS_1	M	4.768	96571	584861	4	0.9417	ng/mL	0.9292
PFOS-13C	Auto	4.768	590311	3877746	1	4.6626	ng/mL	5.0000
PFOS-13C_IS	Auto	4.768	584861	584861	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.950	111836	584861	4	1.6545	ng/mL	0.9616
PFDS_1	M	5.128	155714	584861	4	1.6249	ng/mL	0.9647
PFBA	Auto	3.433	792004	3707034	5	1.0438	ng/mL	1.0000
PFBA-13C	Auto	3.432	3707034	3877746	1	5.8826	ng/mL	5.0000
PFBA-13C_IS	Auto	3.432	3707034	3707034	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.988	1147465	2177966	6	1.1222	ng/mL	1.0000
PFPeA-13C	Auto	3.987	2177966	3877746	1	5.4932	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.987	2177966	2177966	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.239	1038741	4929762	7	0.9957	ng/mL	1.0000
PFHxA-13C	Auto	4.239	4929762	3877746	1	6.3244	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.239	4929762	4929762	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.425	791292	4702820	8	0.9798	ng/mL	1.0000
PFHpA-13C	Auto	4.425	4702820	3877746	1	5.1478	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.425	4702820	4702820	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.602	1245809	5304282	9	1.0417	ng/mL	1.0000
PFOA-13C	Auto	4.602	5304282	3877746	1	6.4111	ng/mL	5.0000
PFOA-13C_IS	Auto	4.602	5304282	5304282	9	5.0000	ng/mL	5.0000
PFNA	M	4.781	697514	3931054	10	0.9749	ng/mL	1.0000
PFNA-13C	Auto	4.782	3931054	3877746	1	5.9809	ng/mL	5.0000
PFNA-13C_IS	Auto	4.782	3931054	3931054	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.965	750043	3966520	11	0.9328	ng/mL	1.0000
PFDA-13C	Auto	4.965	3966520	3877746	1	7.1787	ng/mL	5.0000
PFDA-13C_IS	Auto	4.965	3966520	3966520	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.152	580337	3218013	12	0.9942	ng/mL	1.0000
PFUnA-13C	Auto	5.153	3218013	3877746	1	5.3735	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.153	3218013	3218013	12	5.0000	ng/mL	5.0000
PFDoA	M	5.324	535234	4675516	13	0.9141	ng/mL	1.0000
PFDoA-13C	Auto	5.324	4675516	3877746	1	7.2483	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.324	4675516	4675516	13	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.491	812363	4562032	14	1.2385	ng/mL	1.0000
PFTeDA	Auto	5.642	372124	4562032	14	1.0295	ng/mL	1.0000
PFTeDA-13C	Auto	5.642	4562032	3877746	1	6.4193	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.642	4562032	4562032	14	5.0000	ng/mL	5.0000
FOSA	M	5.248	403899	1691517	16	0.9486	ng/mL	1.0000
FOSA-13C	Auto	5.248	1691517	3877746	1	5.7287	ng/mL	5.0000
FOSA-13C_IS	Auto	5.248	1691517	1691517	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.635	205524	577970	17	1.1287	ng/mL	1.0000
N-MeFOSA-d3	Auto	5.632	577970	3877746	1	4.9889	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.632	577970	577970	17	5.0000	ng/mL	5.0000
N-EtFOSA	M	5.772	37059	930682	18	1.0392	ng/mL	1.0000
N-EtFOSA-d9	Auto	5.766	930682	3877746	1	5.3945	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.766	930682	930682	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.608	180038	697034	19	1.0290	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.601	697034	3877746	1	4.8978	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.601	697034	697034	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.738	168843	732528	20	0.9425	ng/mL	1.0000
N-EtFOSE-d9	Auto	5.728	732528	3877746	1	5.1095	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.728	732528	732528	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.068	92382	596633	21	1.0974	ng/mL	1.0000
N-MeFOSAA-d3	Auto	5.065	596633	3877746	1	7.0016	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.065	596633	596633	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.165	65706	505431	22	1.0671	ng/mL	1.0000

Insight Report

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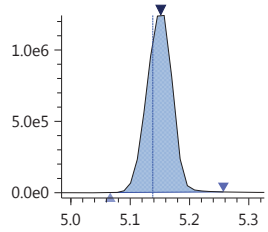
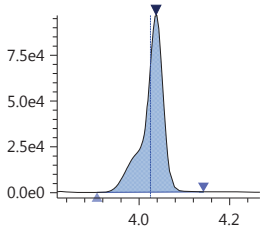
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA-d5	Auto	5.162	505431	3877746	1	6.5645	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.162	505431	505431	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.214	116994	444448	23	1.0586	ng/mL	0.9372
4_2-FTS-13C	Auto	4.214	444448	3877746	1	6.2254	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.214	444448	444448	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.589	99681	398172	24	1.0295	ng/mL	0.9512
6_2-FTS-13C	Auto	4.590	398172	3877746	1	5.9167	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.590	398172	398172	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.960	58471	354654	25	0.9419	ng/mL	0.9600
8_2-FTS-13C	Auto	4.962	354654	3877746	1	9.2462	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.962	354654	354654	25	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.327	41537	354654	25	0.7408	ng/mL	0.9662
HPFO_DA	Auto	4.311	388807	1754568	26	1.1895	ng/mL	1.0000
HFPO_DA-13C	Auto	4.310	1754568	3877746	1	4.5062	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.310	1754568	1754568	26	5.0000	ng/mL	5.0000

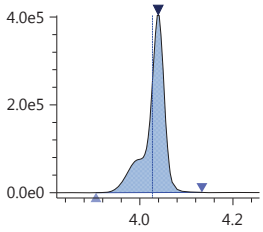
13C7-PFUnDA_IS
Conc 5.0000
RT 5.152 Area 3877746
ISTD 570.00>525.00 (-) 1.24e6



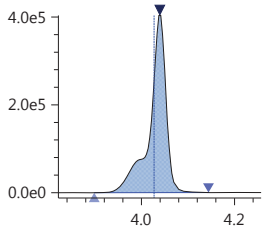
PFBS_1
Conc 0.9594
RT 4.038 Area 271734
Q 299.00>80.00 (-) 9.67e4



PFBS-13C
Conc 5.2862
RT 4.039 Area 981624
Q 301.80>80.00 (-) 4.04e5



PFBS-13C_IS
Conc 5.0000
RT 4.039 Area 983253
ISTD 301.80>80.00 (-) 4.04e5



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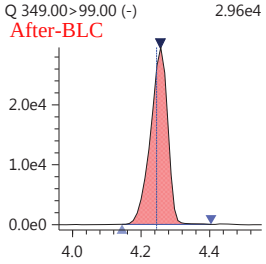
RT 4.256 Area 103171
Q 349.00>99.00 (-) 2.96e4



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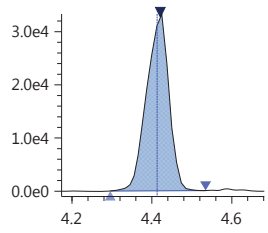

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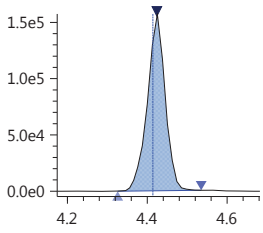

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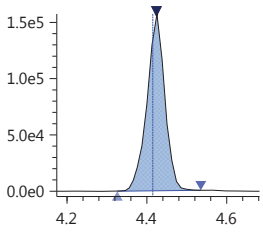

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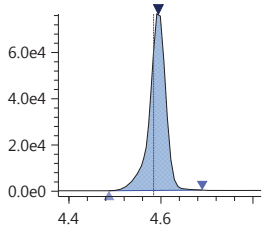

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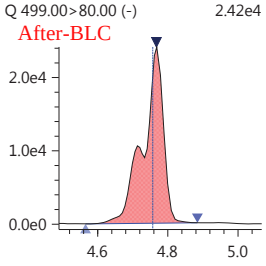
RT 4.768 Area 96571
Q 499.00>80.00 (-) 2.42e4



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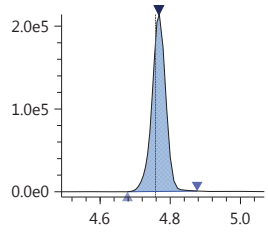
Q 502.80>80.05 (-) 2.14e5



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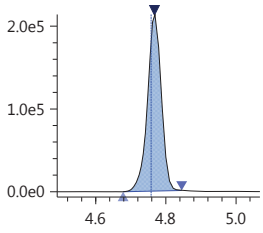

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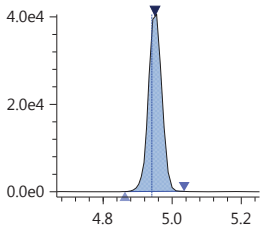

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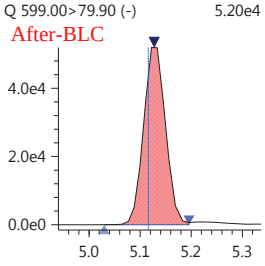

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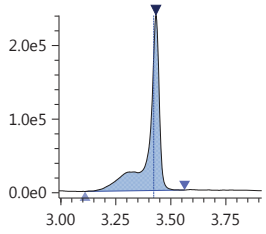

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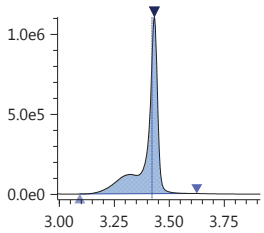

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RT 3.432 Area 3707034
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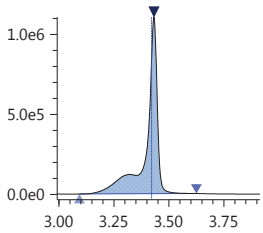

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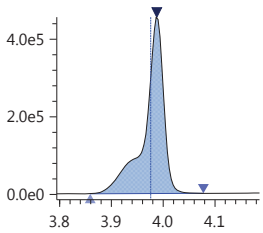

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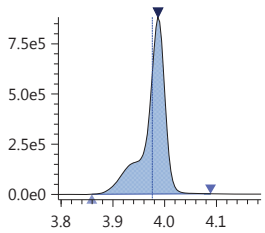

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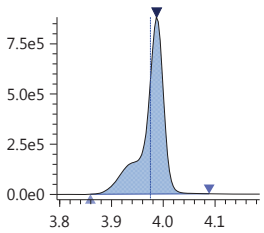

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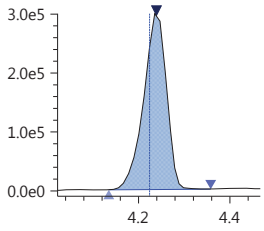
Q 313.00>269.00 (-) 3.01e5



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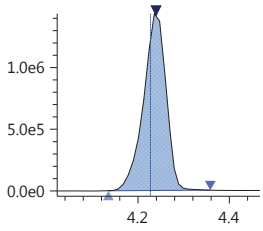

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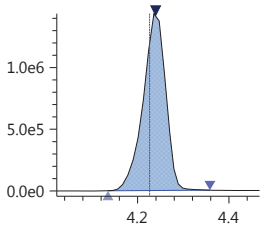

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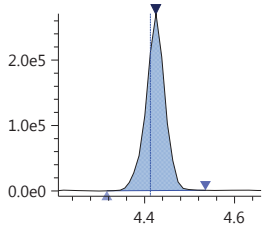
Q 362.90>319.00 (-) 2.71e5



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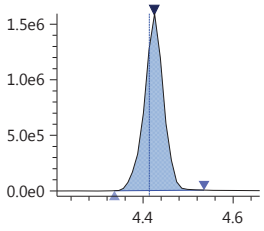

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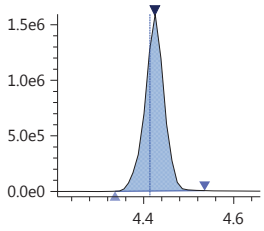

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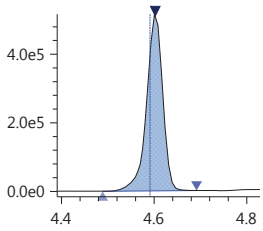

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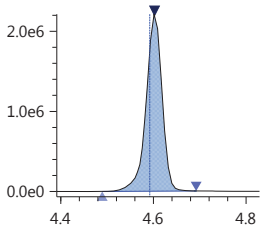

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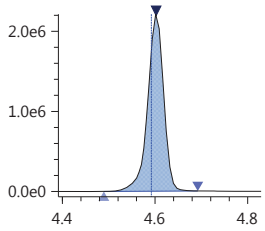

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RT 4.781 Area 697514
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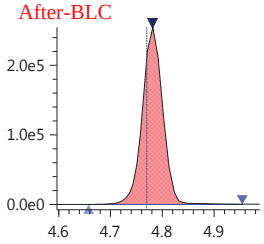
After-BLC



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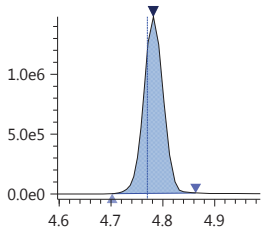
RT 4.782 Area 3931054
Q 467.80>423.00 (-) 1.48e6



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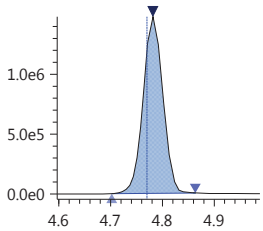

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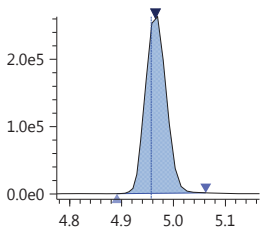
Q 513.00>468.80 (-) 2.63e5



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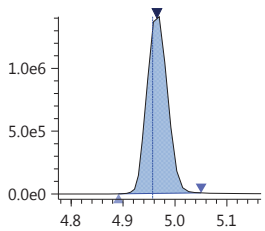

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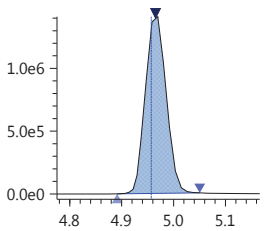

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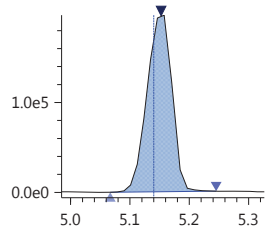

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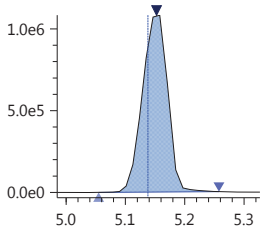

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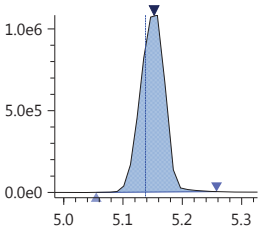

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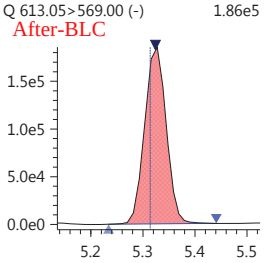

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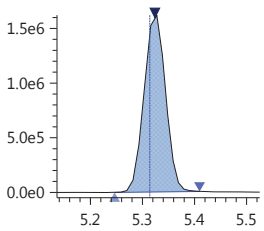

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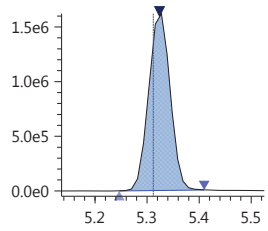

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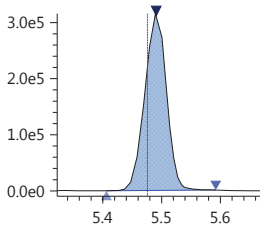

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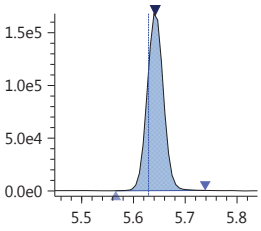
Q 713.40>669.00 (-) 1.68e5



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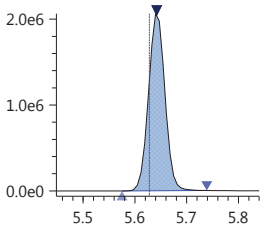
Q 714.70>669.90 (-) 2.06e6



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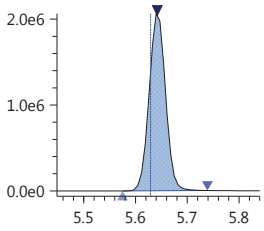

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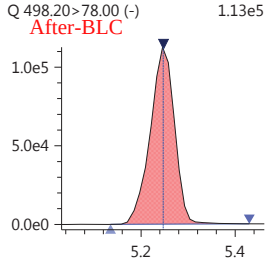

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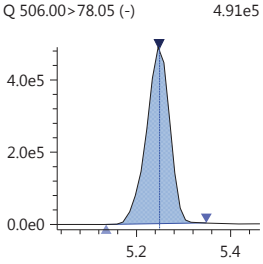
Q 506.00>78.05 (-) 4.91e5



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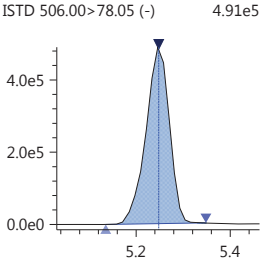
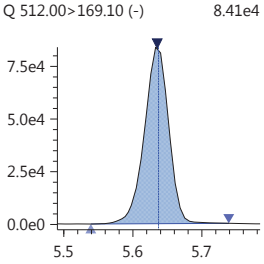
RT 5.248 Area 1691517
ISTD 506.00>78.05 (-) 4.91e5



N-MeFOSA
Conc 1.1287
RT 5.635 Area 205524
Q 512.00>169.10 (-) 8.41e4



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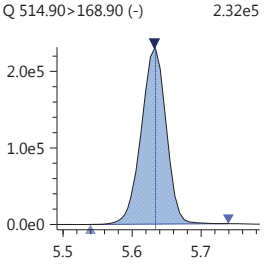
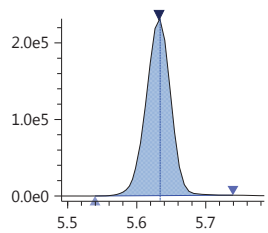
Conc 4.9889
RT 5.632 Area 577970
Q 514.90>168.90 (-) 2.32e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.632 Area 577970
ISTD 514.90>168.90 (-) 2.32e5



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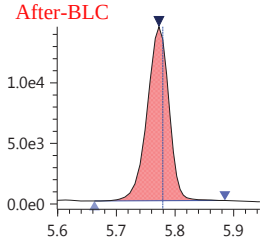
Conc 1.0392
RT 5.772 Area 37059
Q 526.90>169.10 (-) 1.46e4



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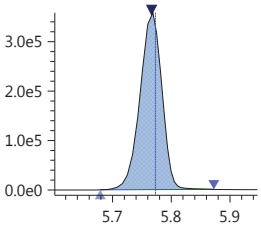
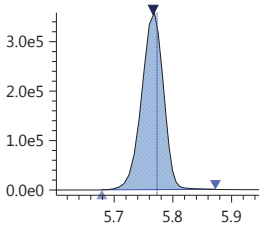
Conc 5.3945
RT 5.766 Area 930682
Q 530.90>169.15 (-) 3.59e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.766 Area 930682
ISTD 530.90>169.15 (-) 3.59e5



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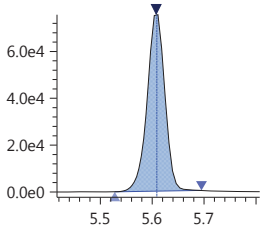
RT 5.608 Area 180038
Q 616.00>59.00 (-) 7.57e4



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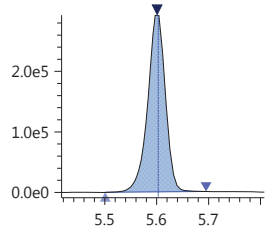
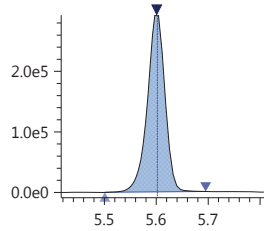
N-MeFOSE-d7
Conc 4.8978
RT 5.601 Area 697034
Q 622.70>59.10 (-) 2.93e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.601 Area 697034
ISTD 622.70>59.10 (-) 2.93e5



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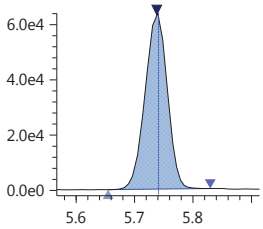
RT 5.738 Area 168843
Q 630.00>58.90 (-) 6.42e4



N-EtFOSE-d9
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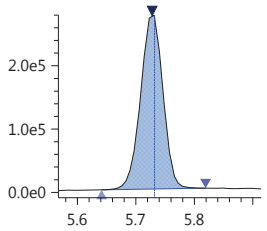
RT 5.728 Area 732528
Q 638.70>59.10 (-) 2.80e5



N-EtFOSE-d9_IS
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RT 5.728 Area 732528
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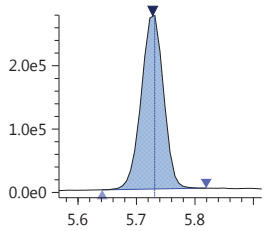

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Conc 1.0974
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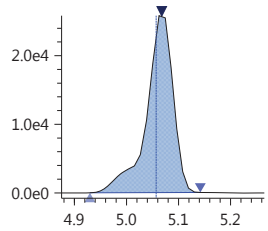
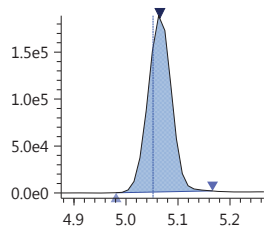
Q 570.20>419.00 (-) 2.58e4



N-MeFOSAA-d3
Conc 7.0016
RT 5.065 Area 596633
Q 572.80>419.05 (-) 1.89e5



N-MeFOSAA-d3_IS
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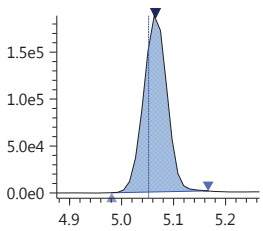
RT 5.065 Area 596633
ISTD 572.80>419.05 (-) 1.89e5



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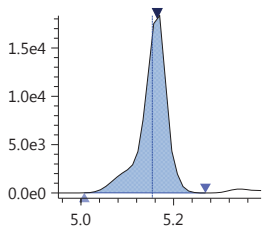
Q 584.20>418.95 (-) 1.83e4



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Conc 6.5645
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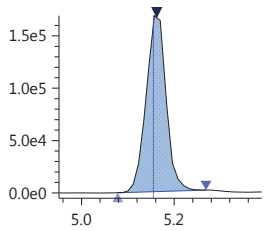
Q 588.80>419.00 (-) 1.69e5



N-EtFOSAA-d5_IS
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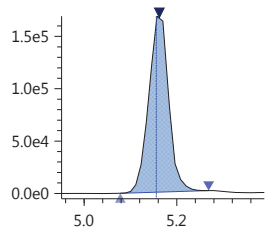
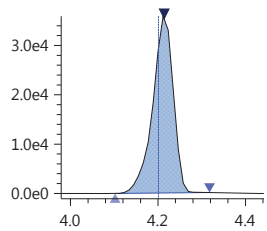
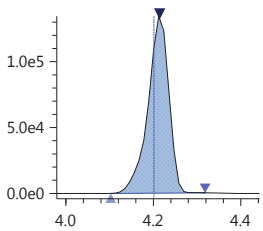


4_2-FTS_1
Conc 1.0586
RT 4.214 Area 116994
Q 327.00>307.05 (-) 3.59e4



4_2-FTS-13C
Conc 6.2254
RT 4.214 Area 444448
Q 328.80>309.05 (-) 1.35e5



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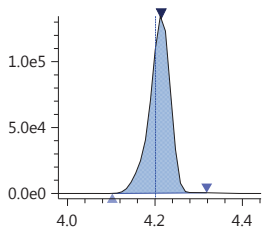
ISTD 328.80>309.05 (-) 1.35e5



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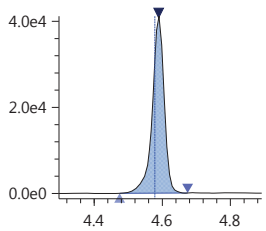
Conc 1.0295
RT 4.589 Area 99681
Q 427.00>407.00 (-) 4.12e4



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Conc 5.9167
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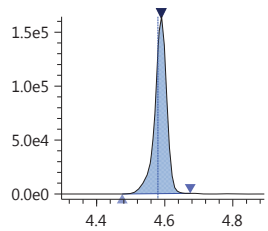
Q 428.90>409.00 (-) 1.64e5



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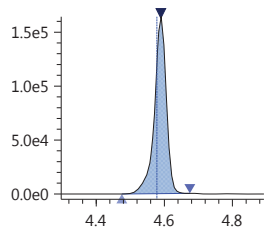
ISTD 428.90>409.00 (-) 1.64e5



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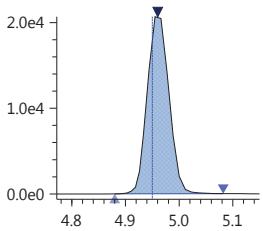
Conc 0.9419
RT 4.960 Area 58471
Q 527.10>506.90 (-) 2.07e4



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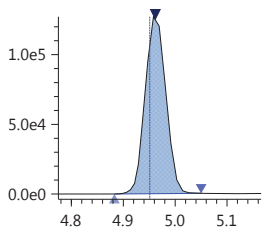
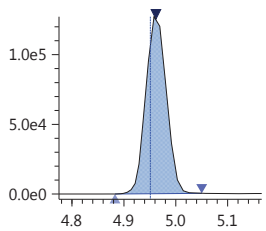
Conc 9.2462
RT 4.962 Area 354654
Q 528.80>509.00 (-) 1.27e5



8_2-FTS-13C_IS
Conc 5.0000
RT 4.962 Area 354654
ISTD 528.80>509.00 (-) 1.27e5



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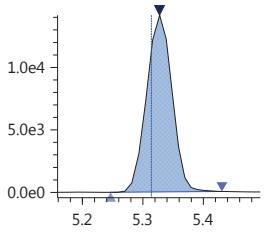
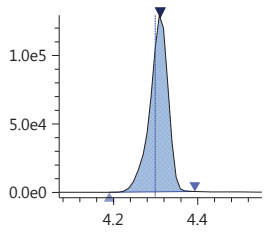
10_2-FtS_1
Conc 0.7408
RT 5.327 Area 41537
Q 627.00>606.95 (-) 1.42e4



HPFO_DA
Conc 1.1895
RT 4.311 Area 388807
Q 329.00>169.00 (-) 1.30e5



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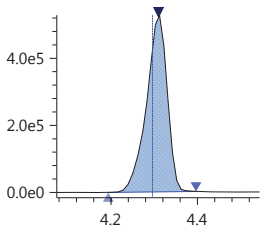
Conc 4.5062
RT 4.310 Area 1754568
Q 332.00>286.80 (-) 5.29e5



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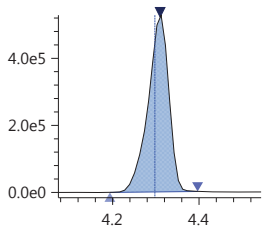

Insight Report

Printed at 8/13/2019 10:42:21 AM

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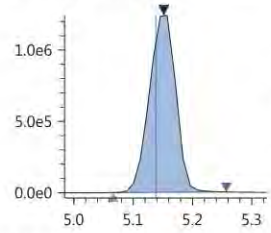
Project File: J:\LCMS06\Data\190812_b1\190812_b1.damlp
Flags File: J:\LCMS06\Data\190812_b1\190812_b1.damlp

190812_007

Sample ID: 1.0 PPB CCV
Date acquired: 8/12/2019 8:28:26 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b1\190812_007.lcd
Vial: 53 | Inj. Volume: 15.0000uL | Tray: 1

13C7-PFUnDA_IS
Conc 5.0000
RT 5.152 Area 3877746
ISTD 570.00>525.00 (-) 1.24e6



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Conc 0.9594
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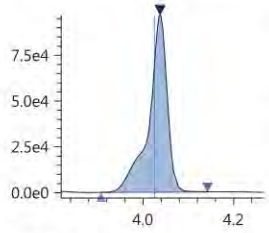
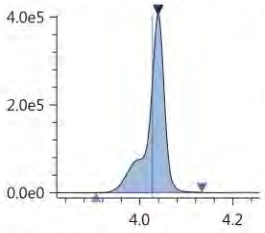
Q 299.00>80.00 (-) 9.67e4



PFBS-13C
Conc 5.2862
RT 4.039 Area 981624
Q 301.80>80.00 (-) 4.04e5



PFBS-13C_IS
Conc 5.0000
RT 4.039 Area 983253
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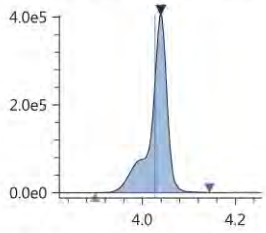

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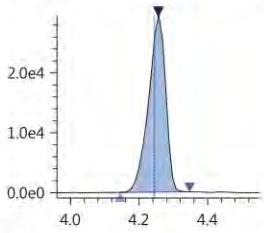
Q 349.00>99.00 (-) 2.96e4



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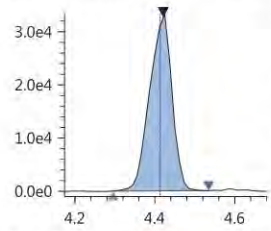
Q 399.00>80.00 (-) 3.33e4



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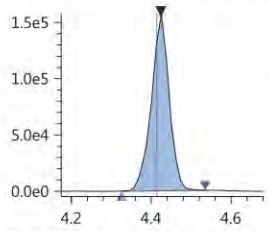
Conc 4.5599
RT 4.424 Area 484614
Q 402.70>84.05 (-) 1.57e5



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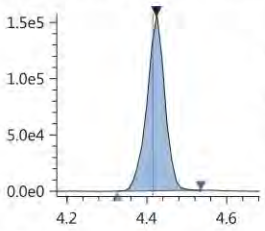
ISTD 402.70>84.05 (-) 1.57e5



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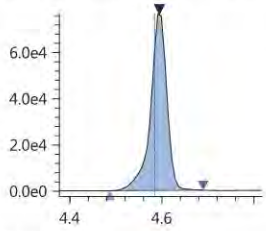
Conc 1.3112
RT 4.595 Area 188188
Q 449.00>80.15 (-) 7.67e4



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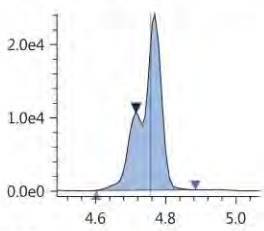
RT 4.715 Area 96262
Q 499.00>80.00 (-) 2.42e4



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RT 4.768 Area 590311
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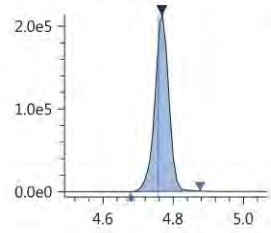

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Conc 5.0000
RT 4.768 Area 584861
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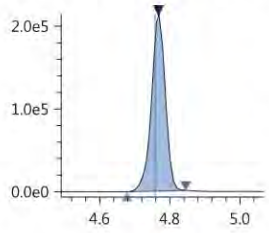

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Conc 1.6545
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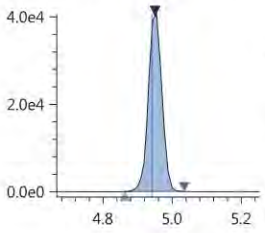

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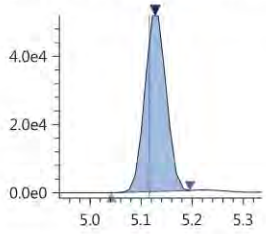

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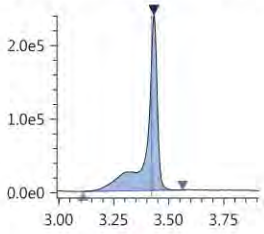

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PFBA-13C
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RT 3.432 Area 3707034
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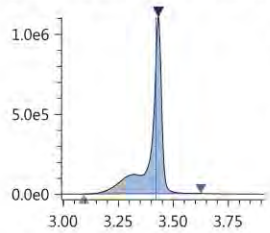

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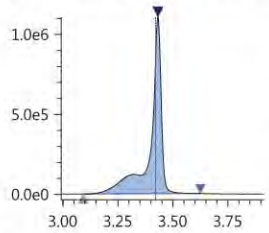

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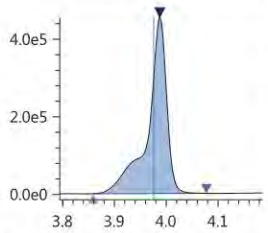
Q 263.05>219.10 (-) 4.57e5



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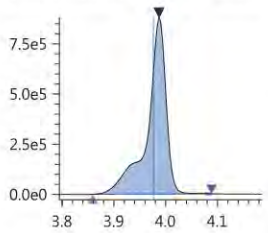

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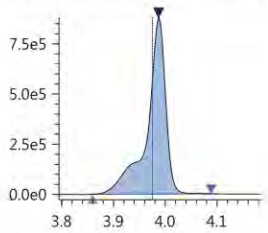

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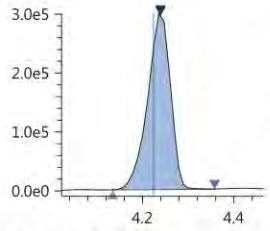
Q 313.00>269.00 (-) 3.01e5



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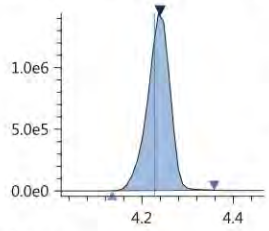
Q 314.90>270.10 (-) 1.44e6



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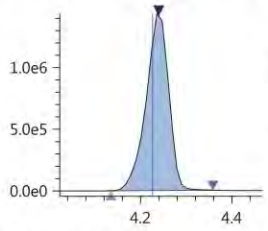

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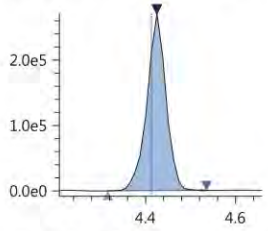

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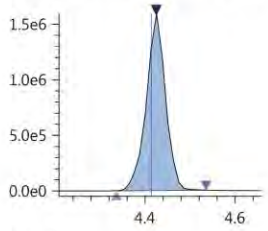
Q 366.90>322.10 (-) 1.59e6



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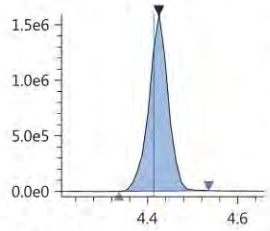

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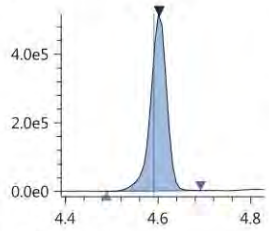
RT 4.602 Area 1245809
Q 413.00>369.00 (-) 5.17e5



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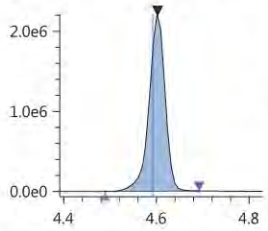
Q 416.80>372.05 (-) 2.21e6



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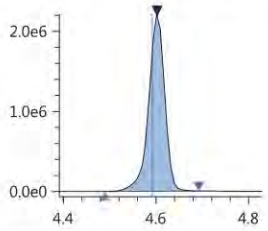

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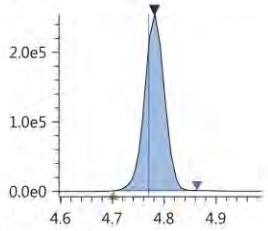

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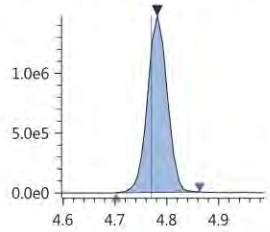
RT 4.782 Area 3931054
Q 467.80>423.00 (-) 1.48e6



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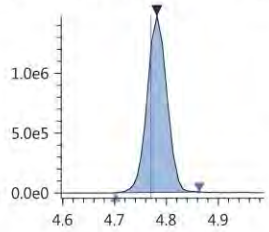

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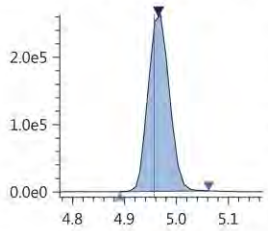
Q 513.00>468.80 (-) 2.63e5



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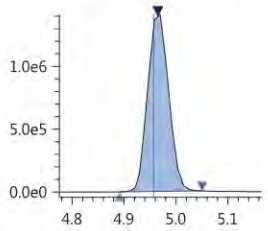
Q 514.80>469.95 (-) 1.41e6



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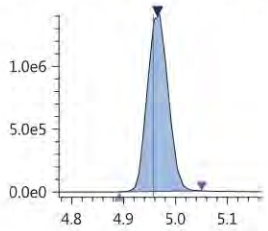

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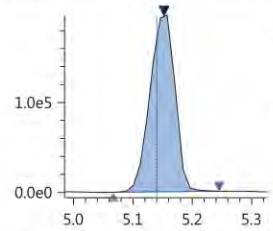

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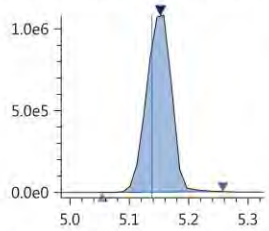

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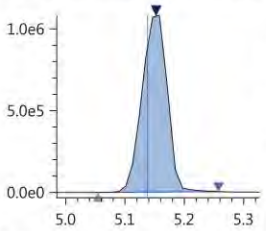

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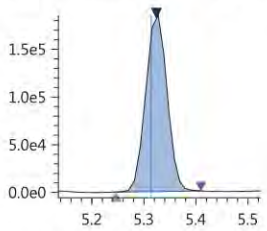

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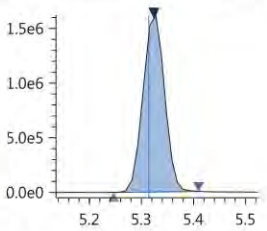

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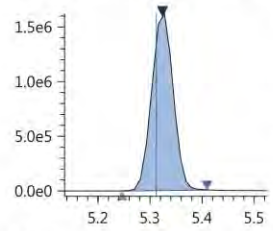
RT 5.324 Area 4675516
ISTD 614.80>569.95 (-) 1.62e6



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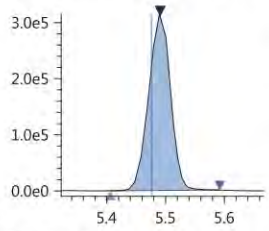

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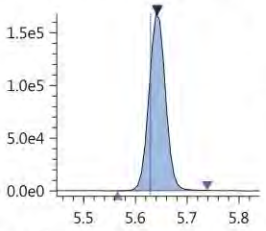
RT 5.642 Area 372124
Q 713.40>669.00 (-) 1.68e5



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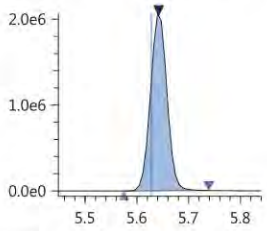
RT 5.642 Area 4562032
Q 714.70>669.90 (-) 2.06e6



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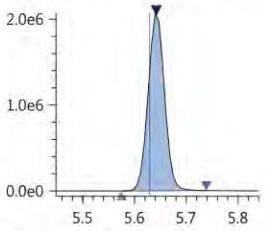

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Conc 0.9364
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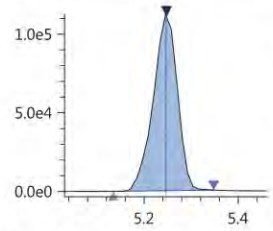

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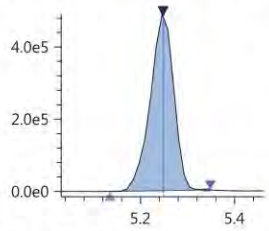
Q 506.00>78.05 (-) 4.91e5



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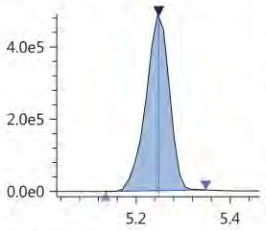

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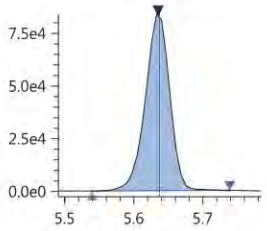

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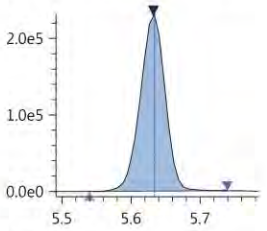
RT 5.632 Area 577970
Q 514.90>168.90 (-) 2.32e5



N-MeFOSA-d3_IS
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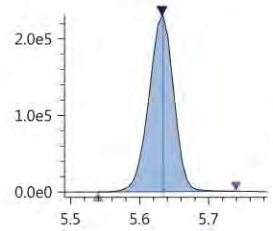
RT 5.632 Area 577970
ISTD 514.90>168.90 (-) 2.32e5



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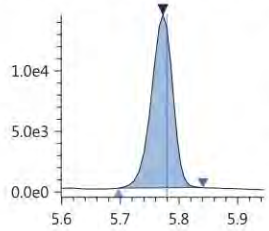
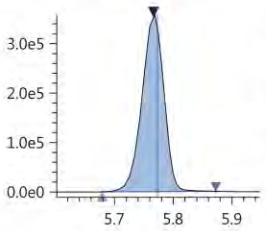
Conc 1.0179
RT 5.772 Area 36300
Q 526.90>169.10 (-) 1.46e4



N-EtFOSA-d9
Conc 5.3945
RT 5.766 Area 930682
Q 530.90>169.15 (-) 3.59e5



N-EtFOSA-d9_IS
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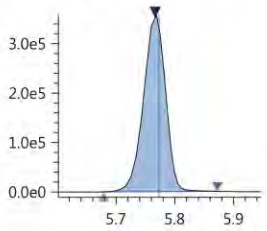

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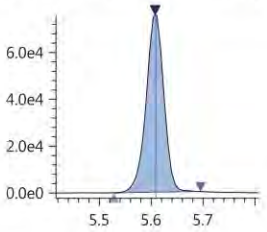
Conc 1.0290
RT 5.608 Area 180038
Q 616.00>59.00 (-) 7.57e4



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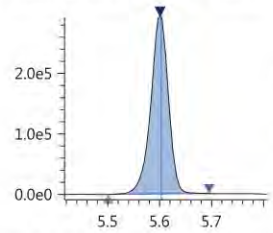
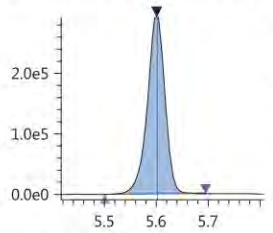
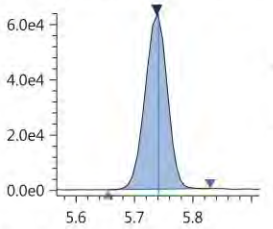
N-MeFOSE-d7
Conc 4.8978
RT 5.601 Area 697034
Q 622.70>59.10 (-) 2.93e5



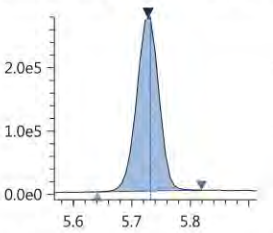
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.601 Area 697034
ISTD 622.70>59.10 (-) 2.93e5



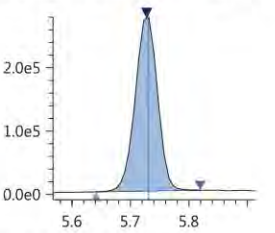
N-EtFOSE
Conc 0.9425
RT 5.738 Area 168843
Q 630.00>58.90 (-) 6.42e4



N-EtFOSE-d9
Conc 5.1095
RT 5.728 Area 732528
Q 638.70>59.10 (-) 2.80e5



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.728 Area 732528
ISTD 638.70>59.10 (-) 2.80e5



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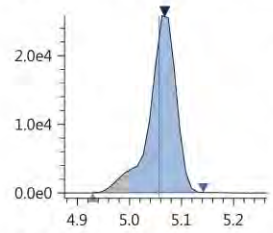
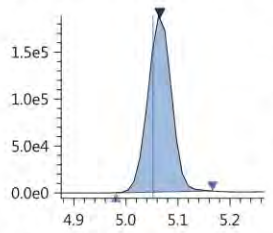
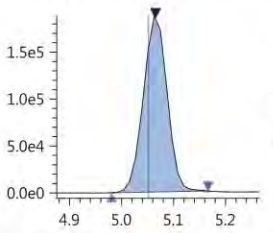
Conc 1.0974
RT 5.068 Area 92382
Q 570.20>419.00 (-) 2.58e4



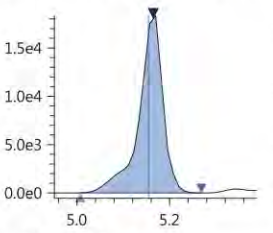
N-MeFOSAA-d3
Conc 7.0016
RT 5.065 Area 596633
Q 572.80>419.05 (-) 1.89e5



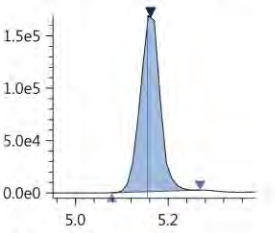
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.065 Area 596633
ISTD 572.80>419.05 (-) 1.89e5



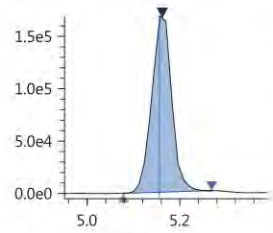
N-EtFOSAA
Conc 1.0671
RT 5.165 Area 65706
Q 584.20>418.95 (-) 1.83e4



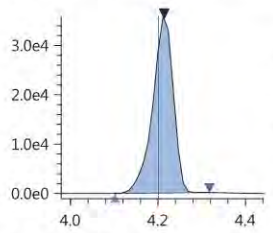
N-EtFOSAA-d5
Conc 6.5645
RT 5.162 Area 505431
Q 588.80>419.00 (-) 1.69e5



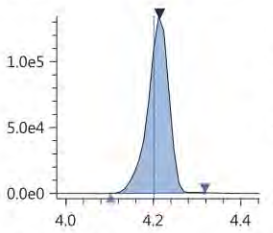
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.162 Area 505431
ISTD 588.80>419.00 (-) 1.69e5



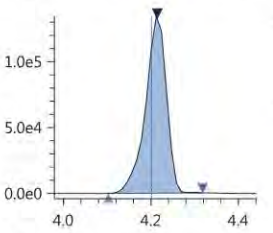
4_2-FTS_1
Conc 1.0586
RT 4.214 Area 116994
Q 327.00>307.05 (-) 3.59e4



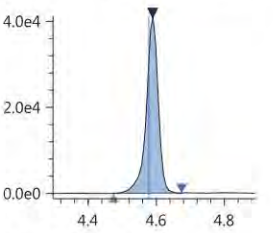
4_2-FTS-13C
Conc 6.2254
RT 4.214 Area 444448
Q 328.80>309.05 (-) 1.35e5



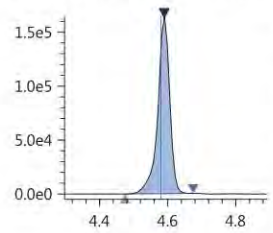
4_2-FTS-13C_IS
Conc 5.0000
RT 4.214 Area 444448
ISTD 328.80>309.05 (-) 1.35e5



6_2-FTS_1
Conc 1.0295
RT 4.589 Area 99681
Q 427.00>407.00 (-) 4.12e4



6_2-FTS-13C
Conc 5.9167
RT 4.590 Area 398172
Q 428.90>409.00 (-) 1.64e5



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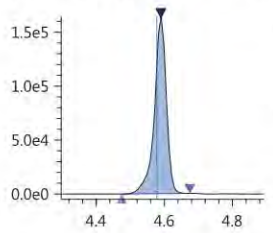
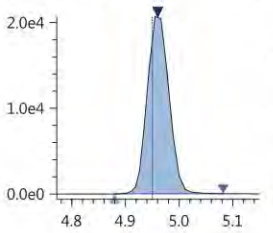
Conc 5.0000
RT 4.590 Area 398172
ISTD 428.90>409.00 (-) 1.64e5



8_2-FTS_1
Conc 0.9419
RT 4.960 Area 58471
Q 527.10>506.90 (-) 2.07e4



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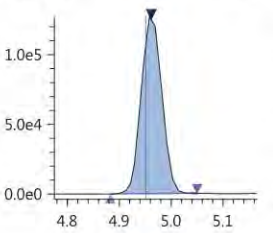
Conc 9.2462
RT 4.962 Area 354654
Q 528.80>509.00 (-) 1.27e5



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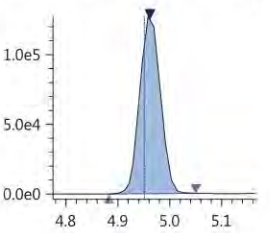
RT 4.962 Area 354654
ISTD 528.80>509.00 (-) 1.27e5

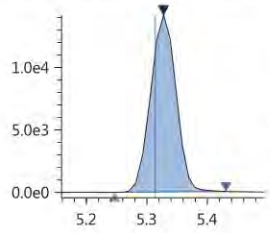


Insight Report

Printed at 8/13/2019 10:42:21 AM

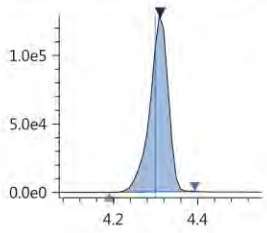
10_2-FtS_1

Conc 0.7408
RT 5.327 Area 41537
Q 627.00>606.95 (-) 1.42e4



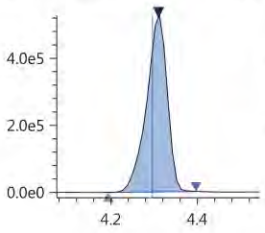
HPFO_DA

Conc 1.1895
RT 4.311 Area 388807
Q 329.00>169.00 (-) 1.30e5



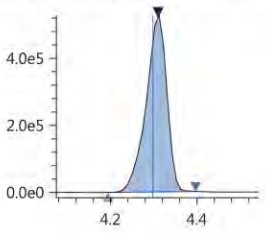
HFPO_DA-13C

Conc 4.5062
RT 4.310 Area 1754568
Q 332.00>286.80 (-) 5.29e5



HFPO_DA-13C_IS

Conc 5.0000
RT 4.310 Area 1754568
ISTD 332.00>286.80 (-) 5.29e5



1st CM 08/14/19
2nd 08/14/19

Validation Report

Data File: J:\LCMS06\Data\190812_b4\190812_054
Lab ID: KQ1911327-01
RunType: CCV
Matrix: Water

Date Acquired: 8/13/19 04:39
Batch ID: 646926
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 08/14/19
2nd 08/14/19

Quantitation Report

Data File:	J:\LCMS06\Data\190812_b4\190812_054	**Instrument:**	K-LCMS-06
Acqu Date:	8/13/19 04:39	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1911327-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	7/13/19	**Receive Date:**	7/15/19

Analysis Lot:	646926	**Prep Lot:**		**Report Group:**	KQ1911327
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900319
		Report List ID:	19837

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.124		3817208	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
13C4-PFBA	3.406		3390224	5.4651	Y
13C2-PFTeDA	5.614		4193850	5.9948	Y
D5-EtFOSA	5.754		897354	5.2838	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluorobutanoic acid (PFBA)	3.406		719400	1.0367	Y
Perfluorotridecanoic acid (PFTrDA)	5.462		757564	1.2565	Y
Perfluorotetradecanoic acid (PFTeDA)	5.614		357044	1.0810	Y
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	5.759		36126	1.0506	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: 8/14/19 10:33
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Insight Report

Printed at 8/14/2019 10:21:14 AM

Method File: J:\LCMS06\Data\190812_b4\190812_b4.lcm
Project File: J:\LCMS06\Data\190812_b4\190812_b4.damlp
Flags File: J:\LCMS06\Data\190812_b4\190812_b4.damlp

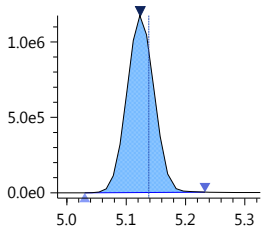
190812_054

Sample ID: 1.0 PPB CCV
Date acquired: 8/13/2019 4:39:27 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b4\190812_054.lcd
Vial: 53 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.124	3817208	3817208	1	5.0000	ng/mL	5.0000
PFBA	Auto	3.406	719400	3390224	5	1.0367	ng/mL	1.0000
PFBA-13C	Auto	3.406	3390224	3817208	1	5.4651	ng/mL	5.0000
PFBA-13C_IS	Auto	3.406	3390224	3390224	5	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.462	757564	4193850	14	1.2565	ng/mL	1.0000
PFTeDA	Auto	5.614	357044	4193850	14	1.0810	ng/mL	1.0000
PFTeDA-13C	Auto	5.614	4193850	3817208	1	5.9948	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.614	4193850	4193850	14	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.759	36126	897354	18	1.0506	ng/mL	1.0000
N-EtFOSA-d9	Auto	5.754	897354	3817208	1	5.2838	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.754	897354	897354	18	5.0000	ng/mL	5.0000

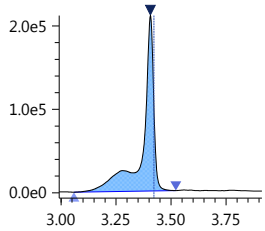
13C7-PFUnDA_IS

Conc 5.0000
RT 5.124 Area 3817208
ISTD 570.00>525.00 (-) 1.17e6



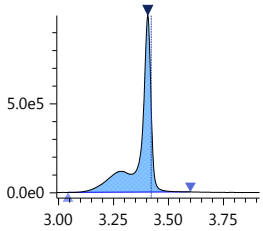
PFBA

Conc 1.0367
RT 3.406 Area 719400
Q 213.00>169.10 (-) 2.12e5



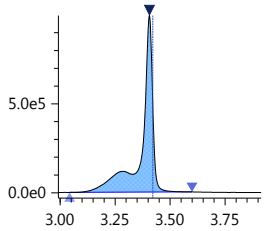
PFBA-13C

Conc 5.4651
RT 3.406 Area 3390224
Q 216.90>172.15 (-) 9.97e5



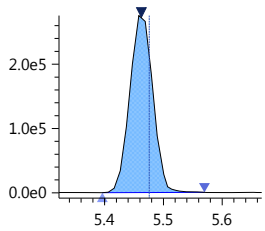
PFBA-13C_IS

Conc 5.0000
RT 3.406 Area 3390224
ISTD 216.90>172.15 (-) 9.97e5



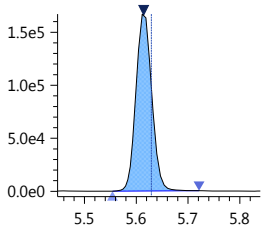
PFTrDA

Conc 1.2565
RT 5.462 Area 757564
Q 663.00>618.90 (-) 2.76e5



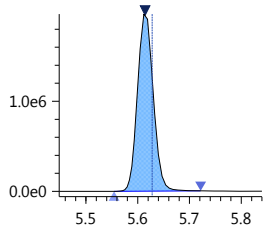
PFTeDA

Conc 1.0810
RT 5.614 Area 357044
Q 713.40>669.00 (-) 1.67e5



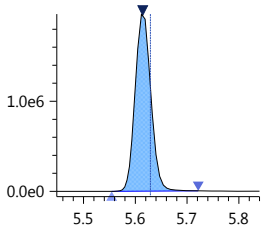
PFTeDA-13C

Conc 5.9948
RT 5.614 Area 4193850
Q 714.70>669.90 (-) 1.97e6



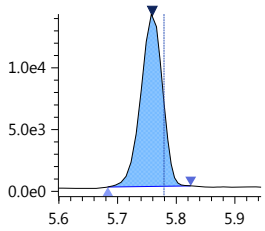
PFTeDA-13C_IS

Conc 5.0000
RT 5.614 Area 4193850
ISTD 714.70>669.90 (-) 1.97e6



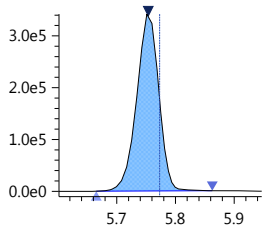
N-EtFOSA

Conc 1.0506
RT 5.759 Area 36126
Q 526.90>169.10 (-) 1.44e4



N-EtFOSA-d9

Conc 5.2838
RT 5.754 Area 897354
Q 530.90>169.15 (-) 3.42e5



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Conc 5.0000
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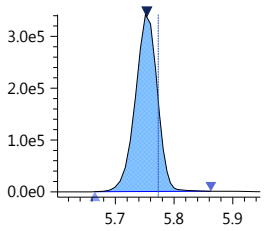
ISTD 530.90>169.15 (-) 3.42e5



Insight Report

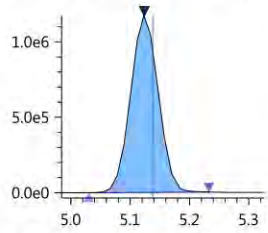
Printed at 8/14/2019 10:19:16 AM

Method File: J:\LCMS06\Data\190812_b4\190812_b4.lcm
Project File: J:\LCMS06\Data\190812_b4\190812_b4.damlp
Flags File: J:\LCMS06\Data\190812_b4\190812_b4.damlp

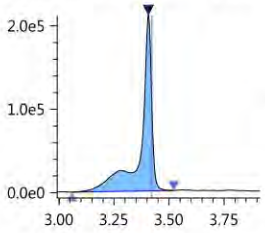
190812_054

Sample ID: 1.0 PPB CCV
Date acquired: 8/13/2019 4:39:27 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190812_b4\190812_054.lcd
Vial: 53 | Inj. Volume: 15.0000uL | Tray: 1

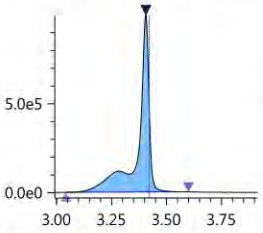
13C7-PFUnDA_IS
Conc 5.0000
RT 5.124 Area 3817208
ISTD 570.00>525.00 (-) 1.17e6



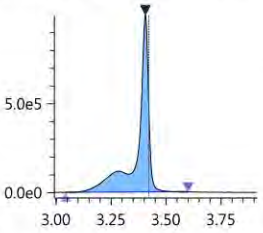
PFBA
Conc 1.0367
RT 3.406 Area 719400
Q 213.00>169.10 (-) 2.12e5



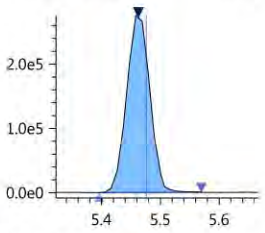
PFBA-13C
Conc 5.4651
RT 3.406 Area 3390224
Q 216.90>172.15 (-) 9.97e5



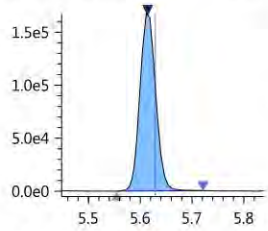
PFBA-13C_IS
Conc 5.0000
RT 3.406 Area 3390224
ISTD 216.90>172.15 (-) 9.97e5



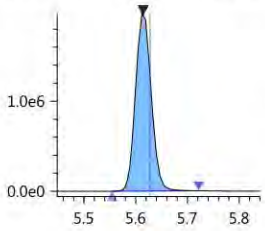
PFTrDA
Conc 1.2565
RT 5.462 Area 757564
Q 663.00>618.90 (-) 2.76e5



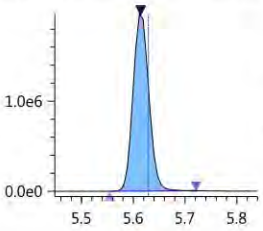
PFTeDA
Conc 1.0810
RT 5.614 Area 357044
Q 713.40>669.00 (-) 1.67e5



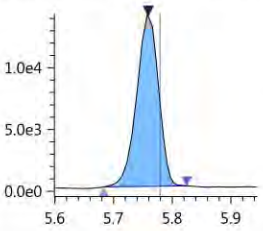
PFTeDA-13C
Conc 5.9948
RT 5.614 Area 4193850
Q 714.70>669.90 (-) 1.97e6



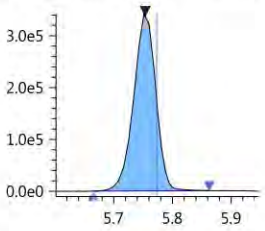
PFTeDA-13C_IS
Conc 5.0000
RT 5.614 Area 4193850
ISTD 714.70>669.90 (-) 1.97e6



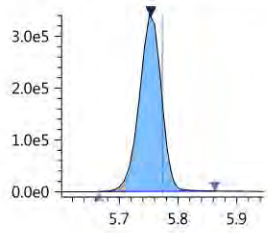
N-EtFOSA
Conc 1.0506
RT 5.759 Area 36126
Q 526.90>169.10 (-) 1.44e4



N-EtFOSA-d9
Conc 5.2838
RT 5.754 Area 897354
Q 530.90>169.15 (-) 3.42e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.754 Area 897354
ISTD 530.90>169.15 (-) 3.42e5



190807_curve

ICAL Date: 8/7/2019
Std. xp: 10/19/2019
ICAL ID: KC1900319
LIMS ID:

1st Review: Cmuller
2nd Review: AUG 0 8 2019
Column: Phenomenex Luna Omega PO-C18 100X4.6 mm S/N: H19-179327
Mobile Phases **A:** 5mM Ammonium Acetate in H2O 19-OLC-01-43A **B:** 5mM Ammonium Acetate In MeOH 19-OLC-01-43B

ALS Environmental
LCMS06 -Shimadzu 8050

	Sample Name		File Name	Acquisition Method	Dilution	R	
1	IB	19-OLC-01-42A	190807_011	PFAS_190807_35_CM.lcm	1x	☒	Curve not valid for 11CL. Not valid for DOD for EtFOSAA
2	0.05 PPB ICAL	19-OLC-02-26E	190807_012	PFAS_190807_35_CM.lcm	1x		NR bad point, relaced by file 190807_020
3	0.10 PPB ICAL	19-OLC-02-26F	190807_013	PFAS_190807_35_CM.lcm	1x	☒	Curve not valid for 11CL. Not valid for DOD for EtFOSAA
4	0.50 PPB ICAL	19-OLC-02-26G	190807_014	PFAS_190807_35_CM.lcm	1x	☒	Curve not valid for 11CL. Not valid for DOD for EtFOSAA
5	1.0 PPB ICAL	19-OLC-02-26H	190807_015	PFAS_190807_35_CM.lcm	1x	☒	Curve not valid for 11CL. Not valid for DOD for EtFOSAA
6	5.0 PPB ICAL	19-OLC-02-26I	190807_016	PFAS_190807_35_CM.lcm	1x	☒	Curve not valid for 11CL. Not valid for DOD for EtFOSAA
7	10.0 PPB ICAL	19-OLC-02-26J	190807_017	PFAS_190807_35_CM.lcm	1x	☒	Curve not valid for 11CL. Not valid for DOD for EtFOSAA
8	15.0 PPB ICAL	19-OLC-02-26K	190807_018	PFAS_190807_35_CM.lcm	1x	☒	Curve not valid for 11CL. Not valid for DOD for EtFOSAA
9	IB	19-OLC-01-42A	190807_019	PFAS_190807_35_CM.lcm	1x	☒	Curve not valid for 11CL. Not valid for DOD for EtFOSAA
10	0.05 PPB ICAL	19-OLC-02-26E	190807_020	PFAS_190807_35_CM.lcm	1x	☒	Curve not valid for 11CL. Not valid for DOD for EtFOSAA
11	1.0 PPB ICV	19-OLC-02-40E	190807_021	PFAS_190807_35_CM.lcm	1x	☒	Curve not valid for 11CL. Not valid for DOD for EtFOSAA
12	IB	19-OLC-01-42A	190807_022	PFAS_190807_35_CM.lcm	1x	☒	Curve not valid for 11CL. Not valid for DOD for EtFOSAA
13	T-PFOA	19-OLC-01-35A	190807_023	PFAS_190807_35_CM.lcm	1x	☒	Curve not valid for 11CL. Not valid for DOD for EtFOSAA

J:\LCMS06\Data\190807_curve\190807_curve inject log

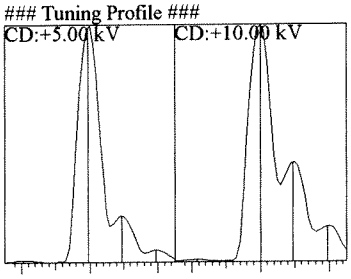
Sample Information
Sample Type: PEG+PPG+Raffinose

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: 8/7/2019 3:31:53 PM
Acquisition Mode: Q1 Scan(Use CID Gas)

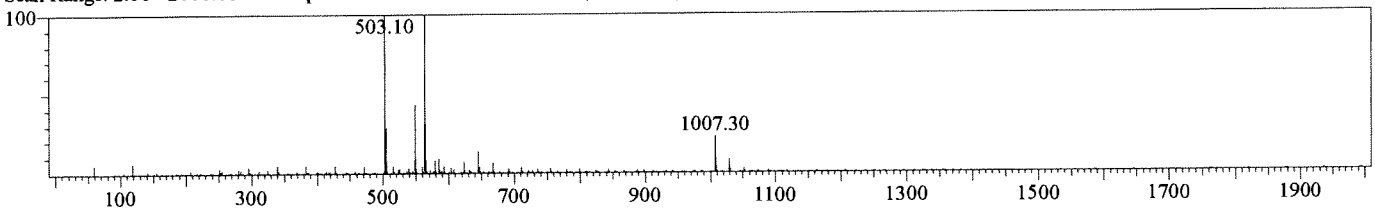
Nebulizing Gas Flow: 1.50(settings : 1.50) L/min
Drying Gas Flow: 10.00(settings : 10.00) L/min
CID Gas Flow: 269(settings : 270) kPa
Interface Bias: -3.00 kV
Interface Current: 0.72 uA
DL Temp.: 250(settings : 250) C
Heat Block Temp.: 400(settings : 400) C
Q1 RF Gain: 5000
Q1 RF Offset: 5000
Q3 RF Gain: ---
Q3 RF Offset: ---
Q1 Post-rod Bias: 5.0 V
CID CELL Exit Lens: 3.5 V
Conversion Dynode: +10.00 kV
Detector: -2.08(-2.08) kV
PG Vacuum: 1.4e+002 Pa
IG Vacuum: 2.1e-003 Pa

Tuning Profile



Int.: 14110966 FWHM: 0.74 m/z : 503.15 Mag.: 1
Int.: 4583457 FWHM: 0.78 m/z : 1007.30 Mag.: 4

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	0.74	14110966
1007.30	1007.30	0.00	0.78	4583457

0<0.5 cm
8/8/19

		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	+90.0	+130.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+20.0	+60.0	+90.0	+120.0	+300.0	+300.0	+300.0
Multipole1 Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Multipole1 Lens	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
Multipole2 Bias	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
Multipole2 Lens	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
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

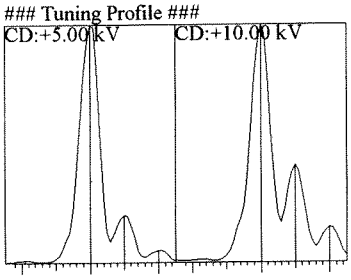
AUG 0 8 2019

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: 8/7/2019 3:34:46 PM
Acquisition Mode: Q3 Scan(Use CID Gas)

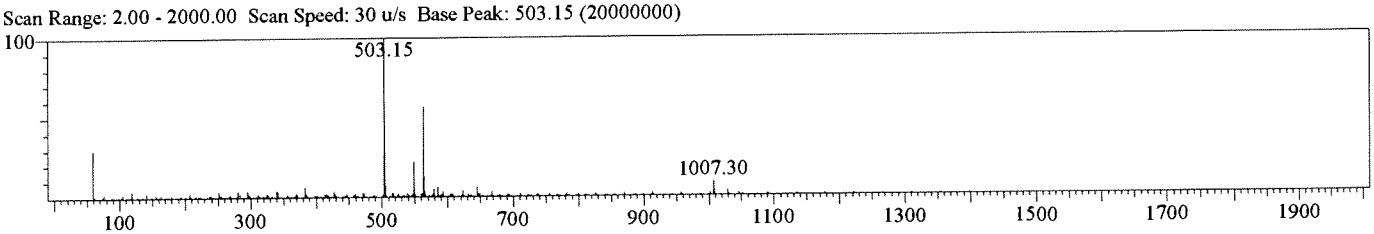
Nebulizing Gas Flow: 1.50(settings : 1.50) L/min
Drying Gas Flow: 10.00(settings : 10.00) L/min
CID Gas Flow: 270(settings : 270) kPa
Interface Bias: -3.00 kV
Interface Current: 0.81 uA
DL Temp.: 249(settings : 250) C
Heat Block Temp.: 399(settings : 400) C
Q1 RF Gain: ---
Q1 RF Offset: ---
Q3 RF Gain: 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: -2.08(-2.08) kV
PG Vacuum: 1.4e+002 Pa
IG Vacuum: 2.1e-003 Pa

Tuning Profile


Int.: 11150028
FWHM: 0.66
m/z : 503.15
Mag.: 1

Int.: 1725513
FWHM: 0.66
m/z : 1007.30
Mag.: 11

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	0.66	11150028
1007.30	1007.30	0.00	0.66	1725513

0<0.5
cm
8/8/19

		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	+90.0	+130.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+20.0	+60.0	+90.0	+120.0	+300.0	+300.0	+300.0
Multipole1 Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Multipole1 Lens	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
Multipole2 Bias	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
Multipole2 Lens	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
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

AUG 0 8 2019

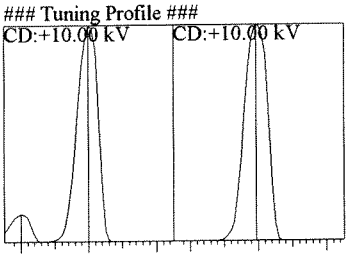
Sample Information
Sample Type: PEG+PPG+Raffinose

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: 8/7/2019 3:36:16 PM
Acquisition Mode: Product Scan

Nebulizing Gas Flow: 1.50(settings : 1.50) L/min
Drying Gas Flow: 10.00(settings : 10.00) L/min
CID Gas Flow: 269(settings : 270) kPa
Interface Bias: -3.00 kV
Interface Current: 0.79 uA
DL Temp.: 250(settings : 250) C
Heat Block Temp.: 400(settings : 400) C
Q1 RF Gain: 5000
Q1 RF Offset: 5000
Q3 RF Gain: 5000
Q3 RF Offset: 4999
Q1 Post-rod Bias: 5.0 V
CID CELL Exit Lens: -0.7 V
Conversion Dynode: +10.00 kV
Detector: -2.08(-2.08) kV
PG Vacuum: 1.4e+002 Pa
IG Vacuum: 2.1e-003 Pa

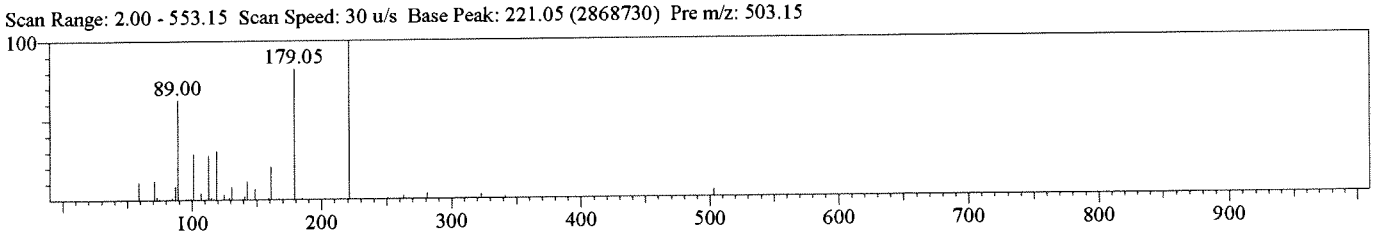
Tuning Profile



Int.: 1829741 FWHM: 0.71 m/z : 89.00 Pre m/z: 503.15 Mag.: 10

Int.: 2390269 FWHM: 0.79 m/z : 179.05 Pre m/z: 503.15 Mag.: 8

Scan Range: 2.00 - 553.15 Scan Speed: 30 u/s Base Peak: 221.05 (2868730) Pre m/z: 503.15



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
503.15 > 89.00	89.00	0.00	0.71	1829741
503.15 > 179.05	179.05	0.00	0.79	2390269

DL 0.5 cm

8/8/19

		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	+90.0	+130.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+20.0	+60.0	+90.0	+120.0	+300.0	+300.0	+300.0
Multipole1 Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Multipole1 Lens	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
Multipole2 Bias	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
Multipole2 Lens	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
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

AUG 0 8 2019

Insight Report

Printed at 8/8/2019 9:54:02 AM

Method File: J:\LCMS06\Data\190807_curve\190807_curve.lcm
Project File: J:\LCMS06\Data\190807_curve\190807_curve.damlp
Flags File: J:\LCMS06\Data\190807_curve\190807_curve.damlp

190807_011

Sample ID: IB
Date acquired: 8/7/2019 5:14:18 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_011.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.133	3593609	3593609	1	5.0000	ng/mL	----
PFBS_1	M	4.022	850	1008580	2	0.0029	ng/mL	----
PFBS-13C	Auto	4.023	1005038	3593609	1	5.8402	ng/mL	----
PFBS-13C_IS	Auto	4.023	1008580	1008580	2	5.0000	ng/mL	----
PFPeS	Auto	4.225	529	1008580	2	0.0043	ng/mL	----
PFHxS_1	Auto	4.403	1142	453395	3	0.0091	ng/mL	----
PFHxS-18O	Auto	4.409	453395	3593609	1	4.6035	ng/mL	----
PFHxS-18O_IS	Auto	4.409	453395	453395	3	5.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	453395	3	----	ng/mL	----
PFOS_1	M	4.755	318	714403	4	0.0025	ng/mL	----
PFOS-13C	Auto	4.756	719658	3593609	1	6.1337	ng/mL	----
PFOS-13C_IS	Auto	4.756	714403	714403	4	5.0000	ng/mL	----
PFNS	M	4.924	508	714403	4	-0.0778	ng/mL	----
PFDS_1	ND(W/B)	----	----	714403	4	----	ng/mL	----
PFDOS	ND(W/B)	----	----	714403	4	----	ng/mL	----
9Cl-PF3ONS	M	4.861	268	2347174	26	0.0003	ng/mL	----
11Cl-PF3OUdS	Auto	5.210	235	2347174	26	0.0003	ng/mL	----
PFBA	ND(W/B)	----	----	3411757	5	----	ng/mL	----
PFBA-13C	Auto	3.418	3411757	3593609	1	5.8421	ng/mL	----
PFBA-13C_IS	Auto	3.418	3411757	3411757	5	5.0000	ng/mL	----
PFPeA	Auto	3.971	108211	2187139	6	0.0025	ng/mL	----
PFPeA-13C	Auto	3.970	2187139	3593609	1	5.9525	ng/mL	----
PFPeA-13C_IS	Auto	3.970	2187139	2187139	6	5.0000	ng/mL	----
PFHxA	M	4.210	26022	4549355	7	0.0017	ng/mL	----
PFHxA-13C	Auto	4.224	4549355	3593609	1	6.2978	ng/mL	----
PFHxA-13C_IS	Auto	4.224	4549355	4549355	7	5.0000	ng/mL	----
PFHpA	M	4.396	12151	4193917	8	-0.0020	ng/mL	----
PFHpA-13C	Auto	4.409	4193917	3593609	1	4.9537	ng/mL	----
PFHpA-13C_IS	Auto	4.409	4193917	4193917	8	5.0000	ng/mL	----
PFOA	Auto	4.579	27462	4659878	9	0.0064	ng/mL	----
PFOA-13C	Auto	4.586	4659878	3593609	1	6.0776	ng/mL	----
PFOA-13C_IS	Auto	4.586	4659878	4659878	9	5.0000	ng/mL	----
PFNA	M	4.752	10340	4207173	10	0.0015	ng/mL	----
PFNA-13C	Auto	4.766	4207173	3593609	1	6.9071	ng/mL	----
PFNA-13C_IS	Auto	4.766	4207173	4207173	10	5.0000	ng/mL	----
PFDA	M	4.941	6825	3407739	11	0.0099	ng/mL	----
PFDA-13C	Auto	4.952	3407739	3593609	1	6.6551	ng/mL	----
PFDA-13C_IS	Auto	4.952	3407739	3407739	11	5.0000	ng/mL	----
PFUnA	M	5.130	14193	2820848	12	-0.0011	ng/mL	----
PFUnA-13C	Auto	5.133	2820848	3593609	1	5.0828	ng/mL	----
PFUnA-13C_IS	Auto	5.133	2820848	2820848	12	5.0000	ng/mL	----
PFDoA	M	5.301	7528	4099852	13	0.0050	ng/mL	----
PFDoA-13C	Auto	5.309	4099852	3593609	1	6.8584	ng/mL	----
PFDoA-13C_IS	Auto	5.309	4099852	4099852	13	5.0000	ng/mL	----
PFTrDA	M	5.468	7444	3939339	14	0.0031	ng/mL	----
PFTeDA	M	5.625	35230	3939339	14	-0.0197	ng/mL	----
PFTeDA-13C	Auto	5.625	3939339	3593609	1	5.9814	ng/mL	----
PFTeDA-13C_IS	Auto	5.625	3939339	3939339	14	5.0000	ng/mL	----
PFHxDA	M	5.964	46001	4953299	15	-0.0010	ng/mL	----
13C-PFHxDA	Auto	5.964	4953299	3593609	1	6.1424	ng/mL	----
13C-PFHxDA_IS	Auto	5.964	4953299	4953299	15	5.0000	ng/mL	----
PFODA	M	6.470	3432	4953299	15	0.0058	ng/mL	----
FOSA	Auto	5.233	582	1656603	16	0.0014	ng/mL	----
FOSA-13C	Auto	5.244	1656603	3593609	1	6.0540	ng/mL	----
FOSA-13C_IS	Auto	5.244	1656603	1656603	16	5.0000	ng/mL	----
N-MeFOSA	M	5.629	2244	628304	17	0.0113	ng/mL	----
N-MeFOSA-d3	Auto	5.630	628304	3593609	1	5.8522	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.630	628304	628304	17	5.0000	ng/mL	----
N-EtFOSA	M	5.781	190	922298	18	0.0054	ng/mL	----
N-EtFOSA-d9	Auto	5.767	922298	3593609	1	5.7685	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.767	922298	922298	18	5.0000	ng/mL	----
N-MeFOSE	M	5.592	231	824730	19	0.0011	ng/mL	----
N-MeFOSE-d7	Auto	5.597	824730	3593609	1	6.2533	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.597	824730	824730	19	5.0000	ng/mL	----

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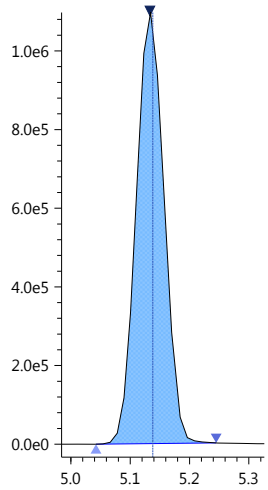
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSE	ND(W/B)	----	----	798808	20	----	ng/mL	----
N-EtFOSE-d9	Auto	5.727	798808	3593609	1	6.0124	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.727	798808	798808	20	5.0000	ng/mL	----
N-MeFOSAA	ND(W/B)	----	----	414375	21	----	ng/mL	----
N-MeFOSAA-d3	Auto	5.048	414375	3593609	1	5.2473	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.048	414375	414375	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	393734	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.148	393734	3593609	1	5.5181	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.148	393734	393734	22	5.0000	ng/mL	----
4_2-FTS_1	M	4.169	314	343040	23	0.0037	ng/mL	----
4_2-FTS-13C	Auto	4.194	343040	3593609	1	5.1849	ng/mL	----
4_2-FTS-13C_IS	Auto	4.194	343040	343040	23	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.570	1390	391342	24	0.0146	ng/mL	----
6_2-FTS-13C	Auto	4.574	391342	3593609	1	6.2750	ng/mL	----
6_2-FTS-13C_IS	Auto	4.574	391342	391342	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.943	99	186764	25	0.0030	ng/mL	----
8_2-FTS-13C	Auto	4.946	186764	3593609	1	5.2541	ng/mL	----
8_2-FTS-13C_IS	Auto	4.946	186764	186764	25	5.0000	ng/mL	----
10_2-FtS_1	M	5.322	36	186764	25	0.0012	ng/mL	----
HPFO_DA	M	4.290	838	2347174	26	0.0019	ng/mL	----
HFPO_DA-13C	Auto	4.294	2347174	3593609	1	6.5048	ng/mL	----
HFPO_DA-13C_IS	Auto	4.294	2347174	2347174	26	5.0000	ng/mL	----
ADONA	Auto	4.418	786	2347174	26	0.0007	ng/mL	----

13C7-PFUnDA_IS

Conc 5.0000
RT 5.133 Area 3593609

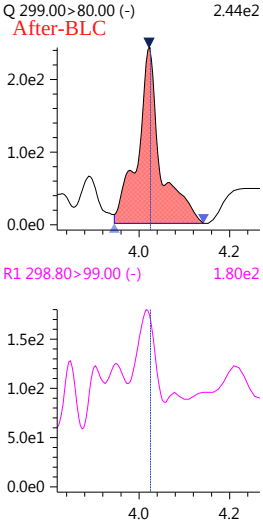
ISTD 570.00>525.00 (-) 1.10e6



PFBS_1

Conc 0.0029
RT 4.022 Area 850
R#1 21.99 (0.00)

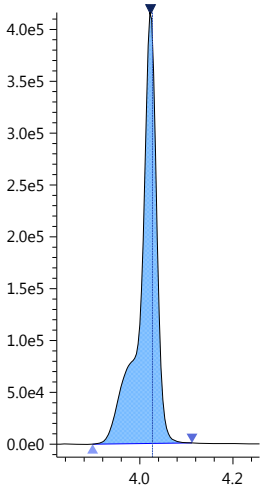
Q 299.00>80.00 (-) 2.44e2



PFBS-13C

Conc 5.8402
RT 4.023 Area 1005038

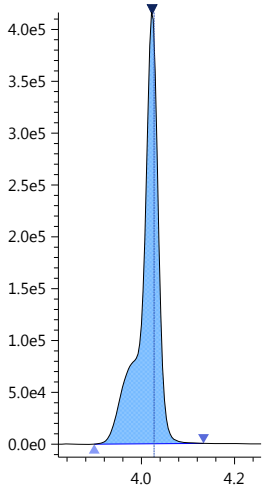
Q 301.80>80.00 (-) 4.16e5



PFBS-13C_IS

Conc 5.0000
RT 4.023 Area 1008580

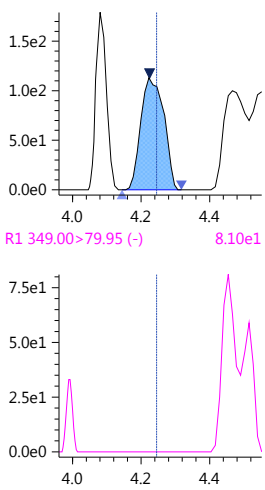
ISTD 301.80>80.00 (-) 4.16e5



PFPeS

Conc 0.0043
RT 4.225 Area 529
R#1 0.00 (0.00)

Q 349.00>99.00 (-) 1.79e2



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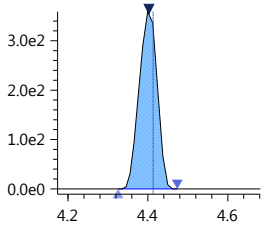
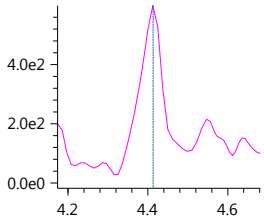
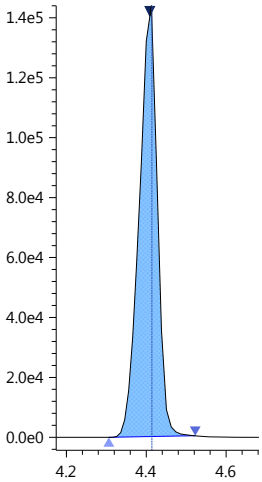
PFHxS_1
Conc 0.0091
RT 4.403 Area 1142
R#1 126.96 (0.00)
Q 399.00>80.00 (-) 3.59e2



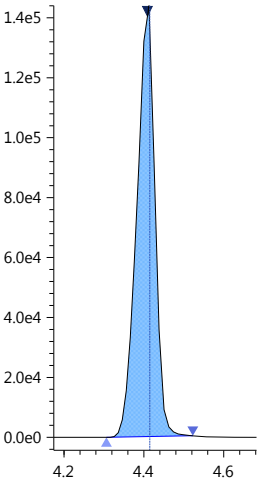
R1 399.00>99.00 (-) 5.99e2



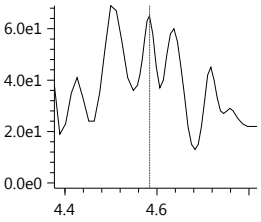
PFHxS-18O
Conc 4.6035
RT 4.409 Area 453395
Q 402.70>84.05 (-) 1.44e5



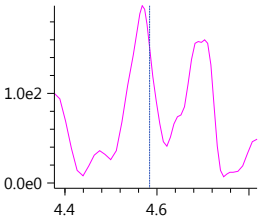
PFHxS-18O_IS
Conc 5.0000
RT 4.409 Area 453395
ISTD 402.70>84.05 (-) 1.44e5



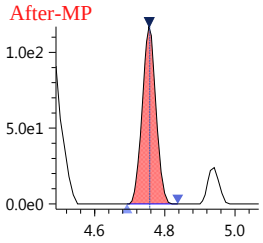
PFHpS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 449.00>80.15 (-) 6.90e1



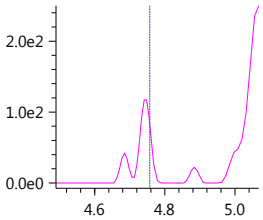
R1 449.00>99.20 (-) 1.98e2



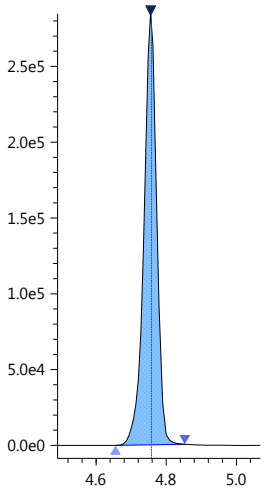
PFOS_1
Conc 0.0025
RT 4.755 Area 318
R#1 61.16 (0.00)
Q 499.00>80.00 (-) 1.17e2



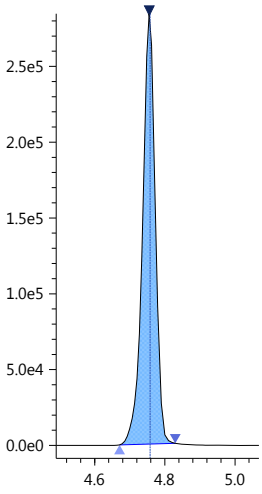
R1 499.00>99.00 (-) 2.50e2



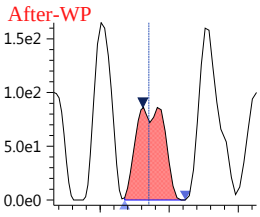
PFOS-13C
Conc 6.1337
RT 4.756 Area 719658
Q 502.80>80.05 (-) 2.85e5



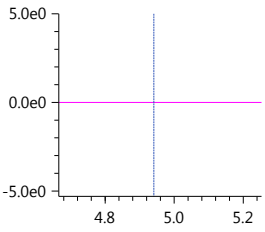
PFOS-13C_IS
Conc 5.0000
RT 4.756 Area 714403
ISTD 502.80>80.05 (-) 2.85e5



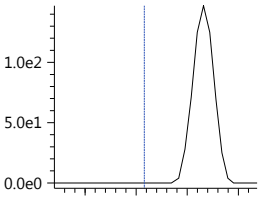
PFNS
Conc -0.0778
RT 4.924 Area 508
R#1 0.00 (0.00)
Q 549.00>99.00 (-) 1.65e2



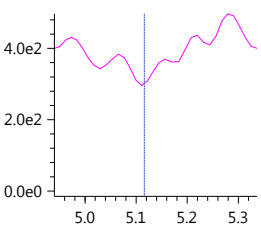
R1 549.00>79.95 (-) 0.00e0



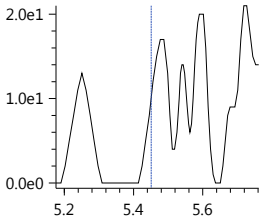
PFDS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 599.00>79.90 (-) 1.47e2



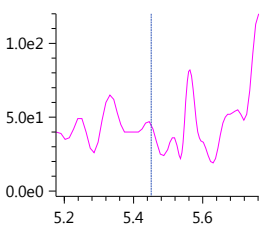
R1 599.00>99.10 (-) 4.97e2



PFDOS
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 699.00>79.95 (-) 2.10e1



R1 699.00>99.05 (-) 1.20e2



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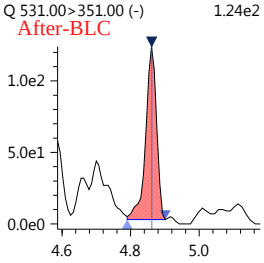
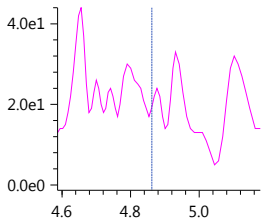
9Cl-PF3ONS

Conc 0.0003
RT 4.861 Area 268
R#1 0.00 (0.00)

Q 531.00>351.00 (-) 1.24e2



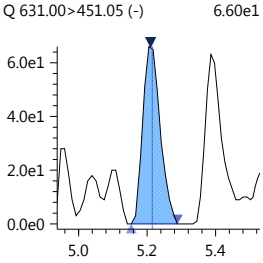
R1 531.00>98.90 (-) 4.40e1



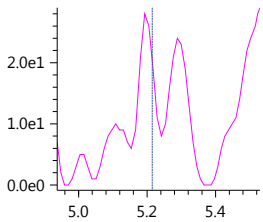
11Cl-PF3OUdS

Conc 0.0003
RT 5.210 Area 235
R#1 18.75 (0.00)

Q 631.00>451.05 (-) 6.60e1



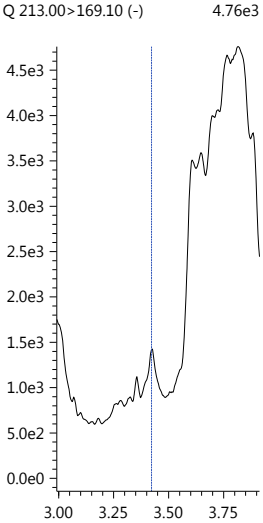
R1 631.00>98.90 (-) 2.90e1



PFBA

Conc ----
RT ---- Area ----

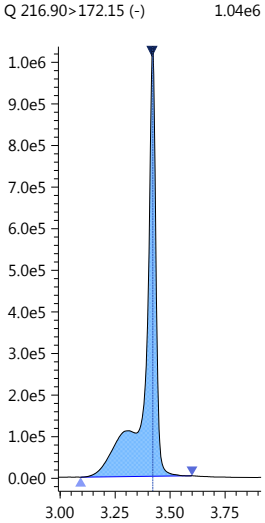
Q 213.00>169.10 (-) 4.76e3



PFBA-13C

Conc 5.8421
RT 3.418 Area 3411757

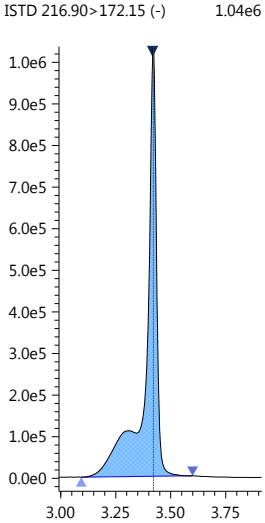
Q 216.90>172.15 (-) 1.04e6



PFBA-13C_IS

Conc 5.0000
RT 3.418 Area 3411757

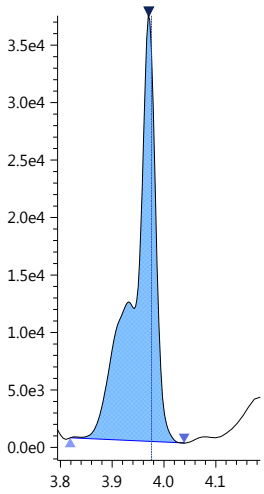
ISTD 216.90>172.15 (-) 1.04e6



PFPeA

Conc 0.0025
RT 3.971 Area 108211

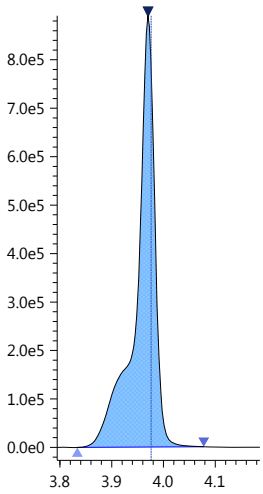
Q 263.05>219.10 (-) 3.76e4



PFPeA-13C

Conc 5.9525
RT 3.970 Area 2187139

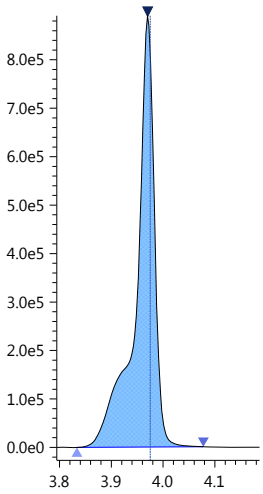
Q 267.90>223.00 (-) 8.91e5



PFPeA-13C_IS

Conc 5.0000
RT 3.970 Area 2187139

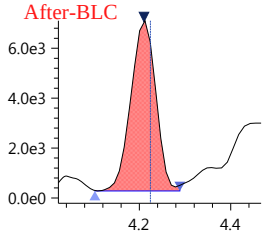
ISTD 267.90>223.00 (-) 8.91e5



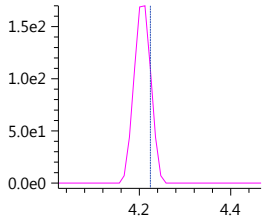
PFHxA

Conc 0.0017
RT 4.210 Area 26022
R#1 2.45 (0.00)

Q 313.00>269.00 (-) 7.10e3



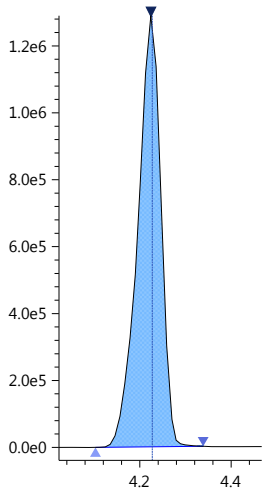
R1 313.00>119.10 (-) 1.70e2



PFHxA-13C

Conc 6.2978
RT 4.224 Area 4549355

Q 314.90>270.10 (-) 1.29e6



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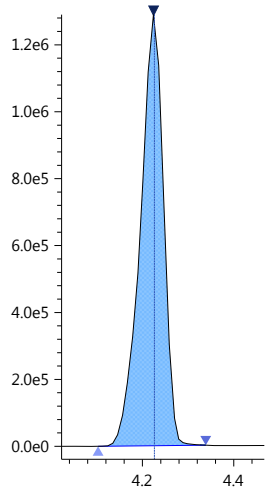
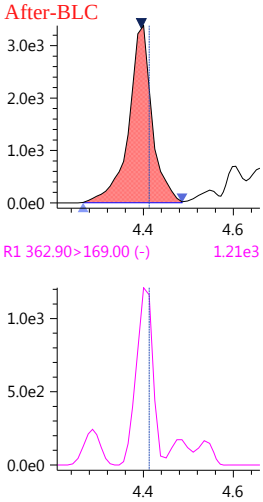
PFHxA-13C_IS
Conc 5.0000
RT 4.224 Area 4549355

ISTD 314.90>270.10 (-) 1.29e6



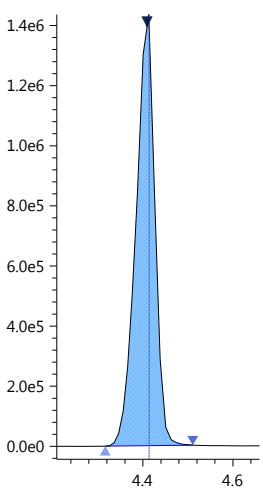
PFHpA
Conc -0.0020
RT 4.396 Area 12151
R#1 31.68 (0.00)

Q 362.90>319.00 (-) 3.38e3



PFHpA-13C
Conc 4.9537
RT 4.409 Area 4193917

Q 366.90>322.10 (-) 1.44e6



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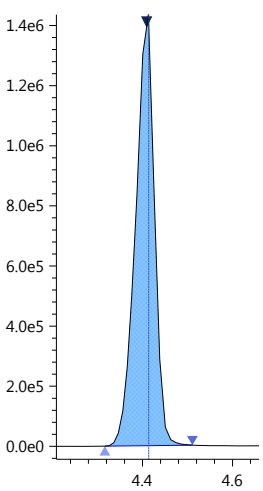
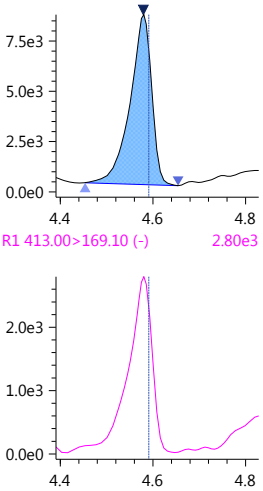
RT 4.409 Area 4193917

ISTD 366.90>322.10 (-) 1.44e6



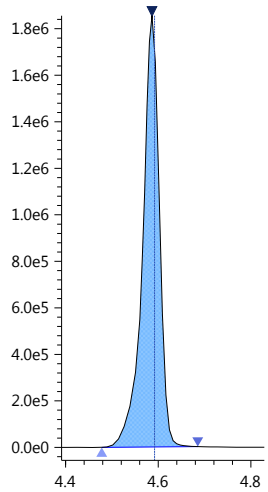
PFOA
Conc 0.0064
RT 4.579 Area 27462
R#1 32.05 (0.00)

Q 413.00>369.00 (-) 8.81e3



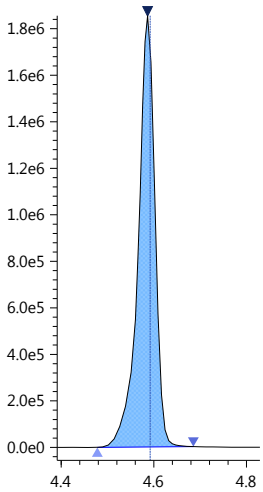
PFOA-13C
Conc 6.0776
RT 4.586 Area 4659878

Q 416.80>372.05 (-) 1.86e6



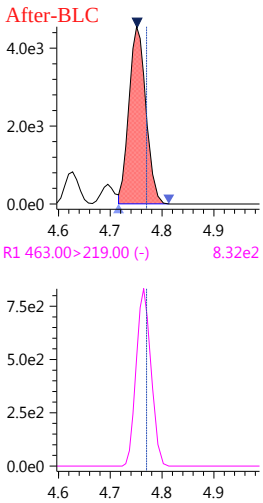
PFOA-13C_IS
Conc 5.0000
RT 4.586 Area 4659878

ISTD 416.80>372.05 (-) 1.86e6



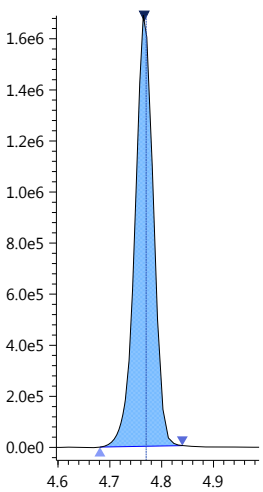
PFNA
Conc 0.0015
RT 4.752 Area 10340
R#1 17.67 (0.00)

Q 463.00>418.90 (-) 4.55e3



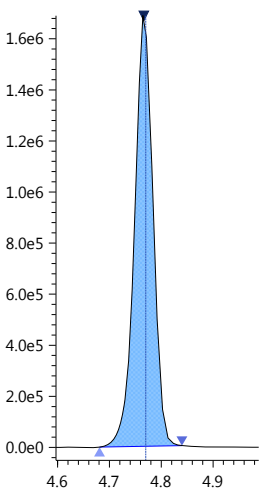
PFNA-13C
Conc 6.9071
RT 4.766 Area 4207173

Q 467.80>423.00 (-) 1.69e6



PFNA-13C_IS
Conc 5.0000
RT 4.766 Area 4207173

ISTD 467.80>423.00 (-) 1.69e6



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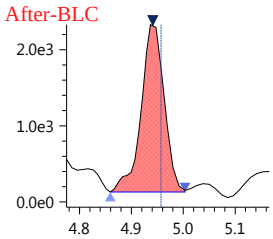
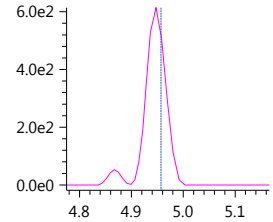
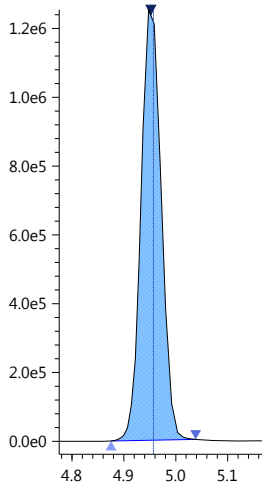
PFDA
Conc 0.0099
RT 4.941 Area 6825
R#1 27.41 (0.00)
Q 513.00>468.80 (-) 2.33e3


R1 513.00>219.10 (-) 6.14e2


PFDA-13C
Conc 6.6551
RT 4.952 Area 3407739
Q 514.80>469.95 (-) 1.25e6


PFDA-13C_IS
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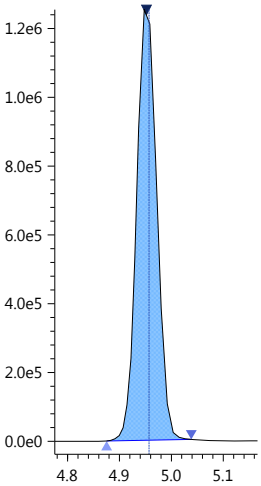
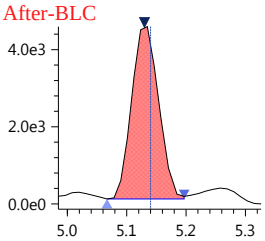
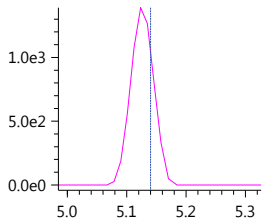
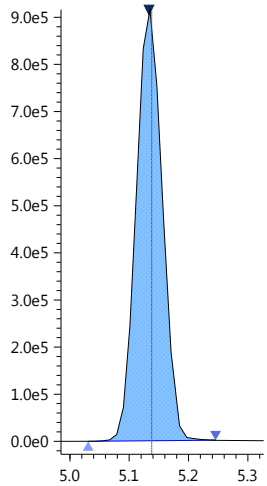
RT 4.952 Area 3407739
ISTD 514.80>469.95 (-) 1.25e6


PFUnA
Conc -0.0011
RT 5.130 Area 14193
R#1 28.29 (0.00)
Q 563.00>518.90 (-) 4.60e3


R1 563.00>219.00 (-) 1.39e3


PFUnA-13C
Conc 5.0828
RT 5.133 Area 2820848
Q 564.80>519.95 (-) 9.16e5


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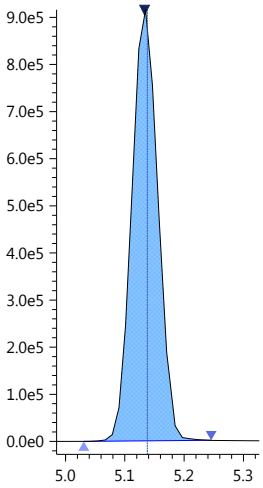
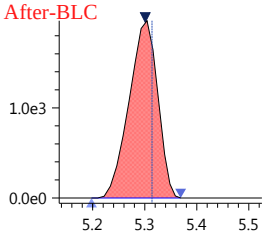
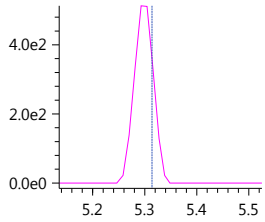
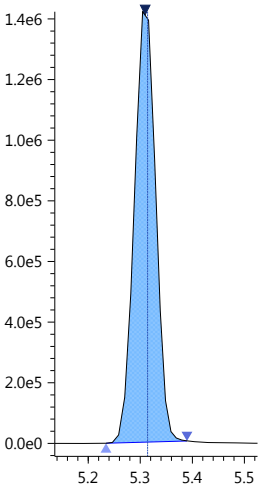
Conc 5.0000
RT 5.133 Area 2820848
ISTD 564.80>519.95 (-) 9.16e5


PFDoA
Conc 0.0050
RT 5.301 Area 7528
R#1 25.21 (0.00)
Q 613.05>569.00 (-) 1.97e3


R1 613.05>169.00 (-) 5.13e2


PFDoA-13C
Conc 6.8584
RT 5.309 Area 4099852
Q 614.80>569.95 (-) 1.42e6


PFDoA-13C_IS
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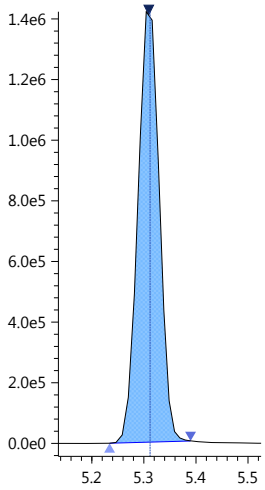
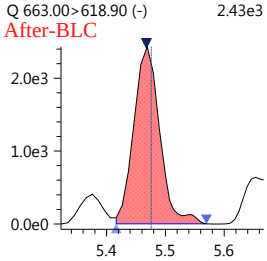
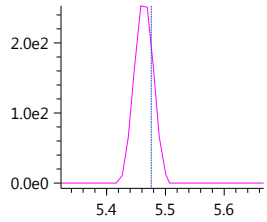
ISTD 614.80>569.95 (-) 1.42e6


PFTrDA
Conc 0.0031
RT 5.468 Area 7444
R#1 10.38 (0.00)
Q 663.00>618.90 (-) 2.43e3


R1 662.90>169.00 (-) 2.53e2


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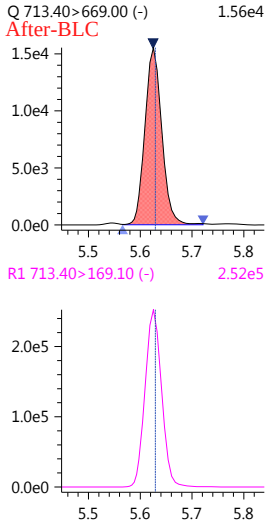
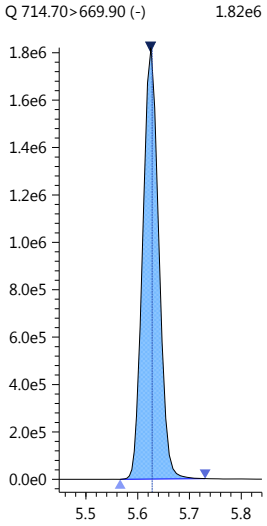
PFTeDA
Conc -0.0197
RT 5.625 Area 35230
R#1 1625.54 (0.00)



PFTeDA-13C
Conc 5.9814
RT 5.625 Area 3939339



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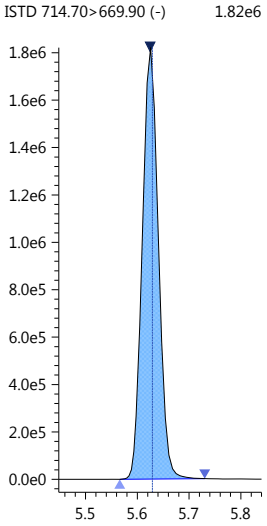
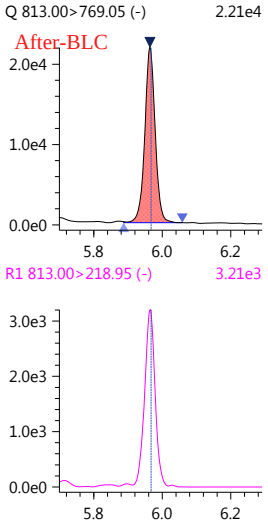
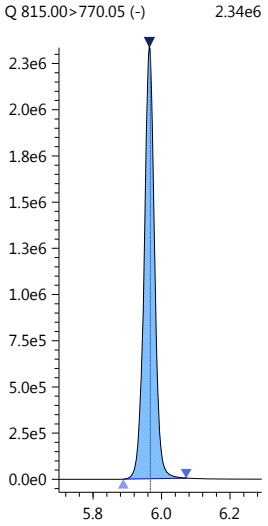
Conc 5.0000
RT 5.625 Area 3939339



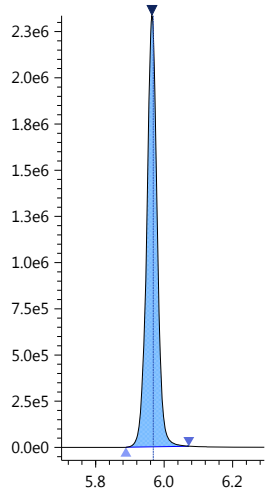
PFHxDA
Conc -0.0010
RT 5.964 Area 46001
R#1 14.03 (0.00)



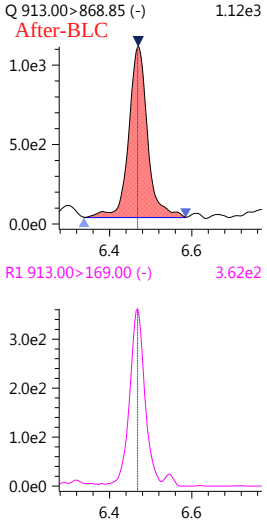
13C-PFHxDA
Conc 6.1424
RT 5.964 Area 4953299



13C-PFHxDA_IS
Conc 5.0000
RT 5.964 Area 4953299



PFODA
Conc 0.0058
RT 6.470 Area 3432
R#1 34.63 (0.00)



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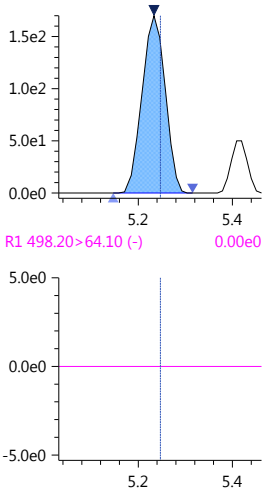
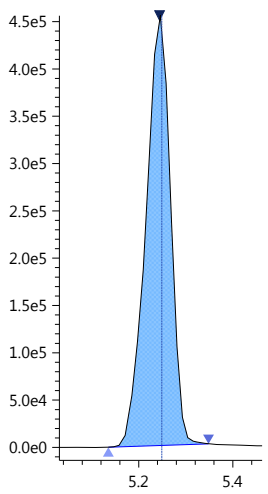
Conc 0.0014
RT 5.233 Area 582
R#1 0.00 (0.00)



FOSA-13C
Conc 6.0540
RT 5.244 Area 1656603



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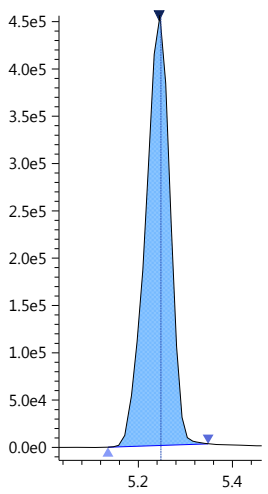
Conc 5.0000
RT 5.244 Area 1656603



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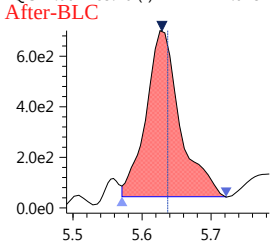
N-MeFOSA
Conc 0.0113
RT 5.629 Area 2244
R#1 26.11 (0.00)
Q 512.00>169.10 (-) 7.01e2
After-BLC

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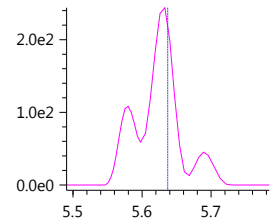
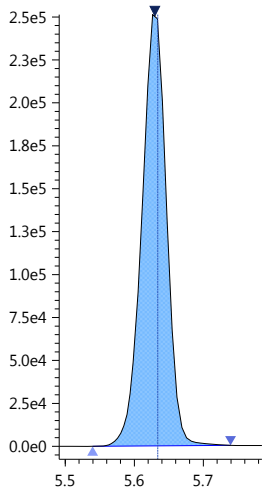
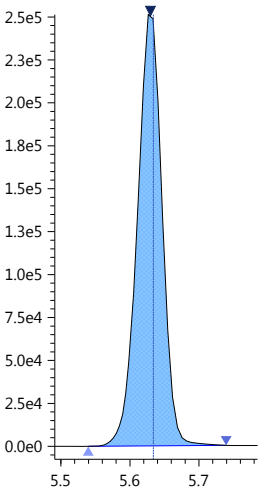
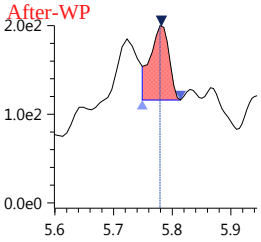
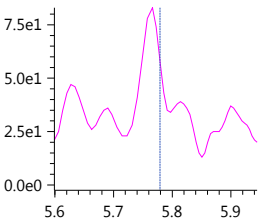
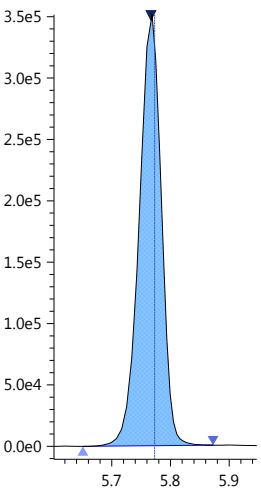
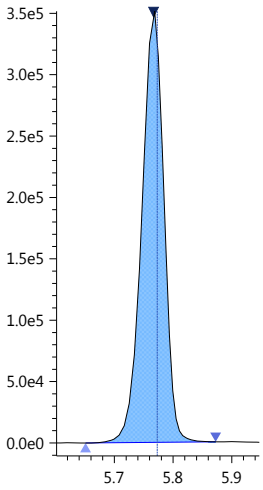


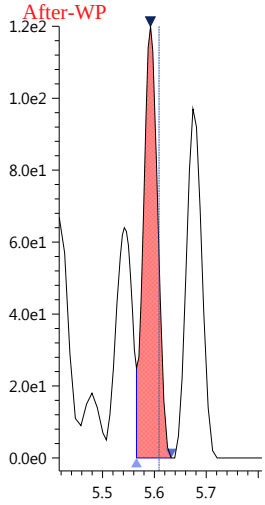
N-MeFOSA-d3
Conc 5.8522
RT 5.630 Area 628304
Q 514.90>168.90 (-) 2.51e5


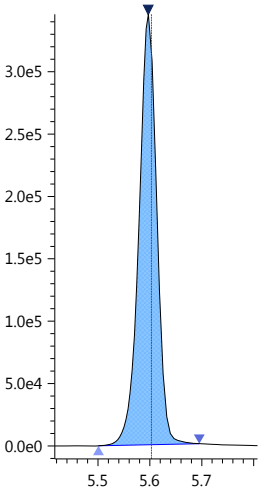
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.630 Area 628304
ISTD 514.90>168.90 (-) 2.51e5


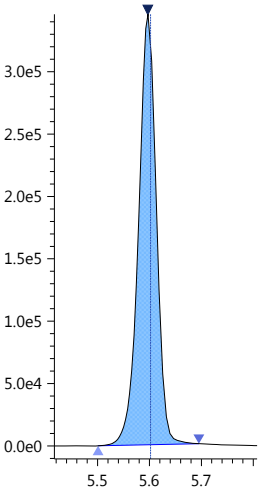
N-EtFOSA
Conc 0.0054
RT 5.781 Area 190
R#1 11.76 (0.00)
Q 526.90>169.10 (-) 2.00e2
After-WP

R1 526.90>219.00 (-) 8.30e1


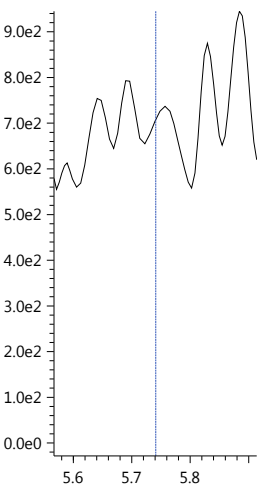
N-EtFOSA-d9
Conc 5.7685
RT 5.767 Area 922298
Q 530.90>169.15 (-) 3.52e5


N-EtFOSA-d9_IS
Conc 5.0000
RT 5.767 Area 922298
ISTD 530.90>169.15 (-) 3.52e5


N-MeFOSE
Conc 0.0011
RT 5.592 Area 231
Q 616.00>59.00 (-) 1.20e2
After-WP


N-MeFOSE-d7
Conc 6.2533
RT 5.597 Area 824730
Q 622.70>59.10 (-) 3.46e5


N-MeFOSE-d7_IS
Conc 5.0000
RT 5.597 Area 824730
ISTD 622.70>59.10 (-) 3.46e5


N-EtFOSE
Conc ----
RT ---- Area ----
Q 630.00>58.90 (-) 9.45e2


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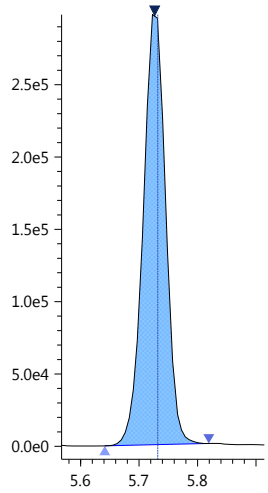
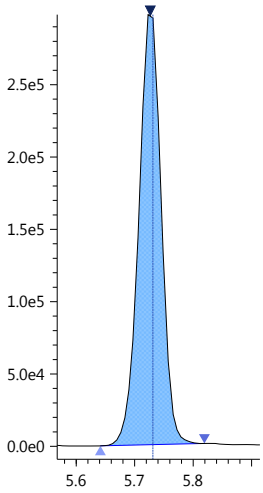
N-EtFOSE-d9
Conc 6.0124
RT 5.727 Area 798808

Q 638.70>59.10 (-) 2.98e5



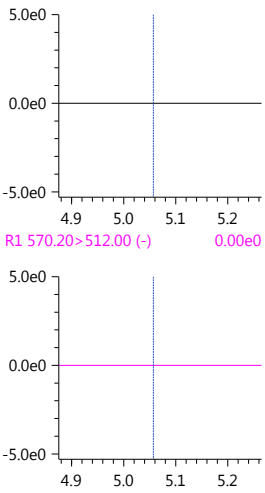
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.727 Area 798808

ISTD 638.70>59.10 (-) 2.98e5



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

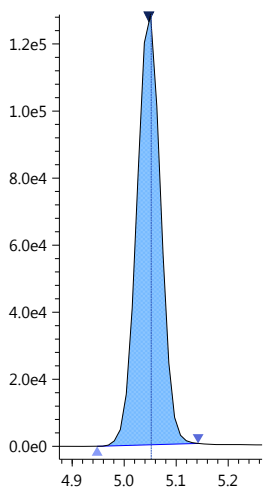
Q 570.20>419.00 (-) 0.00e0



R1 570.20>512.00 (-) 0.00e0

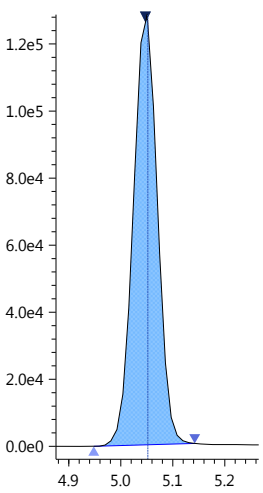
N-MeFOSAA-d3
Conc 5.2473
RT 5.048 Area 414375

Q 572.80>419.05 (-) 1.29e5



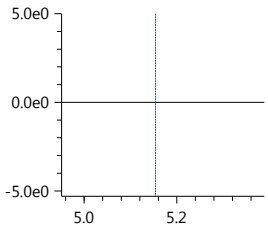
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.048 Area 414375

ISTD 572.80>419.05 (-) 1.29e5

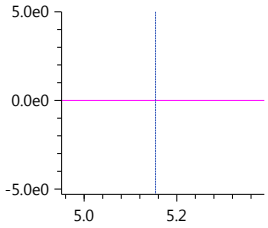


N-EtFOSAA
Conc ----
RT ---- Area ----
R#1 ---- (0.00)

Q 584.20>418.95 (-) 0.00e0

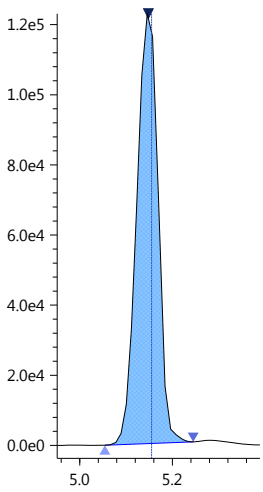


R1 584.20>526.10 (-) 0.00e0



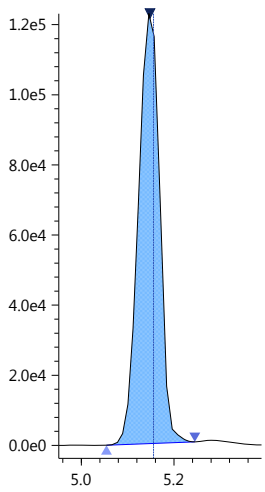
N-EtFOSAA-d5
Conc 5.5181
RT 5.148 Area 393734

Q 588.80>419.00 (-) 1.23e5



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.148 Area 393734

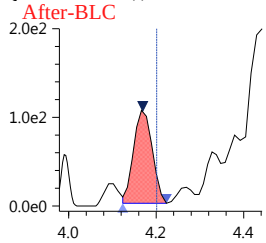
ISTD 588.80>419.00 (-) 1.23e5



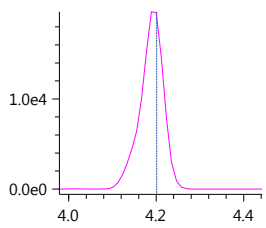
4_2-FTS_1
Conc 0.0037
RT 4.169 Area 314
R#1 6221.78 (0.00)

Q 327.00>307.05 (-) 2.00e2

After-BLC

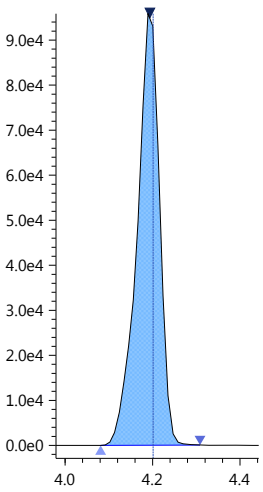


R1 327.00>81.10 (-) 1.97e4



4_2-FTS-13C
Conc 5.1849
RT 4.194 Area 343040

Q 328.80>309.05 (-) 9.59e4



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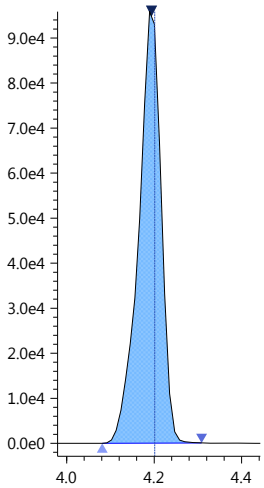
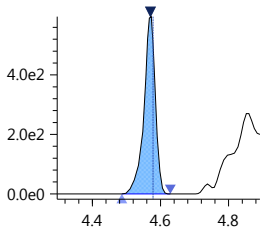
4_2-FTS-13C_IS
Conc 5.0000
RT 4.194 Area 343040

ISTD 328.80>309.05 (-) 9.59e4

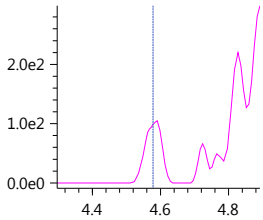


6_2-FTS_1
Conc 0.0146
RT 4.570 Area 1390
R#1 14.78 (0.00)

Q 427.00>407.00 (-) 5.96e2

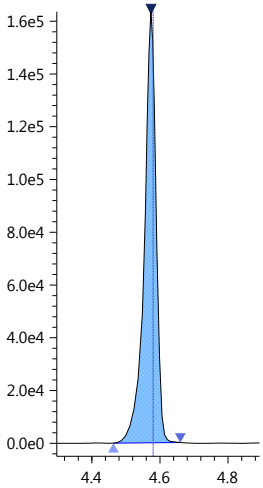


R1 427.00>80.90 (-) 2.99e2



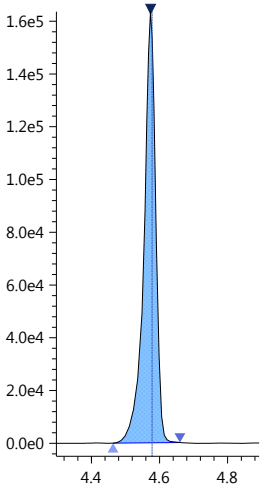
6_2-FTS-13C
Conc 6.2750
RT 4.574 Area 391342

Q 428.90>409.00 (-) 1.64e5



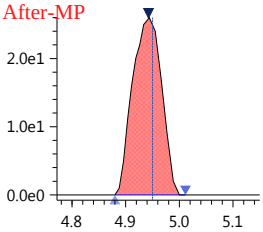
6_2-FTS-13C_IS
Conc 5.0000
RT 4.574 Area 391342

ISTD 428.90>409.00 (-) 1.64e5

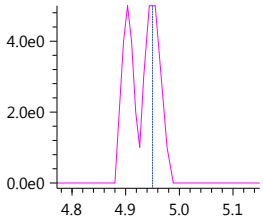


8_2-FTS_1
Conc 0.0030
RT 4.943 Area 99
R#1 19.23 (0.00)

Q 527.10>506.90 (-) 2.60e1

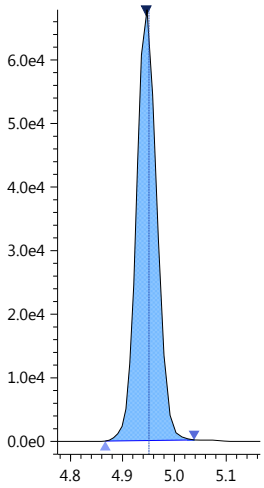


R1 527.20>487.00 (-) 5.00e0



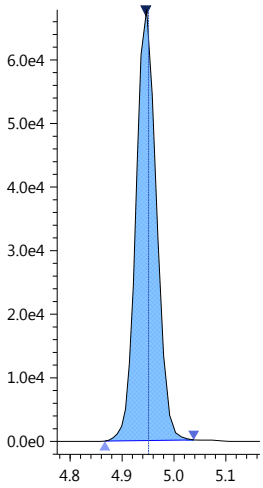
8_2-FTS-13C
Conc 5.2541
RT 4.946 Area 186764

Q 528.80>509.00 (-) 6.79e4



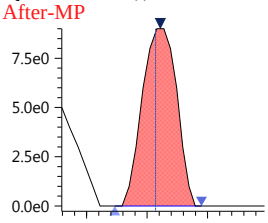
8_2-FTS-13C_IS
Conc 5.0000
RT 4.946 Area 186764

ISTD 528.80>509.00 (-) 6.79e4

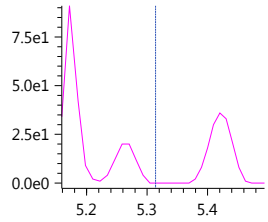


10_2-FtS_1
Conc 0.0012
RT 5.322 Area 36
R#1 0.00 (0.00)

Q 627.00>606.95 (-) 9.00e0

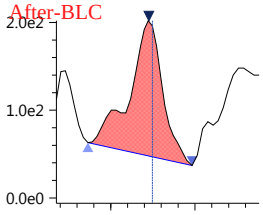


R1 627.00>81.25 (-) 9.10e1

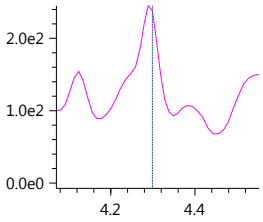


HPFO_DA
Conc 0.0019
RT 4.290 Area 838
R#1 84.31 (0.00)

Q 329.00>169.00 (-) 2.02e2

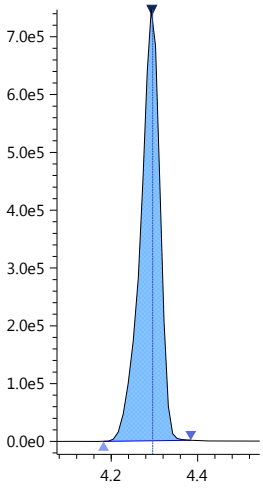


R1 329.00>285.10 (-) 2.45e2



HFPO_DA-13C
Conc 6.5048
RT 4.294 Area 2347174

Q 332.00>286.80 (-) 7.47e5



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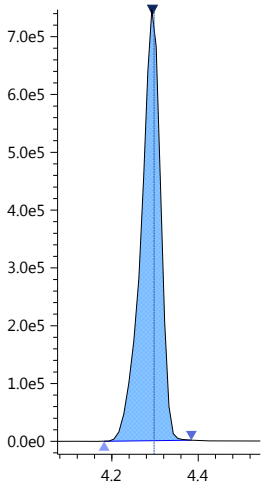
HFPO_DA-13C_IS

Conc 5.0000
RT 4.294 Area 2347174

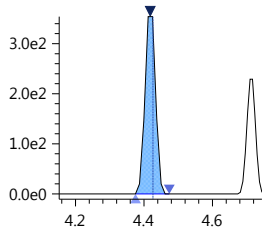
ISTD 332.00>286.80 (-) 7.47e5



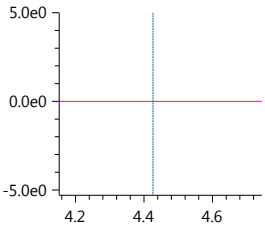
ADONA

Conc 0.0007
RT 4.418 Area 786
R#1 0.00 (0.00)

Q 377.00>251.00 (-) 3.54e2



R1 377.00>84.95 (-) 0.00e0



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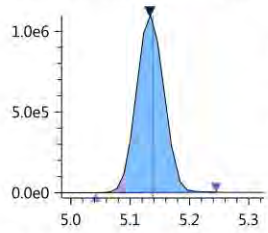
Project File: J:\LCMS06\Data\190807_curve\190807_curve.damlp
Flags File: J:\LCMS06\Data\190807_curve\190807_curve.damlp

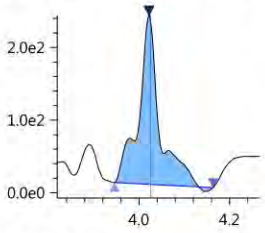
190807_011

Sample ID: IB
Date acquired: 8/7/2019 5:14:18 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_011.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 1

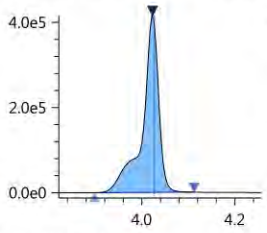
13C7-PFUnDA_IS
Conc 5.0000
RT 5.133 Area 3593609
ISTD 570.00>525.00 (-) 1.10e6



PFBS_1
Conc 0.0025
RT 4.022 Area 740
Q 299.00>80.00 (-) 2.44e2



PFBS-13C
Conc 5.8402
RT 4.023 Area 1005038
Q 301.80>80.00 (-) 4.16e5



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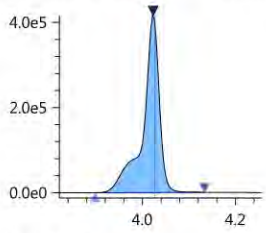
Conc 5.0000
RT 4.023 Area 1008580
ISTD 301.80>80.00 (-) 4.16e5



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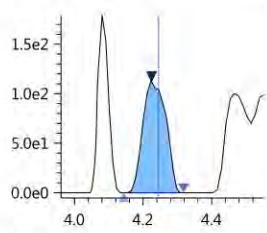
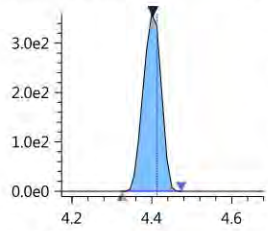
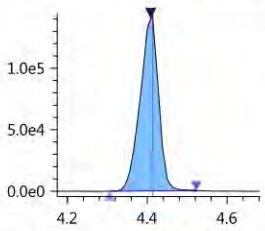
Conc 0.0044
RT 4.225 Area 529
Q 349.00>99.00 (-) 1.79e2



PFHxS_1
Conc 0.0091
RT 4.403 Area 1142
Q 399.00>80.00 (-) 3.59e2



PFHxS-18O
Conc 4.6035
RT 4.409 Area 453395
Q 402.70>84.05 (-) 1.44e5



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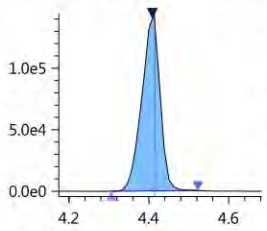
ISTD 402.70>84.05 (-) 1.44e5



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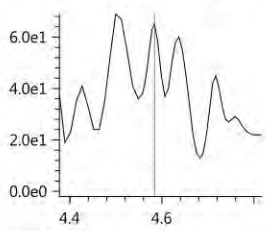
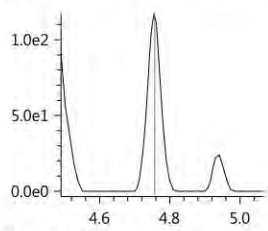
RT ---- Area ----
Q 449.00>80.15 (-) 6.90e1



PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 1.17e2



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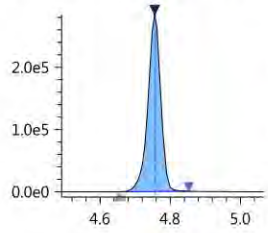
Conc 6.1337
RT 4.756 Area 719658
Q 502.80>80.05 (-) 2.85e5



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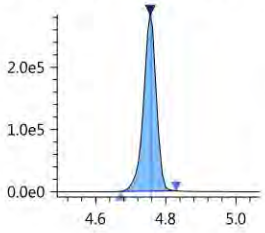

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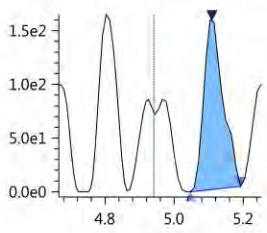
Conc 0.0065
RT 5.109 Area 617
Q 549.00>99.00 (-) 1.65e2



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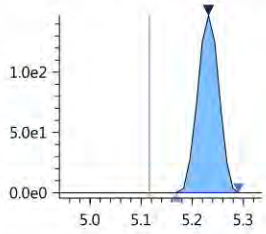

PFDOS
Conc ----
RT ---- Area ----
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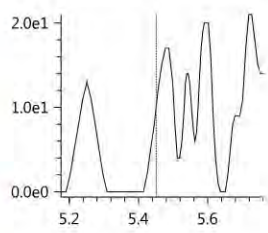

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9Cl-PF3ONS
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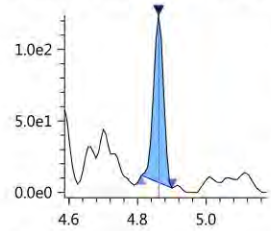
RT 4.861 Area 238
Q 531.00>351.00 (-) 1.24e2



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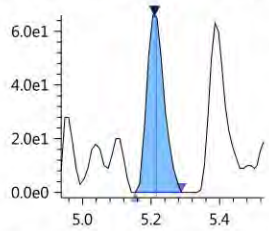
Q 631.00>451.05 (-) 6.60e1



PFBA
Conc ----
RT ---- Area ----
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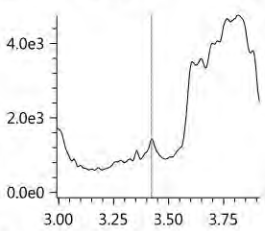

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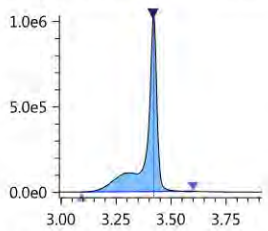
Q 216.90>172.15 (-) 1.04e6



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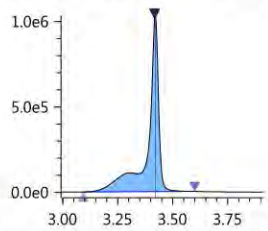
RT 3.418 Area 3411757
ISTD 216.90>172.15 (-) 1.04e6



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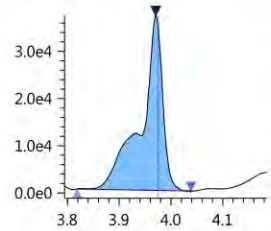
Q 263.05>219.10 (-) 3.76e4



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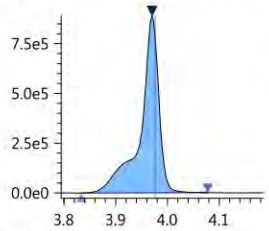
Conc 5.9525
RT 3.970 Area 2187139
Q 267.90>223.00 (-) 8.91e5



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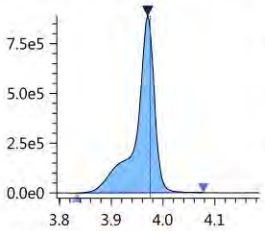

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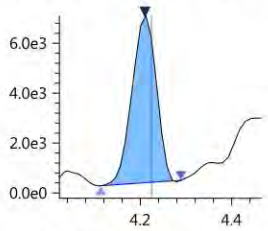
RT 4.210 Area 24844
Q 313.00>269.00 (-) 7.10e3



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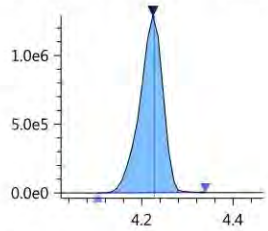

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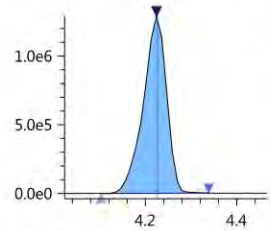

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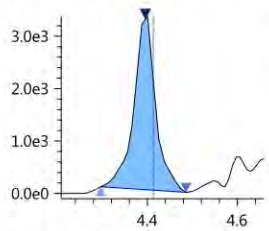

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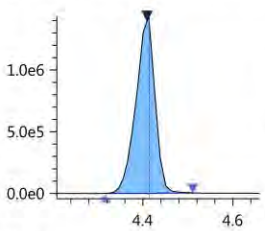

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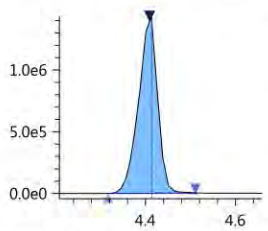

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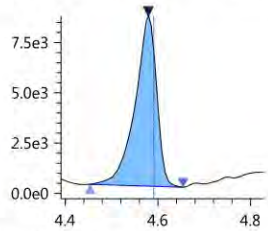

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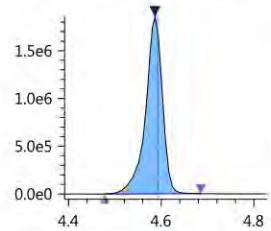
Q 416.80>372.05 (-) 1.86e6



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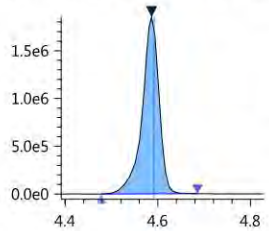

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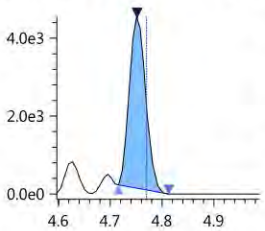
Q 463.00>418.90 (-) 4.55e3



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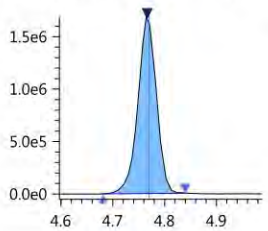

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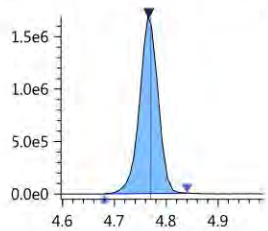

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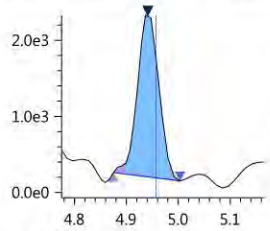

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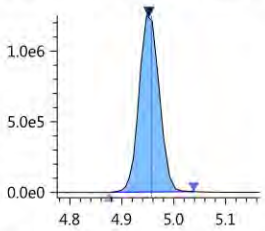

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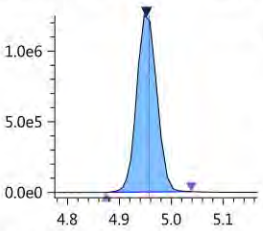

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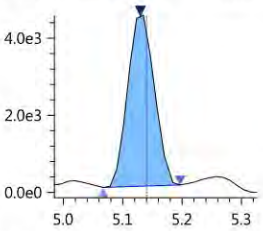

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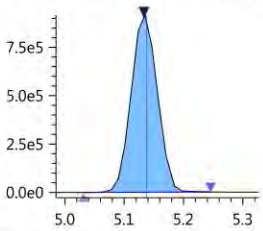

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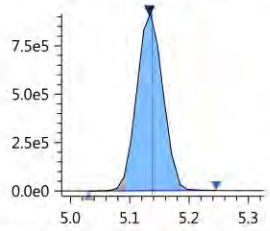

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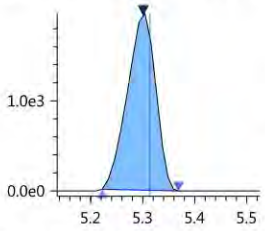
Q 613.05>569.00 (-) 1.97e3



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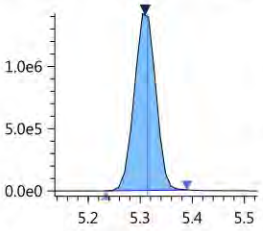

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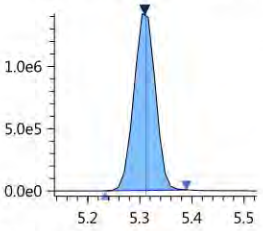

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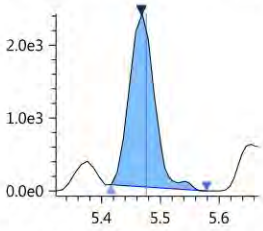

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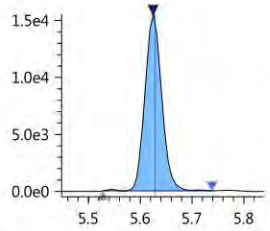

PFTeDA-13C
Conc 5.9814
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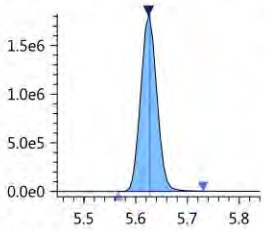
Q 714.70>669.90 (-) 1.82e6



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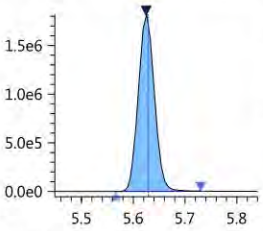

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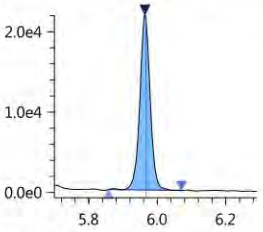
Q 813.00>769.05 (-) 2.21e4



13C-PFHxDA
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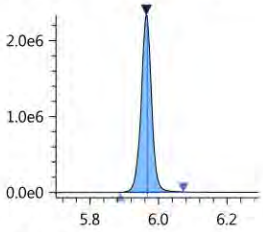
Q 815.00>770.05 (-) 2.34e6



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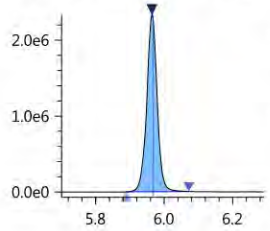
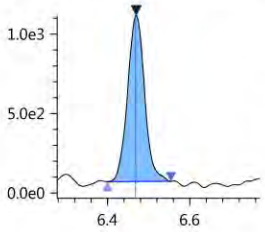
RT 5.964 Area 4953299
ISTD 815.00>770.05 (-) 2.34e6



PFODA
Conc 0.0020
RT 6.470 Area 3011
Q 913.00>868.85 (-) 1.12e3



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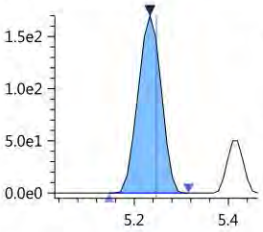
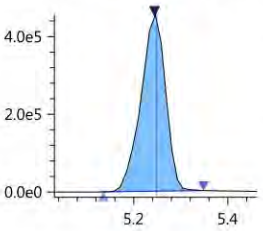
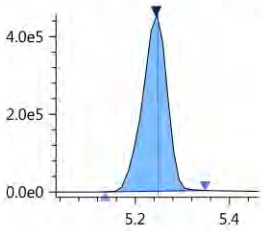
Conc 0.0014
RT 5.233 Area 582
Q 498.20>78.00 (-) 1.70e2



FOSA-13C
Conc 6.0540
RT 5.244 Area 1656603
Q 506.00>78.05 (-) 4.56e5



FOSA-13C_IS
Conc 5.0000
RT 5.244 Area 1656603
ISTD 506.00>78.05 (-) 4.56e5



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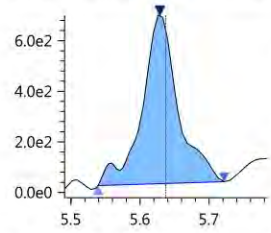
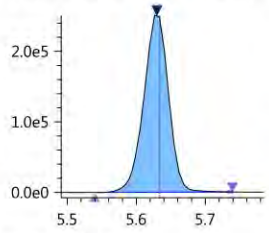
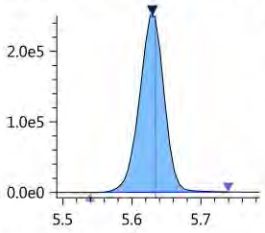
N-MeFOSA
Conc 0.0111
RT 5.629 Area 2179
Q 512.00>169.10 (-) 7.01e2



N-MeFOSA-d3
Conc 5.8522
RT 5.630 Area 628304
Q 514.90>168.90 (-) 2.51e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.630 Area 624119
ISTD 514.90>168.90 (-) 2.51e5



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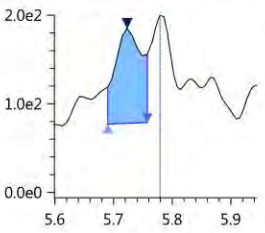
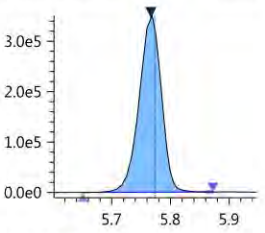
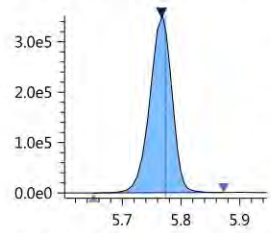
RT 5.723 Area 331
Q 526.90>169.10 (-) 2.00e2



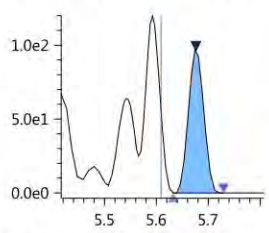
N-EtFOSA-d9
Conc 5.7685
RT 5.767 Area 922298
Q 530.90>169.15 (-) 3.52e5



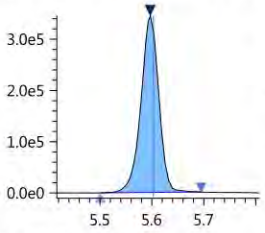
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.767 Area 922298
ISTD 530.90>169.15 (-) 3.52e5



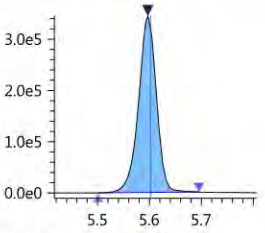
N-MeFOSE
Conc 0.0010
RT 5.676 Area 200
Q 616.00>59.00 (-) 1.20e2



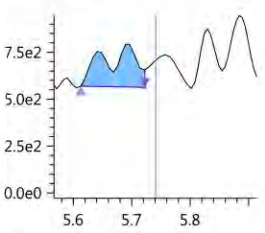
N-MeFOSE-d7
Conc 6.2533
RT 5.597 Area 824730
Q 622.70>59.10 (-) 3.46e5



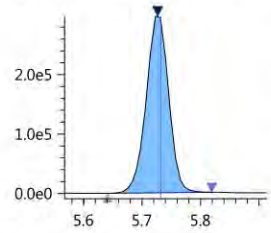
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.597 Area 821903
ISTD 622.70>59.10 (-) 3.46e5



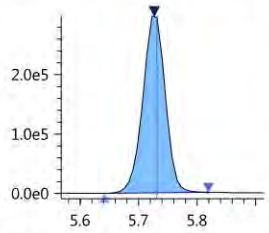
N-EtFOSE
Conc 0.0021
RT 5.829 Area 401
Q 630.00>58.90 (-) 9.45e2



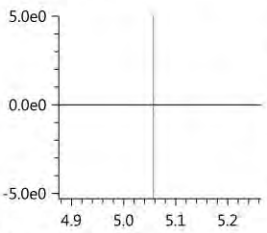
N-EtFOSE-d9
Conc 6.0124
RT 5.727 Area 798808
Q 638.70>59.10 (-) 2.98e5



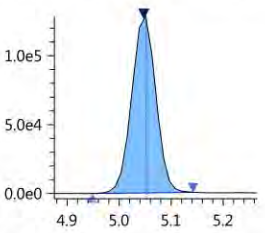
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.727 Area 794345
ISTD 638.70>59.10 (-) 2.98e5



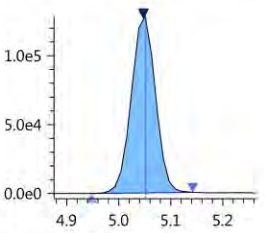
N-MeFOSAA
Conc ----
RT ---- Area ----
Q 570.20>419.00 (-) 0.00e0



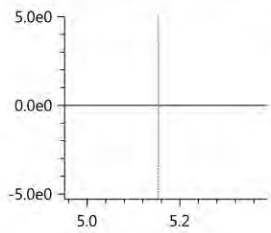
N-MeFOSAA-d3
Conc 5.2473
RT 5.048 Area 414375
Q 572.80>419.05 (-) 1.29e5



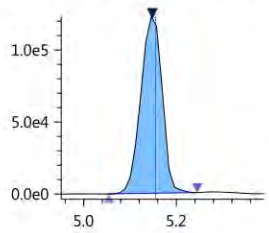
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.048 Area 414375
ISTD 572.80>419.05 (-) 1.29e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5
Conc 5.5181
RT 5.148 Area 393734
Q 588.80>419.00 (-) 1.23e5



N-EtFOSAA-d5_IS
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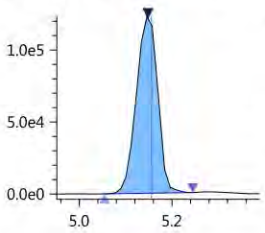
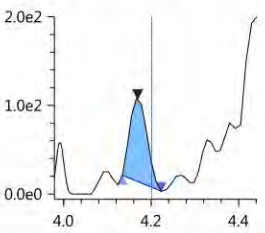
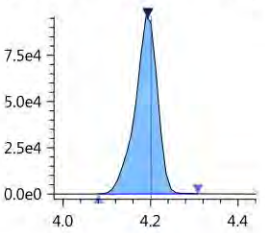
RT 5.148 Area 393734
ISTD 588.80>419.00 (-) 1.23e5



4_2-FTS_1
Conc 0.0030
RT 4.169 Area 258
Q 327.00>307.05 (-) 2.00e2



4_2-FTS-13C
Conc 5.1849
RT 4.194 Area 343040
Q 328.80>309.05 (-) 9.59e4



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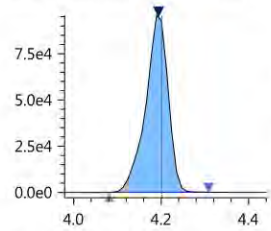
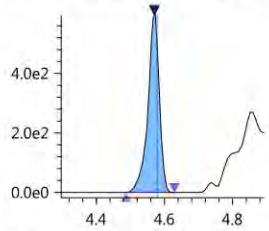
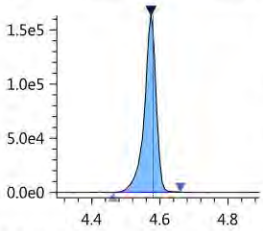
4_2-FTS-13C_IS
Conc 5.0000
RT 4.194 Area 343040
ISTD 328.80>309.05 (-) 9.59e4



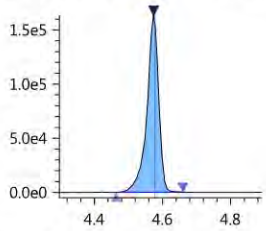
6_2-FTS_1
Conc 0.0136
RT 4.570 Area 1390
Q 427.00>407.00 (-) 5.96e2



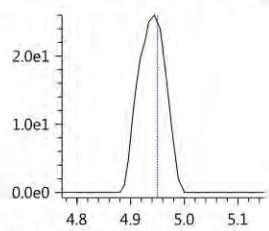
6_2-FTS-13C
Conc 6.2750
RT 4.574 Area 391342
Q 428.90>409.00 (-) 1.64e5



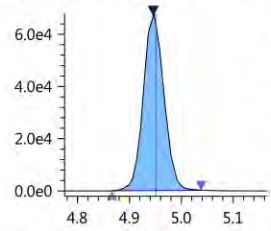
6_2-FTS-13C_IS
Conc 5.0000
RT 4.574 Area 391342
ISTD 428.90>409.00 (-) 1.64e5



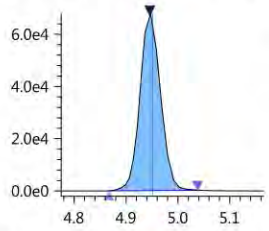
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 2.60e1



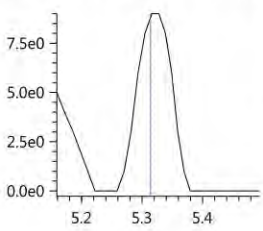
8_2-FTS-13C
Conc 5.2541
RT 4.946 Area 186764
Q 528.80>509.00 (-) 6.79e4



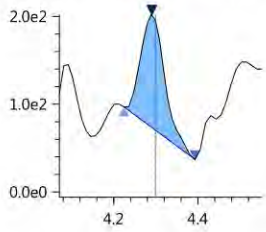
8_2-FTS-13C_IS
Conc 5.0000
RT 4.946 Area 186764
ISTD 528.80>509.00 (-) 6.79e4



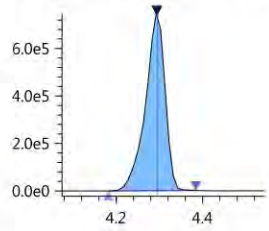
10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 9.00e0



HPFO_DA
Conc 0.0012
RT 4.290 Area 505
Q 329.00>169.00 (-) 2.02e2



HFPO_DA-13C
Conc 6.5048
RT 4.294 Area 2347174
Q 332.00>286.80 (-) 7.47e5



HFPO_DA-13C_IS
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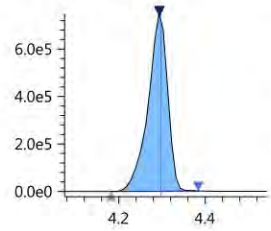
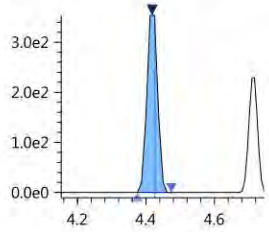
RT 4.294 Area 2347174
ISTD 332.00>286.80 (-) 7.47e5



ADONA
Conc 0.0007
RT 4.418 Area 786
Q 377.00>251.00 (-) 3.54e2



Insight Report

Printed at 8/8/2019 9:54:02 AM

190807_013

Sample ID: 0.10 PPB ICAL
Date acquired: 8/7/2019 5:35:10 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_013.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.140	5686750	5686750	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.025	33964	1265290	2	0.0932	ng/mL	0.0887
PFBS-13C	Auto	4.028	1265290	5686750	1	4.6462	ng/mL	5.0000
PFBS-13C_IS	Auto	4.028	1265290	1265290	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.244	12338	1265290	2	0.0804	ng/mL	0.0941
PFHxS_1	M	4.418	20009	741632	3	0.0972	ng/mL	0.0913
PFHxS-18O	Auto	4.417	741632	5686750	1	4.7584	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.417	741632	741632	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.586	19529	741632	3	0.0889	ng/mL	0.0953
PFOS_1	Auto	4.760	13599	790830	4	0.0981	ng/mL	0.0929
PFOS-13C	Auto	4.760	798185	5686750	1	4.2990	ng/mL	5.0000
PFOS-13C_IS	Auto	4.760	790830	790830	4	5.0000	ng/mL	5.0000
PFNS	M	4.940	13897	790830	4	0.0755	ng/mL	0.0962
PFDS_1	Auto	5.117	12588	790830	4	0.0971	ng/mL	0.0965
PFDOS	M	5.453	15503	790830	4	0.0978	ng/mL	0.0807
9Cl-PF3ONS	Auto	4.864	97875	2488188	26	0.0920	ng/mL	0.0882
11Cl-PF3OUdS	Auto	5.218	71393	2488188	26	0.0749	ng/mL	0.0832
PFBA	Auto	3.424	86640	4182714	5	0.1012	ng/mL	0.1000
PFBA-13C	Auto	3.424	4182714	5686750	1	4.5260	ng/mL	5.0000
PFBA-13C_IS	Auto	3.424	4182714	4182714	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.975	239523	2668250	6	0.0970	ng/mL	0.1000
PFPeA-13C	Auto	3.975	2668250	5686750	1	4.5890	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.975	2668250	2668250	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.226	145246	5822881	7	0.0949	ng/mL	0.1000
PFHxA-13C	Auto	4.228	5822881	5686750	1	5.0938	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.228	5822881	5822881	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.414	129364	6241244	8	0.1038	ng/mL	0.1000
PFHpA-13C	Auto	4.417	6241244	5686750	1	4.6585	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.417	6241244	6241244	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.591	152239	5801543	9	0.0984	ng/mL	0.1000
PFOA-13C	Auto	4.592	5801543	5686750	1	4.7815	ng/mL	5.0000
PFOA-13C_IS	Auto	4.592	5801543	5801543	9	5.0000	ng/mL	5.0000
PFNA	M	4.773	92057	4147846	10	0.1113	ng/mL	0.1000
PFNA-13C	Auto	4.771	4147846	5686750	1	4.3032	ng/mL	5.0000
PFNA-13C_IS	Auto	4.771	4147846	4147846	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.957	85404	3783460	11	0.1114	ng/mL	0.1000
PFDA-13C	Auto	4.956	3783460	5686750	1	4.6692	ng/mL	5.0000
PFDA-13C_IS	Auto	4.956	3783460	3783460	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.138	99995	4147225	12	0.1072	ng/mL	0.1000
PFUnA-13C	Auto	5.140	4147225	5686750	1	4.7222	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.140	4147225	4147225	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.315	59154	4248333	13	0.1026	ng/mL	0.1000
PFDoA-13C	Auto	5.314	4248333	5686750	1	4.4910	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.314	4248333	4248333	13	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.477	63240	4763046	14	0.0829	ng/mL	0.1000
PFTeDA	Auto	5.631	84758	4763046	14	0.1082	ng/mL	0.1000
PFTeDA-13C	Auto	5.631	4763046	5686750	1	4.5701	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.631	4763046	4763046	14	5.0000	ng/mL	5.0000
PFHxDA	Auto	5.972	159329	5668637	15	0.1009	ng/mL	0.1000
13C-PFHxDA	Auto	5.972	5668637	5686750	1	4.4421	ng/mL	5.0000
13C-PFHxDA_IS	Auto	5.972	5668637	5668637	15	5.0000	ng/mL	5.0000
PFODA	Auto	6.474	71770	5668637	15	0.1063	ng/mL	0.1000
FOSA	Auto	5.250	52737	2027951	16	0.1033	ng/mL	0.1000
FOSA-13C	Auto	5.250	2027951	5686750	1	4.6833	ng/mL	5.0000
FOSA-13C_IS	Auto	5.250	2027951	2027951	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.640	25073	759947	17	0.1047	ng/mL	0.1000
N-MeFOSA-d3	Auto	5.637	759947	5686750	1	4.4730	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.637	759947	759947	17	5.0000	ng/mL	5.0000
N-EtFOSA	M	5.782	4693	1104310	18	0.1109	ng/mL	0.1000
N-EtFOSA-d9	Auto	5.775	1104310	5686750	1	4.3647	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.775	1104310	1104310	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.611	24379	907487	19	0.1070	ng/mL	0.1000
N-MeFOSE-d7	Auto	5.604	907487	5686750	1	4.3481	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.604	907487	907487	19	5.0000	ng/mL	5.0000
N-EtFOSE	M	5.745	24356	902259	20	0.1104	ng/mL	0.1000
N-EtFOSE-d9	Auto	5.734	902259	5686750	1	4.2914	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.734	902259	902259	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.058	6620	612836	21	0.0994	ng/mL	0.1000

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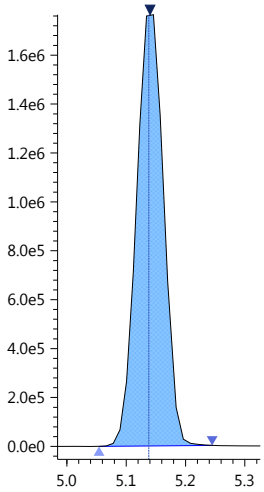
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-MeFOSAA-d3	Auto	5.055	612836	5686750	1	4.9040	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.055	612836	612836	21	5.0000	ng/mL	5.0000
N-EtFOSAA	M	5.150	2845	591864	22	0.1175	ng/mL	0.1000
N-EtFOSAA-d5	Auto	5.154	591864	5686750	1	5.2417	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.154	591864	591864	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.200	11193	416363	23	0.1081	ng/mL	0.0937
4_2-FTS-13C	Auto	4.201	416363	5686750	1	3.9768	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.201	416363	416363	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.578	11440	432709	24	0.1087	ng/mL	0.0951
6_2-FTS-13C	Auto	4.579	432709	5686750	1	4.3845	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.579	432709	432709	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.951	5336	276417	25	0.1103	ng/mL	0.0960
8_2-FTS-13C	Auto	4.952	276417	5686750	1	4.9140	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.952	276417	276417	25	5.0000	ng/mL	5.0000
10_2-FtS_1	M	5.315	3586	276417	25	0.0821	ng/mL	0.0966
HPFO_DA	Auto	4.300	47401	2488188	26	0.1023	ng/mL	0.1000
HFPO_DA-13C	Auto	4.298	2488188	5686750	1	4.3575	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.298	2488188	2488188	26	5.0000	ng/mL	5.0000
ADONA	Auto	4.433	99550	2488188	26	0.0863	ng/mL	0.0945

13C7-PFUnDA_IS

Conc 5.0000
RT 5.140 Area 5686750

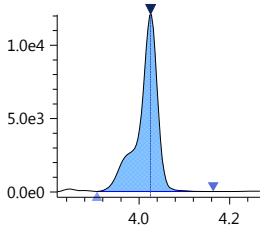
ISTD 570.00>525.00 (-) 1.77e6



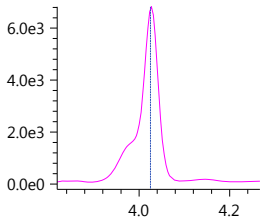
PFBS_1

Conc 0.0932
RT 4.025 Area 33964
R#1 51.33 (0.00)

Q 299.00>80.00 (-) 1.21e4



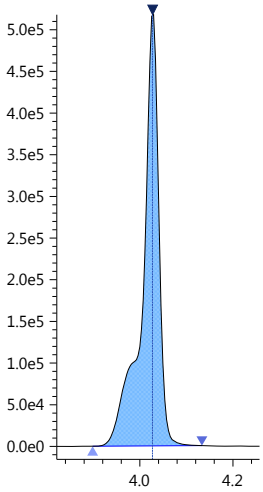
R1 298.80>99.00 (-) 6.82e3



PFBS-13C

Conc 4.6462
RT 4.028 Area 1265290

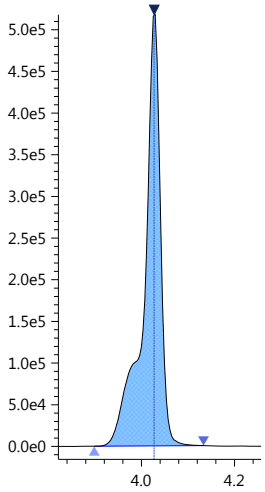
Q 301.80>80.00 (-) 5.18e5



PFBS-13C_IS

Conc 5.0000
RT 4.028 Area 1265290

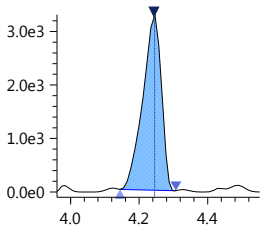
ISTD 301.80>80.00 (-) 5.18e5



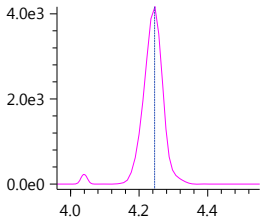
PFPeS

Conc 0.0804
RT 4.244 Area 12338
R#1 122.84 (0.00)

Q 349.00>99.00 (-) 3.31e3



R1 349.00>79.95 (-) 4.17e3



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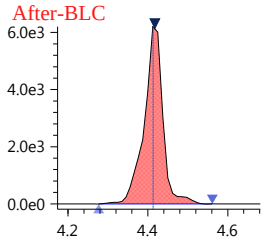
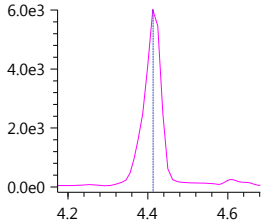
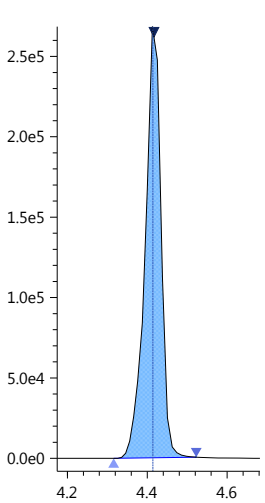
PFHxS_1
Conc 0.0972
RT 4.418 Area 20009
R#1 89.46 (0.00)
Q 399.00>80.00 (-) 6.20e3



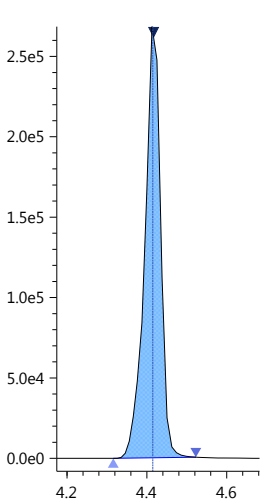
R1 399.00>99.00 (-) 6.01e3



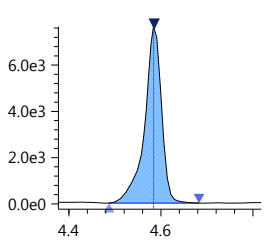
PFHxS-18O
Conc 4.7584
RT 4.417 Area 741632
Q 402.70>84.05 (-) 2.69e5



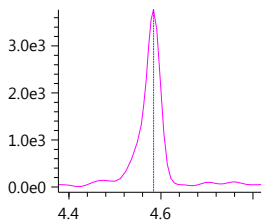
PFHxS-18O_IS
Conc 5.0000
RT 4.417 Area 741632
ISTD 402.70>84.05 (-) 2.69e5



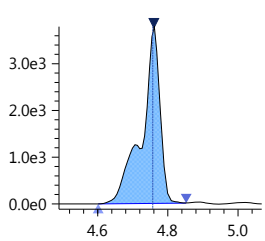
PFHpS_1
Conc 0.0889
RT 4.586 Area 19529
R#1 47.68 (0.00)
Q 449.00>80.15 (-) 7.66e3



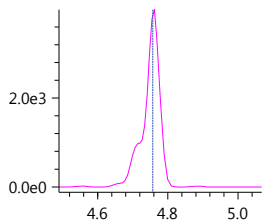
R1 449.00>99.20 (-) 3.77e3



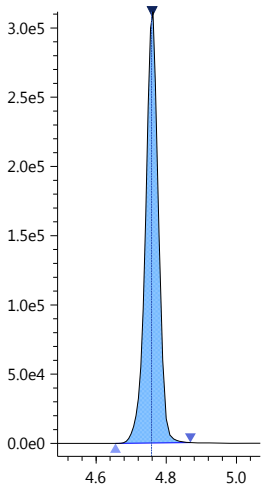
PFOS_1
Conc 0.0981
RT 4.760 Area 13599
R#1 104.87 (0.00)
Q 499.00>80.00 (-) 3.79e3



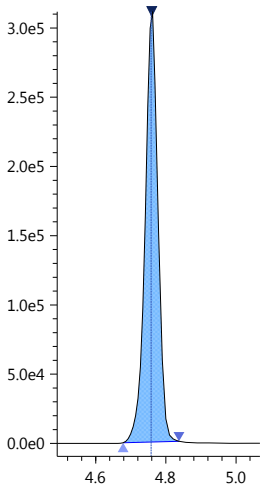
R1 499.00>99.00 (-) 3.99e3



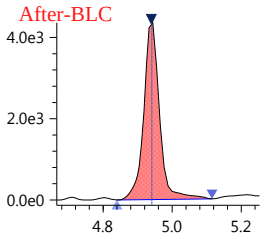
PFOS-13C
Conc 4.2990
RT 4.760 Area 798185
Q 502.80>80.05 (-) 3.12e5



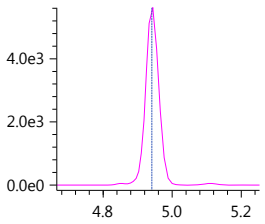
PFOS-13C_IS
Conc 5.0000
RT 4.760 Area 790830
ISTD 502.80>80.05 (-) 3.12e5



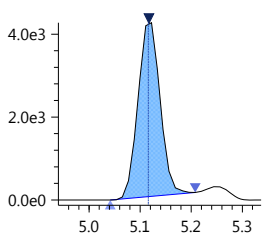
PFNS
Conc 0.0755
RT 4.940 Area 13897
R#1 121.71 (0.00)
Q 549.00>99.00 (-) 4.36e3



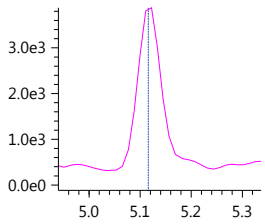
R1 549.00>79.95 (-) 5.62e3



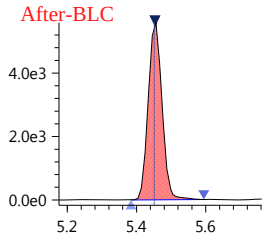
PFDS_1
Conc 0.0971
RT 5.117 Area 12588
R#1 82.85 (0.00)
Q 599.00>79.90 (-) 4.28e3



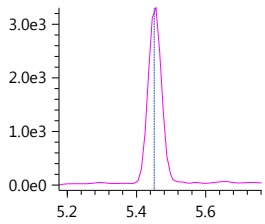
R1 599.00>99.10 (-) 3.88e3



PFDOS
Conc 0.0978
RT 5.453 Area 15503
R#1 58.71 (0.00)
Q 699.00>79.95 (-) 5.59e3



R1 699.00>99.05 (-) 3.31e3



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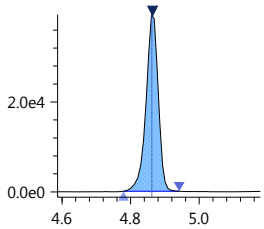
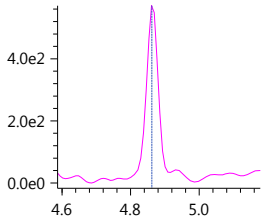
9Cl-PF3ONS

Conc 0.0920
RT 4.864 Area 97875
R#1 1.38 (0.00)

Q 531.00>351.00 (-) 3.94e4



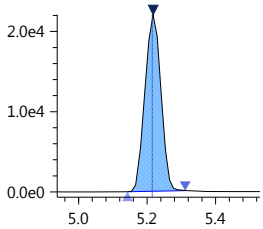
R1 531.00>98.90 (-) 5.71e2



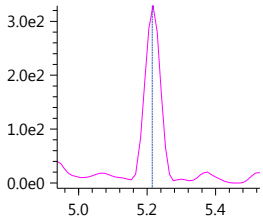
11Cl-PF3OUdS

Conc 0.0749
RT 5.218 Area 71393
R#1 1.46 (0.00)

Q 631.00>451.05 (-) 2.21e4



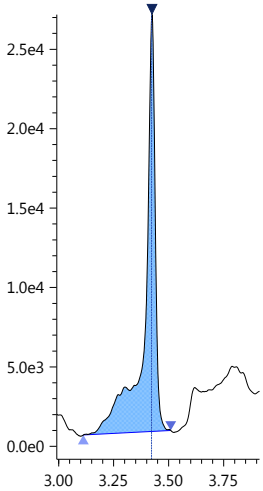
R1 631.00>98.90 (-) 3.29e2



PFBA

Conc 0.1012
RT 3.424 Area 86640

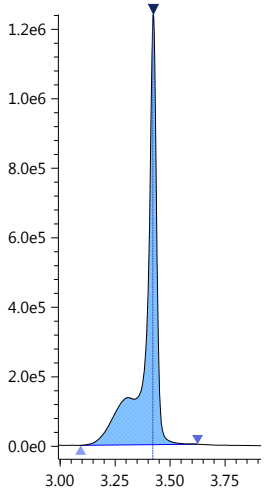
Q 213.00>169.10 (-) 2.72e4



PFBA-13C

Conc 4.5260
RT 3.424 Area 4182714

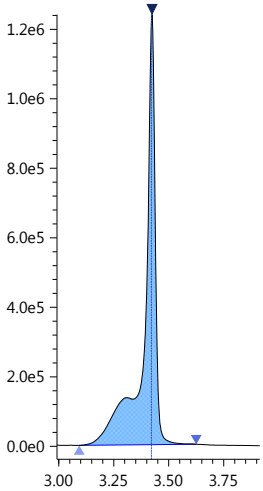
Q 216.90>172.15 (-) 1.24e6



PFBA-13C_IS

Conc 5.0000
RT 3.424 Area 4182714

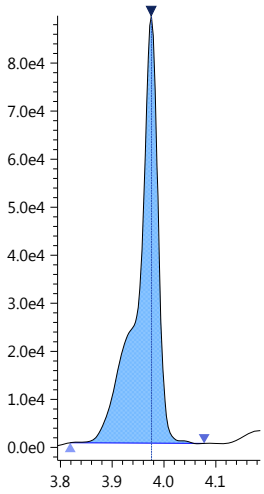
ISTD 216.90>172.15 (-) 1.24e6



PFPeA

Conc 0.0970
RT 3.975 Area 239523

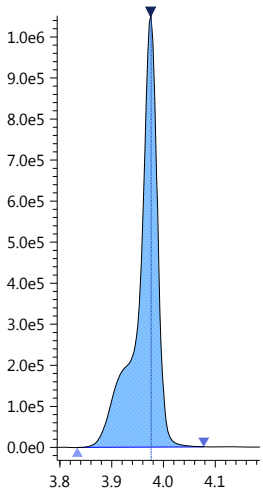
Q 263.05>219.10 (-) 8.99e4



PFPeA-13C

Conc 4.5890
RT 3.975 Area 2668250

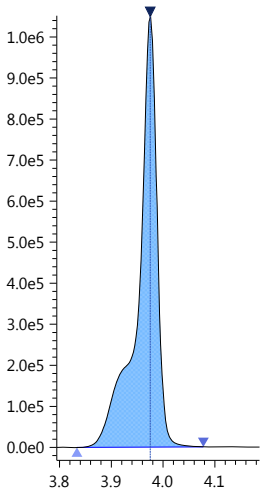
Q 267.90>223.00 (-) 1.05e6



PFPeA-13C_IS

Conc 5.0000
RT 3.975 Area 2668250

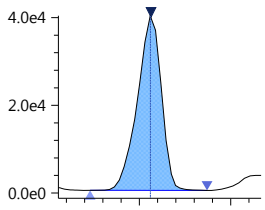
ISTD 267.90>223.00 (-) 1.05e6



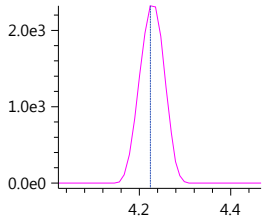
PFHxA

Conc 0.0949
RT 4.226 Area 145246
R#1 5.89 (0.00)

Q 313.00>269.00 (-) 4.05e4



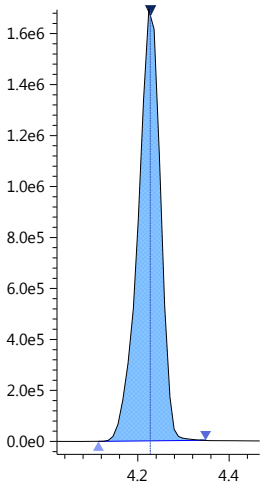
R1 313.00>119.10 (-) 2.32e3



PFHxA-13C

Conc 5.0938
RT 4.228 Area 5822881

Q 314.90>270.10 (-) 1.69e6



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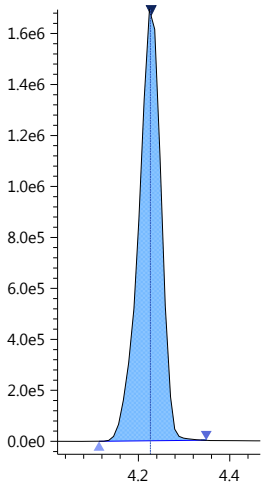
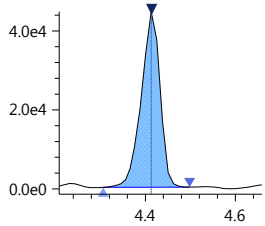
PFHxA-13C_IS
Conc 5.0000
RT 4.228 Area 5822881

ISTD 314.90>270.10 (-) 1.69e6

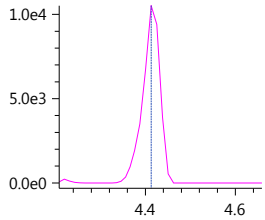


PFHpA
Conc 0.1038
RT 4.414 Area 129364
R#1 23.23 (0.00)

Q 362.90>319.00 (-) 4.49e4

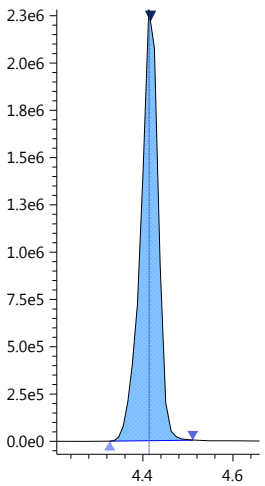


R1 362.90>169.00 (-) 1.05e4



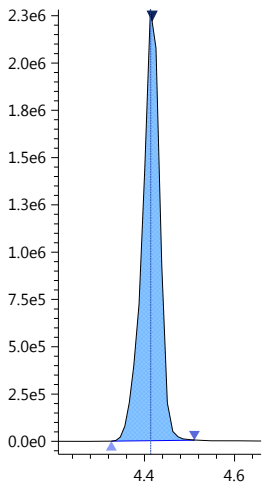
PFHpA-13C
Conc 4.6585
RT 4.417 Area 6241244

Q 366.90>322.10 (-) 2.28e6



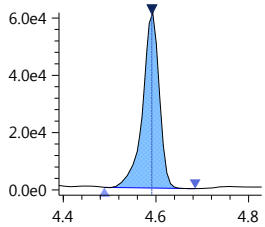
PFHpA-13C_IS
Conc 5.0000
RT 4.417 Area 6241244

ISTD 366.90>322.10 (-) 2.28e6

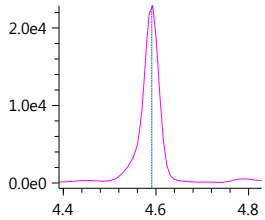


PFOA
Conc 0.0984
RT 4.591 Area 152239
R#1 36.97 (0.00)

Q 413.00>369.00 (-) 6.19e4

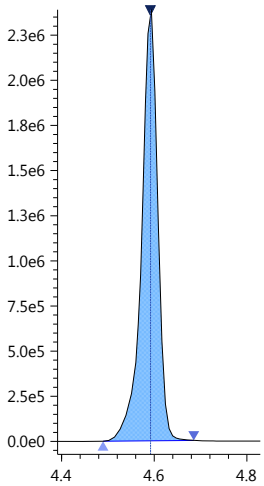


R1 413.00>169.10 (-) 2.29e4



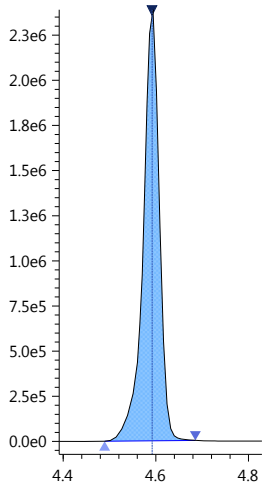
PFOA-13C
Conc 4.7815
RT 4.592 Area 5801543

Q 416.80>372.05 (-) 2.39e6



PFOA-13C_IS
Conc 5.0000
RT 4.592 Area 5801543

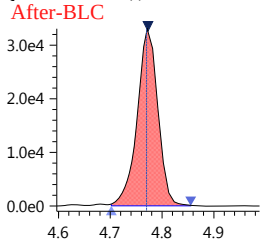
ISTD 416.80>372.05 (-) 2.39e6



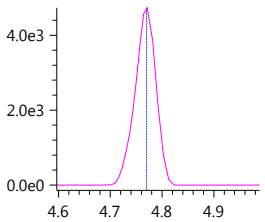
PFNA
Conc 0.1113
RT 4.773 Area 92057
R#1 14.06 (0.00)

Q 463.00>418.90 (-) 3.31e4

After-BLC

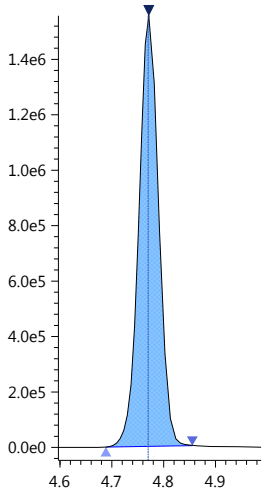


R1 463.00>219.00 (-) 4.73e3



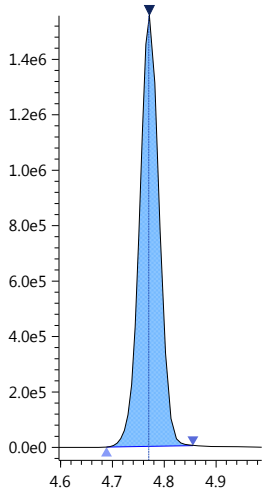
PFNA-13C
Conc 4.3032
RT 4.771 Area 4147846

Q 467.80>423.00 (-) 1.56e6



PFNA-13C_IS
Conc 5.0000
RT 4.771 Area 4147846

ISTD 467.80>423.00 (-) 1.56e6



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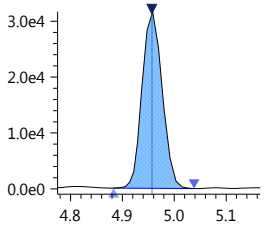
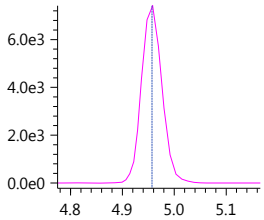
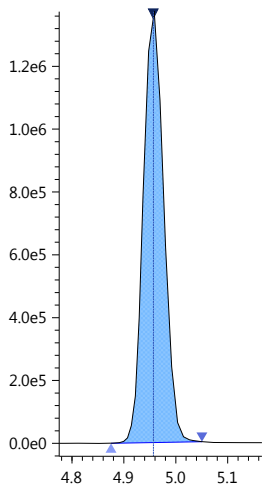
PFDA
Conc 0.1114
RT 4.957 Area 85404
R#1 23.38 (0.00)
Q 513.00>468.80 (-) 3.17e4



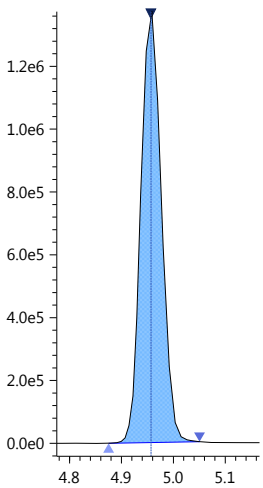
R1 513.00>219.10 (-) 7.42e3



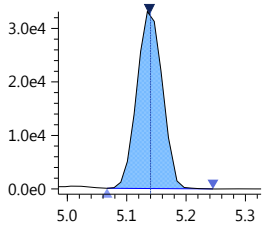
PFDA-13C
Conc 4.6692
RT 4.956 Area 3783460
Q 514.80>469.95 (-) 1.37e6



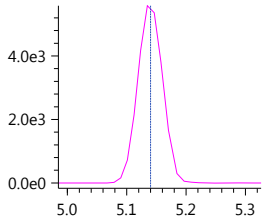
PFDA-13C_IS
Conc 5.0000
RT 4.956 Area 3783460
ISTD 514.80>469.95 (-) 1.37e6



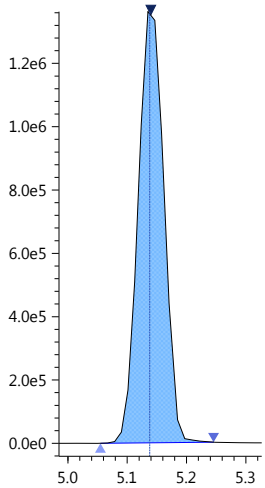
PFUnA
Conc 0.1072
RT 5.138 Area 99995
R#1 17.14 (0.00)
Q 563.00>518.90 (-) 3.31e4



R1 563.00>219.00 (-) 5.58e3



PFUnA-13C
Conc 4.7222
RT 5.140 Area 4147225
Q 564.80>519.95 (-) 1.36e6



PFUnA-13C_IS
Conc 5.0000
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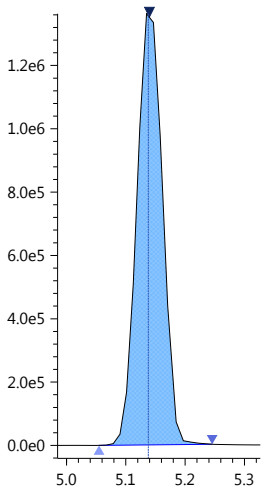
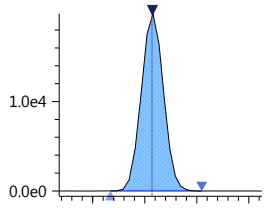
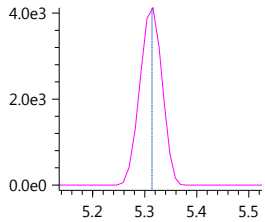
ISTD 564.80>519.95 (-) 1.36e6



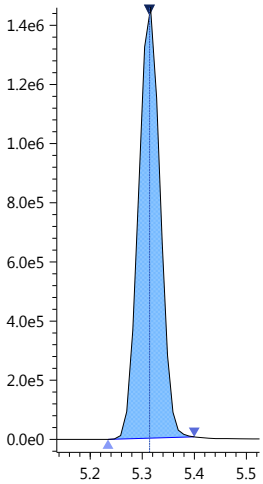
PFDoA
Conc 0.1026
RT 5.315 Area 59154
R#1 20.79 (0.00)
Q 613.05>569.00 (-) 1.98e4



R1 613.05>169.00 (-) 4.12e3



PFDoA-13C
Conc 4.4910
RT 5.314 Area 4248333
Q 614.80>569.95 (-) 1.46e6



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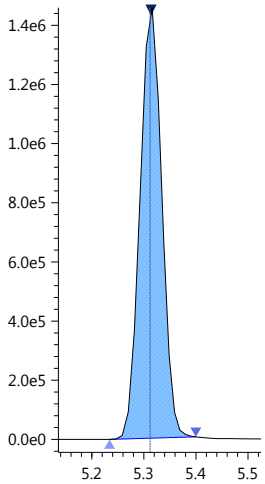
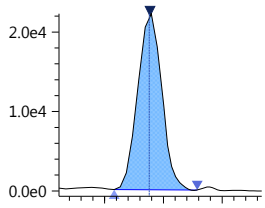
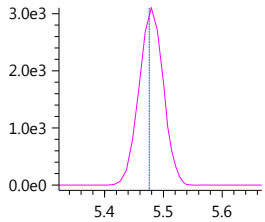
Conc 5.0000
RT 5.314 Area 4248333
ISTD 614.80>569.95 (-) 1.46e6



PFTrDA
Conc 0.0829
RT 5.477 Area 63240
R#1 14.05 (0.00)
Q 663.00>618.90 (-) 2.23e4



R1 662.90>169.00 (-) 3.10e3



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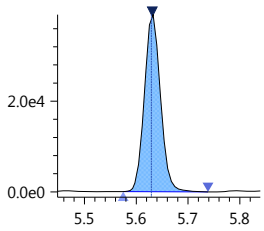
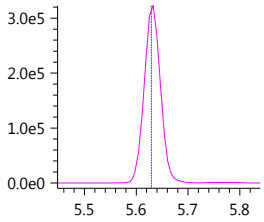
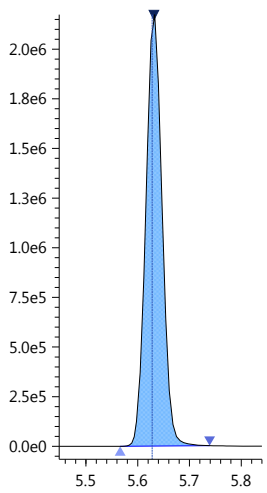
PFTeDA
Conc 0.1082
RT 5.631 Area 84758
R#1 823.91 (0.00)
Q 713.40>669.00 (-) 3.91e4



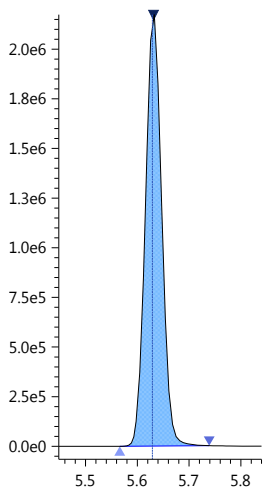
R1 713.40>169.10 (-) 3.23e5



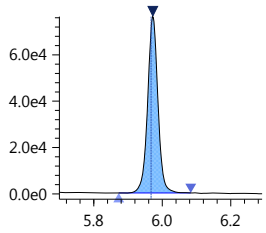
PFTeDA-13C
Conc 4.5701
RT 5.631 Area 4763046
Q 714.70>669.90 (-) 2.17e6



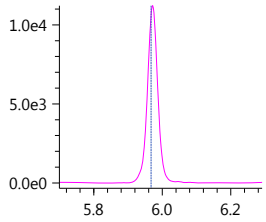
PFTeDA-13C_IS
Conc 5.0000
RT 5.631 Area 4763046
ISTD 714.70>669.90 (-) 2.17e6



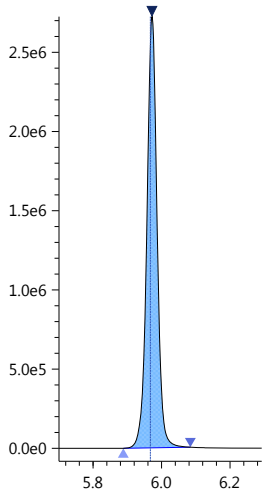
PFHxDA
Conc 0.1009
RT 5.972 Area 159329
R#1 14.64 (0.00)
Q 813.00>769.05 (-) 7.65e4



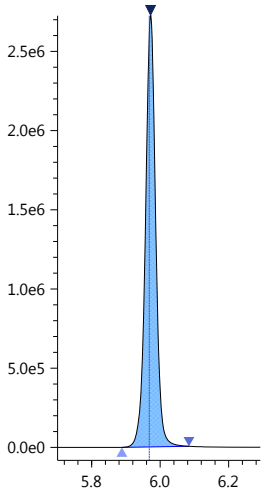
R1 813.00>218.95 (-) 1.12e4



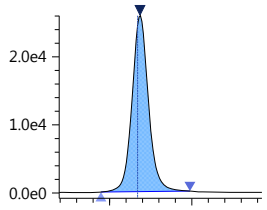
13C-PFHxDA
Conc 4.4421
RT 5.972 Area 5668637
Q 815.00>770.05 (-) 2.73e6



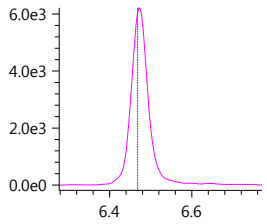
13C-PFHxDA_IS
Conc 5.0000
RT 5.972 Area 5668637
ISTD 815.00>770.05 (-) 2.73e6



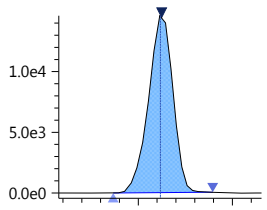
PFODA
Conc 0.1063
RT 6.474 Area 71770
R#1 23.71 (0.00)
Q 913.00>868.85 (-) 2.60e4



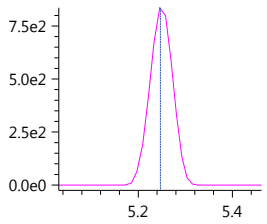
R1 913.00>169.00 (-) 6.22e3



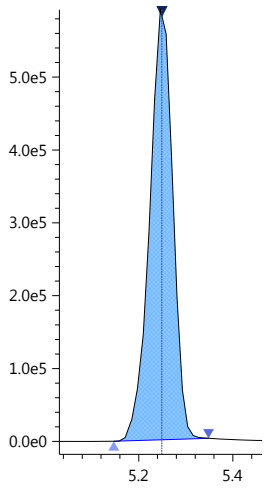
FOSA
Conc 0.1033
RT 5.250 Area 52737
R#1 5.74 (0.00)
Q 498.20>78.00 (-) 1.46e4



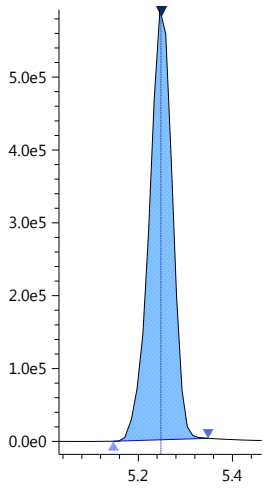
R1 498.20>64.10 (-) 8.36e2



FOSA-13C
Conc 4.6833
RT 5.250 Area 2027951
Q 506.00>78.05 (-) 5.93e5



FOSA-13C_IS
Conc 5.0000
RT 5.250 Area 2027951
ISTD 506.00>78.05 (-) 5.93e5



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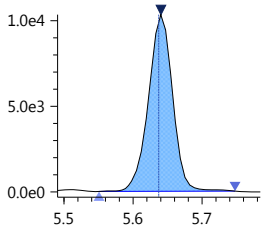
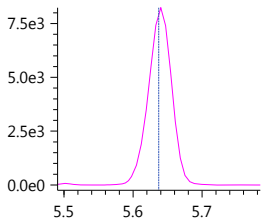
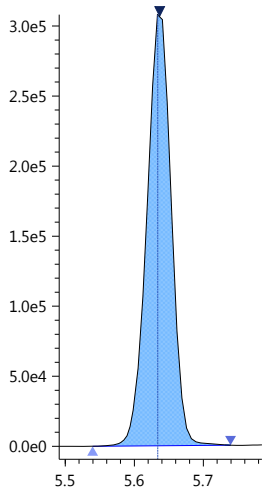
N-MeFOSA
Conc 0.1047
RT 5.640 Area 25073
R#1 79.81 (0.00)
Q 512.00>169.10 (-) 1.04e4



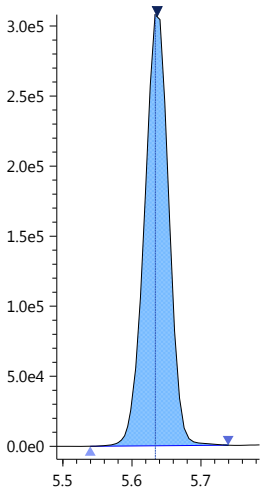
R1 512.00>219.00 (-) 8.24e3



N-MeFOSA-d3
Conc 4.4730
RT 5.637 Area 759947
Q 514.90>168.90 (-) 3.08e5

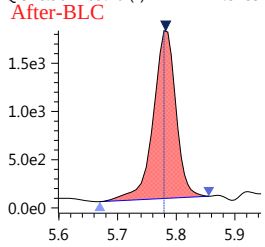


N-MeFOSA-d3_IS
Conc 5.0000
RT 5.637 Area 759947
ISTD 514.90>168.90 (-) 3.08e5



N-EtFOSA
Conc 0.1109
RT 5.782 Area 4693
R#1 60.48 (0.00)
Q 526.90>169.10 (-) 1.84e3

After-BLC



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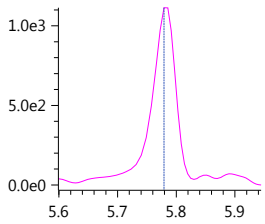
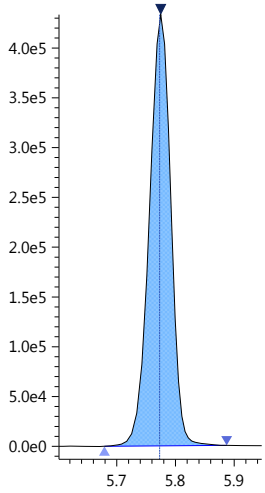
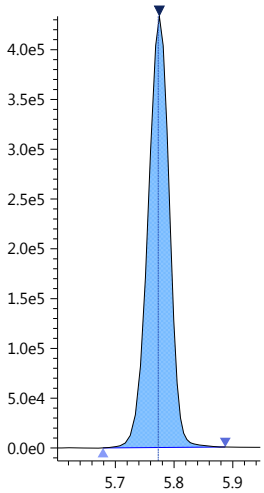


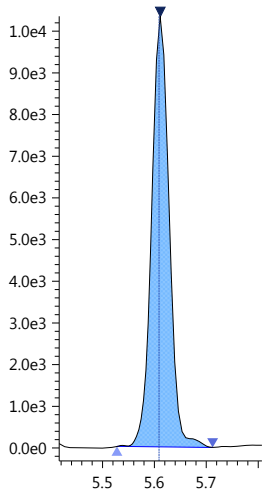
N-EtFOSA-d9
Conc 4.3647
RT 5.775 Area 1104310
Q 530.90>169.15 (-) 4.34e5



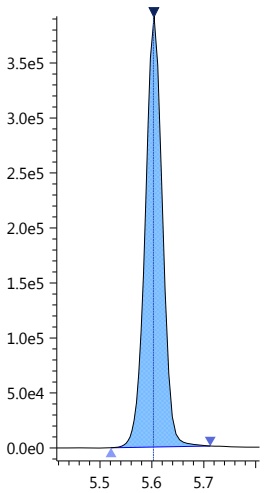
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.775 Area 1104310
ISTD 530.90>169.15 (-) 4.34e5



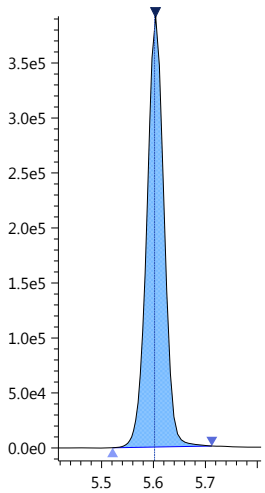
N-MeFOSE
Conc 0.1070
RT 5.611 Area 24379
Q 616.00>59.00 (-) 1.04e4



N-MeFOSE-d7
Conc 4.3481
RT 5.604 Area 907487
Q 622.70>59.10 (-) 3.92e5

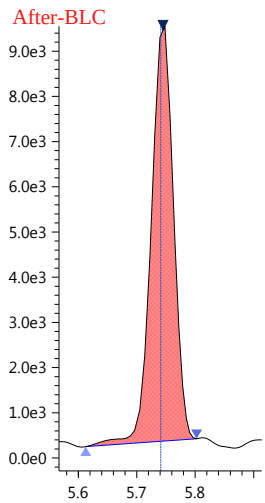


N-MeFOSE-d7_IS
Conc 5.0000
RT 5.604 Area 907487
ISTD 622.70>59.10 (-) 3.92e5



N-EtFOSE
Conc 0.1104
RT 5.745 Area 24356
Q 630.00>58.90 (-) 9.55e3

After-BLC



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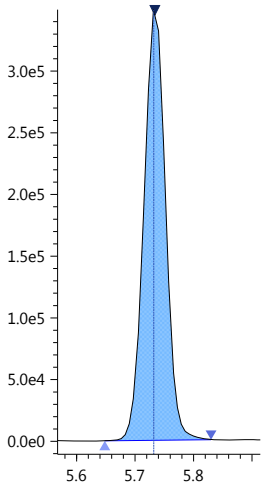
N-EtFOSE-d9

Conc 4.2914
RT 5.734 Area 902259

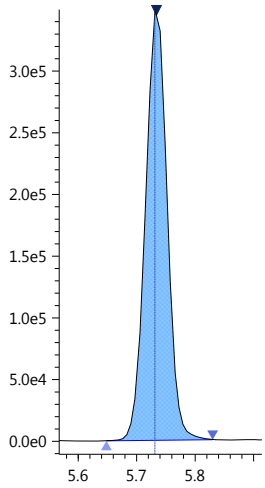
Q 638.70>59.10 (-) 3.50e5



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.734 Area 902259

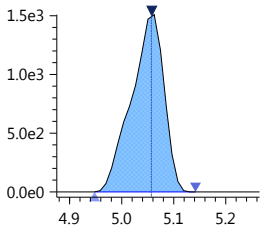
ISTD 638.70>59.10 (-) 3.50e5



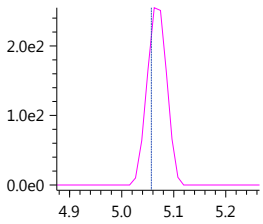
N-MeFOSAA

Conc 0.0994
RT 5.058 Area 6620
R#1 16.38 (0.00)

Q 570.20>419.00 (-) 1.51e3



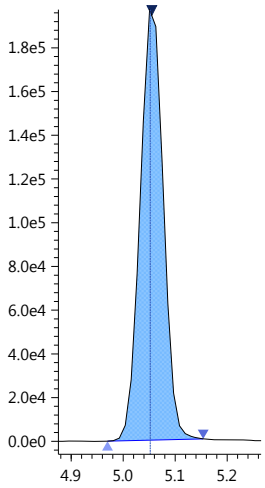
R1 570.20>512.00 (-) 2.55e2



N-MeFOSAA-d3

Conc 4.9040
RT 5.055 Area 612836

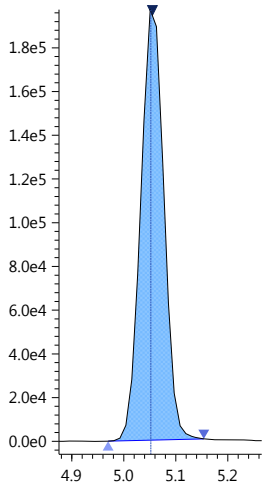
Q 572.80>419.05 (-) 1.97e5



N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.055 Area 612836

ISTD 572.80>419.05 (-) 1.97e5

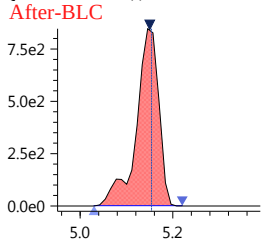


N-EtFOSAA

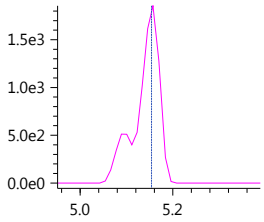
Conc 0.1175
RT 5.150 Area 2845
R#1 225.20 (0.00)

Q 584.20>418.95 (-) 8.47e2

After-BLC



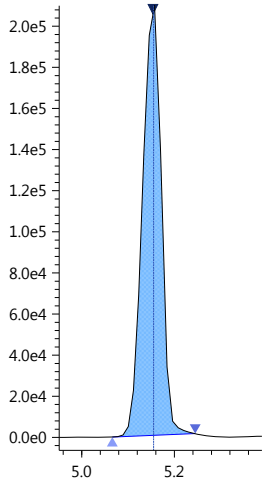
R1 584.20>526.10 (-) 1.86e3



N-EtFOSAA-d5

Conc 5.2417
RT 5.154 Area 591864

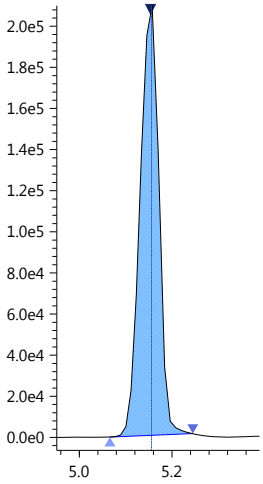
Q 588.80>419.00 (-) 2.10e5



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.154 Area 591864

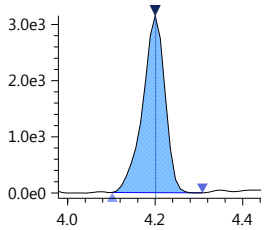
ISTD 588.80>419.00 (-) 2.10e5



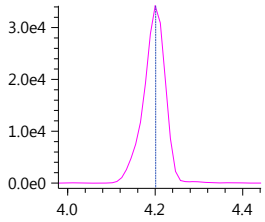
4_2-FTS_1

Conc 0.1081
RT 4.200 Area 11193
R#1 1075.84 (0.00)

Q 327.00>307.05 (-) 3.16e3



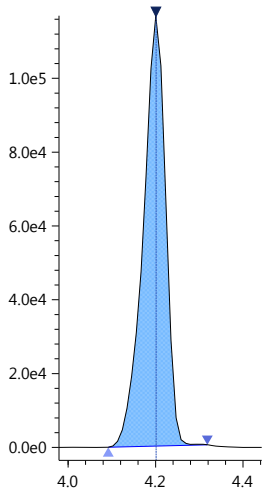
R1 327.00>81.10 (-) 3.42e4



4_2-FTS-13C

Conc 3.9768
RT 4.201 Area 416363

Q 328.80>309.05 (-) 1.17e5



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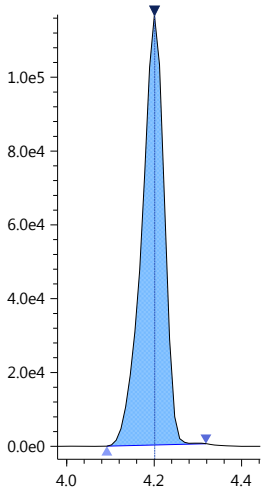
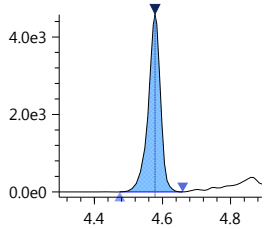
4_2-FTS-13C_IS
Conc 5.0000
RT 4.201 Area 416363

ISTD 328.80>309.05 (-) 1.17e5

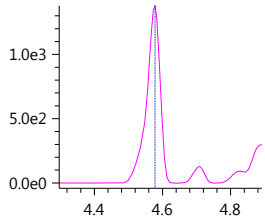


6_2-FTS_1
Conc 0.1087
RT 4.578 Area 11440
R#1 29.49 (0.00)

Q 427.00>407.00 (-) 4.58e3

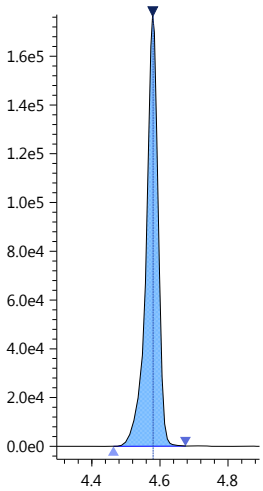


R1 427.00>80.90 (-) 1.38e3



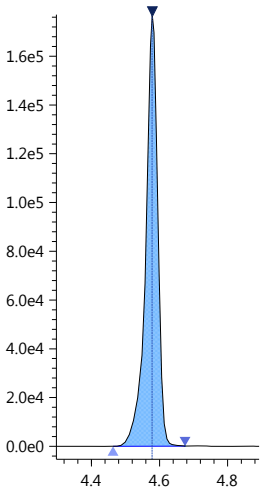
6_2-FTS-13C
Conc 4.3845
RT 4.579 Area 432709

Q 428.90>409.00 (-) 1.77e5



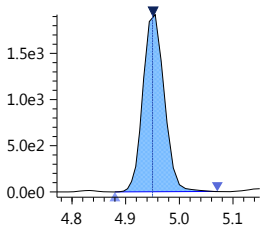
6_2-FTS-13C_IS
Conc 5.0000
RT 4.579 Area 432709

ISTD 428.90>409.00 (-) 1.77e5

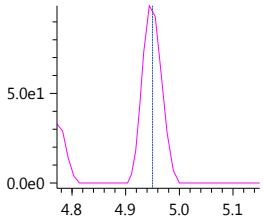


8_2-FTS_1
Conc 0.1103
RT 4.951 Area 5336
R#1 5.34 (0.00)

Q 527.10>506.90 (-) 1.92e3

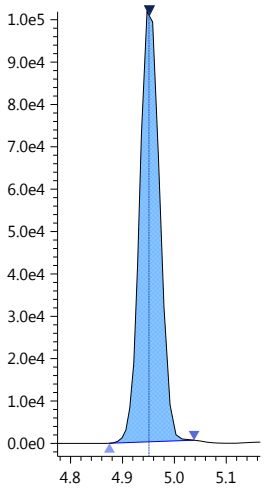


R1 527.20>487.00 (-) 9.90e1



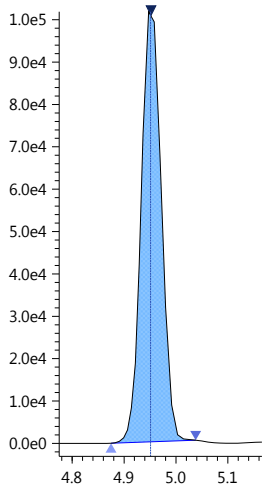
8_2-FTS-13C
Conc 4.9140
RT 4.952 Area 276417

Q 528.80>509.00 (-) 1.02e5



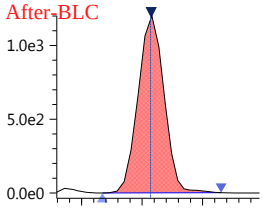
8_2-FTS-13C_IS
Conc 5.0000
RT 4.952 Area 276417

ISTD 528.80>509.00 (-) 1.02e5

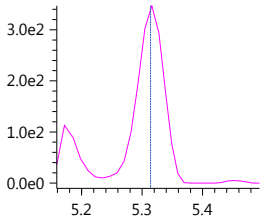


10_2-FtS_1
Conc 0.0821
RT 5.315 Area 3586
R#1 28.35 (0.00)

Q 627.00>606.95 (-) 1.20e3

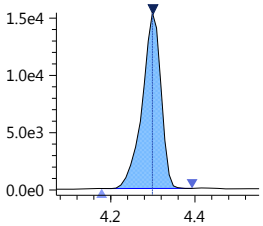


R1 627.00>81.25 (-) 3.47e2

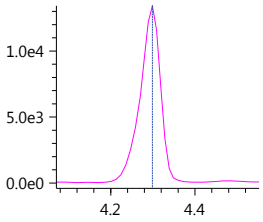


HPFO_DA
Conc 0.1023
RT 4.300 Area 47401
R#1 87.52 (0.00)

Q 329.00>169.00 (-) 1.55e4

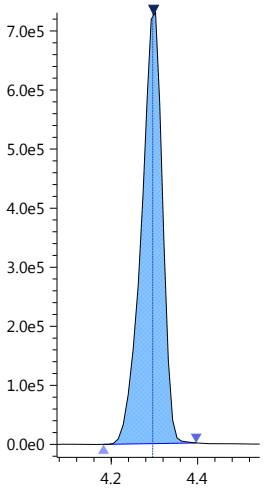


R1 329.00>285.10 (-) 1.34e4



HFPO_DA-13C
Conc 4.3575
RT 4.298 Area 2488188

Q 332.00>286.80 (-) 7.31e5



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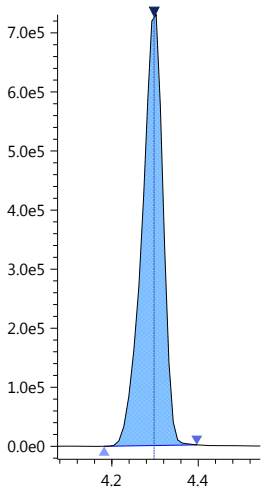
HFPO_DA-13C_IS

Conc 5.0000
RT 4.298 Area 2488188

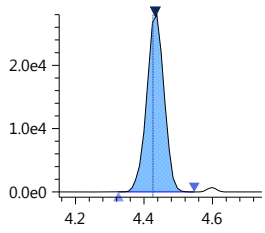
ISTD 332.00>286.80 (-) 7.31e5



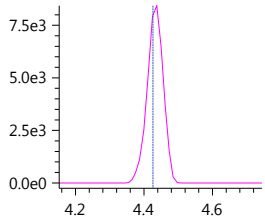
ADONA

Conc 0.0863
RT 4.433 Area 99550
R#1 29.84 (0.00)

Q 377.00>251.00 (-) 2.80e4



R1 377.00>84.95 (-) 8.43e3



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190807_013

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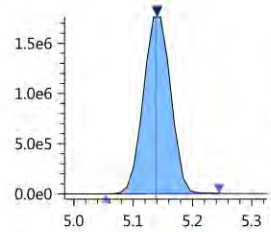
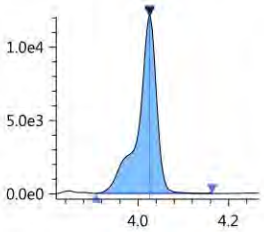
Date acquired: 8/7/2019 5:35:10 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_013.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 0

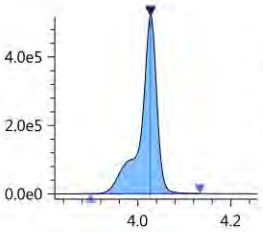
13C7-PFUnDA_IS
Conc 5.0000
RT 5.140 Area 5686750
ISTD 570.00>525.00 (-) 1.77e6



PFBS_1
Conc 0.0932
RT 4.025 Area 33964
Q 299.00>80.00 (-) 1.21e4



PFBS-13C
Conc 4.6462
RT 4.028 Area 1265290
Q 301.80>80.00 (-) 5.18e5



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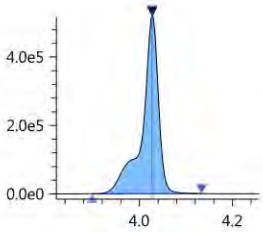

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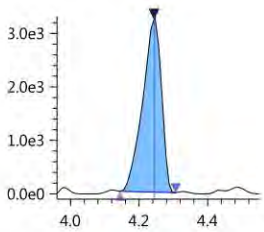
Conc 0.0816
RT 4.244 Area 12338
Q 349.00>99.00 (-) 3.31e3



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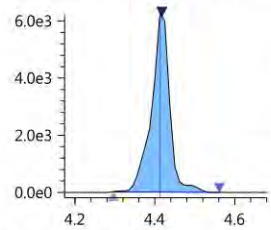
RT 4.418 Area 19833
Q 399.00>80.00 (-) 6.20e3



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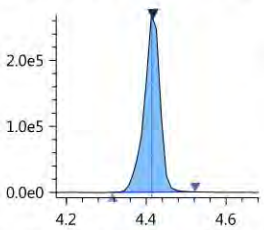
RT 4.417 Area 741632
Q 402.70>84.05 (-) 2.69e5



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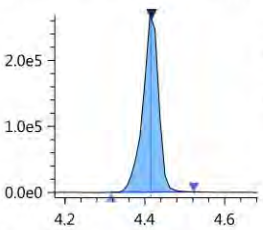

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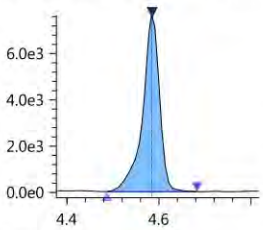

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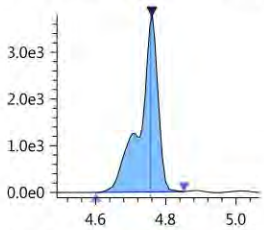

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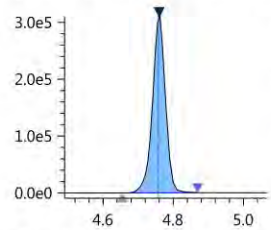

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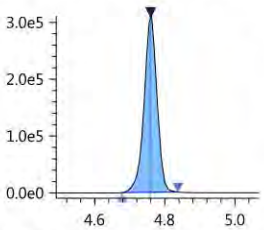

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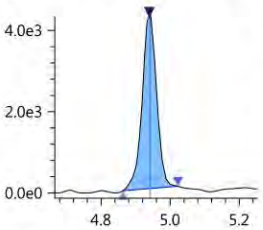

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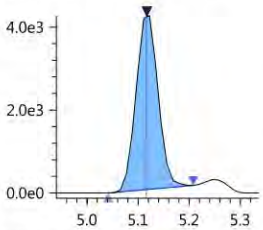

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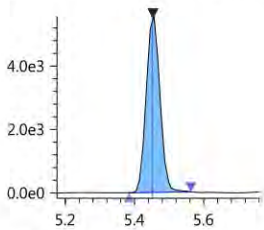

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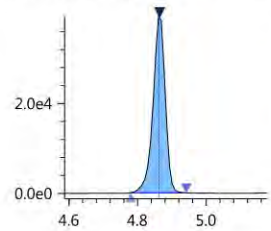

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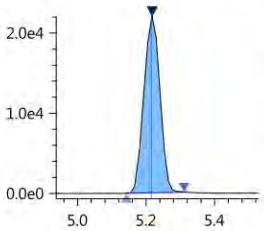

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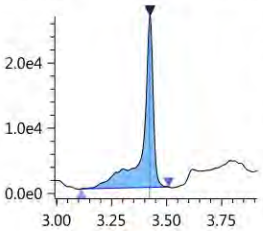
Q 213.00>169.10 (-) 2.72e4



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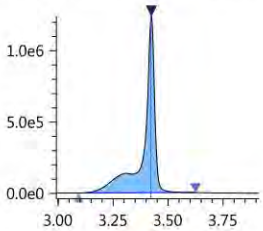

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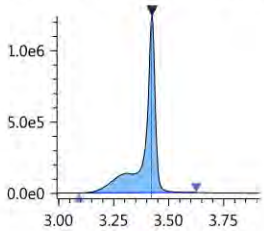

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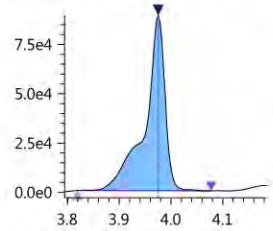

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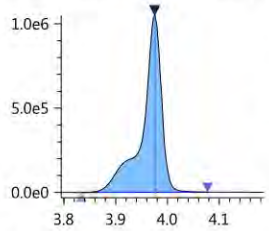

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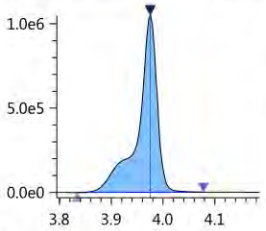

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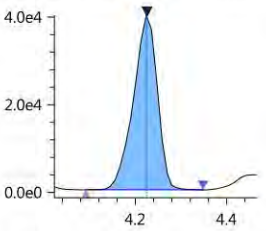

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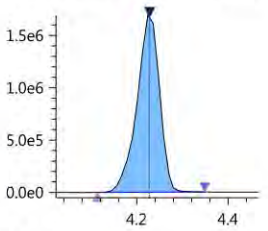

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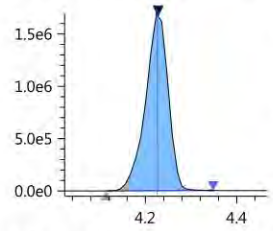

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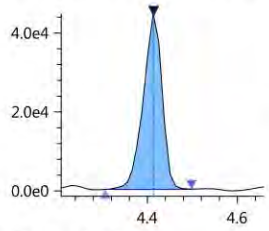

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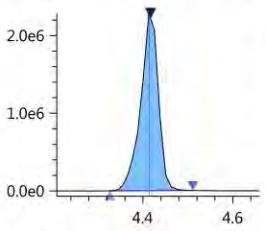

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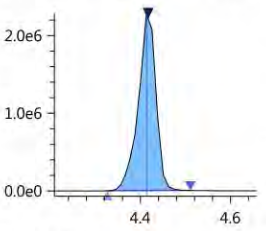

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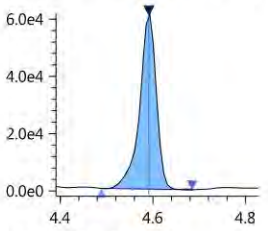

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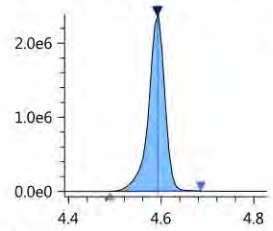

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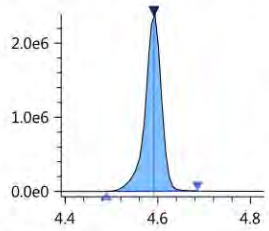

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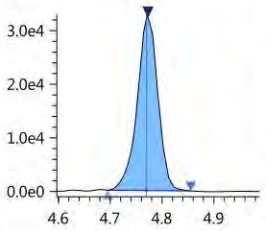

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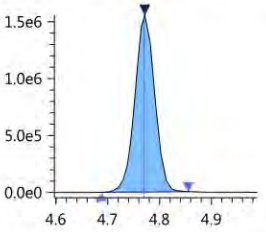

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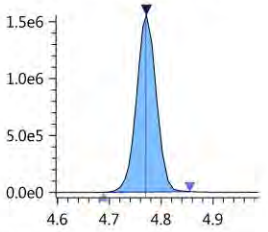

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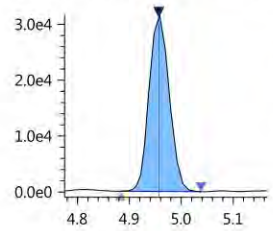

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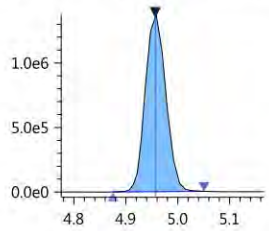

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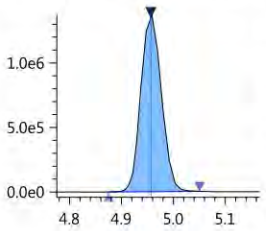

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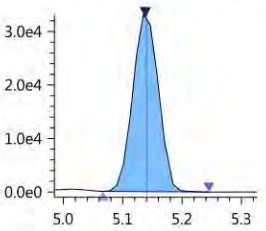

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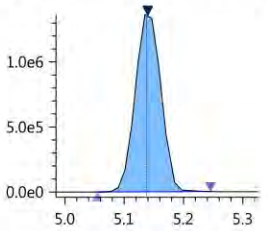

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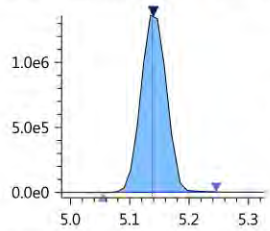

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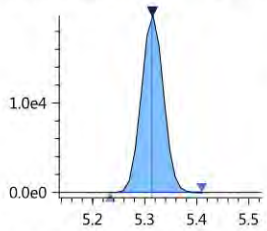

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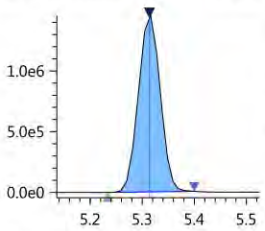

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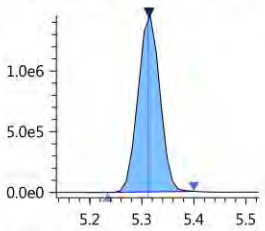

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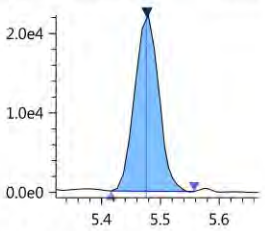

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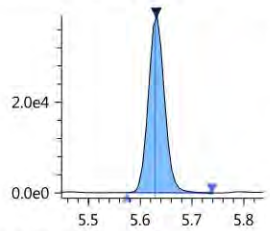
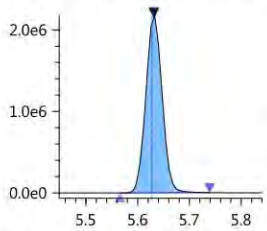
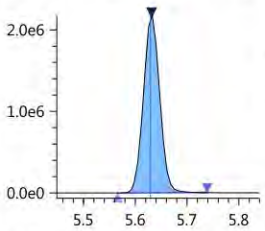


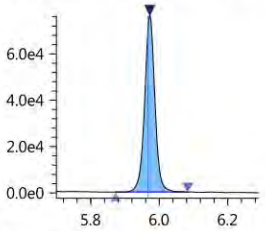
PFTeDA-13C
Conc 4.5701
RT 5.631 Area 4763046
Q 714.70>669.90 (-) 2.17e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.631 Area 4763046
ISTD 714.70>669.90 (-) 2.17e6



PFHxDA
Conc 0.1224
RT 5.972 Area 159329
Q 813.00>769.05 (-) 7.65e4



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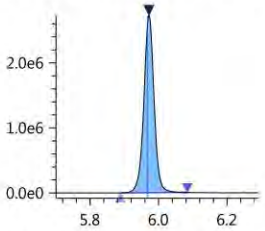
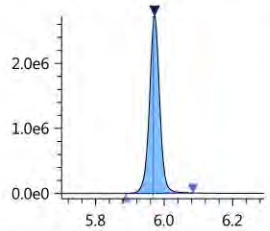
RT 5.972 Area 5668637
Q 815.00>770.05 (-) 2.73e6



13C-PFHxDA_IS
Conc 5.0000
RT 5.972 Area 5668637
ISTD 815.00>770.05 (-) 2.73e6



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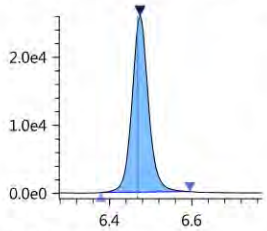
Q 913.00>868.85 (-) 2.60e4



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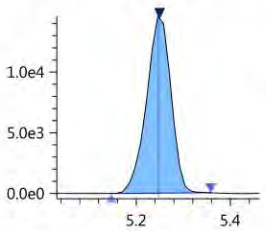
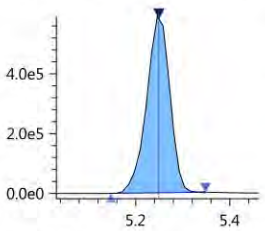
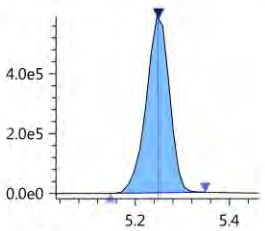
RT 5.250 Area 52583
Q 498.20>78.00 (-) 1.46e4



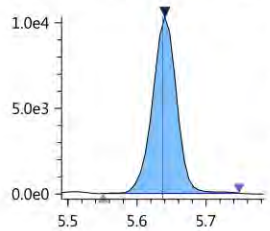
FOSA-13C
Conc 4.6833
RT 5.250 Area 2027951
Q 506.00>78.05 (-) 5.93e5



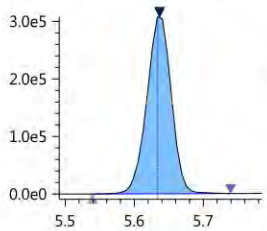
FOSA-13C_IS
Conc 5.0000
RT 5.250 Area 2027951
ISTD 506.00>78.05 (-) 5.93e5



N-MeFOSA
Conc 0.1035
RT 5.640 Area 24545
Q 512.00>169.10 (-) 1.04e4



N-MeFOSA-d3
Conc 4.4730
RT 5.637 Area 759947
Q 514.90>168.90 (-) 3.08e5



N-MeFOSA-d3_IS
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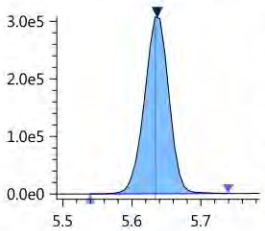

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Conc 0.1001
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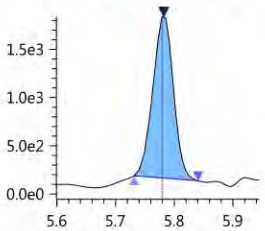
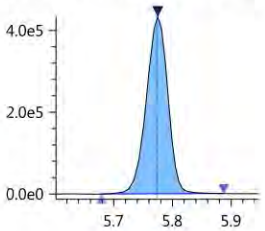


N-EtFOSA-d9
Conc 4.3647
RT 5.775 Area 1104310
Q 530.90>169.15 (-) 4.34e5



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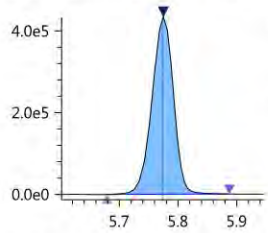
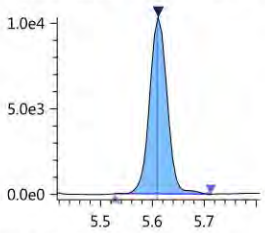
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.775 Area 1104310
ISTD 530.90>169.15 (-) 4.34e5



N-MeFOSE
Conc 0.1073
RT 5.611 Area 24379
Q 616.00>59.00 (-) 1.04e4



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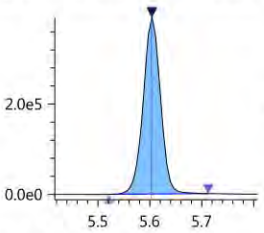
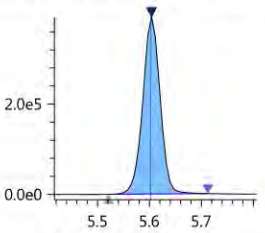
Conc 4.3481
RT 5.604 Area 907487
Q 622.70>59.10 (-) 3.92e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.604 Area 900519
ISTD 622.70>59.10 (-) 3.92e5



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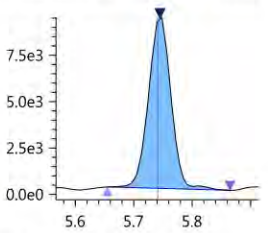

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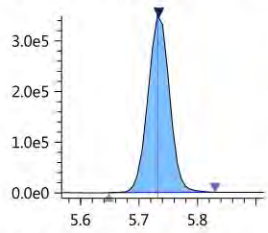
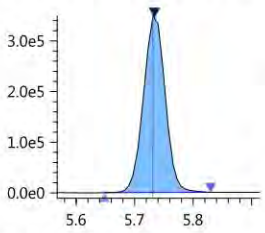
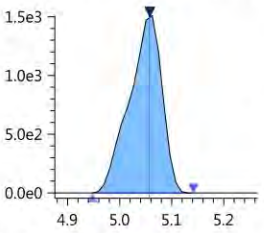
Q 638.70>59.10 (-) 3.50e5



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.734 Area 891114
ISTD 638.70>59.10 (-) 3.50e5



N-MeFOSAA
Conc 0.0751
RT 5.058 Area 6620
Q 570.20>419.00 (-) 1.51e3



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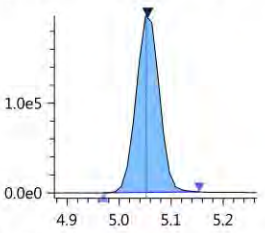
Conc 4.9040
RT 5.055 Area 612836
Q 572.80>419.05 (-) 1.97e5



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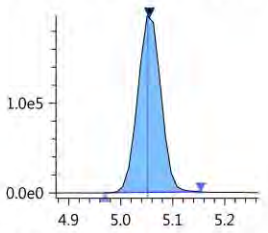

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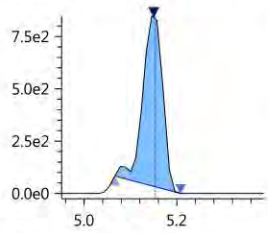
Q 584.20>418.95 (-) 8.47e2



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Conc 5.2417
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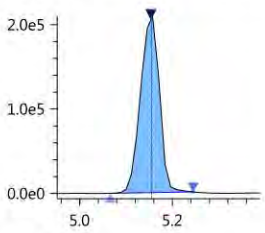
Q 588.80>419.00 (-) 2.10e5



N-EtFOSAA-d5_IS
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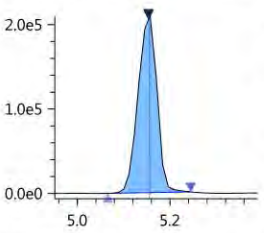
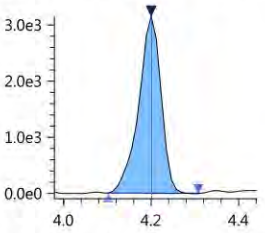
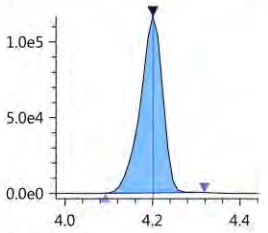
ISTD 588.80>419.00 (-) 2.10e5



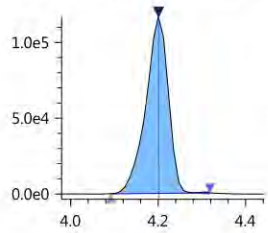
4_2-FTS_1
Conc 0.1089
RT 4.200 Area 11193
Q 327.00>307.05 (-) 3.16e3



4_2-FTS-13C
Conc 3.9768
RT 4.201 Area 416363
Q 328.80>309.05 (-) 1.17e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.201 Area 416363
ISTD 328.80>309.05 (-) 1.17e5



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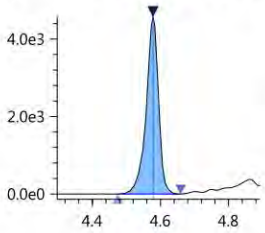
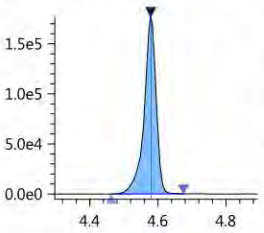
Conc 0.1015
RT 4.578 Area 11440
Q 427.00>407.00 (-) 4.58e3



6_2-FTS-13C
Conc 4.3845
RT 4.579 Area 432709
Q 428.90>409.00 (-) 1.77e5



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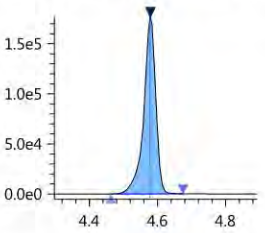
ISTD 428.90>409.00 (-) 1.77e5



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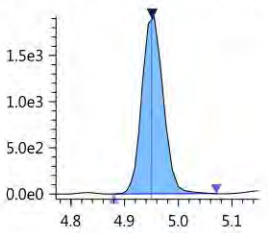
Conc 0.1142
RT 4.951 Area 5336
Q 527.10>506.90 (-) 1.92e3



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8_2-FTS-13C
Conc 4.9140
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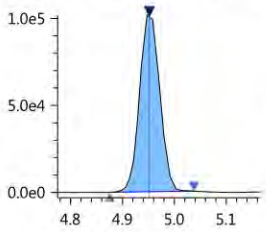
Q 528.80>509.00 (-) 1.02e5



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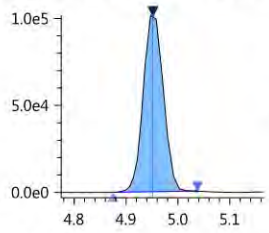
ISTD 528.80>509.00 (-) 1.02e5



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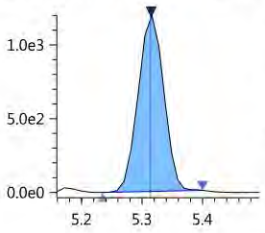
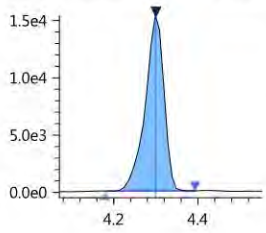
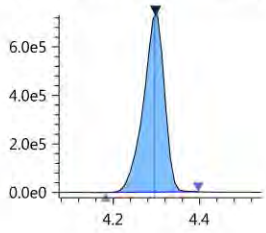
Q 627.00>606.95 (-) 1.20e3



HPFO_DA
Conc 0.1023
RT 4.300 Area 47401
Q 329.00>169.00 (-) 1.55e4



HFPO_DA-13C
Conc 4.3575
RT 4.298 Area 2488188
Q 332.00>286.80 (-) 7.31e5



HFPO_DA-13C_IS
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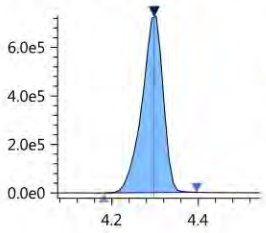
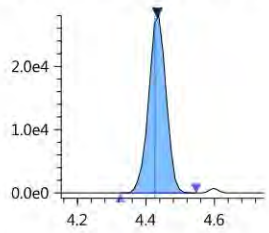
ISTD 332.00>286.80 (-) 7.31e5



ADONA
Conc 0.0863
RT 4.433 Area 99550
Q 377.00>251.00 (-) 2.80e4



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Printed at 8/8/2019 9:54:02 AM

190807_014

Sample ID: 0.50 PPB ICAL
Date acquired: 8/7/2019 5:45:35 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_014.lcd
Vial: 3 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.141	5679097	5679097	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.028	157037	1218358	2	0.4474	ng/mL	0.4437
PFBS-13C	Auto	4.030	1215970	5679097	1	4.4711	ng/mL	5.0000
PFBS-13C_IS	Auto	4.030	1218358	1218358	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.247	69620	1218358	2	0.4714	ng/mL	0.4705
PFHxS_1	Auto	4.416	89943	785632	3	0.4123	ng/mL	0.4565
PFHxS-18O	Auto	4.418	785632	5679097	1	5.0475	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.418	785632	785632	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.587	100165	785632	3	0.4305	ng/mL	0.4767
PFOS_1	Auto	4.761	62650	747795	4	0.4778	ng/mL	0.4646
PFOS-13C	Auto	4.761	752149	5679097	1	4.0565	ng/mL	5.0000
PFOS-13C_IS	Auto	4.761	747795	747795	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.942	50070	747795	4	0.5246	ng/mL	0.4808
PFDS_1	Auto	5.119	76358	747795	4	0.6232	ng/mL	0.4823
PFDOS	Auto	5.454	63723	747795	4	0.4252	ng/mL	0.4033
9Cl-PF3ONS	Auto	4.865	465522	2544616	26	0.4280	ng/mL	0.4410
11Cl-PF3OUdS	Auto	5.220	372327	2544616	26	0.3822	ng/mL	0.4159
PFBA	Auto	3.427	431213	4040788	5	0.5213	ng/mL	0.5000
PFBA-13C	Auto	3.426	4040788	5679097	1	4.3783	ng/mL	5.0000
PFBA-13C_IS	Auto	3.426	4040788	4040788	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.978	682740	2549489	6	0.5146	ng/mL	0.5000
PFPeA-13C	Auto	3.977	2549489	5679097	1	4.3907	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.977	2549489	2549489	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.229	568521	4867134	7	0.5403	ng/mL	0.5000
PFHxA-13C	Auto	4.230	4867134	5679097	1	4.2635	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.230	4867134	4867134	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.418	601723	7387473	8	0.4644	ng/mL	0.5000
PFHpA-13C	Auto	4.418	7387473	5679097	1	5.5215	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.418	7387473	7387473	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.594	649232	5256810	9	0.5382	ng/mL	0.5000
PFOA-13C	Auto	4.594	5256810	5679097	1	4.3384	ng/mL	5.0000
PFOA-13C_IS	Auto	4.594	5256810	5256810	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.774	412788	4139192	10	0.5426	ng/mL	0.5000
PFNA-13C	Auto	4.774	4139192	5679097	1	4.3001	ng/mL	5.0000
PFNA-13C_IS	Auto	4.774	4139192	4139192	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.958	341336	3563231	11	0.4725	ng/mL	0.5000
PFDA-13C	Auto	4.958	3563231	5679097	1	4.4033	ng/mL	5.0000
PFDA-13C_IS	Auto	4.958	3563231	3563231	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.141	410801	4470619	12	0.4920	ng/mL	0.5000
PFUnA-13C	Auto	5.141	4470619	5679097	1	5.0973	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.141	4470619	4470619	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.315	254877	3993936	13	0.5053	ng/mL	0.5000
PFDoA-13C	Auto	5.316	3993936	5679097	1	4.2277	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.316	3993936	3993936	13	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.479	327810	4705329	14	0.4783	ng/mL	0.5000
PFTeDA	Auto	5.632	212158	4705329	14	0.5025	ng/mL	0.5000
PFTeDA-13C	Auto	5.632	4705329	5679097	1	4.5208	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.632	4705329	4705329	14	5.0000	ng/mL	5.0000
PFHxDA	Auto	5.971	589297	5715837	15	0.5073	ng/mL	0.5000
13C-PFHxDA	Auto	5.971	5715837	5679097	1	4.4851	ng/mL	5.0000
13C-PFHxDA_IS	Auto	5.971	5715837	5715837	15	5.0000	ng/mL	5.0000
PFODA	Auto	6.474	347832	5715837	15	0.5109	ng/mL	0.5000
FOSA	Auto	5.251	241016	1942459	16	0.4929	ng/mL	0.5000
FOSA-13C	Auto	5.251	1942459	5679097	1	4.4919	ng/mL	5.0000
FOSA-13C_IS	Auto	5.251	1942459	1942459	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.640	121849	741428	17	0.5217	ng/mL	0.5000
N-MeFOSA-d3	Auto	5.638	741428	5679097	1	4.3699	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.638	741428	741428	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.781	21966	1136508	18	0.5044	ng/mL	0.5000
N-EtFOSA-d9	Auto	5.775	1136508	5679097	1	4.4980	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.775	1136508	1136508	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.613	126507	944183	19	0.5338	ng/mL	0.5000
N-MeFOSE-d7	Auto	5.605	944183	5679097	1	4.5300	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.605	944183	944183	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.745	116904	941186	20	0.5079	ng/mL	0.5000
N-EtFOSE-d9	Auto	5.735	941186	5679097	1	4.4826	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.735	941186	941186	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.057	41699	593534	21	0.5079	ng/mL	0.5000

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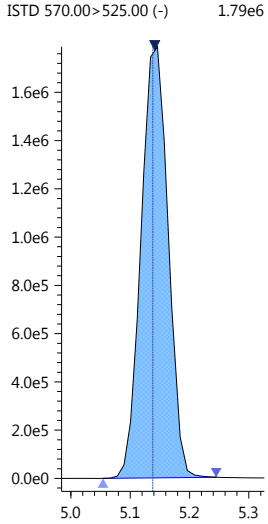
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-MeFOSAA-d3	Auto	5.056	593534	5679097	1	4.7559	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.056	593534	593534	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.159	26611	507759	22	0.4785	ng/mL	0.5000
N-EtFOSAA-d5	Auto	5.154	507759	5679097	1	4.5029	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.154	507759	507759	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.204	58289	485657	23	0.4827	ng/mL	0.4686
4_2-FTS-13C	Auto	4.204	485657	5679097	1	4.6449	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.204	485657	485657	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.581	49671	405115	24	0.5042	ng/mL	0.4756
6_2-FTS-13C	Auto	4.581	405115	5679097	1	4.1104	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.581	405115	405115	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.951	22308	271922	25	0.4687	ng/mL	0.4800
8_2-FTS-13C	Auto	4.953	271922	5679097	1	4.8406	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.953	271922	271922	25	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.318	20431	271922	25	0.4752	ng/mL	0.4831
HPFO_DA	Auto	4.301	240219	2544616	26	0.5068	ng/mL	0.5000
HFPO_DA-13C	Auto	4.302	2544616	5679097	1	4.4623	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.302	2544616	2544616	26	5.0000	ng/mL	5.0000
ADONA	Auto	4.436	507737	2544616	26	0.4302	ng/mL	0.4725

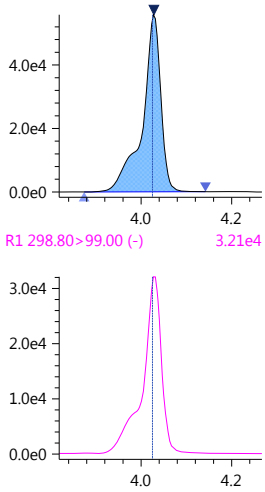
13C7-PFUnDA_IS

Conc 5.0000
RT 5.141 Area 5679097



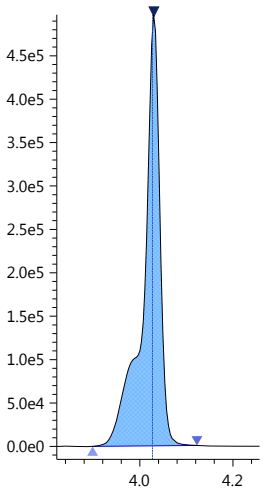
PFBS_1

Conc 0.4474
RT 4.028 Area 157037
R#1 56.53 (0.00)



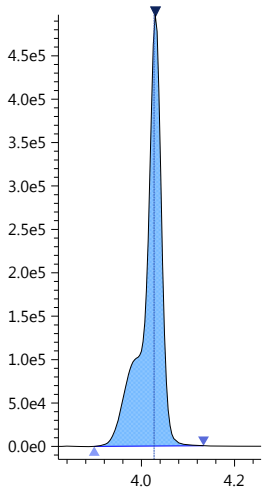
PFBS-13C

Conc 4.4711
RT 4.030 Area 1215970



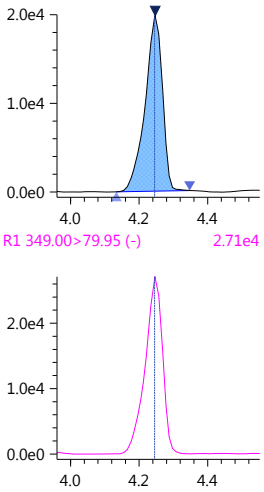
PFBS-13C_IS

Conc 5.0000
RT 4.030 Area 1218358



PFPeS

Conc 0.4714
RT 4.247 Area 69620
R#1 135.88 (0.00)



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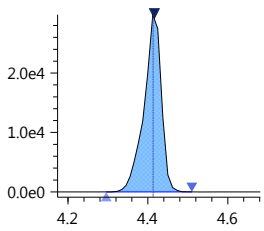
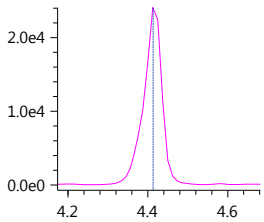
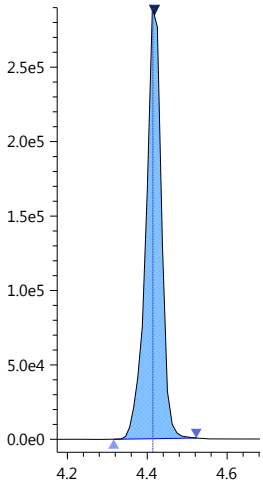
PFHxS_1
Conc 0.4123
RT 4.416 Area 89943
R#1 81.03 (0.00)
Q 399.00>80.00 (-) 2.98e4



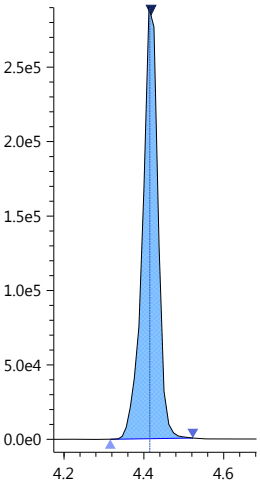
R1 399.00>99.00 (-) 2.41e4



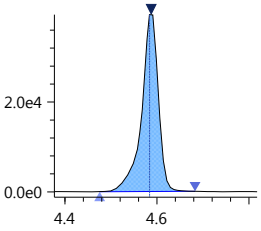
PFHxS-18O
Conc 5.0475
RT 4.418 Area 785632
Q 402.70>84.05 (-) 2.90e5



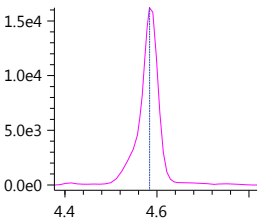
PFHxS-18O_IS
Conc 5.0000
RT 4.418 Area 785632
ISTD 402.70>84.05 (-) 2.90e5



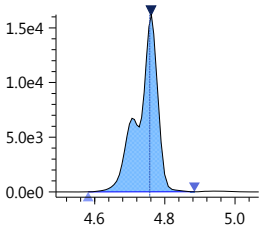
PFHpS_1
Conc 0.4305
RT 4.587 Area 100165
R#1 40.52 (0.00)
Q 449.00>80.15 (-) 3.95e4



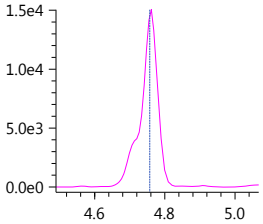
R1 449.00>99.20 (-) 1.62e4



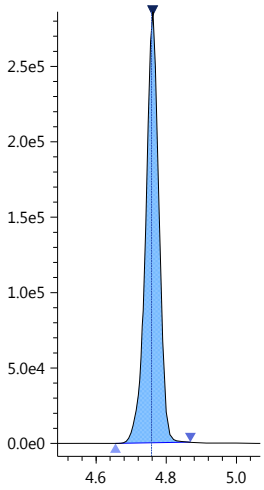
PFOS_1
Conc 0.4778
RT 4.761 Area 62650
R#1 92.44 (0.00)
Q 499.00>80.00 (-) 1.62e4



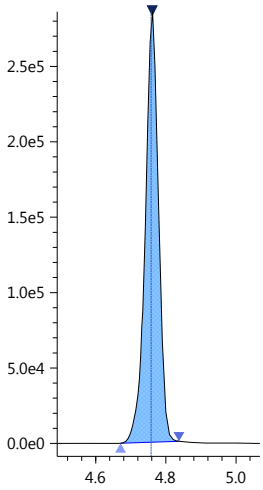
R1 499.00>99.00 (-) 1.50e4



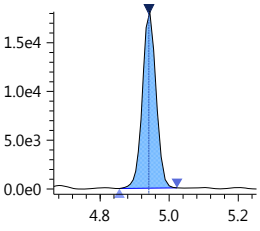
PFOS-13C
Conc 4.0565
RT 4.761 Area 752149
Q 502.80>80.05 (-) 2.86e5



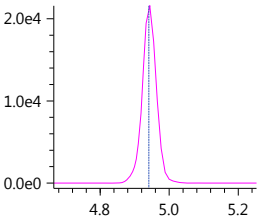
PFOS-13C_IS
Conc 5.0000
RT 4.761 Area 747795
ISTD 502.80>80.05 (-) 2.86e5



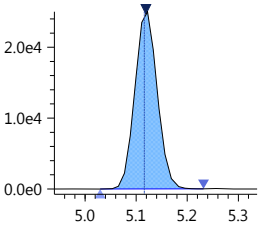
PFNS
Conc 0.5246
RT 4.942 Area 50070
R#1 119.05 (0.00)
Q 549.00>99.00 (-) 1.82e4



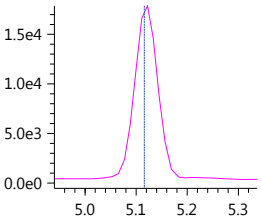
R1 549.00>79.95 (-) 2.16e4



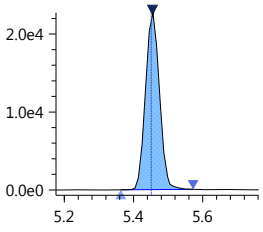
PFDS_1
Conc 0.6232
RT 5.119 Area 76358
R#1 69.80 (0.00)
Q 599.00>79.90 (-) 2.50e4



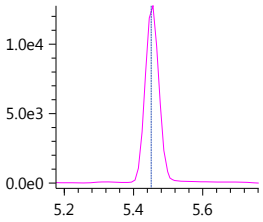
R1 599.00>99.10 (-) 1.79e4



PFDOS
Conc 0.4252
RT 5.454 Area 63723
R#1 55.82 (0.00)
Q 699.00>79.95 (-) 2.27e4



R1 699.00>99.05 (-) 1.28e4



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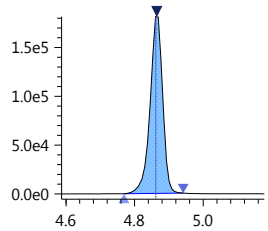
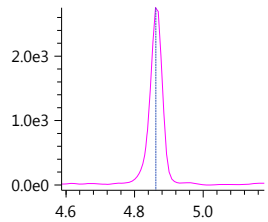
9Cl-PF3ONS

Conc 0.4280
RT 4.865 Area 465522
R#1 1.50 (0.00)

Q 531.00>351.00 (-) 1.82e5



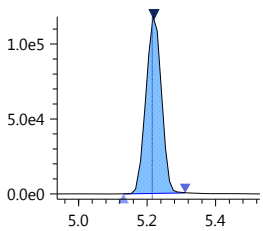
R1 531.00>98.90 (-) 2.75e3



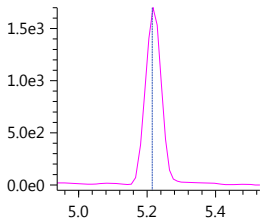
11Cl-PF3OUdS

Conc 0.3822
RT 5.220 Area 372327
R#1 1.43 (0.00)

Q 631.00>451.05 (-) 1.18e5



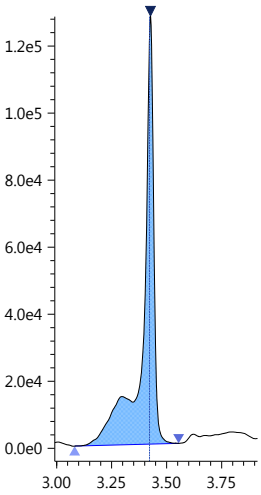
R1 631.00>98.90 (-) 1.70e3



PFBA

Conc 0.5213
RT 3.427 Area 431213

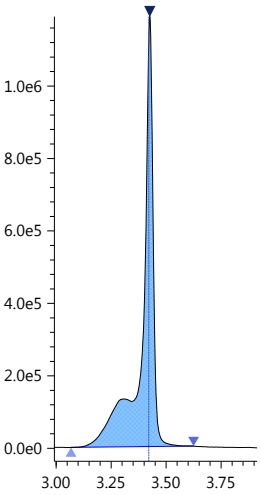
Q 213.00>169.10 (-) 1.29e5



PFBA-13C

Conc 4.3783
RT 3.426 Area 4040788

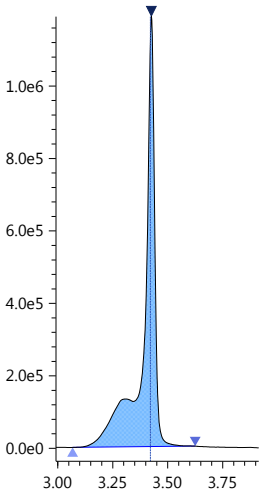
Q 216.90>172.15 (-) 1.19e6



PFBA-13C_IS

Conc 5.0000
RT 3.426 Area 4040788

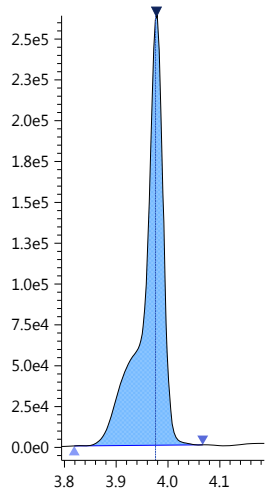
ISTD 216.90>172.15 (-) 1.19e6



PFPeA

Conc 0.5146
RT 3.978 Area 682740

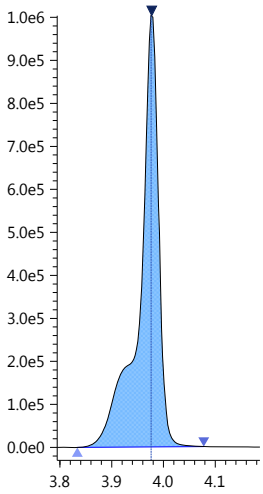
Q 263.05>219.10 (-) 2.64e5



PFPeA-13C

Conc 4.3907
RT 3.977 Area 2549489

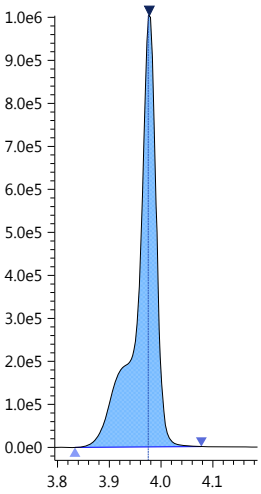
Q 267.90>223.00 (-) 1.00e6



PFPeA-13C_IS

Conc 5.0000
RT 3.977 Area 2549489

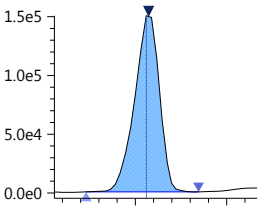
ISTD 267.90>223.00 (-) 1.00e6



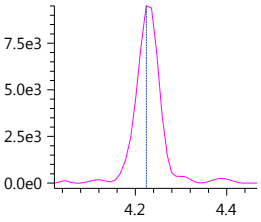
PFHxA

Conc 0.5403
RT 4.229 Area 568521
R#1 6.28 (0.00)

Q 313.00>269.00 (-) 1.51e5



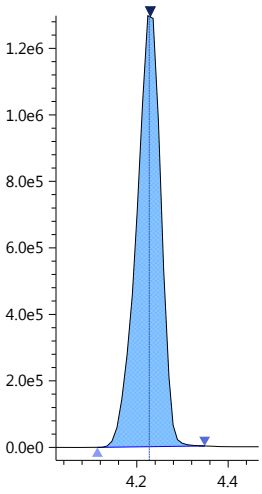
R1 313.00>119.10 (-) 9.51e3



PFHxA-13C

Conc 4.2635
RT 4.230 Area 4867134

Q 314.90>270.10 (-) 1.30e6



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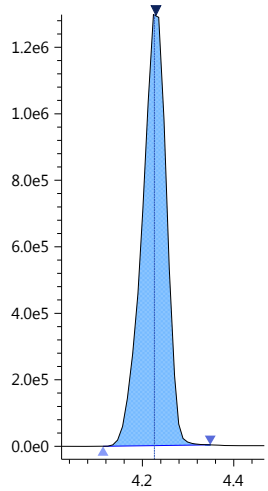
PFHxA-13C_IS

Conc 5.0000
RT 4.230 Area 4867134

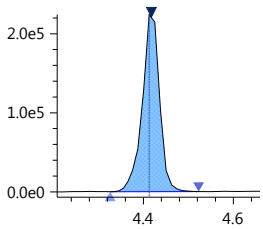
ISTD 314.90>270.10 (-) 1.30e6



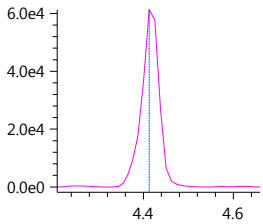
PFHpA

Conc 0.4644
RT 4.418 Area 601723
R#1 26.94 (0.00)

Q 362.90>319.00 (-) 2.24e5



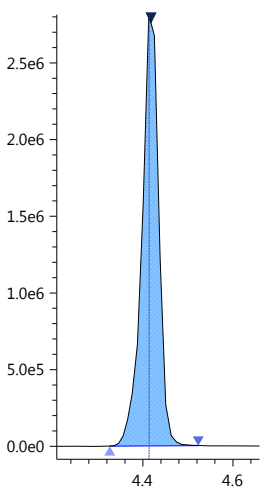
R1 362.90>169.00 (-) 6.13e4



PFHpA-13C

Conc 5.5215
RT 4.418 Area 7387473

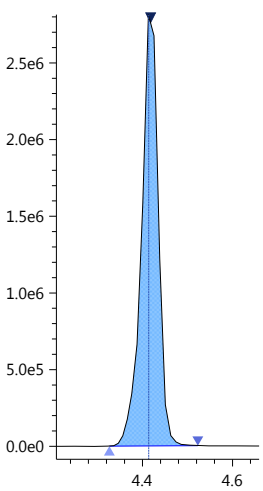
Q 366.90>322.10 (-) 2.81e6



PFHpA-13C_IS

Conc 5.0000
RT 4.418 Area 7387473

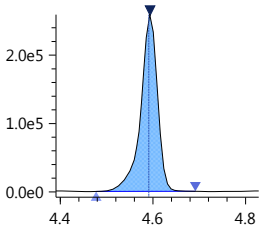
ISTD 366.90>322.10 (-) 2.81e6



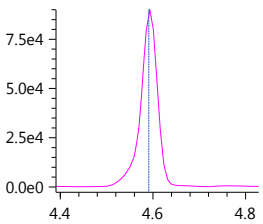
PFOA

Conc 0.5382
RT 4.594 Area 649232
R#1 34.64 (0.00)

Q 413.00>369.00 (-) 2.59e5



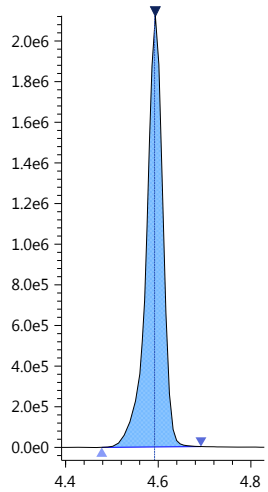
R1 413.00>169.10 (-) 9.00e4



PFOA-13C

Conc 4.3384
RT 4.594 Area 5256810

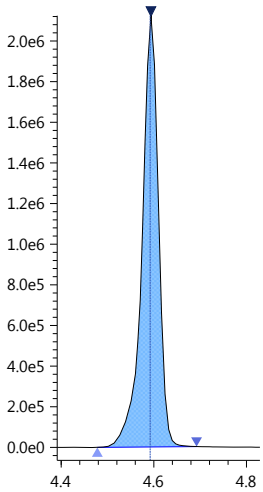
Q 416.80>372.05 (-) 2.12e6



PFOA-13C_IS

Conc 5.0000
RT 4.594 Area 5256810

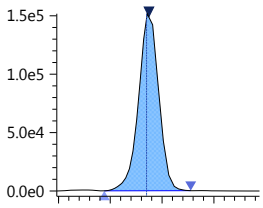
ISTD 416.80>372.05 (-) 2.12e6



PFNA

Conc 0.5426
RT 4.774 Area 412788
R#1 22.29 (0.00)

Q 463.00>418.90 (-) 1.52e5



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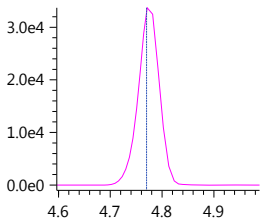
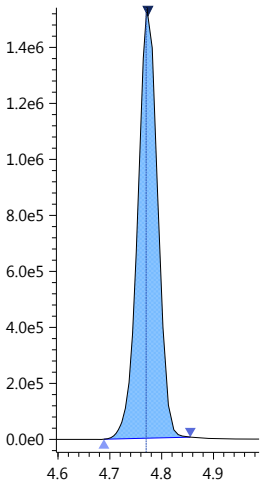


PFNA-13C

Conc 4.3001
RT 4.774 Area 4139192

Q 467.80>423.00 (-) 1.54e6



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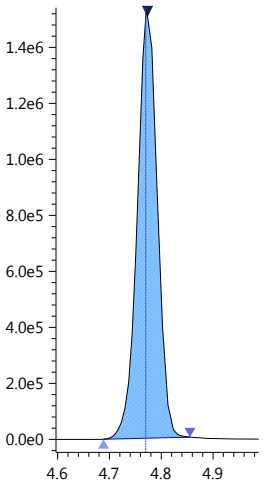
Conc 5.0000
RT 4.774 Area 4139192

ISTD 467.80>423.00 (-) 1.54e6



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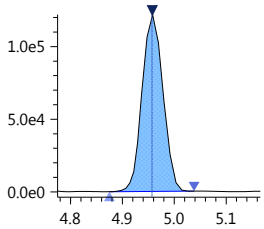
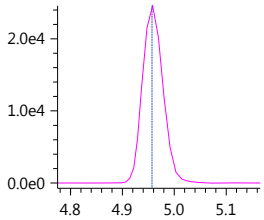
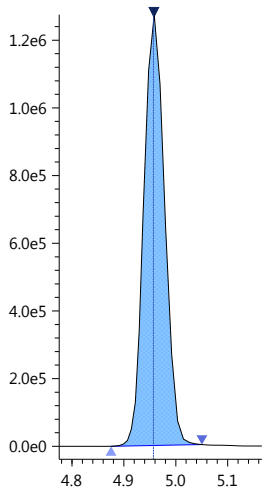
PFDA
Conc 0.4725
RT 4.958 Area 341336
R#1 20.12 (0.00)
Q 513.00>468.80 (-) 1.22e5



R1 513.00>219.10 (-) 2.46e4



PFDA-13C
Conc 4.4033
RT 4.958 Area 3563231
Q 514.80>469.95 (-) 1.28e6



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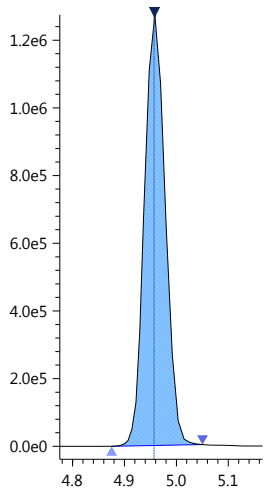
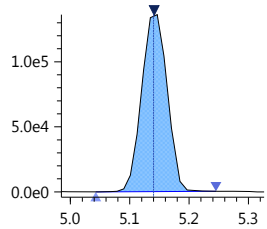
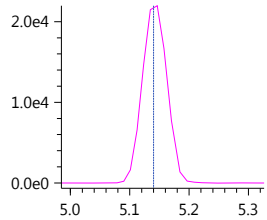


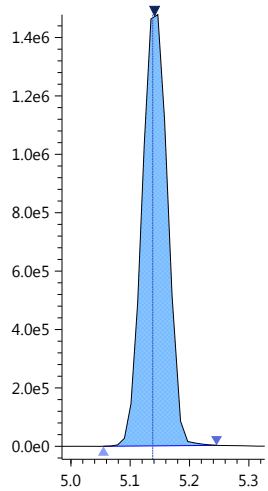
PFUnA
Conc 0.4920
RT 5.141 Area 410801
R#1 16.10 (0.00)
Q 563.00>518.90 (-) 1.36e5



R1 563.00>219.00 (-) 2.20e4



PFUnA-13C
Conc 5.0973
RT 5.141 Area 4470619
Q 564.80>519.95 (-) 1.48e6



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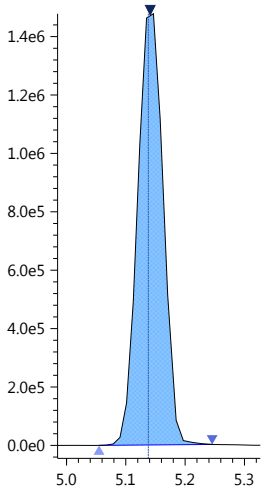

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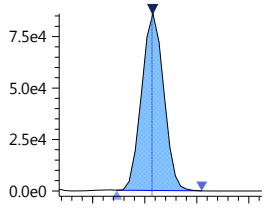
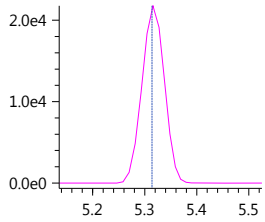
Conc 0.5053
RT 5.315 Area 254877
R#1 25.39 (0.00)
Q 613.05>569.00 (-) 8.61e4



R1 613.05>169.00 (-) 2.18e4



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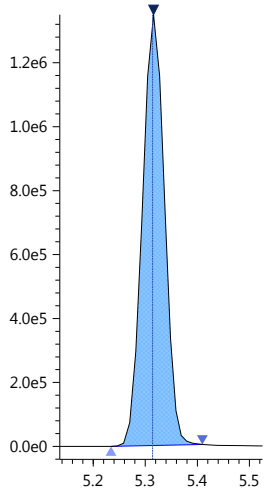
Conc 4.2277
RT 5.316 Area 3993936
Q 614.80>569.95 (-) 1.35e6



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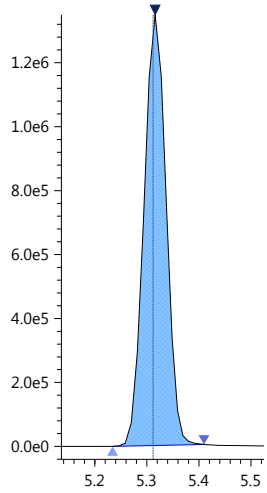

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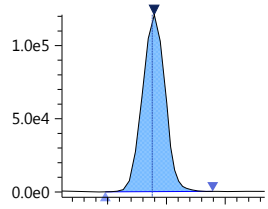
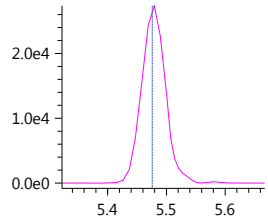
Conc 0.4783
RT 5.479 Area 327810
R#1 22.49 (0.00)
Q 663.00>618.90 (-) 1.21e5



R1 662.90>169.00 (-) 2.74e4



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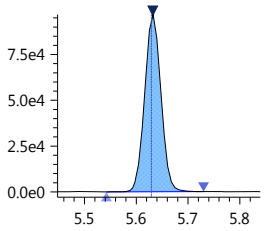
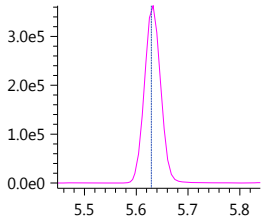
Conc 0.5025
RT 5.632 Area 212158
R#1 374.36 (0.00)
Q 713.40>669.00 (-) 9.68e4



R1 713.40>169.10 (-) 3.63e5



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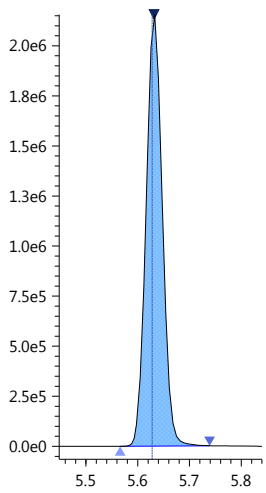
Conc 4.5208
RT 5.632 Area 4705329
Q 714.70>669.90 (-) 2.16e6



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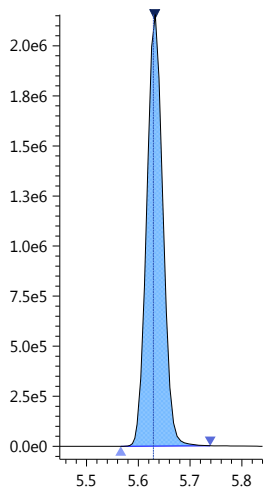
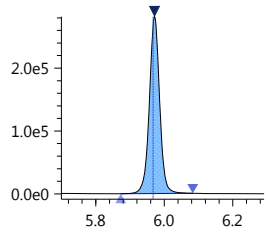
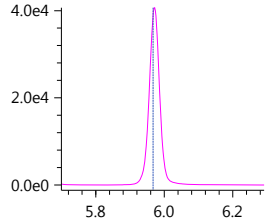
ISTD 714.70>669.90 (-) 2.16e6



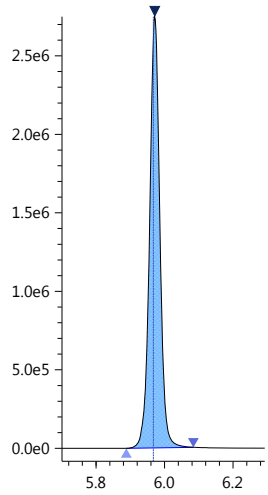
PFHxDA
Conc 0.5073
RT 5.971 Area 589297
R#1 14.10 (0.00)
Q 813.00>769.05 (-) 2.82e5



R1 813.00>218.95 (-) 4.07e4



13C-PFHxDA
Conc 4.4851
RT 5.971 Area 5715837
Q 815.00>770.05 (-) 2.75e6



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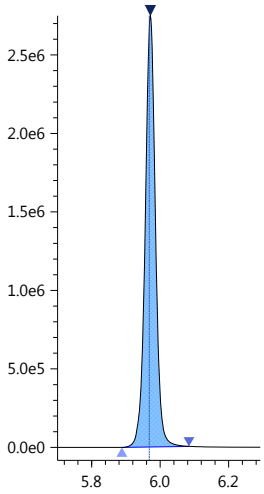
RT 5.971 Area 5715837
ISTD 815.00>770.05 (-) 2.75e6



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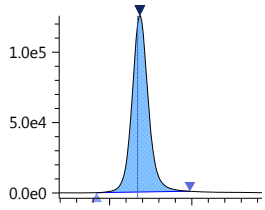
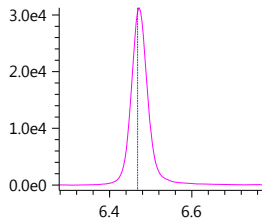
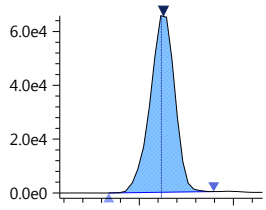
Conc 0.5109
RT 6.474 Area 347832
R#1 24.95 (0.00)
Q 913.00>868.85 (-) 1.26e5



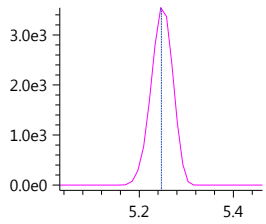
R1 913.00>169.00 (-) 3.13e4



FOSA
Conc 0.4929
RT 5.251 Area 241016
R#1 5.38 (0.00)
Q 498.20>78.00 (-) 6.59e4



R1 498.20>64.10 (-) 3.54e3



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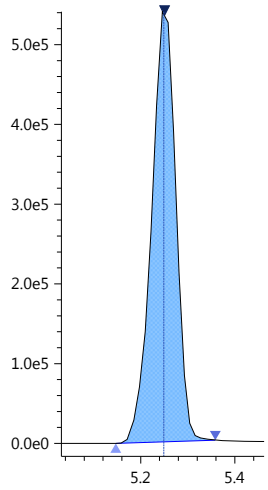
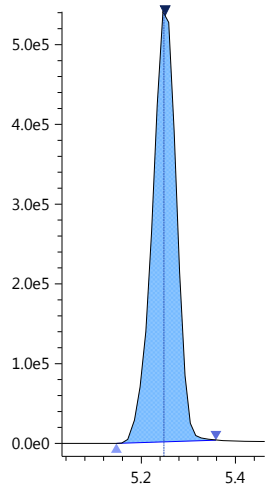
Conc 4.4919
RT 5.251 Area 1942459
Q 506.00>78.05 (-) 5.41e5



FOSA-13C_IS
Conc 5.0000
RT 5.251 Area 1942459
ISTD 506.00>78.05 (-) 5.41e5



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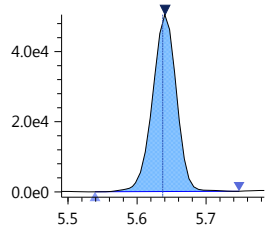
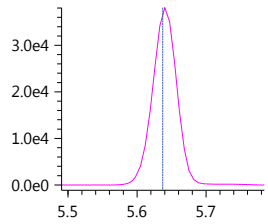
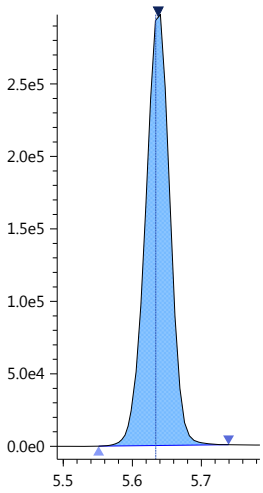
N-MeFOSA
Conc 0.5217
RT 5.640 Area 121849
R#1 75.18 (0.00)
Q 512.00>169.10 (-) 5.05e4



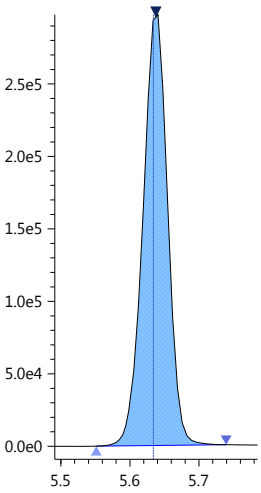
R1 512.00>219.00 (-) 3.81e4



N-MeFOSA-d3
Conc 4.3699
RT 5.638 Area 741428
Q 514.90>168.90 (-) 2.98e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.638 Area 741428
ISTD 514.90>168.90 (-) 2.98e5



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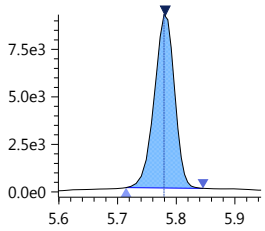
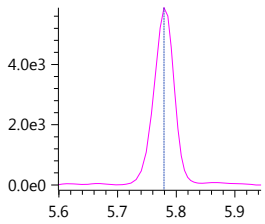
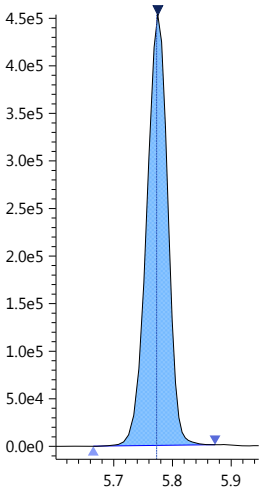
Conc 0.5044
RT 5.781 Area 21966
R#1 64.21 (0.00)
Q 526.90>169.10 (-) 9.33e3



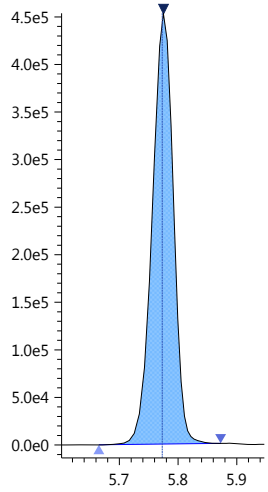
R1 526.90>219.00 (-) 5.88e3



N-EtFOSA-d9
Conc 4.4980
RT 5.775 Area 1136508
Q 530.90>169.15 (-) 4.54e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.775 Area 1136508
ISTD 530.90>169.15 (-) 4.54e5



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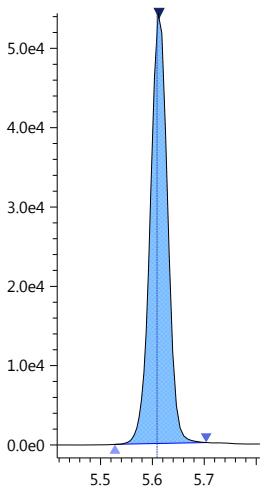
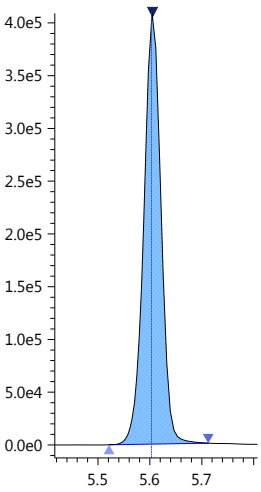
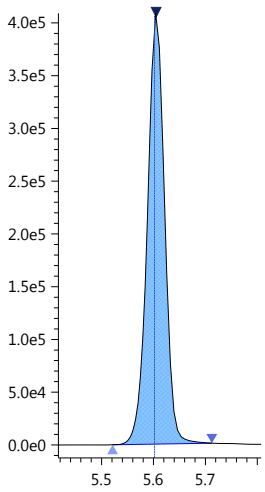
Conc 0.5338
RT 5.613 Area 126507
Q 616.00>59.00 (-) 5.44e4



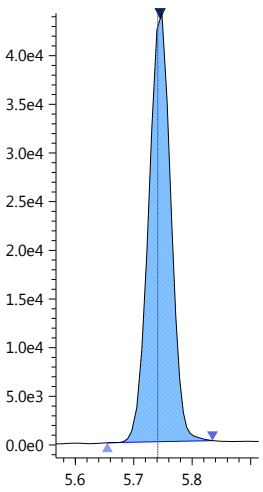
N-MeFOSE-d7
Conc 4.5300
RT 5.605 Area 944183
Q 622.70>59.10 (-) 4.09e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.605 Area 944183
ISTD 622.70>59.10 (-) 4.09e5



N-EtFOSE
Conc 0.5079
RT 5.745 Area 116904
Q 630.00>58.90 (-) 4.44e4



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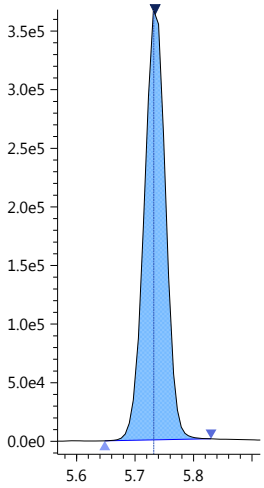
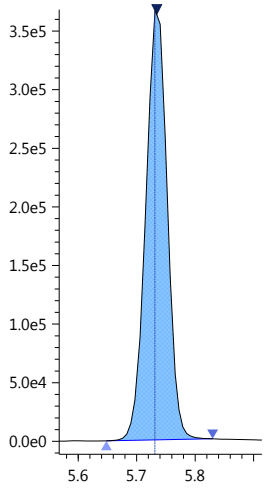
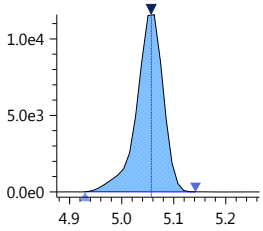
N-EtFOSE-d9
Conc 4.4826
RT 5.735 Area 941186
Q 638.70>59.10 (-) 3.68e5



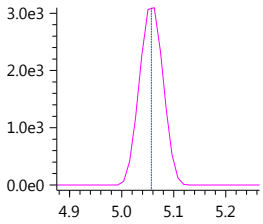
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.735 Area 941186
ISTD 638.70>59.10 (-) 3.68e5



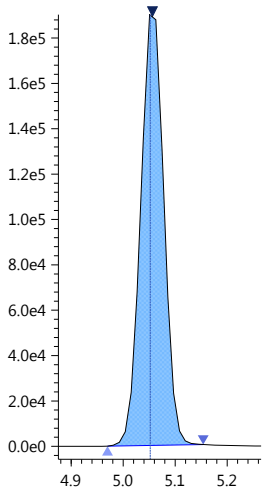
N-MeFOSAA
Conc 0.5079
RT 5.057 Area 41699
R#1 26.83 (0.00)
Q 570.20>419.00 (-) 1.16e4



R1 570.20>512.00 (-) 3.10e3



N-MeFOSAA-d3
Conc 4.7559
RT 5.056 Area 593534
Q 572.80>419.05 (-) 1.90e5



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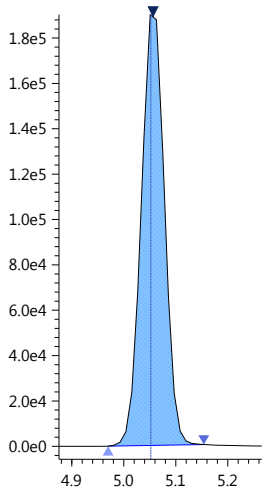
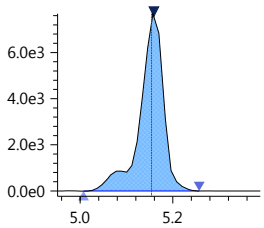
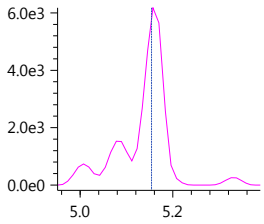
Conc 5.0000
RT 5.056 Area 593534
ISTD 572.80>419.05 (-) 1.90e5



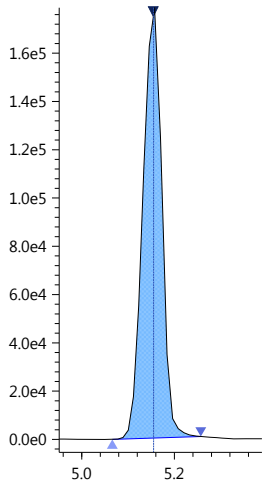
N-EtFOSAA
Conc 0.4785
RT 5.159 Area 26611
R#1 76.33 (0.00)
Q 584.20>418.95 (-) 7.68e3



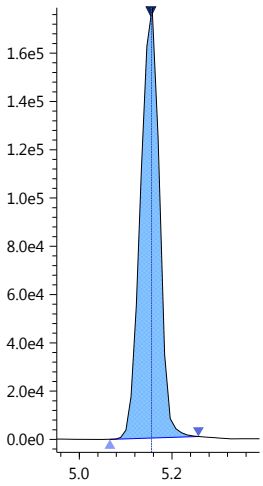
R1 584.20>526.10 (-) 6.18e3



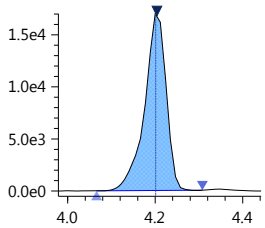
N-EtFOSAA-d5
Conc 4.5029
RT 5.154 Area 507759
Q 588.80>419.00 (-) 1.79e5



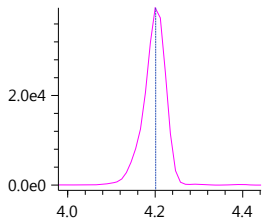
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.154 Area 507759
ISTD 588.80>419.00 (-) 1.79e5



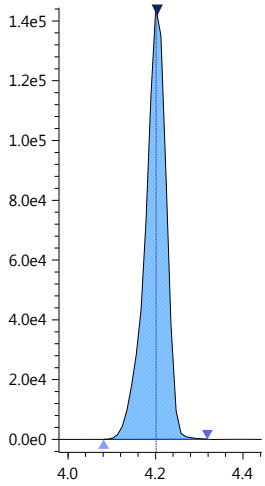
4_2-FTS_1
Conc 0.4827
RT 4.204 Area 58289
R#1 233.24 (0.00)
Q 327.00>307.05 (-) 1.70e4



R1 327.00>81.10 (-) 3.96e4



4_2-FTS-13C
Conc 4.6449
RT 4.204 Area 485657
Q 328.80>309.05 (-) 1.44e5



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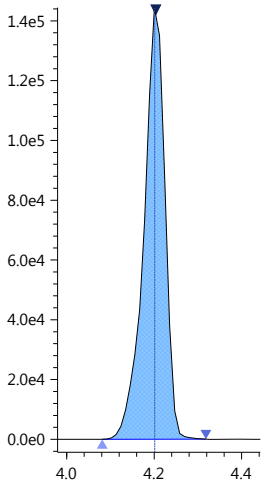
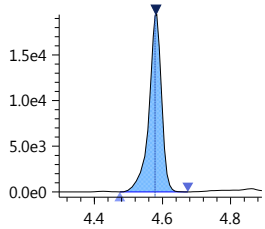
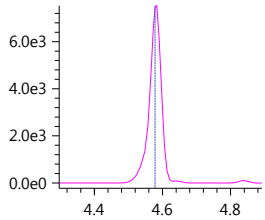
4_2-FTS-13C_IS
Conc 5.0000
RT 4.204 Area 485657
ISTD 328.80>309.05 (-) 1.44e5



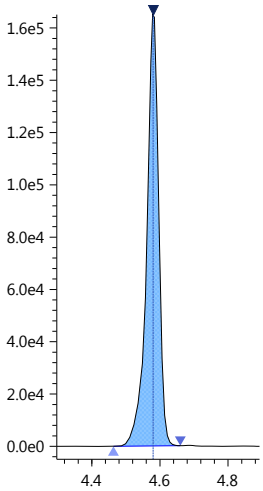
6_2-FTS_1
Conc 0.5042
RT 4.581 Area 49671
R#1 39.03 (0.00)
Q 427.00>407.00 (-) 1.94e4



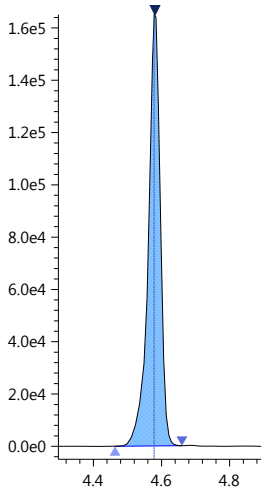
R1 427.00>80.90 (-) 7.53e3



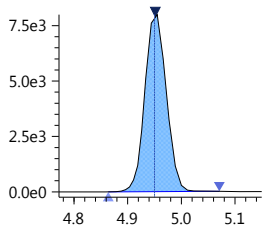
6_2-FTS-13C
Conc 4.1104
RT 4.581 Area 405115
Q 428.90>409.00 (-) 1.65e5



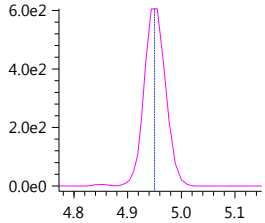
6_2-FTS-13C_IS
Conc 5.0000
RT 4.581 Area 405115
ISTD 428.90>409.00 (-) 1.65e5



8_2-FTS_1
Conc 0.4687
RT 4.951 Area 22308
R#1 7.90 (0.00)
Q 527.10>506.90 (-) 8.00e3



R1 527.20>487.00 (-) 6.06e2



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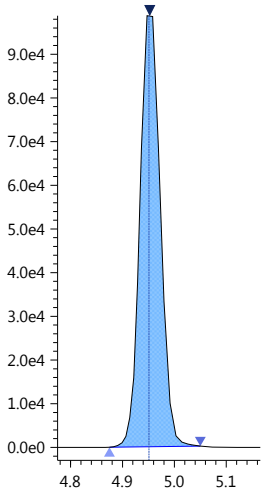
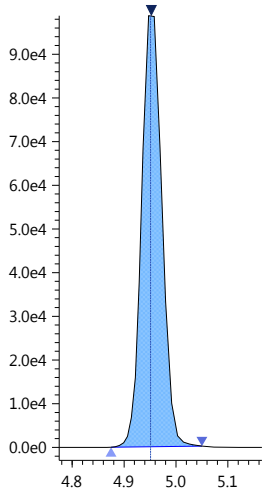
Conc 4.8406
RT 4.953 Area 271922
Q 528.80>509.00 (-) 9.88e4



8_2-FTS-13C_IS
Conc 5.0000
RT 4.953 Area 271922
ISTD 528.80>509.00 (-) 9.88e4



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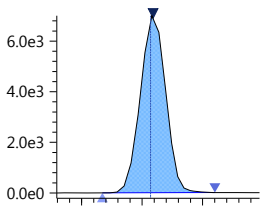
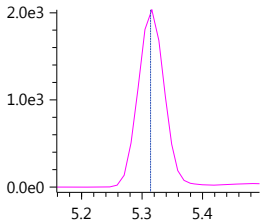
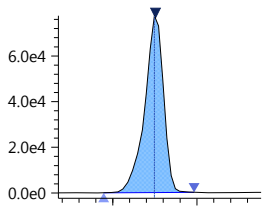
Conc 0.4752
RT 5.318 Area 20431
R#1 29.07 (0.00)
Q 627.00>606.95 (-) 7.01e3



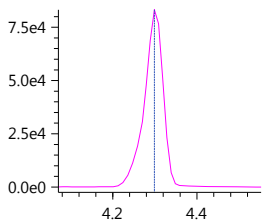
R1 627.00>81.25 (-) 2.03e3



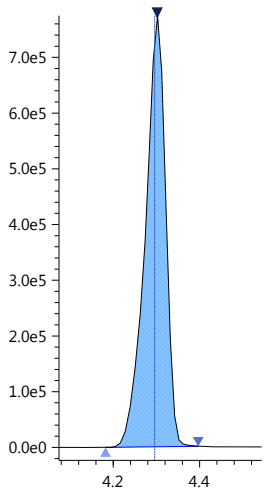
HPFO_DA
Conc 0.5068
RT 4.301 Area 240219
R#1 107.09 (0.00)
Q 329.00>169.00 (-) 7.76e4



R1 329.00>285.10 (-) 8.32e4



HFPO_DA-13C
Conc 4.4623
RT 4.302 Area 2544616
Q 332.00>286.80 (-) 7.75e5



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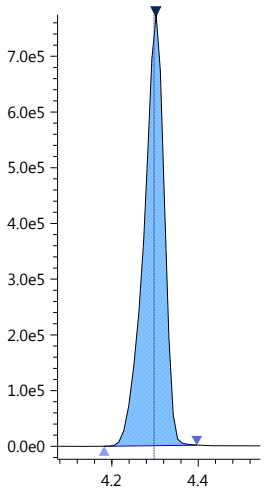
HFPO_DA-13C_IS

Conc 5.0000
RT 4.302 Area 2544616

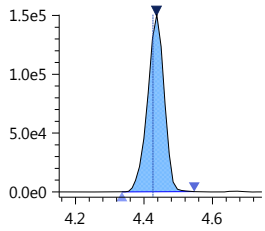
ISTD 332.00>286.80 (-) 7.75e5



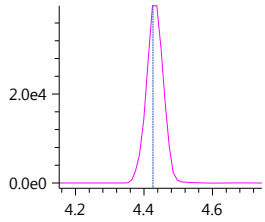
ADONA

Conc 0.4302
RT 4.436 Area 507737
R#1 27.07 (0.00)

Q 377.00>251.00 (-) 1.51e5



R1 377.00>84.95 (-) 3.99e4



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190807_014

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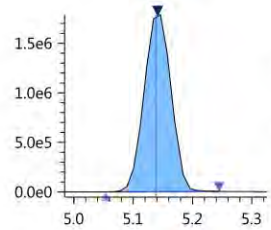
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_014.lcd
Vial: 3 | Inj. Volume: 15.0000uL | Tray: 0

13C7-PFUnDA_IS
Conc 5.0000
RT 5.141 Area 5679097
ISTD 570.00>525.00 (-) 1.79e6



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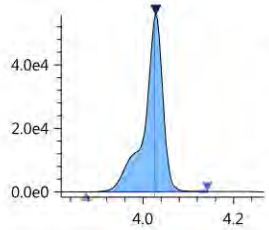
RT 4.028 Area 157037
Q 299.00>80.00 (-) 5.58e4



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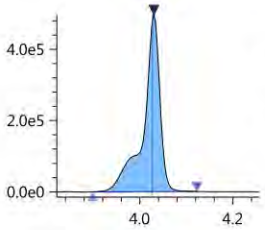
RT 4.030 Area 1215970
Q 301.80>80.00 (-) 4.97e5



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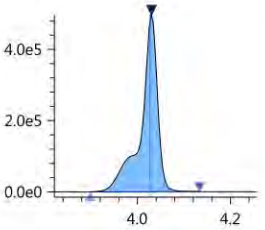

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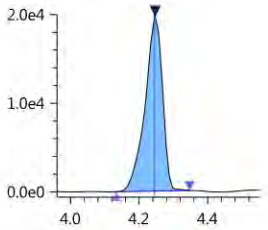

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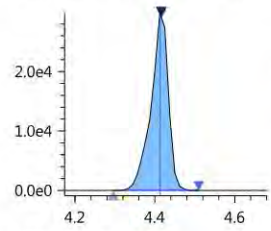
Q 399.00>80.00 (-) 2.98e4



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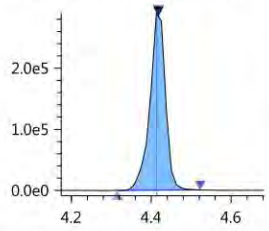
Conc 5.0475
RT 4.418 Area 785632
Q 402.70>84.05 (-) 2.90e5



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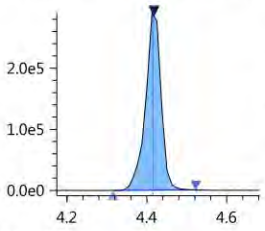

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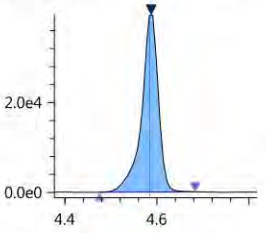

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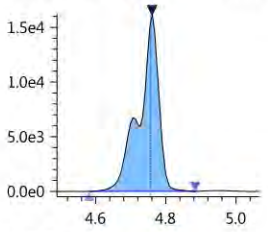
Q 499.00>80.00 (-) 1.62e4



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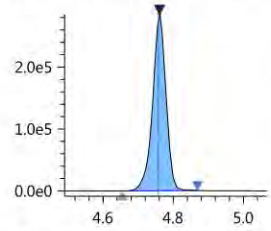

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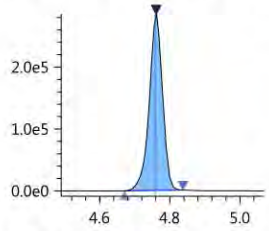

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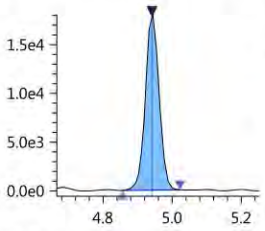

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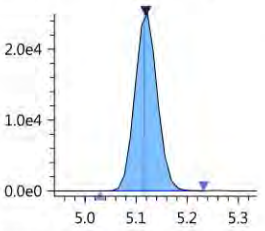
Q 599.00>79.90 (-) 2.50e4



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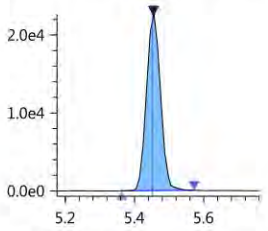

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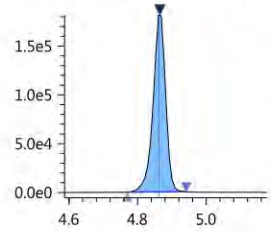
RT 4.865 Area 465522
Q 531.00>351.00 (-) 1.82e5



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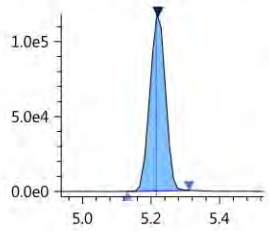

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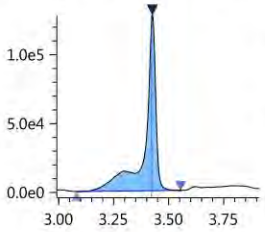
RT 3.427 Area 431213
Q 213.00>169.10 (-) 1.29e5



PFBA-13C
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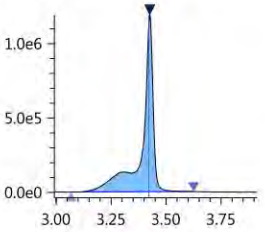
Q 216.90>172.15 (-) 1.19e6



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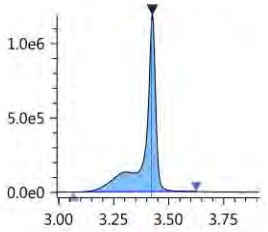
Conc 5.0000
RT 3.426 Area 4040788
ISTD 216.90>172.15 (-) 1.19e6



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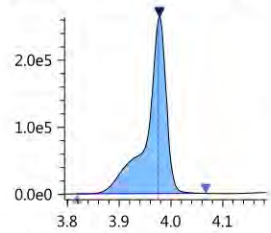
Conc 0.4075
RT 3.978 Area 682740
Q 263.05>219.10 (-) 2.64e5



PFPeA-13C
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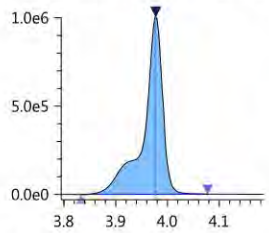
Q 267.90>223.00 (-) 1.00e6



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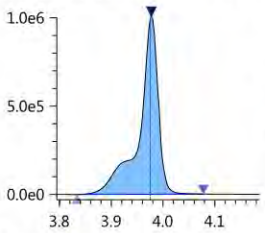

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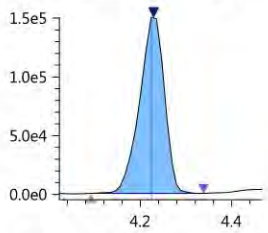

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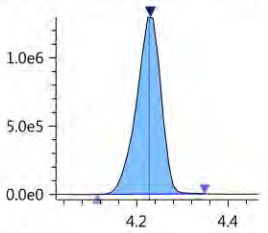

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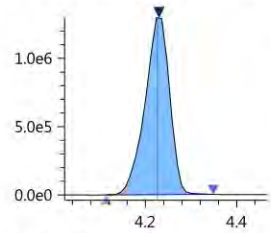

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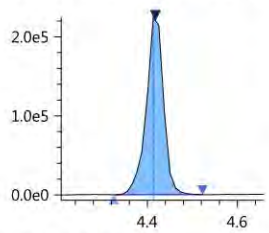

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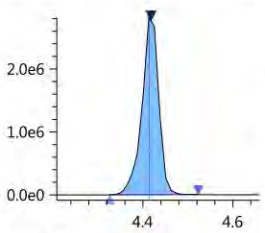
Q 366.90>322.10 (-) 2.81e6



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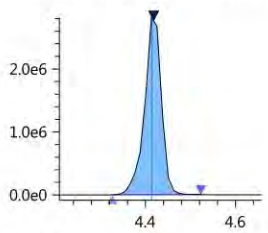
RT 4.418 Area 7387473
ISTD 366.90>322.10 (-) 2.81e6



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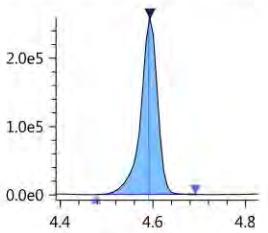

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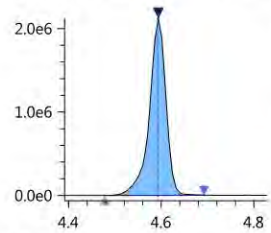

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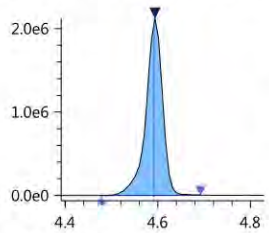

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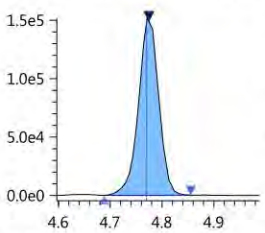

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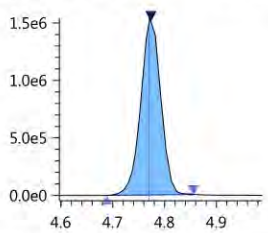

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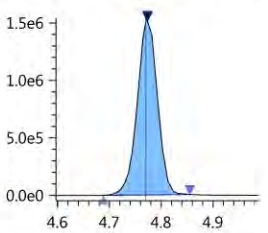
ISTD 467.80>423.00 (-) 1.54e6



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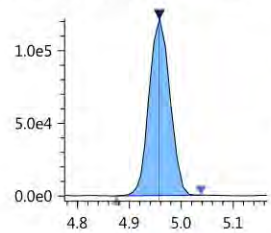

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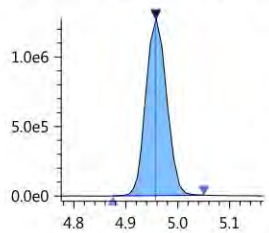

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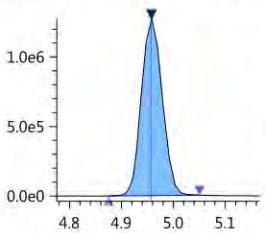

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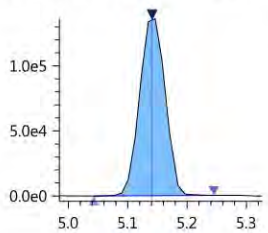

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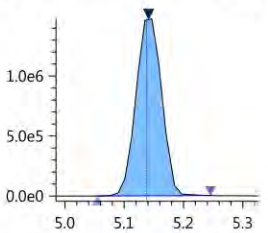

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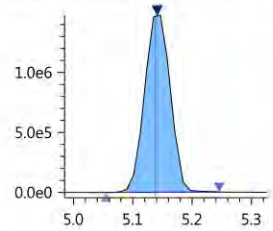
ISTD 564.80>519.95 (-) 1.48e6



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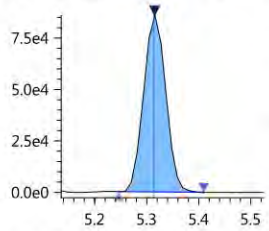

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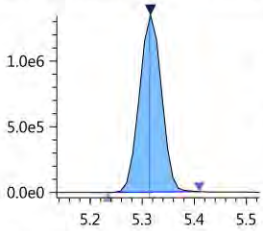

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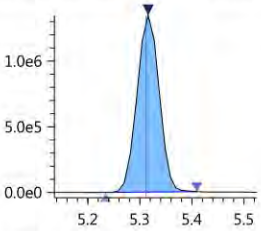

PFTrDA
Conc 0.4667
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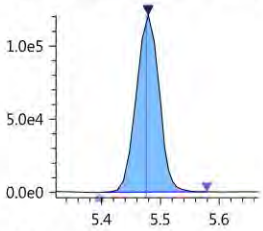
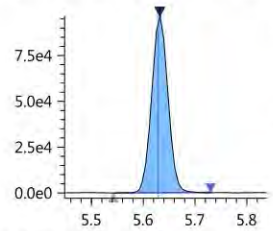


PFTeDA
Conc 0.3810
RT 5.632 Area 212158
Q 713.40>669.00 (-) 9.68e4



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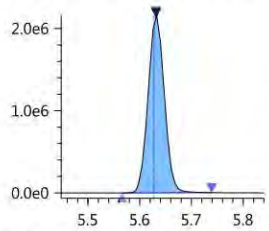
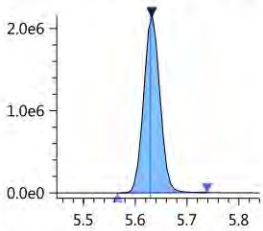
Conc 4.5208
RT 5.632 Area 4705329
Q 714.70>669.90 (-) 2.16e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.632 Area 4705329
ISTD 714.70>669.90 (-) 2.16e6



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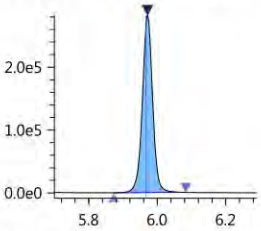
Conc 0.4488
RT 5.971 Area 589297
Q 813.00>769.05 (-) 2.82e5



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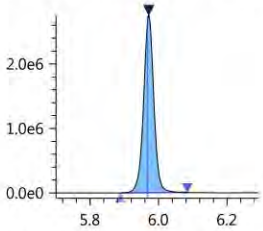

13C-PFHxDA_IS
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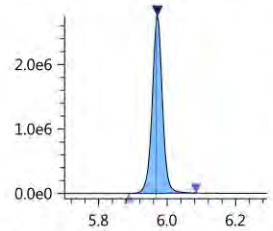
ISTD 815.00>770.05 (-) 2.75e6



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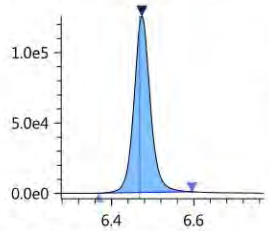

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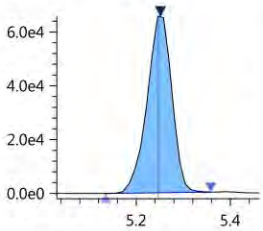

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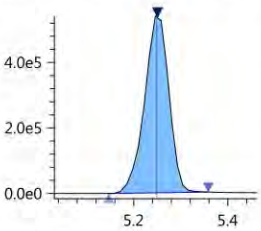
RT 5.251 Area 1942459
Q 506.00>78.05 (-) 5.41e5



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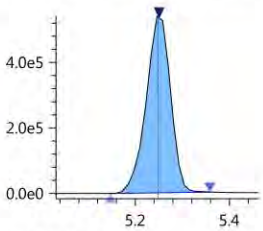

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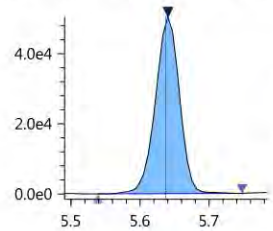
Q 512.00>169.10 (-) 5.05e4



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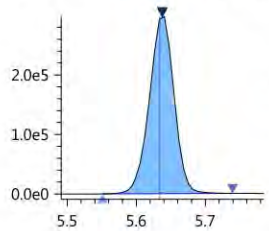
Conc 4.3699
RT 5.638 Area 741428
Q 514.90>168.90 (-) 2.98e5



N-MeFOSA-d3_IS
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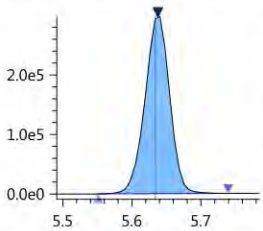
ISTD 514.90>168.90 (-) 2.98e5



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RT 5.781 Area 21966
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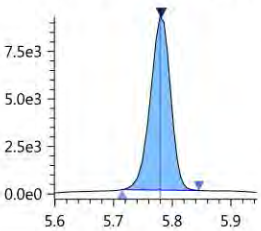
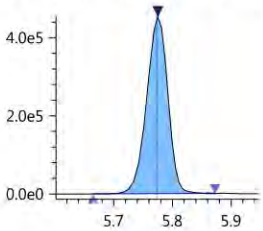


N-EtFOSA-d9
Conc 4.4980
RT 5.775 Area 1136508
Q 530.90>169.15 (-) 4.54e5



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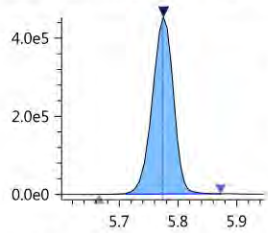
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.775 Area 1136508
ISTD 530.90>169.15 (-) 4.54e5



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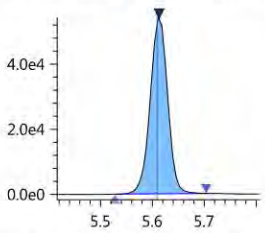
Q 616.00>59.00 (-) 5.44e4



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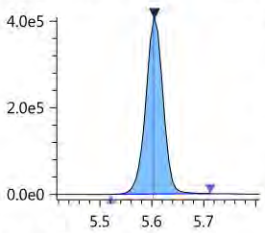
Conc 4.5300
RT 5.605 Area 944183
Q 622.70>59.10 (-) 4.09e5



N-MeFOSE-d7_IS
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RT 5.605 Area 939976
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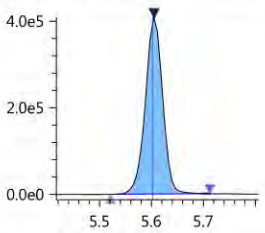

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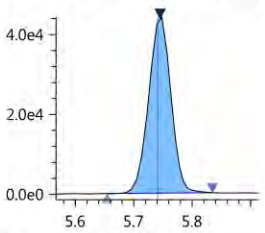
Q 630.00>58.90 (-) 4.44e4



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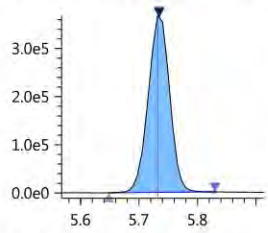
Q 638.70>59.10 (-) 3.68e5



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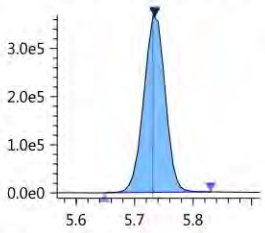
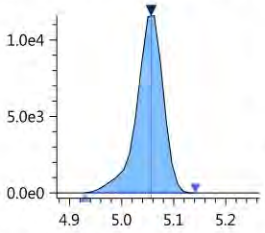


N-MeFOSAA
Conc 0.4882
RT 5.057 Area 41699
Q 570.20>419.00 (-) 1.16e4



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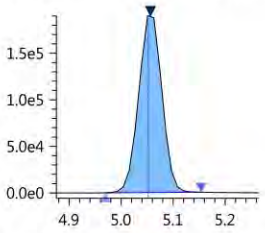
Conc 4.7559
RT 5.056 Area 593534
Q 572.80>419.05 (-) 1.90e5



N-MeFOSAA-d3_IS
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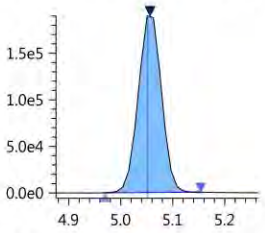
ISTD 572.80>419.05 (-) 1.90e5



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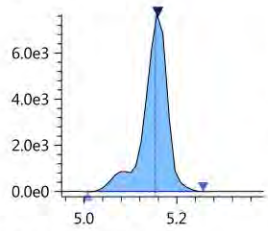

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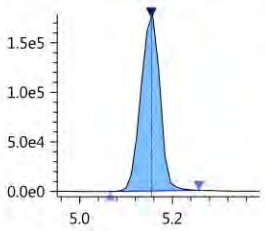
Conc 4.5029
RT 5.154 Area 507759
Q 588.80>419.00 (-) 1.79e5



N-EtFOSAA-d5_IS
Conc 5.0000
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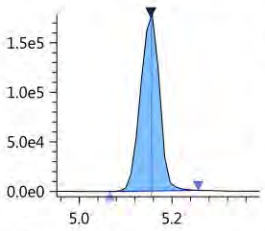
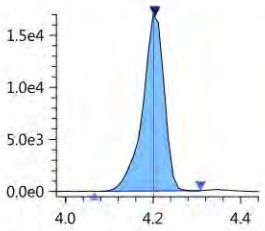
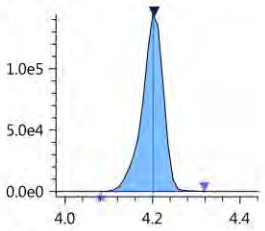
ISTD 588.80>419.00 (-) 1.79e5



4_2-FTS_1
Conc 0.4862
RT 4.204 Area 58289
Q 327.00>307.05 (-) 1.70e4



4_2-FTS-13C
Conc 4.6449
RT 4.204 Area 485657
Q 328.80>309.05 (-) 1.44e5



4_2-FTS-13C_IS
Conc 5.0000
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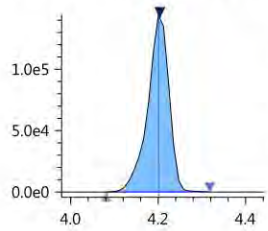
ISTD 328.80>309.05 (-) 1.44e5



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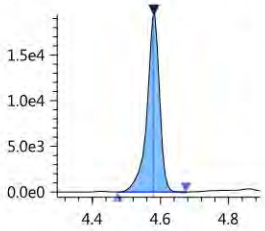
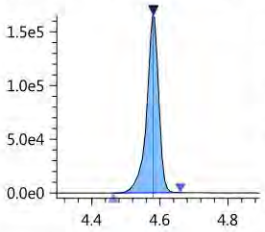
Conc 0.4708
RT 4.581 Area 49671
Q 427.00>407.00 (-) 1.94e4



6_2-FTS-13C
Conc 4.1104
RT 4.581 Area 405115
Q 428.90>409.00 (-) 1.65e5



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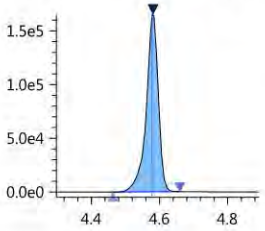

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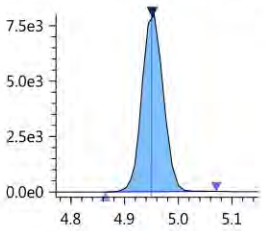
Conc 0.4851
RT 4.951 Area 22308
Q 527.10>506.90 (-) 8.00e3



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8_2-FTS-13C

Conc 4.8406
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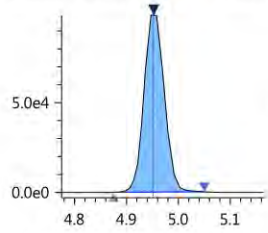
Q 528.80>509.00 (-) 9.88e4



8_2-FTS-13C_IS

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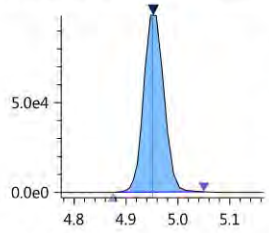
ISTD 528.80>509.00 (-) 9.88e4



10_2-FtS_1

Conc 0.4765
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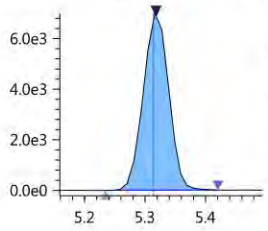
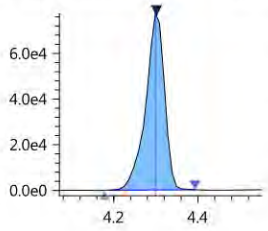


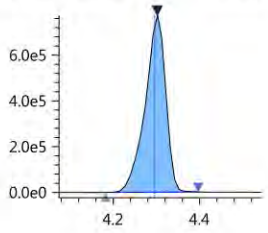
HPFO_DA

Conc 0.5068
RT 4.301 Area 240219
Q 329.00>169.00 (-) 7.76e4



HFPO_DA-13C

Conc 4.4623
RT 4.302 Area 2544616
Q 332.00>286.80 (-) 7.75e5



HFPO_DA-13C_IS

Conc 5.0000
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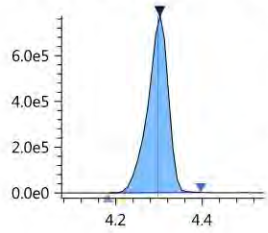
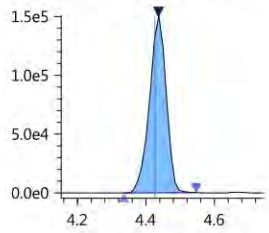


ADONA

Conc 0.4302
RT 4.436 Area 507737
Q 377.00>251.00 (-) 1.51e5



Insight Report

Printed at 8/8/2019 9:54:02 AM

190807_015

Sample ID: 1.0 PPB ICAL
Date acquired: 8/7/2019 5:56:01 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_015.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.139	5063377	5063377	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.026	309294	1270871	2	0.8449	ng/mL	0.8874
PFBS-13C	Auto	4.028	1269918	5063377	1	5.2373	ng/mL	5.0000
PFBS-13C_IS	Auto	4.028	1270871	1270871	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.244	114844	1270871	2	0.7454	ng/mL	0.9409
PFHxS_1	Auto	4.415	180867	746394	3	0.8727	ng/mL	0.9131
PFHxS-18O	Auto	4.417	746394	5063377	1	5.3786	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.417	746394	746394	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.584	190095	746394	3	0.8599	ng/mL	0.9534
PFOS_1	Auto	4.759	138702	834278	4	0.9481	ng/mL	0.9292
PFOS-13C	Auto	4.759	838791	5063377	1	5.0739	ng/mL	5.0000
PFOS-13C_IS	Auto	4.759	834278	834278	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.940	109988	834278	4	1.1145	ng/mL	0.9616
PFDS_1	Auto	5.116	153609	834278	4	1.1237	ng/mL	0.9647
PFDOS	Auto	5.452	156192	834278	4	0.9341	ng/mL	0.8065
9Cl-PF3ONS	Auto	4.863	945560	2495728	26	0.8864	ng/mL	0.8820
11Cl-PF3OUdS	Auto	5.215	678312	2495728	26	0.7099	ng/mL	0.8319
PFBA	Auto	3.422	857215	4206005	5	0.9957	ng/mL	1.0000
PFBA-13C	Auto	3.419	4206005	5063377	1	5.1115	ng/mL	5.0000
PFBA-13C_IS	Auto	3.419	4206005	4206005	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.975	1240791	2655804	6	0.9822	ng/mL	1.0000
PFPeA-13C	Auto	3.975	2655804	5063377	1	5.1299	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.975	2655804	2655804	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.227	1163931	5735738	7	0.9579	ng/mL	1.0000
PFHxA-13C	Auto	4.227	5735738	5063377	1	5.6354	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.227	5735738	5735738	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.417	1129674	6064254	8	1.0869	ng/mL	1.0000
PFHpA-13C	Auto	4.416	6064254	5063377	1	5.0837	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.416	6064254	6064254	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.591	1301490	6009466	9	0.9590	ng/mL	1.0000
PFOA-13C	Auto	4.591	6009466	5063377	1	5.5627	ng/mL	5.0000
PFOA-13C_IS	Auto	4.591	6009466	6009466	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.770	752051	4345090	10	0.9506	ng/mL	1.0000
PFNA-13C	Auto	4.770	4345090	5063377	1	5.0629	ng/mL	5.0000
PFNA-13C_IS	Auto	4.770	4345090	4345090	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.956	755504	4156036	11	0.8967	ng/mL	1.0000
PFDA-13C	Auto	4.955	4156036	5063377	1	5.7604	ng/mL	5.0000
PFDA-13C_IS	Auto	4.955	4156036	4156036	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.139	729642	4040617	12	0.9956	ng/mL	1.0000
PFUnA-13C	Auto	5.139	4040617	5063377	1	5.1672	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.139	4040617	4040617	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.313	552898	4917528	13	0.8976	ng/mL	1.0000
PFDoA-13C	Auto	5.312	4917528	5063377	1	5.8384	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.312	4917528	4917528	13	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.476	704768	5011669	14	0.9759	ng/mL	1.0000
PFTeDA	Auto	5.629	403377	5011669	14	1.0138	ng/mL	1.0000
PFTeDA-13C	Auto	5.629	5011669	5063377	1	5.4007	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.629	5011669	5011669	14	5.0000	ng/mL	5.0000
PFHxDA	Auto	5.968	1098506	5867852	15	0.9631	ng/mL	1.0000
13C-PFHxDA	Auto	5.968	5867852	5063377	1	5.1643	ng/mL	5.0000
13C-PFHxDA_IS	Auto	5.968	5867852	5867852	15	5.0000	ng/mL	5.0000
PFODA	Auto	6.468	662089	5867852	15	0.9472	ng/mL	1.0000
FOSA	Auto	5.249	511641	2153959	16	0.9436	ng/mL	1.0000
FOSA-13C	Auto	5.249	2153959	5063377	1	5.5867	ng/mL	5.0000
FOSA-13C_IS	Auto	5.249	2153959	2153959	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.638	226868	835112	17	0.8623	ng/mL	1.0000
N-MeFOSA-d3	Auto	5.635	835112	5063377	1	5.5206	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.635	835112	835112	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.780	43856	1150968	18	0.9944	ng/mL	1.0000
N-EtFOSA-d9	Auto	5.773	1150968	5063377	1	5.1092	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.773	1150968	1150968	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.610	244106	989336	19	0.9829	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.602	989336	5063377	1	5.3239	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.602	989336	989336	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.743	244536	970542	20	1.0303	ng/mL	1.0000
N-EtFOSE-d9	Auto	5.732	970542	5063377	1	5.1845	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.732	970542	970542	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.057	76486	517345	21	1.0482	ng/mL	1.0000

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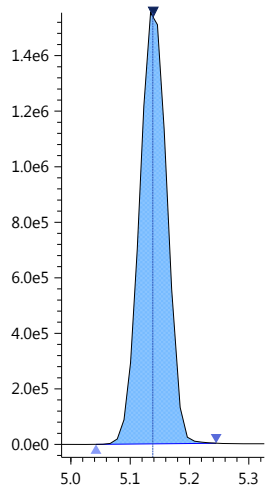
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-MeFOSAA-d3	Auto	5.054	517345	5063377	1	4.6495	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.054	517345	517345	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.154	53117	600021	22	0.7525	ng/mL	1.0000
N-EtFOSAA-d5	Auto	5.153	600021	5063377	1	5.9682	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.153	600021	600021	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.202	100376	435336	23	0.9272	ng/mL	0.9372
4_2-FTS-13C	Auto	4.201	435336	5063377	1	4.6699	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.201	435336	435336	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.578	99642	426945	24	0.9598	ng/mL	0.9512
6_2-FTS-13C	Auto	4.578	426945	5063377	1	4.8587	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.578	426945	426945	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.950	48475	239431	25	1.1567	ng/mL	0.9600
8_2-FTS-13C	Auto	4.951	239431	5063377	1	4.7805	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.951	239431	239431	25	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.314	37777	239431	25	0.9980	ng/mL	0.9662
HPFO_DA	Auto	4.300	461233	2495728	26	0.9920	ng/mL	1.0000
HFPO_DA-13C	Auto	4.298	2495728	5063377	1	4.9088	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.298	2495728	2495728	26	5.0000	ng/mL	5.0000
ADONA	Auto	4.428	1060841	2495728	26	0.9165	ng/mL	0.9451

13C7-PFUnDA_IS

Conc 5.0000
RT 5.139 Area 5063377

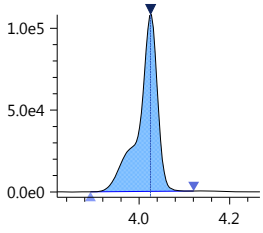
ISTD 570.00>525.00 (-) 1.55e6



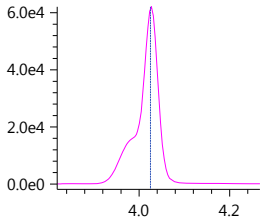
PFBS_1

Conc 0.8449
RT 4.026 Area 309294
R#1 54.36 (0.00)

Q 299.00>80.00 (-) 1.08e5



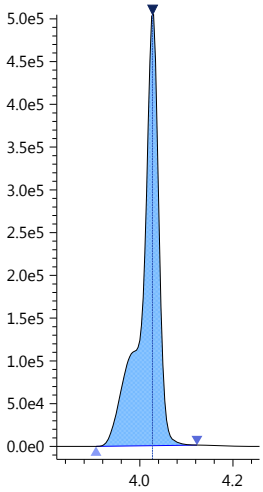
R1 298.80>99.00 (-) 6.21e4



PFBS-13C

Conc 5.2373
RT 4.028 Area 1269918

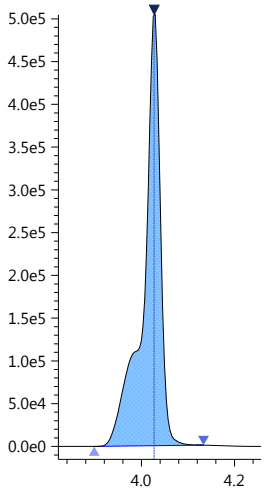
Q 301.80>80.00 (-) 5.05e5



PFBS-13C_IS

Conc 5.0000
RT 4.028 Area 1270871

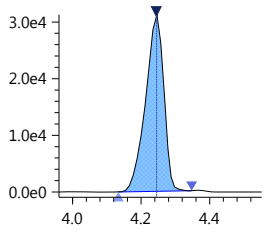
ISTD 301.80>80.00 (-) 5.05e5



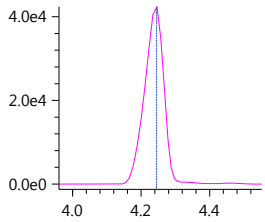
PFPeS

Conc 0.7454
RT 4.244 Area 114844
R#1 136.12 (0.00)

Q 349.00>99.00 (-) 3.13e4



R1 349.00>79.95 (-) 4.24e4



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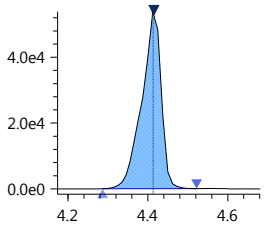
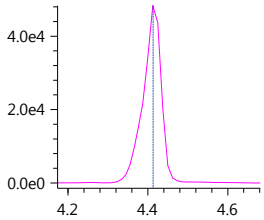
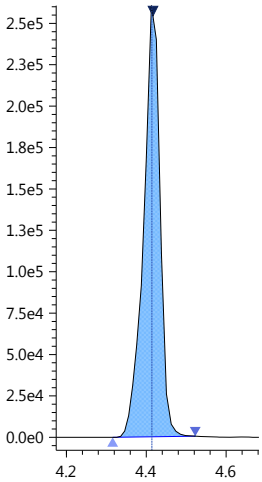
PFHxS_1
Conc 0.8727
RT 4.415 Area 180867
R#1 88.83 (0.00)
Q 399.00>80.00 (-) 5.39e4



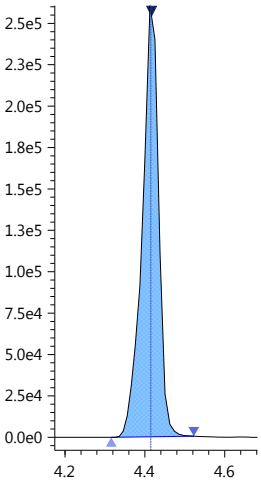
R1 399.00>99.00 (-) 4.83e4



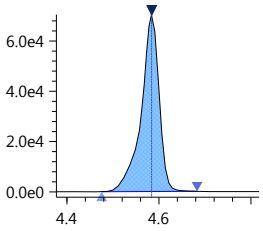
PFHxS-18O
Conc 5.3786
RT 4.417 Area 746394
Q 402.70>84.05 (-) 2.61e5



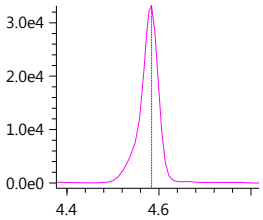
PFHxS-18O_IS
Conc 5.0000
RT 4.417 Area 746394
ISTD 402.70>84.05 (-) 2.61e5



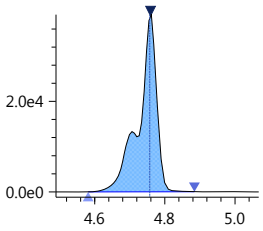
PFHpS_1
Conc 0.8599
RT 4.584 Area 190095
R#1 46.39 (0.00)
Q 449.00>80.15 (-) 7.05e4



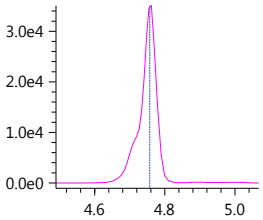
R1 449.00>99.20 (-) 3.32e4



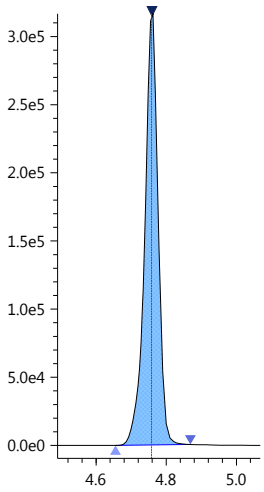
PFOS_1
Conc 0.9481
RT 4.759 Area 138702
R#1 88.68 (0.00)
Q 499.00>80.00 (-) 3.92e4



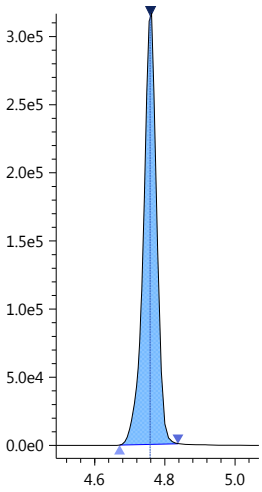
R1 499.00>99.00 (-) 3.51e4



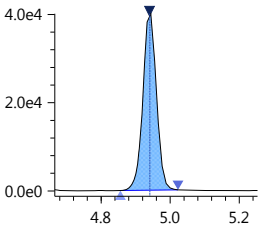
PFOS-13C
Conc 5.0739
RT 4.759 Area 838791
Q 502.80>80.05 (-) 3.17e5



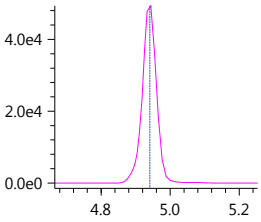
PFOS-13C_IS
Conc 5.0000
RT 4.759 Area 834278
ISTD 502.80>80.05 (-) 3.17e5



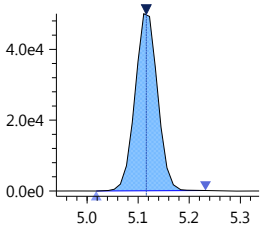
PFNS
Conc 1.1145
RT 4.940 Area 109988
R#1 124.75 (0.00)
Q 549.00>99.00 (-) 4.02e4



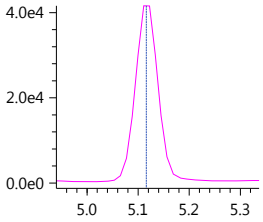
R1 549.00>79.95 (-) 4.94e4



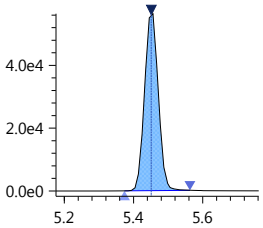
PFDS_1
Conc 1.1237
RT 5.116 Area 153609
R#1 83.52 (0.00)
Q 599.00>79.90 (-) 5.01e4



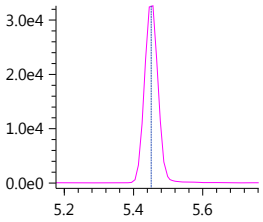
R1 599.00>99.10 (-) 4.16e4



PFDOS
Conc 0.9341
RT 5.452 Area 156192
R#1 57.63 (0.00)
Q 699.00>79.95 (-) 5.65e4



R1 699.00>99.05 (-) 3.26e4



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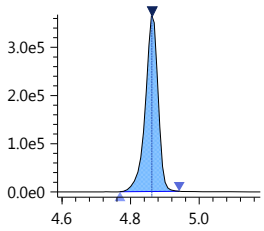
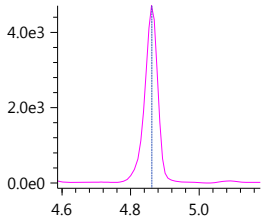
9Cl-PF3ONS

Conc 0.8864
RT 4.863 Area 945560
R#1 1.27 (0.00)

Q 531.00>351.00 (-) 3.68e5



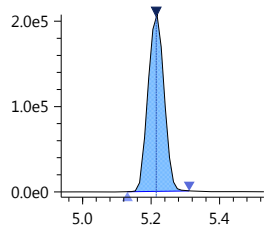
R1 531.00>98.90 (-) 4.71e3



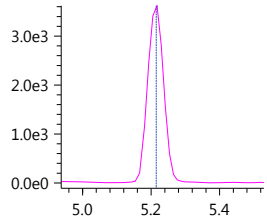
11Cl-PF3OUdS

Conc 0.7099
RT 5.215 Area 678312
R#1 1.79 (0.00)

Q 631.00>451.05 (-) 2.08e5



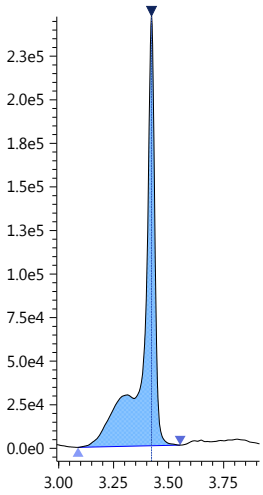
R1 631.00>98.90 (-) 3.62e3



PFBA

Conc 0.9957
RT 3.422 Area 857215

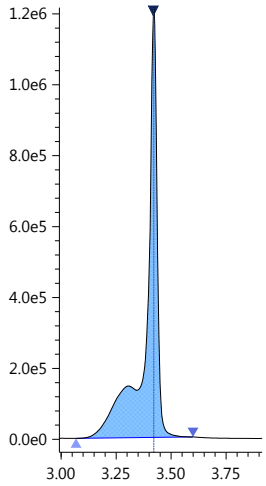
Q 213.00>169.10 (-) 2.48e5



PFBA-13C

Conc 5.1115
RT 3.419 Area 4206005

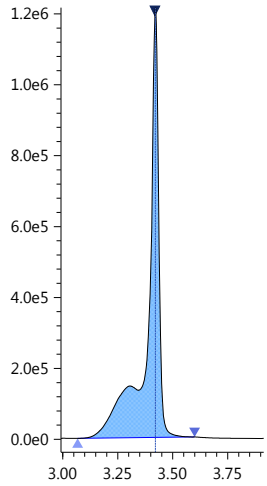
Q 216.90>172.15 (-) 1.22e6



PFBA-13C_IS

Conc 5.0000
RT 3.419 Area 4206005

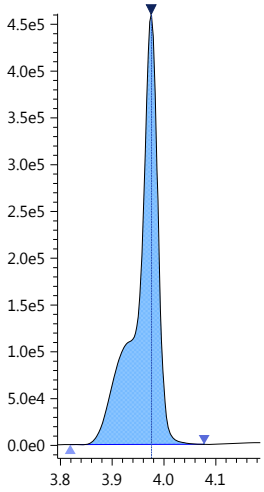
ISTD 216.90>172.15 (-) 1.22e6



PFPeA

Conc 0.9822
RT 3.975 Area 1240791

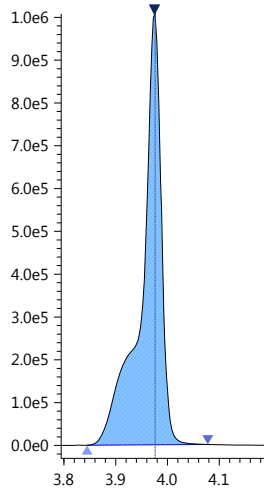
Q 263.05>219.10 (-) 4.61e5



PFPeA-13C

Conc 5.1299
RT 3.975 Area 2655804

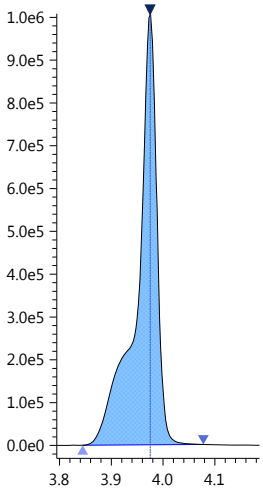
Q 267.90>223.00 (-) 1.01e6



PFPeA-13C_IS

Conc 5.0000
RT 3.975 Area 2655804

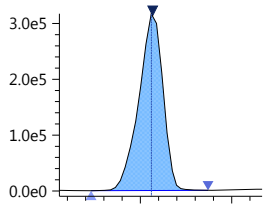
ISTD 267.90>223.00 (-) 1.01e6



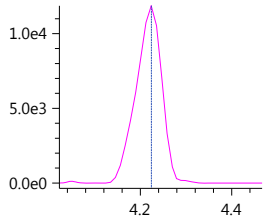
PFHxA

Conc 0.9579
RT 4.227 Area 1163931
R#1 3.77 (0.00)

Q 313.00>269.00 (-) 3.17e5



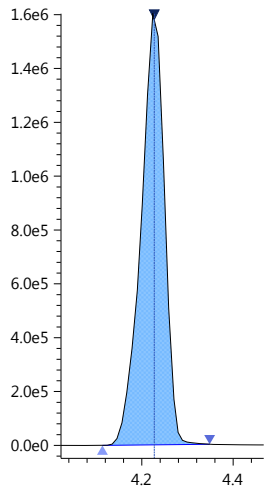
R1 313.00>119.10 (-) 1.19e4



PFHxA-13C

Conc 5.6354
RT 4.227 Area 5735738

Q 314.90>270.10 (-) 1.60e6



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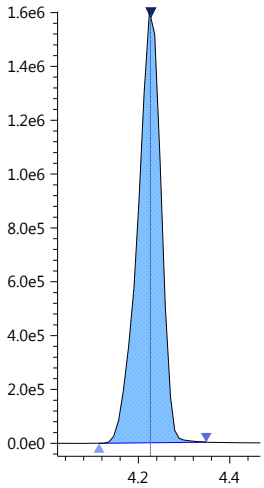
PFHxA-13C_IS
Conc 5.0000
RT 4.227 Area 5735738

ISTD 314.90>270.10 (-) 1.60e6



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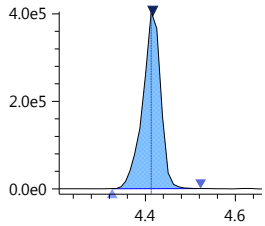
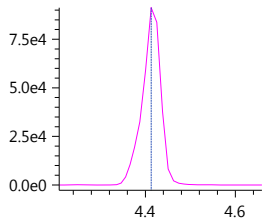
Conc 1.0869
RT 4.417 Area 1129674
R#1 22.64 (0.00)

Q 362.90>319.00 (-) 4.05e5

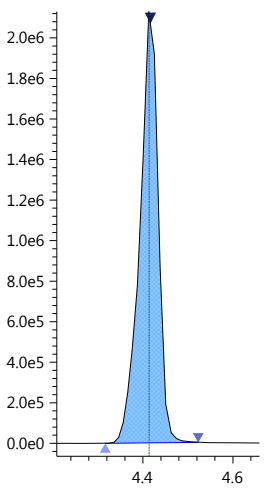


R1 362.90>169.00 (-) 9.12e4



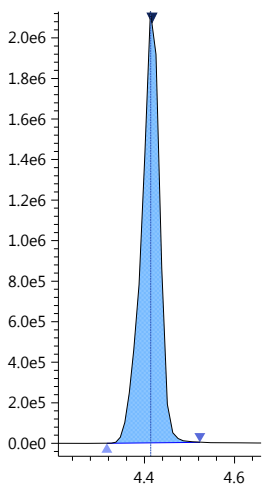
PFHpA-13C
Conc 5.0837
RT 4.416 Area 6064254

Q 366.90>322.10 (-) 2.13e6



PFHpA-13C_IS
Conc 5.0000
RT 4.416 Area 6064254

ISTD 366.90>322.10 (-) 2.13e6



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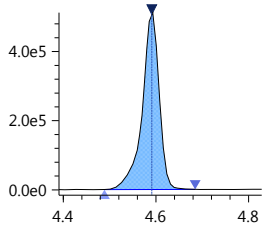
Conc 0.9590
RT 4.591 Area 1301490
R#1 35.90 (0.00)

Q 413.00>369.00 (-) 5.13e5



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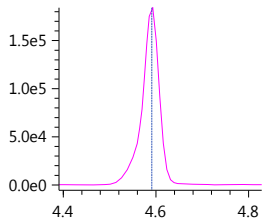

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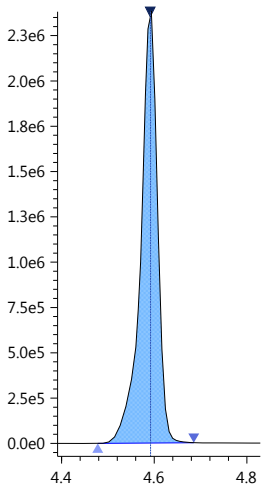
Conc 5.5627
RT 4.591 Area 6009466

Q 416.80>372.05 (-) 2.38e6



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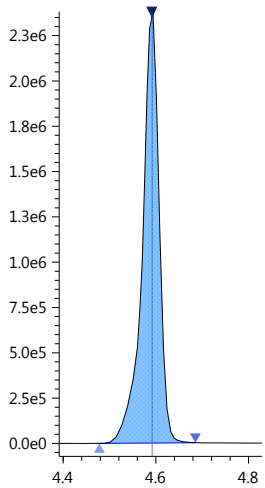
RT 4.591 Area 6009466

ISTD 416.80>372.05 (-) 2.38e6



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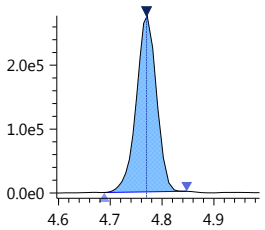
Conc 0.9506
RT 4.770 Area 752051
R#1 24.10 (0.00)

Q 463.00>418.90 (-) 2.78e5



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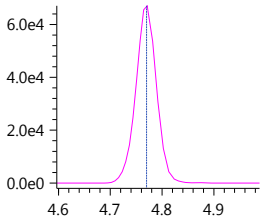

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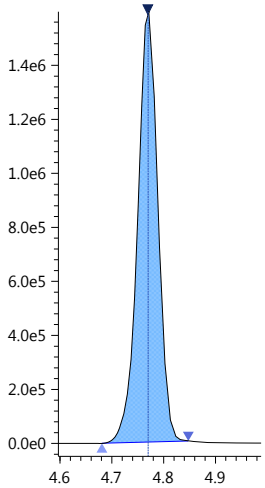
RT 4.770 Area 4345090

Q 467.80>423.00 (-) 1.60e6



PFNA-13C_IS
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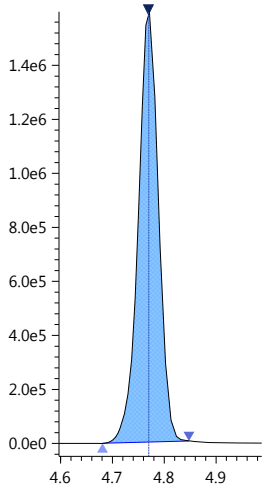
RT 4.770 Area 4345090

ISTD 467.80>423.00 (-) 1.60e6



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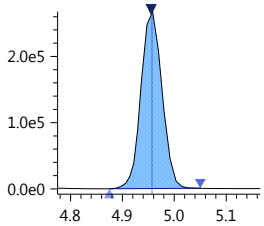
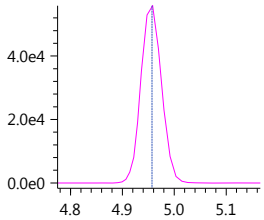
Conc 0.8967
RT 4.956 Area 755504
R#1 20.87 (0.00)
Q 513.00>468.80 (-) 2.68e5

R1 513.00>219.10 (-) 5.58e4


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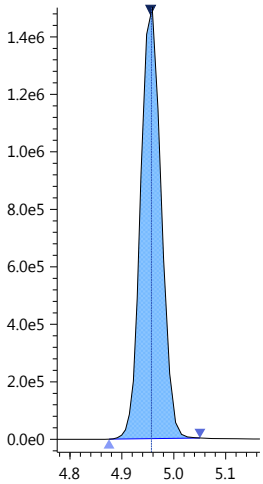
RT 4.955 Area 4156036
Q 514.80>469.95 (-) 1.50e6


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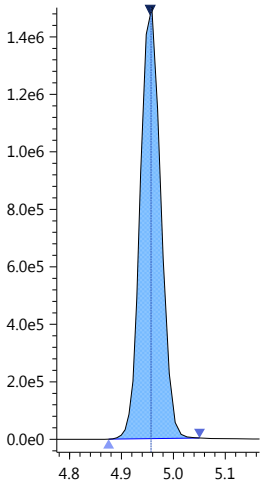
RT 4.955 Area 4156036
ISTD 514.80>469.95 (-) 1.50e6


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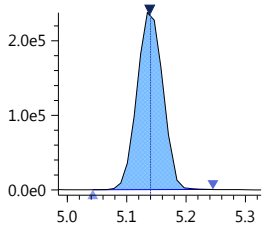
Conc 0.9956
RT 5.139 Area 729642
R#1 16.35 (0.00)
Q 563.00>518.90 (-) 2.38e5

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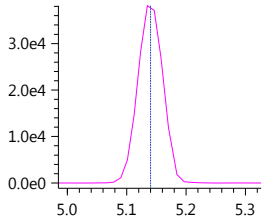

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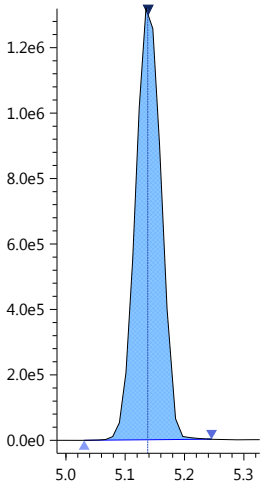
Conc 5.1672
RT 5.139 Area 4040617
Q 564.80>519.95 (-) 1.32e6


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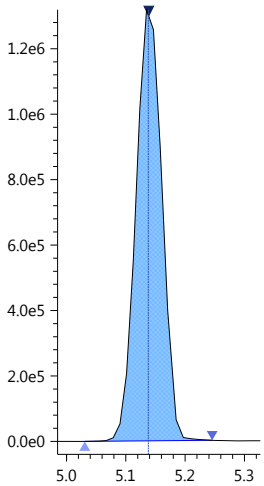

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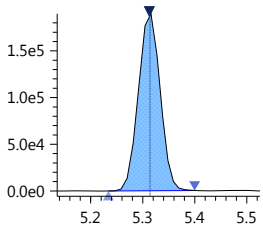
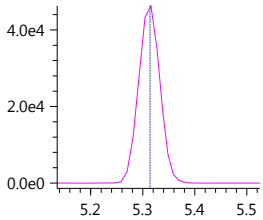
Conc 0.8976
RT 5.313 Area 552898
R#1 24.40 (0.00)
Q 613.05>569.00 (-) 1.90e5

R1 613.05>169.00 (-) 4.63e4


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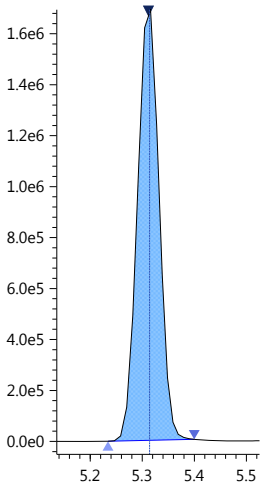
Conc 5.8384
RT 5.312 Area 4917528
Q 614.80>569.95 (-) 1.69e6


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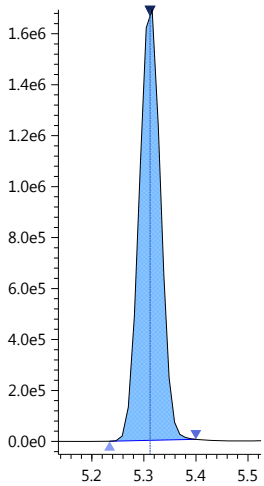

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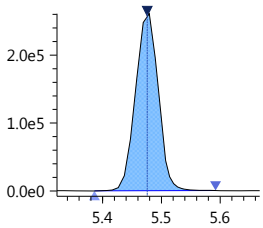
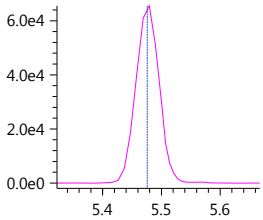
Conc 0.9759
RT 5.476 Area 704768
R#1 25.25 (0.00)
Q 663.00>618.90 (-) 2.61e5

R1 662.90>169.00 (-) 6.55e4


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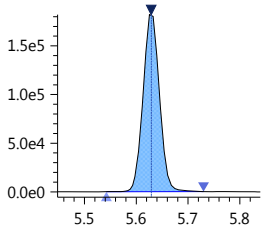
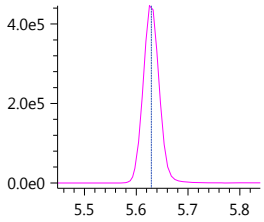
PFTeDA

Conc 1.0138
RT 5.629 Area 403377
R#1 245.57 (0.00)

Q 713.40>669.00 (-) 1.82e5



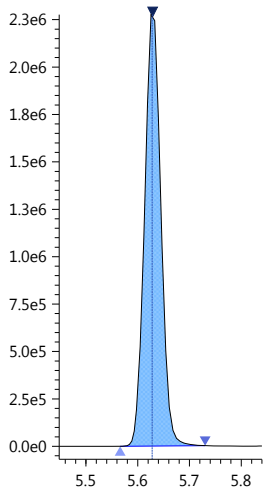
R1 713.40>169.10 (-) 4.46e5



PFTeDA-13C

Conc 5.4007
RT 5.629 Area 5011669

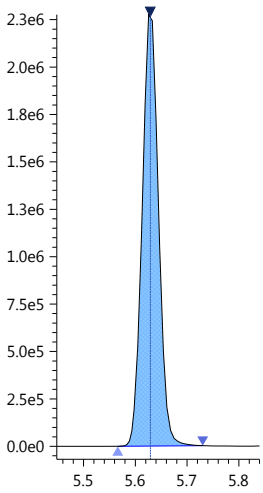
Q 714.70>669.90 (-) 2.28e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.629 Area 5011669

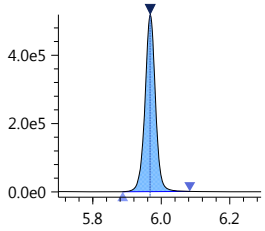
ISTD 714.70>669.90 (-) 2.28e6



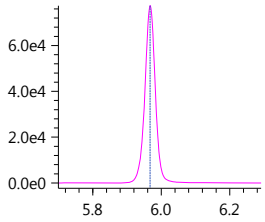
PFHxDA

Conc 0.9631
RT 5.968 Area 1098506
R#1 14.92 (0.00)

Q 813.00>769.05 (-) 5.19e5



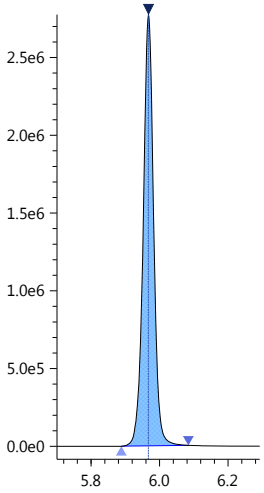
R1 813.00>218.95 (-) 7.74e4



13C-PFHxDA

Conc 5.1643
RT 5.968 Area 5867852

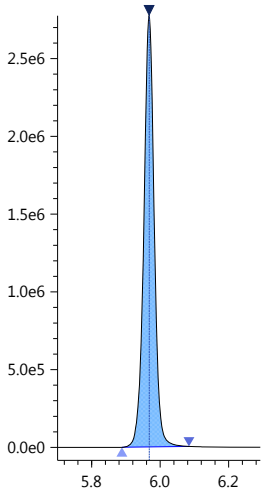
Q 815.00>770.05 (-) 2.78e6



13C-PFHxDA_IS

Conc 5.0000
RT 5.968 Area 5867852

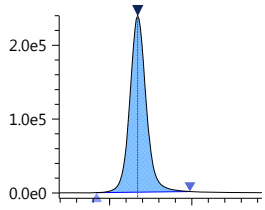
ISTD 815.00>770.05 (-) 2.78e6



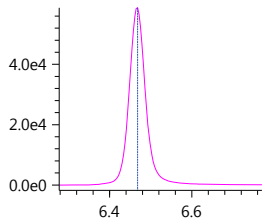
PFODA

Conc 0.9472
RT 6.468 Area 662089
R#1 24.44 (0.00)

Q 913.00>868.85 (-) 2.40e5



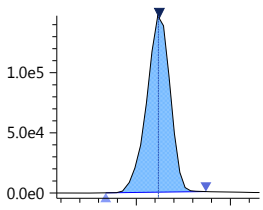
R1 913.00>169.00 (-) 5.87e4



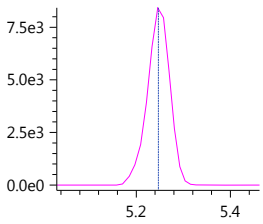
FOSA

Conc 0.9436
RT 5.249 Area 511641
R#1 5.72 (0.00)

Q 498.20>78.00 (-) 1.47e5



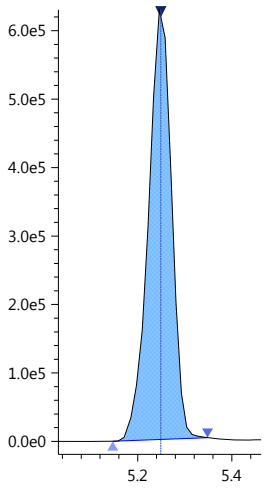
R1 498.20>64.10 (-) 8.43e3



FOSA-13C

Conc 5.5867
RT 5.249 Area 2153959

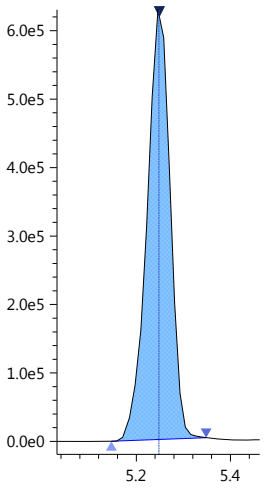
Q 506.00>78.05 (-) 6.31e5



FOSA-13C_IS

Conc 5.0000
RT 5.249 Area 2153959

ISTD 506.00>78.05 (-) 6.31e5



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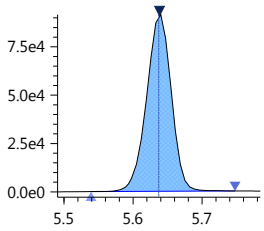
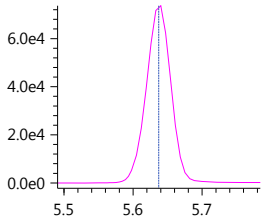
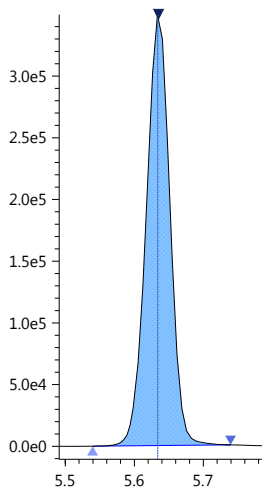
N-MeFOSA
Conc 0.8623
RT 5.638 Area 226868
R#1 80.48 (0.00)
Q 512.00>169.10 (-) 9.17e4



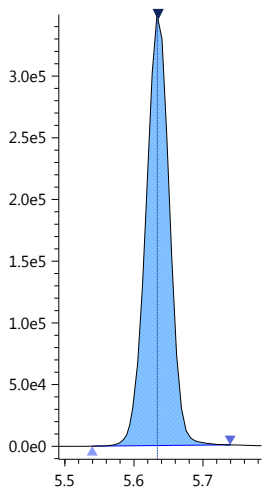
R1 512.00>219.00 (-) 7.37e4



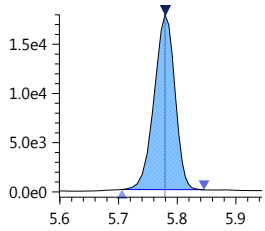
N-MeFOSA-d3
Conc 5.5206
RT 5.635 Area 835112
Q 514.90>168.90 (-) 3.50e5



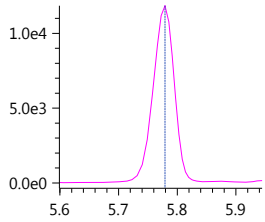
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.635 Area 835112
ISTD 514.90>168.90 (-) 3.50e5



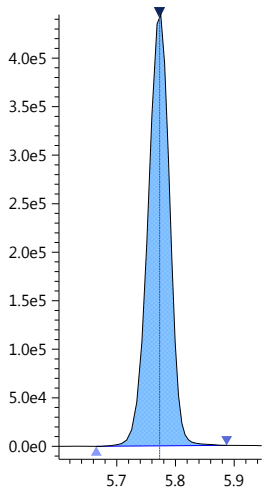
N-EtFOSA
Conc 0.9944
RT 5.780 Area 43856
R#1 66.30 (0.00)
Q 526.90>169.10 (-) 1.80e4



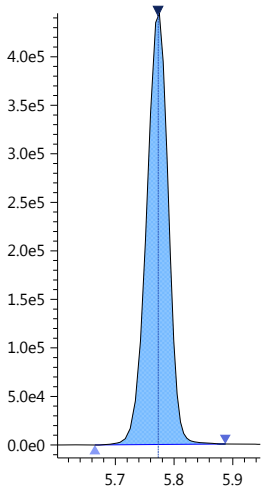
R1 526.90>219.00 (-) 1.18e4



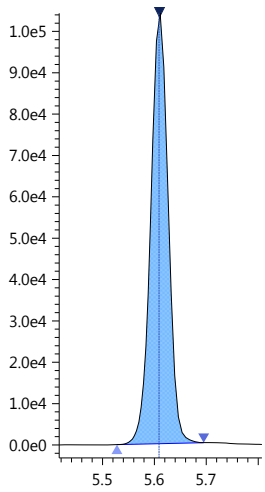
N-EtFOSA-d9
Conc 5.1092
RT 5.773 Area 1150968
Q 530.90>169.15 (-) 4.45e5



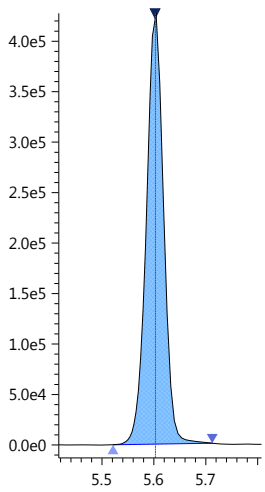
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.773 Area 1150968
ISTD 530.90>169.15 (-) 4.45e5



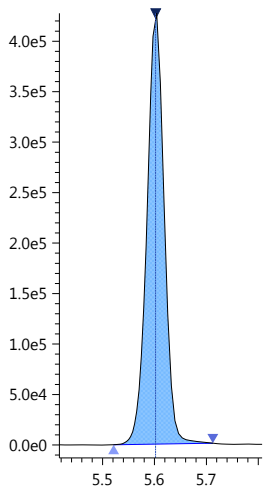
N-MeFOSE
Conc 0.9829
RT 5.610 Area 244106
Q 616.00>59.00 (-) 1.04e5



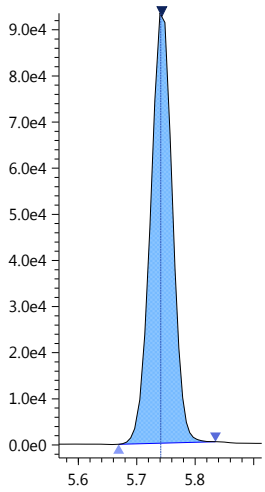
N-MeFOSE-d7
Conc 5.3239
RT 5.602 Area 989336
Q 622.70>59.10 (-) 4.28e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.602 Area 989336
ISTD 622.70>59.10 (-) 4.28e5



N-EtFOSE
Conc 1.0303
RT 5.743 Area 244536
Q 630.00>58.90 (-) 9.36e4



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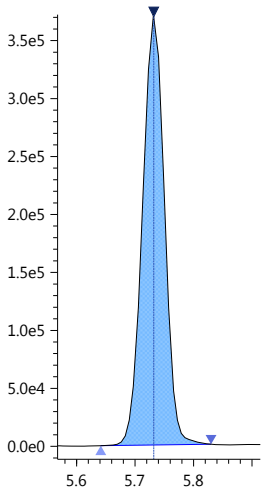
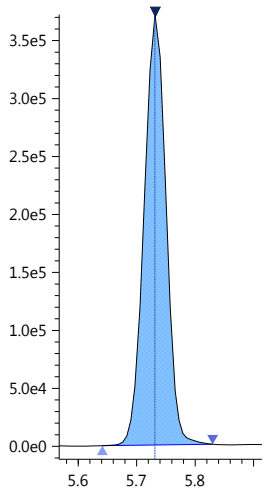
N-EtFOSE-d9
Conc 5.1845
RT 5.732 Area 970542

Q 638.70>59.10 (-) 3.72e5



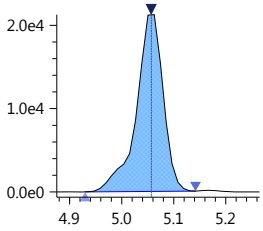
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.732 Area 970542

ISTD 638.70>59.10 (-) 3.72e5

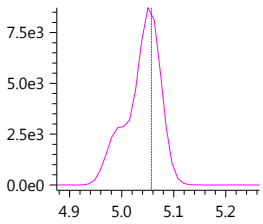


N-MeFOSAA
Conc 1.0482
RT 5.057 Area 76486
R#1 38.36 (0.00)

Q 570.20>419.00 (-) 2.13e4

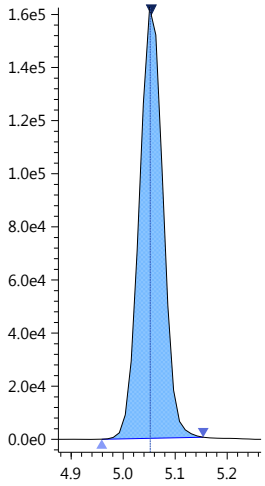


R1 570.20>512.00 (-) 8.72e3



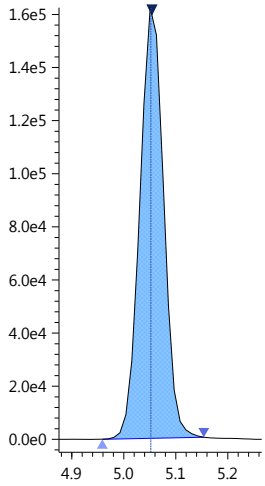
N-MeFOSAA-d3
Conc 4.6495
RT 5.054 Area 517345

Q 572.80>419.05 (-) 1.63e5



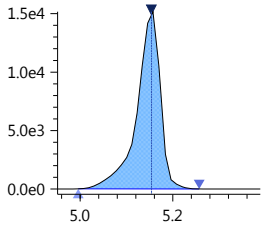
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.054 Area 517345

ISTD 572.80>419.05 (-) 1.63e5

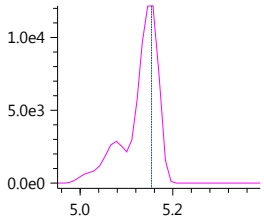


N-EtFOSAA
Conc 0.7525
RT 5.154 Area 53117
R#1 78.06 (0.00)

Q 584.20>418.95 (-) 1.52e4

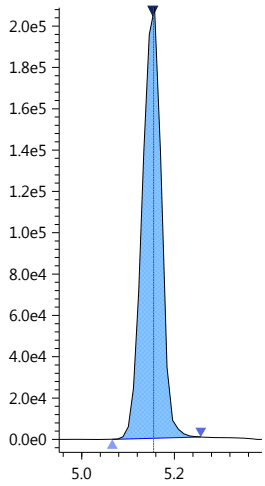


R1 584.20>526.10 (-) 1.22e4



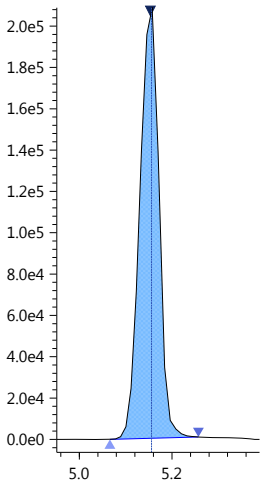
N-EtFOSAA-d5
Conc 5.9682
RT 5.153 Area 600021

Q 588.80>419.00 (-) 2.09e5



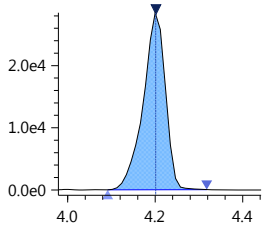
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.153 Area 600021

ISTD 588.80>419.00 (-) 2.09e5

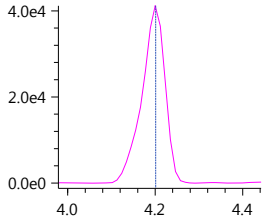


4_2-FTS_1
Conc 0.9272
RT 4.202 Area 100376
R#1 144.68 (0.00)

Q 327.00>307.05 (-) 2.85e4

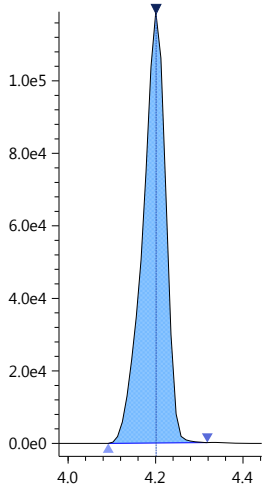


R1 327.00>81.10 (-) 4.12e4



4_2-FTS-13C
Conc 4.6699
RT 4.201 Area 435336

Q 328.80>309.05 (-) 1.19e5



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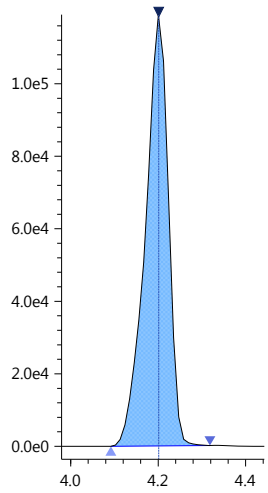
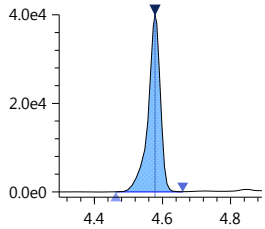
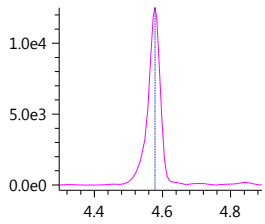
4_2-FTS-13C_IS
Conc 5.0000
RT 4.201 Area 435336
ISTD 328.80>309.05 (-) 1.19e5



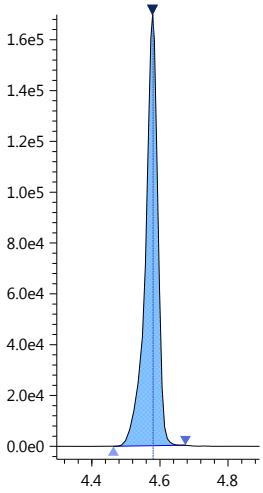
6_2-FTS_1
Conc 0.9598
RT 4.578 Area 99642
R#1 30.94 (0.00)
Q 427.00>407.00 (-) 4.00e4



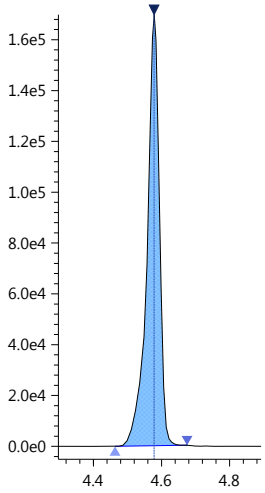
R1 427.00>80.90 (-) 1.25e4



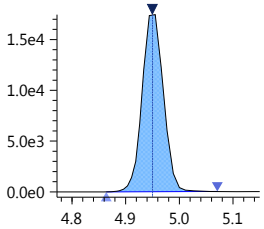
6_2-FTS-13C
Conc 4.8587
RT 4.578 Area 426945
Q 428.90>409.00 (-) 1.70e5



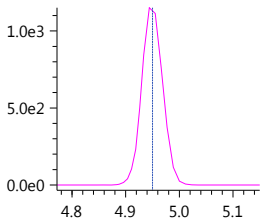
6_2-FTS-13C_IS
Conc 5.0000
RT 4.578 Area 426945
ISTD 428.90>409.00 (-) 1.70e5



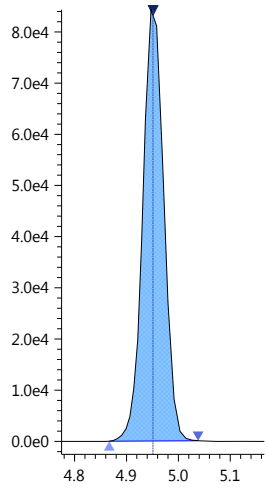
8_2-FTS_1
Conc 1.1567
RT 4.950 Area 48475
R#1 6.65 (0.00)
Q 527.10>506.90 (-) 1.75e4



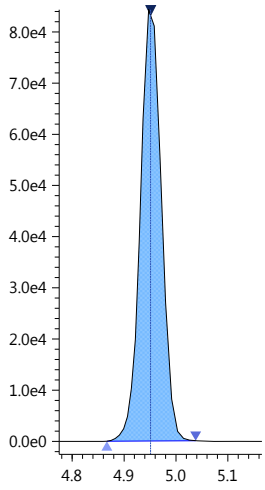
R1 527.20>487.00 (-) 1.15e3



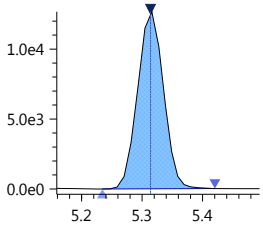
8_2-FTS-13C
Conc 4.7805
RT 4.951 Area 239431
Q 528.80>509.00 (-) 8.43e4



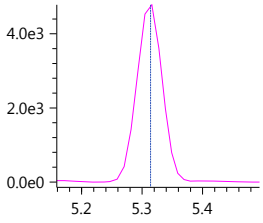
8_2-FTS-13C_IS
Conc 5.0000
RT 4.951 Area 239431
ISTD 528.80>509.00 (-) 8.43e4



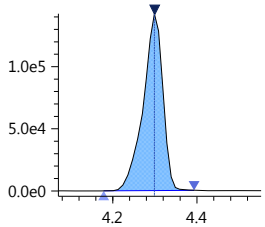
10_2-FtS_1
Conc 0.9980
RT 5.314 Area 37777
R#1 37.54 (0.00)
Q 627.00>606.95 (-) 1.27e4



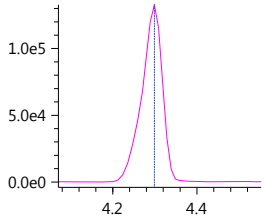
R1 627.00>81.25 (-) 4.78e3



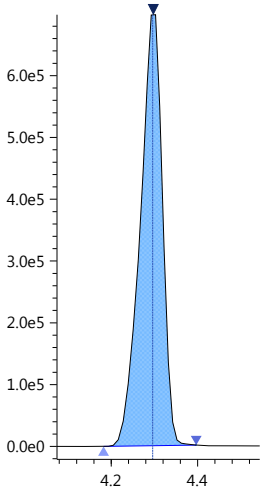
HPFO_DA
Conc 0.9920
RT 4.300 Area 461233
R#1 93.40 (0.00)
Q 329.00>169.00 (-) 1.43e5



R1 329.00>285.10 (-) 1.33e5



HFPO_DA-13C
Conc 4.9088
RT 4.298 Area 2495728
Q 332.00>286.80 (-) 6.99e5



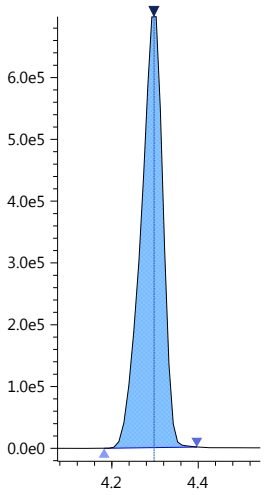
Insight Report

Printed at 8/8/2019 9:54:02 AM

HFPO_DA-13C_IS

Conc 5.0000
RT 4.298 Area 2495728

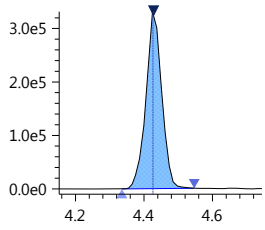
ISTD 332.00>286.80 (-) 6.99e5



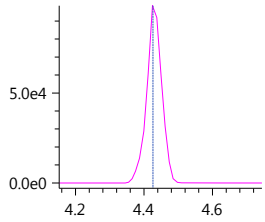
ADONA

Conc 0.9165
RT 4.428 Area 1060841
R#1 29.35 (0.00)

Q 377.00>251.00 (-) 3.32e5



R1 377.00>84.95 (-) 9.85e4



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Printed at 8/8/2019 8:44:13 AM

190807_015

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Date acquired: 8/7/2019 5:56:01 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_015.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 0

13C7-PFUnDA_IS
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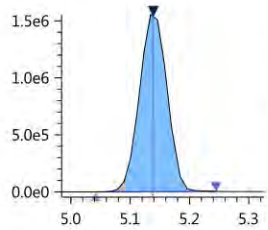
ISTD 570.00>525.00 (-) 1.55e6



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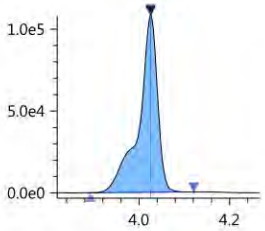
RT 4.026 Area 309294
Q 299.00>80.00 (-) 1.08e5



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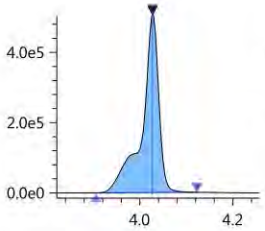
Conc 5.2373
RT 4.028 Area 1269918
Q 301.80>80.00 (-) 5.05e5



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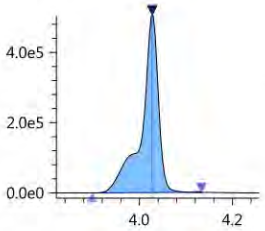

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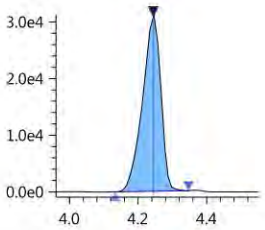
Conc 0.7562
RT 4.244 Area 114844
Q 349.00>99.00 (-) 3.13e4



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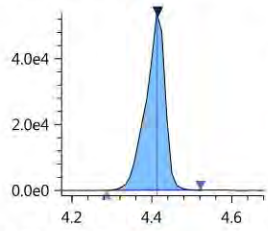
Q 399.00>80.00 (-) 5.39e4



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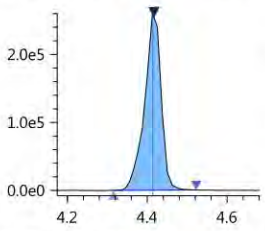
Conc 5.3786
RT 4.417 Area 746394
Q 402.70>84.05 (-) 2.61e5



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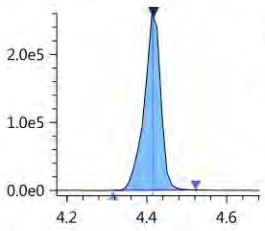

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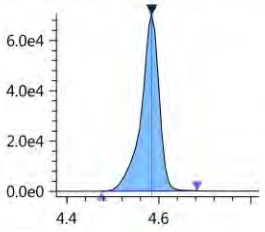

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Conc 0.9538
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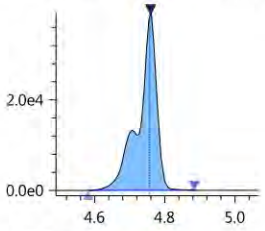
Q 499.00>80.00 (-) 3.92e4



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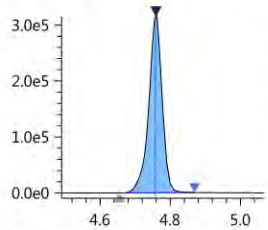
Q 502.80>80.05 (-) 3.17e5



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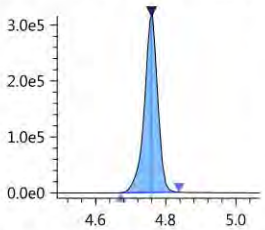

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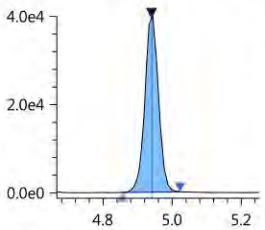

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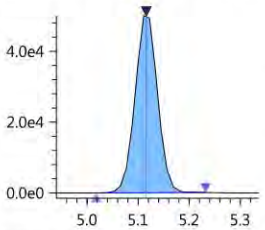
RT 5.116 Area 153609
Q 599.00>79.90 (-) 5.01e4



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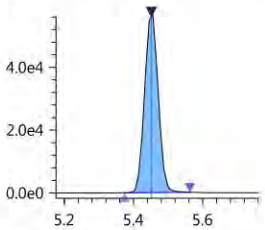

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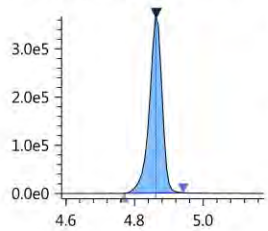
Q 531.00>351.00 (-) 3.68e5



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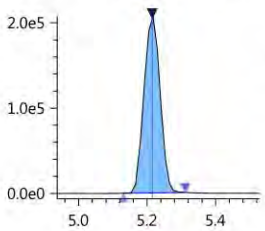

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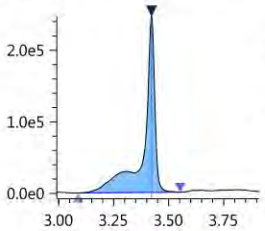

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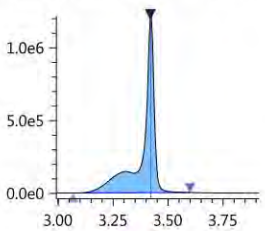

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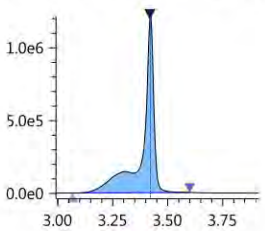

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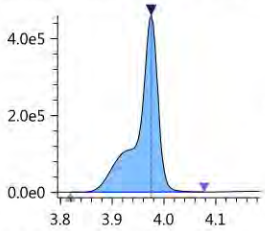

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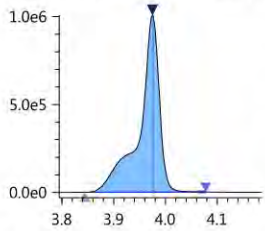

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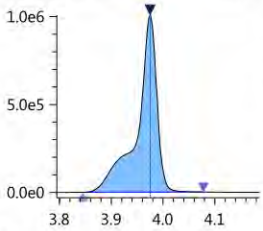

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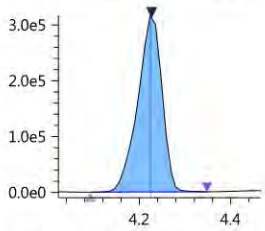

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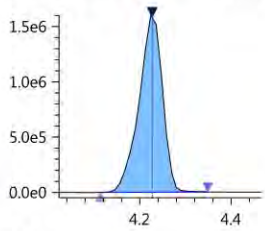

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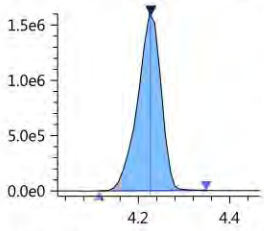

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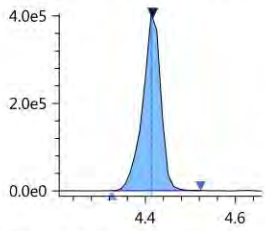

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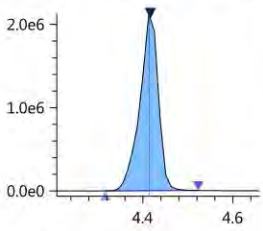

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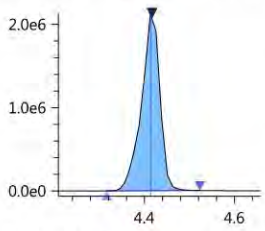

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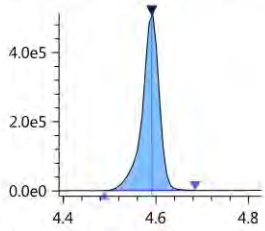

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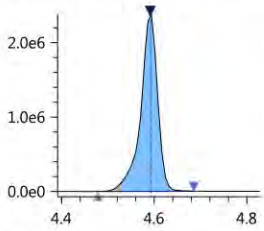

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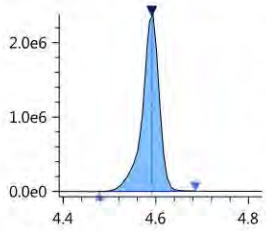

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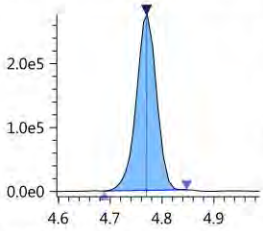

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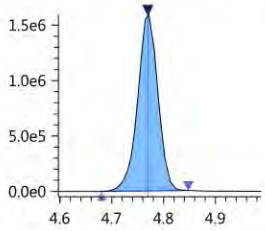

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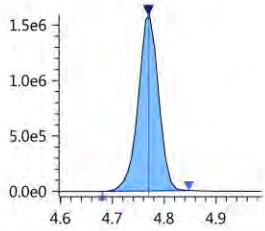

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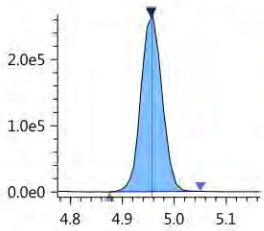
Q 513.00>468.80 (-) 2.68e5



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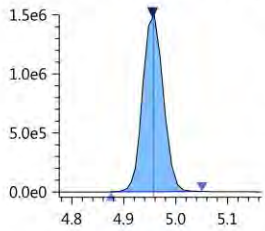

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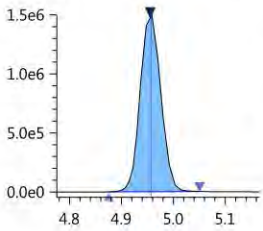

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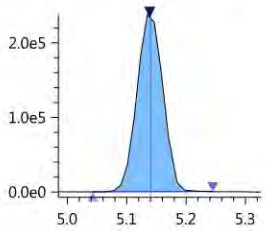

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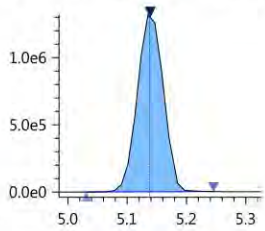

Insight Report

PFUnA-13C_IS
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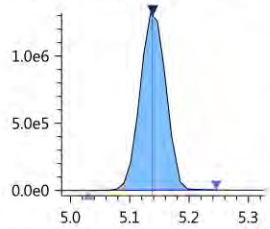

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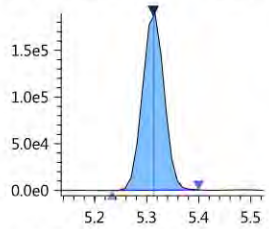
RT 5.313 Area 552898
Q 613.05>569.00 (-) 1.90e5



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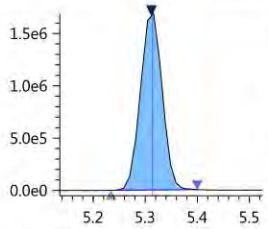
RT 5.312 Area 4917528
Q 614.80>569.95 (-) 1.69e6



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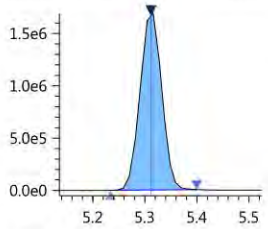

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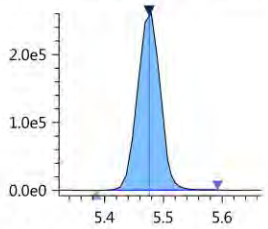

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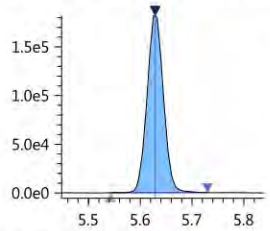
Q 713.40>669.00 (-) 1.82e5



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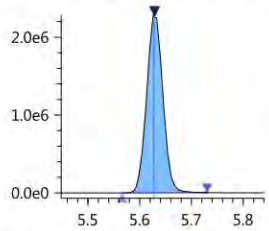

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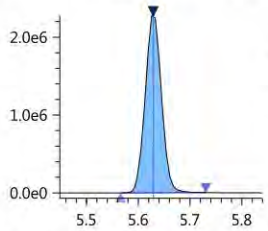

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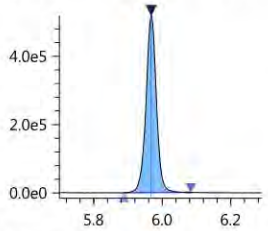

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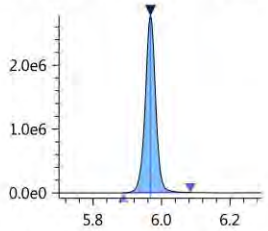

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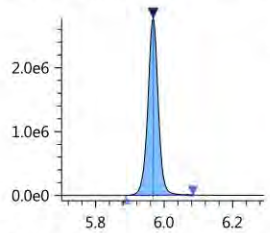

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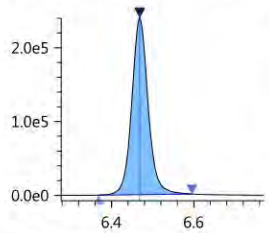

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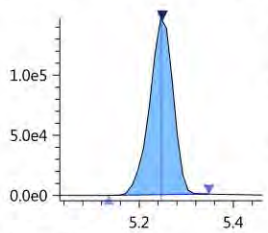

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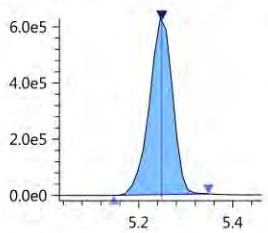
RT 5.249 Area 2153959
Q 506.00>78.05 (-) 6.31e5



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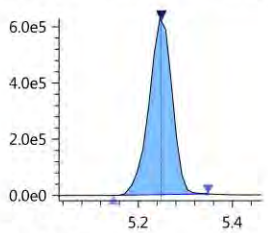

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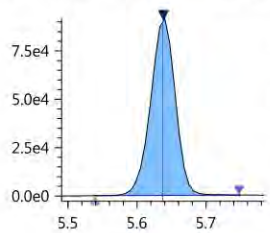

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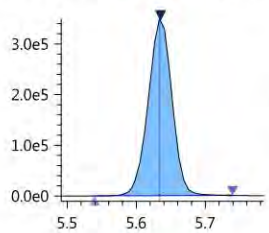

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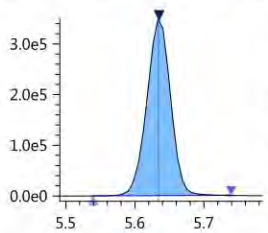

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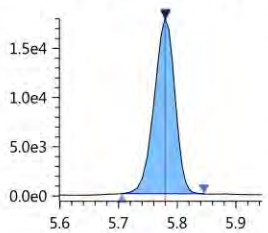

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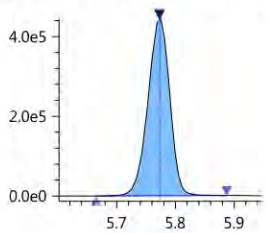
Q 530.90>169.15 (-) 4.45e5



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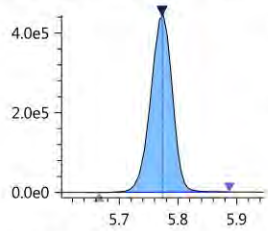
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.773 Area 1150968
ISTD 530.90>169.15 (-) 4.45e5



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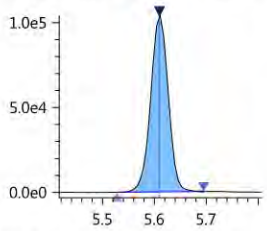

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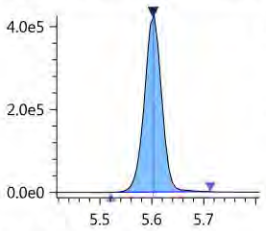

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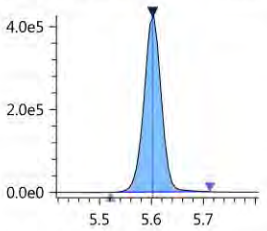

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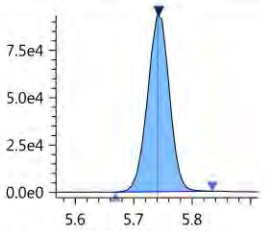

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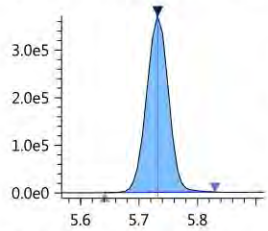

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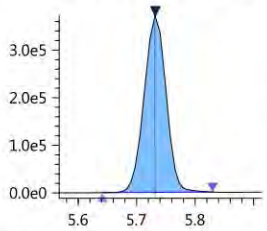

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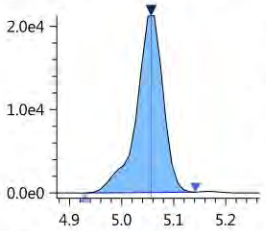
Q 570.20>419.00 (-) 2.13e4



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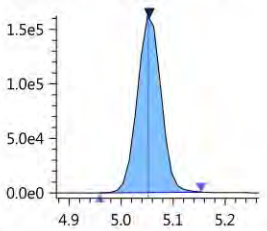
Conc 4.6495
RT 5.054 Area 517345
Q 572.80>419.05 (-) 1.63e5



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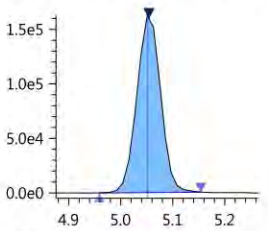
ISTD 572.80>419.05 (-) 1.63e5



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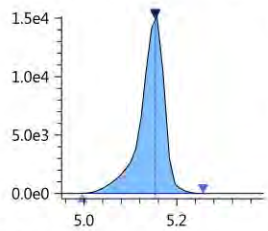

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Conc 5.9682
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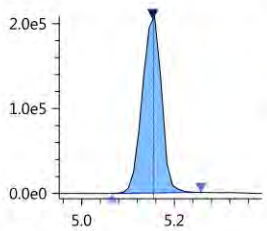
Q 588.80>419.00 (-) 2.09e5



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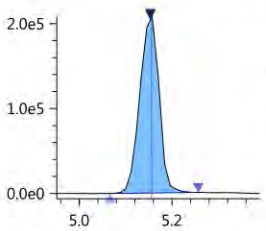

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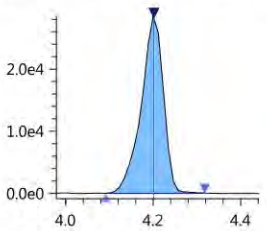
Q 327.00>307.05 (-) 2.85e4



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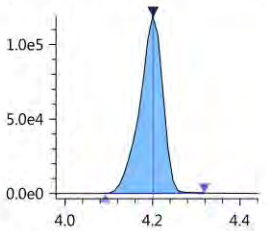
Conc 4.6699
RT 4.201 Area 435336
Q 328.80>309.05 (-) 1.19e5



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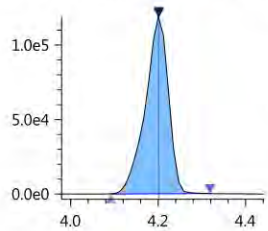

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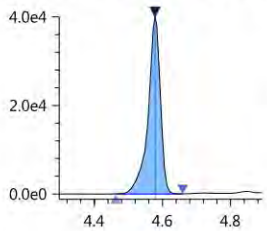

6_2-FTS-13C
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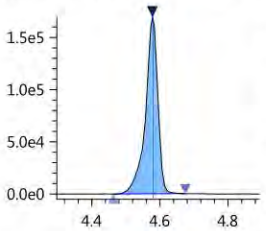
Q 428.90>409.00 (-) 1.70e5



6_2-FTS-13C_IS
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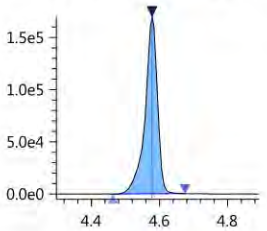
ISTD 428.90>409.00 (-) 1.70e5



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Conc 1.1972
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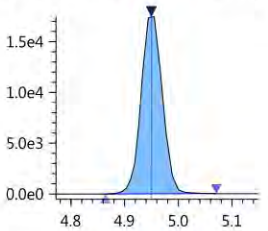
Q 527.10>506.90 (-) 1.75e4



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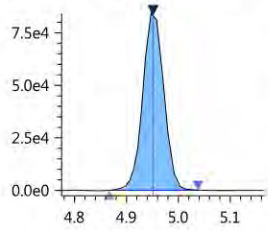
8_2-FTS-13C
Conc 4.7805
RT 4.951 Area 239431
Q 528.80>509.00 (-) 8.43e4



8_2-FTS-13C_IS
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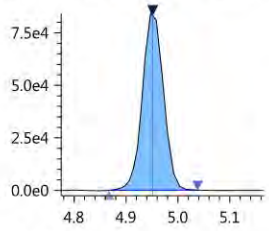
ISTD 528.80>509.00 (-) 8.43e4



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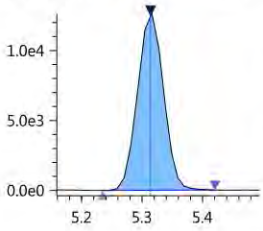
RT 5.314 Area 37777
Q 627.00>606.95 (-) 1.27e4



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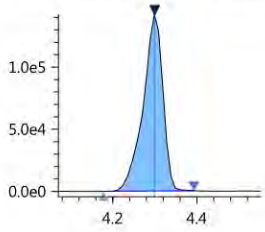
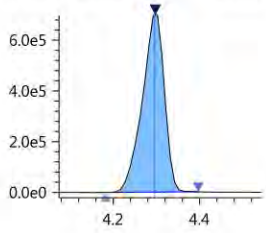
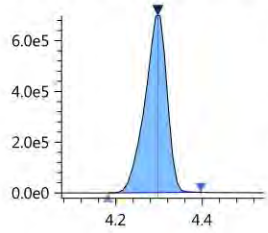
Q 329.00>169.00 (-) 1.43e5



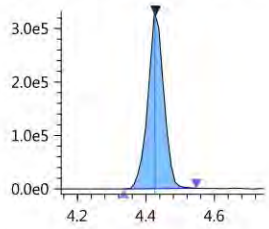
HFPO_DA-13C
Conc 4.9088
RT 4.298 Area 2495728
Q 332.00>286.80 (-) 6.99e5



HFPO_DA-13C_IS
Conc 5.0000
RT 4.298 Area 2495728
ISTD 332.00>286.80 (-) 6.99e5



ADONA
Conc 0.9165
RT 4.428 Area 1060841
Q 377.00>251.00 (-) 3.32e5



Insight Report

Printed at 8/8/2019 9:54:02 AM

190807_016

Sample ID: 5.0 PPB ICAL
Date acquired: 8/7/2019 6:06:30 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_016.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.131	4656132	4656132	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.018	1427672	1204717	2	4.1139	ng/mL	4.4368
PFBS-13C	Auto	4.020	1201444	4656132	1	5.3883	ng/mL	5.0000
PFBS-13C_IS	Auto	4.020	1204717	1204717	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.237	692918	1204717	2	4.7445	ng/mL	4.7046
PFHxS_1	Auto	4.402	701835	601456	3	4.2023	ng/mL	4.5654
PFHxS-18O	Auto	4.408	601456	4656132	1	4.7132	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.408	601456	601456	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.577	975386	601456	3	5.4756	ng/mL	4.7672
PFOS_1	Auto	4.753	658108	860992	4	4.3592	ng/mL	4.6461
PFOS-13C	Auto	4.753	866487	4656132	1	5.6999	ng/mL	5.0000
PFOS-13C_IS	Auto	4.753	860992	860992	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.933	452263	860992	4	4.6922	ng/mL	4.8079
PFDS_1	Auto	5.111	580637	860992	4	4.1157	ng/mL	4.8233
PFDOS	Auto	5.447	573735	860992	4	3.3247	ng/mL	4.0327
9Cl-PF3ONS	Auto	4.856	4697384	2519515	26	4.3619	ng/mL	4.4098
11Cl-PF3OUdS	Auto	5.209	4637724	2519515	26	4.8078	ng/mL	4.1593
PFBA	Auto	3.417	3928530	3996103	5	4.8028	ng/mL	5.0000
PFBA-13C	Auto	3.413	3996103	4656132	1	5.2812	ng/mL	5.0000
PFBA-13C_IS	Auto	3.413	3996103	3996103	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.968	5376811	2545671	6	4.8403	ng/mL	5.0000
PFPeA-13C	Auto	3.968	2545671	4656132	1	5.3473	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.968	2545671	2545671	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.220	4811542	4676970	7	4.9626	ng/mL	5.0000
PFHxA-13C	Auto	4.220	4676970	4656132	1	4.9970	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.220	4676970	4676970	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.408	4178776	5326527	8	4.6390	ng/mL	5.0000
PFHpA-13C	Auto	4.408	5326527	4656132	1	4.8558	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.408	5326527	5326527	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.584	5707246	5453763	9	4.7112	ng/mL	5.0000
PFOA-13C	Auto	4.584	5453763	4656132	1	5.4898	ng/mL	5.0000
PFOA-13C_IS	Auto	4.584	5453763	5453763	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.765	3815532	4480851	10	4.7245	ng/mL	5.0000
PFNA-13C	Auto	4.764	4480851	4656132	1	5.6777	ng/mL	5.0000
PFNA-13C_IS	Auto	4.764	4480851	4480851	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.950	3214107	3448261	11	4.5980	ng/mL	5.0000
PFDA-13C	Auto	4.950	3448261	4656132	1	5.1975	ng/mL	5.0000
PFDA-13C_IS	Auto	4.950	3448261	3448261	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.131	3201180	3572309	12	5.0582	ng/mL	5.0000
PFUnA-13C	Auto	5.131	3572309	4656132	1	4.9679	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.131	3572309	3572309	12	5.0000	ng/mL	5.0000
PFDoA	M	5.308	2695113	4266694	13	5.0880	ng/mL	5.0000
PFDoA-13C	Auto	5.308	4266694	4656132	1	5.5087	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.308	4266694	4266694	13	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.472	3446468	4580217	14	5.2662	ng/mL	5.0000
PFTeDA	Auto	5.624	1585285	4580217	14	4.8510	ng/mL	5.0000
PFTeDA-13C	Auto	5.624	4580217	4656132	1	5.3675	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.624	4580217	4580217	14	5.0000	ng/mL	5.0000
PFHxDA	Auto	5.962	5259978	5762797	15	4.8948	ng/mL	5.0000
13C-PFHxDA	Auto	5.962	5762797	4656132	1	5.5155	ng/mL	5.0000
13C-PFHxDA_IS	Auto	5.962	5762797	5762797	15	5.0000	ng/mL	5.0000
PFODA	Auto	6.465	3275030	5762797	15	4.7708	ng/mL	5.0000
FOSA	Auto	5.244	2283825	1878285	16	4.8303	ng/mL	5.0000
FOSA-13C	Auto	5.244	1878285	4656132	1	5.2978	ng/mL	5.0000
FOSA-13C_IS	Auto	5.244	1878285	1878285	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.633	1117738	734944	17	4.8275	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.630	734944	4656132	1	5.2833	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.630	734944	734944	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.774	202917	1102367	18	4.8038	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.767	1102367	4656132	1	5.3214	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.767	1102367	1102367	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.605	1146164	918697	19	4.9701	ng/mL	5.0000
N-MeFOSE-d7	Auto	5.598	918697	4656132	1	5.3762	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.598	918697	918697	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.738	1044908	924878	20	4.6197	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.727	924878	4656132	1	5.3727	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.727	924878	924878	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.048	329515	529415	21	4.5561	ng/mL	5.0000

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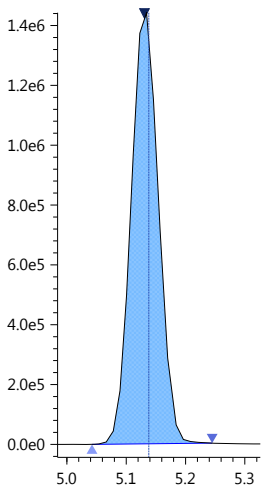
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-MeFOSAA-d3	Auto	5.046	529415	4656132	1	5.1742	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.046	529415	529415	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.152	262253	460548	22	4.4002	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.146	460548	4656132	1	4.9816	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.146	460548	460548	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.192	497103	460825	23	4.3380	ng/mL	4.6861
4_2-FTS-13C	Auto	4.192	460825	4656132	1	5.3757	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.192	460825	460825	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.571	501761	443803	24	4.6494	ng/mL	4.7558
6_2-FTS-13C	Auto	4.571	443803	4656132	1	5.4922	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.571	443803	443803	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.943	168073	238003	25	4.0345	ng/mL	4.8002
8_2-FTS-13C	Auto	4.944	238003	4656132	1	5.1676	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.944	238003	238003	25	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.309	216818	238003	25	5.7620	ng/mL	4.8310
HPFO_DA	Auto	4.291	2250849	2519515	26	4.7956	ng/mL	5.0000
HFPO_DA-13C	Auto	4.291	2519515	4656132	1	5.3890	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.291	2519515	2519515	26	5.0000	ng/mL	5.0000
ADONA	Auto	4.426	5928385	2519515	26	5.0733	ng/mL	4.7253

13C7-PFUnDA_IS

Conc 5.0000
RT 5.131 Area 4656132

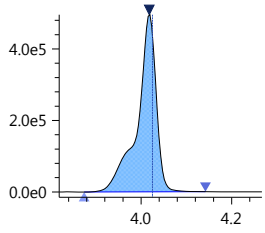
ISTD 570.00>525.00 (-) 1.44e6



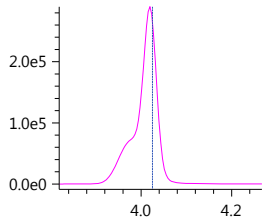
PFBS_1

Conc 4.1139
RT 4.018 Area 1427672
R#1 55.69 (0.00)

Q 299.00>80.00 (-) 4.96e5



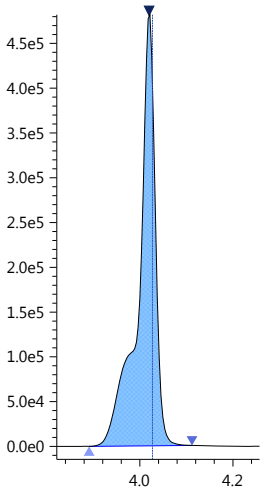
R1 298.80>99.00 (-) 2.90e5



PFBS-13C

Conc 5.3883
RT 4.020 Area 1201444

Q 301.80>80.00 (-) 4.82e5



PFBS-13C_IS

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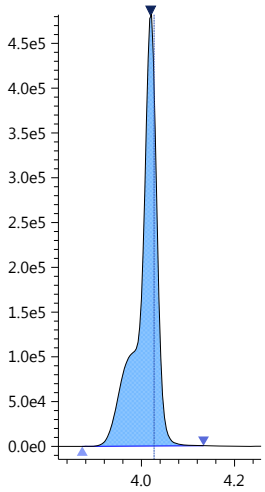
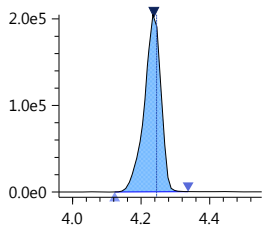


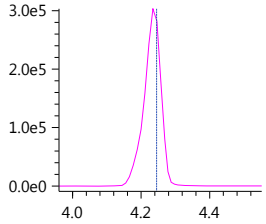
PFPeS

Conc 4.7445
RT 4.237 Area 692918
R#1 147.73 (0.00)

Q 349.00>99.00 (-) 2.05e5



R1 349.00>79.95 (-) 3.03e5



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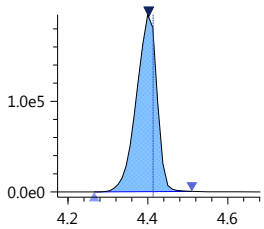
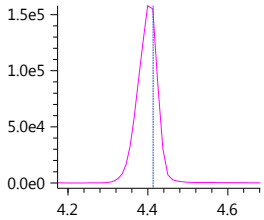
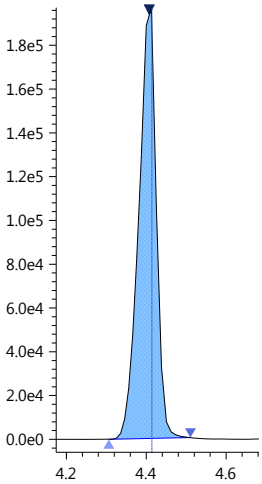
PFHxS_1
Conc 4.2023
RT 4.402 Area 701835
R#1 80.81 (0.00)
Q 399.00>80.00 (-) 1.96e5



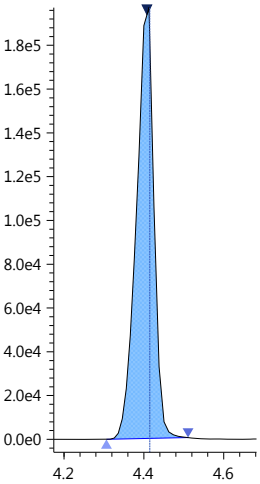
R1 399.00>99.00 (-) 1.58e5



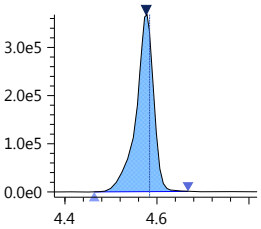
PFHxS-18O
Conc 4.7132
RT 4.408 Area 601456
Q 402.70>84.05 (-) 1.97e5



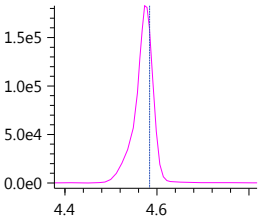
PFHxS-18O_IS
Conc 5.0000
RT 4.408 Area 601456
ISTD 402.70>84.05 (-) 1.97e5



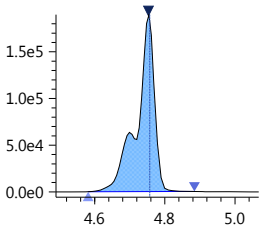
PFHpS_1
Conc 5.4756
RT 4.577 Area 975386
R#1 50.65 (0.00)
Q 449.00>80.15 (-) 3.68e5



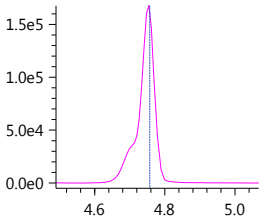
R1 449.00>99.20 (-) 1.83e5



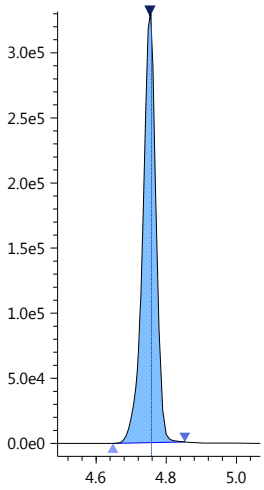
PFOS_1
Conc 4.3592
RT 4.753 Area 658108
R#1 88.32 (0.00)
Q 499.00>80.00 (-) 1.90e5



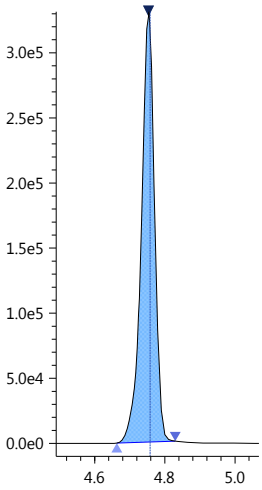
R1 499.00>99.00 (-) 1.68e5



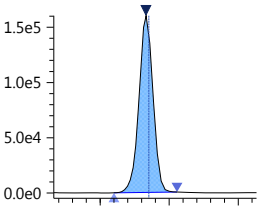
PFOS-13C
Conc 5.6999
RT 4.753 Area 866487
Q 502.80>80.05 (-) 3.32e5



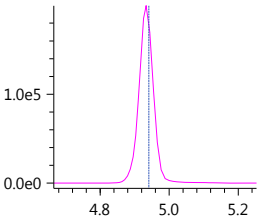
PFOS-13C_IS
Conc 5.0000
RT 4.753 Area 860992
ISTD 502.80>80.05 (-) 3.32e5



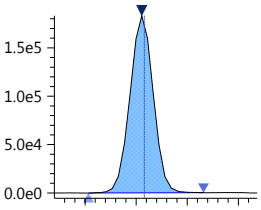
PFNS
Conc 4.6922
RT 4.933 Area 452263
R#1 124.41 (0.00)
Q 549.00>99.00 (-) 1.60e5



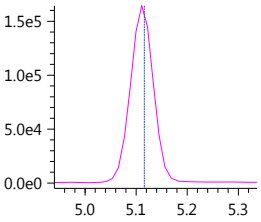
R1 549.00>79.95 (-) 2.00e5



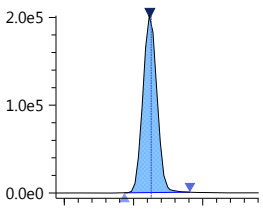
PFDS_1
Conc 4.1157
RT 5.111 Area 580637
R#1 89.25 (0.00)
Q 599.00>79.90 (-) 1.83e5



R1 599.00>99.10 (-) 1.64e5



PFDOS
Conc 3.3247
RT 5.447 Area 573735
R#1 53.53 (0.00)
Q 699.00>79.95 (-) 2.02e5



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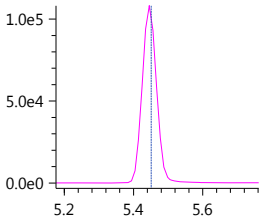

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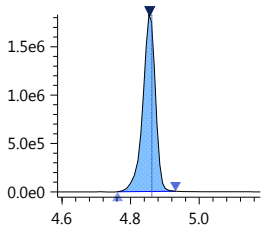
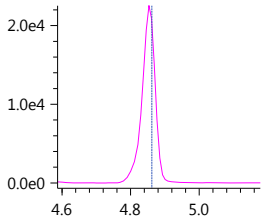
9Cl-PF3ONS

Conc 4.3619
RT 4.856 Area 4697384
R#1 1.23 (0.00)

Q 531.00>351.00 (-) 1.83e6



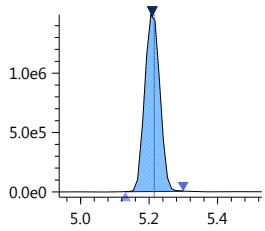
R1 531.00>98.90 (-) 2.25e4



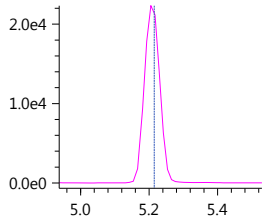
11Cl-PF3OUdS

Conc 4.8078
RT 5.209 Area 4637724
R#1 1.50 (0.00)

Q 631.00>451.05 (-) 1.49e6



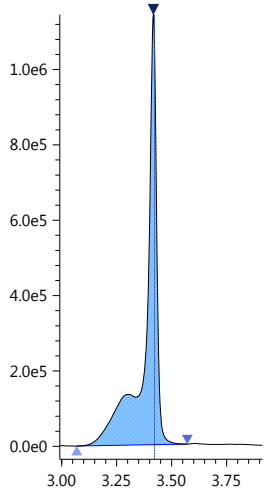
R1 631.00>98.90 (-) 2.23e4



PFBA

Conc 4.8028
RT 3.417 Area 3928530

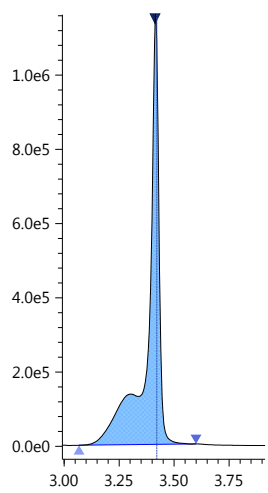
Q 213.00>169.10 (-) 1.15e6



PFBA-13C

Conc 5.2812
RT 3.413 Area 3996103

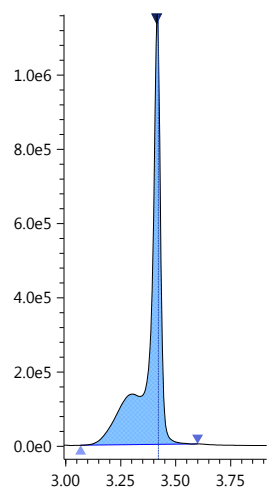
Q 216.90>172.15 (-) 1.16e6



PFBA-13C_IS

Conc 5.0000
RT 3.413 Area 3996103

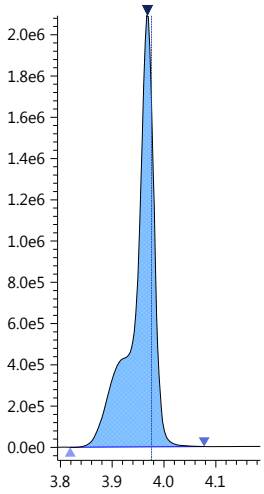
ISTD 216.90>172.15 (-) 1.16e6



PFPeA

Conc 4.8403
RT 3.968 Area 5376811

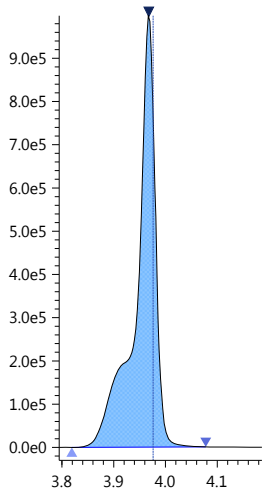
Q 263.05>219.10 (-) 2.09e6



PFPeA-13C

Conc 5.3473
RT 3.968 Area 2545671

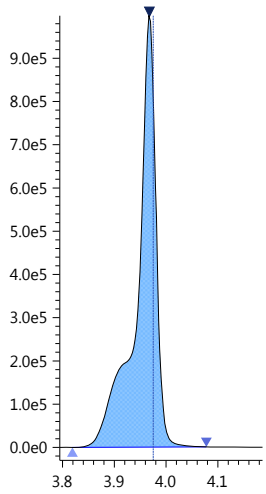
Q 267.90>223.00 (-) 9.98e5



PFPeA-13C_IS

Conc 5.0000
RT 3.968 Area 2545671

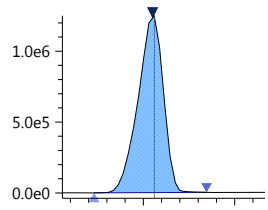
ISTD 267.90>223.00 (-) 9.98e5



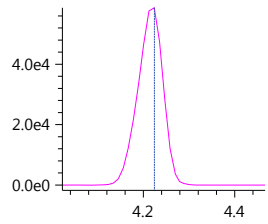
PFHxA

Conc 4.9626
RT 4.220 Area 4811542
R#1 4.81 (0.00)

Q 313.00>269.00 (-) 1.25e6



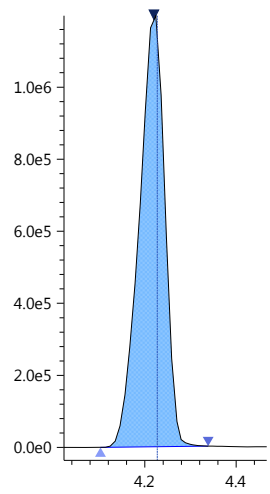
R1 313.00>119.10 (-) 5.87e4



PFHxA-13C

Conc 4.9970
RT 4.220 Area 4676970

Q 314.90>270.10 (-) 1.20e6



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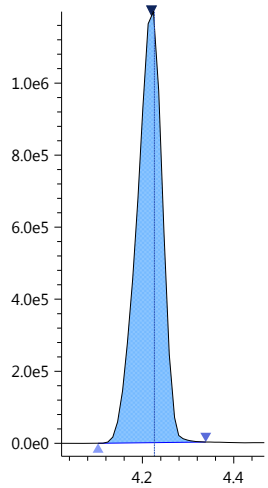
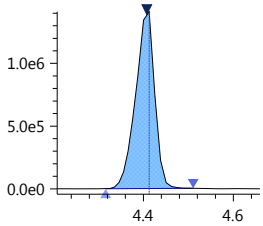
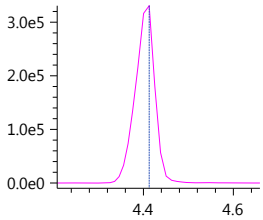
PFHxA-13C_IS
Conc 5.0000
RT 4.220 Area 4676970
ISTD 314.90>270.10 (-) 1.20e6



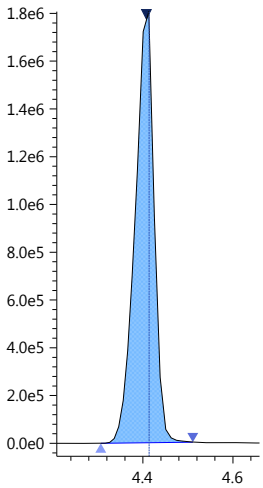
PFHpA
Conc 4.6390
RT 4.408 Area 4178776
R#1 23.59 (0.00)
Q 362.90>319.00 (-) 1.41e6



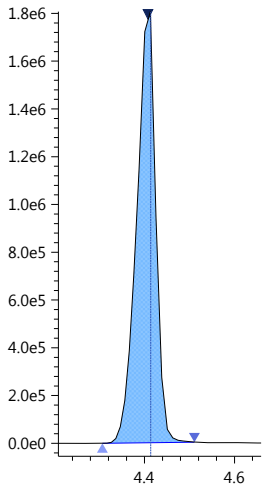
R1 362.90>169.00 (-) 3.31e5



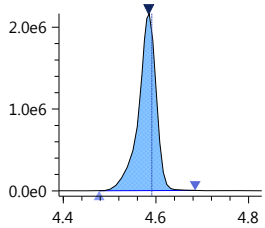
PFHpA-13C
Conc 4.8558
RT 4.408 Area 5326527
Q 366.90>322.10 (-) 1.81e6



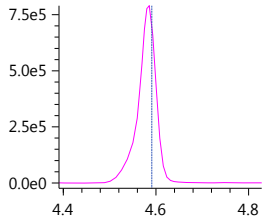
PFHpA-13C_IS
Conc 5.0000
RT 4.408 Area 5326527
ISTD 366.90>322.10 (-) 1.81e6



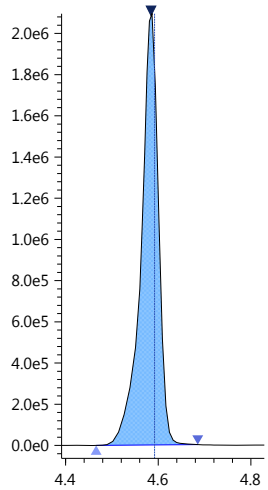
PFOA
Conc 4.7112
RT 4.584 Area 5707246
R#1 36.33 (0.00)
Q 413.00>369.00 (-) 2.17e6



R1 413.00>169.10 (-) 7.90e5



PFOA-13C
Conc 5.4898
RT 4.584 Area 5453763
Q 416.80>372.05 (-) 2.10e6



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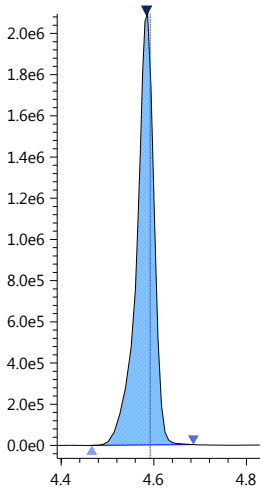
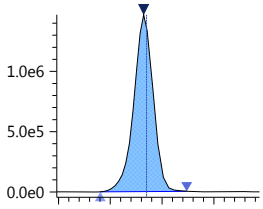
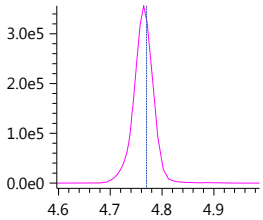
Conc 5.0000
RT 4.584 Area 5453763
ISTD 416.80>372.05 (-) 2.10e6



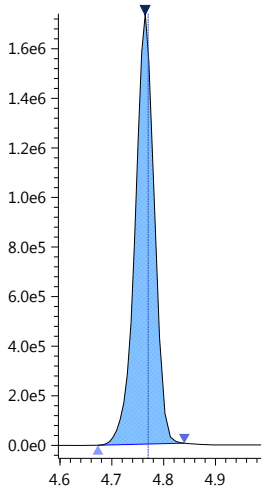
PFNA
Conc 4.7245
RT 4.765 Area 3815532
R#1 24.25 (0.00)
Q 463.00>418.90 (-) 1.47e6



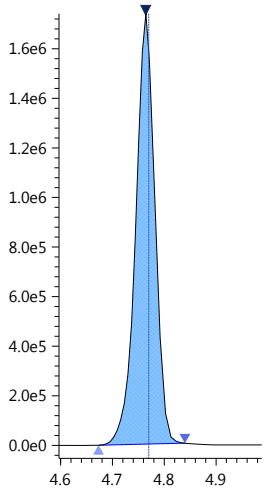
R1 463.00>219.00 (-) 3.56e5



PFNA-13C
Conc 5.6777
RT 4.764 Area 4480851
Q 467.80>423.00 (-) 1.74e6



PFNA-13C_IS
Conc 5.0000
RT 4.764 Area 4480851
ISTD 467.80>423.00 (-) 1.74e6



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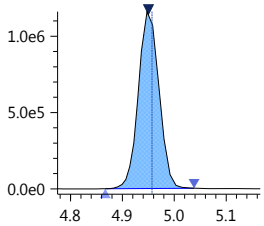
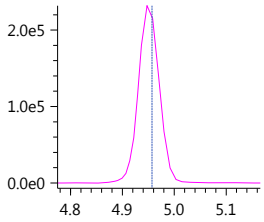
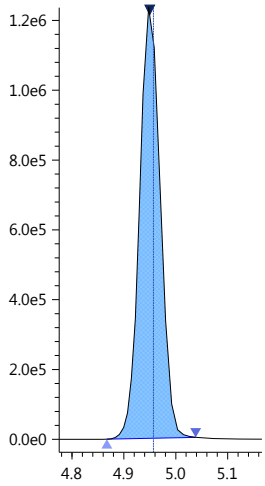
PFDA
Conc 4.5980
RT 4.950 Area 3214107
R#1 19.97 (0.00)
Q 513.00>468.80 (-) 1.16e6



R1 513.00>219.10 (-) 2.32e5



PFDA-13C
Conc 5.1975
RT 4.950 Area 3448261
Q 514.80>469.95 (-) 1.24e6



PFDA-13C_IS
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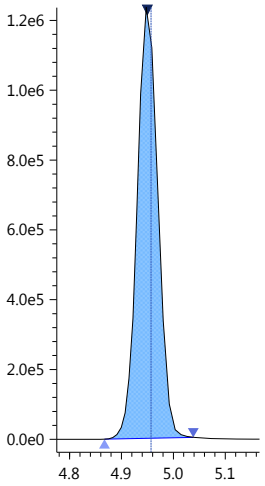
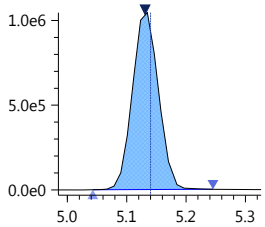
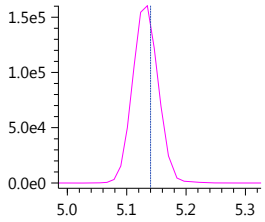
RT 4.950 Area 3448261
ISTD 514.80>469.95 (-) 1.24e6



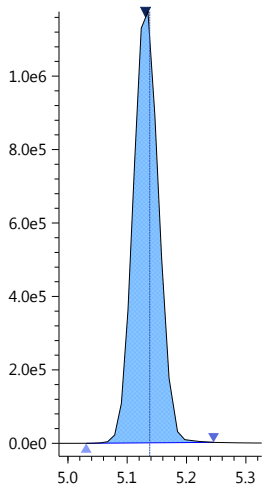
PFUnA
Conc 5.0582
RT 5.131 Area 3201180
R#1 15.34 (0.00)
Q 563.00>518.90 (-) 1.05e6



R1 563.00>219.00 (-) 1.60e5



PFUnA-13C
Conc 4.9679
RT 5.131 Area 3572309
Q 564.80>519.95 (-) 1.18e6



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Conc 5.0000
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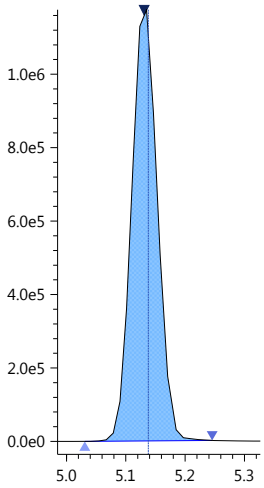
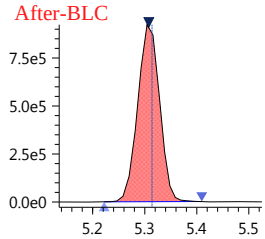
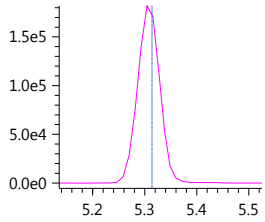
ISTD 564.80>519.95 (-) 1.18e6



PFDoA
Conc 5.0880
RT 5.308 Area 2695113
R#1 19.74 (0.00)
Q 613.05>569.00 (-) 9.23e5



R1 613.05>169.00 (-) 1.82e5



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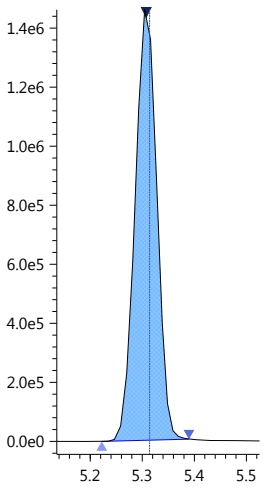
Conc 5.5087
RT 5.308 Area 4266694
Q 614.80>569.95 (-) 1.46e6



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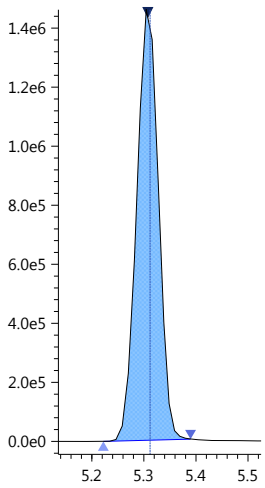
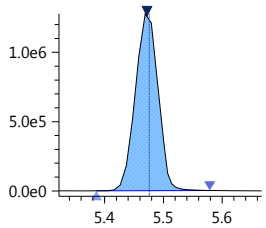
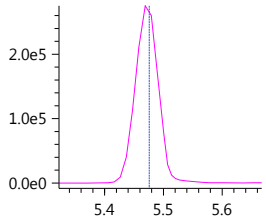
ISTD 614.80>569.95 (-) 1.46e6



PFTrDA
Conc 5.2662
RT 5.472 Area 3446468
R#1 21.49 (0.00)
Q 663.00>618.90 (-) 1.28e6



R1 662.90>169.00 (-) 2.75e5



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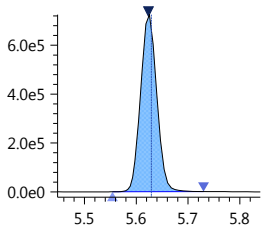
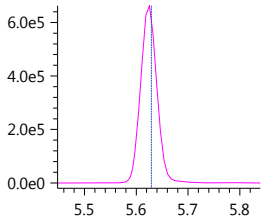
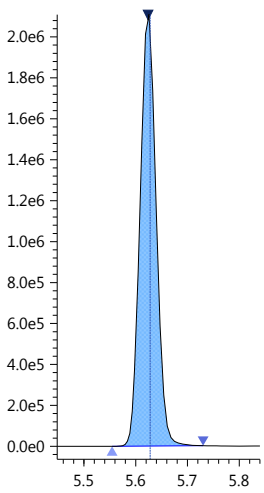
PFTeDA
Conc 4.8510
RT 5.624 Area 1585285
R#1 91.42 (0.00)
Q 713.40>669.00 (-) 7.25e5



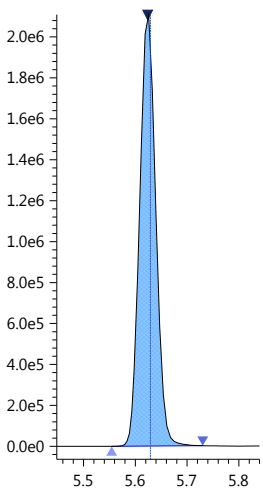
R1 713.40>169.10 (-) 6.63e5



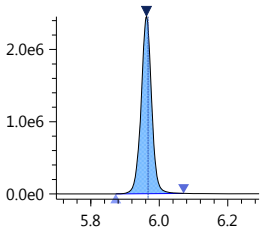
PFTeDA-13C
Conc 5.3675
RT 5.624 Area 4580217
Q 714.70>669.90 (-) 2.11e6



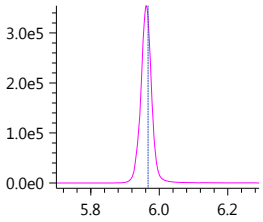
PFTeDA-13C_IS
Conc 5.0000
RT 5.624 Area 4580217
ISTD 714.70>669.90 (-) 2.11e6



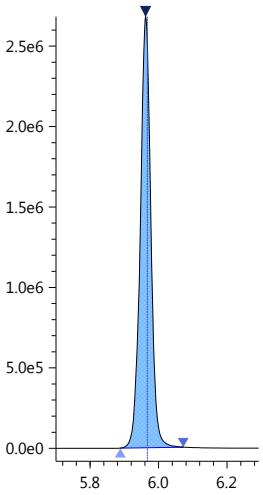
PFHxDA
Conc 4.8948
RT 5.962 Area 5259978
R#1 14.45 (0.00)
Q 813.00>769.05 (-) 2.46e6



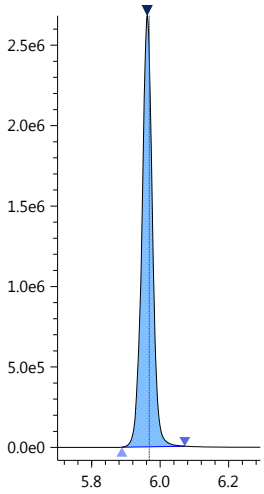
R1 813.00>218.95 (-) 3.55e5



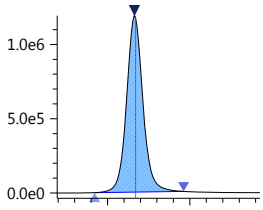
13C-PFHxDA
Conc 5.5155
RT 5.962 Area 5762797
Q 815.00>770.05 (-) 2.68e6



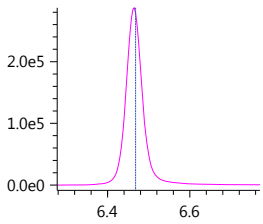
13C-PFHxDA_IS
Conc 5.0000
RT 5.962 Area 5762797
ISTD 815.00>770.05 (-) 2.68e6



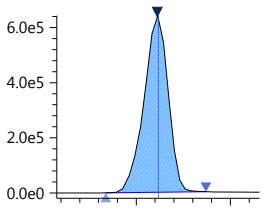
PFODA
Conc 4.7708
RT 6.465 Area 3275030
R#1 24.03 (0.00)
Q 913.00>868.85 (-) 1.19e6



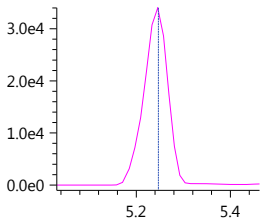
R1 913.00>169.00 (-) 2.87e5



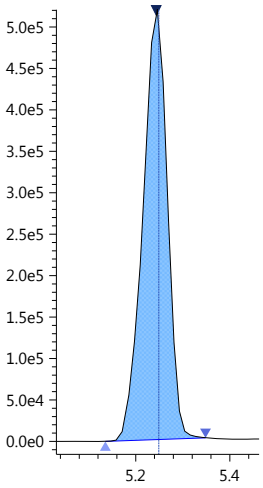
FOSA
Conc 4.8303
RT 5.244 Area 2283825
R#1 5.29 (0.00)
Q 498.20>78.00 (-) 6.43e5



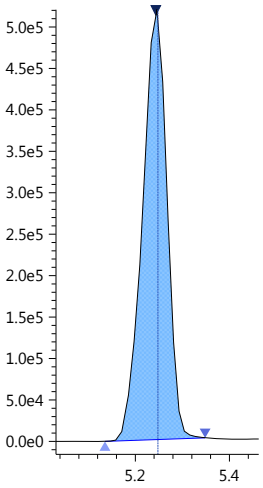
R1 498.20>64.10 (-) 3.40e4



FOSA-13C
Conc 5.2978
RT 5.244 Area 1878285
Q 506.00>78.05 (-) 5.21e5



FOSA-13C_IS
Conc 5.0000
RT 5.244 Area 1878285
ISTD 506.00>78.05 (-) 5.21e5



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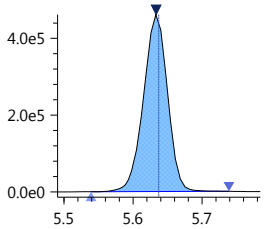
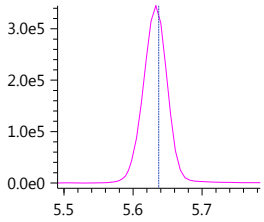
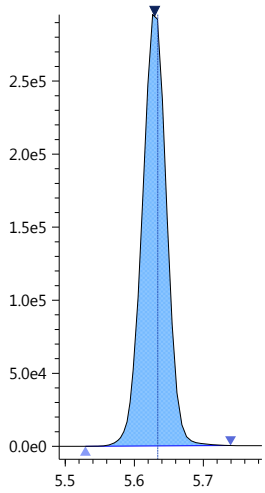
N-MeFOSA
Conc 4.8275
RT 5.633 Area 1117738
R#1 74.64 (0.00)
Q 512.00>169.10 (-) 4.62e5



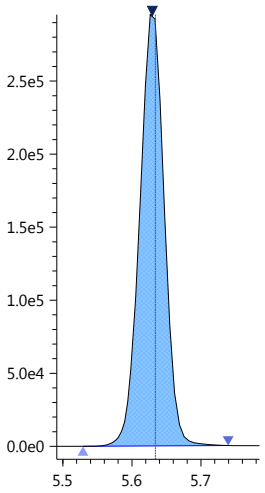
R1 512.00>219.00 (-) 3.45e5



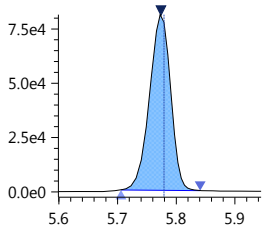
N-MeFOSA-d3
Conc 5.2833
RT 5.630 Area 734944
Q 514.90>168.90 (-) 2.95e5



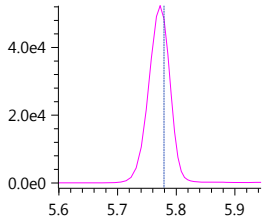
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.630 Area 734944
ISTD 514.90>168.90 (-) 2.95e5



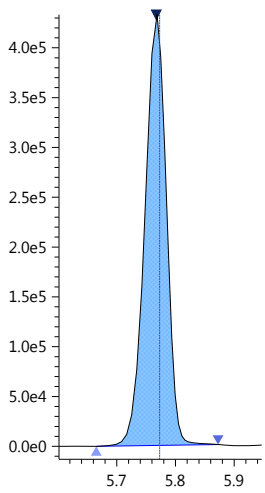
N-EtFOSA
Conc 4.8038
RT 5.774 Area 202917
R#1 64.82 (0.00)
Q 526.90>169.10 (-) 8.16e4



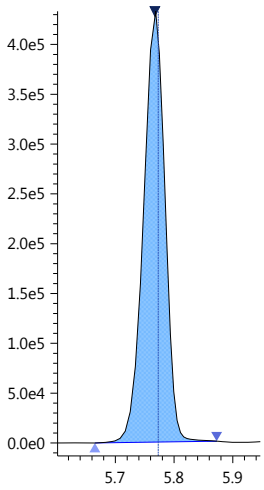
R1 526.90>219.00 (-) 5.23e4



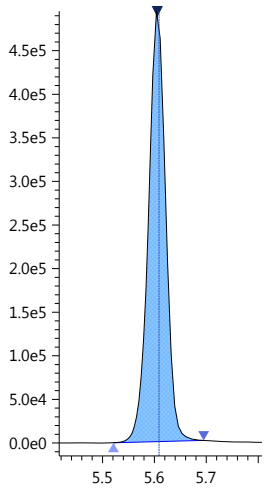
N-EtFOSA-d9
Conc 5.3214
RT 5.767 Area 1102367
Q 530.90>169.15 (-) 4.33e5



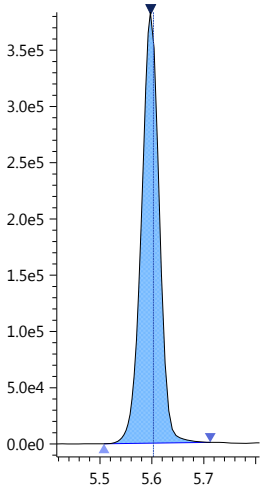
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.767 Area 1102367
ISTD 530.90>169.15 (-) 4.33e5



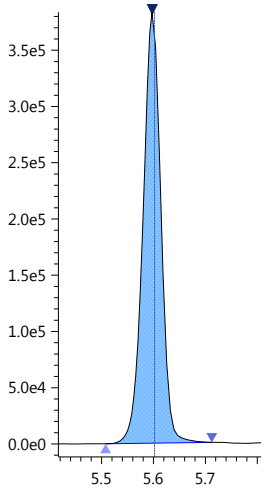
N-MeFOSE
Conc 4.9701
RT 5.605 Area 1146164
Q 616.00>59.00 (-) 4.95e5



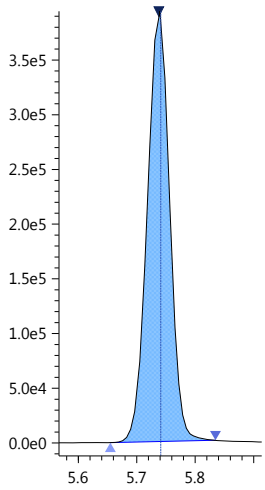
N-MeFOSE-d7
Conc 5.3762
RT 5.598 Area 918697
Q 622.70>59.10 (-) 3.84e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.598 Area 918697
ISTD 622.70>59.10 (-) 3.84e5



N-EtFOSE
Conc 4.6197
RT 5.738 Area 1044908
Q 630.00>58.90 (-) 3.95e5



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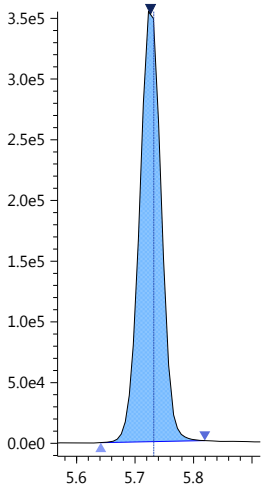
N-EtFOSE-d9

Conc 5.3727
RT 5.727 Area 924878

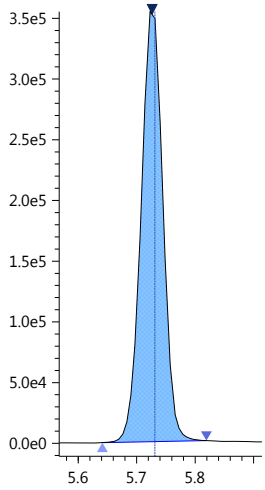
Q 638.70>59.10 (-) 3.56e5



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.727 Area 924878

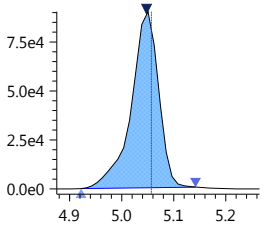
ISTD 638.70>59.10 (-) 3.56e5



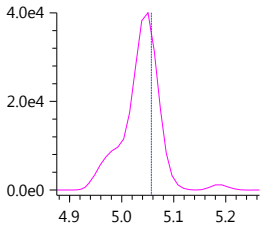
N-MeFOSAA

Conc 4.5561
RT 5.048 Area 329515
R#1 44.40 (0.00)

Q 570.20>419.00 (-) 9.05e4



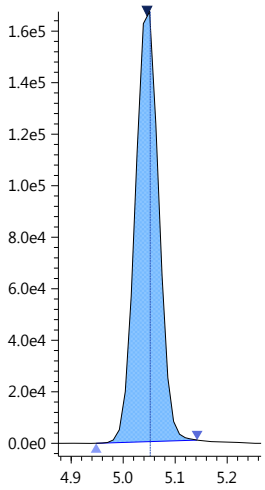
R1 570.20>512.00 (-) 4.00e4



N-MeFOSAA-d3

Conc 5.1742
RT 5.046 Area 529415

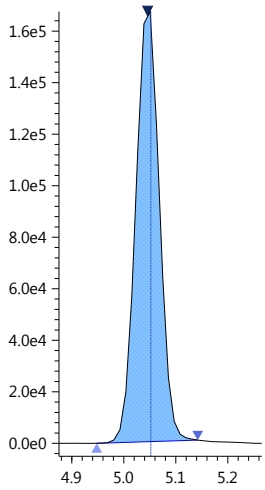
Q 572.80>419.05 (-) 1.68e5



N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.046 Area 529415

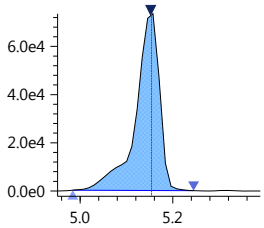
ISTD 572.80>419.05 (-) 1.68e5



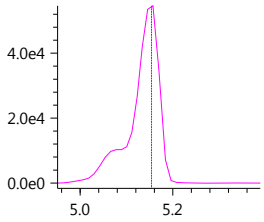
N-EtFOSAA

Conc 4.4002
RT 5.152 Area 262253
R#1 73.95 (0.00)

Q 584.20>418.95 (-) 7.36e4



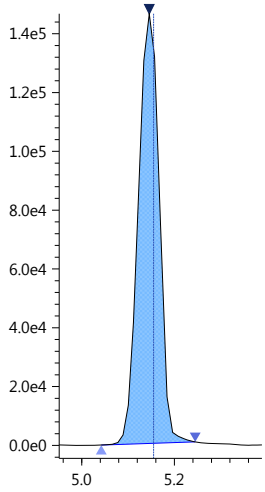
R1 584.20>526.10 (-) 5.46e4



N-EtFOSAA-d5

Conc 4.9816
RT 5.146 Area 460548

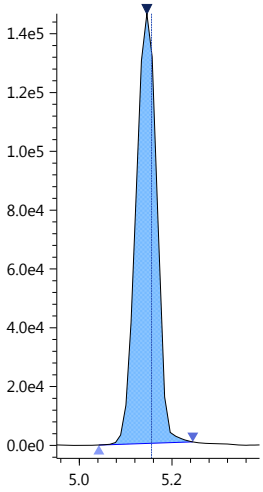
Q 588.80>419.00 (-) 1.47e5



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.146 Area 460548

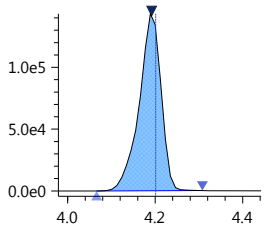
ISTD 588.80>419.00 (-) 1.47e5



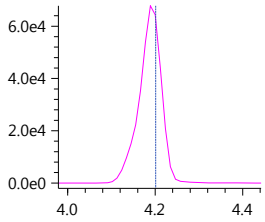
4_2-FTS_1

Conc 4.3380
RT 4.192 Area 497103
R#1 47.30 (0.00)

Q 327.00>307.05 (-) 1.43e5



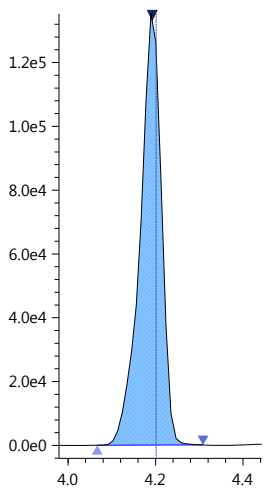
R1 327.00>81.10 (-) 6.78e4



4_2-FTS-13C

Conc 5.3757
RT 4.192 Area 460825

Q 328.80>309.05 (-) 1.35e5



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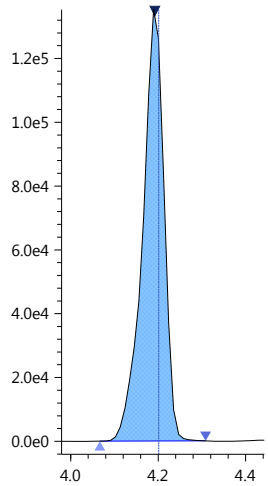
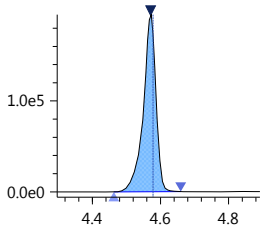
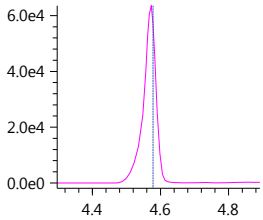
4_2-FTS-13C_IS
Conc 5.0000
RT 4.192 Area 460825
ISTD 328.80>309.05 (-) 1.35e5



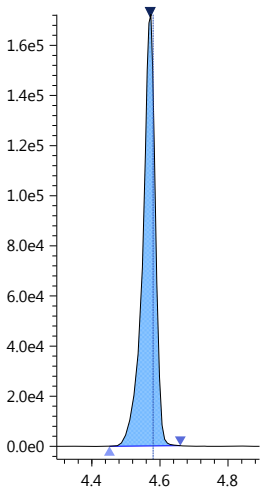
6_2-FTS_1
Conc 4.6494
RT 4.571 Area 501761
R#1 32.04 (0.00)
Q 427.00>407.00 (-) 1.95e5



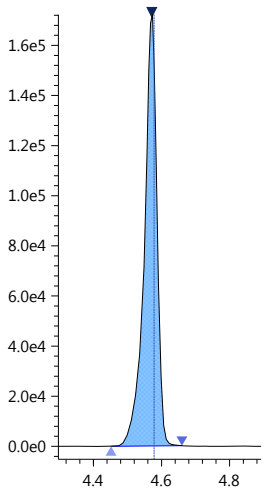
R1 427.00>80.90 (-) 6.36e4



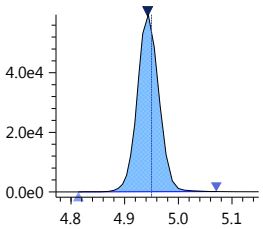
6_2-FTS-13C
Conc 5.4922
RT 4.571 Area 443803
Q 428.90>409.00 (-) 1.72e5



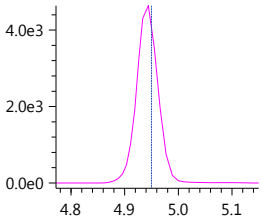
6_2-FTS-13C_IS
Conc 5.0000
RT 4.571 Area 443803
ISTD 428.90>409.00 (-) 1.72e5



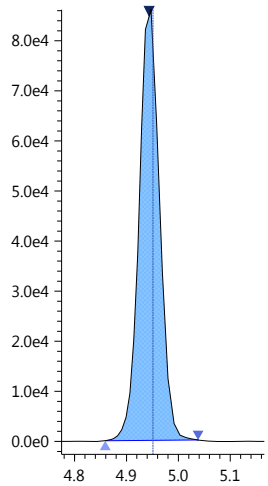
8_2-FTS_1
Conc 4.0345
RT 4.943 Area 168073
R#1 7.74 (0.00)
Q 527.10>506.90 (-) 5.95e4



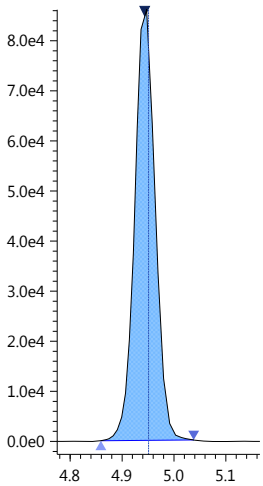
R1 527.20>487.00 (-) 4.64e3



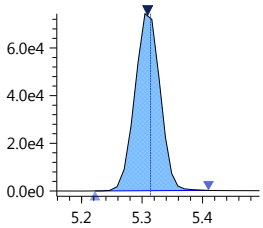
8_2-FTS-13C
Conc 5.1676
RT 4.944 Area 238003
Q 528.80>509.00 (-) 8.62e4



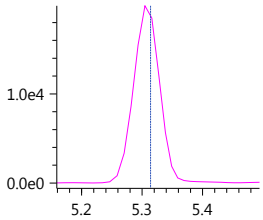
8_2-FTS-13C_IS
Conc 5.0000
RT 4.944 Area 238003
ISTD 528.80>509.00 (-) 8.62e4



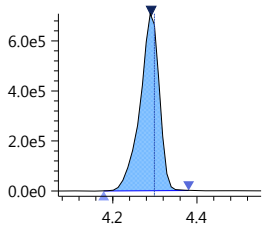
10_2-FtS_1
Conc 5.7620
RT 5.309 Area 216818
R#1 26.80 (0.00)
Q 627.00>606.95 (-) 7.44e4



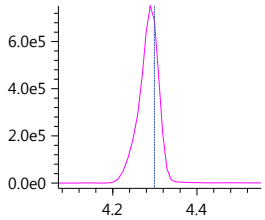
R1 627.00>81.25 (-) 1.99e4



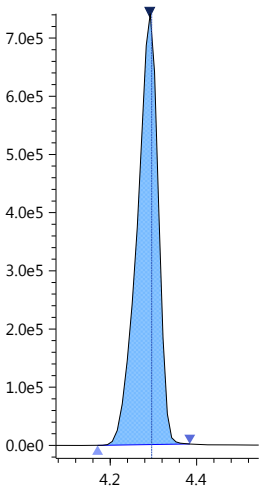
HPFO_DA
Conc 4.7956
RT 4.291 Area 2250849
R#1 106.01 (0.00)
Q 329.00>169.00 (-) 7.09e5



R1 329.00>285.10 (-) 7.52e5



HFPO_DA-13C
Conc 5.3890
RT 4.291 Area 2519515
Q 332.00>286.80 (-) 7.42e5



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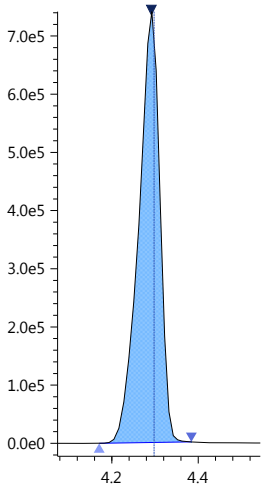
Printed at 8/8/2019 9:54:02 AM

HFPO_DA-13C_IS

Conc 5.0000
RT 4.291 Area 2519515

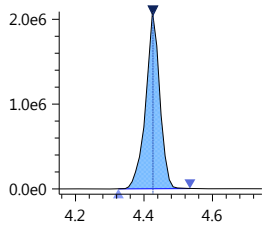
ISTD 332.00>286.80 (-) 7.42e5



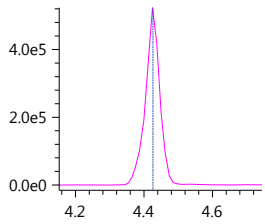
ADONA

Conc 5.0733
RT 4.426 Area 5928385
R#1 25.08 (0.00)

Q 377.00>251.00 (-) 2.09e6



R1 377.00>84.95 (-) 5.24e5



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Printed at 8/8/2019 8:44:13 AM

190807_016

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Date acquired: 8/7/2019 6:06:30 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_016.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 0

13C7-PFUnDA_IS
Conc 5.0000
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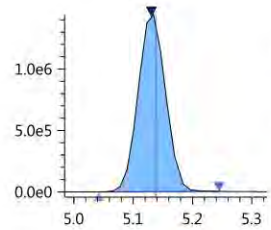
ISTD 570.00>525.00 (-) 1.44e6



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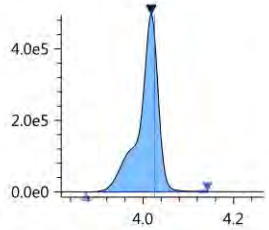
Conc 4.1139
RT 4.018 Area 1427672
Q 299.00>80.00 (-) 4.96e5



PFBS-13C
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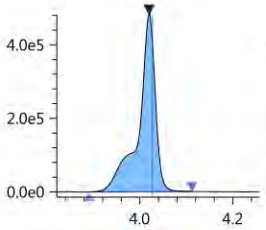
RT 4.020 Area 1201444
Q 301.80>80.00 (-) 4.82e5



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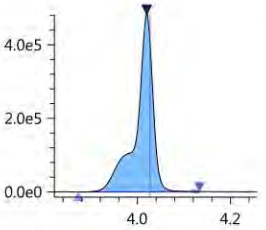

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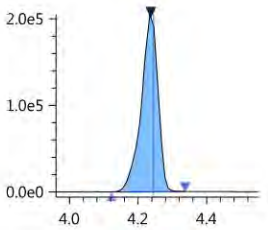
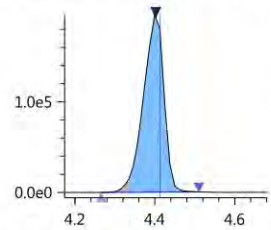
Conc 4.8131
RT 4.237 Area 692918
Q 349.00>99.00 (-) 2.05e5



PFHxS_1
Conc 4.2080
RT 4.402 Area 701835
Q 399.00>80.00 (-) 1.96e5



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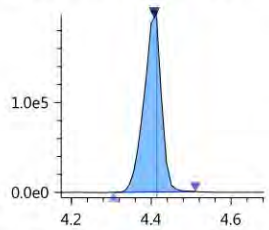
Q 402.70>84.05 (-) 1.97e5



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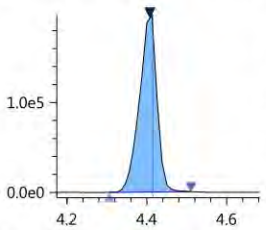

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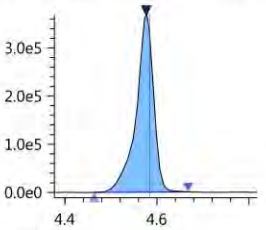

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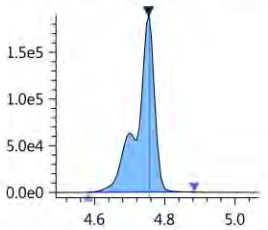
Q 499.00>80.00 (-) 1.90e5



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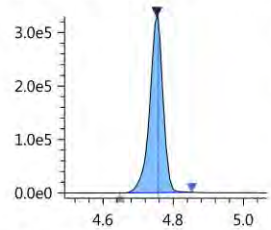

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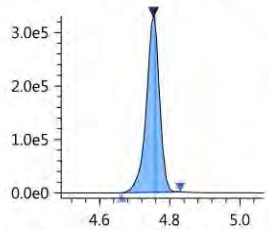

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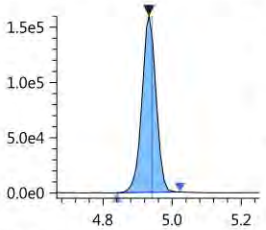
Q 549.00>99.00 (-) 1.60e5



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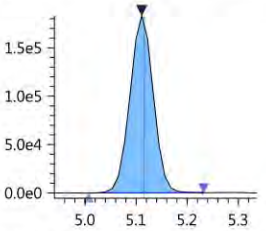
RT 5.111 Area 580637
Q 599.00>79.90 (-) 1.83e5



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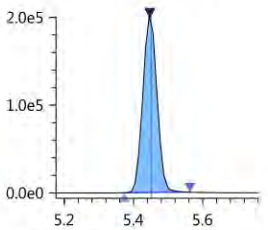

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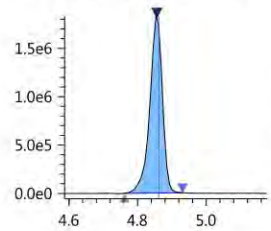
RT 4.856 Area 4697384
Q 531.00>351.00 (-) 1.83e6



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RT 5.209 Area 4637724
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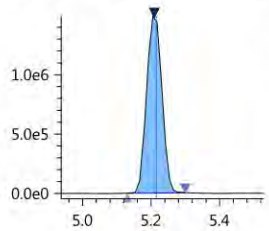

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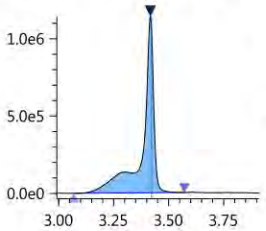
Q 213.00>169.10 (-) 1.15e6



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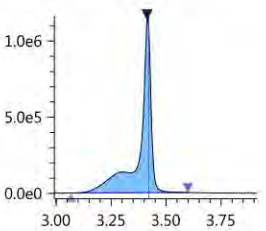
Q 216.90>172.15 (-) 1.16e6



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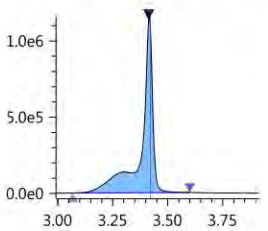
ISTD 216.90>172.15 (-) 1.16e6



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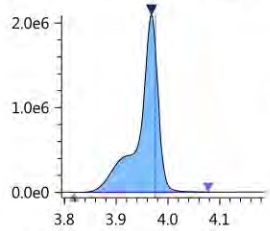

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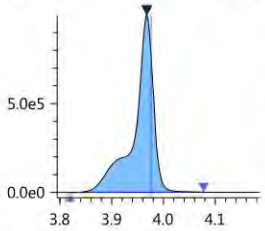
Q 267.90>223.00 (-) 9.98e5



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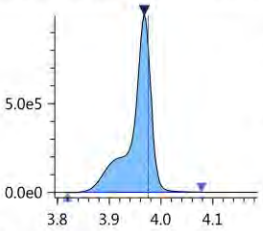

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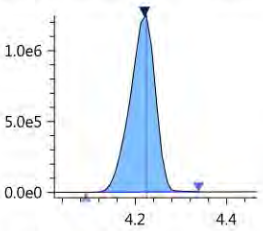
RT 4.220 Area 4811542
Q 313.00>269.00 (-) 1.25e6



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RT 4.220 Area 4676970
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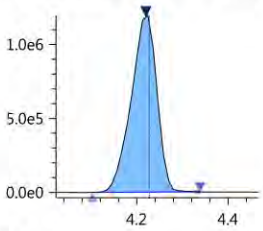

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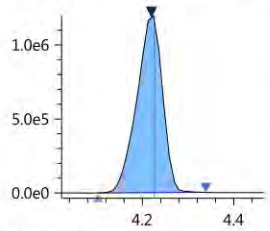

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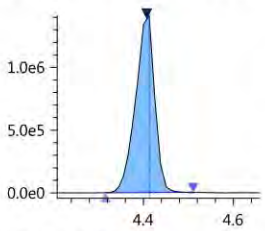
RT 4.408 Area 4178776
Q 362.90>319.00 (-) 1.41e6



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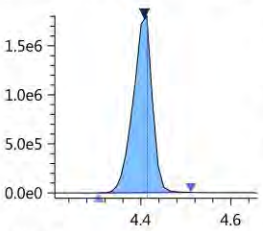

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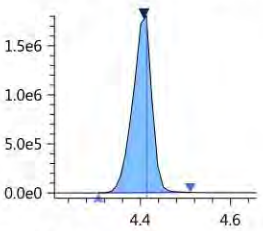

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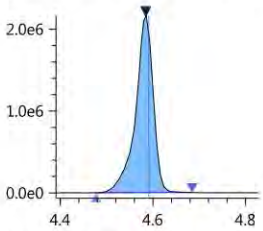
Q 413.00>369.00 (-) 2.17e6



PFOA-13C
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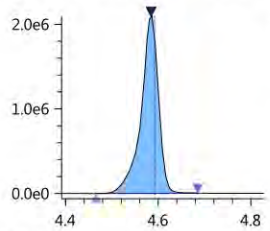

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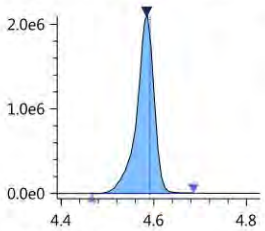

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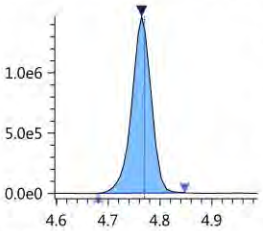
Conc 4.5068
RT 4.765 Area 3815532
Q 463.00>418.90 (-) 1.47e6



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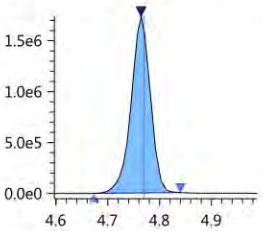
Q 467.80>423.00 (-) 1.74e6



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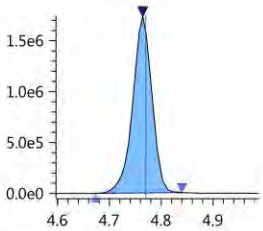

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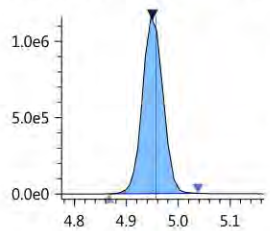
RT 4.950 Area 3214107
Q 513.00>468.80 (-) 1.16e6



PFDA-13C
Conc 5.1975
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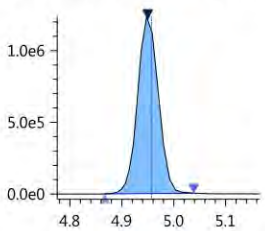
Q 514.80>469.95 (-) 1.24e6



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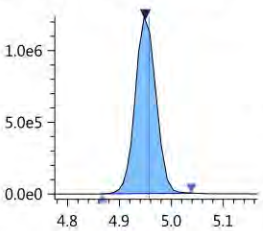
Conc 5.0000
RT 4.950 Area 3448261
ISTD 514.80>469.95 (-) 1.24e6



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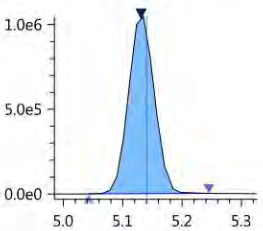
Conc 4.4570
RT 5.131 Area 3201180
Q 563.00>518.90 (-) 1.05e6



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RT 5.131 Area 3572309
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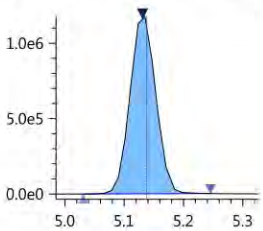

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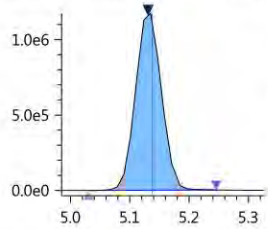

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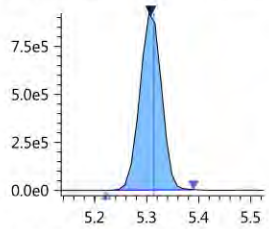
Q 613.05>569.00 (-) 9.23e5



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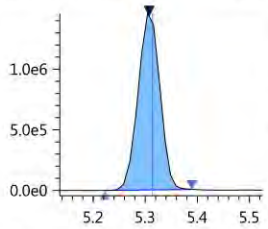
Q 614.80>569.95 (-) 1.46e6



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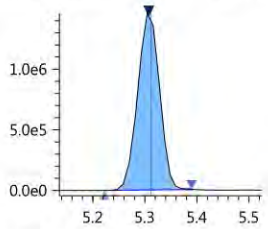

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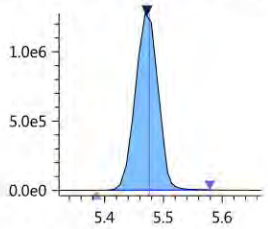

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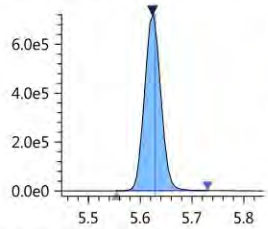

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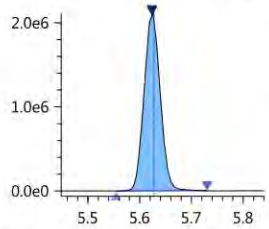

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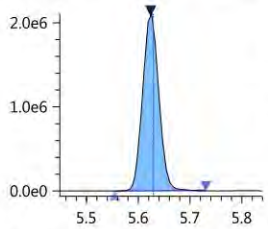

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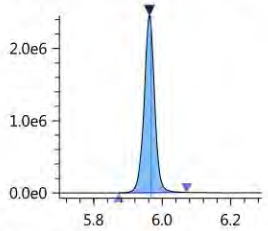

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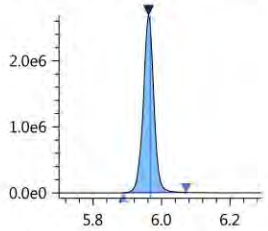

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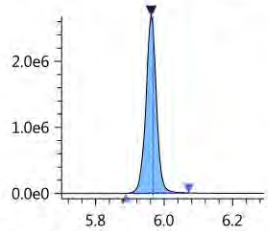

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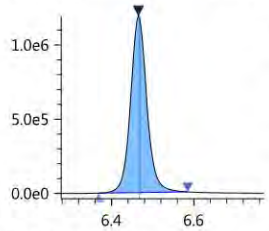

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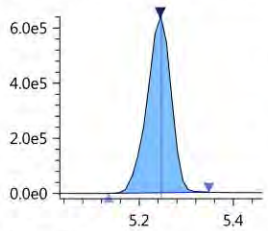

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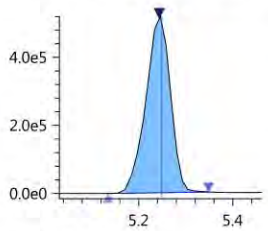

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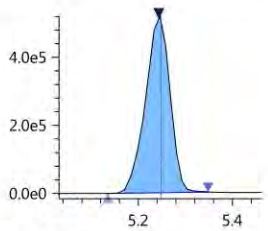

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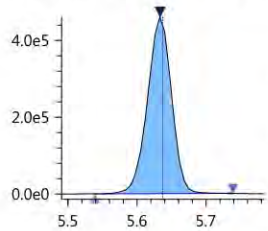

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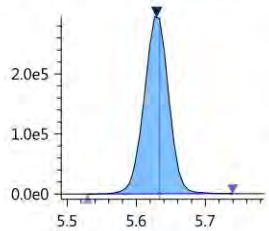

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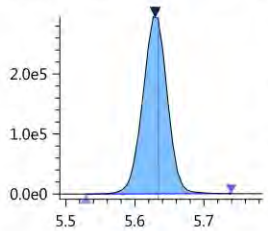

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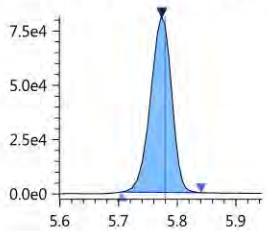

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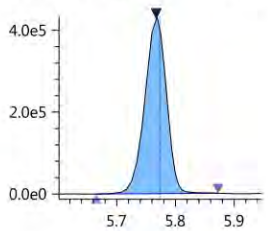
Q 530.90>169.15 (-) 4.33e5



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N-EtFOSA-d9_IS
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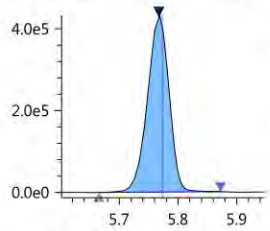
ISTD 530.90>169.15 (-) 4.33e5



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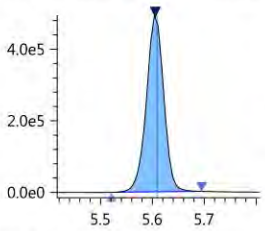

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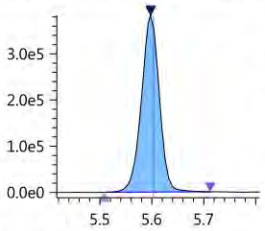

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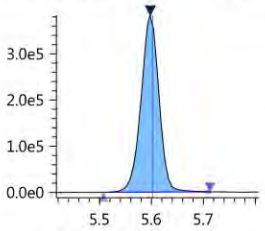

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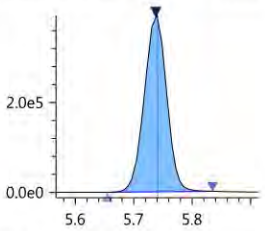

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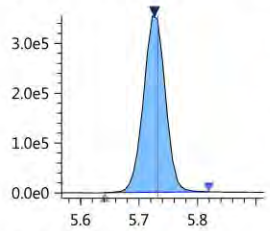
Q 638.70>59.10 (-) 3.56e5



N-EtFOSE-d9_IS
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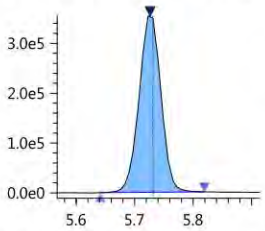
ISTD 638.70>59.10 (-) 3.56e5



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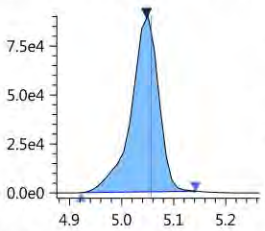

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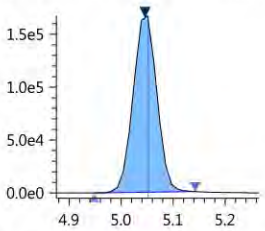
RT 5.046 Area 529415
Q 572.80>419.05 (-) 1.68e5



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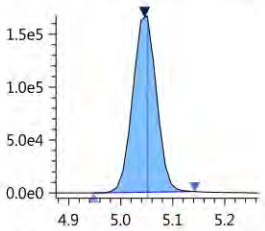

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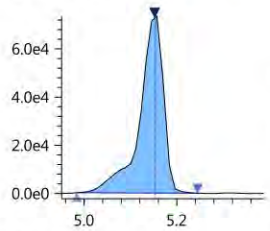

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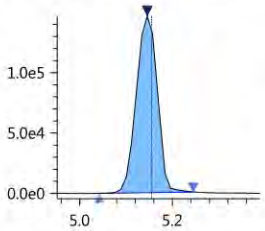

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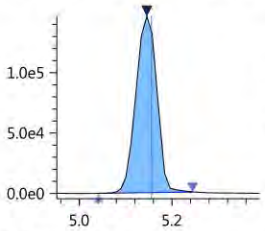

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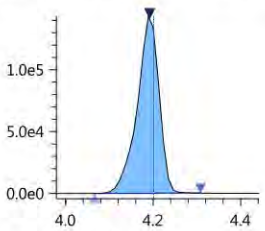

4_2-FTS-13C
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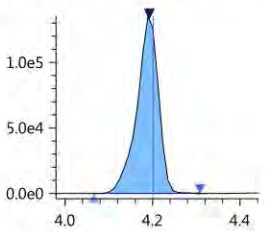
Q 328.80>309.05 (-) 1.35e5



4_2-FTS-13C_IS
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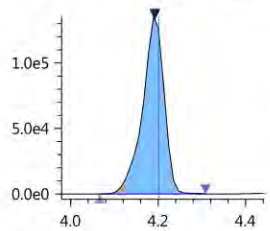
ISTD 328.80>309.05 (-) 1.35e5



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RT 4.571 Area 501761
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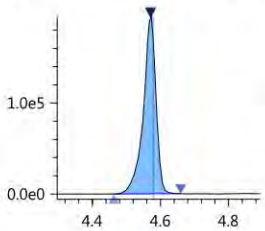

6_2-FTS-13C
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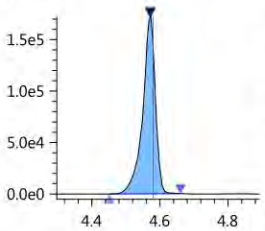
Q 428.90>409.00 (-) 1.72e5



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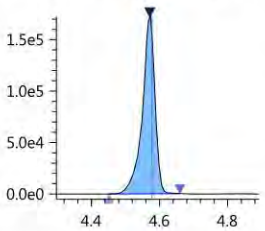

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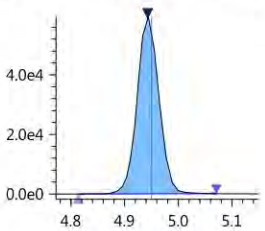

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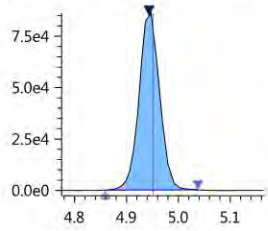
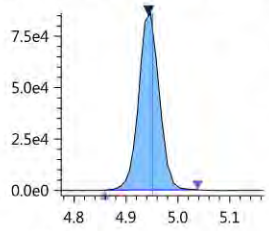
8_2-FTS-13C

Conc 5.1676
RT 4.944 Area 238003
Q 528.80>509.00 (-) 8.62e4



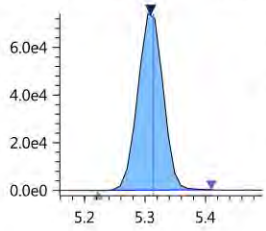
8_2-FTS-13C_IS

Conc 5.0000
RT 4.944 Area 238003
ISTD 528.80>509.00 (-) 8.62e4



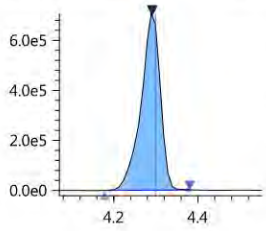
10_2-FtS_1

Conc 5.7779
RT 5.309 Area 216818
Q 627.00>606.95 (-) 7.44e4



HPFO_DA

Conc 4.7956
RT 4.291 Area 2250849
Q 329.00>169.00 (-) 7.09e5



HFPO_DA-13C

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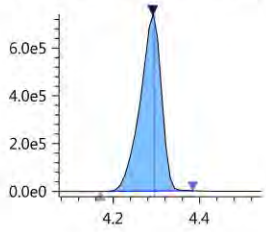
Q 332.00>286.80 (-) 7.42e5



HFPO_DA-13C_IS

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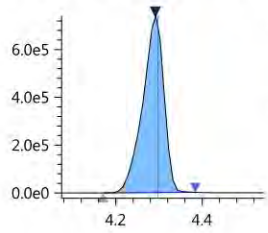
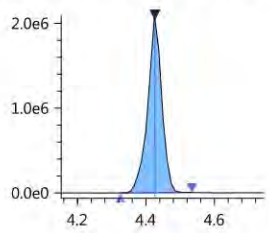
ISTD 332.00>286.80 (-) 7.42e5



ADONA

Conc 5.0733
RT 4.426 Area 5928385
Q 377.00>251.00 (-) 2.09e6



Insight Report

Printed at 8/8/2019 9:54:02 AM

190807_017

Sample ID: 10.0 PPB ICAL
Date acquired: 8/7/2019 6:16:58 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_017.lcd
Vial: 6 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.132	4220789	4220789	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.019	2856483	1128261	2	8.7889	ng/mL	8.8737
PFBS-13C	Auto	4.021	1124788	4220789	1	5.5648	ng/mL	5.0000
PFBS-13C_IS	Auto	4.021	1128261	1128261	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.237	1390378	1128261	2	10.1652	ng/mL	9.4092
PFHxS_1	Auto	4.403	1416910	566962	3	9.0001	ng/mL	9.1308
PFHxS-18O	Auto	4.408	566962	4220789	1	4.9012	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.408	566962	566962	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.577	1863156	566962	3	11.0958	ng/mL	9.5344
PFOS_1	Auto	4.753	1277710	822381	4	8.8606	ng/mL	9.2923
PFOS-13C	Auto	4.754	829027	4220789	1	6.0159	ng/mL	5.0000
PFOS-13C_IS	Auto	4.754	822381	822381	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.932	858069	822381	4	9.4035	ng/mL	9.6158
PFDS_1	Auto	5.111	1109598	822381	4	8.2344	ng/mL	9.6467
PFDOS	Auto	5.447	1080037	822381	4	6.5525	ng/mL	8.0654
9Cl-PF3ONS	Auto	4.856	9427904	2560394	26	8.6148	ng/mL	8.8196
11Cl-PF3OUdS	Auto	5.210	9055940	2560394	26	9.2381	ng/mL	8.3186
PFBA	Auto	3.417	8006272	3935676	5	9.9383	ng/mL	10.0000
PFBA-13C	Auto	3.413	3935676	4220789	1	5.7378	ng/mL	5.0000
PFBA-13C_IS	Auto	3.413	3935676	3935676	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.969	10637742	2445189	6	10.0901	ng/mL	10.0000
PFPeA-13C	Auto	3.969	2445189	4220789	1	5.6660	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.969	2445189	2445189	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.221	9532216	4640481	7	9.9347	ng/mL	10.0000
PFHxA-13C	Auto	4.221	4640481	4220789	1	5.4694	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.221	4640481	4640481	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.408	9076366	4913201	8	10.9497	ng/mL	10.0000
PFHpA-13C	Auto	4.408	4913201	4220789	1	4.9410	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.408	4913201	4913201	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.585	10859540	4746187	9	10.3247	ng/mL	10.0000
PFOA-13C	Auto	4.585	4746187	4220789	1	5.2703	ng/mL	5.0000
PFOA-13C_IS	Auto	4.585	4746187	4746187	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.765	7422719	4207306	10	9.8017	ng/mL	10.0000
PFNA-13C	Auto	4.765	4207306	4220789	1	5.8810	ng/mL	5.0000
PFNA-13C_IS	Auto	4.765	4207306	4207306	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.951	6059126	3204063	11	9.3286	ng/mL	10.0000
PFDA-13C	Auto	4.951	3204063	4220789	1	5.3275	ng/mL	5.0000
PFDA-13C_IS	Auto	4.951	3204063	3204063	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.132	5846869	3352783	12	9.8716	ng/mL	10.0000
PFUnA-13C	Auto	5.132	3352783	4220789	1	5.1436	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.132	3352783	3352783	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.308	5011235	3936403	13	10.2642	ng/mL	10.0000
PFDoA-13C	Auto	5.308	3936403	4220789	1	5.6065	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.308	3936403	3936403	13	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.472	6317151	4385168	14	10.0912	ng/mL	10.0000
PFTeDA	Auto	5.624	3066492	4385168	14	9.9528	ng/mL	10.0000
PFTeDA-13C	Auto	5.624	4385168	4220789	1	5.6689	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.624	4385168	4385168	14	5.0000	ng/mL	5.0000
PFHxDA	Auto	5.964	10452815	5525240	15	10.2004	ng/mL	10.0000
13C-PFHxDA	Auto	5.964	5525240	4220789	1	5.8335	ng/mL	5.0000
13C-PFHxDA_IS	Auto	5.964	5525240	5525240	15	5.0000	ng/mL	5.0000
PFODA	Auto	6.465	6466498	5525240	15	9.8249	ng/mL	10.0000
FOSA	Auto	5.246	4520178	1680591	16	10.6848	ng/mL	10.0000
FOSA-13C	Auto	5.246	1680591	4220789	1	5.2291	ng/mL	5.0000
FOSA-13C_IS	Auto	5.246	1680591	1680591	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.635	2257904	720975	17	9.9408	ng/mL	10.0000
N-MeFOSA-d3	Auto	5.631	720975	4220789	1	5.7175	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.631	720975	720975	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.775	413193	1101051	18	9.7935	ng/mL	10.0000
N-EtFOSA-d9	Auto	5.769	1101051	4220789	1	5.8633	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.769	1101051	1101051	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.606	2260860	855119	19	10.5326	ng/mL	10.0000
N-MeFOSE-d7	Auto	5.599	855119	4220789	1	5.5203	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.599	855119	855119	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.740	2111929	880297	20	9.8100	ng/mL	10.0000
N-EtFOSE-d9	Auto	5.728	880297	4220789	1	5.6412	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.728	880297	880297	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.050	617233	492183	21	9.9541	ng/mL	10.0000

Insight Report

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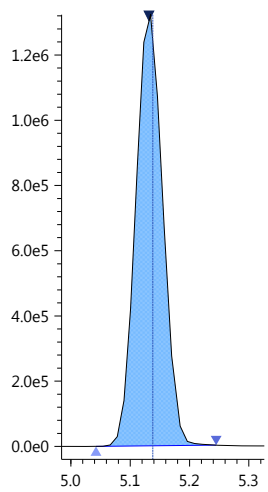
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-MeFOSAA-d3	Auto	5.047	492183	4220789	1	5.3064	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.047	492183	492183	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.153	551735	405576	22	10.3996	ng/mL	10.0000
N-EtFOSAA-d5	Auto	5.149	405576	4220789	1	4.8395	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.149	405576	405576	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.192	965352	449893	23	8.6290	ng/mL	9.3722
4_2-FTS-13C	Auto	4.192	449893	4220789	1	5.7895	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.192	449893	449893	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.572	945241	421051	24	9.2321	ng/mL	9.5117
6_2-FTS-13C	Auto	4.572	421051	4220789	1	5.7481	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.572	421051	421051	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.944	304456	224868	25	7.7353	ng/mL	9.6004
8_2-FTS-13C	Auto	4.944	224868	4220789	1	5.3860	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.944	224868	224868	25	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.309	402498	224868	25	11.3213	ng/mL	9.6619
HPFO_DA	Auto	4.292	4494755	2560394	26	9.4234	ng/mL	10.0000
HFPO_DA-13C	Auto	4.292	2560394	4220789	1	6.0413	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.292	2560394	2560394	26	5.0000	ng/mL	5.0000
ADONA	Auto	4.427	11638213	2560394	26	9.8005	ng/mL	9.4505

13C7-PFUnDA_IS

Conc 5.0000
RT 5.132 Area 4220789

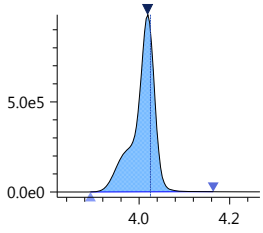
ISTD 570.00>525.00 (-) 1.32e6



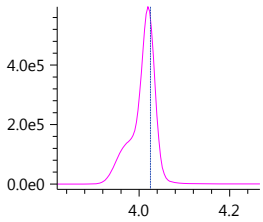
PFBS_1

Conc 8.7889
RT 4.019 Area 2856483
R#1 58.30 (0.00)

Q 299.00>80.00 (-) 9.84e5



R1 298.80>99.00 (-) 5.96e5



PFBS-13C

Conc 5.5648
RT 4.021 Area 1124788

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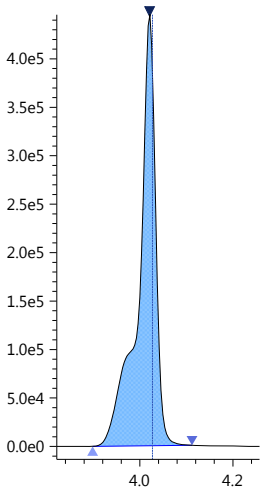

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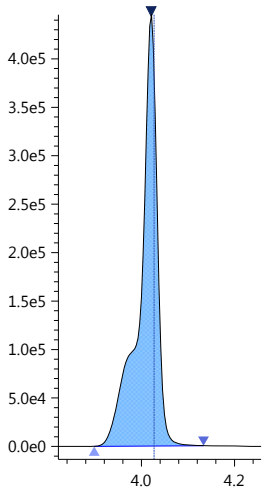
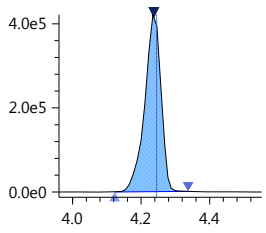


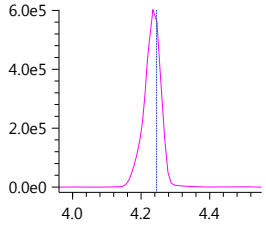
PFPeS

Conc 10.1652
RT 4.237 Area 1390378
R#1 142.88 (0.00)

Q 349.00>99.00 (-) 4.22e5



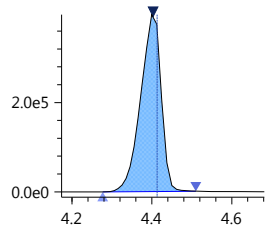
R1 349.00>79.95 (-) 6.02e5



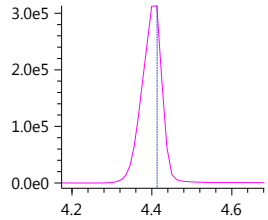
Insight Report

Printed at 8/8/2019 9:54:02 AM

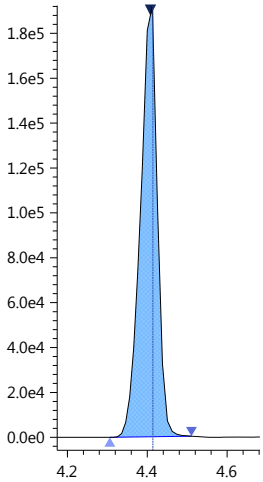
PFHxS_1
Conc 9.0001
RT 4.403 Area 1416910
R#1 78.93 (0.00)
Q 399.00>80.00 (-) 3.97e5



R1 399.00>99.00 (-) 3.13e5



PFHxS-18O
Conc 4.9012
RT 4.408 Area 566962
Q 402.70>84.05 (-) 1.92e5



PFHxS-18O_IS
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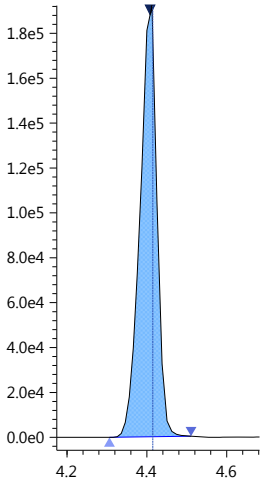
RT 4.408 Area 566962
ISTD 402.70>84.05 (-) 1.92e5



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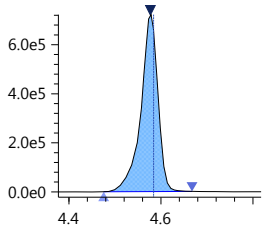
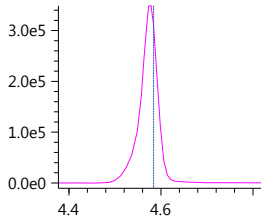
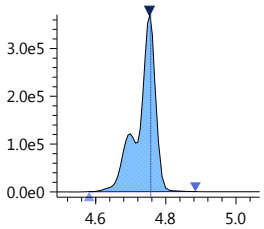
Conc 11.0958
RT 4.577 Area 1863156
R#1 48.06 (0.00)
Q 449.00>80.15 (-) 7.23e5



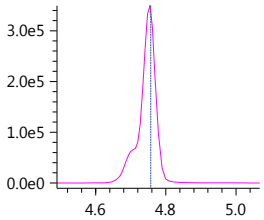
R1 449.00>99.20 (-) 3.49e5



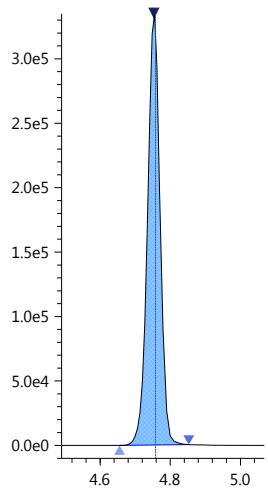
PFOS_1
Conc 8.8606
RT 4.753 Area 1277710
R#1 94.24 (0.00)
Q 499.00>80.00 (-) 3.71e5



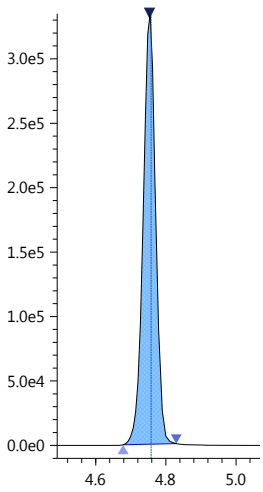
R1 499.00>99.00 (-) 3.49e5



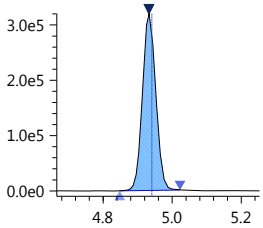
PFOS-13C
Conc 6.0159
RT 4.754 Area 829027
Q 502.80>80.05 (-) 3.35e5



PFOS-13C_IS
Conc 5.0000
RT 4.754 Area 822381
ISTD 502.80>80.05 (-) 3.35e5



PFNS
Conc 9.4035
RT 4.932 Area 858069
R#1 127.78 (0.00)
Q 549.00>99.00 (-) 3.20e5



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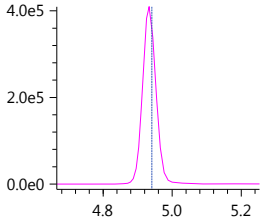
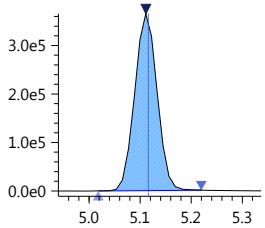
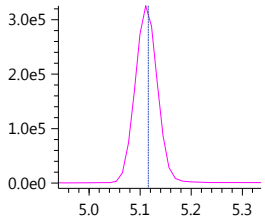


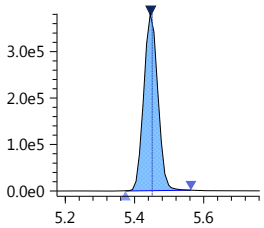
PFDS_1
Conc 8.2344
RT 5.111 Area 1109598
R#1 88.90 (0.00)
Q 599.00>79.90 (-) 3.66e5



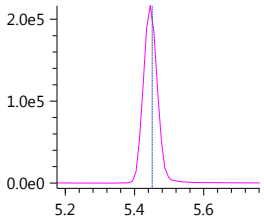
R1 599.00>99.10 (-) 3.26e5



PFDOS
Conc 6.5525
RT 5.447 Area 1080037
R#1 56.70 (0.00)
Q 699.00>79.95 (-) 3.82e5



R1 699.00>99.05 (-) 2.17e5



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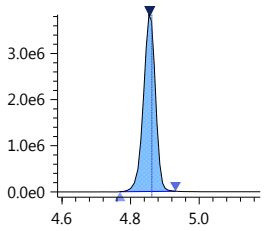
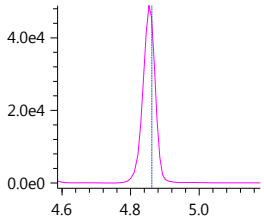
9Cl-PF3ONS

Conc 8.6148
RT 4.856 Area 9427904
R#1 1.27 (0.00)

Q 531.00>351.00 (-) 3.84e6



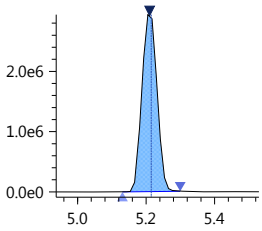
R1 531.00>98.90 (-) 4.88e4



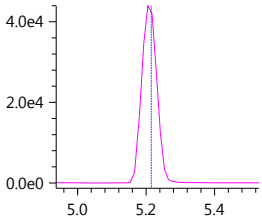
11Cl-PF3OUdS

Conc 9.2381
RT 5.210 Area 9055940
R#1 1.50 (0.00)

Q 631.00>451.05 (-) 2.94e6



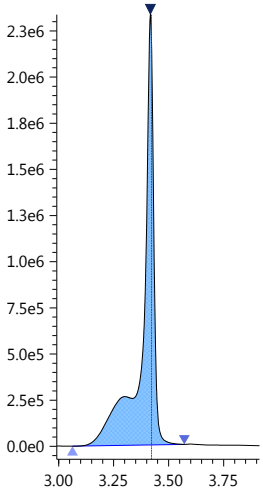
R1 631.00>98.90 (-) 4.40e4



PFBA

Conc 9.9383
RT 3.417 Area 8006272

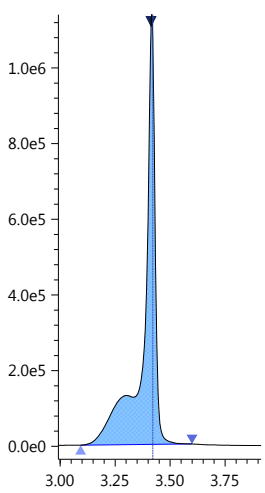
Q 213.00>169.10 (-) 2.34e6



PFBA-13C

Conc 5.7378
RT 3.413 Area 3935676

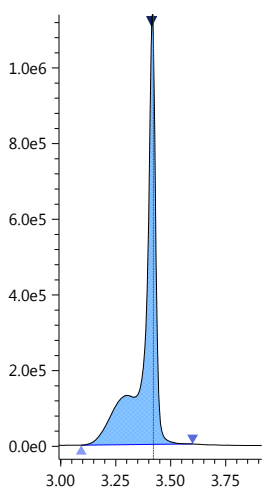
Q 216.90>172.15 (-) 1.14e6



PFBA-13C_IS

Conc 5.0000
RT 3.413 Area 3935676

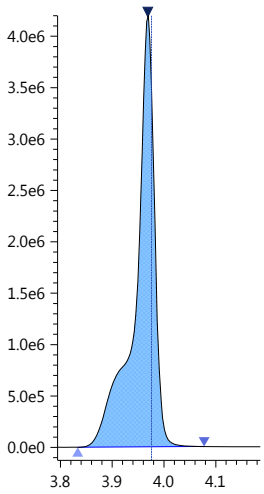
ISTD 216.90>172.15 (-) 1.14e6



PFPeA

Conc 10.0901
RT 3.969 Area 10637742

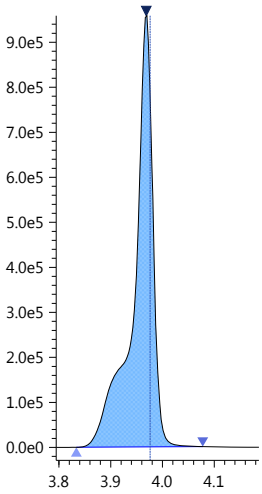
Q 263.05>219.10 (-) 4.20e6



PFPeA-13C

Conc 5.6660
RT 3.969 Area 2445189

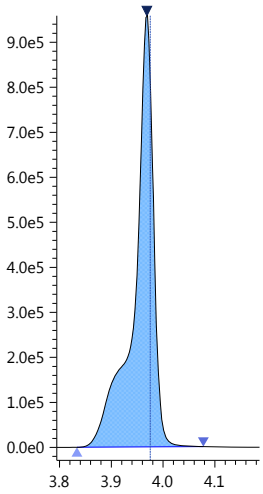
Q 267.90>223.00 (-) 9.59e5



PFPeA-13C_IS

Conc 5.0000
RT 3.969 Area 2445189

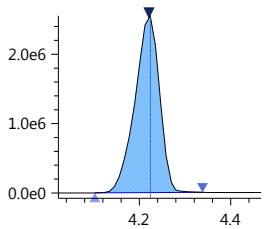
ISTD 267.90>223.00 (-) 9.59e5



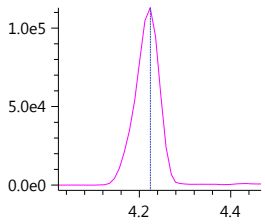
PFHxA

Conc 9.9347
RT 4.221 Area 9532216
R#1 4.41 (0.00)

Q 313.00>269.00 (-) 2.56e6



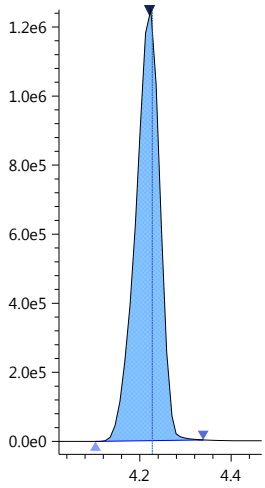
R1 313.00>119.10 (-) 1.13e5



PFHxA-13C

Conc 5.4694
RT 4.221 Area 4640481

Q 314.90>270.10 (-) 1.25e6



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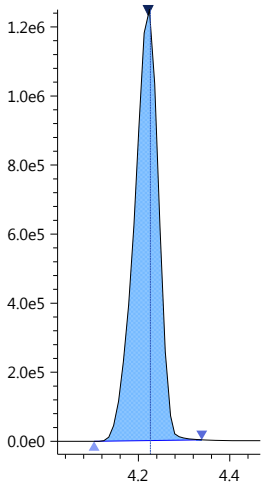
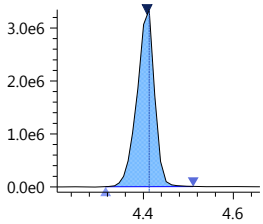
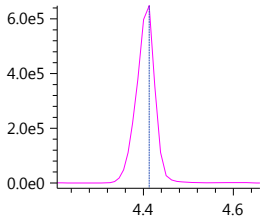
PFHxA-13C_IS
Conc 5.0000
RT 4.221 Area 4640481
ISTD 314.90>270.10 (-) 1.25e6



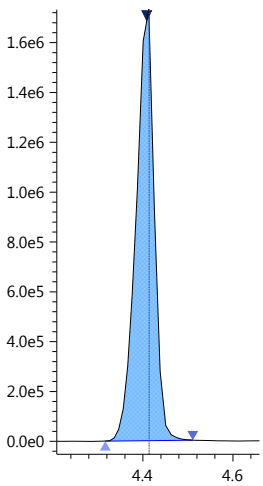
PFHpA
Conc 10.9497
RT 4.408 Area 9076366
R#1 19.63 (0.00)
Q 362.90>319.00 (-) 3.35e6



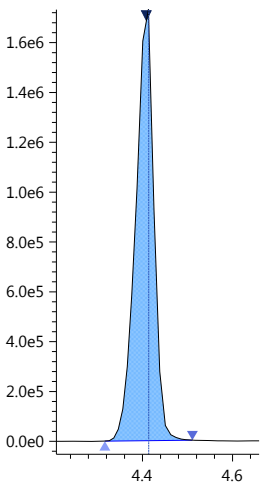
R1 362.90>169.00 (-) 6.48e5



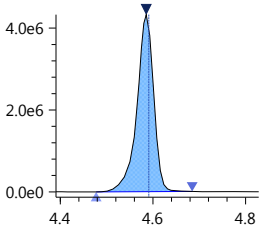
PFHpA-13C
Conc 4.9410
RT 4.408 Area 4913201
Q 366.90>322.10 (-) 1.73e6



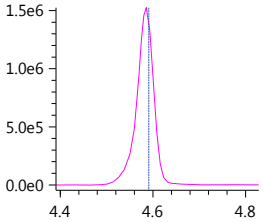
PFHpA-13C_IS
Conc 5.0000
RT 4.408 Area 4913201
ISTD 366.90>322.10 (-) 1.73e6



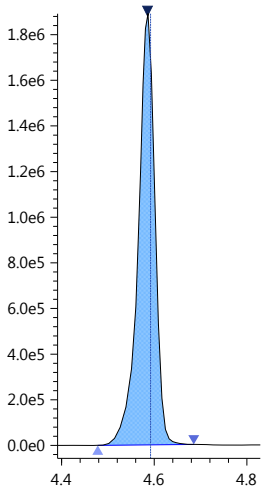
PFOA
Conc 10.3247
RT 4.585 Area 10859540
R#1 35.14 (0.00)
Q 413.00>369.00 (-) 4.33e6



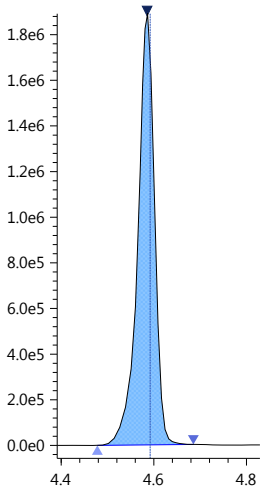
R1 413.00>169.10 (-) 1.52e6



PFOA-13C
Conc 5.2703
RT 4.585 Area 4746187
Q 416.80>372.05 (-) 1.89e6



PFOA-13C_IS
Conc 5.0000
RT 4.585 Area 4746187
ISTD 416.80>372.05 (-) 1.89e6



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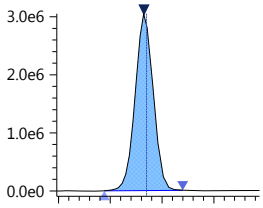
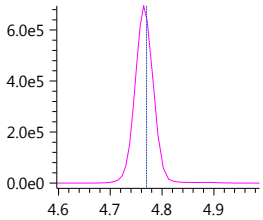
Conc 9.8017
RT 4.765 Area 7422719
R#1 22.61 (0.00)
Q 463.00>418.90 (-) 3.05e6



R1 463.00>219.00 (-) 6.95e5



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Conc 5.8810
RT 4.765 Area 4207306
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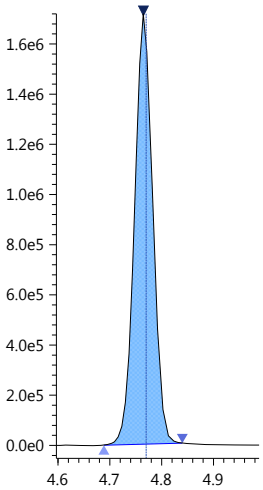
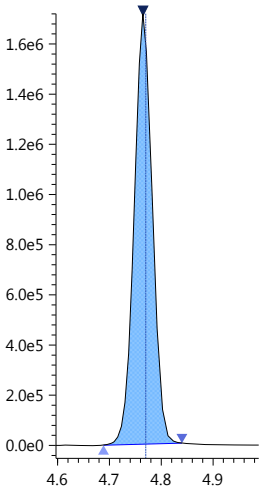


PFNA-13C_IS
Conc 5.0000
RT 4.765 Area 4207306
ISTD 467.80>423.00 (-) 1.72e6



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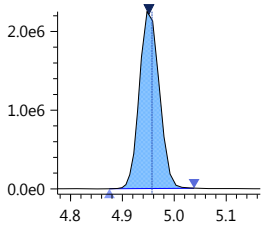
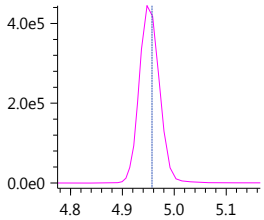
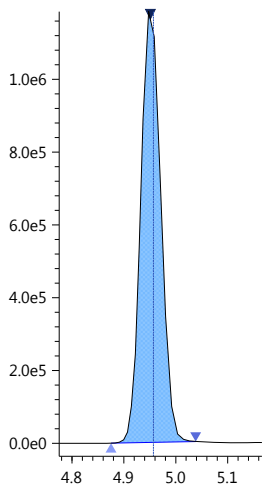
PFDA
Conc 9.3286
RT 4.951 Area 6059126
R#1 19.73 (0.00)
Q 513.00>468.80 (-) 2.25e6



R1 513.00>219.10 (-) 4.44e5



PFDA-13C
Conc 5.3275
RT 4.951 Area 3204063
Q 514.80>469.95 (-) 1.19e6



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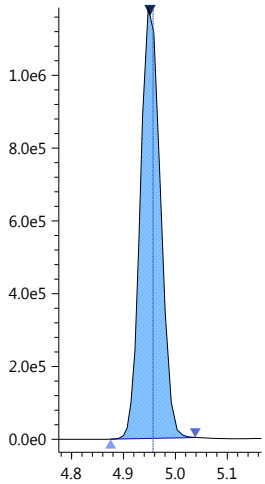
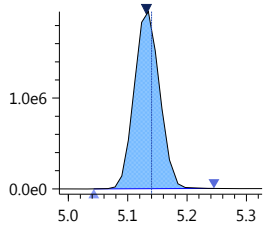
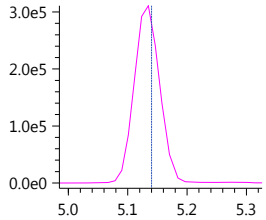


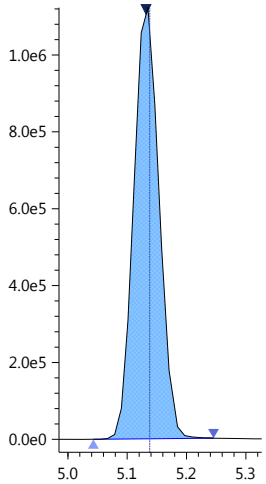
PFUnA
Conc 9.8716
RT 5.132 Area 5846869
R#1 15.90 (0.00)
Q 563.00>518.90 (-) 1.95e6



R1 563.00>219.00 (-) 3.11e5



PFUnA-13C
Conc 5.1436
RT 5.132 Area 3352783
Q 564.80>519.95 (-) 1.12e6



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Conc 5.0000
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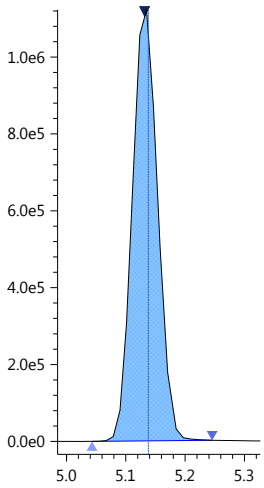
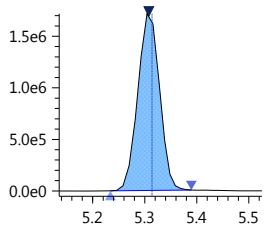
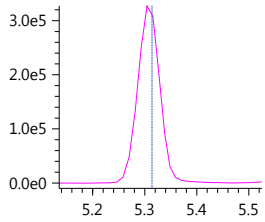
ISTD 564.80>519.95 (-) 1.12e6



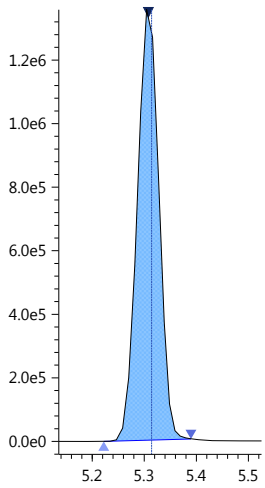
PFDoA
Conc 10.2642
RT 5.308 Area 5011235
R#1 19.00 (0.00)
Q 613.05>569.00 (-) 1.72e6



R1 613.05>169.00 (-) 3.27e5



PFDoA-13C
Conc 5.6065
RT 5.308 Area 3936403
Q 614.80>569.95 (-) 1.36e6



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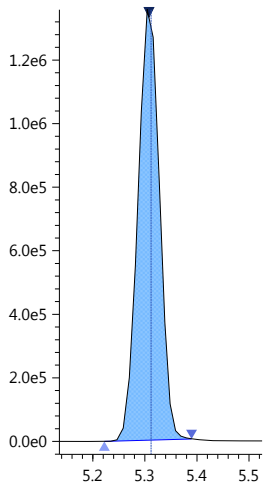
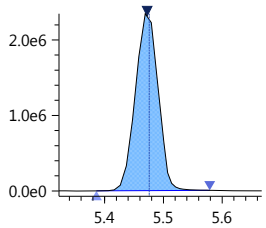
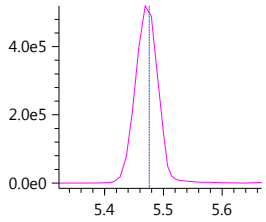
ISTD 614.80>569.95 (-) 1.36e6



PFTrDA
Conc 10.0912
RT 5.472 Area 6317151
R#1 21.95 (0.00)
Q 663.00>618.90 (-) 2.35e6



R1 662.90>169.00 (-) 5.20e5



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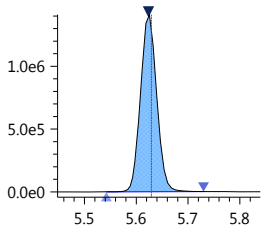
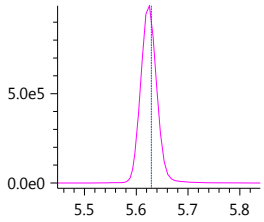
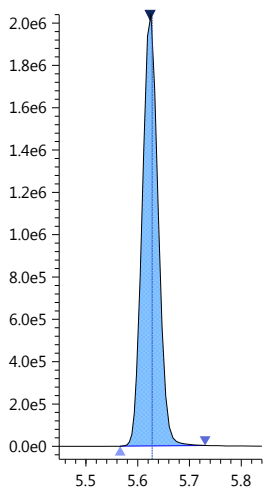
PFTeDA
Conc 9.9528
RT 5.624 Area 3066492
R#1 70.34 (0.00)
Q 713.40>669.00 (-) 1.41e6



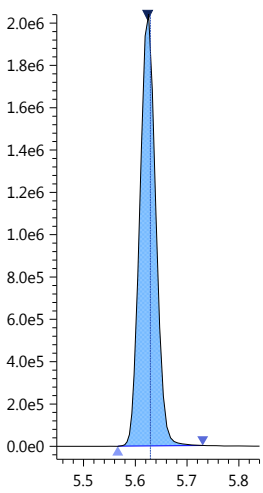
R1 713.40>169.10 (-) 9.93e5



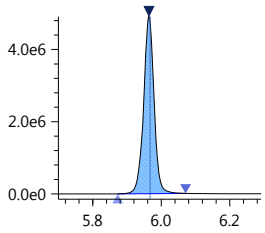
PFTeDA-13C
Conc 5.6689
RT 5.624 Area 4385168
Q 714.70>669.90 (-) 2.04e6



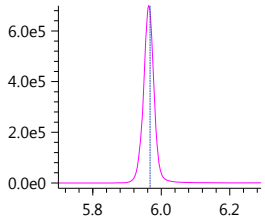
PFTeDA-13C_IS
Conc 5.0000
RT 5.624 Area 4385168
ISTD 714.70>669.90 (-) 2.04e6



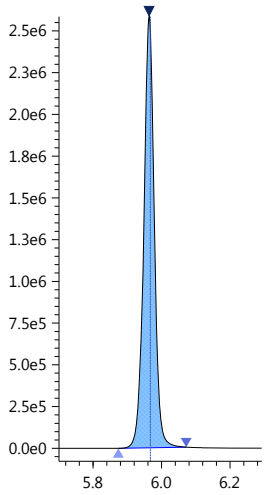
PFHxDA
Conc 10.2004
RT 5.964 Area 10452815
R#1 14.19 (0.00)
Q 813.00>769.05 (-) 4.91e6



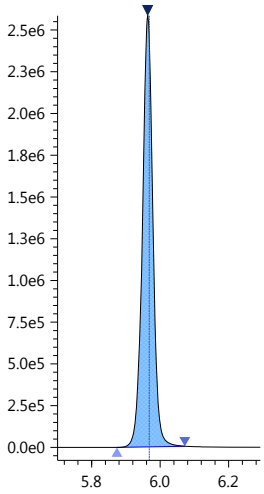
R1 813.00>218.95 (-) 7.00e5



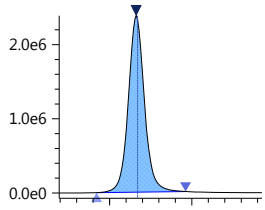
13C-PFHxDA
Conc 5.8335
RT 5.964 Area 5525240
Q 815.00>770.05 (-) 2.59e6



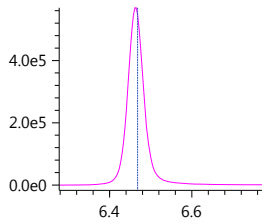
13C-PFHxDA_IS
Conc 5.0000
RT 5.964 Area 5525240
ISTD 815.00>770.05 (-) 2.59e6



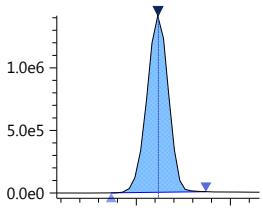
PFODA
Conc 9.8249
RT 6.465 Area 6466498
R#1 24.30 (0.00)
Q 913.00>868.85 (-) 2.39e6



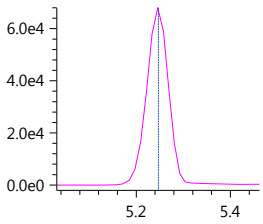
R1 913.00>169.00 (-) 5.69e5



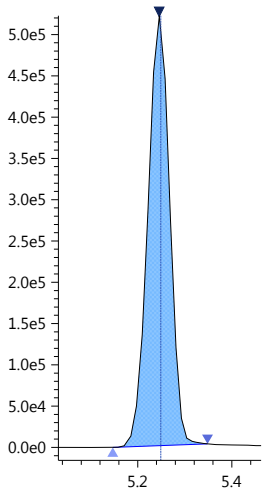
FOSA
Conc 10.6848
RT 5.246 Area 4520178
R#1 4.80 (0.00)
Q 498.20>78.00 (-) 1.42e6



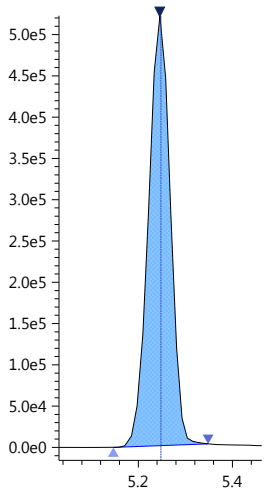
R1 498.20>64.10 (-) 6.80e4



FOSA-13C
Conc 5.2291
RT 5.246 Area 1680591
Q 506.00>78.05 (-) 5.23e5



FOSA-13C_IS
Conc 5.0000
RT 5.246 Area 1680591
ISTD 506.00>78.05 (-) 5.23e5



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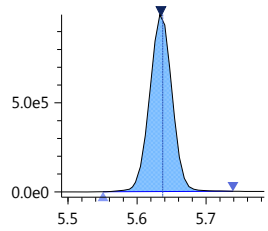
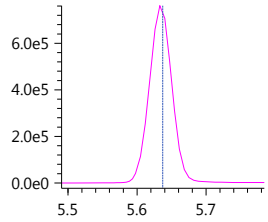
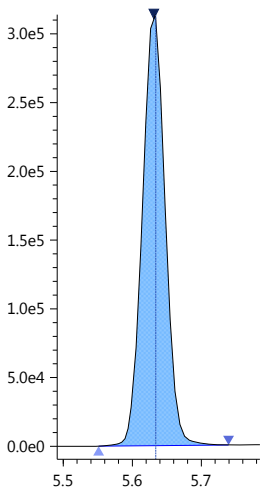
N-MeFOSA
Conc 9.9408
RT 5.635 Area 2257904
R#1 76.54 (0.00)
Q 512.00>169.10 (-) 9.95e5



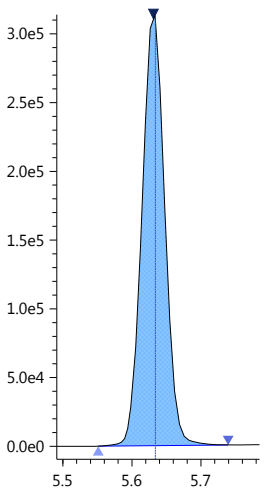
R1 512.00>219.00 (-) 7.61e5



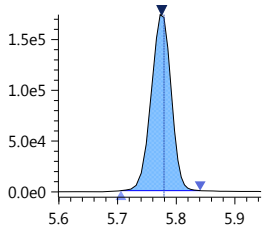
N-MeFOSA-d3
Conc 5.7175
RT 5.631 Area 720975
Q 514.90>168.90 (-) 3.14e5



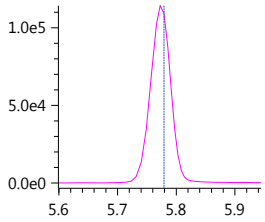
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.631 Area 720975
ISTD 514.90>168.90 (-) 3.14e5



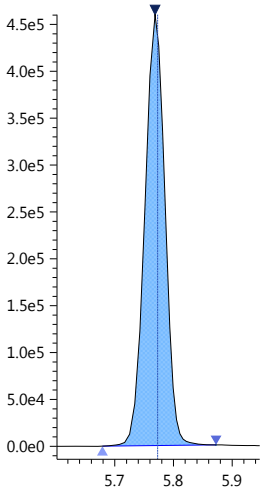
N-EtFOSA
Conc 9.7935
RT 5.775 Area 413193
R#1 66.10 (0.00)
Q 526.90>169.10 (-) 1.75e5



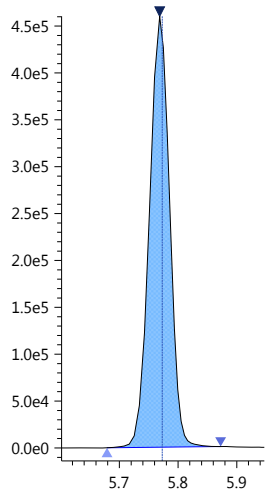
R1 526.90>219.00 (-) 1.14e5



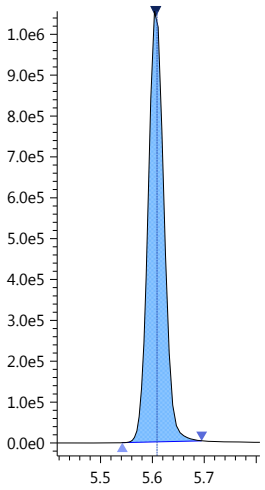
N-EtFOSA-d9
Conc 5.8633
RT 5.769 Area 1101051
Q 530.90>169.15 (-) 4.60e5



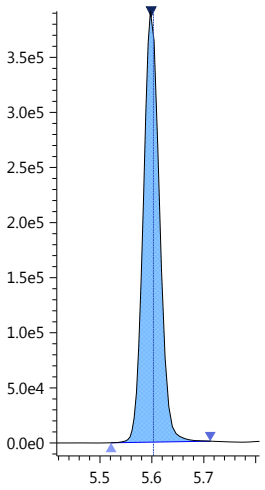
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.769 Area 1101051
ISTD 530.90>169.15 (-) 4.60e5



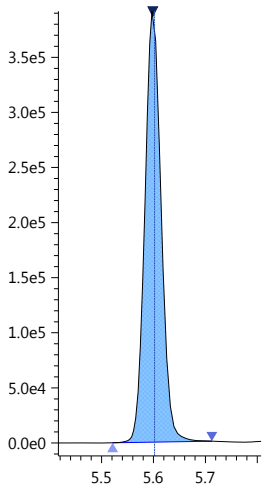
N-MeFOSE
Conc 10.5326
RT 5.606 Area 2260860
Q 616.00>59.00 (-) 1.06e6



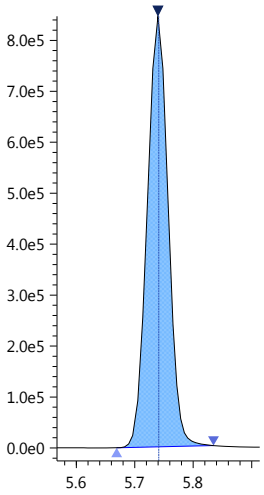
N-MeFOSE-d7
Conc 5.5203
RT 5.599 Area 855119
Q 622.70>59.10 (-) 3.92e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.599 Area 855119
ISTD 622.70>59.10 (-) 3.92e5



N-EtFOSE
Conc 9.8100
RT 5.740 Area 2111929
Q 630.00>58.90 (-) 8.47e5



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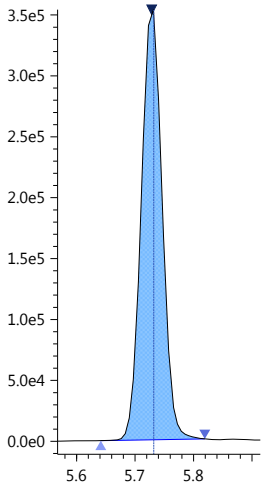
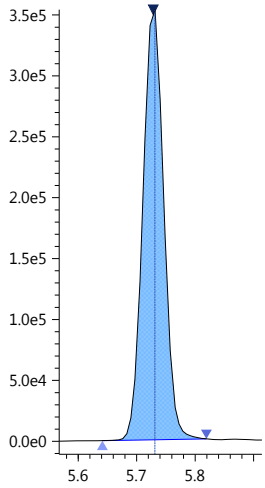
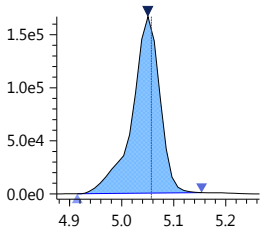
N-EtFOSE-d9
Conc 5.6412
RT 5.728 Area 880297
Q 638.70>59.10 (-) 3.54e5



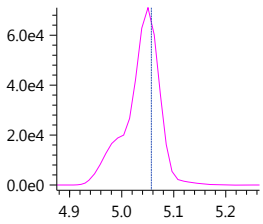
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.728 Area 880297
ISTD 638.70>59.10 (-) 3.54e5



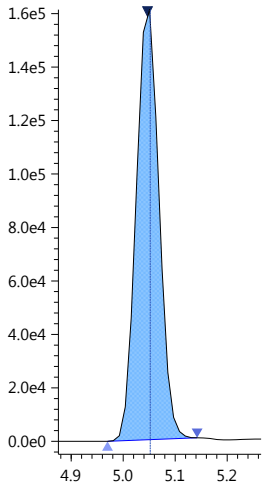
N-MeFOSAA
Conc 9.9541
RT 5.050 Area 617233
R#1 42.43 (0.00)
Q 570.20>419.00 (-) 1.67e5



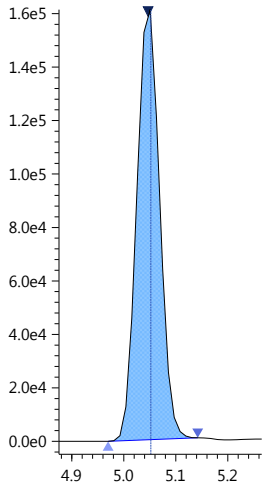
R1 570.20>512.00 (-) 7.10e4



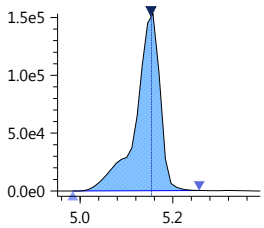
N-MeFOSAA-d3
Conc 5.3064
RT 5.047 Area 492183
Q 572.80>419.05 (-) 1.61e5



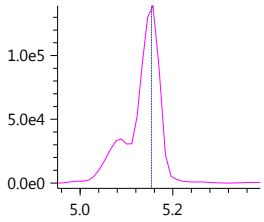
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.047 Area 492183
ISTD 572.80>419.05 (-) 1.61e5



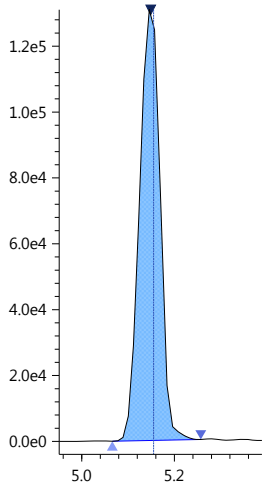
N-EtFOSAA
Conc 10.3996
RT 5.153 Area 551735
R#1 89.60 (0.00)
Q 584.20>418.95 (-) 1.53e5



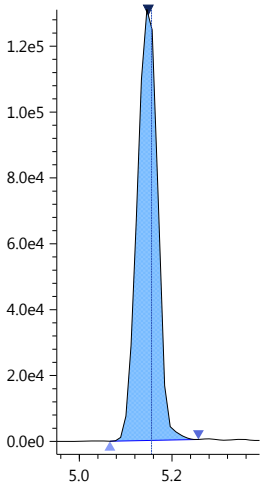
R1 584.20>526.10 (-) 1.39e5



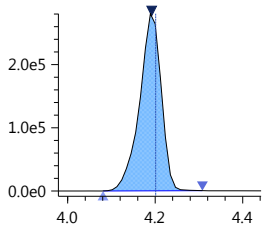
N-EtFOSAA-d5
Conc 4.8395
RT 5.149 Area 405576
Q 588.80>419.00 (-) 1.31e5



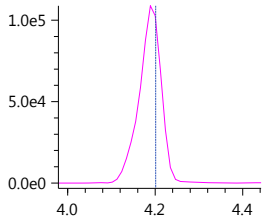
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.149 Area 405576
ISTD 588.80>419.00 (-) 1.31e5



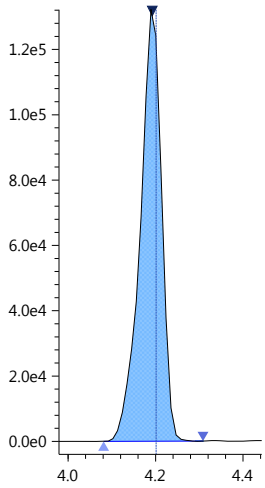
4_2-FTS_1
Conc 8.6290
RT 4.192 Area 965352
R#1 38.75 (0.00)
Q 327.00>307.05 (-) 2.80e5



R1 327.00>81.10 (-) 1.09e5



4_2-FTS-13C
Conc 5.7895
RT 4.192 Area 449893
Q 328.80>309.05 (-) 1.32e5



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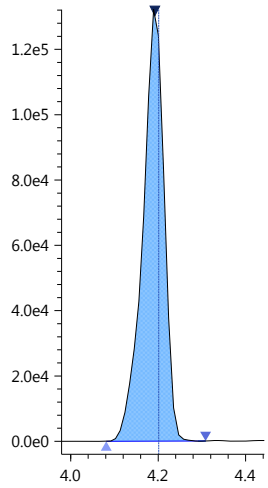
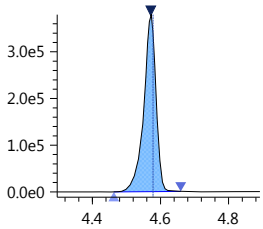
4_2-FTS-13C_IS
Conc 5.0000
RT 4.192 Area 449893

ISTD 328.80>309.05 (-) 1.32e5

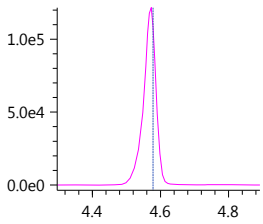


6_2-FTS_1
Conc 9.2321
RT 4.572 Area 945241
R#1 31.98 (0.00)

Q 427.00>407.00 (-) 3.80e5

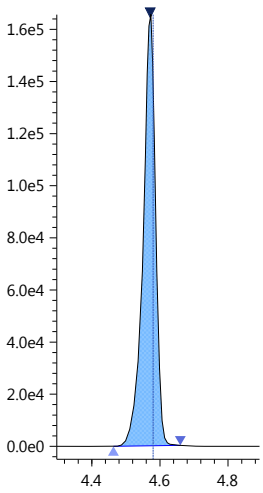


R1 427.00>80.90 (-) 1.22e5



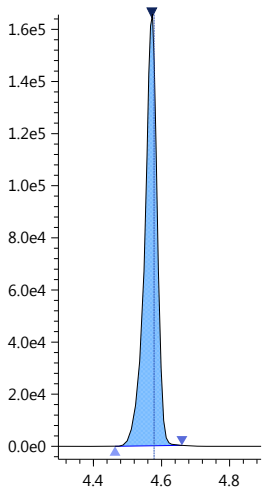
6_2-FTS-13C
Conc 5.7481
RT 4.572 Area 421051

Q 428.90>409.00 (-) 1.66e5



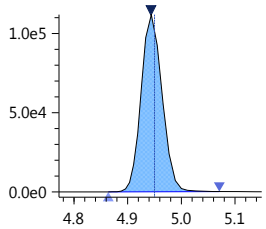
6_2-FTS-13C_IS
Conc 5.0000
RT 4.572 Area 421051

ISTD 428.90>409.00 (-) 1.66e5

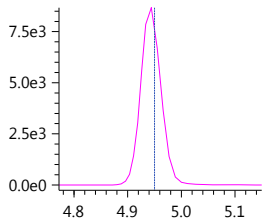


8_2-FTS_1
Conc 7.7353
RT 4.944 Area 304456
R#1 7.70 (0.00)

Q 527.10>506.90 (-) 1.12e5

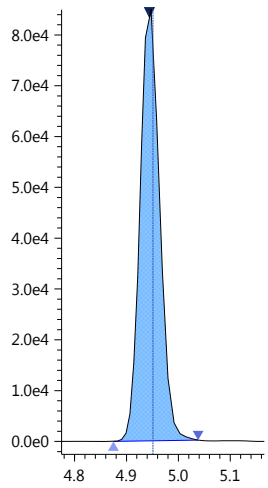


R1 527.20>487.00 (-) 8.67e3



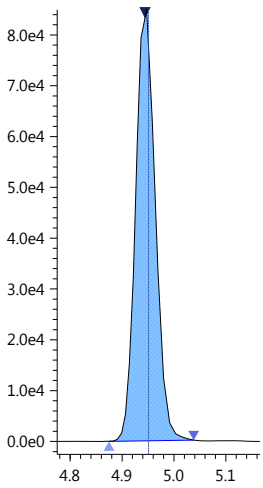
8_2-FTS-13C
Conc 5.3860
RT 4.944 Area 224868

Q 528.80>509.00 (-) 8.50e4



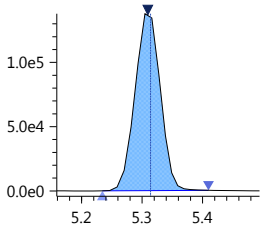
8_2-FTS-13C_IS
Conc 5.0000
RT 4.944 Area 224868

ISTD 528.80>509.00 (-) 8.50e4

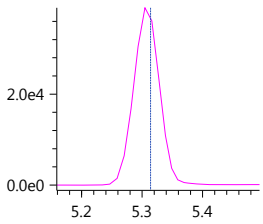


10_2-FtS_1
Conc 11.3213
RT 5.309 Area 402498
R#1 28.40 (0.00)

Q 627.00>606.95 (-) 1.38e5

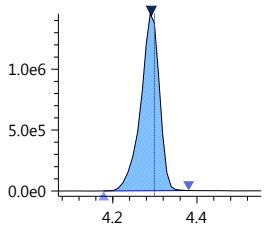


R1 627.00>81.25 (-) 3.90e4

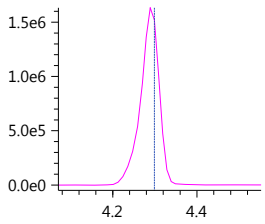


HPFO_DA
Conc 9.4234
RT 4.292 Area 4494755
R#1 112.01 (0.00)

Q 329.00>169.00 (-) 1.46e6

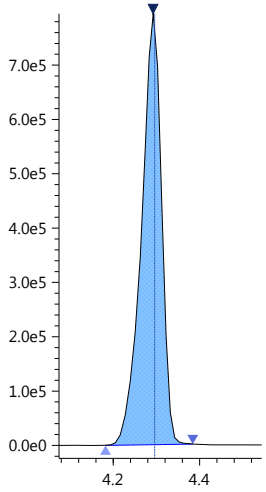


R1 329.00>285.10 (-) 1.63e6



HFPO_DA-13C
Conc 6.0413
RT 4.292 Area 2560394

Q 332.00>286.80 (-) 7.95e5



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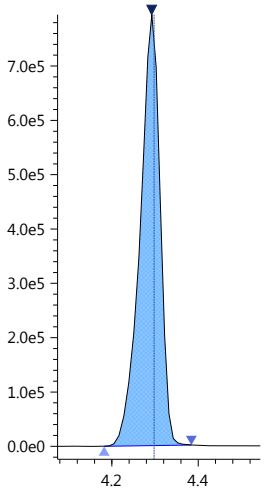
HFPO_DA-13C_IS

Conc 5.0000
RT 4.292 Area 2560394

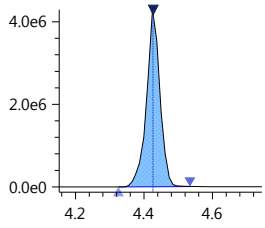
ISTD 332.00>286.80 (-) 7.95e5



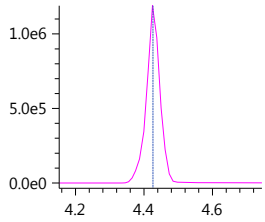
ADONA

Conc 9.8005
RT 4.427 Area 11638213
R#1 27.81 (0.00)

Q 377.00>251.00 (-) 4.29e6



R1 377.00>84.95 (-) 1.19e6



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Printed at 8/8/2019 8:44:13 AM

190807_017

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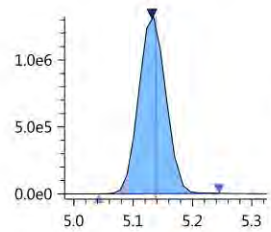
Date acquired: 8/7/2019 6:16:58 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_017.lcd
Vial: 6 | Inj. Volume: 15.0000uL | Tray: 0

13C7-PFUnDA_IS
Conc 5.0000
RT 5.132 Area 4220789
ISTD 570.00>525.00 (-) 1.32e6



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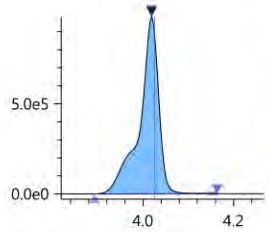
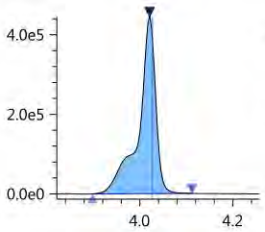
Conc 8.7889
RT 4.019 Area 2856483
Q 299.00>80.00 (-) 9.84e5



PFBS-13C
Conc 5.5648
RT 4.021 Area 1124788
Q 301.80>80.00 (-) 4.46e5



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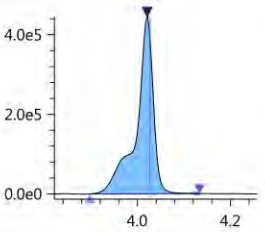
Conc 5.0000
RT 4.021 Area 1128261
ISTD 301.80>80.00 (-) 4.46e5



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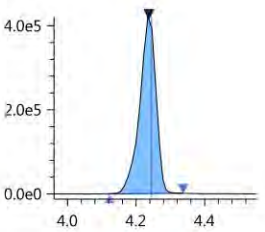
Conc 10.3121
RT 4.237 Area 1390378
Q 349.00>99.00 (-) 4.22e5



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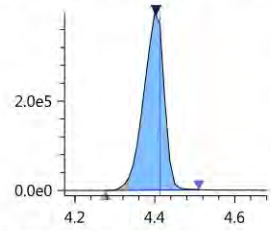
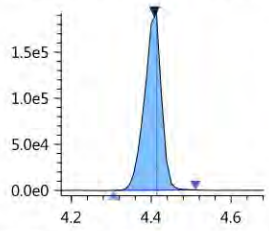
Q 399.00>80.00 (-) 3.97e5



PFHxS-18O
Conc 4.9012
RT 4.408 Area 566962
Q 402.70>84.05 (-) 1.92e5



PFHxS-18O_IS
Conc 5.0000
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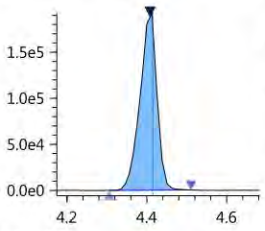
ISTD 402.70>84.05 (-) 1.92e5



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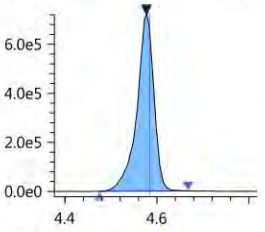

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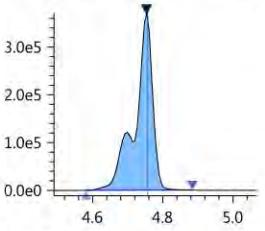

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RT 4.754 Area 829027
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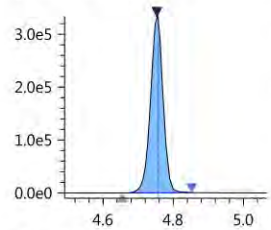

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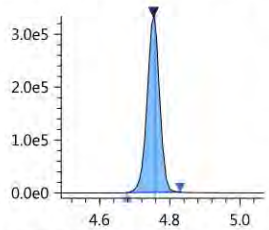

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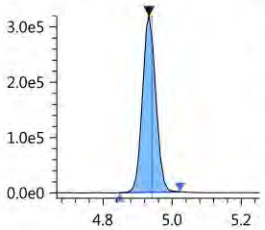
Conc 7.8819
RT 4.932 Area 858069
Q 549.00>99.00 (-) 3.20e5



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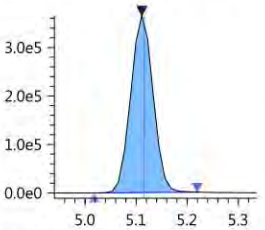
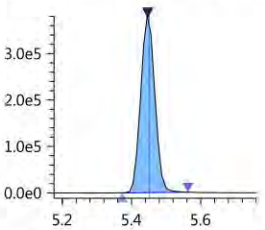
RT 5.111 Area 1109598
Q 599.00>79.90 (-) 3.66e5



PFDOS
Conc 2.1659
RT 5.447 Area 1080037
Q 699.00>79.95 (-) 3.82e5



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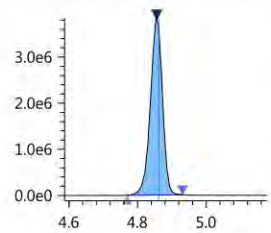
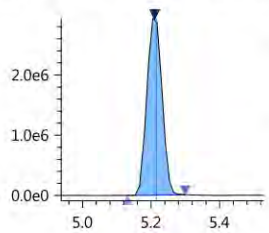
Conc 2.2280
RT 4.856 Area 9427904
Q 531.00>351.00 (-) 3.84e6



11Cl-PF3OUdS
Conc 2.2834
RT 5.210 Area 9055940
Q 631.00>451.05 (-) 2.94e6



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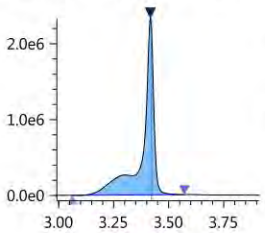

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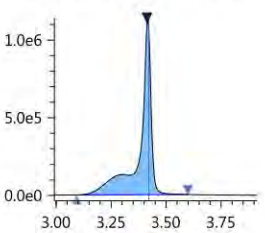
Q 216.90>172.15 (-) 1.14e6



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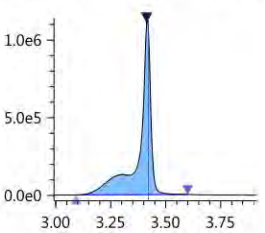
ISTD 216.90>172.15 (-) 1.14e6



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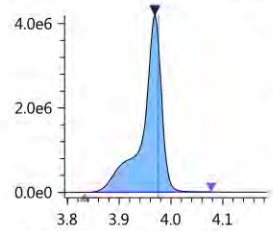
Q 263.05>219.10 (-) 4.20e6



PFPeA-13C
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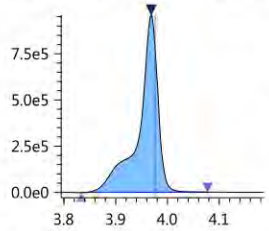
Q 267.90>223.00 (-) 9.59e5



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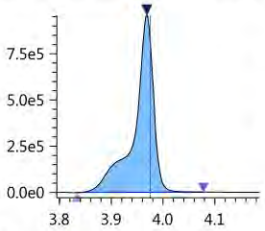

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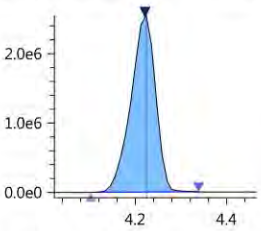
RT 4.221 Area 9532216
Q 313.00>269.00 (-) 2.56e6



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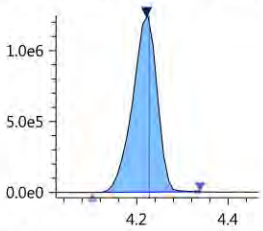

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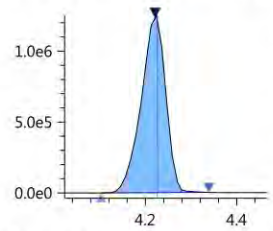

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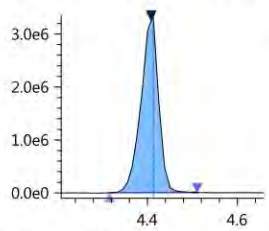
Conc 10.0480
RT 4.408 Area 9076366
Q 362.90>319.00 (-) 3.35e6



PFHpA-13C
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RT 4.408 Area 4913201
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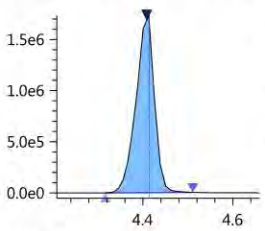

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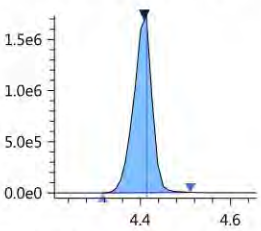

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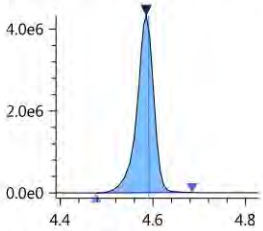
Conc 9.4365
RT 4.585 Area 10859540
Q 413.00>369.00 (-) 4.33e6



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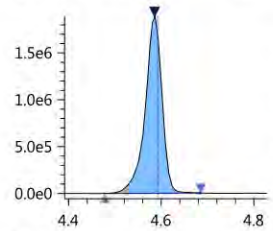
Q 416.80>372.05 (-) 1.89e6



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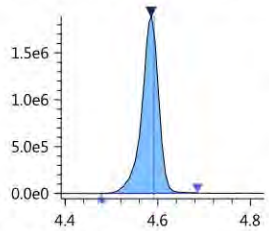
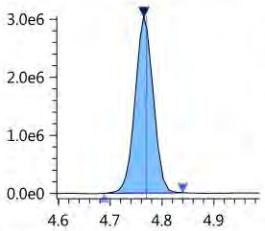


PFNA
Conc 9.3375
RT 4.765 Area 7422719
Q 463.00>418.90 (-) 3.05e6



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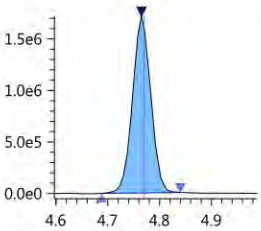
Q 467.80>423.00 (-) 1.72e6



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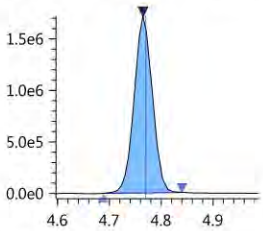
ISTD 467.80>423.00 (-) 1.72e6



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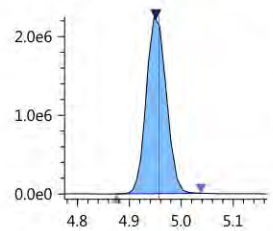

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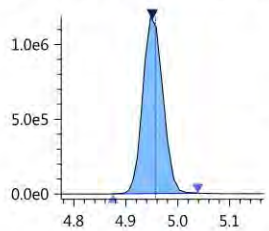

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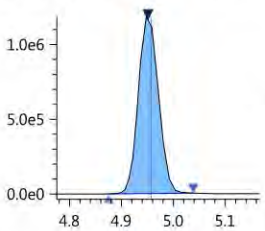

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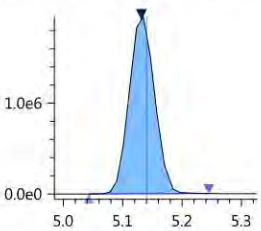

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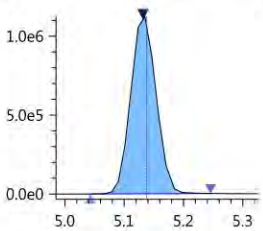

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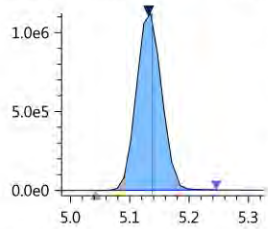

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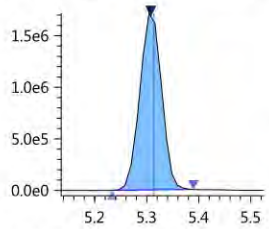

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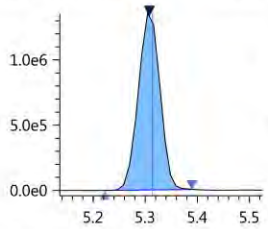

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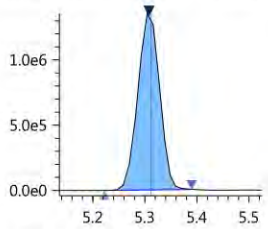

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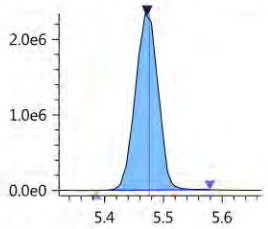

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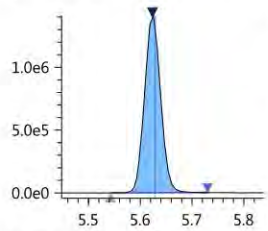

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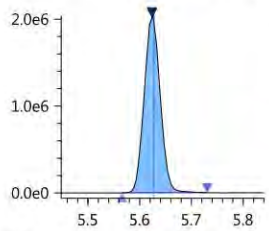

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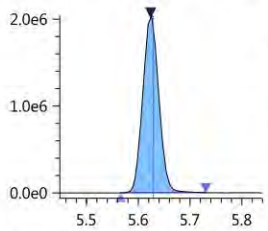

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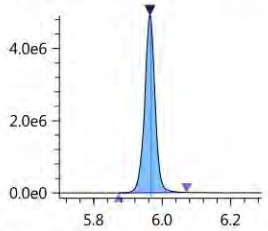

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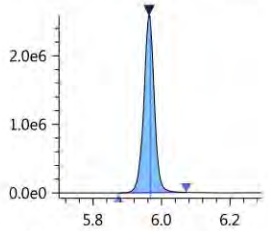

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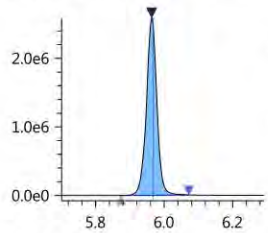

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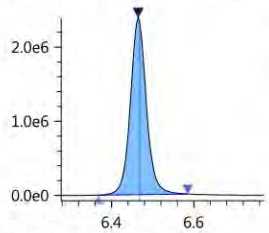

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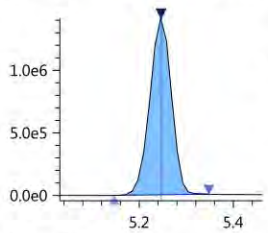

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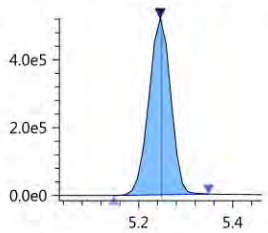

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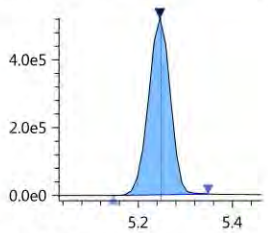

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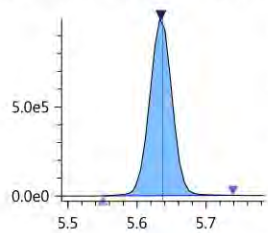

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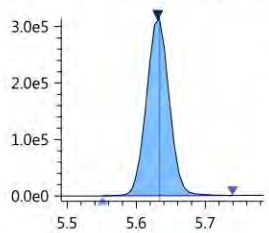

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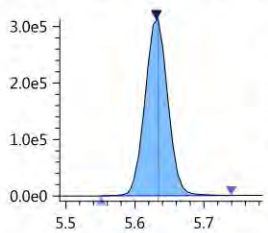

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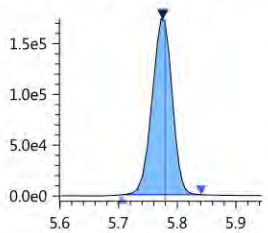

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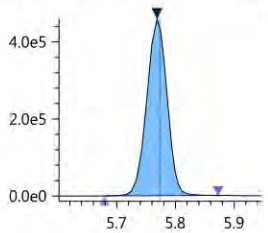

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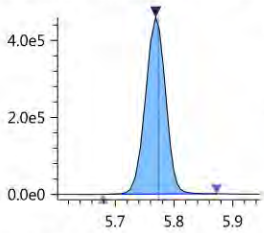

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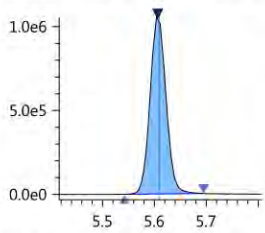

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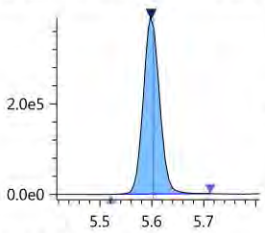

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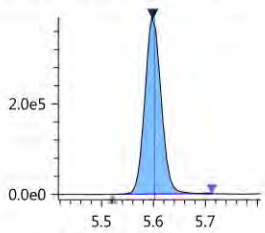

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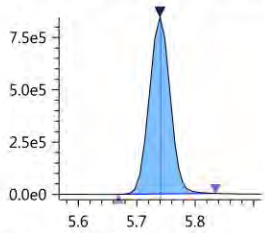

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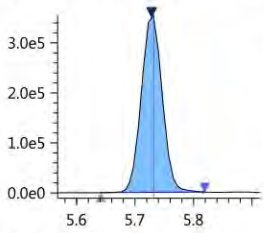

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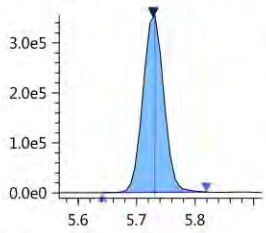

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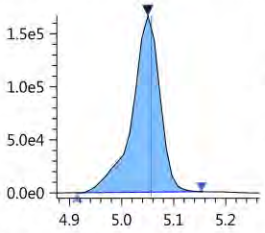

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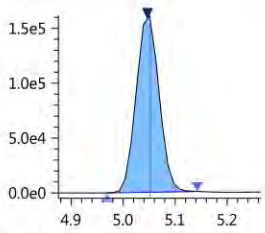

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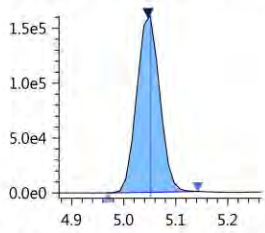

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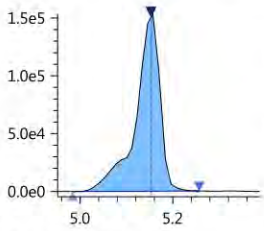

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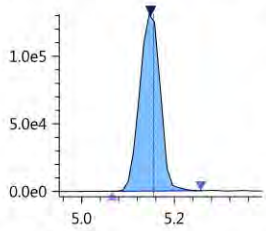

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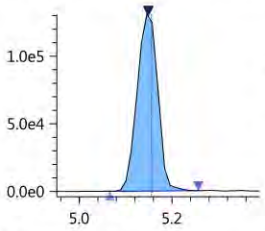

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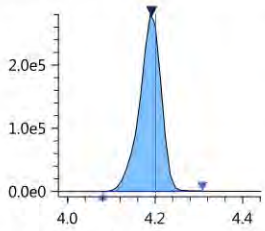

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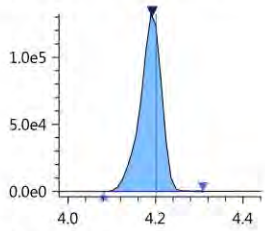

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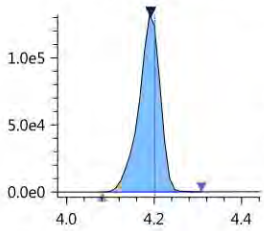

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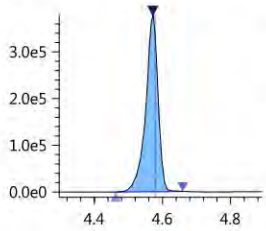
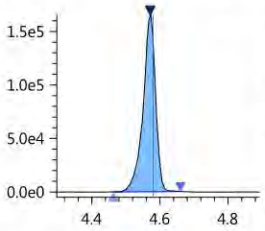
RT 4.572 Area 945241
Q 427.00>407.00 (-) 3.80e5



6_2-FTS-13C
Conc 5.7481
RT 4.572 Area 421051
Q 428.90>409.00 (-) 1.66e5



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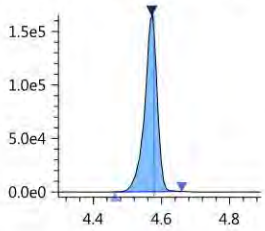
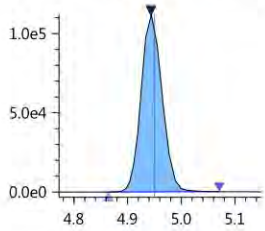
Conc 5.0000
RT 4.572 Area 421051
ISTD 428.90>409.00 (-) 1.66e5



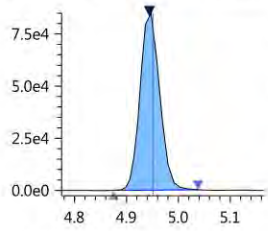
8_2-FTS_1
Conc 8.0063
RT 4.944 Area 304456
Q 527.10>506.90 (-) 1.12e5



Insight Report

Printed at 8/8/2019 8:44:13 AM

8_2-FTS-13C
Conc 5.3860
RT 4.944 Area 224868
Q 528.80>509.00 (-) 8.50e4



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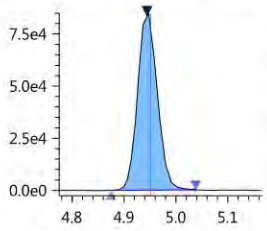
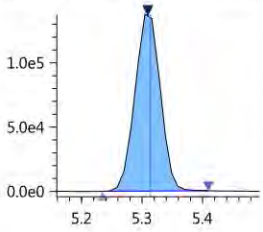
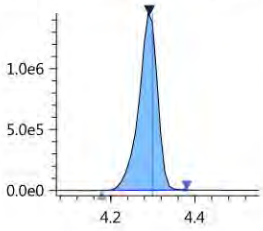
ISTD 528.80>509.00 (-) 8.50e4



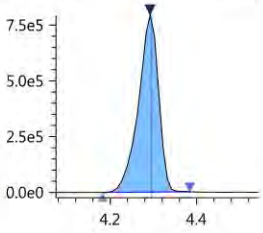
10_2-FtS_1
Conc 11.3526
RT 5.309 Area 402498
Q 627.00>606.95 (-) 1.38e5



HPFO_DA
Conc 9.4234
RT 4.292 Area 4494755
Q 329.00>169.00 (-) 1.46e6



HFPO_DA-13C
Conc 6.0413
RT 4.292 Area 2560394
Q 332.00>286.80 (-) 7.95e5



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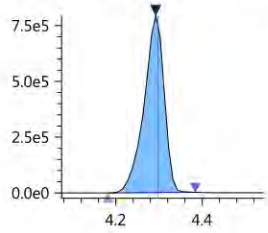
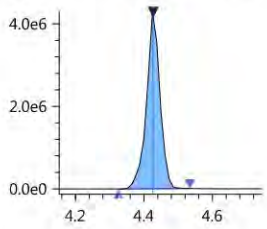
Conc 5.0000
RT 4.292 Area 2560394
ISTD 332.00>286.80 (-) 7.95e5



ADONA
Conc 9.8005
RT 4.427 Area 11638213
Q 377.00>251.00 (-) 4.29e6



Insight Report

Printed at 8/8/2019 9:54:02 AM

190807_018

Sample ID: 15.0 PPB ICAL
Date acquired: 8/7/2019 6:27:27 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_018.lcd
Vial: 7 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.131	4185332	4185332	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.018	4198710	1101056	2	13.2378	ng/mL	13.3106
PFBS-13C	Auto	4.020	1098235	4185332	1	5.4795	ng/mL	5.0000
PFBS-13C_IS	Auto	4.020	1101056	1101056	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.237	1897012	1101056	2	14.2119	ng/mL	14.1138
PFHxS_1	Auto	4.402	2144680	594706	3	12.9874	ng/mL	13.6961
PFHxS-18O	Auto	4.408	594706	4185332	1	5.1846	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.408	594706	594706	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.576	2712921	594706	3	15.4027	ng/mL	14.3016
PFOS_1	Auto	4.753	1872879	787012	4	13.5717	ng/mL	13.9384
PFOS-13C	Auto	4.753	792412	4185332	1	5.7989	ng/mL	5.0000
PFOS-13C_IS	Auto	4.753	787012	787012	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.932	1268813	787012	4	14.5756	ng/mL	14.4237
PFDS_1	Auto	5.110	1547371	787012	4	11.9993	ng/mL	14.4700
PFDOS	Auto	5.445	1545614	787012	4	9.7985	ng/mL	12.0981
9Cl-PF3ONS	Auto	4.856	13504446	2400745	26	13.1603	ng/mL	13.2294
11Cl-PF3OUdS	Auto	5.209	12521790	2400745	26	13.6231	ng/mL	12.4779
PFBA	Auto	3.417	11684973	3849222	5	14.8305	ng/mL	15.0000
PFBA-13C	Auto	3.413	3849222	4185332	1	5.6593	ng/mL	5.0000
PFBA-13C_IS	Auto	3.413	3849222	3849222	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.968	15663830	2364265	6	15.4253	ng/mL	15.0000
PFPeA-13C	Auto	3.968	2364265	4185332	1	5.5249	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.968	2364265	2364265	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.219	13623352	4366209	7	15.1040	ng/mL	15.0000
PFHxA-13C	Auto	4.219	4366209	4185332	1	5.1898	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.219	4366209	4366209	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.408	11318159	4764328	8	14.0864	ng/mL	15.0000
PFHpA-13C	Auto	4.408	4764328	4185332	1	4.8318	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.408	4764328	4764328	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.585	15408693	4625051	9	15.0428	ng/mL	15.0000
PFOA-13C	Auto	4.585	4625051	4185332	1	5.1793	ng/mL	5.0000
PFOA-13C_IS	Auto	4.585	4625051	4625051	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.765	10680792	4005611	10	14.8203	ng/mL	15.0000
PFNA-13C	Auto	4.765	4005611	4185332	1	5.6465	ng/mL	5.0000
PFNA-13C_IS	Auto	4.765	4005611	4005611	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.950	8496645	3104366	11	13.5015	ng/mL	15.0000
PFDA-13C	Auto	4.950	3104366	4185332	1	5.2055	ng/mL	5.0000
PFDA-13C_IS	Auto	4.950	3104366	3104366	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.131	8533903	3276962	12	14.7563	ng/mL	15.0000
PFUnA-13C	Auto	5.131	3276962	4185332	1	5.0698	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.131	3276962	3276962	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.307	7218288	3763850	13	15.4676	ng/mL	15.0000
PFDoA-13C	Auto	5.307	3763850	4185332	1	5.4061	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.307	3763850	3763850	13	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.471	8594837	4098228	14	14.6956	ng/mL	15.0000
PFTeDA	Auto	5.623	4193956	4098228	14	14.6343	ng/mL	15.0000
PFTeDA-13C	Auto	5.623	4098228	4185332	1	5.3429	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.623	4098228	4098228	14	5.0000	ng/mL	5.0000
PFHxDA	Auto	5.962	14439040	5106255	15	15.2719	ng/mL	15.0000
13C-PFHxDA	Auto	5.961	5106255	4185332	1	5.4368	ng/mL	5.0000
13C-PFHxDA_IS	Auto	5.961	5106255	5106255	15	5.0000	ng/mL	5.0000
PFODA	Auto	6.461	8757362	5106255	15	14.3973	ng/mL	15.0000
FOSA	Auto	5.245	6560759	1736595	16	15.0083	ng/mL	15.0000
FOSA-13C	Auto	5.244	1736595	4185332	1	5.4491	ng/mL	5.0000
FOSA-13C_IS	Auto	5.244	1736595	1736595	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.633	3107932	701212	17	14.0688	ng/mL	15.0000
N-MeFOSA-d3	Auto	5.630	701212	4185332	1	5.6079	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.630	701212	701212	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.774	582655	1018932	18	14.9231	ng/mL	15.0000
N-EtFOSA-d9	Auto	5.767	1018932	4185332	1	5.4719	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.767	1018932	1018932	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.605	3055537	853134	19	14.2679	ng/mL	15.0000
N-MeFOSE-d7	Auto	5.597	853134	4185332	1	5.5541	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.597	853134	853134	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.738	3042414	874103	20	14.2323	ng/mL	15.0000
N-EtFOSE-d9	Auto	5.727	874103	4185332	1	5.6489	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.727	874103	874103	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.047	937463	523777	21	15.6361	ng/mL	15.0000

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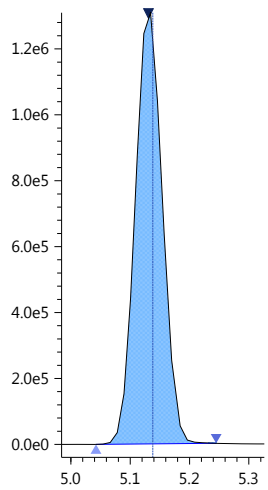
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-MeFOSAA-d3	Auto	5.046	523777	4185332	1	5.6949	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.046	523777	523777	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.152	811809	394725	22	15.6809	ng/mL	15.0000
N-EtFOSAA-d5	Auto	5.146	394725	4185332	1	4.7499	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.146	394725	394725	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.192	1428704	494955	23	11.6080	ng/mL	14.0583
4_2-FTS-13C	Auto	4.192	494955	4185332	1	6.4234	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.192	494955	494955	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.571	1293178	443998	24	11.9776	ng/mL	14.2676
6_2-FTS-13C	Auto	4.571	443998	4185332	1	6.1127	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.571	443998	443998	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.943	410578	213467	25	10.9887	ng/mL	14.4007
8_2-FTS-13C	Auto	4.944	213467	4185332	1	5.1563	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.944	213467	213467	25	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.309	495273	213467	25	14.6749	ng/mL	14.4929
HPFO_DA	Auto	4.291	6802722	2400745	26	15.2106	ng/mL	15.0000
HFPO_DA-13C	Auto	4.291	2400745	4185332	1	5.7126	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.291	2400745	2400745	26	5.0000	ng/mL	5.0000
ADONA	Auto	4.426	16000793	2400745	26	14.3702	ng/mL	14.1758

13C7-PFUnDA_IS

Conc 5.0000
RT 5.131 Area 4185332

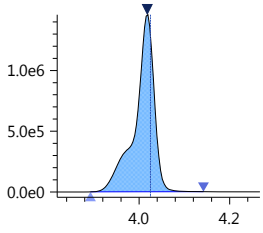
ISTD 570.00>525.00 (-) 1.31e6



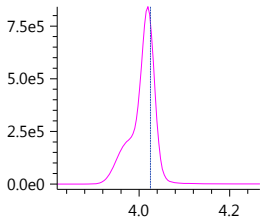
PFBS_1

Conc 13.2378
RT 4.018 Area 4198710
R#1 55.01 (0.00)

Q 299.00>80.00 (-) 1.46e6



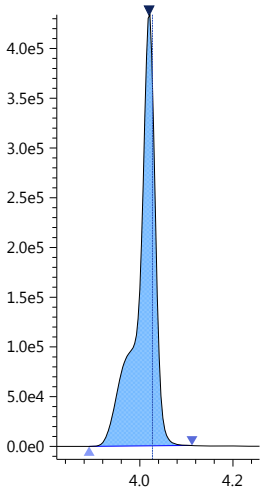
R1 298.80>99.00 (-) 8.42e5



PFBS-13C

Conc 5.4795
RT 4.020 Area 1098235

Q 301.80>80.00 (-) 4.34e5



PFBS-13C_IS

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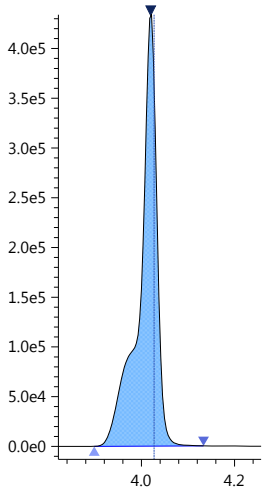
RT 4.020 Area 1101056

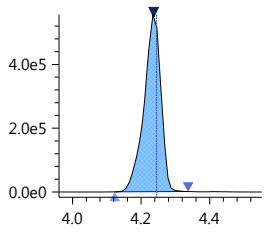
ISTD 301.80>80.00 (-) 4.34e5



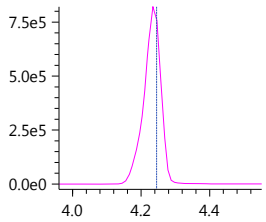
PFPeS

Conc 14.2119
RT 4.237 Area 1897012
R#1 147.69 (0.00)

Q 349.00>99.00 (-) 5.56e5



R1 349.00>79.95 (-) 8.21e5



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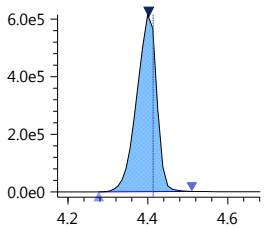
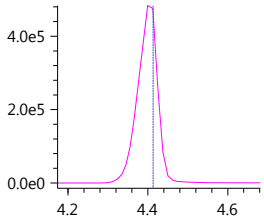
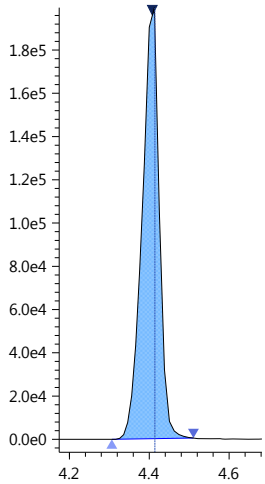
PFHxS_1
Conc 12.9874
RT 4.402 Area 2144680
R#1 78.70 (0.00)
Q 399.00>80.00 (-) 6.16e5



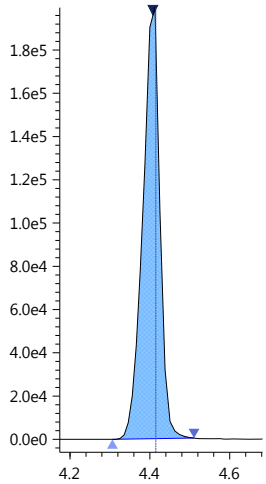
R1 399.00>99.00 (-) 4.83e5



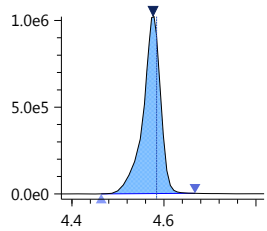
PFHxS-18O
Conc 5.1846
RT 4.408 Area 594706
Q 402.70>84.05 (-) 2.00e5



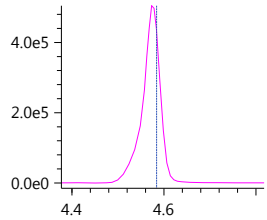
PFHxS-18O_IS
Conc 5.0000
RT 4.408 Area 594706
ISTD 402.70>84.05 (-) 2.00e5



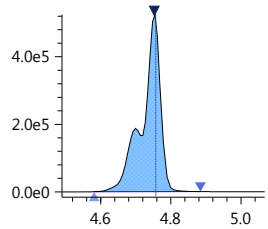
PFHpS_1
Conc 15.4027
RT 4.576 Area 2712921
R#1 49.87 (0.00)
Q 449.00>80.15 (-) 1.02e6



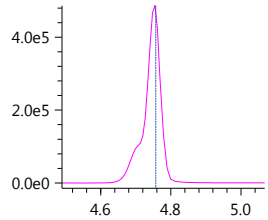
R1 449.00>99.20 (-) 5.05e5



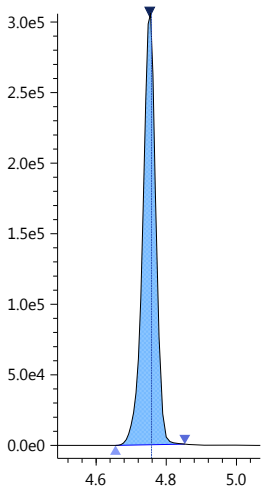
PFOS_1
Conc 13.5717
RT 4.753 Area 1872879
R#1 92.74 (0.00)
Q 499.00>80.00 (-) 5.25e5



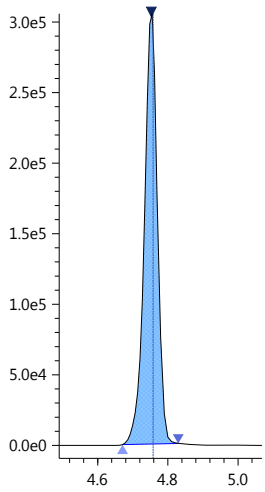
R1 499.00>99.00 (-) 4.87e5



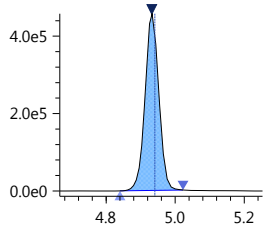
PFOS-13C
Conc 5.7989
RT 4.753 Area 792412
Q 502.80>80.05 (-) 3.06e5



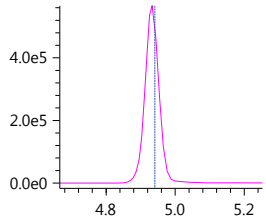
PFOS-13C_IS
Conc 5.0000
RT 4.753 Area 787012
ISTD 502.80>80.05 (-) 3.06e5



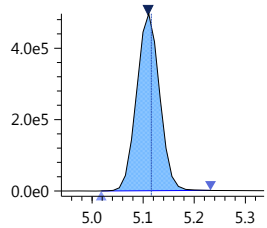
PFNS
Conc 14.5756
RT 4.932 Area 1268813
R#1 123.44 (0.00)
Q 549.00>99.00 (-) 4.58e5



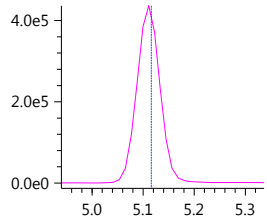
R1 549.00>79.95 (-) 5.66e5



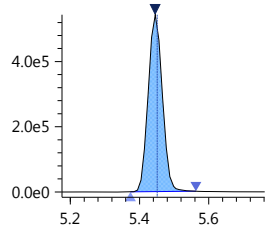
PFDS_1
Conc 11.9993
RT 5.110 Area 1547371
R#1 87.89 (0.00)
Q 599.00>79.90 (-) 4.97e5



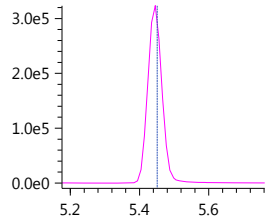
R1 599.00>99.10 (-) 4.36e5



PFDOS
Conc 9.7985
RT 5.445 Area 1545614
R#1 59.19 (0.00)
Q 699.00>79.95 (-) 5.44e5



R1 699.00>99.05 (-) 3.23e5



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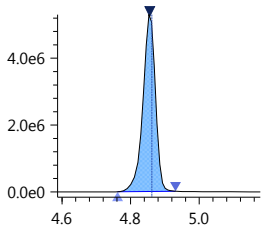
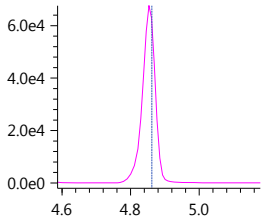
9Cl-PF3ONS

Conc 13.1603
RT 4.856 Area 13504446
R#1 1.27 (0.00)

Q 531.00>351.00 (-) 5.30e6



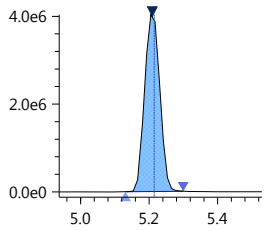
R1 531.00>98.90 (-) 6.76e4



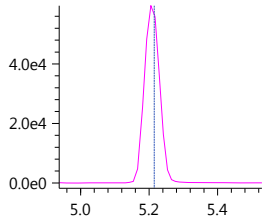
11Cl-PF3OUdS

Conc 13.6231
RT 5.209 Area 12521790
R#1 1.48 (0.00)

Q 631.00>451.05 (-) 4.04e6



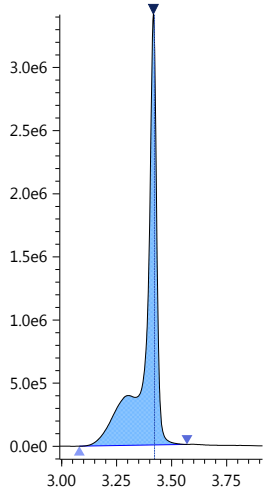
R1 631.00>98.90 (-) 5.96e4



PFBA

Conc 14.8305
RT 3.417 Area 11684973

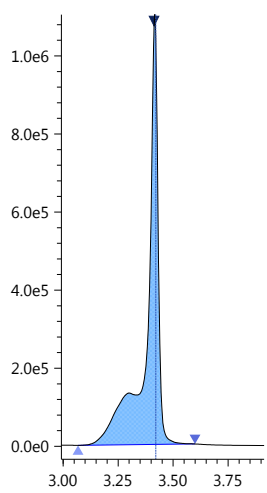
Q 213.00>169.10 (-) 3.42e6



PFBA-13C

Conc 5.6593
RT 3.413 Area 3849222

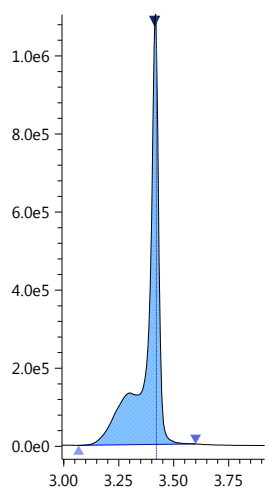
Q 216.90>172.15 (-) 1.11e6



PFBA-13C_IS

Conc 5.0000
RT 3.413 Area 3849222

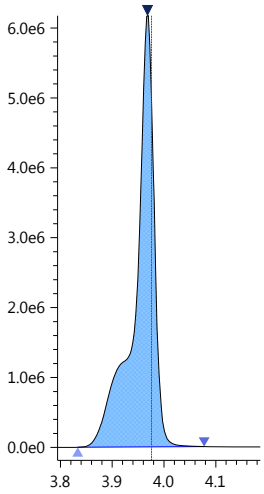
ISTD 216.90>172.15 (-) 1.11e6



PFPeA

Conc 15.4253
RT 3.968 Area 15663830

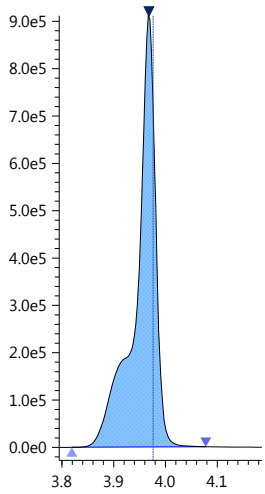
Q 263.05>219.10 (-) 6.18e6



PFPeA-13C

Conc 5.5249
RT 3.968 Area 2364265

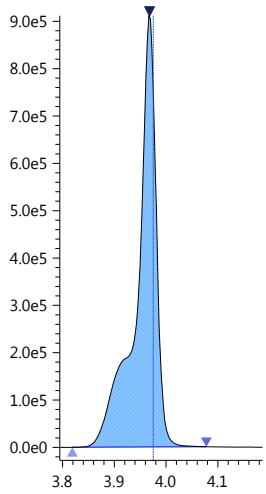
Q 267.90>223.00 (-) 9.12e5



PFPeA-13C_IS

Conc 5.0000
RT 3.968 Area 2364265

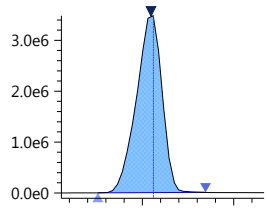
ISTD 267.90>223.00 (-) 9.12e5



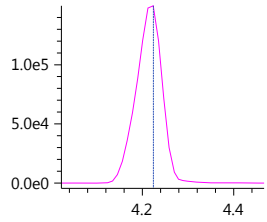
PFHxA

Conc 15.1040
RT 4.219 Area 13623352
R#1 4.32 (0.00)

Q 313.00>269.00 (-) 3.48e6



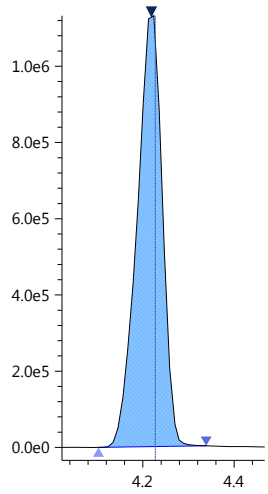
R1 313.00>119.10 (-) 1.50e5



PFHxA-13C

Conc 5.1898
RT 4.219 Area 4366209

Q 314.90>270.10 (-) 1.13e6



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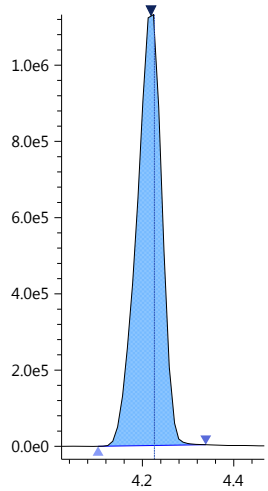
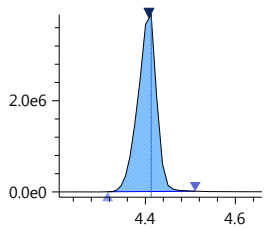
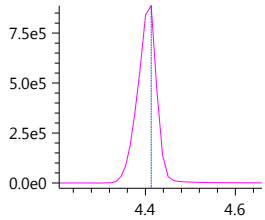
PFHxA-13C_IS
Conc 5.0000
RT 4.219 Area 4366209
ISTD 314.90>270.10 (-) 1.13e6



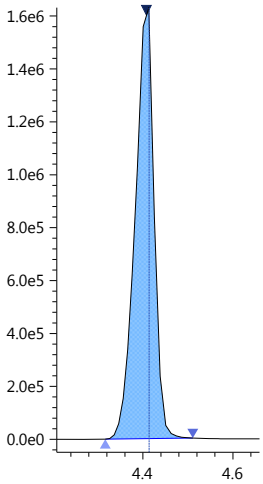
PFHpA
Conc 14.0864
RT 4.408 Area 11318159
R#1 22.88 (0.00)
Q 362.90>319.00 (-) 3.89e6



R1 362.90>169.00 (-) 8.87e5



PFHpA-13C
Conc 4.8318
RT 4.408 Area 4764328
Q 366.90>322.10 (-) 1.63e6



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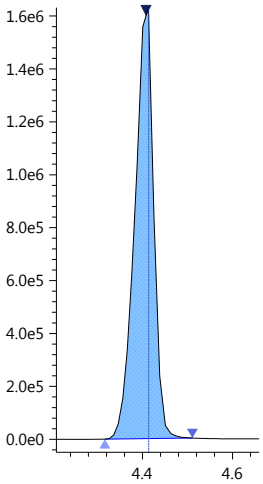
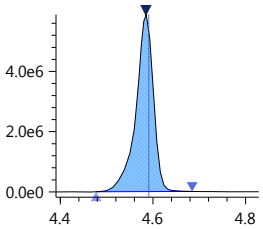
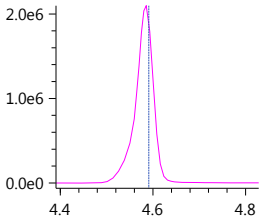
Conc 5.0000
RT 4.408 Area 4764328
ISTD 366.90>322.10 (-) 1.63e6



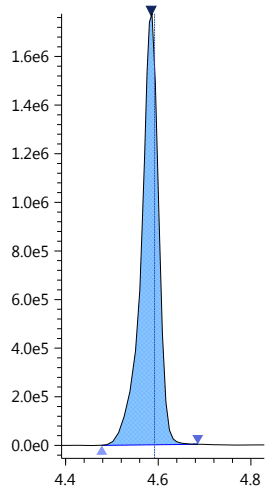
PFOA
Conc 15.0428
RT 4.585 Area 15408693
R#1 35.53 (0.00)
Q 413.00>369.00 (-) 5.89e6



R1 413.00>169.10 (-) 2.10e6



PFOA-13C
Conc 5.1793
RT 4.585 Area 4625051
Q 416.80>372.05 (-) 1.78e6



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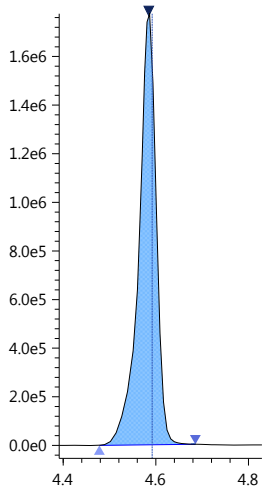
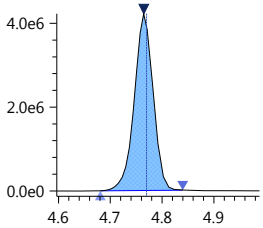
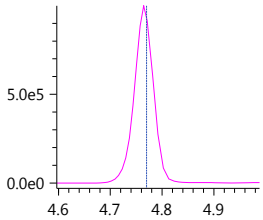
Conc 5.0000
RT 4.585 Area 4625051
ISTD 416.80>372.05 (-) 1.78e6



PFNA
Conc 14.8203
RT 4.765 Area 10680792
R#1 23.64 (0.00)
Q 463.00>418.90 (-) 4.23e6



R1 463.00>219.00 (-) 9.99e5



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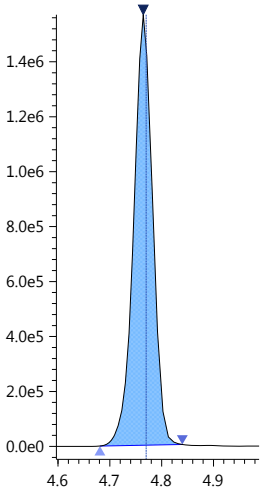
Conc 5.6465
RT 4.765 Area 4005611
Q 467.80>423.00 (-) 1.57e6



PFNA-13C_IS
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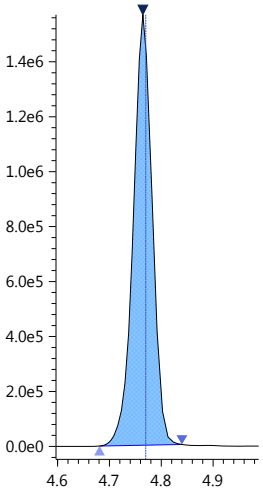
RT 4.765 Area 4005611
ISTD 467.80>423.00 (-) 1.57e6



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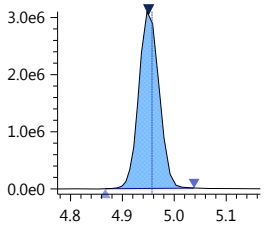
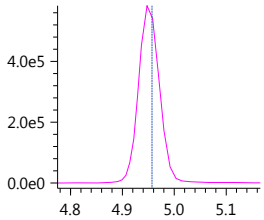
PFDA
Conc 13.5015
RT 4.950 Area 8496645
R#1 18.78 (0.00)
Q 513.00>468.80 (-) 3.10e6



R1 513.00>219.10 (-) 5.83e5



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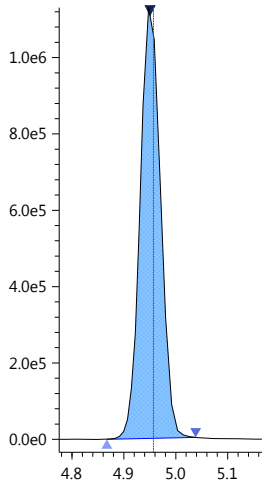
Conc 5.2055
RT 4.950 Area 3104366
Q 514.80>469.95 (-) 1.13e6



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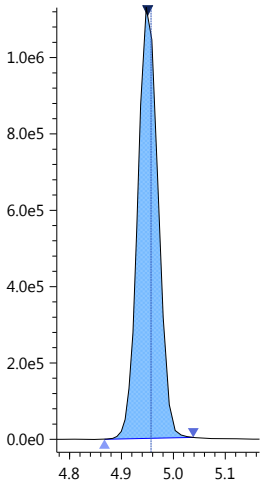
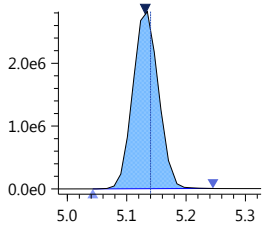
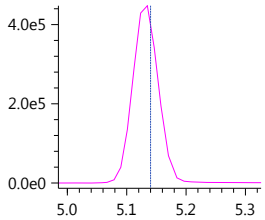
ISTD 514.80>469.95 (-) 1.13e6



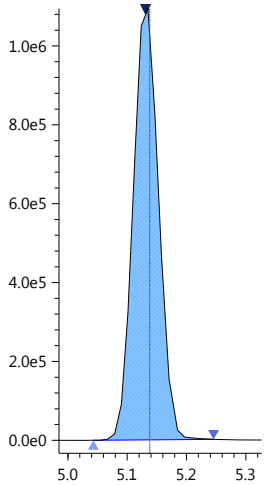
PFUnA
Conc 14.7563
RT 5.131 Area 8533903
R#1 15.85 (0.00)
Q 563.00>518.90 (-) 2.82e6



R1 563.00>219.00 (-) 4.48e5



PFUnA-13C
Conc 5.0698
RT 5.131 Area 3276962
Q 564.80>519.95 (-) 1.09e6



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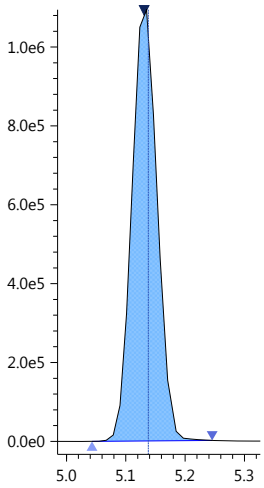
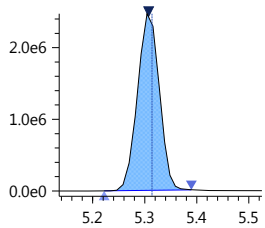
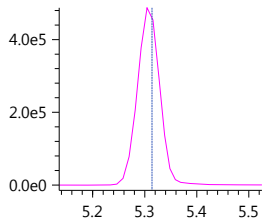


PFDoA
Conc 15.4676
RT 5.307 Area 7218288
R#1 19.69 (0.00)
Q 613.05>569.00 (-) 2.47e6



R1 613.05>169.00 (-) 4.87e5



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Conc 5.4061
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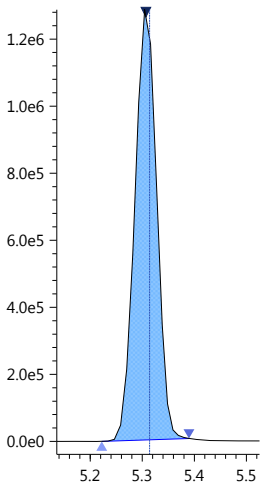
Q 614.80>569.95 (-) 1.29e6



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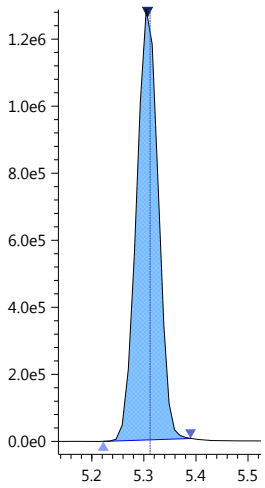
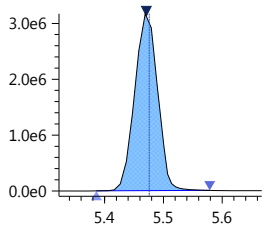
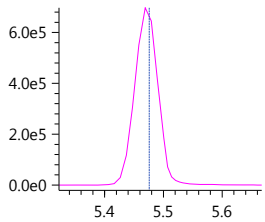
RT 5.307 Area 3763850
ISTD 614.80>569.95 (-) 1.29e6



PFTrDA
Conc 14.6956
RT 5.471 Area 8594837
R#1 22.10 (0.00)
Q 663.00>618.90 (-) 3.17e6



R1 662.90>169.00 (-) 6.97e5



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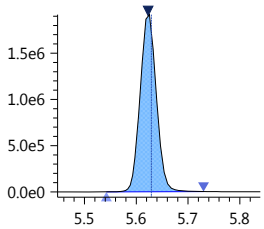
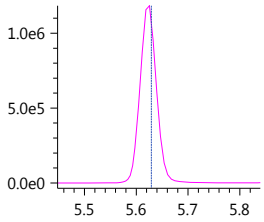
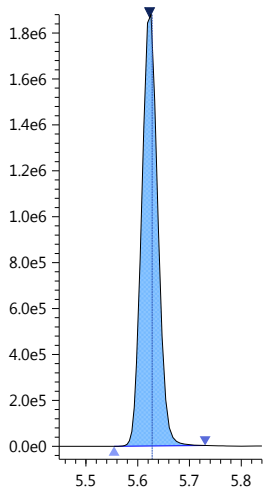
PFTeDA
Conc 14.6343
RT 5.623 Area 4193956
R#1 61.68 (0.00)
Q 713.40>669.00 (-) 1.92e6



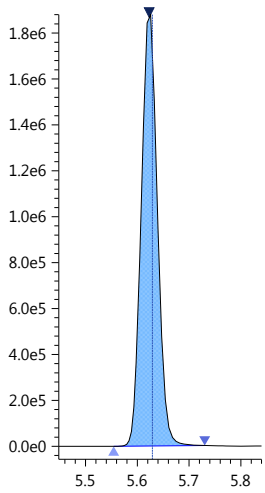
R1 713.40>169.10 (-) 1.18e6



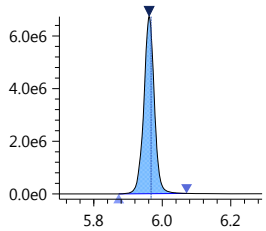
PFTeDA-13C
Conc 5.3429
RT 5.623 Area 4098228
Q 714.70>669.90 (-) 1.88e6



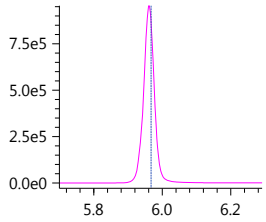
PFTeDA-13C_IS
Conc 5.0000
RT 5.623 Area 4098228
ISTD 714.70>669.90 (-) 1.88e6



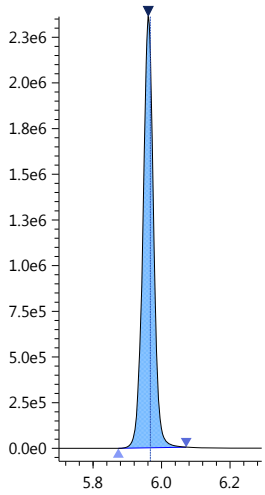
PFHxDA
Conc 15.2719
RT 5.962 Area 14439040
R#1 14.05 (0.00)
Q 813.00>769.05 (-) 6.73e6



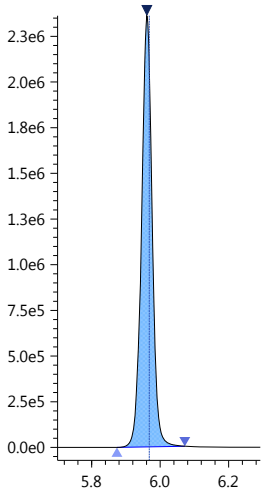
R1 813.00>218.95 (-) 9.55e5



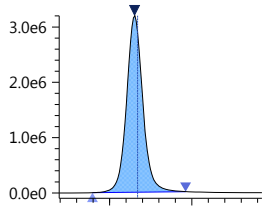
13C-PFHxDA
Conc 5.4368
RT 5.961 Area 5106255
Q 815.00>770.05 (-) 2.36e6



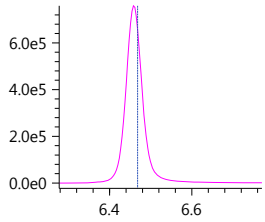
13C-PFHxDA_IS
Conc 5.0000
RT 5.961 Area 5106255
ISTD 815.00>770.05 (-) 2.36e6



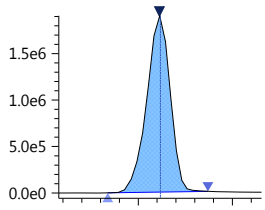
PFODA
Conc 14.3973
RT 6.461 Area 8757362
R#1 23.92 (0.00)
Q 913.00>868.85 (-) 3.20e6



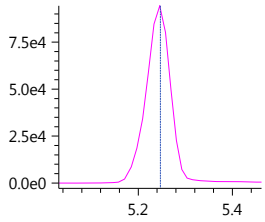
R1 913.00>169.00 (-) 7.59e5



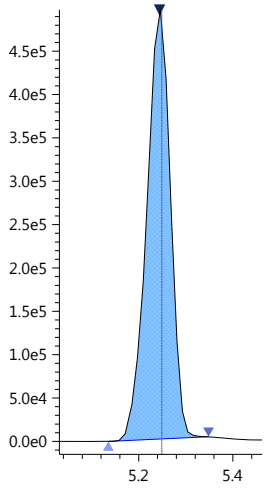
FOSA
Conc 15.0083
RT 5.245 Area 6560759
R#1 4.95 (0.00)
Q 498.20>78.00 (-) 1.91e6



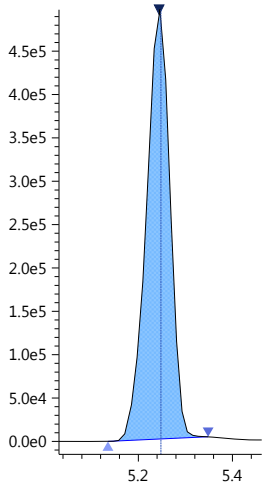
R1 498.20>64.10 (-) 9.44e4



FOSA-13C
Conc 5.4491
RT 5.244 Area 1736595
Q 506.00>78.05 (-) 4.98e5



FOSA-13C_IS
Conc 5.0000
RT 5.244 Area 1736595
ISTD 506.00>78.05 (-) 4.98e5



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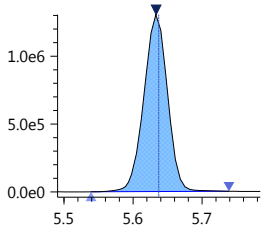
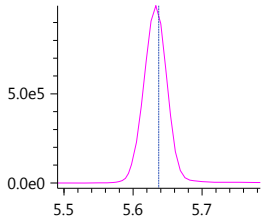
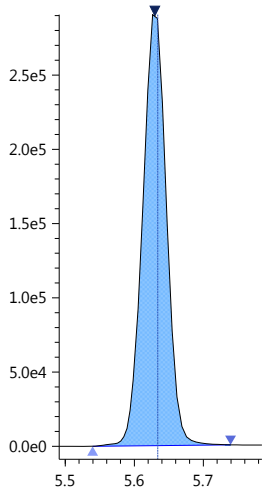
N-MeFOSA
Conc 14.0688
RT 5.633 Area 3107932
R#1 76.14 (0.00)
Q 512.00>169.10 (-) 1.31e6



R1 512.00>219.00 (-) 9.94e5



N-MeFOSA-d3
Conc 5.6079
RT 5.630 Area 701212
Q 514.90>168.90 (-) 2.91e5



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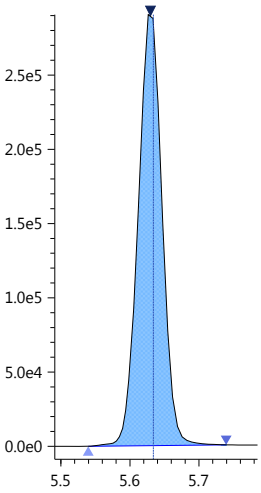
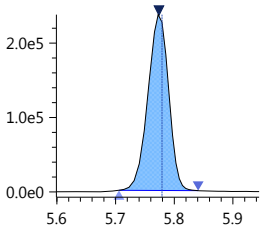
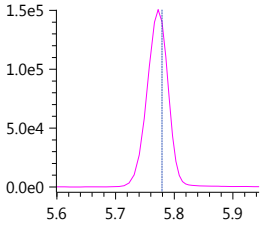
Conc 5.0000
RT 5.630 Area 701212
ISTD 514.90>168.90 (-) 2.91e5



N-EtFOSA
Conc 14.9231
RT 5.774 Area 582655
R#1 63.76 (0.00)
Q 526.90>169.10 (-) 2.38e5



R1 526.90>219.00 (-) 1.51e5



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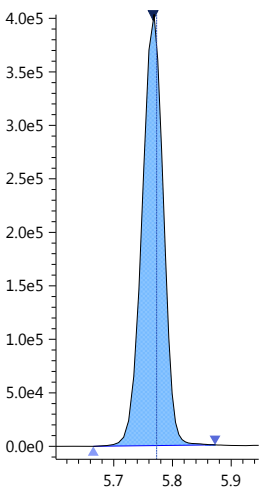
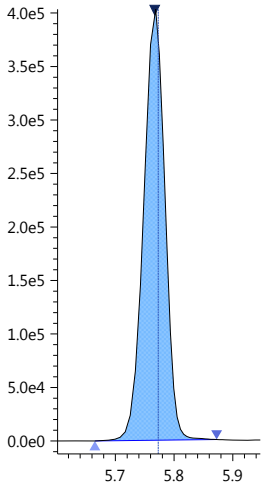
Conc 5.4719
RT 5.767 Area 1018932
Q 530.90>169.15 (-) 4.04e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.767 Area 1018932
ISTD 530.90>169.15 (-) 4.04e5



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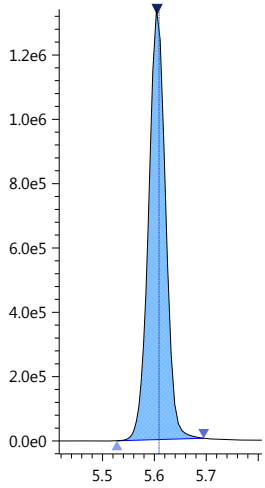
Conc 14.2679
RT 5.605 Area 3055537
Q 616.00>59.00 (-) 1.34e6



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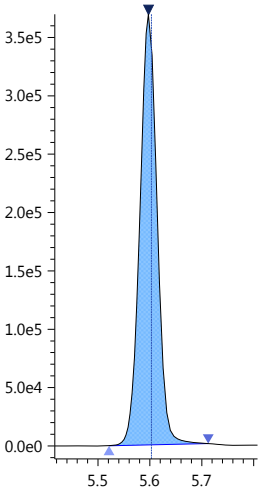
Conc 5.5541
RT 5.597 Area 853134
Q 622.70>59.10 (-) 3.70e5



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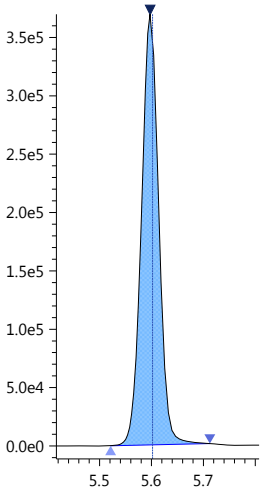
Conc 5.0000
RT 5.597 Area 853134
ISTD 622.70>59.10 (-) 3.70e5



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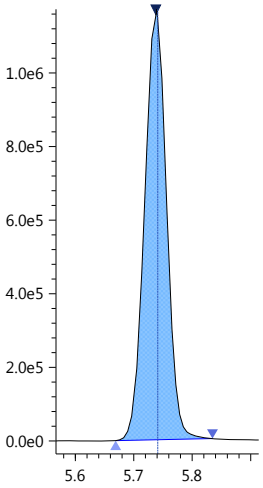
Conc 14.2323
RT 5.738 Area 3042414
Q 630.00>58.90 (-) 1.17e6



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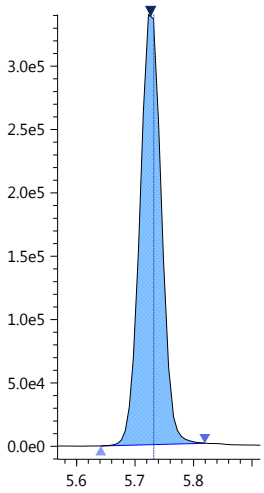
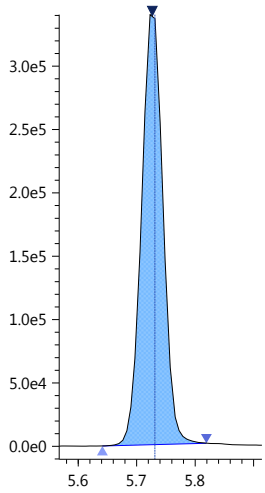
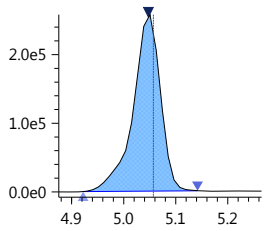
N-EtFOSE-d9
Conc 5.6489
RT 5.727 Area 874103
Q 638.70>59.10 (-) 3.41e5



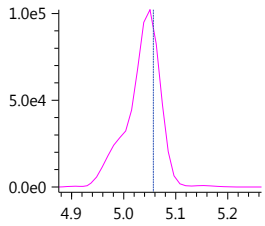
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.727 Area 874103
ISTD 638.70>59.10 (-) 3.41e5



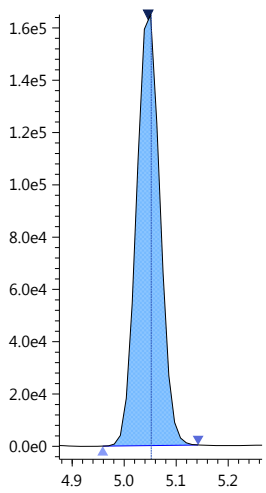
N-MeFOSAA
Conc 15.6361
RT 5.047 Area 937463
R#1 39.54 (0.00)
Q 570.20>419.00 (-) 2.58e5



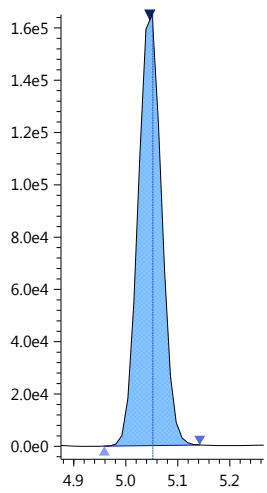
R1 570.20>512.00 (-) 1.02e5



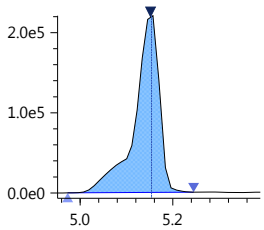
N-MeFOSAA-d3
Conc 5.6949
RT 5.046 Area 523777
Q 572.80>419.05 (-) 1.65e5



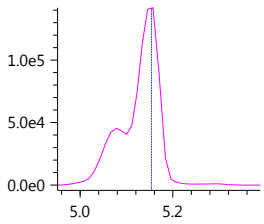
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.046 Area 523777
ISTD 572.80>419.05 (-) 1.65e5



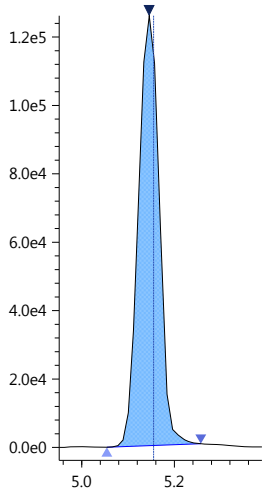
N-EtFOSAA
Conc 15.6809
RT 5.152 Area 811809
R#1 64.24 (0.00)
Q 584.20>418.95 (-) 2.21e5



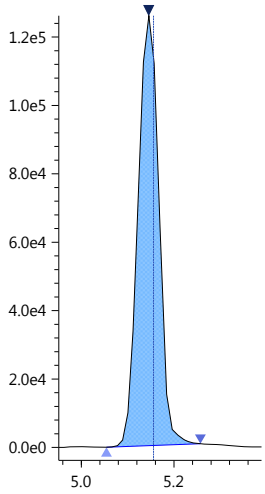
R1 584.20>526.10 (-) 1.42e5



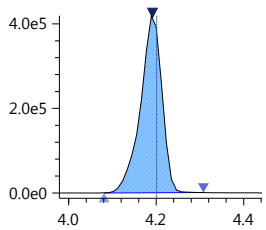
N-EtFOSAA-d5
Conc 4.7499
RT 5.146 Area 394725
Q 588.80>419.00 (-) 1.26e5



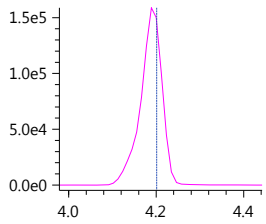
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.146 Area 394725
ISTD 588.80>419.00 (-) 1.26e5



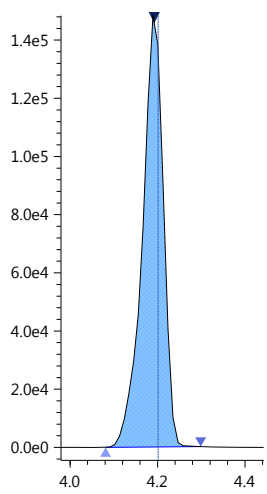
4_2-FTS_1
Conc 11.6080
RT 4.192 Area 1428704
R#1 37.81 (0.00)
Q 327.00>307.05 (-) 4.19e5



R1 327.00>81.10 (-) 1.59e5



4_2-FTS-13C
Conc 6.4234
RT 4.192 Area 494955
Q 328.80>309.05 (-) 1.48e5



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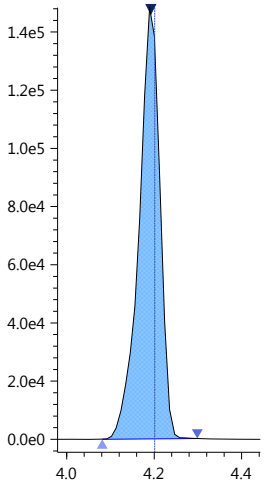
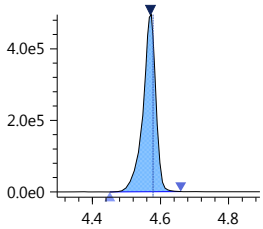
4_2-FTS-13C_IS
Conc 5.0000
RT 4.192 Area 494955

ISTD 328.80>309.05 (-) 1.48e5

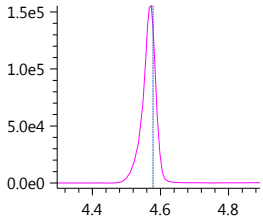


6_2-FTS_1
Conc 11.9776
RT 4.571 Area 1293178
R#1 31.57 (0.00)

Q 427.00>407.00 (-) 4.96e5

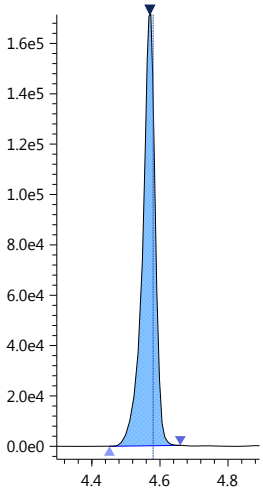


R1 427.00>80.90 (-) 1.56e5



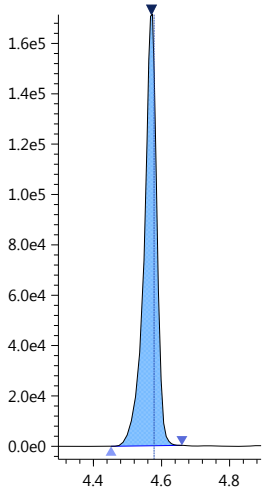
6_2-FTS-13C
Conc 6.1127
RT 4.571 Area 443998

Q 428.90>409.00 (-) 1.71e5



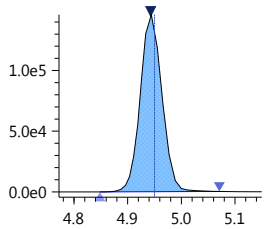
6_2-FTS-13C_IS
Conc 5.0000
RT 4.571 Area 443998

ISTD 428.90>409.00 (-) 1.71e5



8_2-FTS_1
Conc 10.9887
RT 4.943 Area 410578
R#1 7.93 (0.00)

Q 527.10>506.90 (-) 1.46e5



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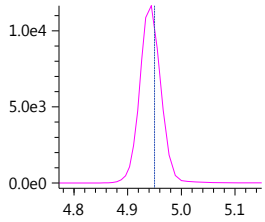
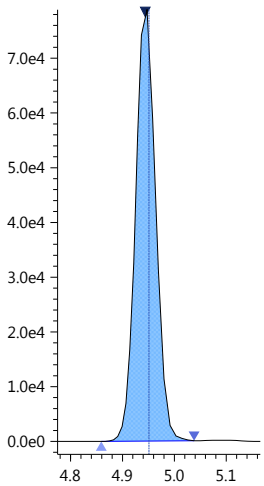


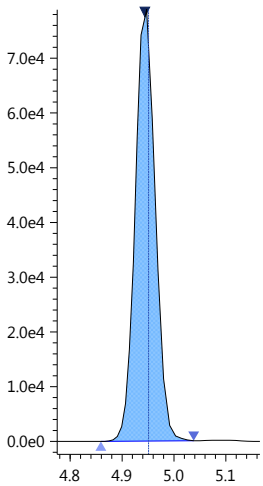
8_2-FTS-13C
Conc 5.1563
RT 4.944 Area 213467

Q 528.80>509.00 (-) 7.89e4



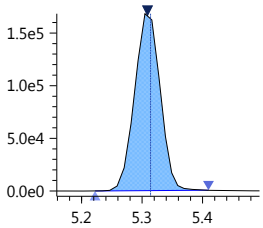
8_2-FTS-13C_IS
Conc 5.0000
RT 4.944 Area 213467

ISTD 528.80>509.00 (-) 7.89e4

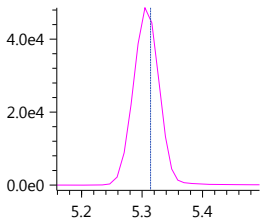


10_2-FtS_1
Conc 14.6749
RT 5.309 Area 495273
R#1 28.97 (0.00)

Q 627.00>606.95 (-) 1.68e5

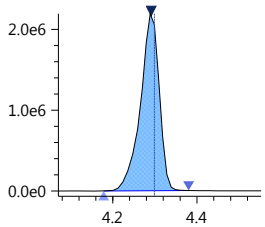


R1 627.00>81.25 (-) 4.86e4

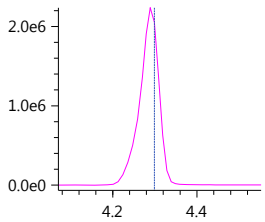


HPFO_DA
Conc 15.2106
RT 4.291 Area 6802722
R#1 101.91 (0.00)

Q 329.00>169.00 (-) 2.19e6

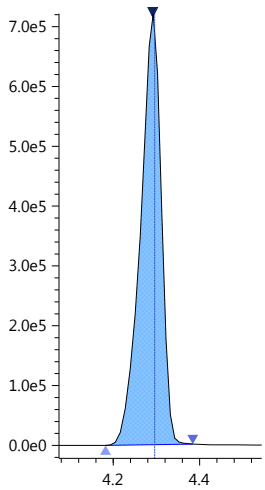


R1 329.00>285.10 (-) 2.24e6



HFPO_DA-13C
Conc 5.7126
RT 4.291 Area 2400745

Q 332.00>286.80 (-) 7.22e5



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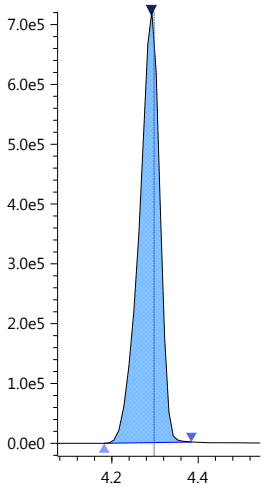
HFPO_DA-13C_IS

Conc 5.0000
RT 4.291 Area 2400745

ISTD 332.00>286.80 (-) 7.22e5



ADONA

Conc 14.3702
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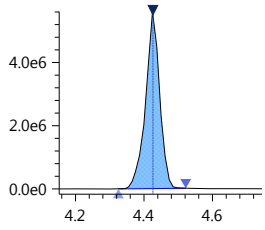
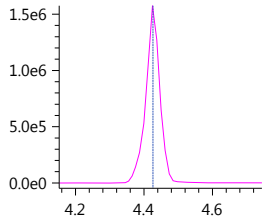
R#1 27.90 (0.00)

Q 377.00>251.00 (-) 5.61e6



R1 377.00>84.95 (-) 1.58e6



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Printed at 8/8/2019 8:44:13 AM

190807_018

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Date acquired: 8/7/2019 6:27:27 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_018.lcd
Vial: 7 | Inj. Volume: 15.0000uL | Tray: 0

13C7-PFUnDA_IS
Conc 5.0000
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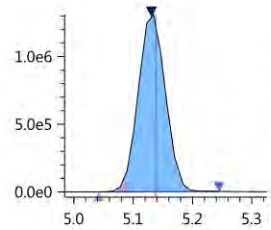
ISTD 570.00>525.00 (-) 1.31e6



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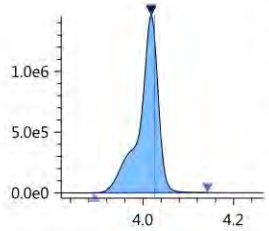
Conc 13.2378
RT 4.018 Area 4198710
Q 299.00>80.00 (-) 1.46e6



PFBS-13C
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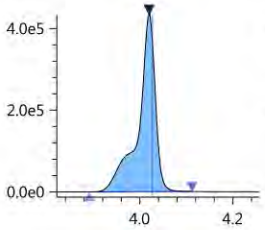
Q 301.80>80.00 (-) 4.34e5



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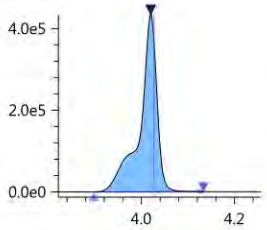

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Conc 14.4174
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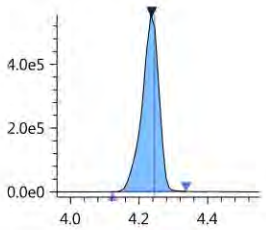
Q 349.00>99.00 (-) 5.56e5



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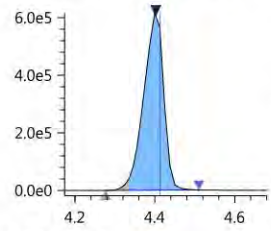

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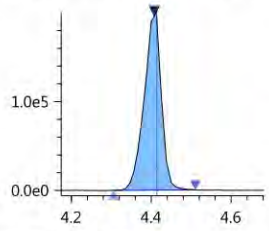
Q 402.70>84.05 (-) 2.00e5



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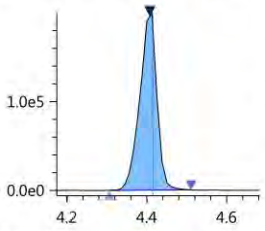

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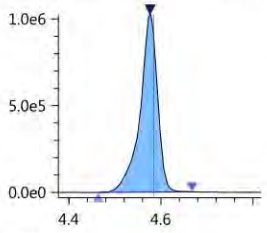

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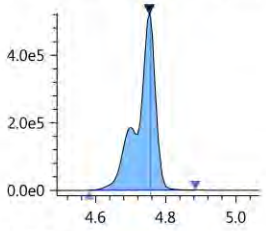
RT 4.753 Area 1872879
Q 499.00>80.00 (-) 5.25e5



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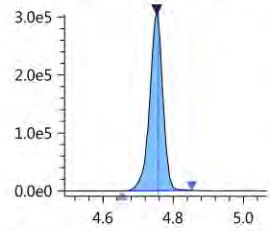
Q 502.80>80.05 (-) 3.06e5



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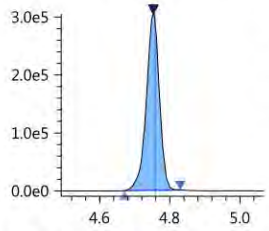

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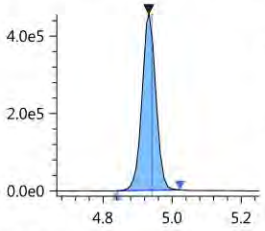
Conc 12.1786
RT 4.932 Area 1268813
Q 549.00>99.00 (-) 4.58e5



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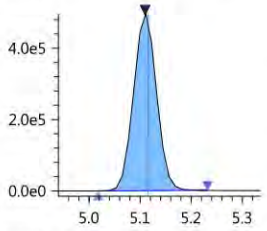
RT 5.110 Area 1547371
Q 599.00>79.90 (-) 4.97e5



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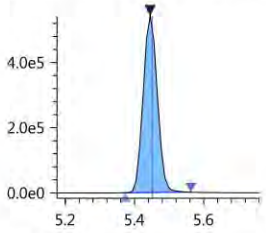

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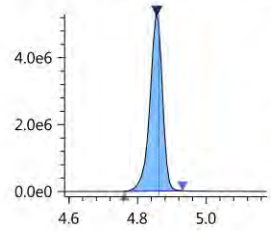
RT 4.856 Area 13504446
Q 531.00>351.00 (-) 5.30e6



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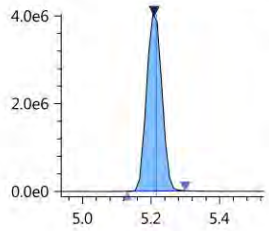
RT 5.209 Area 12521790
Q 631.00>451.05 (-) 4.04e6



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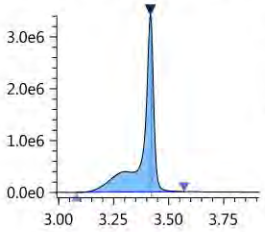
Conc 14.8305
RT 3.417 Area 11684973
Q 213.00>169.10 (-) 3.42e6



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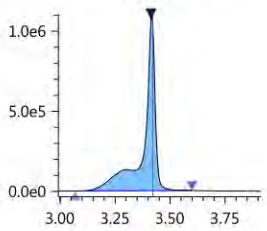
RT 3.413 Area 3849222
Q 216.90>172.15 (-) 1.11e6



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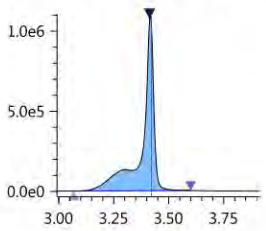

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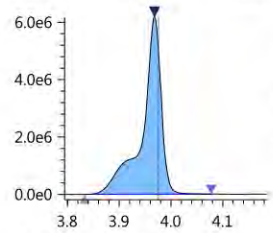
Q 263.05>219.10 (-) 6.18e6



PFPeA-13C
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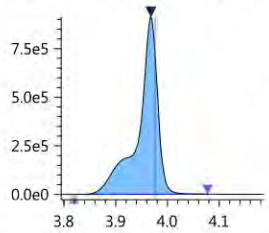
Q 267.90>223.00 (-) 9.12e5



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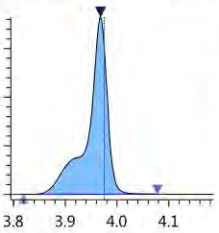

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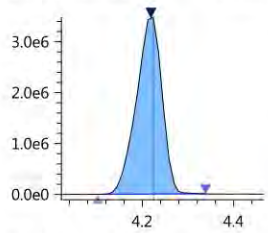
Q 313.00>269.00 (-) 3.48e6



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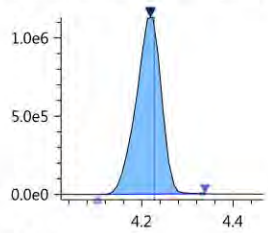

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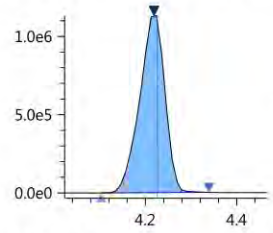

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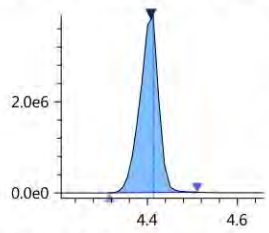
Q 362.90>319.00 (-) 3.89e6



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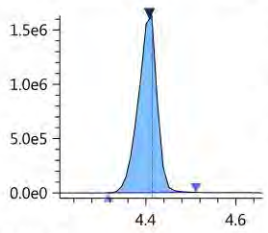
Conc 4.8318
RT 4.408 Area 4764328
Q 366.90>322.10 (-) 1.63e6



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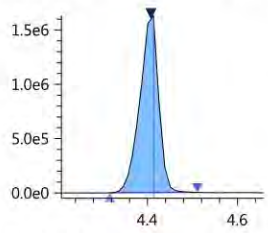

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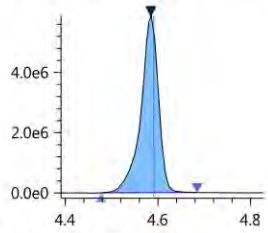
Q 413.00>369.00 (-) 5.89e6



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RT 4.585 Area 4625051
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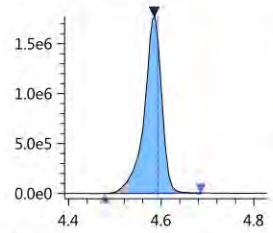

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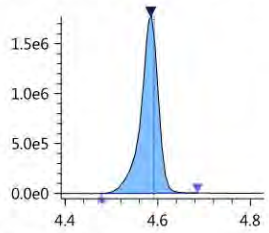

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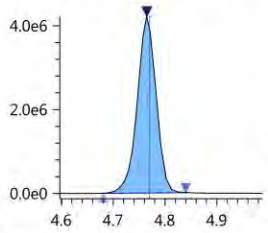

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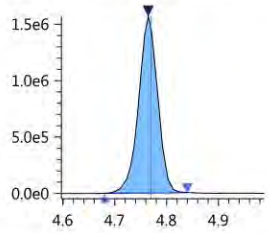

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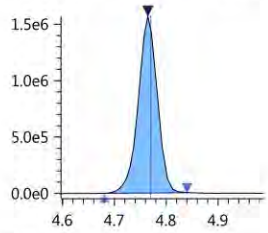

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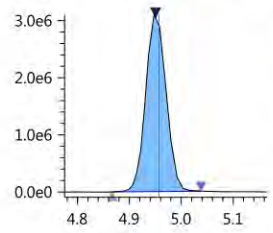

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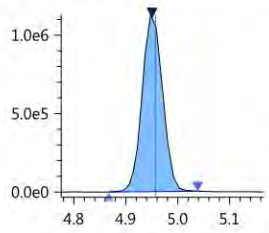

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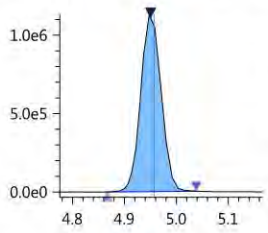

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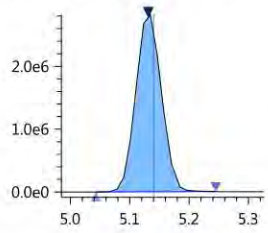

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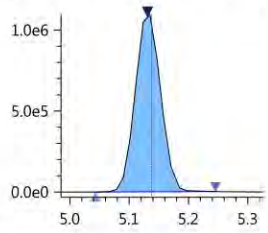

Insight Report

PFUnA-13C_IS
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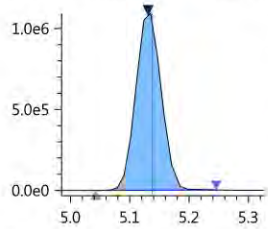
RT 5.131 Area 3276962
ISTD 564.80>519.95 (-) 1.09e6



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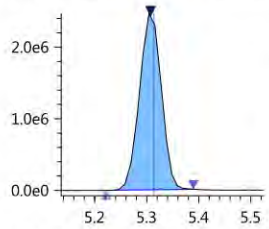
Q 613.05>569.00 (-) 2.47e6



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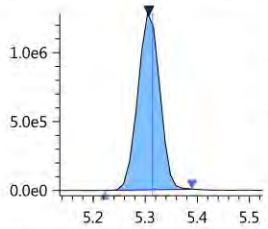

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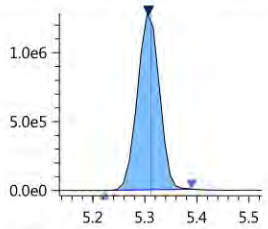

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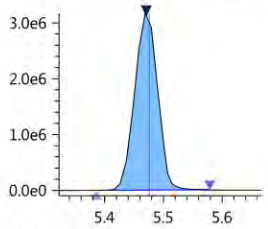

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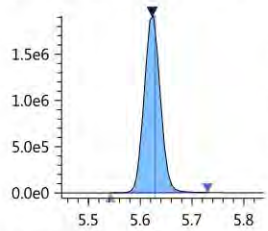

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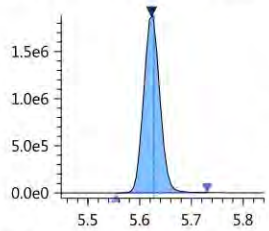

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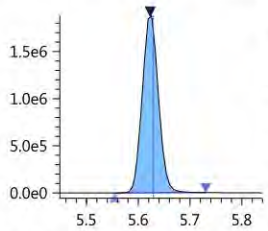

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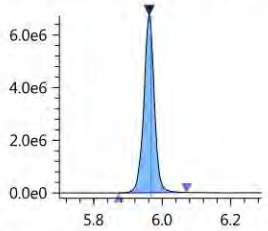

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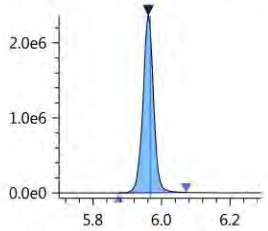
Q 815.00>770.05 (-) 2.36e6



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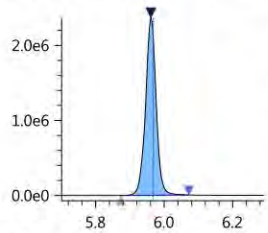

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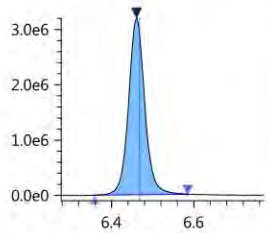

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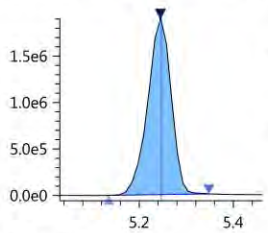

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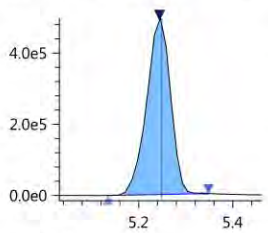
Q 506.00>78.05 (-) 4.98e5



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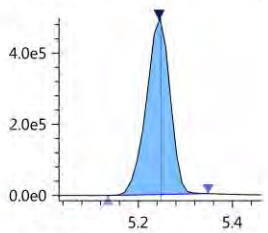

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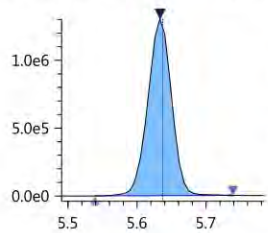

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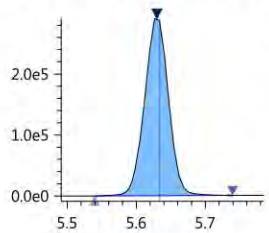
Q 514.90>168.90 (-) 2.91e5



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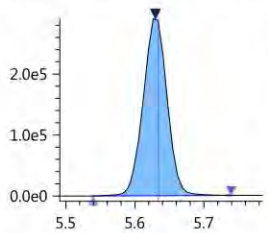

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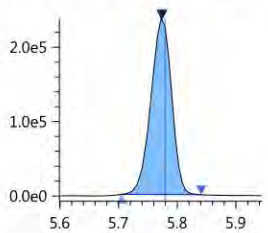

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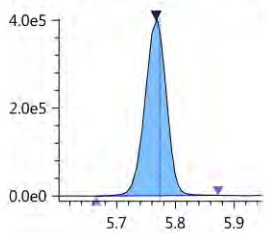
Q 530.90>169.15 (-) 4.04e5



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N-EtFOSA-d9_IS
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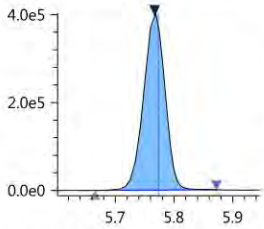
ISTD 530.90>169.15 (-) 4.04e5



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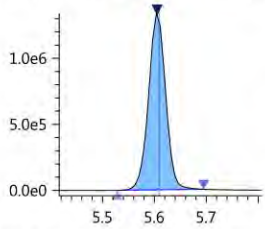

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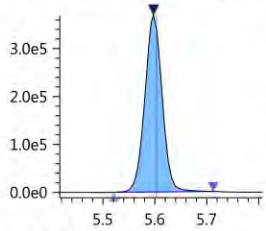
Q 622.70>59.10 (-) 3.70e5



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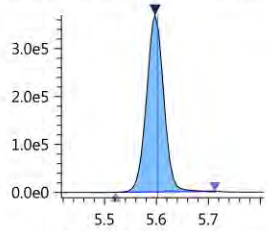

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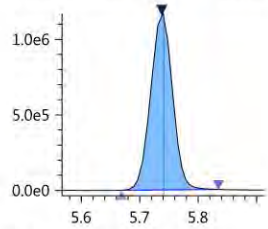

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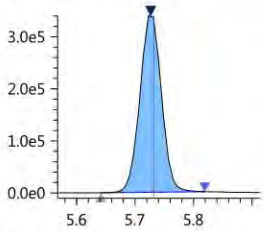

N-EtFOSE-d9_IS
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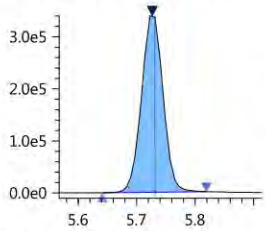
ISTD 638.70>59.10 (-) 3.41e5



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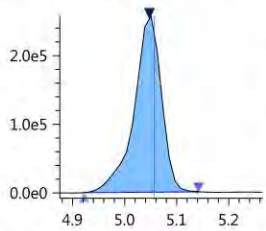
Conc 12.4363
RT 5.047 Area 937463
Q 570.20>419.00 (-) 2.58e5



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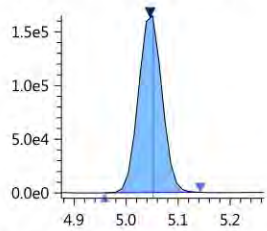
Q 572.80>419.05 (-) 1.65e5



N-MeFOSAA-d3_IS
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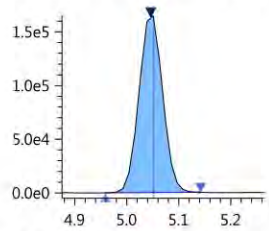

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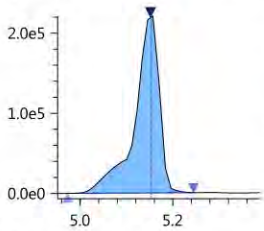

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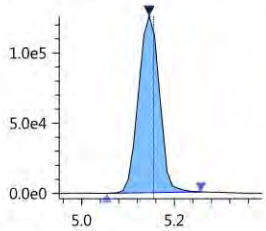

N-EtFOSAA-d5_IS
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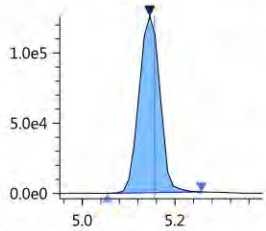
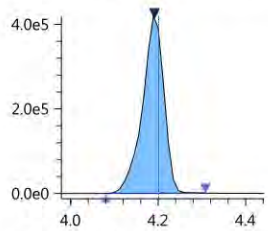
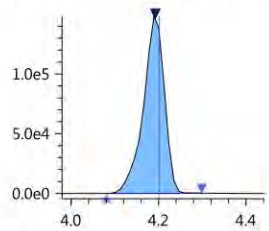
RT 5.146 Area 394725
ISTD 588.80>419.00 (-) 1.26e5



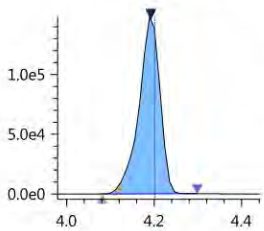
4_2-FTS_1
Conc 11.6943
RT 4.192 Area 1428704
Q 327.00>307.05 (-) 4.19e5



4_2-FTS-13C
Conc 6.4234
RT 4.192 Area 494955
Q 328.80>309.05 (-) 1.48e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.192 Area 494955
ISTD 328.80>309.05 (-) 1.48e5



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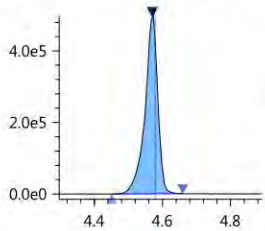
Conc 11.1844
RT 4.571 Area 1293178
Q 427.00>407.00 (-) 4.96e5



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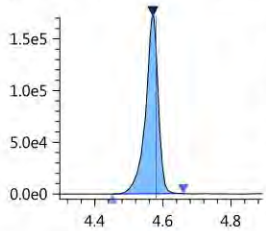
Conc 6.1127
RT 4.571 Area 443998
Q 428.90>409.00 (-) 1.71e5



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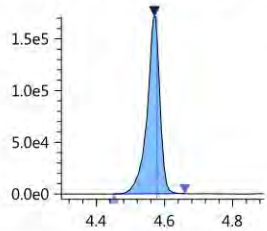
Conc 5.0000
RT 4.571 Area 443998
ISTD 428.90>409.00 (-) 1.71e5



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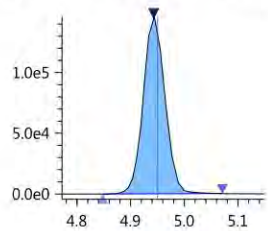
Conc 11.3737
RT 4.943 Area 410578
Q 527.10>506.90 (-) 1.46e5



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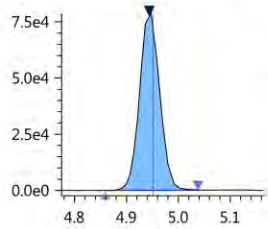
Printed at 8/8/2019 8:44:13 AM

8_2-FTS-13C
Conc 5.1563
RT 4.944 Area 213467
Q 528.80>509.00 (-) 7.89e4



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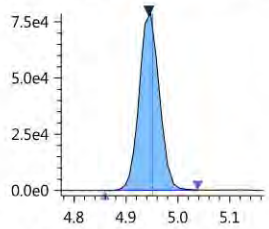
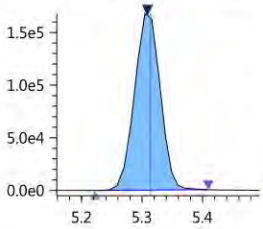
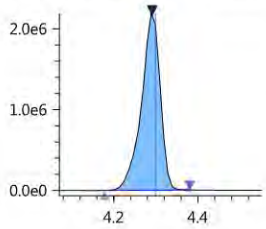
RT 4.944 Area 213467
ISTD 528.80>509.00 (-) 7.89e4



10_2-FtS_1
Conc 14.7154
RT 5.309 Area 495273
Q 627.00>606.95 (-) 1.68e5



HPFO_DA
Conc 15.2106
RT 4.291 Area 6802722
Q 329.00>169.00 (-) 2.19e6



HFPO_DA-13C
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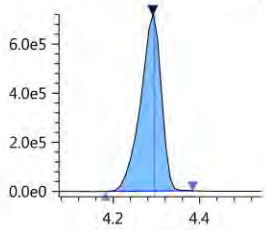
RT 4.291 Area 2400745
Q 332.00>286.80 (-) 7.22e5



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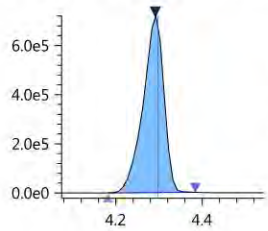
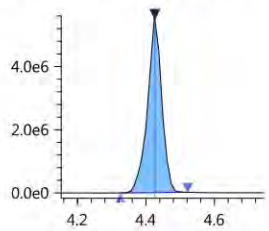
RT 4.291 Area 2400745
ISTD 332.00>286.80 (-) 7.22e5



ADONA
Conc 14.3702
RT 4.426 Area 16000793
Q 377.00>251.00 (-) 5.61e6



Insight Report

Printed at 8/8/2019 9:54:02 AM

190807_019

Sample ID: IB
Date acquired: 8/7/2019 6:37:57 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_019.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.138	3828917	3828917	1	5.0000	ng/mL	----
PFBS_1	M	4.022	678	974013	2	0.0024	ng/mL	----
PFBS-13C	Auto	4.026	969621	3828917	1	5.2881	ng/mL	----
PFBS-13C_IS	Auto	4.026	974013	974013	2	5.0000	ng/mL	----
PFPeS	M	4.240	268	974013	2	0.0023	ng/mL	----
PFHxS_1	Auto	4.407	3449	507655	3	0.0245	ng/mL	----
PFHxS-18O	Auto	4.415	507655	3828917	1	4.8376	ng/mL	----
PFHxS-18O_IS	Auto	4.415	507655	507655	3	5.0000	ng/mL	----
PFHpS_1	M	4.587	405	507655	3	0.0027	ng/mL	----
PFOS_1	M	4.758	346	676909	4	0.0029	ng/mL	----
PFOS-13C	Auto	4.759	684979	3828917	1	5.4793	ng/mL	----
PFOS-13C_IS	Auto	4.759	676909	676909	4	5.0000	ng/mL	----
PFNS	M	4.902	558	676909	4	-0.0768	ng/mL	----
PFDS_1	ND(W/B)	----	----	676909	4	----	ng/mL	----
PFDOS	M	5.451	260	676909	4	0.0019	ng/mL	----
9Cl-PF3ONS	M	4.863	655	2123687	26	0.0007	ng/mL	----
11Cl-PF3OUdS	M	5.235	834	2123687	26	0.0010	ng/mL	----
PFBA	ND(W/B)	----	----	3337150	5	----	ng/mL	----
PFBA-13C	Auto	3.418	3337150	3828917	1	5.3631	ng/mL	----
PFBA-13C_IS	Auto	3.418	3337150	3337150	5	5.0000	ng/mL	----
PFPeA	Auto	3.931	101090	2138329	6	-0.0026	ng/mL	----
PFPeA-13C	Auto	3.973	2138329	3828917	1	5.4620	ng/mL	----
PFPeA-13C_IS	Auto	3.973	2138329	2138329	6	5.0000	ng/mL	----
PFHxA	Auto	4.208	31227	5474699	7	0.0016	ng/mL	----
PFHxA-13C	Auto	4.227	5474699	3828917	1	7.1131	ng/mL	----
PFHxA-13C_IS	Auto	4.227	5474699	5474699	7	5.0000	ng/mL	----
PFHpA	M	4.402	17283	4138028	8	0.0056	ng/mL	----
PFHpA-13C	Auto	4.415	4138028	3828917	1	4.5873	ng/mL	----
PFHpA-13C_IS	Auto	4.415	4138028	4138028	8	5.0000	ng/mL	----
PFOA	M	4.586	28100	4846944	9	0.0060	ng/mL	----
PFOA-13C	Auto	4.591	4846944	3828917	1	5.9331	ng/mL	----
PFOA-13C_IS	Auto	4.591	4846944	4846944	9	5.0000	ng/mL	----
PFNA	Auto	4.764	18399	3551707	10	0.0167	ng/mL	----
PFNA-13C	Auto	4.769	3551707	3828917	1	5.4727	ng/mL	----
PFNA-13C_IS	Auto	4.769	3551707	3551707	10	5.0000	ng/mL	----
PFDA	Auto	4.944	12653	3434411	11	0.0182	ng/mL	----
PFDA-13C	Auto	4.955	3434411	3828917	1	6.2950	ng/mL	----
PFDA-13C_IS	Auto	4.955	3434411	3434411	11	5.0000	ng/mL	----
PFUnA	M	5.131	17192	2885864	12	0.0041	ng/mL	----
PFUnA-13C	Auto	5.138	2885864	3828917	1	4.8804	ng/mL	----
PFUnA-13C_IS	Auto	5.138	2885864	2885864	12	5.0000	ng/mL	----
PFDoA	Auto	5.307	6792	3970672	13	0.0040	ng/mL	----
PFDoA-13C	Auto	5.311	3970672	3828917	1	6.2341	ng/mL	----
PFDoA-13C_IS	Auto	5.311	3970672	3970672	13	5.0000	ng/mL	----
PFTrDA	M	5.472	11172	3745994	14	0.0107	ng/mL	----
PFTeDA	Auto	5.628	39685	3745994	14	0.0042	ng/mL	----
PFTeDA-13C	Auto	5.628	3745994	3828917	1	5.3383	ng/mL	----
PFTeDA-13C_IS	Auto	5.628	3745994	3745994	14	5.0000	ng/mL	----
PFHxDA	Auto	5.967	47624	4471602	15	0.0063	ng/mL	----
13C-PFHxDA	Auto	5.967	4471602	3828917	1	5.2043	ng/mL	----
13C-PFHxDA_IS	Auto	5.967	4471602	4471602	15	5.0000	ng/mL	----
PFODA	M	6.466	6949	4471602	15	0.0130	ng/mL	----
FOSA	Auto	5.252	2788	1854602	16	0.0060	ng/mL	----
FOSA-13C	Auto	5.249	1854602	3828917	1	6.3611	ng/mL	----
FOSA-13C_IS	Auto	5.249	1854602	1854602	16	5.0000	ng/mL	----
N-MeFOSA	Auto	5.635	1192	663678	17	0.0057	ng/mL	----
N-MeFOSA-d3	Auto	5.635	663678	3828917	1	5.8018	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.635	663678	663678	17	5.0000	ng/mL	----
N-EtFOSA	M	5.788	479	911375	18	0.0137	ng/mL	----
N-EtFOSA-d9	Auto	5.772	911375	3828917	1	5.3499	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.772	911375	911375	18	5.0000	ng/mL	----
N-MeFOSE	M	5.605	760	803101	19	0.0038	ng/mL	----
N-MeFOSE-d7	Auto	5.603	803101	3828917	1	5.7151	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.603	803101	803101	19	5.0000	ng/mL	----
N-EtFOSE	M	5.724	280	795202	20	0.0014	ng/mL	----
N-EtFOSE-d9	Auto	5.732	795202	3828917	1	5.6174	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.732	795202	795202	20	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.063	1739	429670	21	0.0532	ng/mL	----

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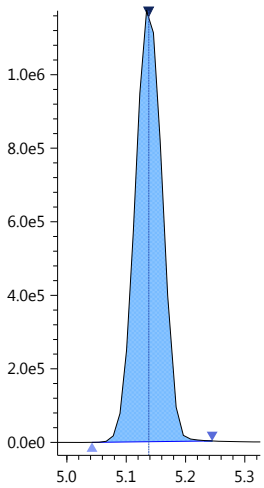
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-MeFOSAA-d3	Auto	5.052	429670	3828917	1	5.1066	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.052	429670	429670	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.155	1925	418052	22	0.1159	ng/mL	----
N-EtFOSAA-d5	Auto	5.152	418052	3828917	1	5.4989	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.152	418052	418052	22	5.0000	ng/mL	----
4_2-FTS_1	M	4.200	597	277884	23	0.0086	ng/mL	----
4_2-FTS-13C	Auto	4.198	277884	3828917	1	3.9420	ng/mL	----
4_2-FTS-13C_IS	Auto	4.198	277884	277884	23	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.574	1089	321488	24	0.0139	ng/mL	----
6_2-FTS-13C	Auto	4.577	321488	3828917	1	4.8381	ng/mL	----
6_2-FTS-13C_IS	Auto	4.577	321488	321488	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.950	63	198684	25	0.0018	ng/mL	----
8_2-FTS-13C	Auto	4.950	198684	3828917	1	5.2459	ng/mL	----
8_2-FTS-13C_IS	Auto	4.950	198684	198684	25	5.0000	ng/mL	----
10_2-FtS_1	M	5.299	16	198684	25	0.0005	ng/mL	----
HPFO_DA	Auto	4.279	684	2123687	26	0.0017	ng/mL	----
HFPO_DA-13C	Auto	4.296	2123687	3828917	1	5.5237	ng/mL	----
HFPO_DA-13C_IS	Auto	4.296	2123687	2123687	26	5.0000	ng/mL	----
ADONA	ND(W/B)	----	----	2123687	26	----	ng/mL	----

13C7-PFUnDA_IS

Conc 5.0000
RT 5.138 Area 3828917

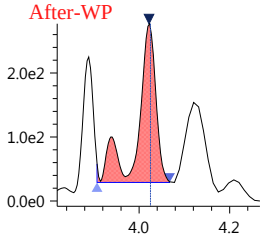
ISTD 570.00>525.00 (-) 1.17e6



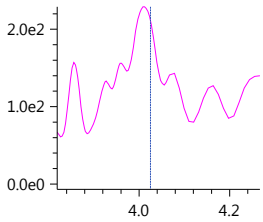
PFBS_1

Conc 0.0024
RT 4.022 Area 678
R#1 30.59 (0.00)

Q 299.00>80.00 (-) 2.77e2



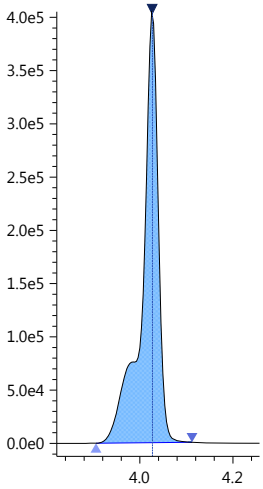
R1 298.80>99.00 (-) 2.29e2



PFBS-13C

Conc 5.2881
RT 4.026 Area 969621

Q 301.80>80.00 (-) 4.05e5



PFBS-13C_IS

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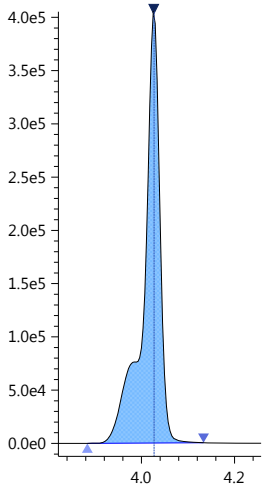
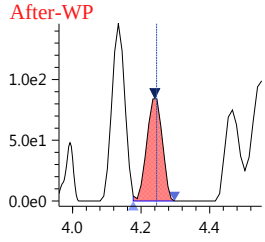


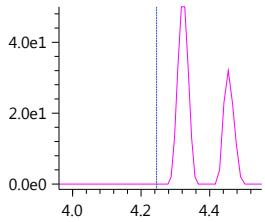
PFPeS

Conc 0.0023
RT 4.240 Area 268
R#1 0.00 (0.00)

Q 349.00>99.00 (-) 1.46e2



R1 349.00>79.95 (-) 5.00e1



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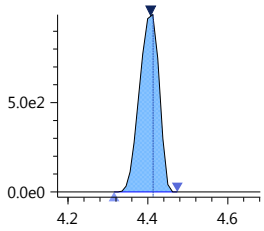
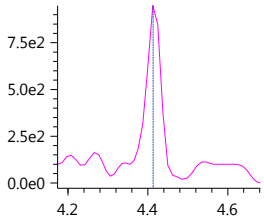
PFHxS_1
Conc 0.0245
RT 4.407 Area 3449
R#1 86.38 (0.00)

Q 399.00>80.00 (-) 9.93e2

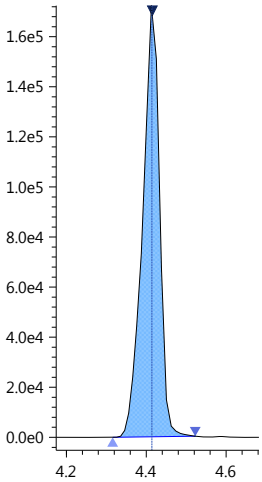


R1 399.00>99.00 (-) 9.48e2



PFHxS-18O
Conc 4.8376
RT 4.415 Area 507655

Q 402.70>84.05 (-) 1.72e5



PFHxS-18O_IS
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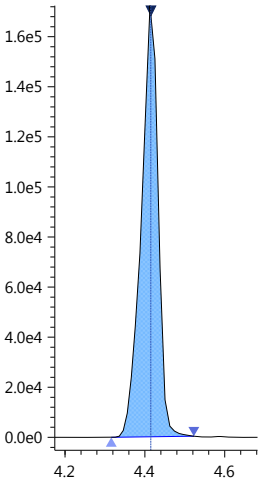
RT 4.415 Area 507655

ISTD 402.70>84.05 (-) 1.72e5



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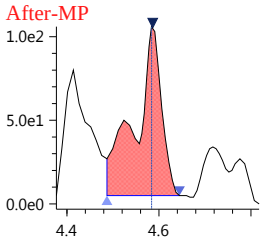
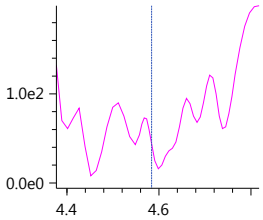
Conc 0.0027
RT 4.587 Area 405
R#1 0.00 (0.00)

Q 449.00>80.15 (-) 1.06e2

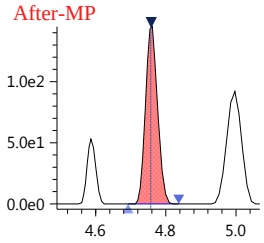


R1 449.00>99.20 (-) 1.99e2

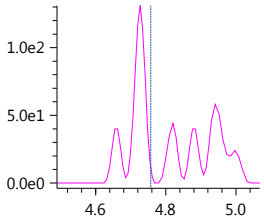


PFOS_1
Conc 0.0029
RT 4.758 Area 346
R#1 0.00 (0.00)

Q 499.00>80.00 (-) 1.45e2

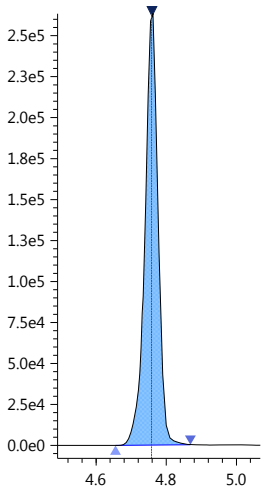


R1 499.00>99.00 (-) 1.31e2



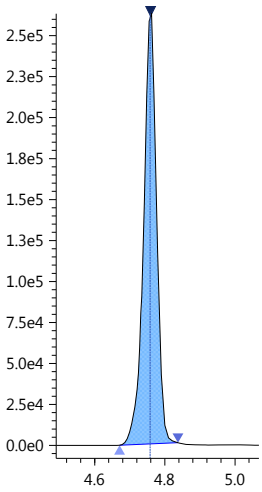
PFOS-13C
Conc 5.4793
RT 4.759 Area 684979

Q 502.80>80.05 (-) 2.63e5



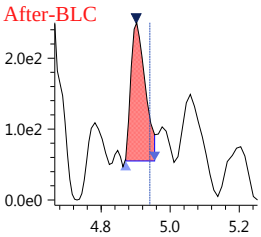
PFOS-13C_IS
Conc 5.0000
RT 4.759 Area 676909

ISTD 502.80>80.05 (-) 2.63e5

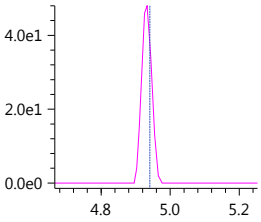


PFNS
Conc -0.0768
RT 4.902 Area 558
R#1 0.00 (0.00)

Q 549.00>99.00 (-) 2.50e2

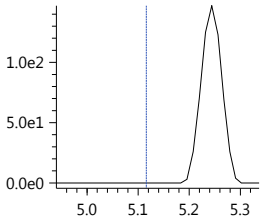


R1 549.00>79.95 (-) 4.80e1

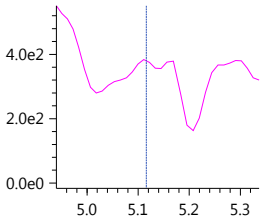


PFDS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)

Q 599.00>79.90 (-) 1.47e2

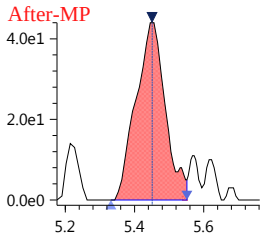


R1 599.00>99.10 (-) 5.51e2

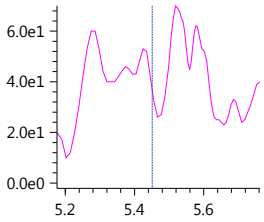


PFDOS
Conc 0.0019
RT 5.451 Area 260
R#1 0.00 (0.00)

Q 699.00>79.95 (-) 4.40e1



R1 699.00>99.05 (-) 7.00e1



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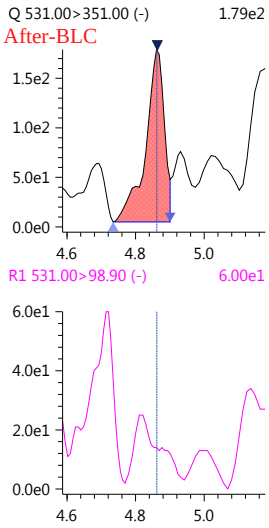
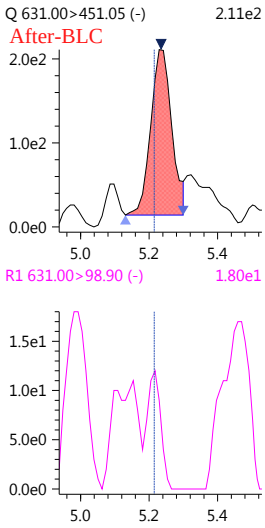
9Cl-PF3ONS

Conc 0.0007
RT 4.863 Area 655
R#1 0.00 (0.00)



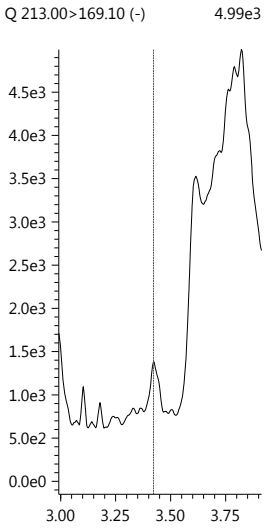
11Cl-PF3OUdS

Conc 0.0010
RT 5.235 Area 834
R#1 2.37 (0.00)



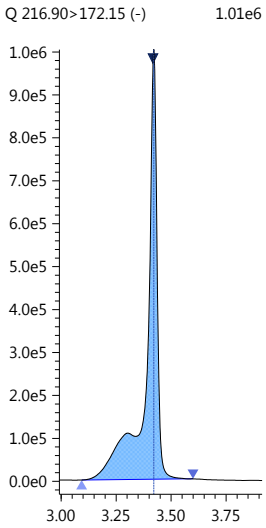
PFBA

Conc ----
RT ---- Area ----



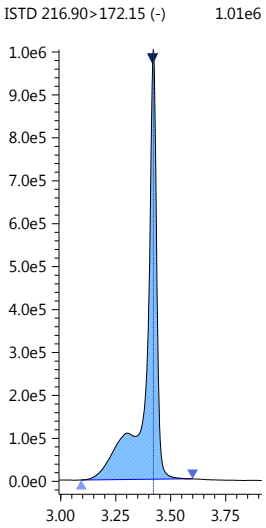
PFBA-13C

Conc 5.3631
RT 3.418 Area 3337150



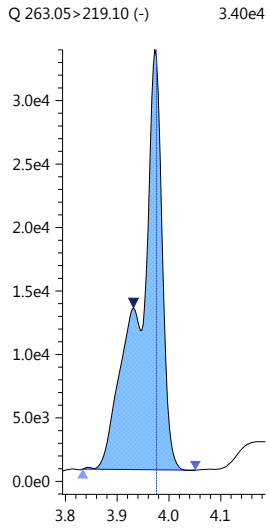
PFBA-13C_IS

Conc 5.0000
RT 3.418 Area 3337150



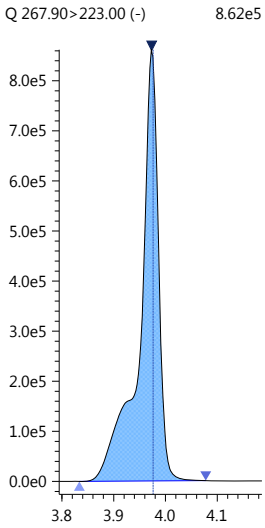
PFPeA

Conc -0.0026
RT 3.931 Area 101090



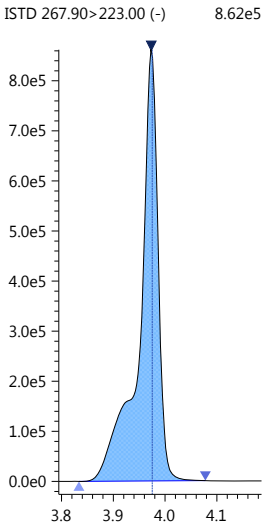
PFPeA-13C

Conc 5.4620
RT 3.973 Area 2138329



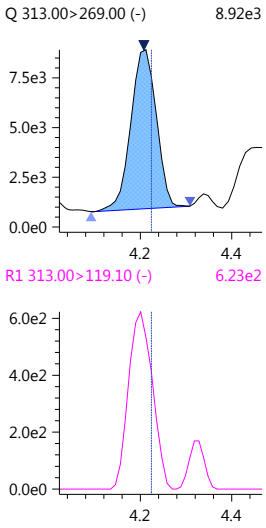
PFPeA-13C_IS

Conc 5.0000
RT 3.973 Area 2138329



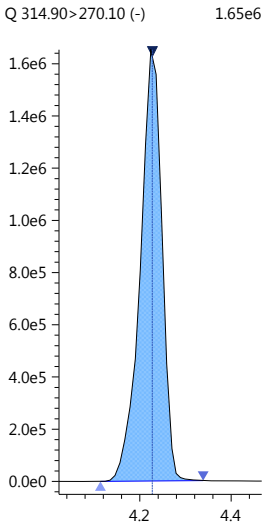
PFHxA

Conc 0.0016
RT 4.208 Area 31227
R#1 6.91 (0.00)



PFHxA-13C

Conc 7.1131
RT 4.227 Area 5474699



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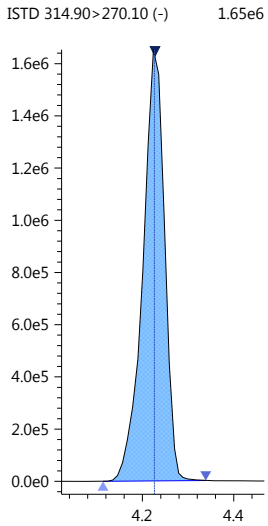
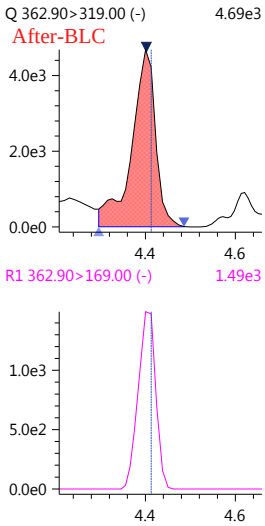
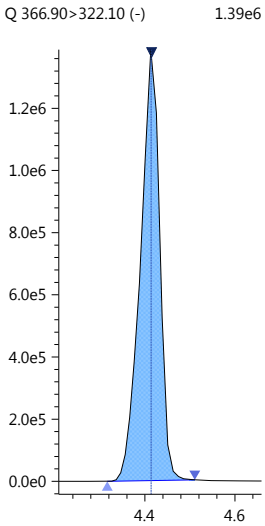
PFHxA-13C_IS
Conc 5.0000
RT 4.227 Area 5474699



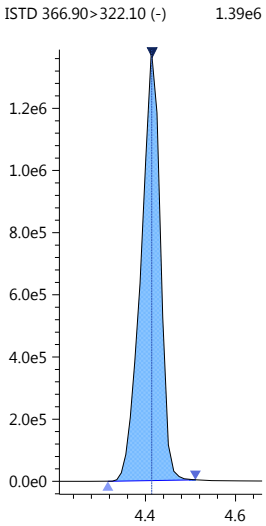
PFHpA
Conc 0.0056
RT 4.402 Area 17283
R#1 33.18 (0.00)



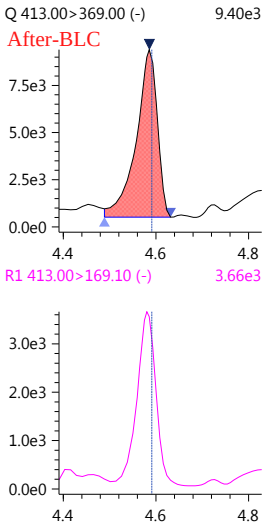
PFHpA-13C
Conc 4.5873
RT 4.415 Area 4138028



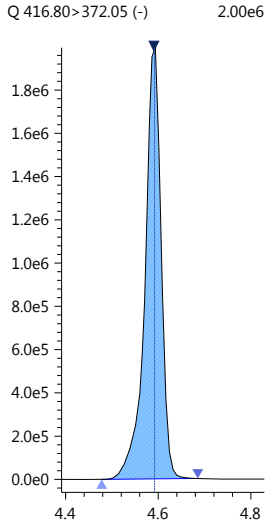
PFHpA-13C_IS
Conc 5.0000
RT 4.415 Area 4138028



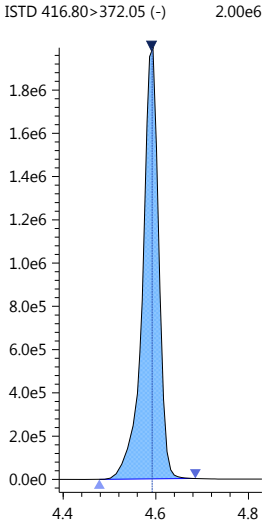
PFOA
Conc 0.0060
RT 4.586 Area 28100
R#1 37.04 (0.00)



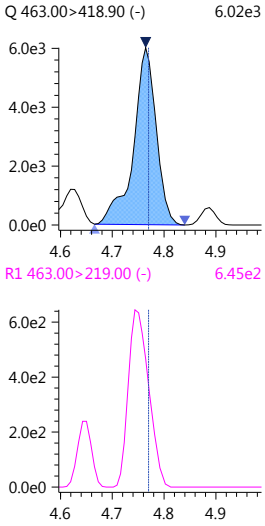
PFOA-13C
Conc 5.9331
RT 4.591 Area 4846944



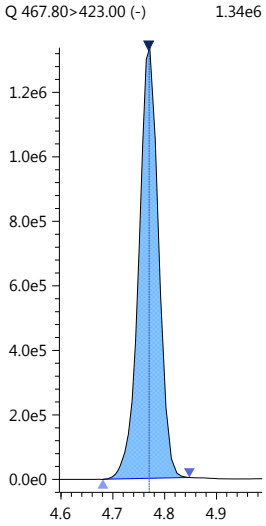
PFOA-13C_IS
Conc 5.0000
RT 4.591 Area 4846944



PFNA
Conc 0.0167
RT 4.764 Area 18399
R#1 6.80 (0.00)



PFNA-13C
Conc 5.4727
RT 4.769 Area 3551707



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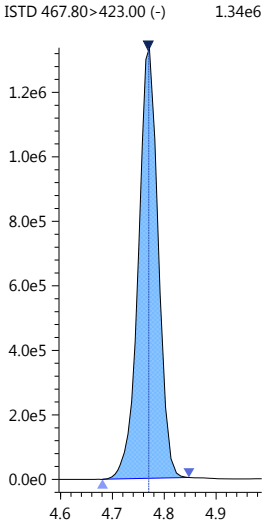
Conc 5.0000
RT 4.769 Area 3551707



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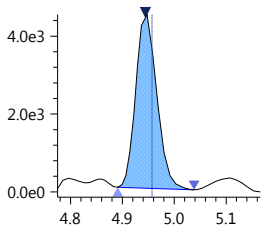
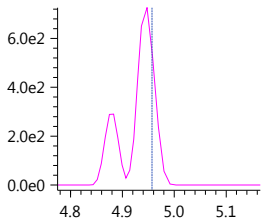
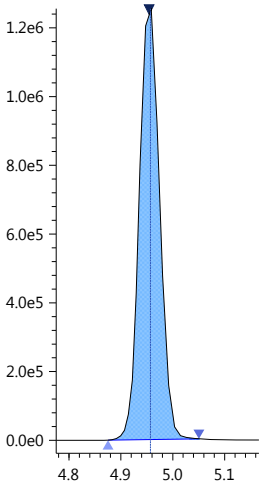
PFDA
Conc 0.0182
RT 4.944 Area 12653
R#1 13.13 (0.00)
Q 513.00>468.80 (-) 4.55e3

R1 513.00>219.10 (-) 7.26e2


PFDA-13C
Conc 6.2950
RT 4.955 Area 3434411
Q 514.80>469.95 (-) 1.26e6


PFDA-13C_IS
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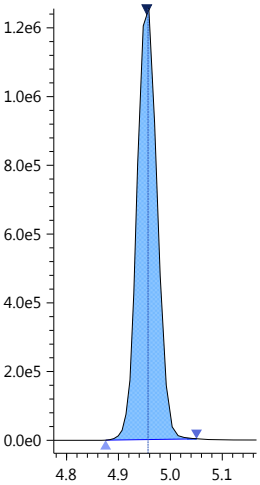
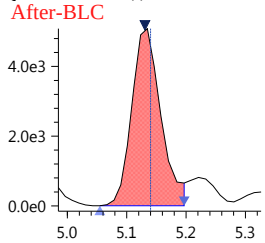
ISTD 514.80>469.95 (-) 1.26e6


PFUnA
Conc 0.0041
RT 5.131 Area 17192
R#1 22.95 (0.00)
Q 563.00>518.90 (-) 5.09e3
After-BLC

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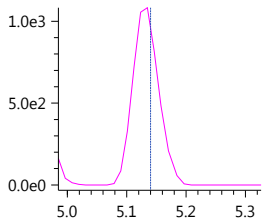
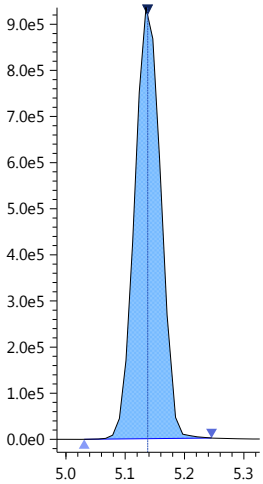
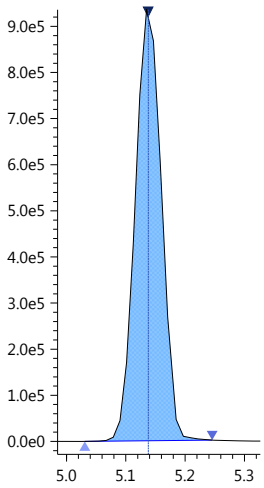
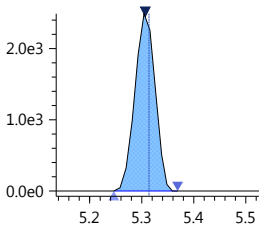
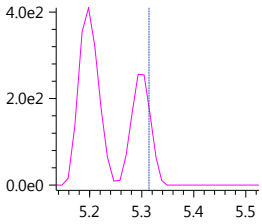
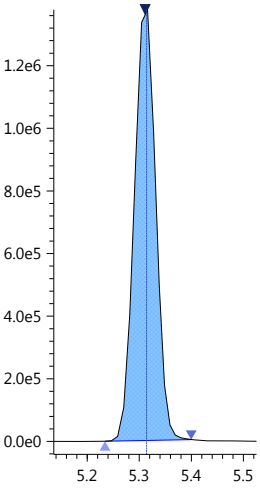


PFUnA-13C
Conc 4.8804
RT 5.138 Area 2885864
Q 564.80>519.95 (-) 9.36e5


PFUnA-13C_IS
Conc 5.0000
RT 5.138 Area 2885864
ISTD 564.80>519.95 (-) 9.36e5


PFDoA
Conc 0.0040
RT 5.307 Area 6792
R#1 10.14 (0.00)
Q 613.05>569.00 (-) 2.49e3

R1 613.05>169.00 (-) 4.10e2


PFDoA-13C
Conc 6.2341
RT 5.311 Area 3970672
Q 614.80>569.95 (-) 1.38e6


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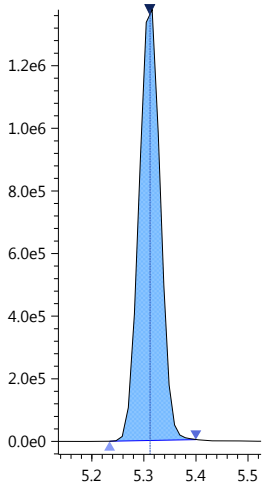
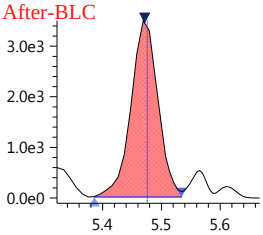
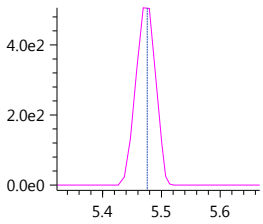


PFTrDA
Conc 0.0107
RT 5.472 Area 11172
R#1 15.12 (0.00)
Q 663.00>618.90 (-) 3.50e3
After-BLC

R1 662.90>169.00 (-) 5.06e2


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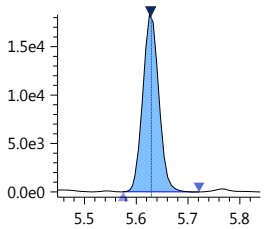
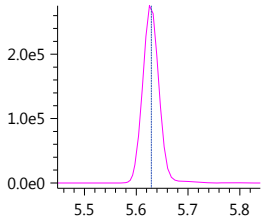
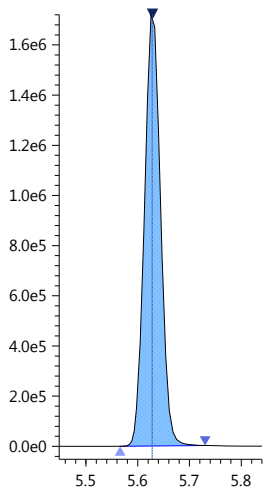
PFTeDA
Conc 0.0042
RT 5.628 Area 39685
R#1 1499.51 (0.00)
Q 713.40>669.00 (-) 1.83e4



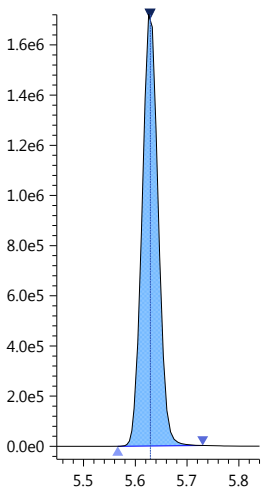
R1 713.40>169.10 (-) 2.75e5



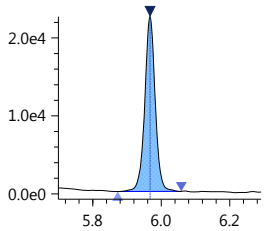
PFTeDA-13C
Conc 5.3383
RT 5.628 Area 3745994
Q 714.70>669.90 (-) 1.72e6



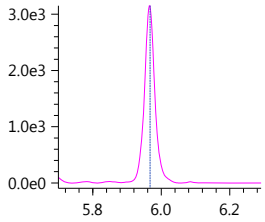
PFTeDA-13C_IS
Conc 5.0000
RT 5.628 Area 3745994
ISTD 714.70>669.90 (-) 1.72e6



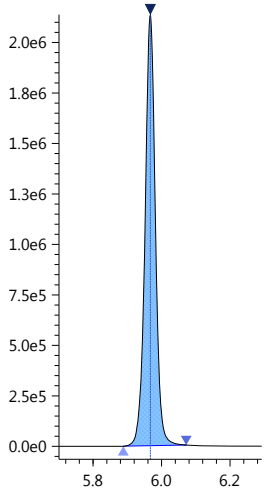
PFHxDA
Conc 0.0063
RT 5.967 Area 47624
R#1 14.41 (0.00)
Q 813.00>769.05 (-) 2.27e4



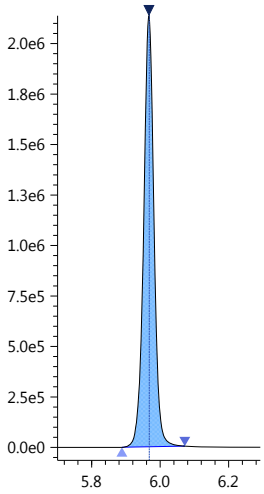
R1 813.00>218.95 (-) 3.15e3



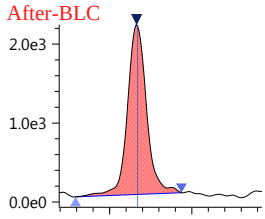
13C-PFHxDA
Conc 5.2043
RT 5.967 Area 4471602
Q 815.00>770.05 (-) 2.14e6



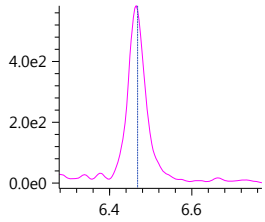
13C-PFHxDA_IS
Conc 5.0000
RT 5.967 Area 4471602
ISTD 815.00>770.05 (-) 2.14e6



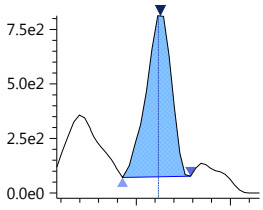
PFODA
Conc 0.0130
RT 6.466 Area 6949
R#1 27.30 (0.00)
Q 913.00>868.85 (-) 2.25e3



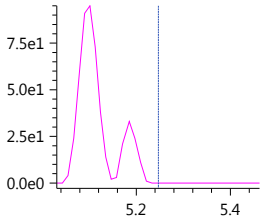
R1 913.00>169.00 (-) 5.83e2



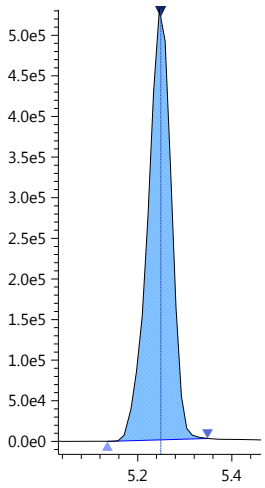
FOSA
Conc 0.0060
RT 5.252 Area 2788
R#1 0.00 (0.00)
Q 498.20>78.00 (-) 8.13e2



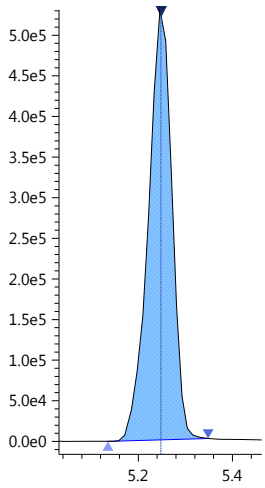
R1 498.20>64.10 (-) 9.50e1



FOSA-13C
Conc 6.3611
RT 5.249 Area 1854602
Q 506.00>78.05 (-) 5.31e5



FOSA-13C_IS
Conc 5.0000
RT 5.249 Area 1854602
ISTD 506.00>78.05 (-) 5.31e5



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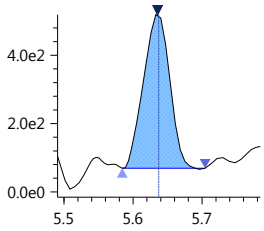
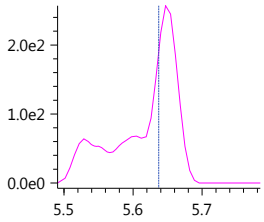
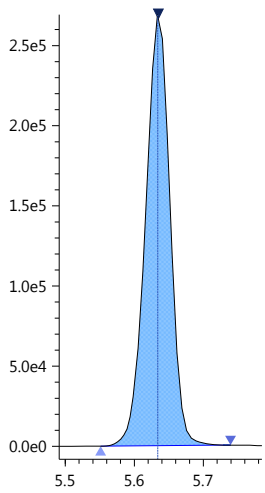
N-MeFOSA
Conc 0.0057
RT 5.635 Area 1192
R#1 24.20 (0.00)
Q 512.00>169.10 (-) 5.19e2



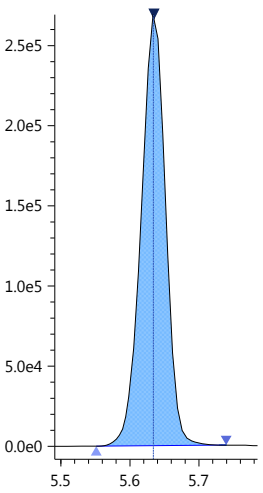
R1 512.00>219.00 (-) 2.57e2



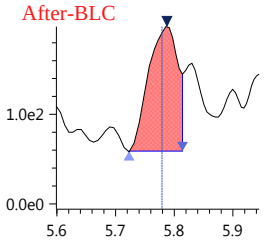
N-MeFOSA-d3
Conc 5.8018
RT 5.635 Area 663678
Q 514.90>168.90 (-) 2.69e5



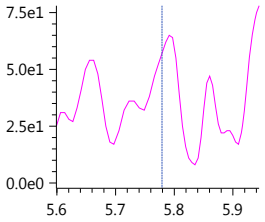
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.635 Area 663678
ISTD 514.90>168.90 (-) 2.69e5



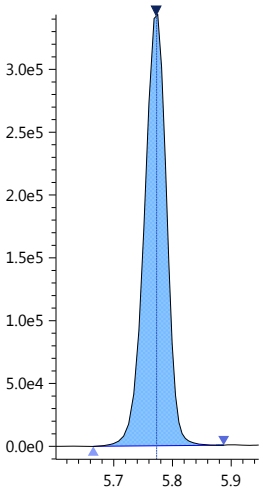
N-EtFOSA
Conc 0.0137
RT 5.788 Area 479
R#1 39.33 (0.00)
Q 526.90>169.10 (-) 1.98e2



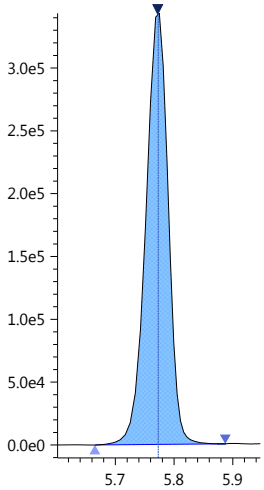
R1 526.90>219.00 (-) 7.80e1



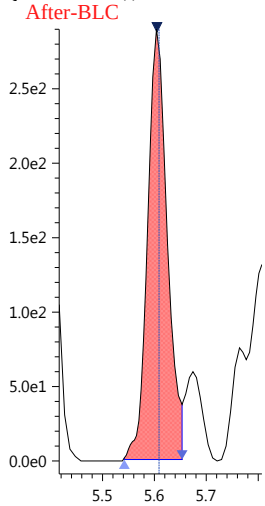
N-EtFOSA-d9
Conc 5.3499
RT 5.772 Area 911375
Q 530.90>169.15 (-) 3.44e5



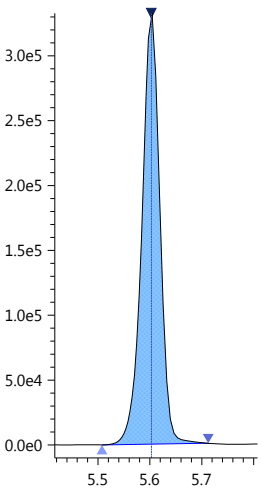
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.772 Area 911375
ISTD 530.90>169.15 (-) 3.44e5



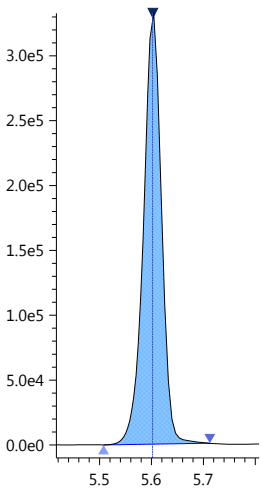
N-MeFOSE
Conc 0.0038
RT 5.605 Area 760
Q 616.00>59.00 (-) 2.90e2



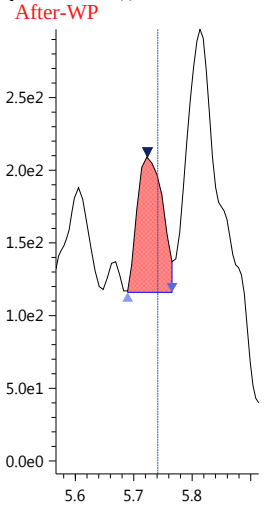
N-MeFOSE-d7
Conc 5.7151
RT 5.603 Area 803101
Q 622.70>59.10 (-) 3.33e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.603 Area 803101
ISTD 622.70>59.10 (-) 3.33e5



N-EtFOSE
Conc 0.0014
RT 5.724 Area 280
Q 630.00>58.90 (-) 2.97e2



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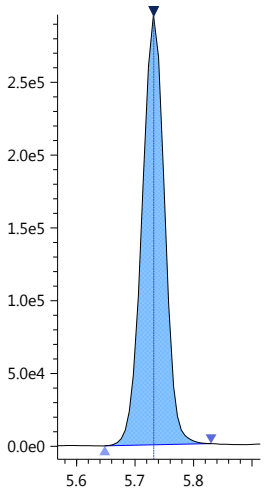
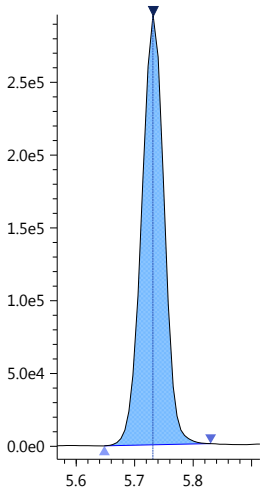
N-EtFOSE-d9
Conc 5.6174
RT 5.732 Area 795202

Q 638.70>59.10 (-) 2.97e5



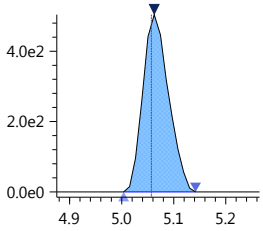
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.732 Area 795202

ISTD 638.70>59.10 (-) 2.97e5

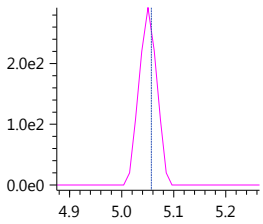


N-MeFOSAA
Conc 0.0532
RT 5.063 Area 1739
R#1 45.29 (0.00)

Q 570.20>419.00 (-) 5.04e2

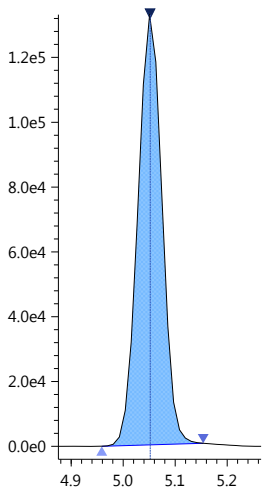


R1 570.20>512.00 (-) 2.92e2



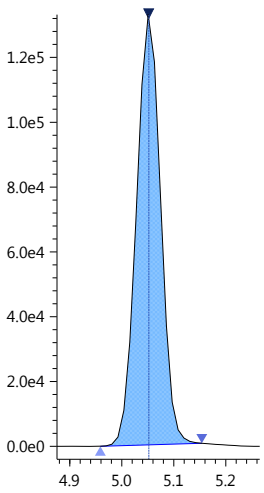
N-MeFOSAA-d3
Conc 5.1066
RT 5.052 Area 429670

Q 572.80>419.05 (-) 1.33e5



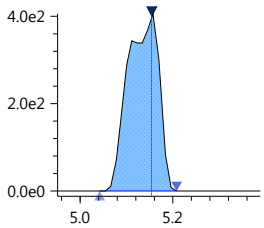
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.052 Area 429670

ISTD 572.80>419.05 (-) 1.33e5

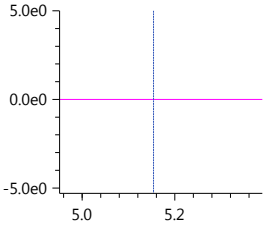


N-EtFOSAA
Conc 0.1159
RT 5.155 Area 1925
R#1 0.00 (0.00)

Q 584.20>418.95 (-) 4.06e2

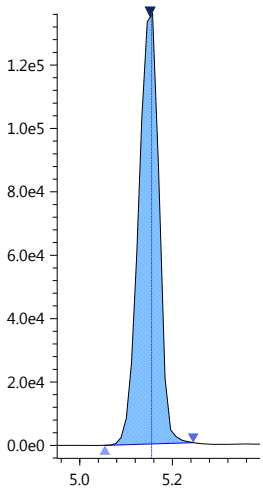


R1 584.20>526.10 (-) 0.00e0



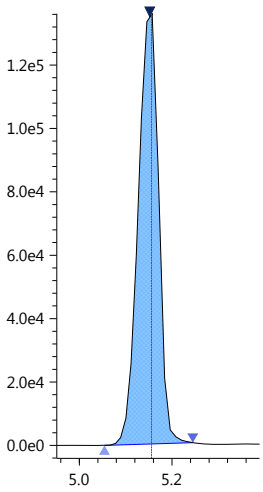
N-EtFOSAA-d5
Conc 5.4989
RT 5.152 Area 418052

Q 588.80>419.00 (-) 1.36e5



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.152 Area 418052

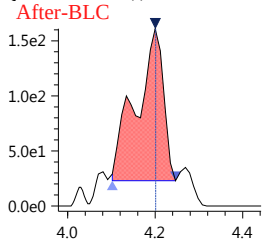
ISTD 588.80>419.00 (-) 1.36e5



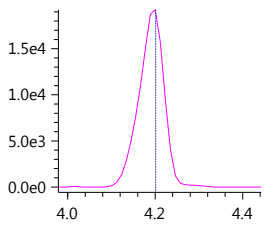
4_2-FTS_1
Conc 0.0086
RT 4.200 Area 597
R#1 13421.48 (0.00)

Q 327.00>307.05 (-) 1.61e2

After-BLC

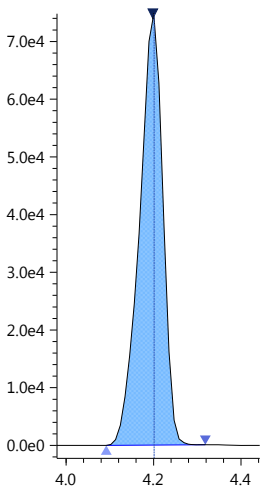


R1 327.00>81.10 (-) 1.92e4



4_2-FTS-13C
Conc 3.9420
RT 4.198 Area 277884

Q 328.80>309.05 (-) 7.48e4



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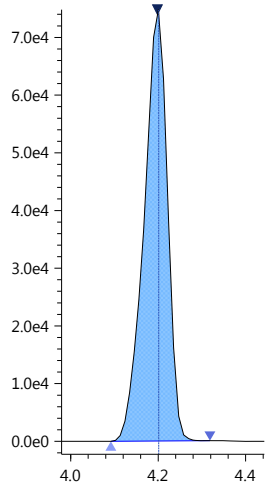
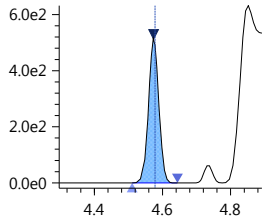
4_2-FTS-13C_IS
Conc 5.0000
RT 4.198 Area 277884

ISTD 328.80>309.05 (-) 7.48e4

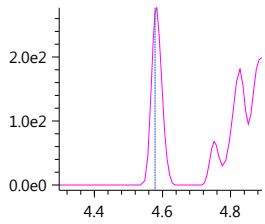


6_2-FTS_1
Conc 0.0139
RT 4.574 Area 1089
R#1 42.96 (0.00)

Q 427.00>407.00 (-) 6.32e2

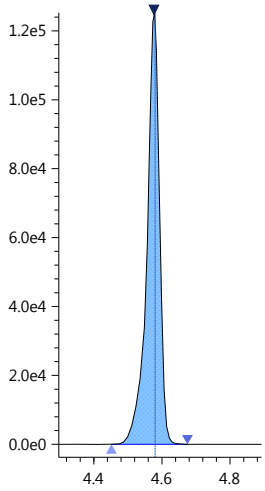


R1 427.00>80.90 (-) 2.77e2



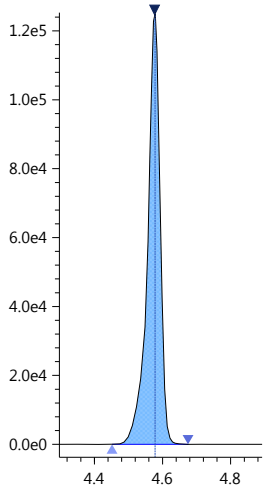
6_2-FTS-13C
Conc 4.8381
RT 4.577 Area 321488

Q 428.90>409.00 (-) 1.25e5



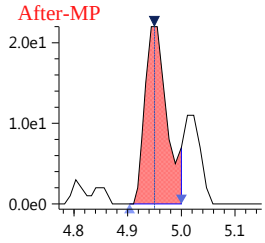
6_2-FTS-13C_IS
Conc 5.0000
RT 4.577 Area 321488

ISTD 428.90>409.00 (-) 1.25e5



8_2-FTS_1
Conc 0.0018
RT 4.950 Area 63
R#1 0.00 (0.00)

Q 527.10>506.90 (-) 2.20e1



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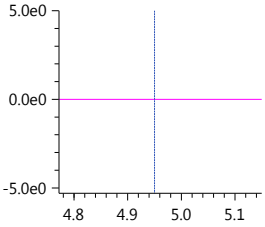
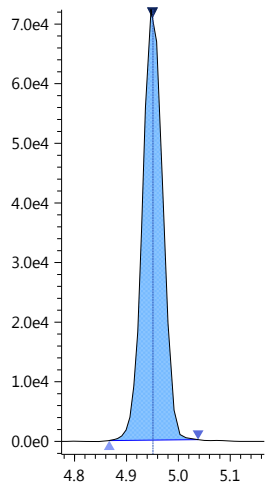


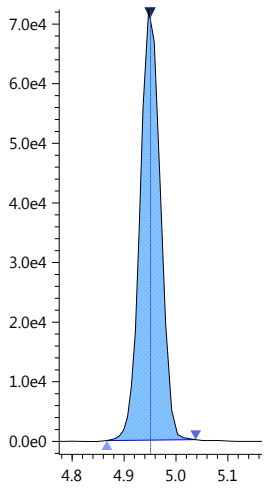
8_2-FTS-13C
Conc 5.2459
RT 4.950 Area 198684

Q 528.80>509.00 (-) 7.24e4



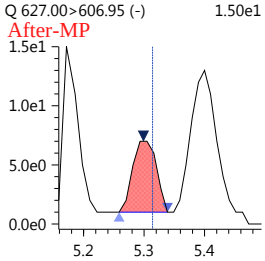
8_2-FTS-13C_IS
Conc 5.0000
RT 4.950 Area 198684

ISTD 528.80>509.00 (-) 7.24e4

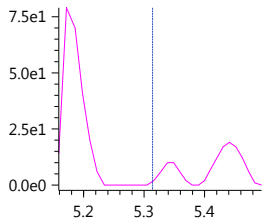


10_2-FtS_1
Conc 0.0005
RT 5.299 Area 16
R#1 0.00 (0.00)

Q 627.00>606.95 (-) 1.50e1

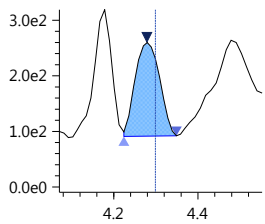


R1 627.00>81.25 (-) 7.90e1

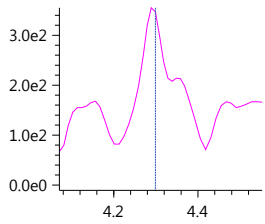


HPFO_DA
Conc 0.0017
RT 4.279 Area 684
R#1 98.21 (0.00)

Q 329.00>169.00 (-) 3.19e2

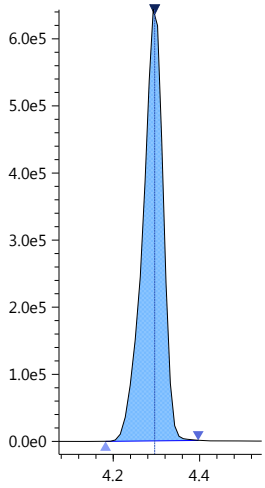


R1 329.00>285.10 (-) 3.55e2



HFPO_DA-13C
Conc 5.5237
RT 4.296 Area 2123687

Q 332.00>286.80 (-) 6.43e5



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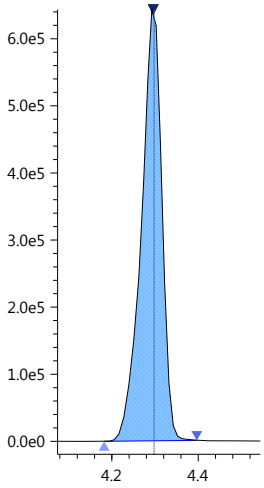
Printed at 8/8/2019 9:54:02 AM

HFPO_DA-13C_IS

Conc 5.0000
RT 4.296 Area 2123687

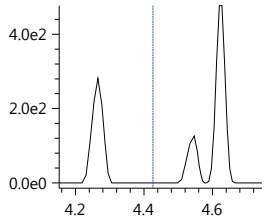
ISTD 332.00>286.80 (-) 6.43e5



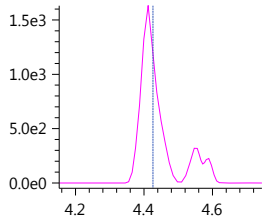
ADONA

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

Q 377.00>251.00 (-) 4.77e2



R1 377.00>84.95 (-) 1.63e3



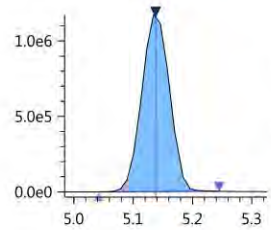
Insight Report

Printed at 8/8/2019 8:44:13 AM

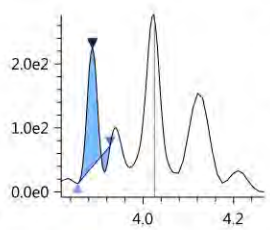
190807_019

Sample ID: IB
Date acquired: 8/7/2019 6:37:57 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_019.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 1

13C7-PFUnDA_IS
Conc 5.0000
RT 5.138 Area 3828917
ISTD 570.00>525.00 (-) 1.17e6



PFBS_1
Conc 0.0009
RT 3.888 Area 246
Q 299.00>80.00 (-) 2.77e2



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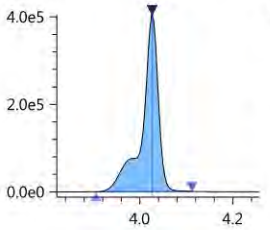
Conc 5.2881
RT 4.026 Area 969621
Q 301.80>80.00 (-) 4.05e5



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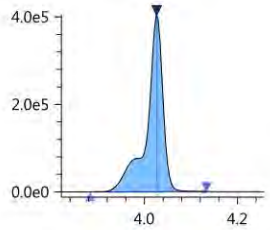
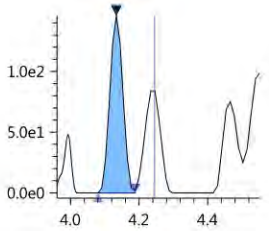
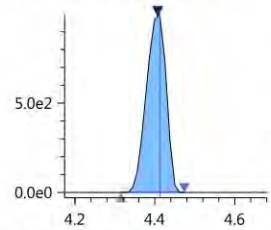


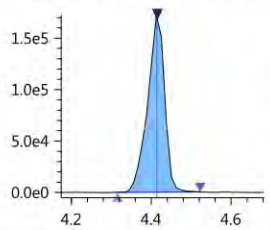
PFPeS
Conc 0.0033
RT 4.134 Area 385
Q 349.00>99.00 (-) 1.46e2



PFHxS_1
Conc 0.0245
RT 4.407 Area 3449
Q 399.00>80.00 (-) 9.93e2



PFHxS-18O
Conc 4.8376
RT 4.415 Area 507655
Q 402.70>84.05 (-) 1.72e5



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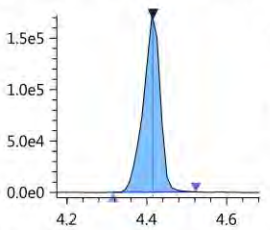
Conc 5.0000
RT 4.415 Area 507655
ISTD 402.70>84.05 (-) 1.72e5



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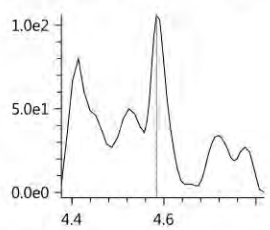
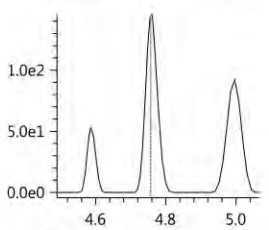
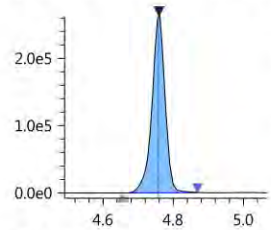
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 1.06e2



PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 1.45e2



PFOS-13C
Conc 5.4793
RT 4.759 Area 684979
Q 502.80>80.05 (-) 2.63e5



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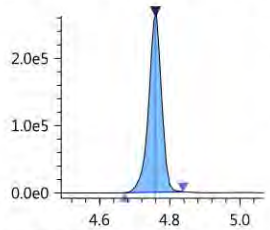
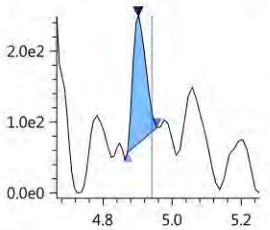
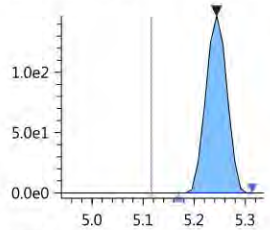
RT 4.759 Area 676909
ISTD 502.80>80.05 (-) 2.63e5



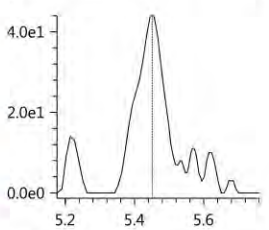
PFNS
Conc 0.0051
RT 4.902 Area 460
Q 549.00>99.00 (-) 2.50e2



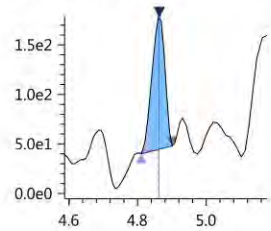
PFDS_1
Conc 0.0039
RT 5.244 Area 427
Q 599.00>79.90 (-) 1.47e2



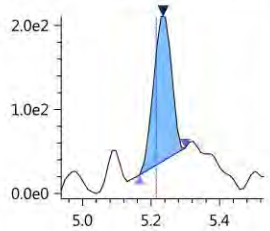
PFDOS
Conc ----
RT ---- Area ----
Q 699.00>79.95 (-) 4.40e1



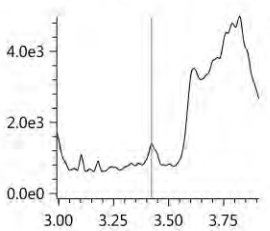
9Cl-PF3ONS
Conc 0.0001
RT 4.863 Area 355
Q 531.00>351.00 (-) 1.79e2



11Cl-PF3OUdS
Conc 0.0002
RT 5.235 Area 633
Q 631.00>451.05 (-) 2.11e2



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 4.99e3



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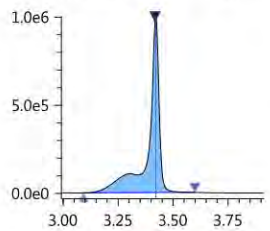
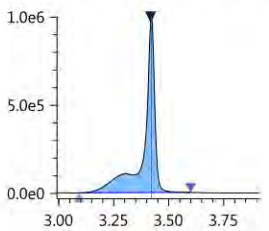
Conc 5.3631
RT 3.418 Area 3337150
Q 216.90>172.15 (-) 1.01e6

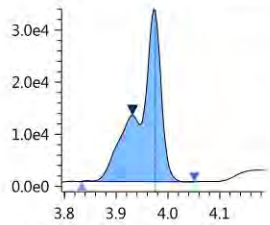


PFBA-13C_IS
Conc 5.0000
RT 3.418 Area 3337150
ISTD 216.90>172.15 (-) 1.01e6



Insight Report

PFPeA
Conc 0.0719
RT 3.931 Area 101090
Q 263.05>219.10 (-) 3.40e4



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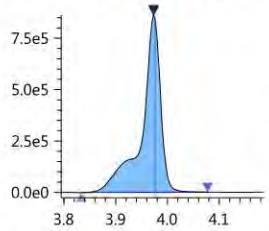
RT 3.973 Area 2138329
Q 267.90>223.00 (-) 8.62e5



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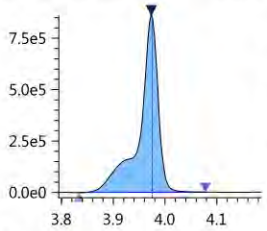

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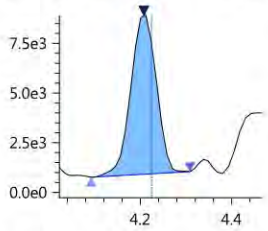
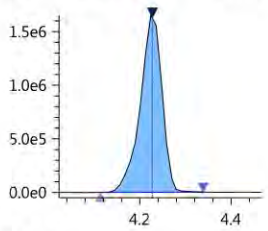
Conc 0.0246
RT 4.208 Area 31227
Q 313.00>269.00 (-) 8.92e3



PFHxA-13C
Conc 7.1131
RT 4.227 Area 5474699
Q 314.90>270.10 (-) 1.65e6



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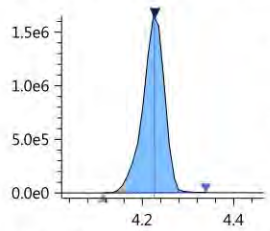

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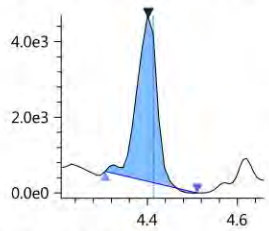
Conc 0.0178
RT 4.402 Area 13533
Q 362.90>319.00 (-) 4.69e3



PFHpA-13C
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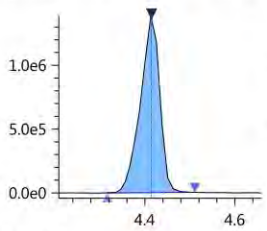
RT 4.415 Area 4138028
Q 366.90>322.10 (-) 1.39e6



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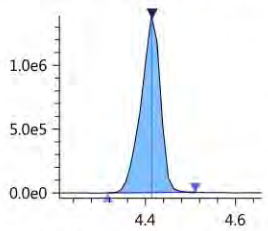
ISTD 366.90>322.10 (-) 1.39e6



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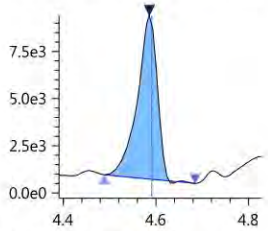
Conc 0.0219
RT 4.586 Area 25731
Q 413.00>369.00 (-) 9.40e3



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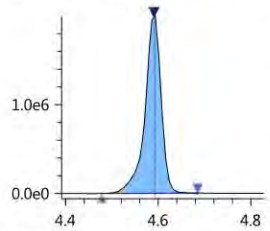
Conc 5.9331
RT 4.591 Area 4846944
Q 416.80>372.05 (-) 2.00e6



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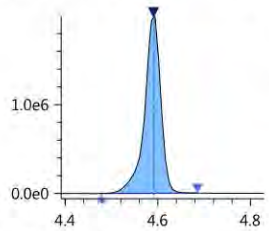

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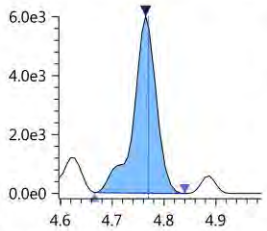
Conc 0.0274
RT 4.764 Area 18399
Q 463.00>418.90 (-) 6.02e3



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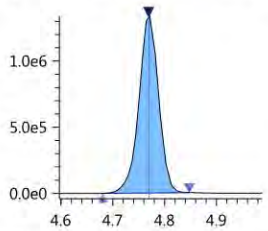
RT 4.769 Area 3551707
Q 467.80>423.00 (-) 1.34e6



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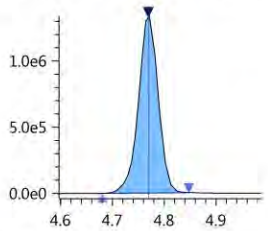
ISTD 467.80>423.00 (-) 1.34e6



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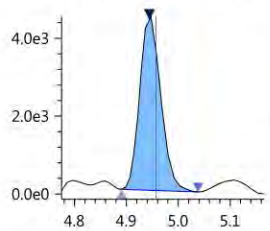

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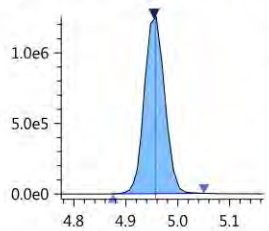

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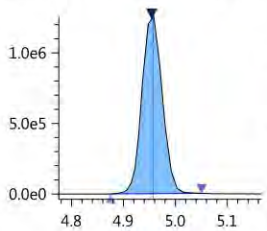

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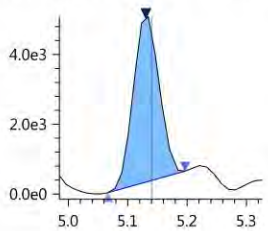

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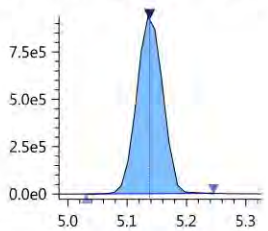

Insight Report

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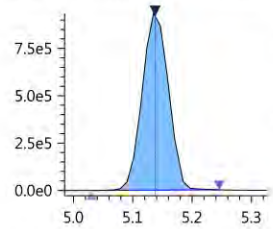

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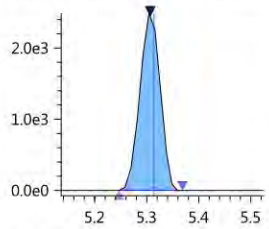

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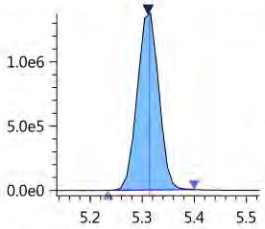
Q 614.80>569.95 (-) 1.38e6



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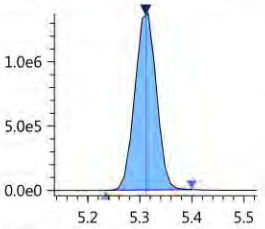

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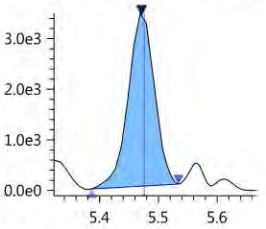

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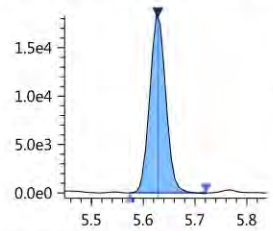

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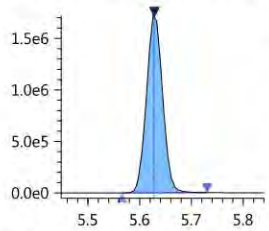

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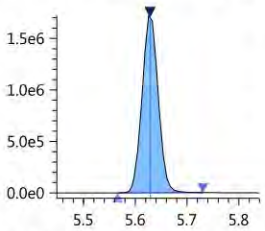

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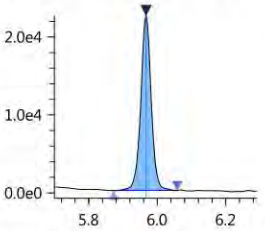

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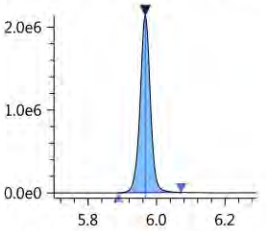

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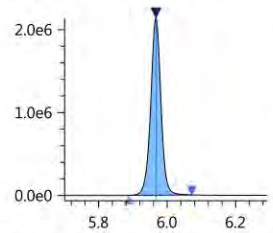

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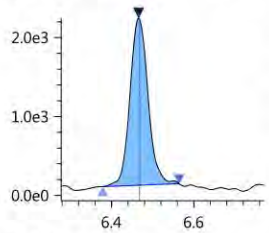

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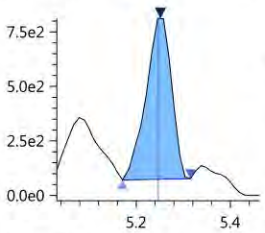

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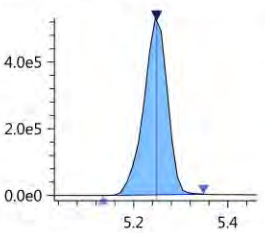
RT 5.249 Area 1854602
Q 506.00>78.05 (-) 5.31e5



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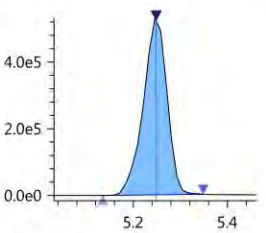

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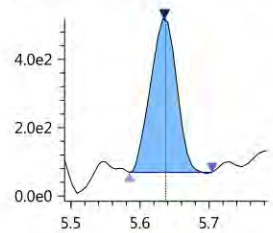

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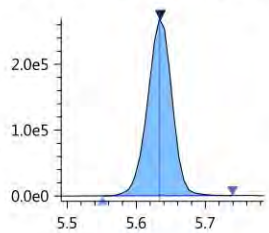

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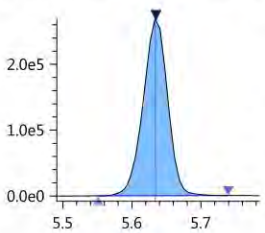

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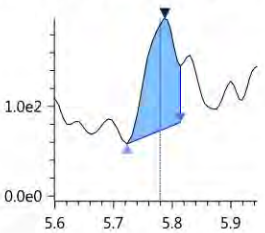

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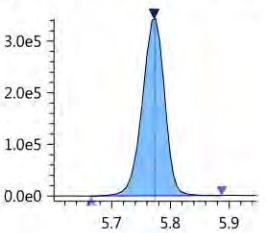
Q 530.90>169.15 (-) 3.44e5



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N-EtFOSA-d9_IS
Conc 5.0000
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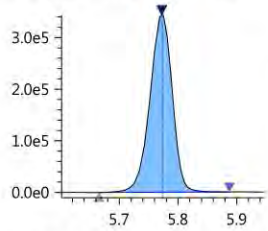
ISTD 530.90>169.15 (-) 3.44e5



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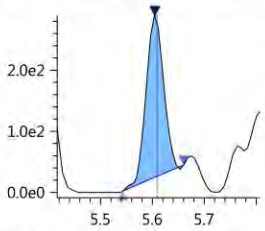

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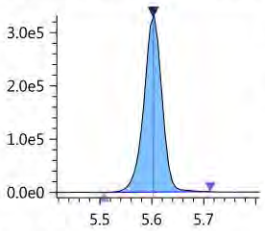

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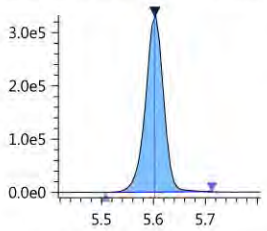

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Conc 0.0050
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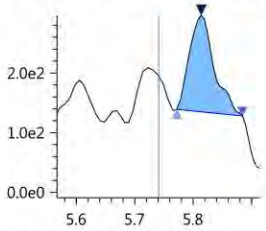
Q 630.00>58.90 (-) 2.97e2



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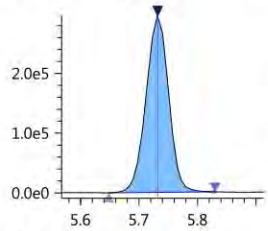
RT 5.732 Area 795202
Q 638.70>59.10 (-) 2.97e5



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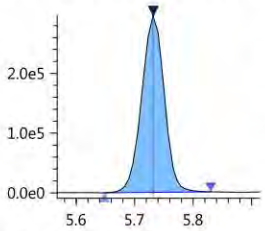

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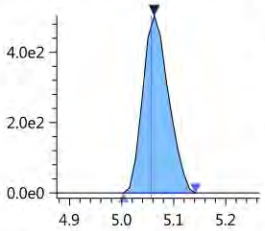
Q 570.20>419.00 (-) 5.04e2



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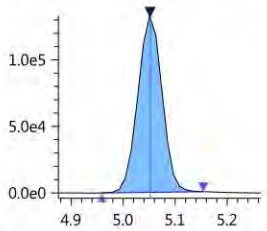
Conc 5.1066
RT 5.052 Area 429670
Q 572.80>419.05 (-) 1.33e5



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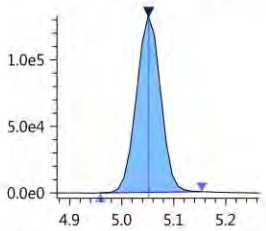

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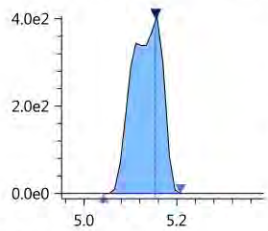

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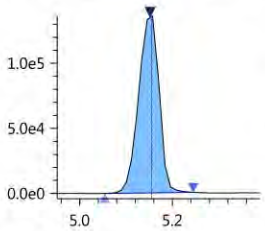

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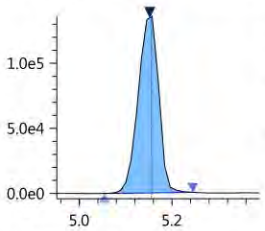
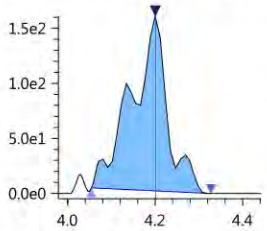
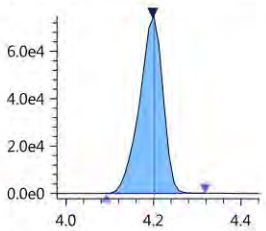


4_2-FTS_1
Conc 0.0132
RT 4.200 Area 908
Q 327.00>307.05 (-) 1.61e2



4_2-FTS-13C
Conc 3.9420
RT 4.198 Area 277884
Q 328.80>309.05 (-) 7.48e4



4_2-FTS-13C_IS
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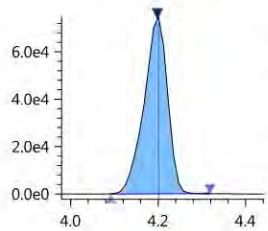
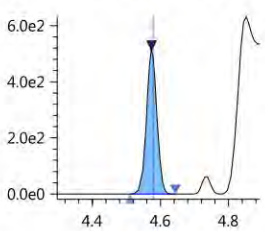
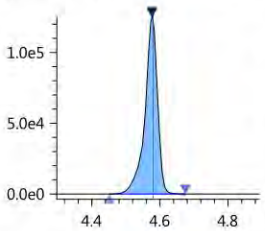


6_2-FTS_1
Conc 0.0130
RT 4.574 Area 1089
Q 427.00>407.00 (-) 6.32e2



6_2-FTS-13C
Conc 4.8381
RT 4.577 Area 321488
Q 428.90>409.00 (-) 1.25e5



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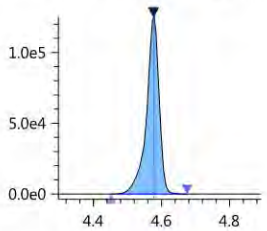
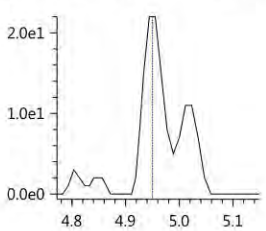
Conc 5.0000
RT 4.577 Area 321488
ISTD 428.90>409.00 (-) 1.25e5



8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 2.20e1



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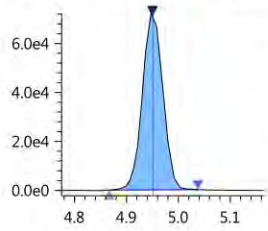
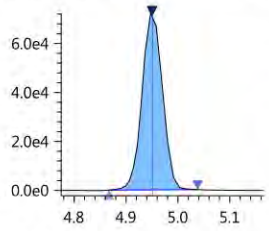
8_2-FTS-13C

Conc 5.2459
RT 4.950 Area 198684
Q 528.80>509.00 (-) 7.24e4



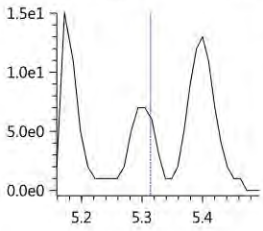
8_2-FTS-13C_IS

Conc 5.0000
RT 4.950 Area 198684
ISTD 528.80>509.00 (-) 7.24e4



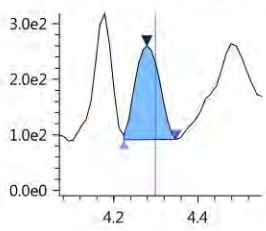
10_2-FtS_1

Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 1.50e1



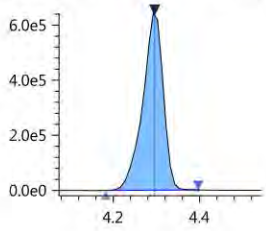
HPFO_DA

Conc 0.0017
RT 4.279 Area 684
Q 329.00>169.00 (-) 3.19e2



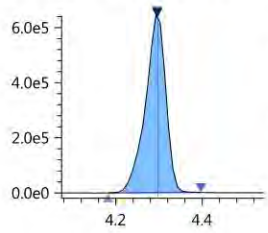
HFPO_DA-13C

Conc 5.5237
RT 4.296 Area 2123687
Q 332.00>286.80 (-) 6.43e5



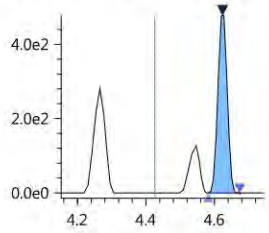
HFPO_DA-13C_IS

Conc 5.0000
RT 4.296 Area 2123687
ISTD 332.00>286.80 (-) 6.43e5



ADONA

Conc 0.0009
RT 4.624 Area 916
Q 377.00>251.00 (-) 4.77e2



Insight Report

Printed at 8/8/2019 9:54:02 AM

190807_020

Sample ID: 0.05 PPB ICAL
Date acquired: 8/7/2019 6:48:25 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_020.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.141	5704271	5704271	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.027	15875	1153089	2	0.0478	ng/mL	0.0444
PFBS-13C	Auto	4.029	1150742	5704271	1	4.2126	ng/mL	5.0000
PFBS-13C_IS	Auto	4.029	1153089	1153089	2	5.0000	ng/mL	5.0000
PFPeS	M	4.252	8255	1153089	2	0.0591	ng/mL	0.0470
PFHxS_1	Auto	4.416	12155	784251	3	0.0558	ng/mL	0.0457
PFHxS-18O	Auto	4.418	784251	5704271	1	5.0164	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.418	784251	784251	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.586	9668	784251	3	0.0416	ng/mL	0.0477
PFOS_1	M	4.761	6312	751926	4	0.0479	ng/mL	0.0465
PFOS-13C	Auto	4.761	755375	5704271	1	4.0559	ng/mL	5.0000
PFOS-13C_IS	Auto	4.761	751926	751926	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.943	5638	751926	4	-0.0161	ng/mL	0.0481
PFDS_1	Auto	5.118	5226	751926	4	0.0424	ng/mL	0.0482
PFDOS	Auto	5.454	6856	751926	4	0.0455	ng/mL	0.0403
9Cl-PF3ONS	Auto	4.864	45473	2364699	26	0.0450	ng/mL	0.0441
11Cl-PF3OUdS	Auto	5.220	36476	2364699	26	0.0403	ng/mL	0.0416
PFBA	Auto	3.424	41122	3991618	5	0.0503	ng/mL	0.0500
PFBA-13C	Auto	3.424	3991618	5704271	1	4.3059	ng/mL	5.0000
PFBA-13C_IS	Auto	3.424	3991618	3991618	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.977	177691	2538371	6	0.0507	ng/mL	0.0500
PFPeA-13C	Auto	3.977	2538371	5704271	1	4.3522	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.977	2538371	2538371	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.224	79297	4989140	7	0.0510	ng/mL	0.0500
PFHxA-13C	Auto	4.229	4989140	5704271	1	4.3511	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.229	4989140	4989140	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.415	79106	6864251	8	0.0492	ng/mL	0.0500
PFHpA-13C	Auto	4.418	6864251	5704271	1	5.1078	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.418	6864251	6864251	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.591	82974	5334480	9	0.0501	ng/mL	0.0500
PFOA-13C	Auto	4.593	5328119	5704271	1	4.3779	ng/mL	5.0000
PFOA-13C_IS	Auto	4.593	5334480	5334480	9	5.0000	ng/mL	5.0000
PFNA	M	4.771	42390	3991905	10	0.0469	ng/mL	0.0500
PFNA-13C	Auto	4.772	3991905	5704271	1	4.1287	ng/mL	5.0000
PFNA-13C_IS	Auto	4.772	3991905	3991905	10	5.0000	ng/mL	5.0000
PFDA	M	4.956	47228	3606083	11	0.0646	ng/mL	0.0500
PFDA-13C	Auto	4.957	3606083	5704271	1	4.4366	ng/mL	5.0000
PFDA-13C_IS	Auto	4.957	3606083	3606083	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.139	58466	4256658	12	0.0483	ng/mL	0.0500
PFUnA-13C	Auto	5.141	4256658	5704271	1	4.8319	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.141	4256658	4256658	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.316	27343	3721225	13	0.0495	ng/mL	0.0500
PFDoA-13C	Auto	5.316	3721225	5704271	1	3.9217	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.316	3721225	3721225	13	5.0000	ng/mL	5.0000
PFTrDA	M	5.480	43087	4316554	14	0.0598	ng/mL	0.0500
PFTeDA	Auto	5.632	58803	4316554	14	0.0479	ng/mL	0.0500
PFTeDA-13C	Auto	5.632	4316554	5704271	1	4.1290	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.632	4316554	4316554	14	5.0000	ng/mL	5.0000
PFHxDA	Auto	5.970	98512	5277228	15	0.0498	ng/mL	0.0500
13C-PFHxDA	Auto	5.970	5277228	5704271	1	4.1227	ng/mL	5.0000
13C-PFHxDA_IS	Auto	5.970	5277228	5277228	15	5.0000	ng/mL	5.0000
PFODA	Auto	6.470	33686	5277228	15	0.0536	ng/mL	0.0500
FOSA	Auto	5.252	23357	1851328	16	0.0501	ng/mL	0.0500
FOSA-13C	Auto	5.251	1851328	5704271	1	4.2623	ng/mL	5.0000
FOSA-13C_IS	Auto	5.251	1851328	1851328	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.642	12430	686423	17	0.0575	ng/mL	0.0500
N-MeFOSA-d3	Auto	5.639	686423	5704271	1	4.0278	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.639	686423	686423	17	5.0000	ng/mL	5.0000
N-EtFOSA	M	5.782	2025	1109457	18	0.0476	ng/mL	0.0500
N-EtFOSA-d9	Auto	5.777	1109457	5704271	1	4.3716	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.777	1109457	1109457	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.613	10062	910133	19	0.0440	ng/mL	0.0500
N-MeFOSE-d7	Auto	5.606	910133	5704271	1	4.3474	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.606	910133	910133	19	5.0000	ng/mL	5.0000
N-EtFOSE	M	5.749	11251	923419	20	0.0498	ng/mL	0.0500
N-EtFOSE-d9	Auto	5.736	923419	5704271	1	4.3786	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.736	923419	923419	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.055	6844	565965	21	0.1082	ng/mL	0.0500

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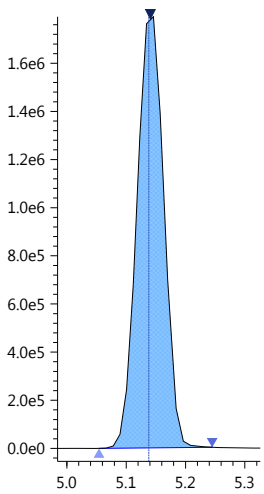
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-MeFOSAA-d3	Auto	5.055	565965	5704271	1	4.5150	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.055	565965	565965	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.154	2161	534164	22	0.1117	ng/mL	0.0500
N-EtFOSAA-d5	Auto	5.154	534164	5704271	1	4.7162	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.154	534164	534164	22	5.0000	ng/mL	5.0000
4_2-FTS_1	M	4.202	5824	432656	23	0.0541	ng/mL	0.0469
4_2-FTS-13C	Auto	4.202	432656	5704271	1	4.1197	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.202	432656	432656	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.580	7355	425025	24	0.0712	ng/mL	0.0476
6_2-FTS-13C	Auto	4.580	425025	5704271	1	4.2934	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.580	425025	425025	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.953	2307	268291	25	0.0491	ng/mL	0.0480
8_2-FTS-13C	Auto	4.953	268291	5704271	1	4.7549	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.953	268291	268291	25	5.0000	ng/mL	5.0000
10_2-FtS_1	M	5.318	1551	268291	25	0.0366	ng/mL	0.0483
HPFO_DA	Auto	4.301	23267	2364699	26	0.0528	ng/mL	0.0500
HFPO_DA-13C	Auto	4.300	2364699	5704271	1	4.1285	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.300	2364699	2364699	26	5.0000	ng/mL	5.0000
ADONA	Auto	4.430	56106	2364699	26	0.0512	ng/mL	0.0473

13C7-PFUnDA_IS

Conc 5.0000
RT 5.141 Area 5704271



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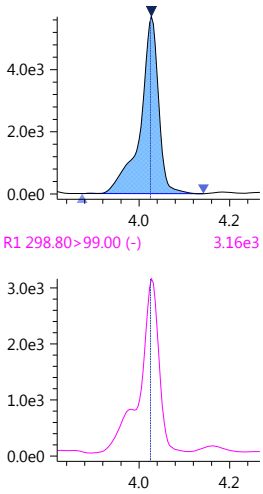
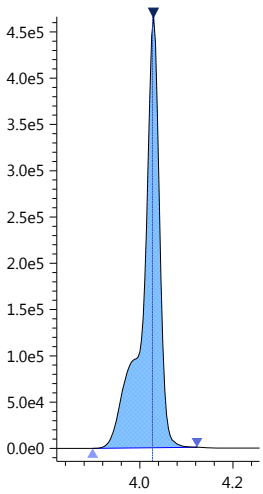
Conc 0.0478
RT 4.027 Area 15875
R#1 53.55 (0.00)



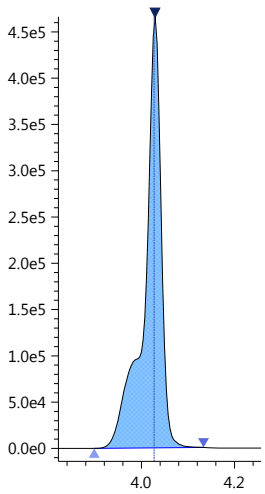
PFBS-13C

Conc 4.2126
RT 4.029 Area 1150742



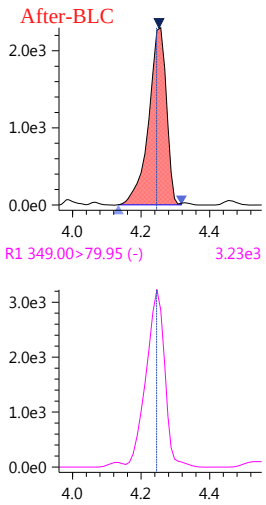
PFBS-13C_IS

Conc 5.0000
RT 4.029 Area 1153089



PFPeS

Conc 0.0591
RT 4.252 Area 8255
R#1 138.90 (0.00)



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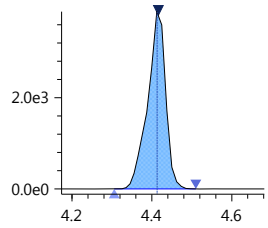
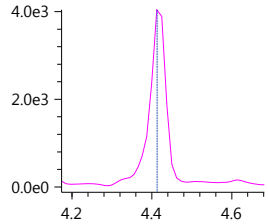
PFHxS_1
Conc 0.0558
RT 4.416 Area 12155
R#1 99.50 (0.00)
Q 399.00>80.00 (-) 3.89e3



R1 399.00>99.00 (-) 4.04e3



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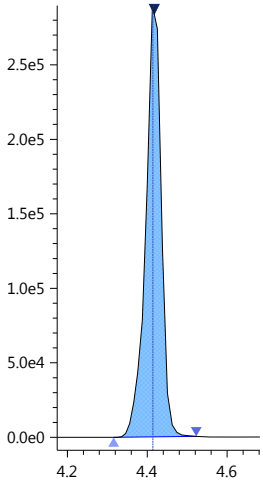
Conc 5.0164
RT 4.418 Area 784251
Q 402.70>84.05 (-) 2.90e5



PFHxS-18O_IS
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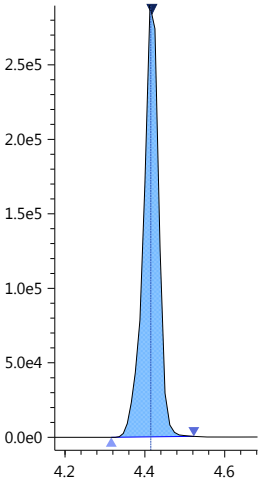
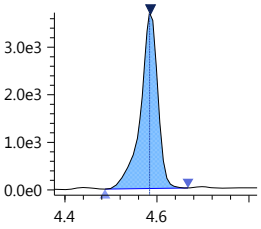
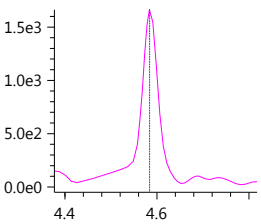
RT 4.418 Area 784251
ISTD 402.70>84.05 (-) 2.90e5



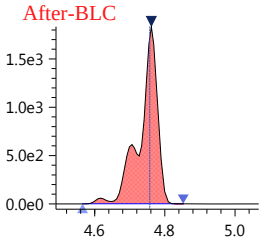
PFHpS_1
Conc 0.0416
RT 4.586 Area 9668
R#1 42.22 (0.00)
Q 449.00>80.15 (-) 3.73e3



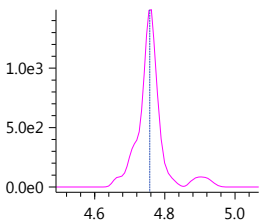
R1 449.00>99.20 (-) 1.66e3



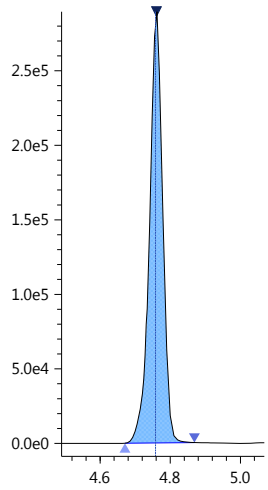
PFOS_1
Conc 0.0479
RT 4.761 Area 6312
R#1 78.98 (0.00)
Q 499.00>80.00 (-) 1.83e3



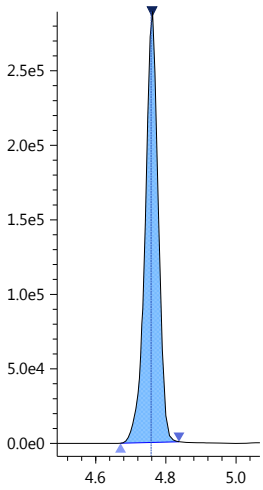
R1 499.00>99.00 (-) 1.49e3



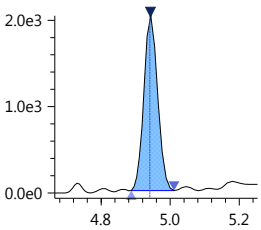
PFOS-13C
Conc 4.0559
RT 4.761 Area 755375
Q 502.80>80.05 (-) 2.90e5



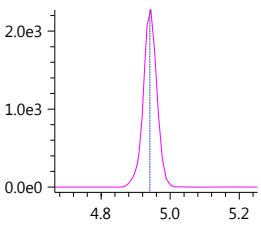
PFOS-13C_IS
Conc 5.0000
RT 4.761 Area 751926
ISTD 502.80>80.05 (-) 2.90e5



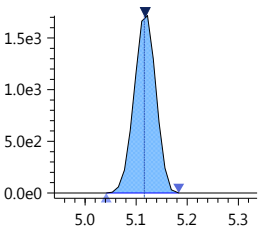
PFNS
Conc -0.0161
RT 4.943 Area 5638
R#1 108.12 (0.00)
Q 549.00>99.00 (-) 2.05e3



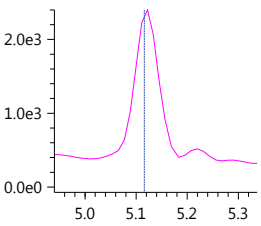
R1 549.00>79.95 (-) 2.27e3



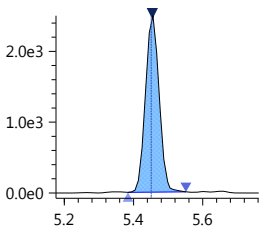
PFDS_1
Conc 0.0424
RT 5.118 Area 5226
R#1 117.34 (0.00)
Q 599.00>79.90 (-) 1.72e3



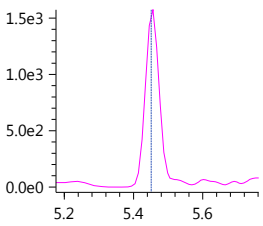
R1 599.00>99.10 (-) 2.40e3



PFDOS
Conc 0.0455
RT 5.454 Area 6856
R#1 62.55 (0.00)
Q 699.00>79.95 (-) 2.50e3



R1 699.00>99.05 (-) 1.57e3



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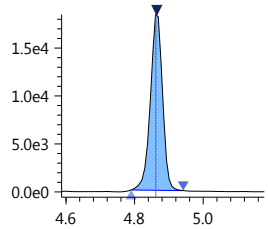
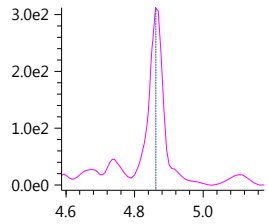
9Cl-PF3ONS

Conc 0.0450
RT 4.864 Area 45473
R#1 1.64 (0.00)

Q 531.00>351.00 (-) 1.85e4



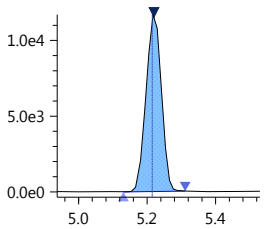
R1 531.00>98.90 (-) 3.12e2



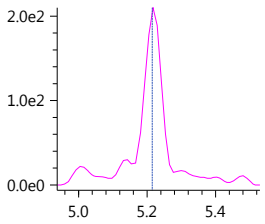
11Cl-PF3OUdS

Conc 0.0403
RT 5.220 Area 36476
R#1 1.59 (0.00)

Q 631.00>451.05 (-) 1.17e4



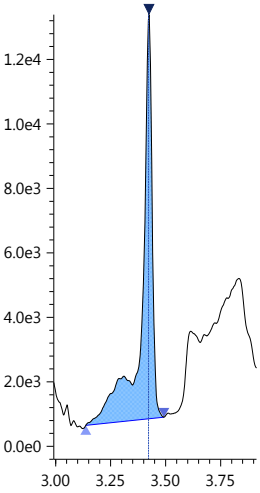
R1 631.00>98.90 (-) 2.10e2



PFBA

Conc 0.0503
RT 3.424 Area 41122

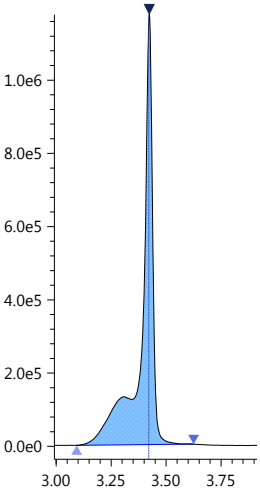
Q 213.00>169.10 (-) 1.34e4



PFBA-13C

Conc 4.3059
RT 3.424 Area 3991618

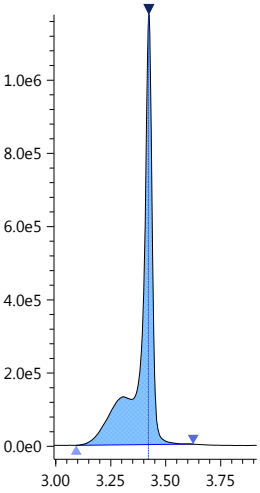
Q 216.90>172.15 (-) 1.18e6



PFBA-13C_IS

Conc 5.0000
RT 3.424 Area 3991618

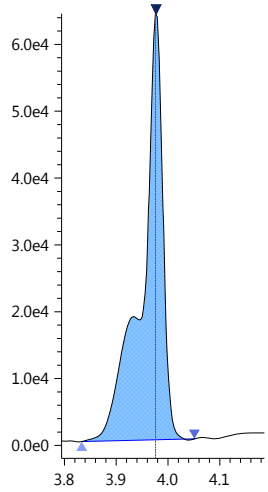
ISTD 216.90>172.15 (-) 1.18e6



PFPeA

Conc 0.0507
RT 3.977 Area 177691

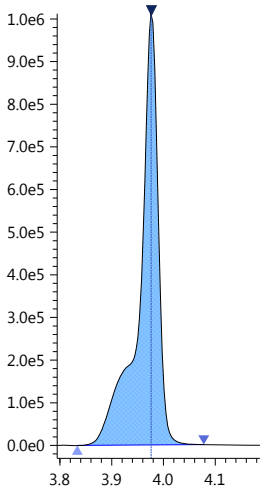
Q 263.05>219.10 (-) 6.46e4



PFPeA-13C

Conc 4.3522
RT 3.977 Area 2538371

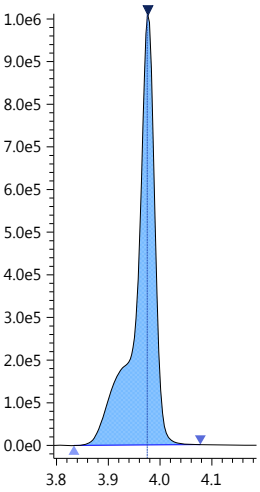
Q 267.90>223.00 (-) 1.01e6



PFPeA-13C_IS

Conc 5.0000
RT 3.977 Area 2538371

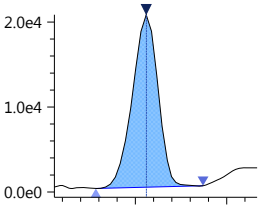
ISTD 267.90>223.00 (-) 1.01e6



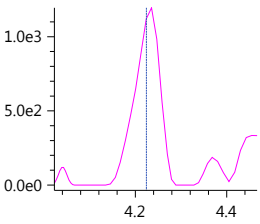
PFHxA

Conc 0.0510
RT 4.224 Area 79297
R#1 5.39 (0.00)

Q 313.00>269.00 (-) 2.09e4



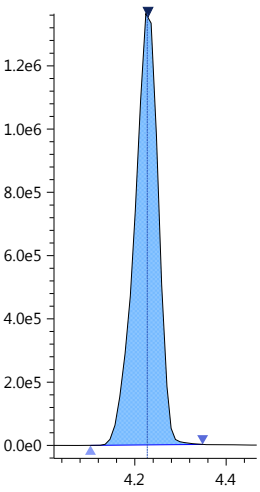
R1 313.00>119.10 (-) 1.20e3



PFHxA-13C

Conc 4.3511
RT 4.229 Area 4989140

Q 314.90>270.10 (-) 1.36e6



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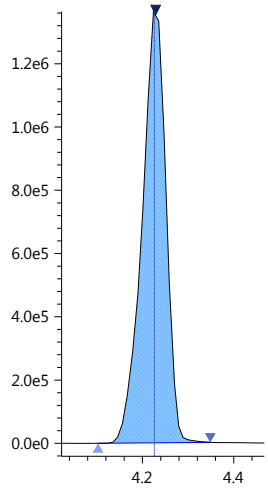
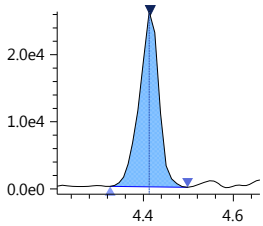
PFHxA-13C_IS
Conc 5.0000
RT 4.229 Area 4989140

ISTD 314.90>270.10 (-) 1.36e6

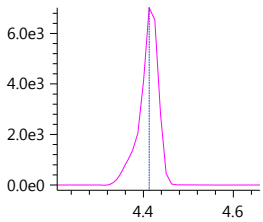


PFHpA
Conc 0.0492
RT 4.415 Area 79106
R#1 26.15 (0.00)

Q 362.90>319.00 (-) 2.64e4

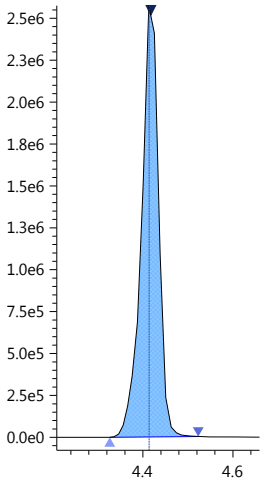


R1 362.90>169.00 (-) 7.02e3



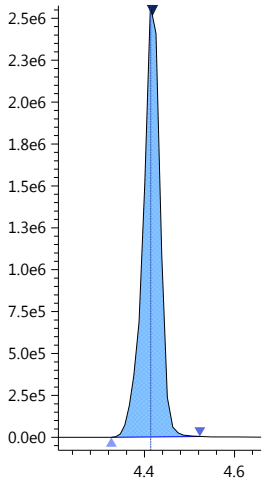
PFHpA-13C
Conc 5.1078
RT 4.418 Area 6864251

Q 366.90>322.10 (-) 2.58e6



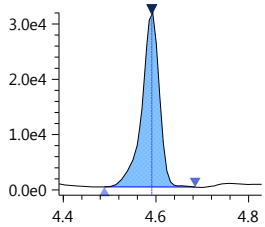
PFHpA-13C_IS
Conc 5.0000
RT 4.418 Area 6864251

ISTD 366.90>322.10 (-) 2.58e6

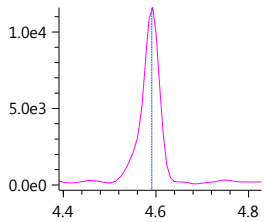


PFOA
Conc 0.0501
RT 4.591 Area 82974
R#1 36.46 (0.00)

Q 413.00>369.00 (-) 3.21e4

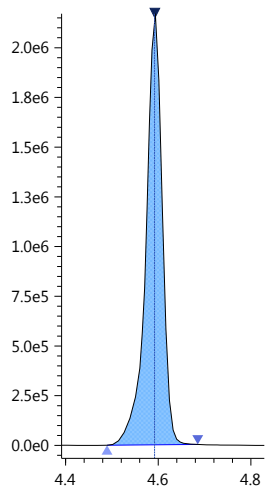


R1 413.00>169.10 (-) 1.16e4



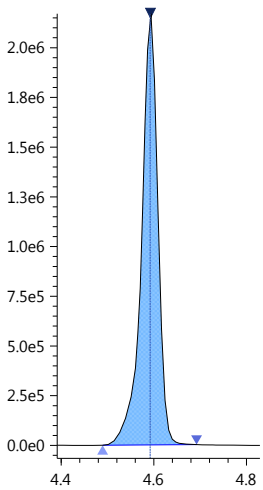
PFOA-13C
Conc 4.3779
RT 4.593 Area 5328119

Q 416.80>372.05 (-) 2.17e6



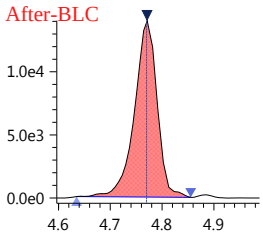
PFOA-13C_IS
Conc 5.0000
RT 4.593 Area 5334480

ISTD 416.80>372.05 (-) 2.17e6

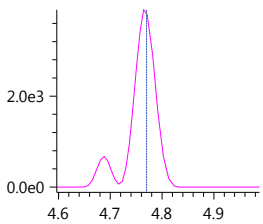


PFNA
Conc 0.0469
RT 4.771 Area 42390
R#1 26.19 (0.00)

Q 463.00>418.90 (-) 1.41e4

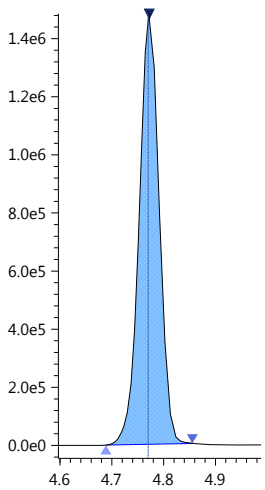


R1 463.00>219.00 (-) 3.90e3



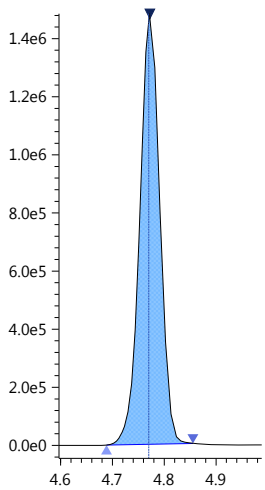
PFNA-13C
Conc 4.1287
RT 4.772 Area 3991905

Q 467.80>423.00 (-) 1.49e6



PFNA-13C_IS
Conc 5.0000
RT 4.772 Area 3991905

ISTD 467.80>423.00 (-) 1.49e6



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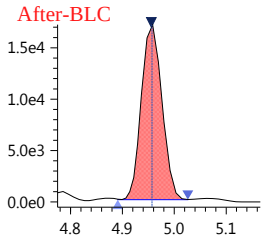
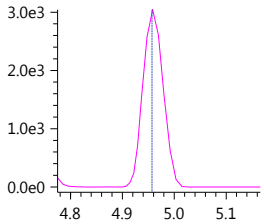
PFDA
Conc 0.0646
RT 4.956 Area 47228
R#1 17.93 (0.00)
Q 513.00>468.80 (-) 1.73e4


R1 513.00>219.10 (-) 3.04e3


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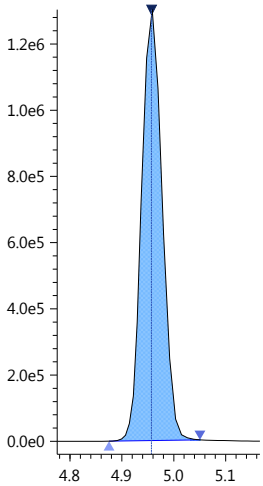
Conc 4.4366
RT 4.957 Area 3606083
Q 514.80>469.95 (-) 1.30e6


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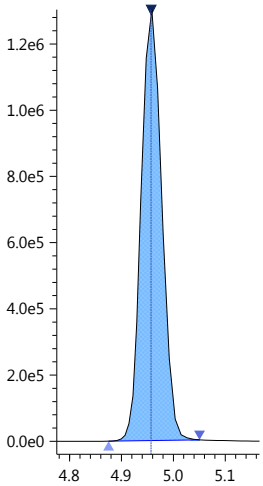
ISTD 514.80>469.95 (-) 1.30e6


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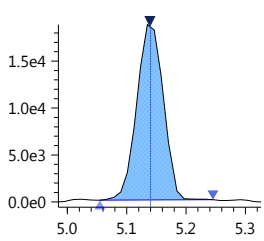
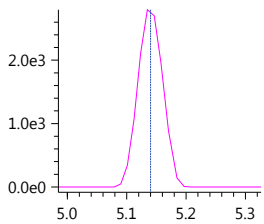
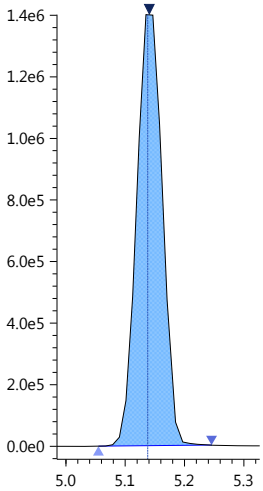
Conc 0.0483
RT 5.139 Area 58466
R#1 14.84 (0.00)
Q 563.00>518.90 (-) 1.89e4


R1 563.00>219.00 (-) 2.80e3


PFUnA-13C
Conc 4.8319
RT 5.141 Area 4256658
Q 564.80>519.95 (-) 1.40e6


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RT 5.141 Area 4256658
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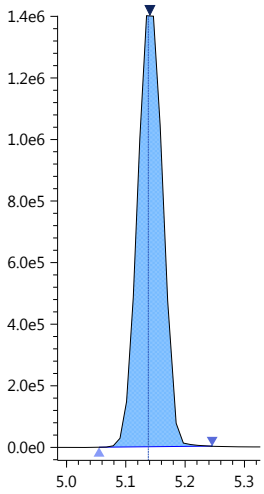
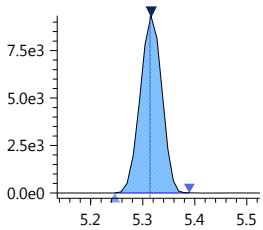
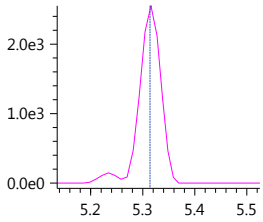


PFDoA
Conc 0.0495
RT 5.316 Area 27343
R#1 26.69 (0.00)
Q 613.05>569.00 (-) 9.34e3


R1 613.05>169.00 (-) 2.55e3


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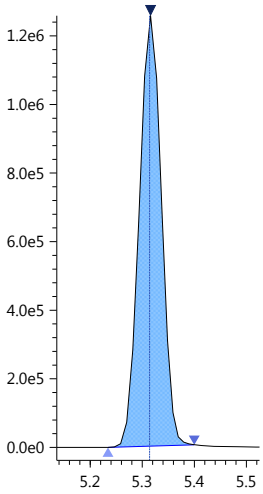
Conc 3.9217
RT 5.316 Area 3721225
Q 614.80>569.95 (-) 1.26e6


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Conc 5.0000
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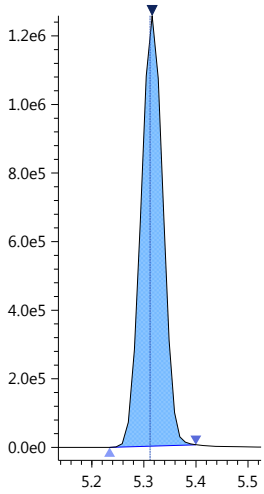
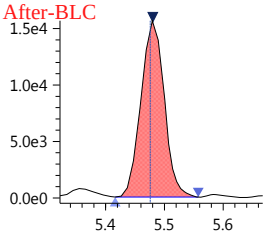
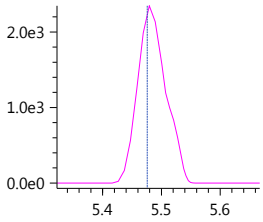


PFTrDA
Conc 0.0598
RT 5.480 Area 43087
R#1 14.98 (0.00)
Q 663.00>618.90 (-) 1.57e4


R1 662.90>169.00 (-) 2.35e3


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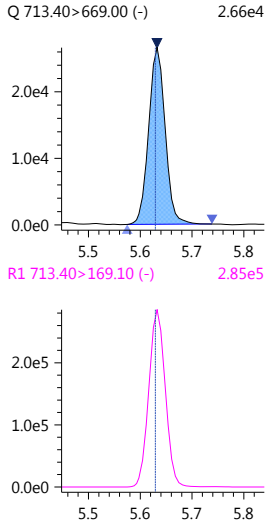
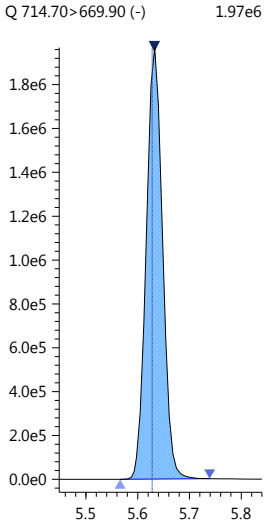
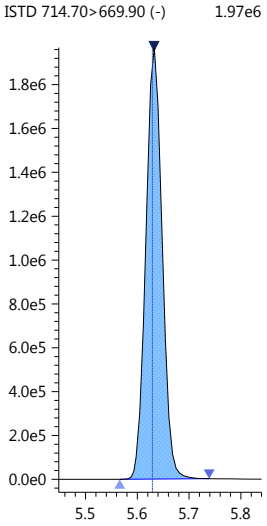
PFTeDA
Conc 0.0479
RT 5.632 Area 58803
R#1 1070.90 (0.00)



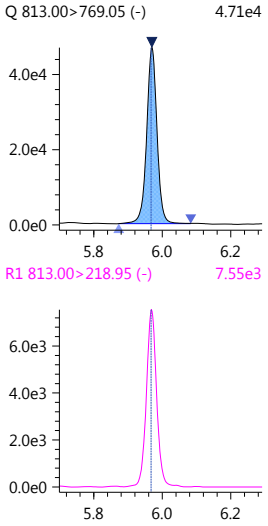
PFTeDA-13C
Conc 4.1290
RT 5.632 Area 4316554



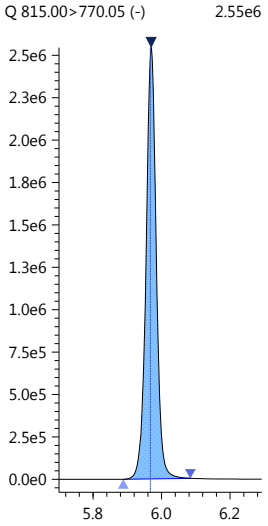
PFTeDA-13C_IS
Conc 5.0000
RT 5.632 Area 4316554



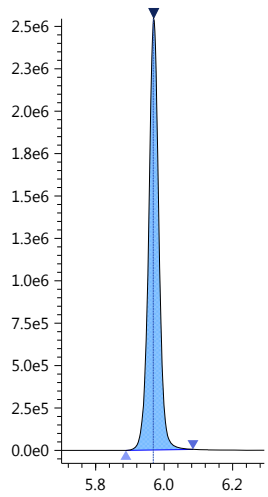
PFHxDA
Conc 0.0498
RT 5.970 Area 98512
R#1 16.47 (0.00)



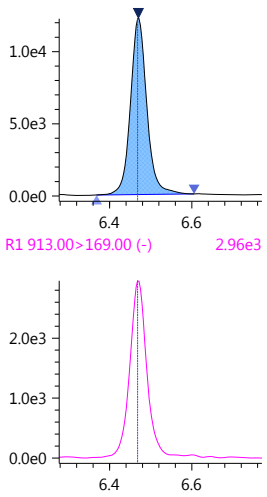
13C-PFHxDA
Conc 4.1227
RT 5.970 Area 5277228



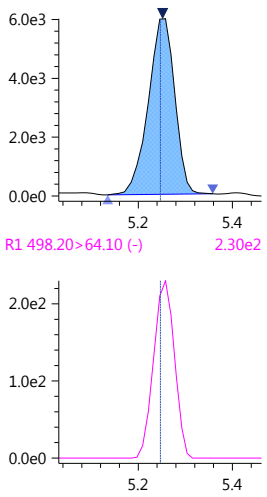
13C-PFHxDA_IS
Conc 5.0000
RT 5.970 Area 5277228



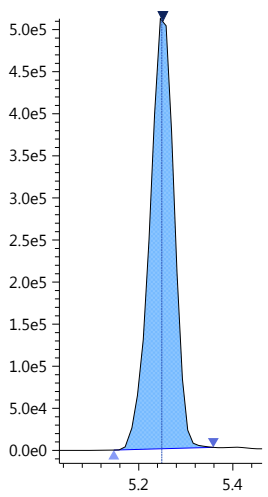
PFODA
Conc 0.0536
RT 6.470 Area 33686
R#1 23.80 (0.00)



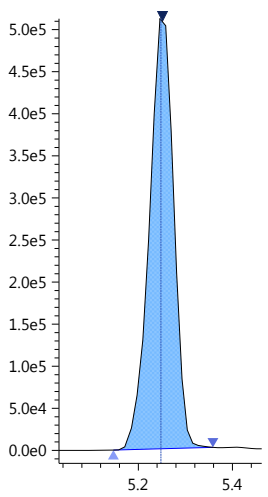
FOSA
Conc 0.0501
RT 5.252 Area 23357
R#1 3.48 (0.00)



FOSA-13C
Conc 4.2623
RT 5.251 Area 1851328



FOSA-13C_IS
Conc 5.0000
RT 5.251 Area 1851328



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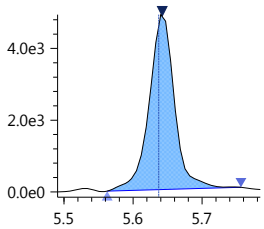
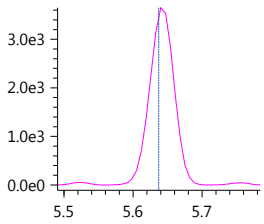
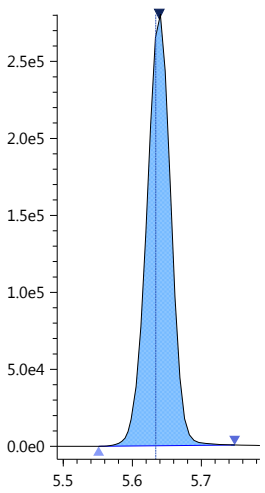
N-MeFOSA
Conc 0.0575
RT 5.642 Area 12430
R#1 73.92 (0.00)
Q 512.00>169.10 (-) 4.94e3



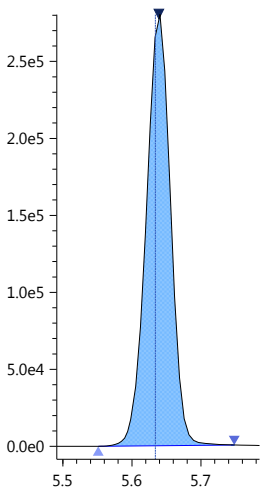
R1 512.00>219.00 (-) 3.65e3



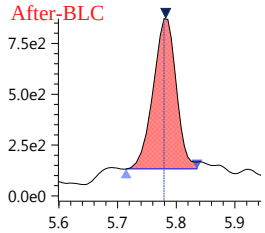
N-MeFOSA-d3
Conc 4.0278
RT 5.639 Area 686423
Q 514.90>168.90 (-) 2.80e5



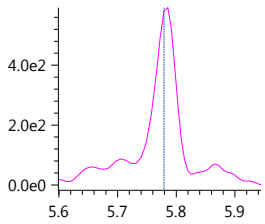
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.639 Area 686423
ISTD 514.90>168.90 (-) 2.80e5



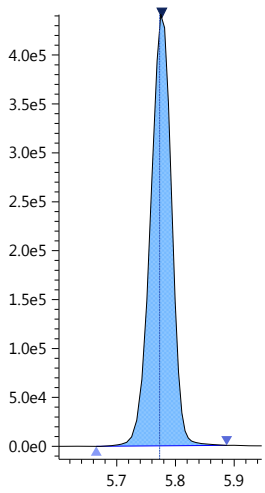
N-EtFOSA
Conc 0.0476
RT 5.782 Area 2025
R#1 71.39 (0.00)
Q 526.90>169.10 (-) 8.72e2



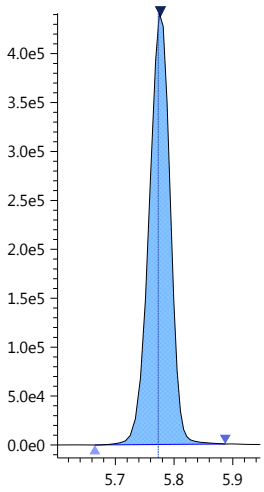
R1 526.90>219.00 (-) 5.92e2



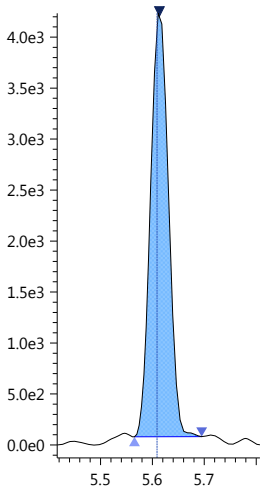
N-EtFOSA-d9
Conc 4.3716
RT 5.777 Area 1109457
Q 530.90>169.15 (-) 4.41e5



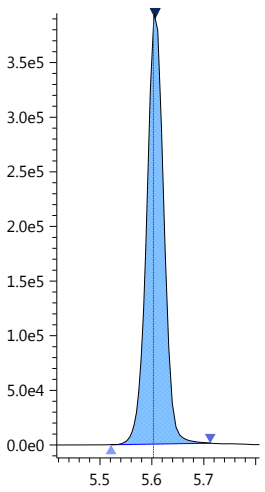
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.777 Area 1109457
ISTD 530.90>169.15 (-) 4.41e5



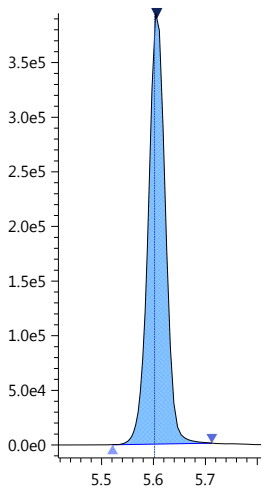
N-MeFOSE
Conc 0.0440
RT 5.613 Area 10062
Q 616.00>59.00 (-) 4.23e3



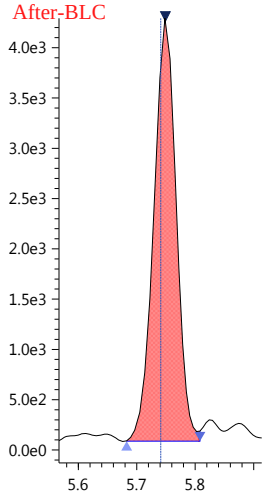
N-MeFOSE-d7
Conc 4.3474
RT 5.606 Area 910133
Q 622.70>59.10 (-) 3.95e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.606 Area 910133
ISTD 622.70>59.10 (-) 3.95e5



N-EtFOSE
Conc 0.0498
RT 5.749 Area 11251
Q 630.00>58.90 (-) 4.29e3



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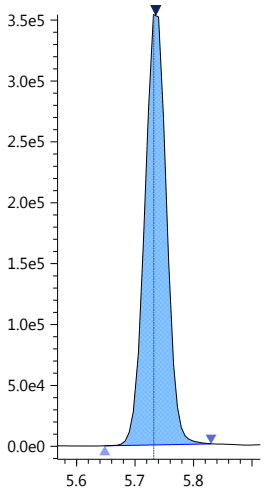
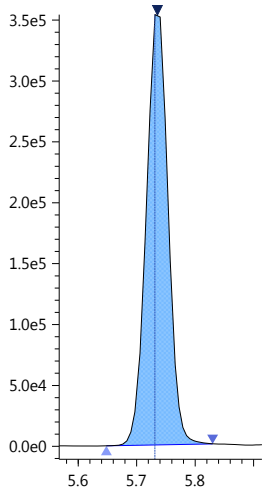
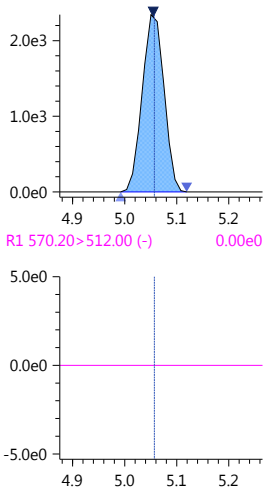
N-EtFOSE-d9
Conc 4.3786
RT 5.736 Area 923419
Q 638.70>59.10 (-) 3.55e5



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.736 Area 923419
ISTD 638.70>59.10 (-) 3.55e5

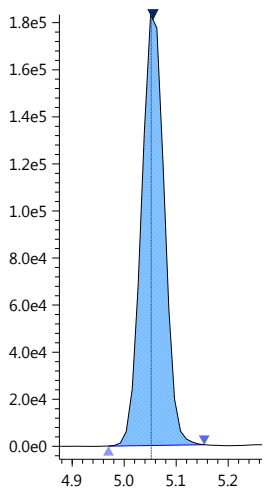


N-MeFOSAA
Conc 0.1082
RT 5.055 Area 6844
R#1 0.00 (0.00)
Q 570.20>419.00 (-) 2.35e3



R1 570.20>512.00 (-) 0.00e0

N-MeFOSAA-d3
Conc 4.5150
RT 5.055 Area 565965
Q 572.80>419.05 (-) 1.83e5



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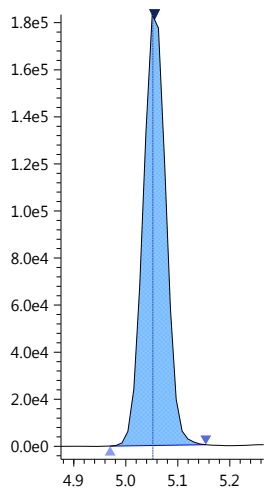
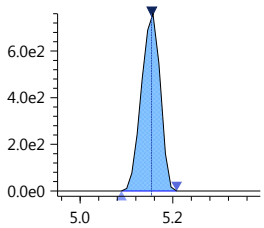
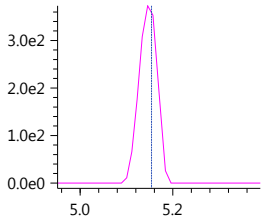
Conc 5.0000
RT 5.055 Area 565965
ISTD 572.80>419.05 (-) 1.83e5



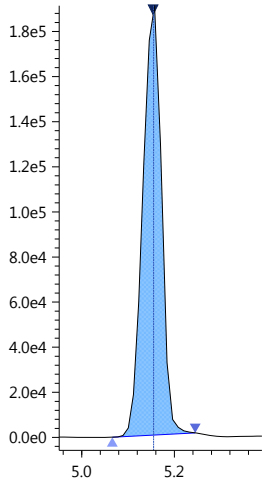
N-EtFOSAA
Conc 0.1117
RT 5.154 Area 2161
R#1 44.67 (0.00)
Q 584.20>418.95 (-) 7.60e2



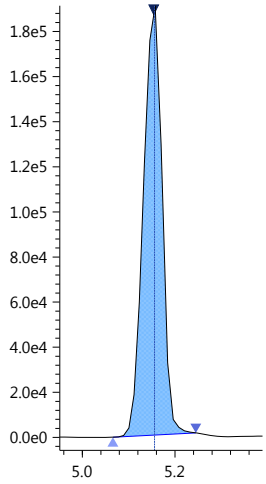
R1 584.20>526.10 (-) 3.73e2



N-EtFOSAA-d5
Conc 4.7162
RT 5.154 Area 534164
Q 588.80>419.00 (-) 1.91e5

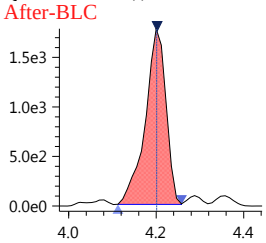


N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.154 Area 534164
ISTD 588.80>419.00 (-) 1.91e5

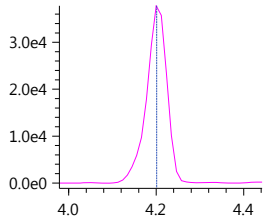


4_2-FTS_1
Conc 0.0541
RT 4.202 Area 5824
R#1 2102.52 (0.00)
Q 327.00>307.05 (-) 1.79e3

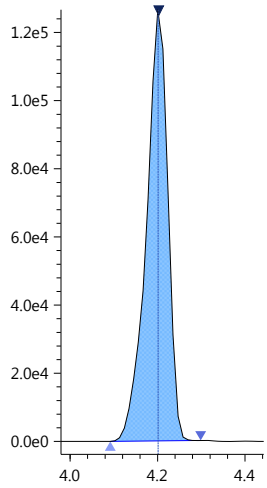
After-BLC



R1 327.00>81.10 (-) 3.78e4



4_2-FTS-13C
Conc 4.1197
RT 4.202 Area 432656
Q 328.80>309.05 (-) 1.27e5



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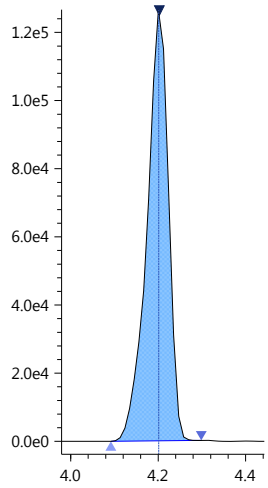
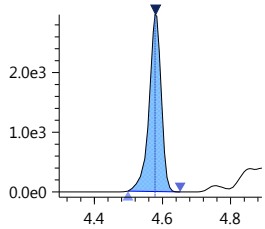
4_2-FTS-13C_IS
Conc 5.0000
RT 4.202 Area 432656

ISTD 328.80>309.05 (-) 1.27e5

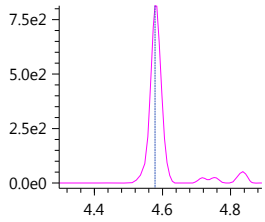


6_2-FTS_1
Conc 0.0712
RT 4.580 Area 7355
R#1 28.02 (0.00)

Q 427.00>407.00 (-) 2.97e3

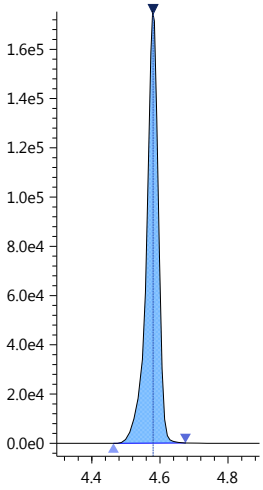


R1 427.00>80.90 (-) 8.14e2



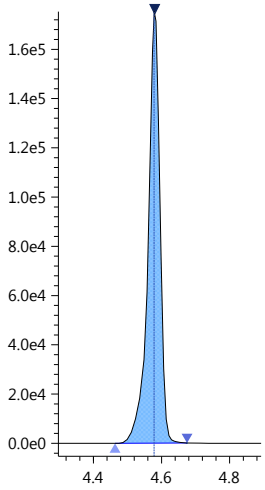
6_2-FTS-13C
Conc 4.2934
RT 4.580 Area 425025

Q 428.90>409.00 (-) 1.75e5



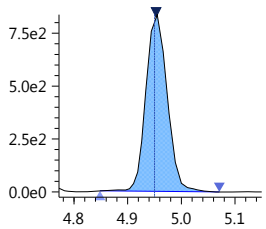
6_2-FTS-13C_IS
Conc 5.0000
RT 4.580 Area 425025

ISTD 428.90>409.00 (-) 1.75e5

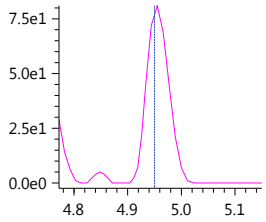


8_2-FTS_1
Conc 0.0491
RT 4.953 Area 2307
R#1 9.28 (0.00)

Q 527.10>506.90 (-) 8.38e2

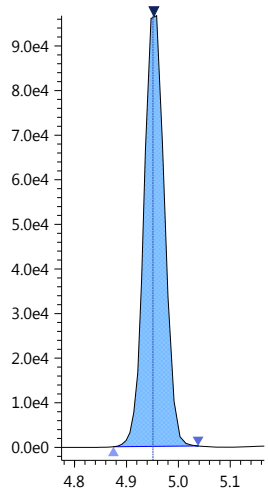


R1 527.20>487.00 (-) 8.10e1



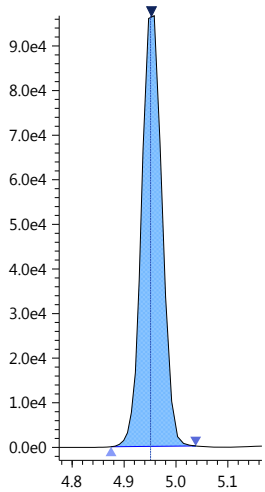
8_2-FTS-13C
Conc 4.7549
RT 4.953 Area 268291

Q 528.80>509.00 (-) 9.68e4



8_2-FTS-13C_IS
Conc 5.0000
RT 4.953 Area 268291

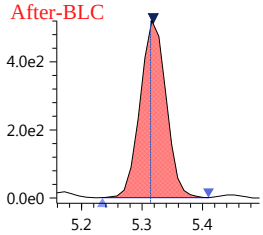
ISTD 528.80>509.00 (-) 9.68e4



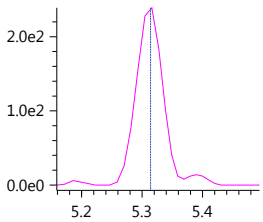
10_2-FtS_1
Conc 0.0366
RT 5.318 Area 1551
R#1 45.56 (0.00)

Q 627.00>606.95 (-) 5.21e2

After-BLC

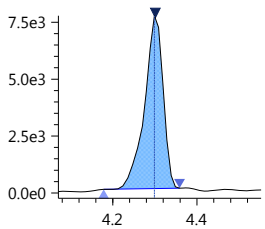


R1 627.00>81.25 (-) 2.39e2

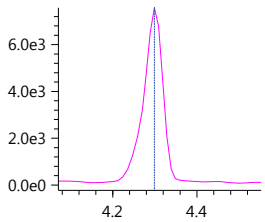


HPFO_DA
Conc 0.0528
RT 4.301 Area 23267
R#1 97.58 (0.00)

Q 329.00>169.00 (-) 7.79e3

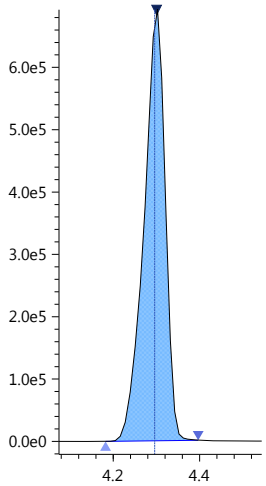


R1 329.00>285.10 (-) 7.57e3



HFPO_DA-13C
Conc 4.1285
RT 4.300 Area 2364699

Q 332.00>286.80 (-) 6.92e5



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HFPO_DA-13C_IS

Conc 5.0000
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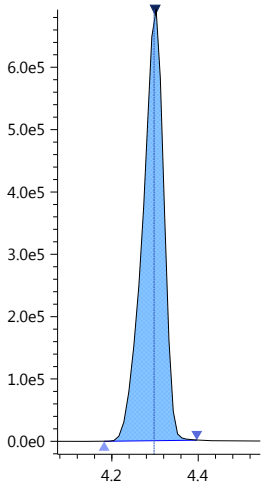
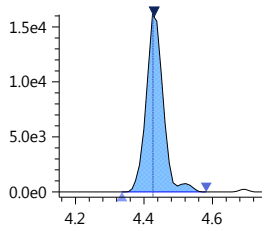


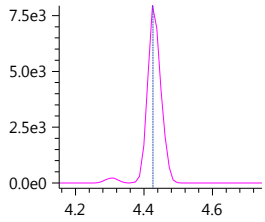
ADONA

Conc 0.0512
RT 4.430 Area 56106
R#1 44.66 (0.00)

Q 377.00>251.00 (-) 1.61e4



R1 377.00>84.95 (-) 7.94e3



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Printed at 8/8/2019 8:44:13 AM

190807_020

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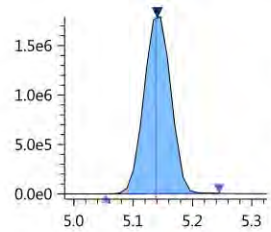
Date acquired: 8/7/2019 6:48:25 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_020.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 0

13C7-PFUnDA_IS
Conc 5.0000
RT 5.141 Area 5704271
ISTD 570.00>525.00 (-) 1.79e6



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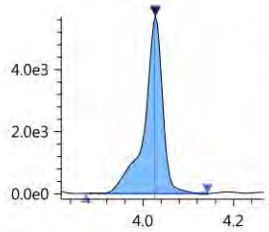
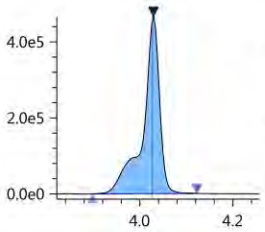
Q 299.00>80.00 (-) 5.71e3



PFBS-13C
Conc 4.2126
RT 4.029 Area 1150742
Q 301.80>80.00 (-) 4.66e5



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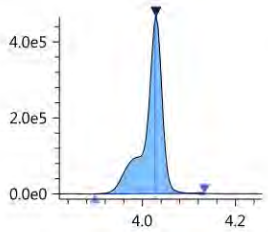

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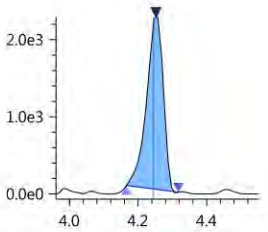
Conc 0.0551
RT 4.252 Area 7599
Q 349.00>99.00 (-) 2.30e3



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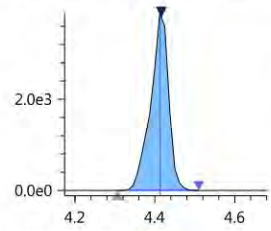
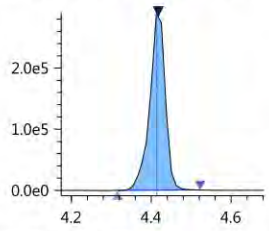
Conc 0.0559
RT 4.416 Area 12155
Q 399.00>80.00 (-) 3.89e3



PFHxS-18O
Conc 5.0164
RT 4.418 Area 784251
Q 402.70>84.05 (-) 2.90e5



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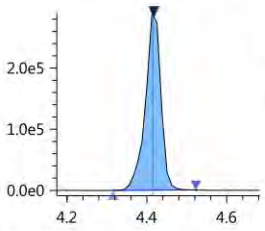

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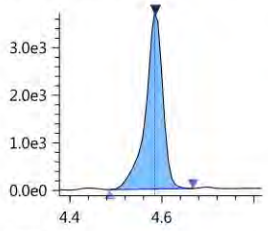

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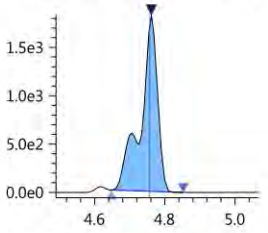
Q 499.00>80.00 (-) 1.83e3



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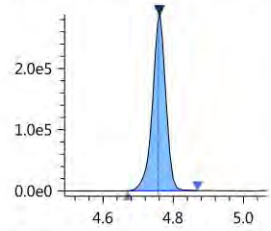
RT 4.761 Area 755375
Q 502.80>80.05 (-) 2.90e5



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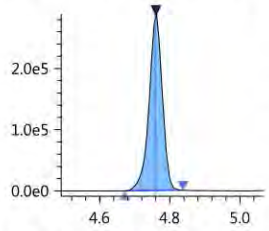

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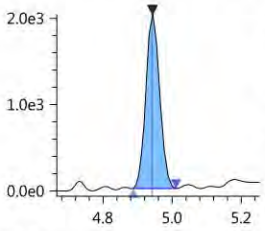
Conc 0.0566
RT 4.943 Area 5638
Q 549.00>99.00 (-) 2.05e3



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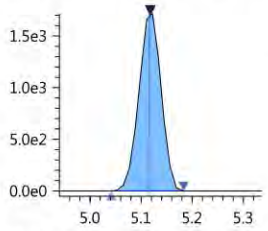
RT 5.118 Area 5226
Q 599.00>79.90 (-) 1.72e3



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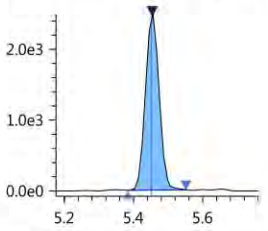

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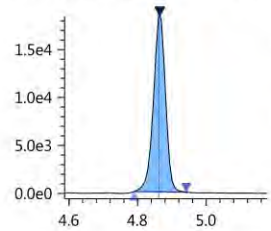
RT 4.864 Area 45473
Q 531.00>351.00 (-) 1.85e4



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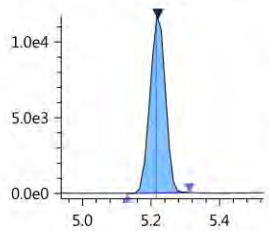
RT 5.220 Area 36476
Q 631.00>451.05 (-) 1.17e4



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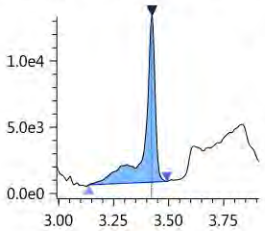
RT 3.424 Area 41122
Q 213.00>169.10 (-) 1.34e4



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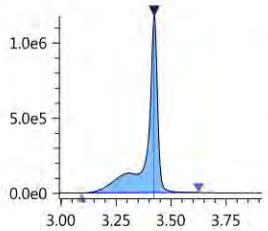

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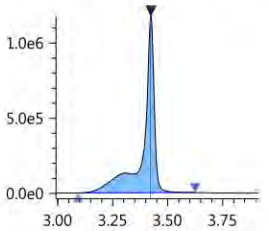

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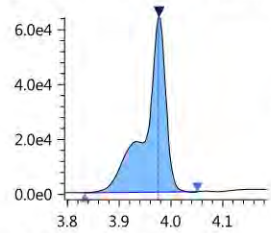

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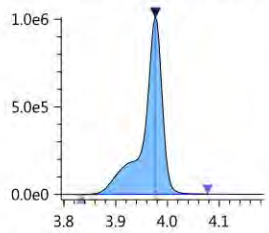

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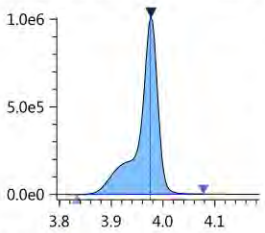

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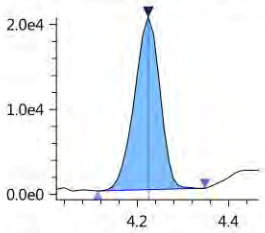
Q 313.00>269.00 (-) 2.09e4



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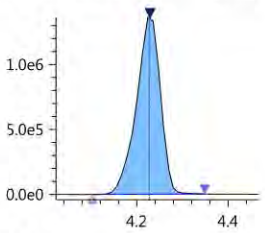

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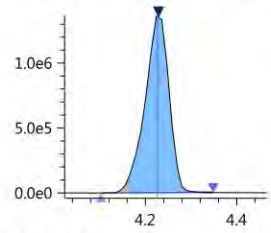

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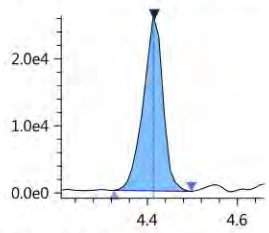
Q 362.90>319.00 (-) 2.64e4



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Conc 5.1078
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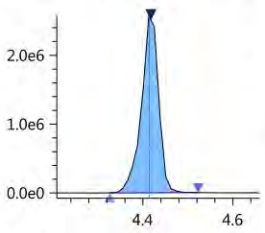
Q 366.90>322.10 (-) 2.58e6



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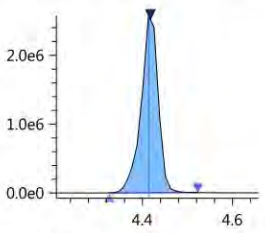

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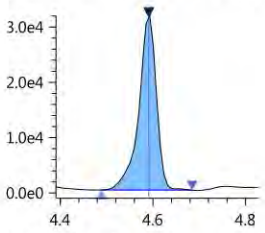

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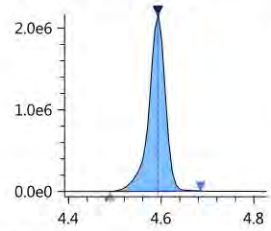

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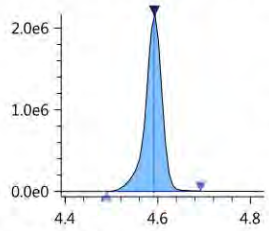

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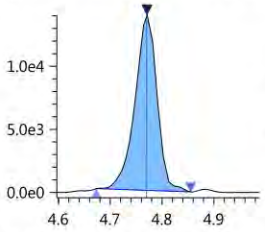
Conc 0.0546
RT 4.771 Area 41170
Q 463.00>418.90 (-) 1.41e4



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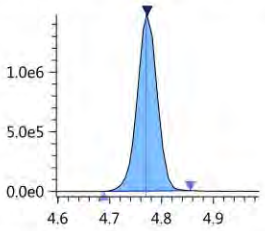

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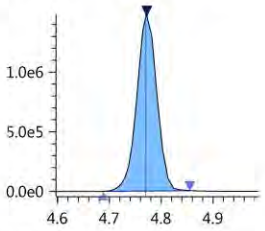

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RT 4.956 Area 46989
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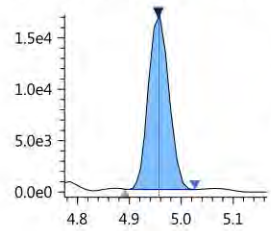
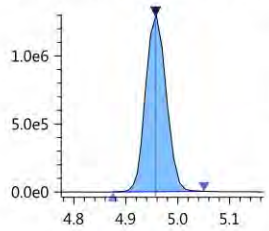


PFDA-13C
Conc 4.4366
RT 4.957 Area 3606083
Q 514.80>469.95 (-) 1.30e6



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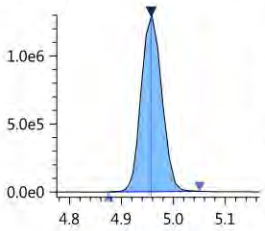

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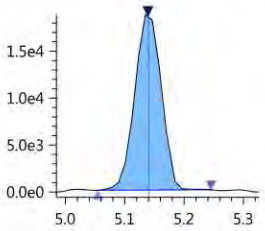
RT 5.139 Area 58466
Q 563.00>518.90 (-) 1.89e4



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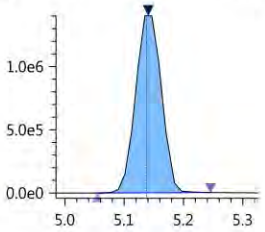
Q 564.80>519.95 (-) 1.40e6



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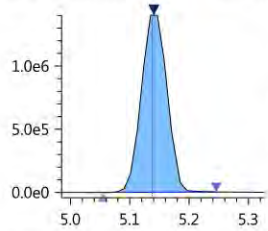

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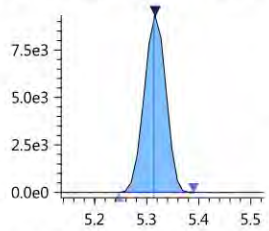

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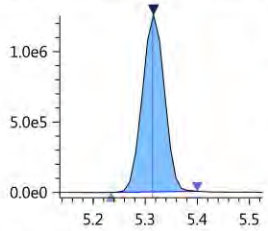

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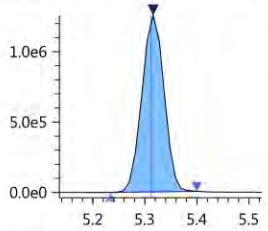

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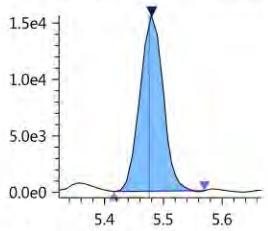

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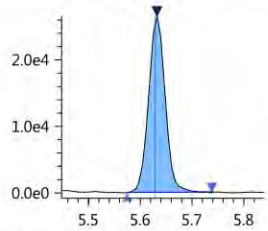
Q 713.40>669.00 (-) 2.66e4



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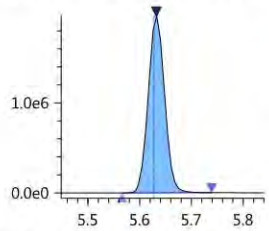
Q 714.70>669.90 (-) 1.97e6



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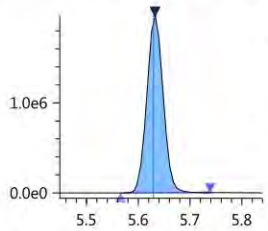

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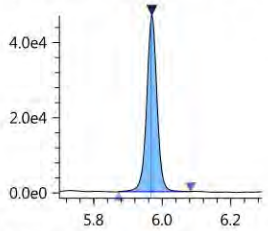

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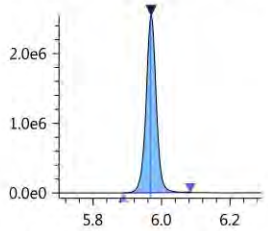

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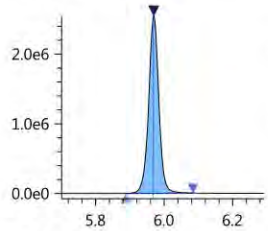

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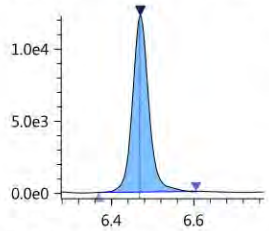

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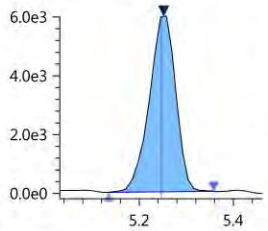

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Conc 4.2623
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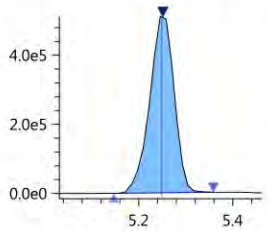
Q 506.00>78.05 (-) 5.13e5



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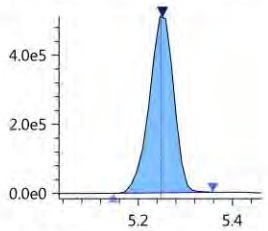

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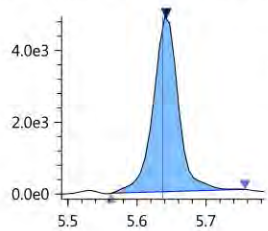

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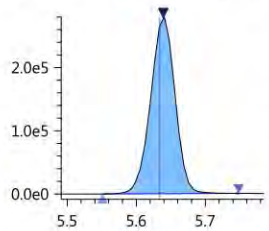
Conc 4.0278
RT 5.639 Area 686423
Q 514.90>168.90 (-) 2.80e5



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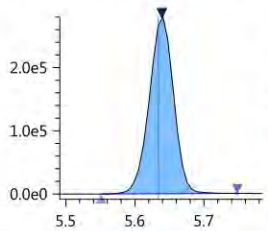
ISTD 514.90>168.90 (-) 2.80e5



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Conc 0.0457
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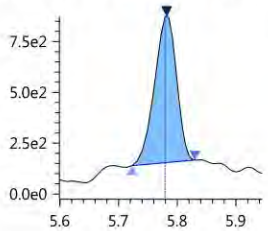

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Conc 4.3716
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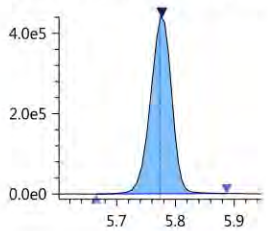
Q 530.90>169.15 (-) 4.41e5



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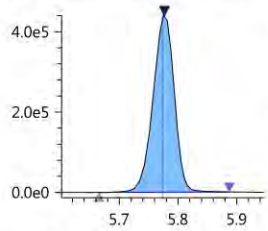
ISTD 530.90>169.15 (-) 4.41e5



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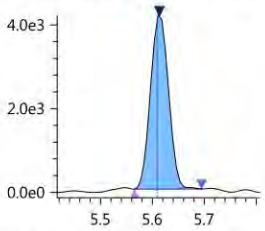
Q 616.00>59.00 (-) 4.23e3



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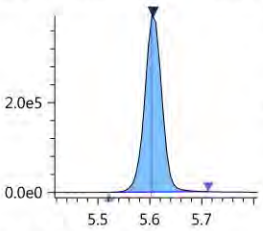
Q 622.70>59.10 (-) 3.95e5



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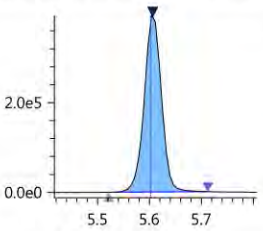
ISTD 622.70>59.10 (-) 3.95e5



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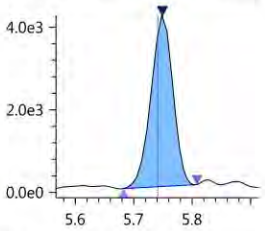

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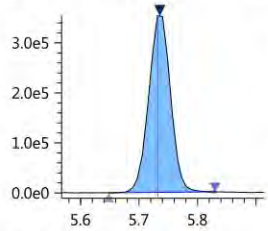
Q 638.70>59.10 (-) 3.55e5



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Conc 5.0000
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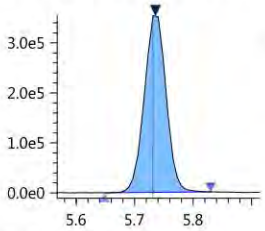

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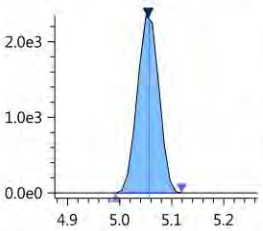
Conc 0.0840
RT 5.055 Area 6844
Q 570.20>419.00 (-) 2.35e3



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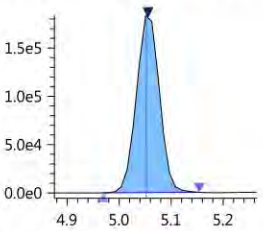
Conc 4.5150
RT 5.055 Area 565965
Q 572.80>419.05 (-) 1.83e5



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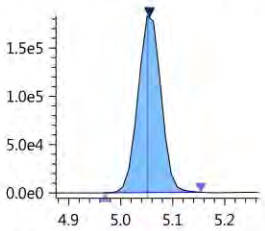

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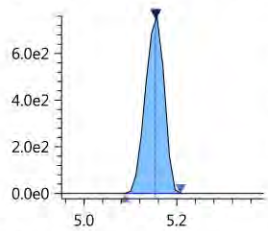

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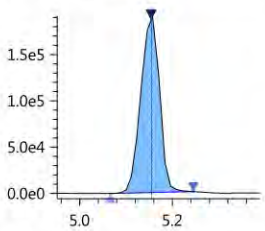
Q 588.80>419.00 (-) 1.91e5



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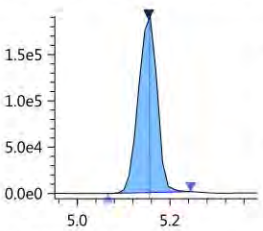

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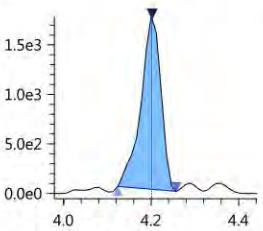
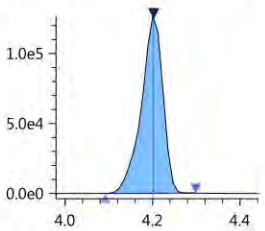
Q 327.00>307.05 (-) 1.79e3



4_2-FTS-13C
Conc 4.1197
RT 4.202 Area 432656
Q 328.80>309.05 (-) 1.27e5



4_2-FTS-13C_IS
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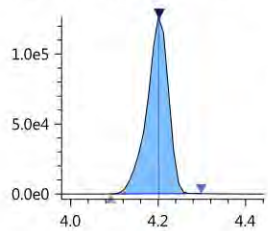
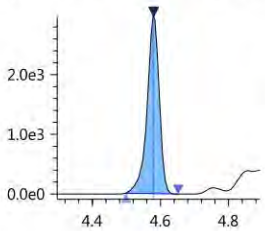
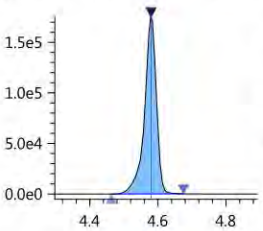
ISTD 328.80>309.05 (-) 1.27e5



6_2-FTS_1
Conc 0.0665
RT 4.580 Area 7355
Q 427.00>407.00 (-) 2.97e3



6_2-FTS-13C
Conc 4.2934
RT 4.580 Area 425025
Q 428.90>409.00 (-) 1.75e5



6_2-FTS-13C_IS
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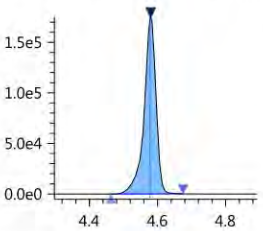
ISTD 428.90>409.00 (-) 1.75e5



8_2-FTS_1
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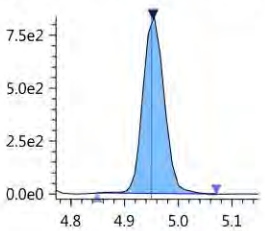
Q 527.10>506.90 (-) 8.38e2



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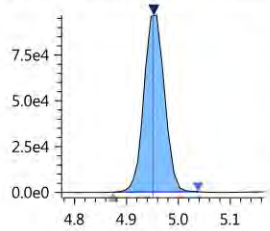
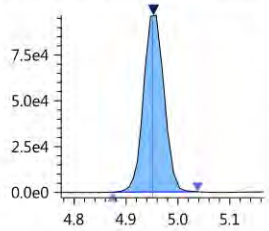
8_2-FTS-13C
Conc 4.7549
RT 4.953 Area 268291
Q 528.80>509.00 (-) 9.68e4



8_2-FTS-13C_IS
Conc 5.0000
RT 4.953 Area 268291
ISTD 528.80>509.00 (-) 9.68e4



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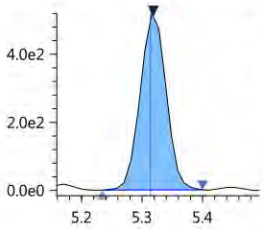
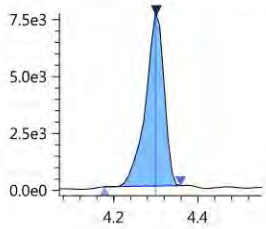
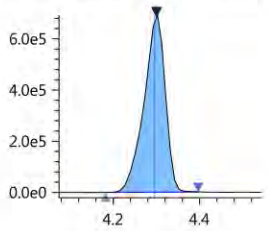
Conc 0.0366
RT 5.318 Area 1546
Q 627.00>606.95 (-) 5.21e2



HPFO_DA
Conc 0.0528
RT 4.301 Area 23267
Q 329.00>169.00 (-) 7.79e3



HFPO_DA-13C
Conc 4.1285
RT 4.300 Area 2364699
Q 332.00>286.80 (-) 6.92e5



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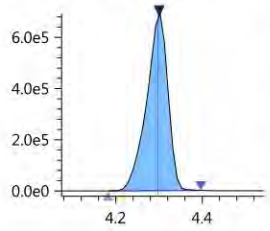
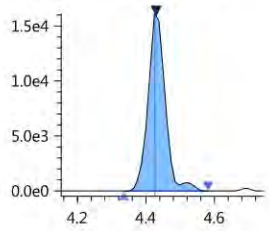
Conc 5.0000
RT 4.300 Area 2364699
ISTD 332.00>286.80 (-) 6.92e5



ADONA
Conc 0.0512
RT 4.430 Area 56106
Q 377.00>251.00 (-) 1.61e4



Insight Report

Printed at 8/8/2019 9:54:02 AM

190807_021

Sample ID: 1.0 PPB ICV
Date acquired: 8/7/2019 6:58:51 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_021.lcd
Vial: 8 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.137	4338810	4338810	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.025	246786	998421	2	0.8581	ng/mL	0.8874
PFBS-13C	Auto	4.027	997798	4338810	1	4.8023	ng/mL	5.0000
PFBS-13C_IS	Auto	4.027	998421	998421	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.240	85280	998421	2	0.7046	ng/mL	0.9409
PFHxS_1	Auto	4.411	128131	532221	3	0.8670	ng/mL	0.9131
PFHxS-18O	Auto	4.416	532221	4338810	1	4.4757	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.416	532221	532221	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.583	149825	532221	3	0.9505	ng/mL	0.9534
PFOS_1	Auto	4.758	117163	720344	4	0.9276	ng/mL	0.9292
PFOS-13C	Auto	4.759	724285	4338810	1	5.1129	ng/mL	5.0000
PFOS-13C_IS	Auto	4.759	720344	720344	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.939	90213	720344	4	1.0545	ng/mL	0.9616
PFDS_1	Auto	5.116	135867	720344	4	1.1511	ng/mL	0.9647
PFDOS	Auto	5.450	110536	720344	4	0.7656	ng/mL	0.8065
9Cl-PF3ONS	Auto	4.862	627758	2127112	26	0.6905	ng/mL	0.8820
11Cl-PF3OUdS	Auto	5.213	398903	2127112	26	0.4898	ng/mL	0.8319
PFBA	Auto	3.423	717073	3401649	5	1.0298	ng/mL	1.0000
PFBA-13C	Auto	3.419	3401649	4338810	1	4.8243	ng/mL	5.0000
PFBA-13C_IS	Auto	3.419	3401649	3401649	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.974	1073546	2163004	6	1.0505	ng/mL	1.0000
PFPeA-13C	Auto	3.974	2163004	4338810	1	4.8758	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.974	2163004	2163004	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.227	1093290	5148974	7	1.0035	ng/mL	1.0000
PFHxA-13C	Auto	4.227	5148974	4338810	1	5.9037	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.227	5148974	5148974	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.415	805019	4375783	8	1.0731	ng/mL	1.0000
PFHpA-13C	Auto	4.415	4375783	4338810	1	4.2808	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.415	4375783	4375783	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.590	1136828	4933930	9	1.0216	ng/mL	1.0000
PFOA-13C	Auto	4.590	4933930	4338810	1	5.3298	ng/mL	5.0000
PFOA-13C_IS	Auto	4.590	4933930	4933930	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.768	677427	3731822	10	0.9976	ng/mL	1.0000
PFNA-13C	Auto	4.768	3731822	4338810	1	5.0744	ng/mL	5.0000
PFNA-13C_IS	Auto	4.768	3731822	3731822	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.954	685431	3568496	11	0.9475	ng/mL	1.0000
PFDA-13C	Auto	4.954	3568496	4338810	1	5.7721	ng/mL	5.0000
PFDA-13C_IS	Auto	4.954	3568496	3568496	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.137	586861	2862431	12	1.1344	ng/mL	1.0000
PFUnA-13C	Auto	5.137	2862431	4338810	1	4.2719	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.137	2862431	2862431	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.311	522955	4208270	13	0.9931	ng/mL	1.0000
PFDoA-13C	Auto	5.311	4208270	4338810	1	5.8306	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.311	4208270	4208270	13	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.475	653495	3715232	14	1.2232	ng/mL	1.0000
PFTeDA	Auto	5.628	311827	3715232	14	1.0636	ng/mL	1.0000
PFTeDA-13C	Auto	5.627	3715232	4338810	1	4.6722	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.627	3715232	3715232	14	5.0000	ng/mL	5.0000
PFHxDA	Auto	5.963	741485	4665413	15	0.8099	ng/mL	1.0000
13C-PFHxDA	Auto	5.962	4665413	4338810	1	4.7917	ng/mL	5.0000
13C-PFHxDA_IS	Auto	5.962	4665413	4665413	15	5.0000	ng/mL	5.0000
PFODA	Auto	6.462	448955	4665413	15	0.8078	ng/mL	1.0000
FOSA	Auto	5.248	477636	1980678	16	0.9580	ng/mL	1.0000
FOSA-13C	Auto	5.248	1980678	4338810	1	5.9951	ng/mL	5.0000
FOSA-13C_IS	Auto	5.248	1980678	1980678	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.636	183624	713692	17	0.8167	ng/mL	1.0000
N-MeFOSA-d3	Auto	5.634	713692	4338810	1	5.5058	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.634	713692	713692	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.778	31585	1041923	18	0.7911	ng/mL	1.0000
N-EtFOSA-d9	Auto	5.771	1041923	4338810	1	5.3975	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.771	1041923	1041923	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.610	191800	901129	19	0.8479	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.602	901129	4338810	1	5.6590	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.602	901129	901129	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.742	202109	869276	20	0.9507	ng/mL	1.0000
N-EtFOSE-d9	Auto	5.731	869276	4338810	1	5.4190	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.731	869276	869276	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.053	79375	431151	21	1.3036	ng/mL	1.0000

Insight Report

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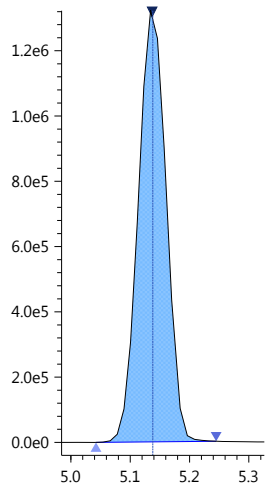
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-MeFOSAA-d3	Auto	5.052	431151	4338810	1	4.5220	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.052	431151	431151	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.154	52697	432667	22	1.0048	ng/mL	1.0000
N-EtFOSAA-d5	Auto	5.152	432667	4338810	1	5.0223	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.152	432667	432667	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.199	70758	302292	23	0.9413	ng/mL	0.9372
4_2-FTS-13C	Auto	4.199	302292	4338810	1	3.7843	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.199	302292	302292	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.577	82457	334792	24	1.0129	ng/mL	0.9512
6_2-FTS-13C	Auto	4.577	334792	4338810	1	4.4462	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.577	334792	334792	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.949	37663	176503	25	1.2191	ng/mL	0.9600
8_2-FTS-13C	Auto	4.949	176503	4338810	1	4.1126	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.949	176503	176503	25	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.312	26064	176503	25	0.9340	ng/mL	0.9662
HPFO_DA	Auto	4.298	330086	2127112	26	0.8330	ng/mL	1.0000
HFPO_DA-13C	Auto	4.296	2127112	4338810	1	4.8824	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.296	2127112	2127112	26	5.0000	ng/mL	5.0000
ADONA	Auto	4.428	828770	2127112	26	0.8401	ng/mL	0.9451

13C7-PFUnDA_IS

Conc 5.0000
RT 5.137 Area 4338810

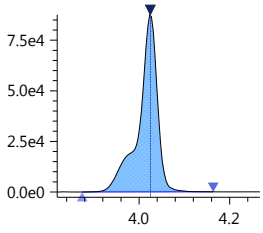
ISTD 570.00>525.00 (-) 1.32e6



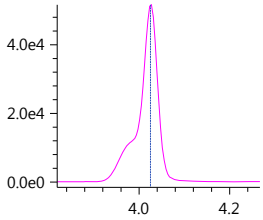
PFBS_1

Conc 0.8581
RT 4.025 Area 246786
R#1 57.89 (0.00)

Q 299.00>80.00 (-) 8.76e4



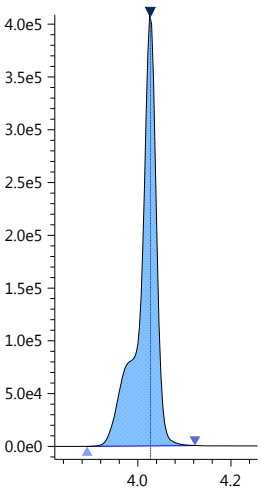
R1 298.80>99.00 (-) 5.17e4



PFBS-13C

Conc 4.8023
RT 4.027 Area 997798

Q 301.80>80.00 (-) 4.09e5



PFBS-13C_IS

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RT 4.027 Area 998421

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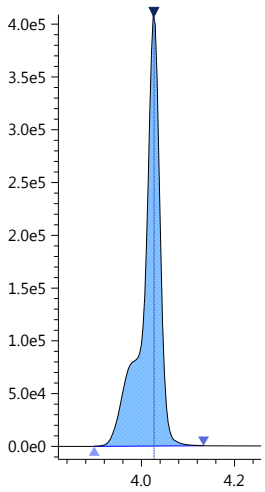
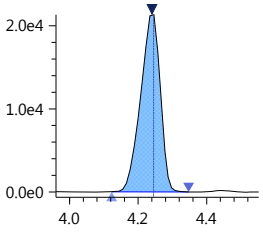


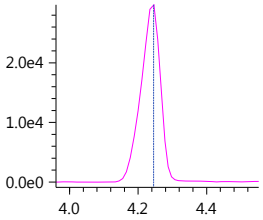
PFPeS

Conc 0.7046
RT 4.240 Area 85280
R#1 136.30 (0.00)

Q 349.00>99.00 (-) 2.13e4



R1 349.00>79.95 (-) 2.97e4



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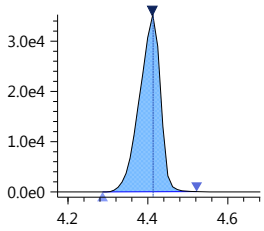
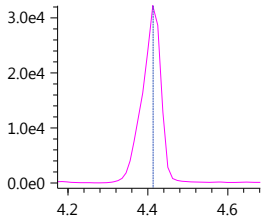
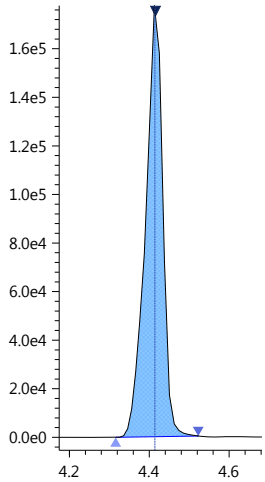
PFHxS_1
Conc 0.8670
RT 4.411 Area 128131
R#1 89.59 (0.00)
Q 399.00>80.00 (-) 3.53e4



R1 399.00>99.00 (-) 3.22e4



PFHxS-18O
Conc 4.4757
RT 4.416 Area 532221
Q 402.70>84.05 (-) 1.78e5



PFHxS-18O_IS
Conc 5.0000
RT 4.416 Area 532221
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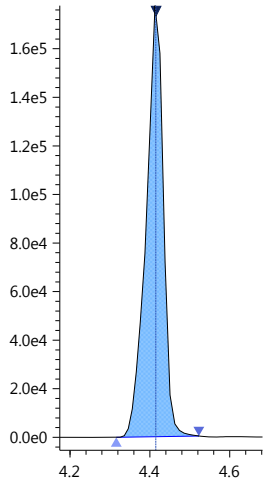
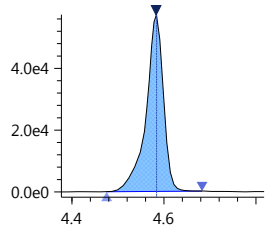
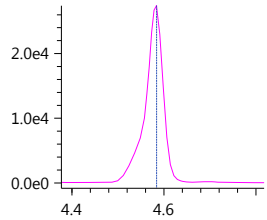


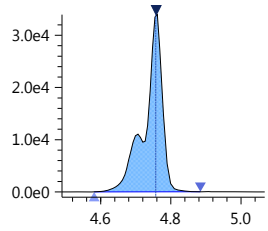
PFHpS_1
Conc 0.9505
RT 4.583 Area 149825
R#1 47.32 (0.00)
Q 449.00>80.15 (-) 5.74e4



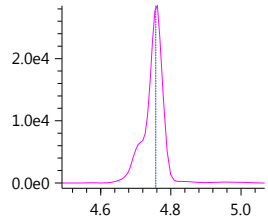
R1 449.00>99.20 (-) 2.74e4



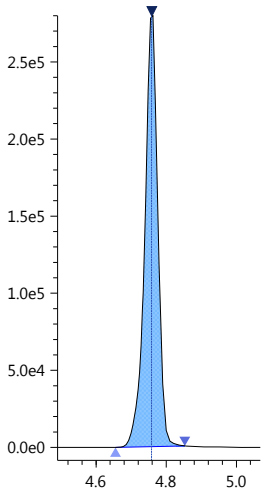
PFOS_1
Conc 0.9276
RT 4.758 Area 117163
R#1 84.45 (0.00)
Q 499.00>80.00 (-) 3.40e4



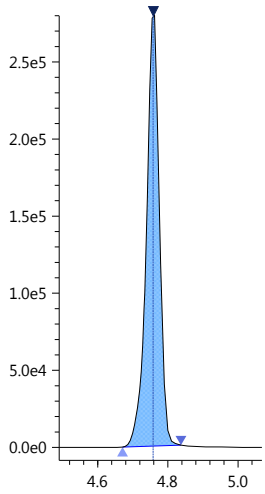
R1 499.00>99.00 (-) 2.85e4



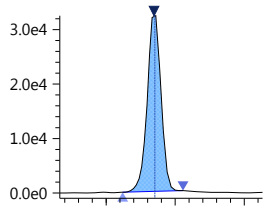
PFOS-13C
Conc 5.1129
RT 4.759 Area 724285
Q 502.80>80.05 (-) 2.80e5



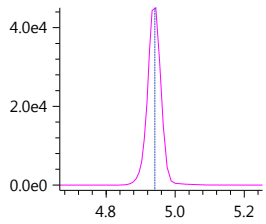
PFOS-13C_IS
Conc 5.0000
RT 4.759 Area 720344
ISTD 502.80>80.05 (-) 2.80e5



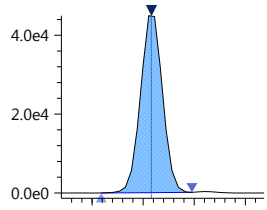
PFNS
Conc 1.0545
RT 4.939 Area 90213
R#1 138.71 (0.00)
Q 549.00>99.00 (-) 3.26e4



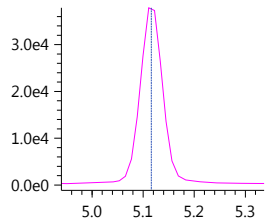
R1 549.00>79.95 (-) 4.51e4



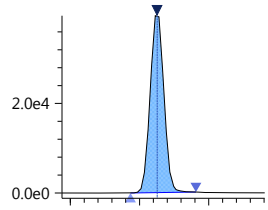
PFDS_1
Conc 1.1511
RT 5.116 Area 135867
R#1 81.75 (0.00)
Q 599.00>79.90 (-) 4.50e4



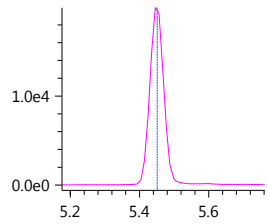
R1 599.00>99.10 (-) 3.79e4



PFDOS
Conc 0.7656
RT 5.450 Area 110536
R#1 48.98 (0.00)
Q 699.00>79.95 (-) 3.96e4



R1 699.00>99.05 (-) 1.99e4



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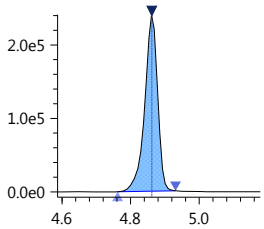
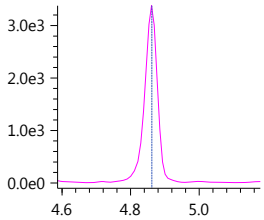
9Cl-PF3ONS

Conc 0.6905
RT 4.862 Area 627758
R#1 1.39 (0.00)

Q 531.00>351.00 (-) 2.41e5



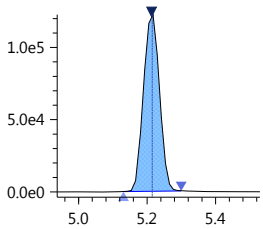
R1 531.00>98.90 (-) 3.38e3



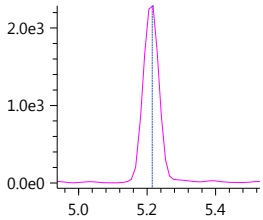
11Cl-PF3OUdS

Conc 0.4898
RT 5.213 Area 398903
R#1 1.90 (0.00)

Q 631.00>451.05 (-) 1.23e5



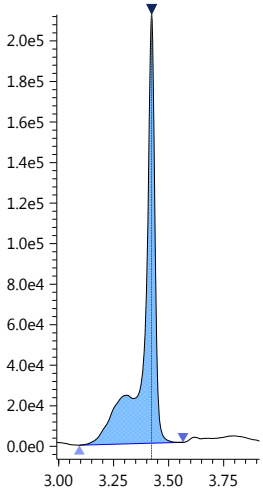
R1 631.00>98.90 (-) 2.29e3



PFBA

Conc 1.0298
RT 3.423 Area 717073

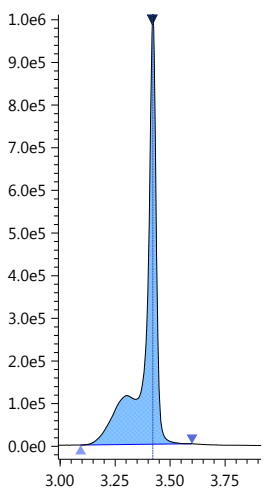
Q 213.00>169.10 (-) 2.13e5



PFBA-13C

Conc 4.8243
RT 3.419 Area 3401649

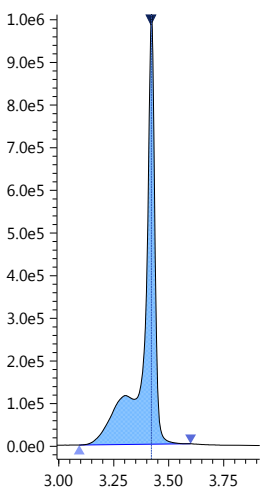
Q 216.90>172.15 (-) 1.01e6



PFBA-13C_IS

Conc 5.0000
RT 3.419 Area 3401649

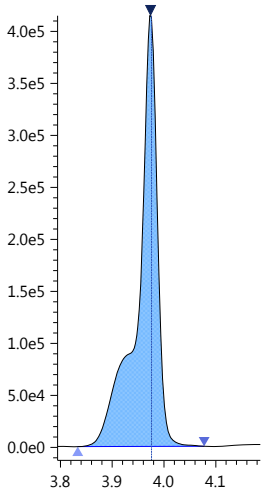
ISTD 216.90>172.15 (-) 1.01e6



PFPeA

Conc 1.0505
RT 3.974 Area 1073546

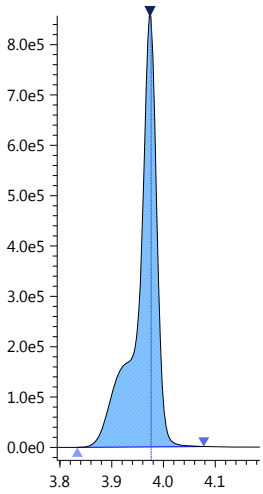
Q 263.05>219.10 (-) 4.15e5



PFPeA-13C

Conc 4.8758
RT 3.974 Area 2163004

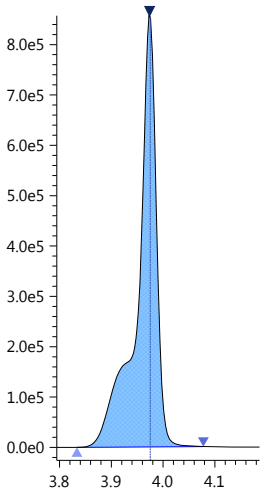
Q 267.90>223.00 (-) 8.57e5



PFPeA-13C_IS

Conc 5.0000
RT 3.974 Area 2163004

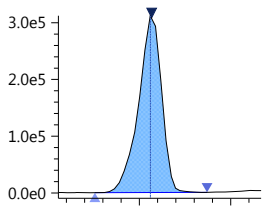
ISTD 267.90>223.00 (-) 8.57e5



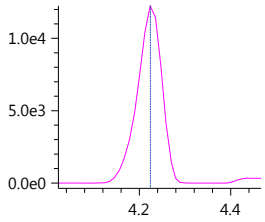
PFHxA

Conc 1.0035
RT 4.227 Area 1093290
R#1 3.96 (0.00)

Q 313.00>269.00 (-) 3.12e5



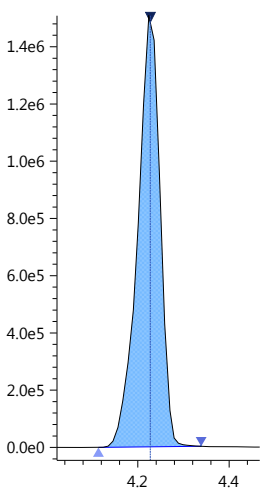
R1 313.00>119.10 (-) 1.23e4



PFHxA-13C

Conc 5.9037
RT 4.227 Area 5148974

Q 314.90>270.10 (-) 1.51e6



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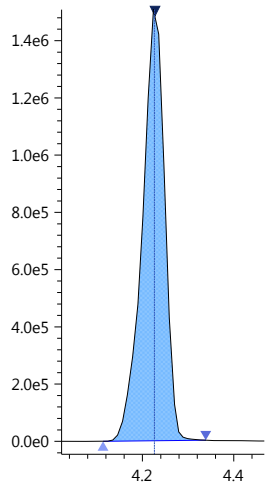
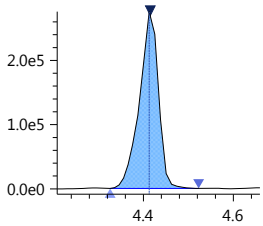
PFHxA-13C_IS
Conc 5.0000
RT 4.227 Area 5148974

ISTD 314.90>270.10 (-) 1.51e6

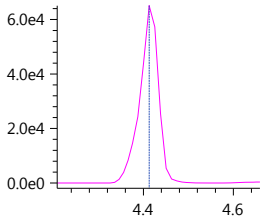


PFHpA
Conc 1.0731
RT 4.415 Area 805019
R#1 23.49 (0.00)

Q 362.90>319.00 (-) 2.76e5

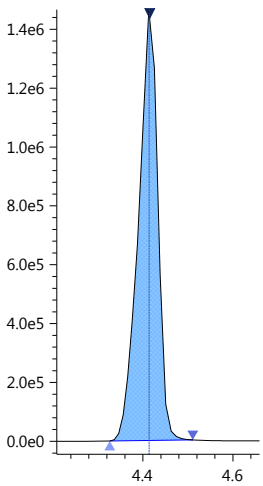


R1 362.90>169.00 (-) 6.51e4



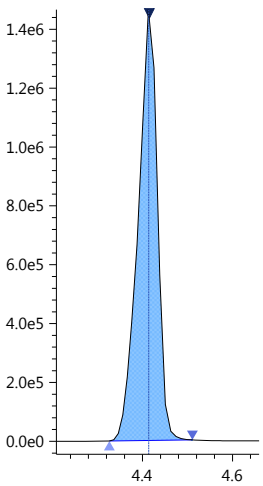
PFHpA-13C
Conc 4.2808
RT 4.415 Area 4375783

Q 366.90>322.10 (-) 1.47e6



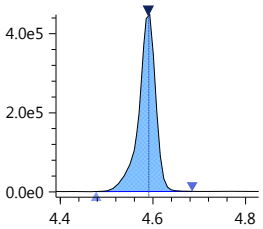
PFHpA-13C_IS
Conc 5.0000
RT 4.415 Area 4375783

ISTD 366.90>322.10 (-) 1.47e6

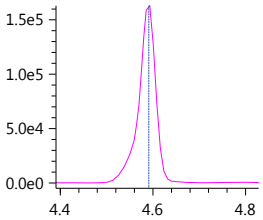


PFOA
Conc 1.0216
RT 4.590 Area 1136828
R#1 36.44 (0.00)

Q 413.00>369.00 (-) 4.48e5



R1 413.00>169.10 (-) 1.63e5



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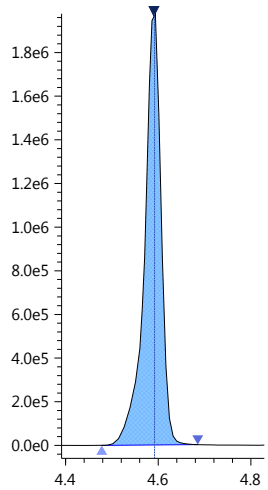
Conc 5.3298
RT 4.590 Area 4933930

Q 416.80>372.05 (-) 1.98e6



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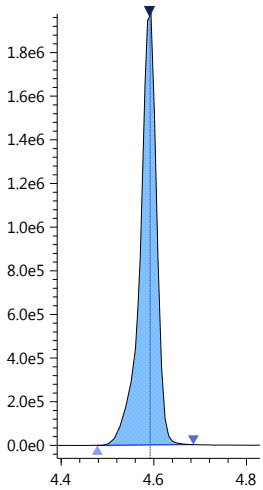
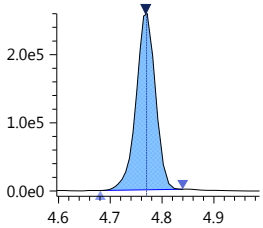
Conc 5.0000
RT 4.590 Area 4933930

ISTD 416.80>372.05 (-) 1.98e6

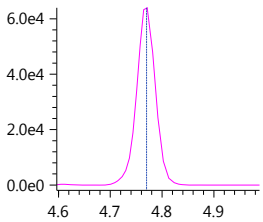


PFNA
Conc 0.9976
RT 4.768 Area 677427
R#1 24.70 (0.00)

Q 463.00>418.90 (-) 2.60e5



R1 463.00>219.00 (-) 6.40e4



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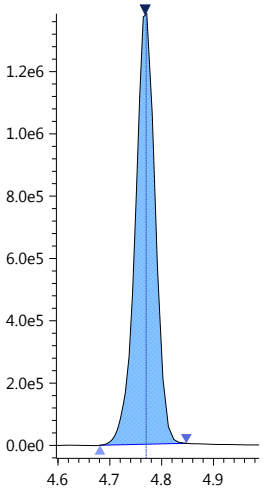
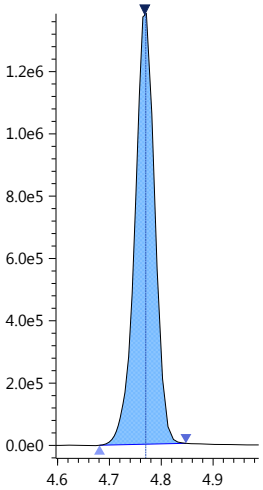
Conc 5.0744
RT 4.768 Area 3731822

Q 467.80>423.00 (-) 1.39e6



PFNA-13C_IS
Conc 5.0000
RT 4.768 Area 3731822

ISTD 467.80>423.00 (-) 1.39e6



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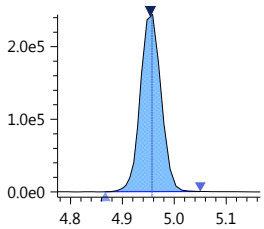
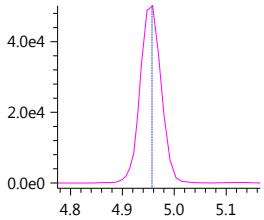
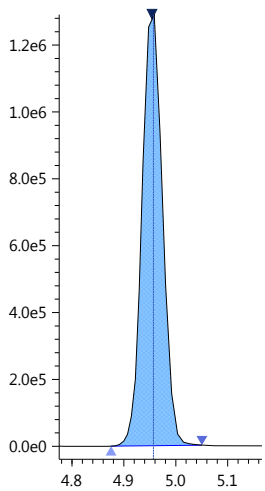
PFDA
Conc 0.9475
RT 4.954 Area 685431
R#1 20.53 (0.00)
Q 513.00>468.80 (-) 2.44e5



R1 513.00>219.10 (-) 5.02e4



PFDA-13C
Conc 5.7721
RT 4.954 Area 3568496
Q 514.80>469.95 (-) 1.29e6



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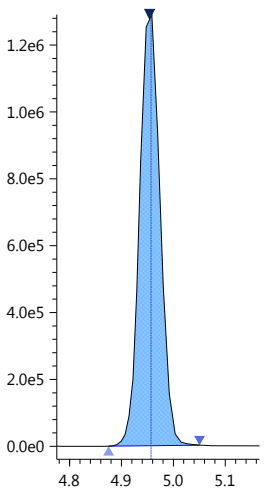
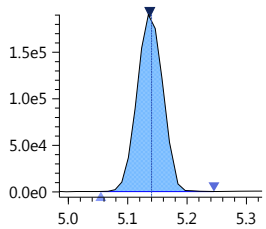
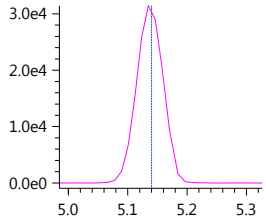
RT 4.954 Area 3568496
ISTD 514.80>469.95 (-) 1.29e6



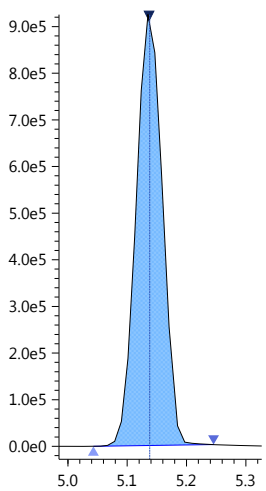
PFUnA
Conc 1.1344
RT 5.137 Area 586861
R#1 16.64 (0.00)
Q 563.00>518.90 (-) 1.90e5



R1 563.00>219.00 (-) 3.14e4



PFUnA-13C
Conc 4.2719
RT 5.137 Area 2862431
Q 564.80>519.95 (-) 9.26e5



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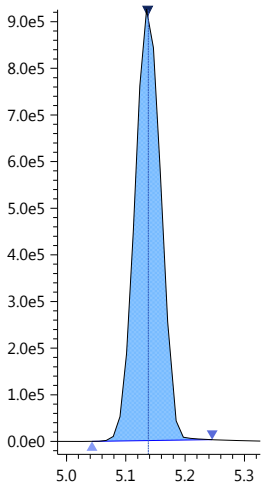
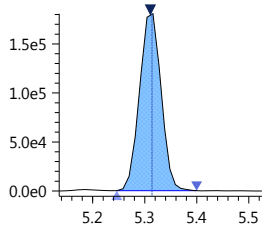
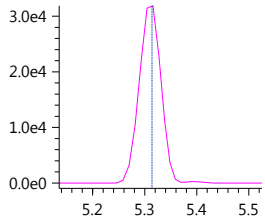
ISTD 564.80>519.95 (-) 9.26e5



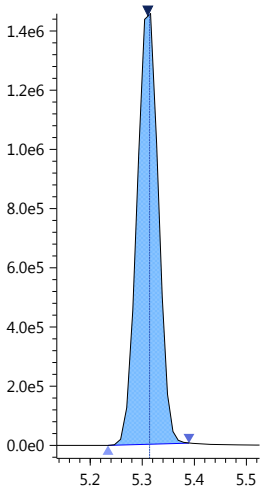
PFDoA
Conc 0.9931
RT 5.311 Area 522955
R#1 17.73 (0.00)
Q 613.05>569.00 (-) 1.81e5



R1 613.05>169.00 (-) 3.19e4



PFDoA-13C
Conc 5.8306
RT 5.311 Area 4208270
Q 614.80>569.95 (-) 1.46e6



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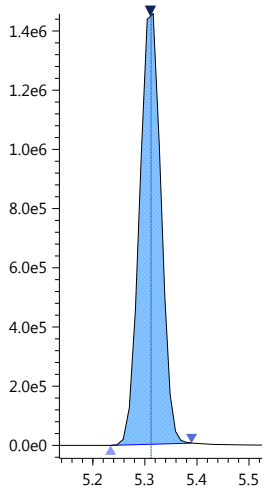
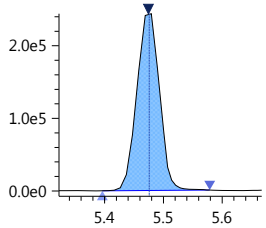
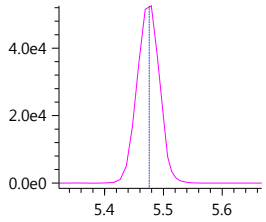
RT 5.311 Area 4208270
ISTD 614.80>569.95 (-) 1.46e6



PFTrDA
Conc 1.2232
RT 5.475 Area 653495
R#1 21.64 (0.00)
Q 663.00>618.90 (-) 2.44e5



R1 662.90>169.00 (-) 5.26e4



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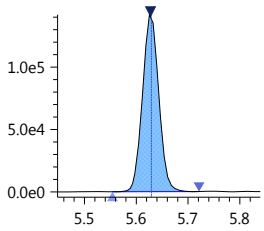
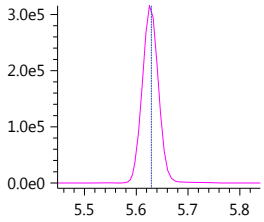
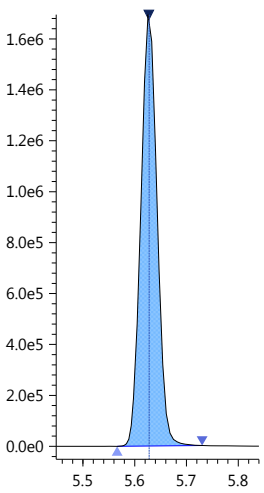
PFTeDA
Conc 1.0636
RT 5.628 Area 311827
R#1 222.31 (0.00)
Q 713.40>669.00 (-) 1.42e5



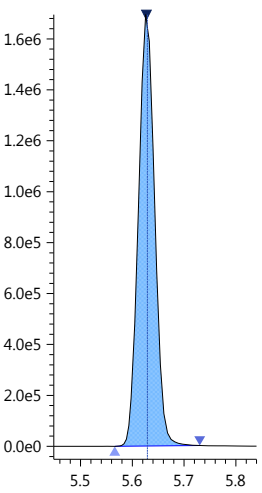
R1 713.40>169.10 (-) 3.16e5



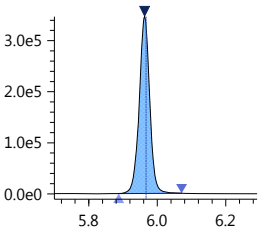
PFTeDA-13C
Conc 4.6722
RT 5.627 Area 3715232
Q 714.70>669.90 (-) 1.70e6



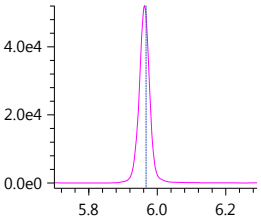
PFTeDA-13C_IS
Conc 5.0000
RT 5.627 Area 3715232
ISTD 714.70>669.90 (-) 1.70e6



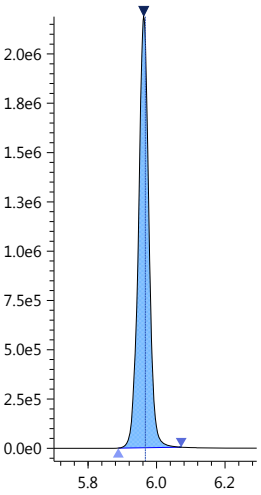
PFHxDA
Conc 0.8099
RT 5.963 Area 741485
R#1 15.09 (0.00)
Q 813.00>769.05 (-) 3.47e5



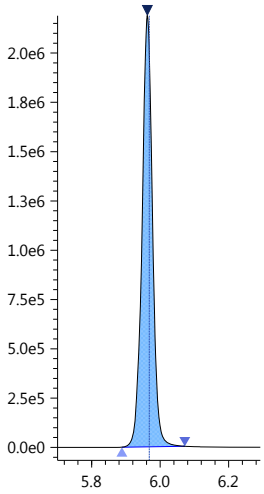
R1 813.00>218.95 (-) 5.21e4



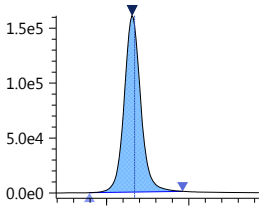
13C-PFHxDA
Conc 4.7917
RT 5.962 Area 4665413
Q 815.00>770.05 (-) 2.19e6



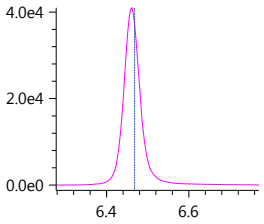
13C-PFHxDA_IS
Conc 5.0000
RT 5.962 Area 4665413
ISTD 815.00>770.05 (-) 2.19e6



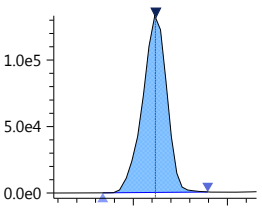
PFODA
Conc 0.8078
RT 6.462 Area 448955
R#1 25.36 (0.00)
Q 913.00>868.85 (-) 1.61e5



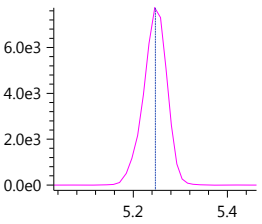
R1 913.00>169.00 (-) 4.10e4



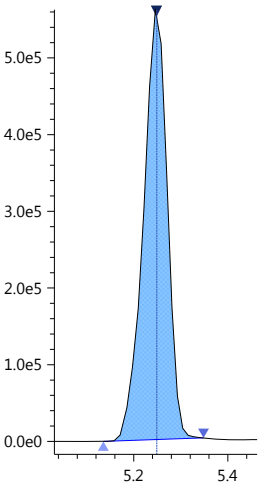
FOSA
Conc 0.9580
RT 5.248 Area 477636
R#1 5.81 (0.00)
Q 498.20>78.00 (-) 1.33e5



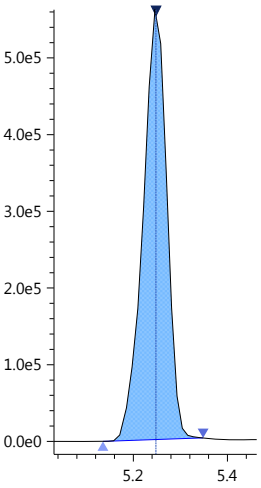
R1 498.20>64.10 (-) 7.73e3



FOSA-13C
Conc 5.9951
RT 5.248 Area 1980678
Q 506.00>78.05 (-) 5.63e5



FOSA-13C_IS
Conc 5.0000
RT 5.248 Area 1980678
ISTD 506.00>78.05 (-) 5.63e5



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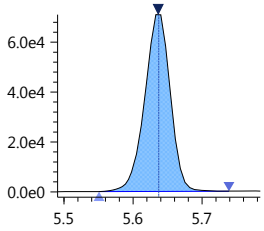
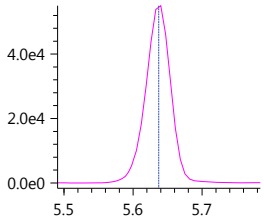
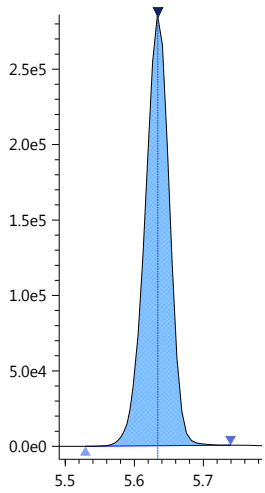
N-MeFOSA
Conc 0.8167
RT 5.636 Area 183624
R#1 75.92 (0.00)
Q 512.00>169.10 (-) 7.10e4



R1 512.00>219.00 (-) 5.50e4



N-MeFOSA-d3
Conc 5.5058
RT 5.634 Area 713692
Q 514.90>168.90 (-) 2.86e5



N-MeFOSA-d3_IS
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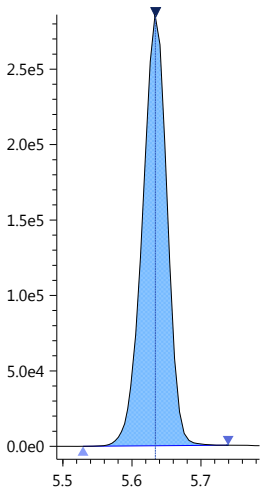
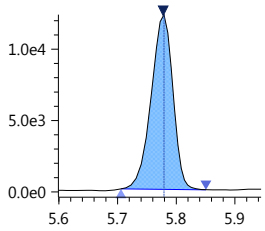
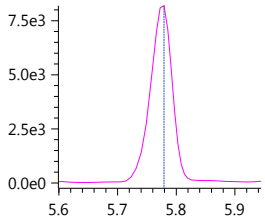
RT 5.634 Area 713692
ISTD 514.90>168.90 (-) 2.86e5



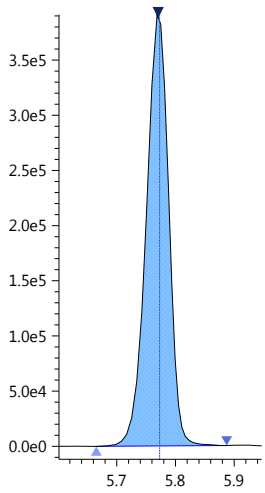
N-EtFOSA
Conc 0.7911
RT 5.778 Area 31585
R#1 66.30 (0.00)
Q 526.90>169.10 (-) 1.24e4



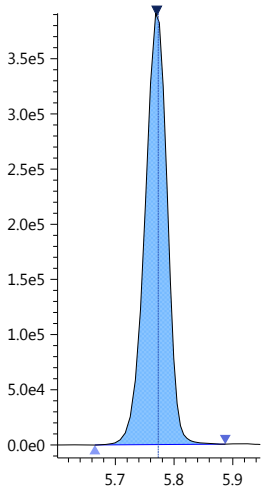
R1 526.90>219.00 (-) 8.19e3



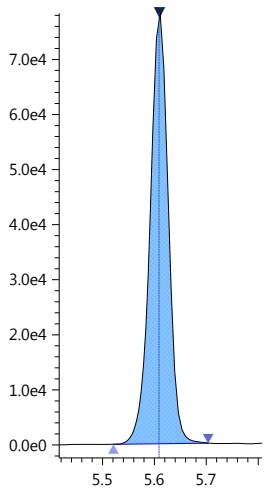
N-EtFOSA-d9
Conc 5.3975
RT 5.771 Area 1041923
Q 530.90>169.15 (-) 3.91e5



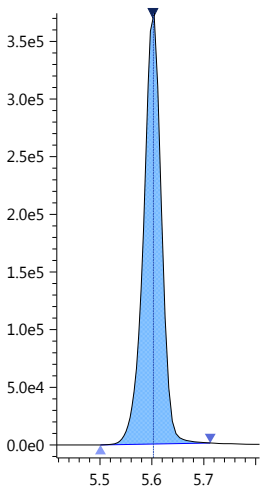
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.771 Area 1041923
ISTD 530.90>169.15 (-) 3.91e5



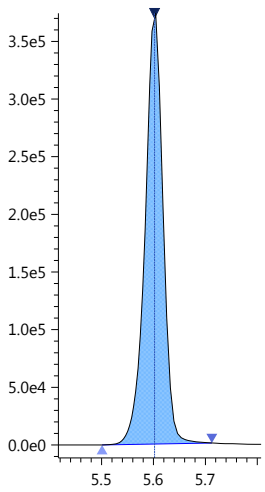
N-MeFOSE
Conc 0.8479
RT 5.610 Area 191800
Q 616.00>59.00 (-) 7.84e4



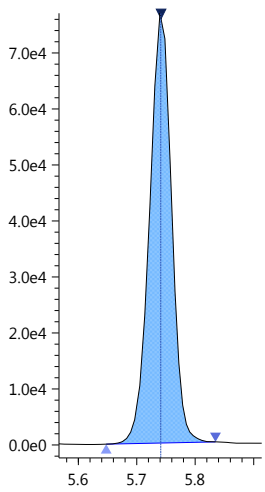
N-MeFOSE-d7
Conc 5.6590
RT 5.602 Area 901129
Q 622.70>59.10 (-) 3.74e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.602 Area 901129
ISTD 622.70>59.10 (-) 3.74e5



N-EtFOSE
Conc 0.9507
RT 5.742 Area 202109
Q 630.00>58.90 (-) 7.71e4



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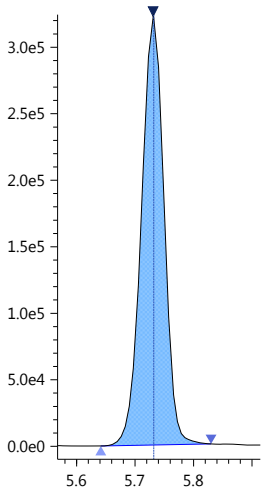
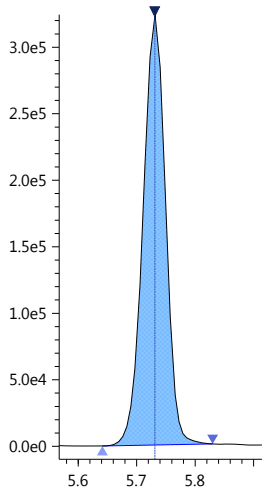
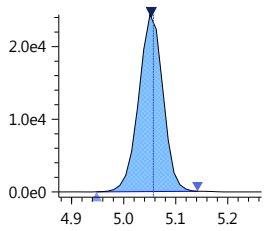
N-EtFOSE-d9
Conc 5.4190
RT 5.731 Area 869276
Q 638.70>59.10 (-) 3.24e5



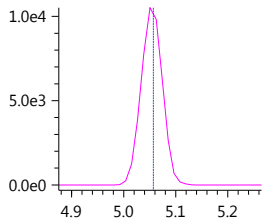
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.731 Area 869276
ISTD 638.70>59.10 (-) 3.24e5



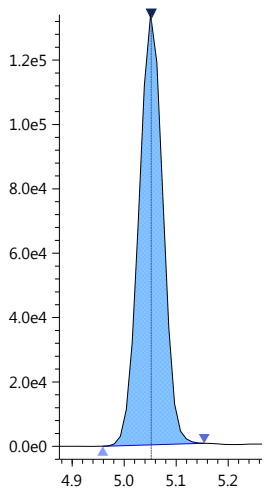
N-MeFOSAA
Conc 1.3036
RT 5.053 Area 79375
R#1 42.66 (0.00)
Q 570.20>419.00 (-) 2.44e4



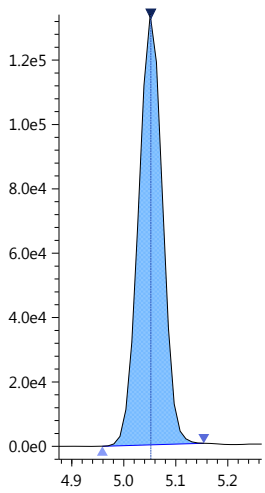
R1 570.20>512.00 (-) 1.05e4



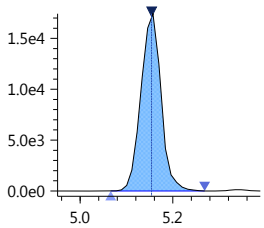
N-MeFOSAA-d3
Conc 4.5220
RT 5.052 Area 431151
Q 572.80>419.05 (-) 1.34e5



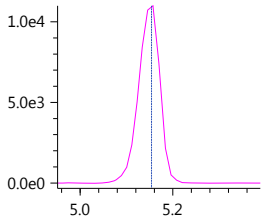
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.052 Area 431151
ISTD 572.80>419.05 (-) 1.34e5



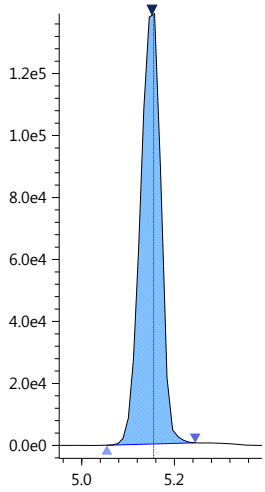
N-EtFOSAA
Conc 1.0048
RT 5.154 Area 52697
R#1 62.46 (0.00)
Q 584.20>418.95 (-) 1.74e4



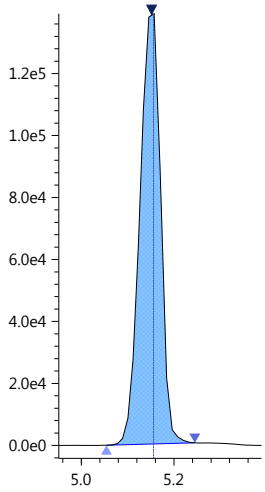
R1 584.20>526.10 (-) 1.10e4



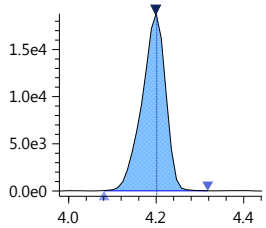
N-EtFOSAA-d5
Conc 5.0223
RT 5.152 Area 432667
Q 588.80>419.00 (-) 1.39e5



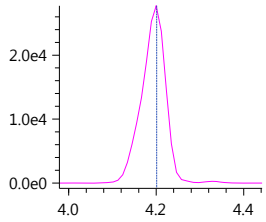
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.152 Area 432667
ISTD 588.80>419.00 (-) 1.39e5



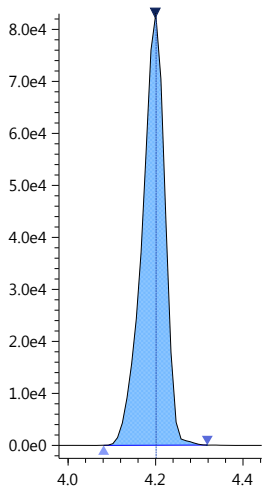
4_2-FTS_1
Conc 0.9413
RT 4.199 Area 70758
R#1 146.68 (0.00)
Q 327.00>307.05 (-) 1.88e4



R1 327.00>81.10 (-) 2.77e4



4_2-FTS-13C
Conc 3.7843
RT 4.199 Area 302292
Q 328.80>309.05 (-) 8.30e4



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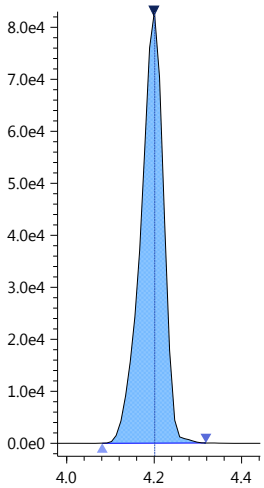
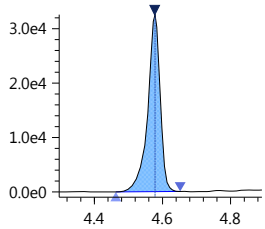
4_2-FTS-13C_IS
Conc 5.0000
RT 4.199 Area 302292

ISTD 328.80>309.05 (-) 8.30e4

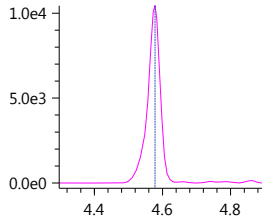


6_2-FTS_1
Conc 1.0129
RT 4.577 Area 82457
R#1 31.88 (0.00)

Q 427.00>407.00 (-) 3.26e4

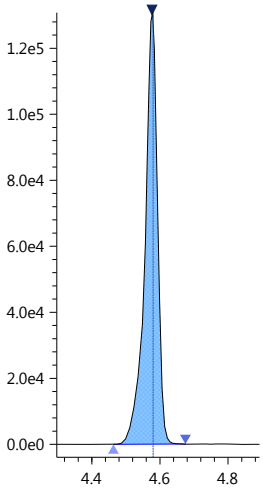


R1 427.00>80.90 (-) 1.04e4



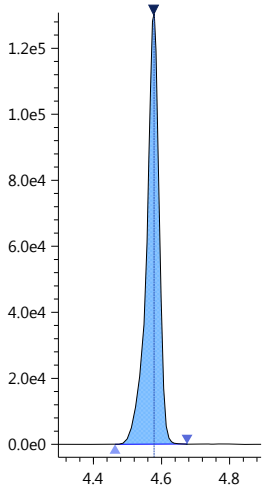
6_2-FTS-13C
Conc 4.4462
RT 4.577 Area 334792

Q 428.90>409.00 (-) 1.31e5



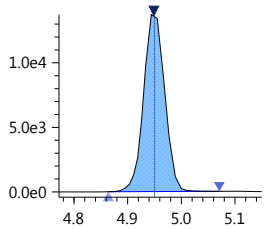
6_2-FTS-13C_IS
Conc 5.0000
RT 4.577 Area 334792

ISTD 428.90>409.00 (-) 1.31e5

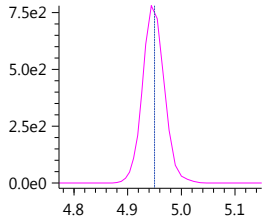


8_2-FTS_1
Conc 1.2191
RT 4.949 Area 37663
R#1 5.70 (0.00)

Q 527.10>506.90 (-) 1.37e4

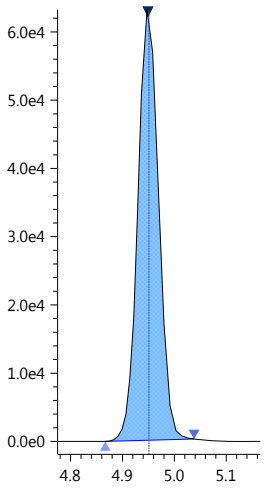


R1 527.20>487.00 (-) 7.80e2



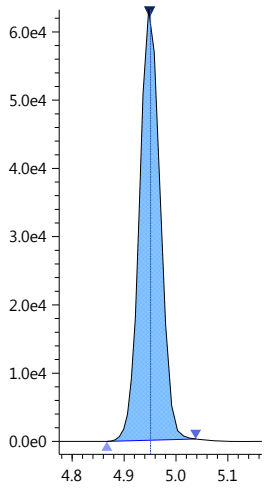
8_2-FTS-13C
Conc 4.1126
RT 4.949 Area 176503

Q 528.80>509.00 (-) 6.33e4



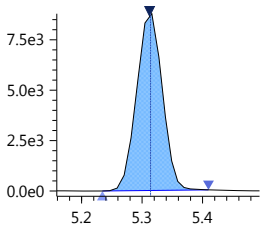
8_2-FTS-13C_IS
Conc 5.0000
RT 4.949 Area 176503

ISTD 528.80>509.00 (-) 6.33e4

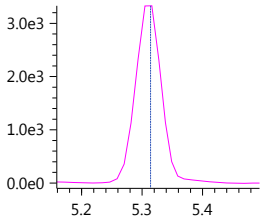


10_2-FtS_1
Conc 0.9340
RT 5.312 Area 26064
R#1 37.64 (0.00)

Q 627.00>606.95 (-) 8.80e3

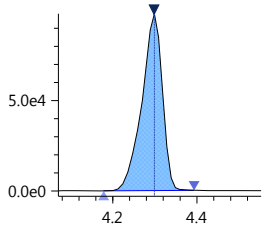


R1 627.00>81.25 (-) 3.33e3

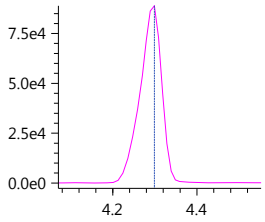


HPFO_DA
Conc 0.8330
RT 4.298 Area 330086
R#1 91.07 (0.00)

Q 329.00>169.00 (-) 9.80e4

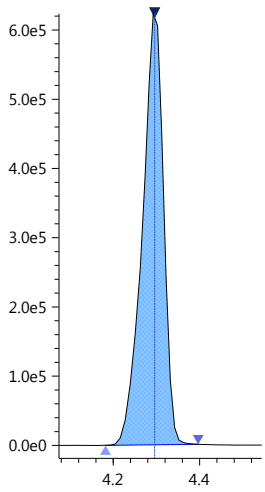


R1 329.00>285.10 (-) 8.89e4



HFPO_DA-13C
Conc 4.8824
RT 4.296 Area 2127112

Q 332.00>286.80 (-) 6.24e5



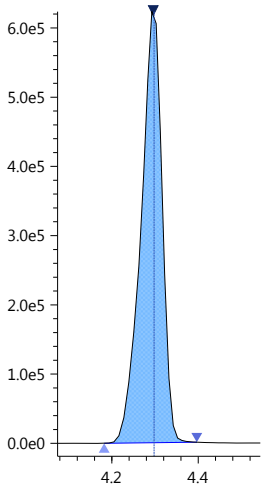
Insight Report

Printed at 8/8/2019 9:54:02 AM

HFPO_DA-13C_IS

Conc 5.0000
RT 4.296 Area 2127112

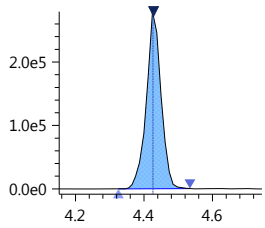
ISTD 332.00>286.80 (-) 6.24e5



ADONA

Conc 0.8401
RT 4.428 Area 828770
R#1 26.38 (0.00)

Q 377.00>251.00 (-) 2.79e5



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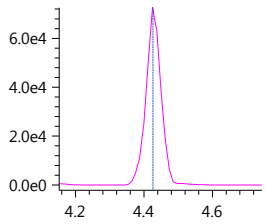


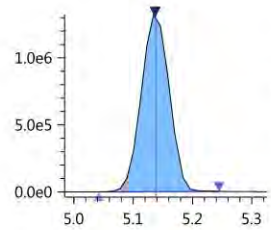
Insight Report

Printed at 8/8/2019 8:44:13 AM

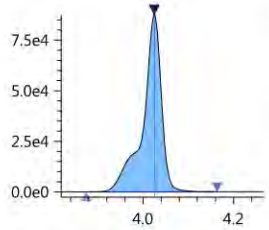
190807_021

Sample ID: 1.0 PPB ICV
Date acquired: 8/7/2019 6:58:51 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_021.lcd
Vial: 8 | Inj. Volume: 15.0000uL | Tray: 0

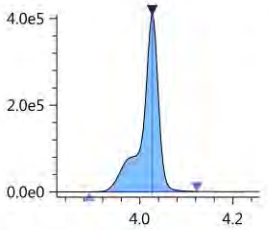
13C7-PFUnDA_IS
Conc 5.0000
RT 5.137 Area 4338810
ISTD 570.00>525.00 (-) 1.32e6



PFBS_1
Conc 0.8581
RT 4.025 Area 246786
Q 299.00>80.00 (-) 8.76e4



PFBS-13C
Conc 4.8023
RT 4.027 Area 997798
Q 301.80>80.00 (-) 4.09e5



PFBS-13C_IS
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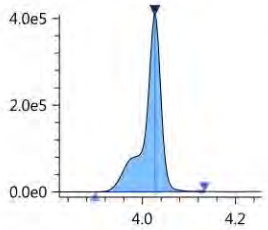
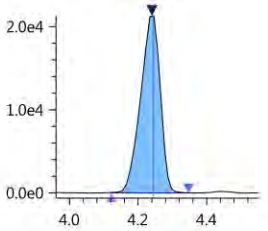


PFPeS
Conc 0.7148
RT 4.240 Area 85280
Q 349.00>99.00 (-) 2.13e4



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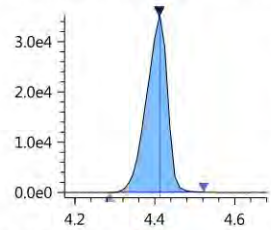
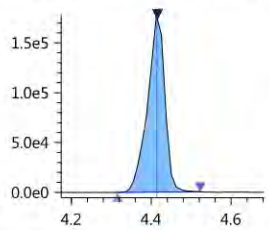
Conc 0.8682
RT 4.411 Area 128131
Q 399.00>80.00 (-) 3.53e4



PFHxS-18O
Conc 4.4757
RT 4.416 Area 532221
Q 402.70>84.05 (-) 1.78e5



PFHxS-18O_IS
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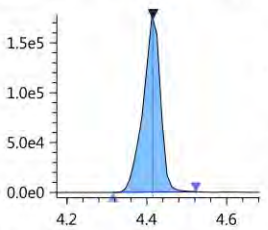

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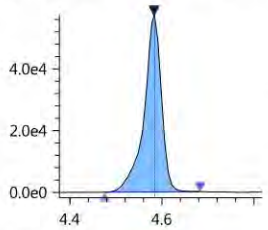
Q 449.00>80.15 (-) 5.74e4



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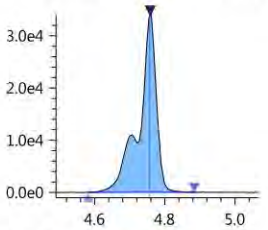
RT 4.758 Area 117163
Q 499.00>80.00 (-) 3.40e4



PFOS-13C
Conc 5.1129
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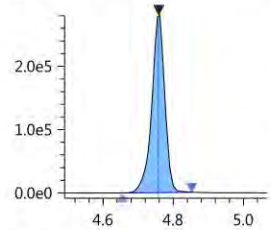
Q 502.80>80.05 (-) 2.80e5



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Conc 5.0000
RT 4.759 Area 720344
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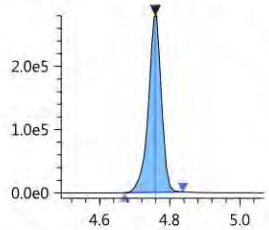
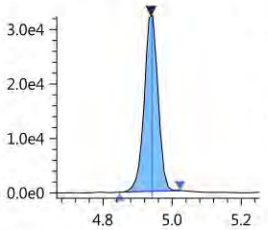


PFNS
Conc 0.9460
RT 4.939 Area 90213
Q 549.00>99.00 (-) 3.26e4



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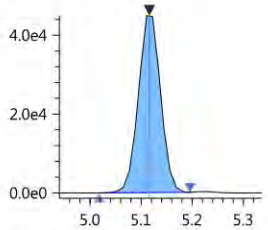
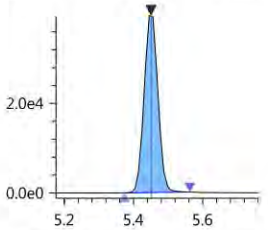
Q 599.00>79.90 (-) 4.50e4



PFDOS
Conc 0.2531
RT 5.450 Area 110536
Q 699.00>79.95 (-) 3.96e4



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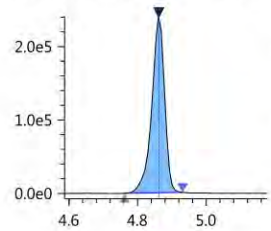
RT 4.862 Area 627758
Q 531.00>351.00 (-) 2.41e5



11Cl-PF3OUdS
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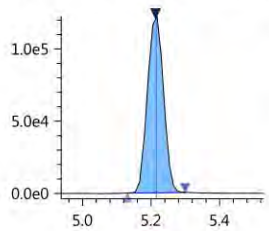
Q 631.00>451.05 (-) 1.23e5



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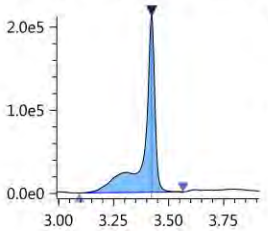
Conc 1.0298
RT 3.423 Area 717073
Q 213.00>169.10 (-) 2.13e5



PFBA-13C
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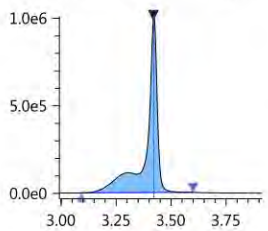
RT 3.419 Area 3401649
Q 216.90>172.15 (-) 1.01e6



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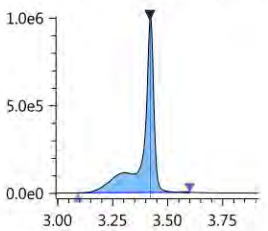
Conc 5.0000
RT 3.419 Area 3401649
ISTD 216.90>172.15 (-) 1.01e6



Insight Report

PFPeA
Conc 0.7553
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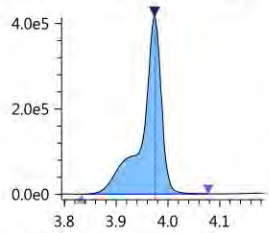
Q 263.05>219.10 (-) 4.15e5



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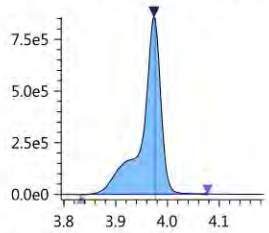
Q 267.90>223.00 (-) 8.57e5



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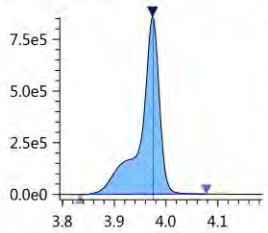

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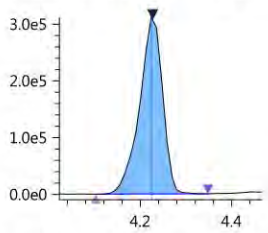
RT 4.227 Area 1093290
Q 313.00>269.00 (-) 3.12e5



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Conc 5.9037
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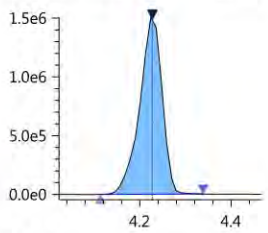
Q 314.90>270.10 (-) 1.51e6



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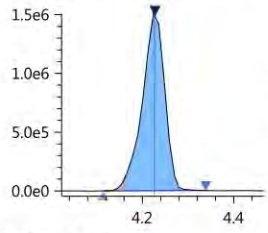

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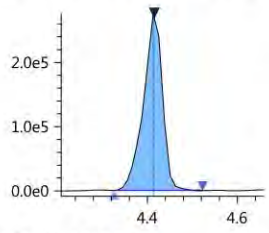
Conc 1.0007
RT 4.415 Area 805019
Q 362.90>319.00 (-) 2.76e5



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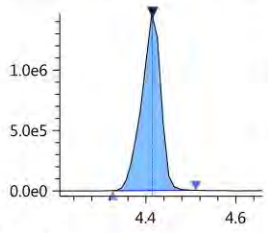
Conc 4.2808
RT 4.415 Area 4375783
Q 366.90>322.10 (-) 1.47e6



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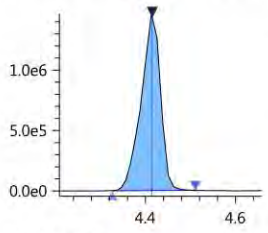

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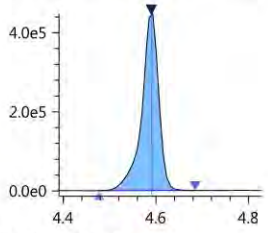
RT 4.590 Area 1136828
Q 413.00>369.00 (-) 4.48e5



PFOA-13C
Conc 5.3298
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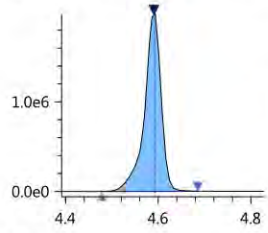
Q 416.80>372.05 (-) 1.98e6



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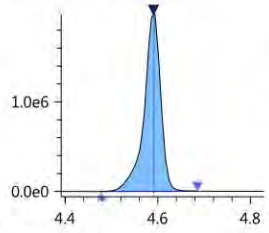
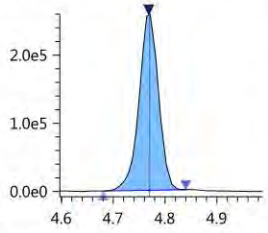
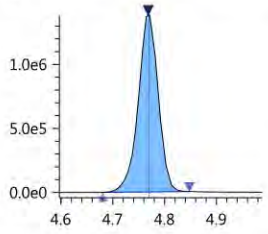


PFNA
Conc 0.9608
RT 4.768 Area 677427
Q 463.00>418.90 (-) 2.60e5



PFNA-13C
Conc 5.0744
RT 4.768 Area 3731822
Q 467.80>423.00 (-) 1.39e6



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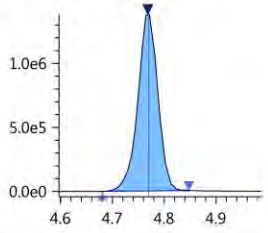
RT 4.768 Area 3731822
ISTD 467.80>423.00 (-) 1.39e6



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RT 4.954 Area 685431
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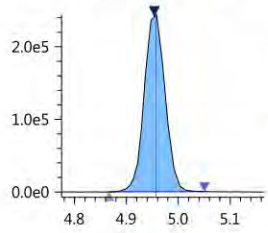

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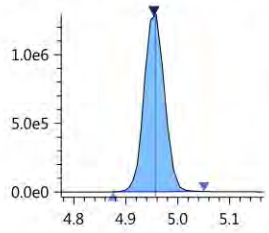

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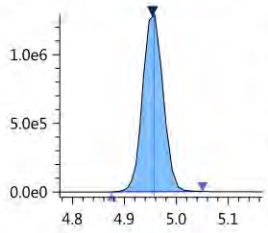

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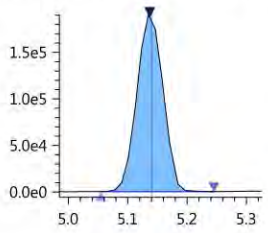

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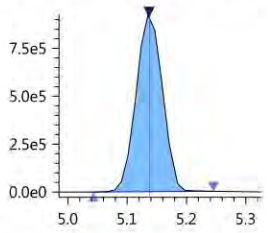

Insight Report

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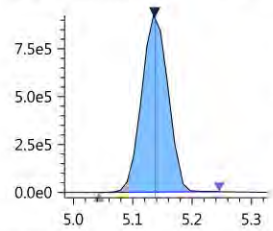

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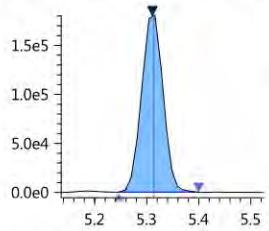

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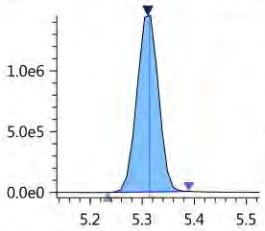

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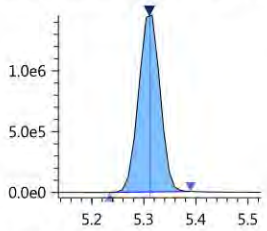

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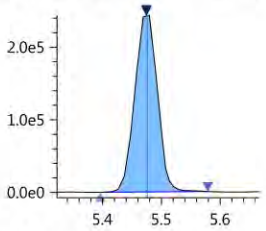

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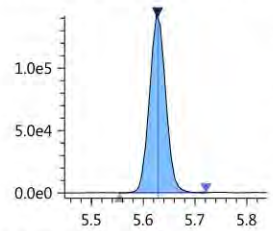

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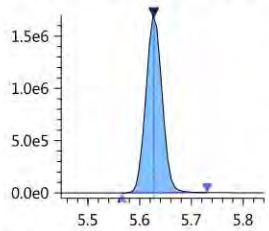

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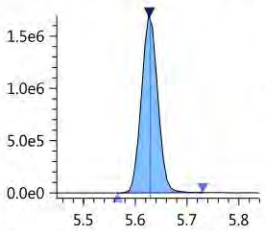

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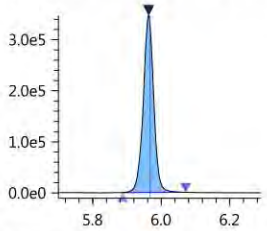

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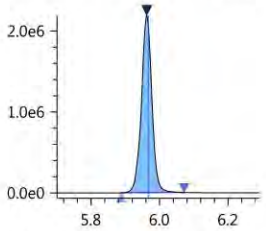

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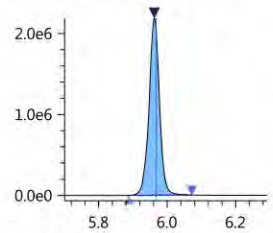

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Conc 0.3206
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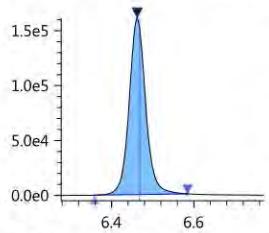
Q 913.00>868.85 (-) 1.61e5



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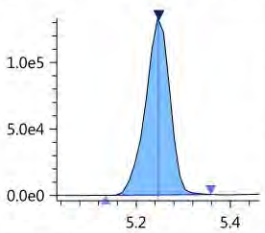

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Conc 5.9951
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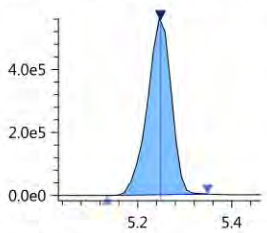

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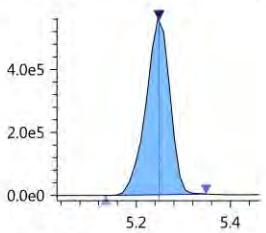

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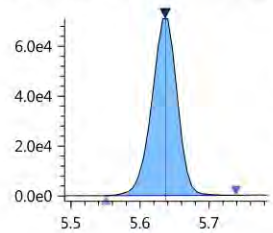

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Conc 5.5058
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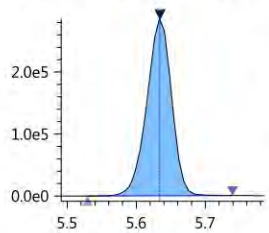

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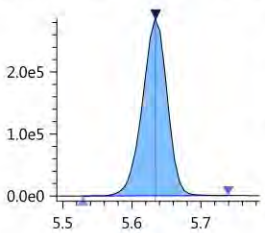

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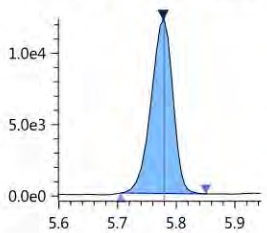

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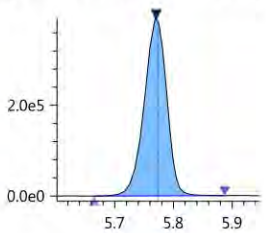
Q 530.90>169.15 (-) 3.91e5



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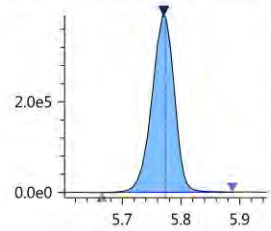
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.771 Area 1041923
ISTD 530.90>169.15 (-) 3.91e5



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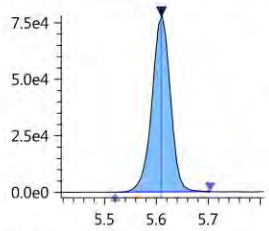

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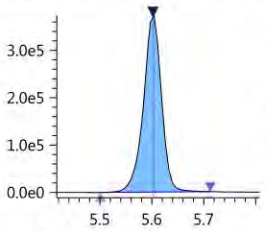

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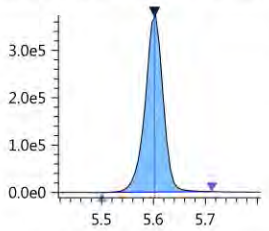

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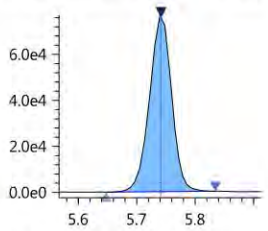
Q 630.00>58.90 (-) 7.71e4



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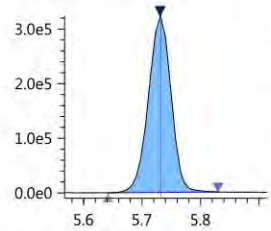

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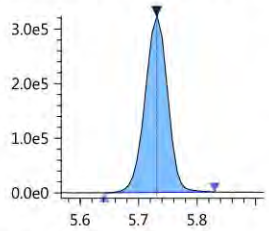

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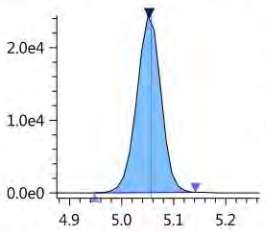
Q 570.20>419.00 (-) 2.44e4



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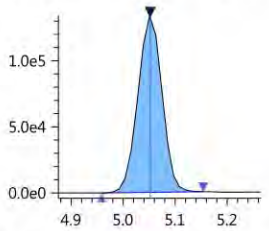
Q 572.80>419.05 (-) 1.34e5



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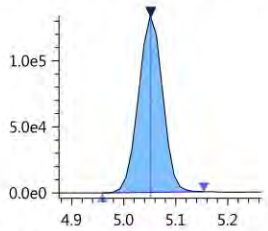

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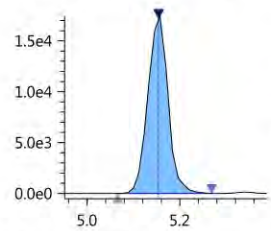

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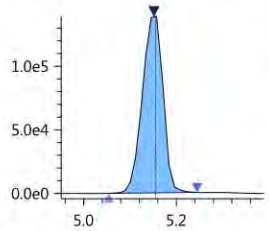

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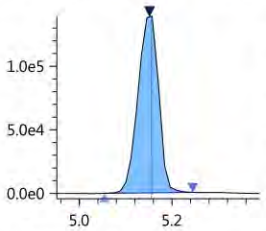

4_2-FTS_1
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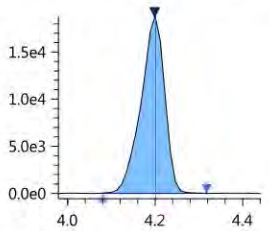
Q 327.00>307.05 (-) 1.88e4



4_2-FTS-13C
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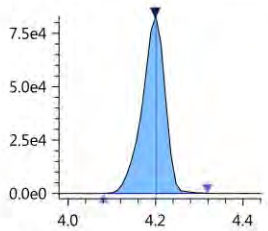
Q 328.80>309.05 (-) 8.30e4



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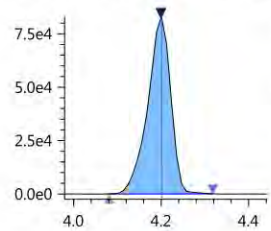

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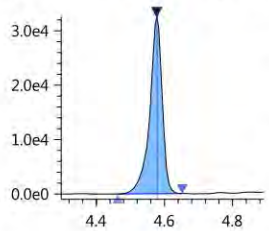
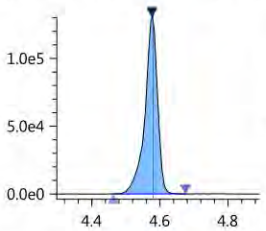
Conc 0.9458
RT 4.577 Area 82457
Q 427.00>407.00 (-) 3.26e4



6_2-FTS-13C
Conc 4.4462
RT 4.577 Area 334792
Q 428.90>409.00 (-) 1.31e5



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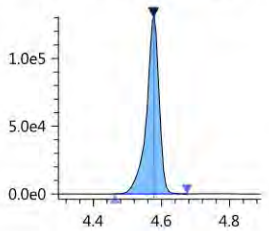
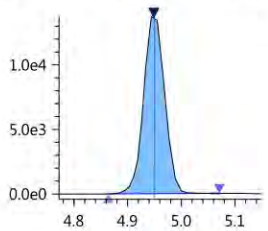
Conc 5.0000
RT 4.577 Area 334792
ISTD 428.90>409.00 (-) 1.31e5



8_2-FTS_1
Conc 1.2618
RT 4.949 Area 37663
Q 527.10>506.90 (-) 1.37e4



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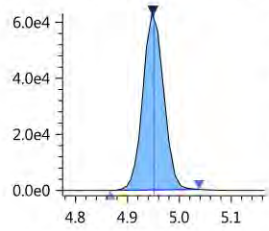
Printed at 8/8/2019 8:44:13 AM

8_2-FTS-13C

Conc 4.1126
RT 4.949 Area 176503
Q 528.80>509.00 (-) 6.33e4



8_2-FTS-13C_IS

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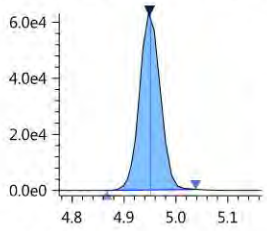
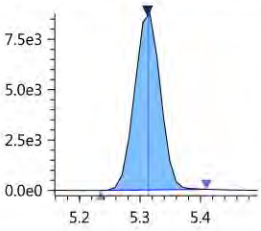
RT 4.949 Area 176503
ISTD 528.80>509.00 (-) 6.33e4



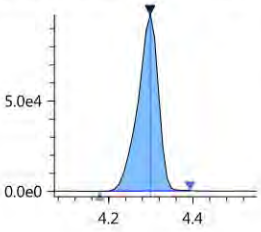
10_2-FtS_1

Conc 0.9366
RT 5.312 Area 26064
Q 627.00>606.95 (-) 8.80e3



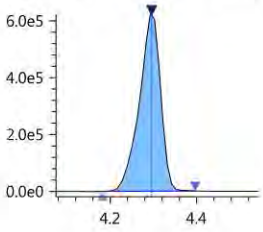
HPFO_DA

Conc 0.8330
RT 4.298 Area 330086
Q 329.00>169.00 (-) 9.80e4



HFPO_DA-13C

Conc 4.8824
RT 4.296 Area 2127112
Q 332.00>286.80 (-) 6.24e5



HFPO_DA-13C_IS

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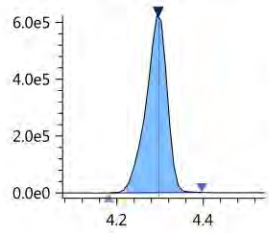
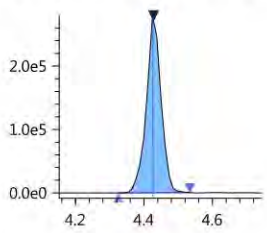
RT 4.296 Area 2127112
ISTD 332.00>286.80 (-) 6.24e5



ADONA

Conc 0.8401
RT 4.428 Area 828770
Q 377.00>251.00 (-) 2.79e5



Insight Report

Printed at 8/8/2019 9:54:02 AM

190807_022

Sample ID: IB
Date acquired: 8/7/2019 7:09:25 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_022.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.130	4049730	4049730	1	5.0000	ng/mL	----
PFBS_1	M	4.020	650	943830	2	0.0024	ng/mL	----
PFBS-13C	Auto	4.021	939261	4049730	1	4.8432	ng/mL	----
PFBS-13C_IS	Auto	4.021	943830	943830	2	5.0000	ng/mL	----
PFPeS	ND(W/B)	----	----	943830	2	----	ng/mL	----
PFHxS_1	Auto	4.411	739	474347	3	0.0056	ng/mL	----
PFHxS-18O	Auto	4.408	474347	4049730	1	4.2738	ng/mL	----
PFHxS-18O_IS	Auto	4.408	474347	474347	3	5.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	474347	3	----	ng/mL	----
PFOS_1	Auto	4.748	435	688552	4	0.0036	ng/mL	----
PFOS-13C	Auto	4.755	693688	4049730	1	5.2464	ng/mL	----
PFOS-13C_IS	Auto	4.755	688552	688552	4	5.0000	ng/mL	----
PFNS	M	4.922	344	688552	4	-0.0797	ng/mL	----
PFDS_1	ND(W/B)	----	----	688552	4	----	ng/mL	----
PFDOS	M	5.435	25	688552	4	0.0002	ng/mL	----
9Cl-PF3ONS	M	4.868	476	2125891	26	0.0005	ng/mL	----
11Cl-PF3OUdS	Auto	5.211	311	2125891	26	0.0004	ng/mL	----
PFBA	ND(W/B)	----	----	3293049	5	----	ng/mL	----
PFBA-13C	Auto	3.412	3293049	4049730	1	5.0037	ng/mL	----
PFBA-13C_IS	Auto	3.412	3293049	3293049	5	5.0000	ng/mL	----
PFPeA	Auto	3.968	108463	2121864	6	0.0064	ng/mL	----
PFPeA-13C	Auto	3.968	2121864	4049730	1	5.1245	ng/mL	----
PFPeA-13C_IS	Auto	3.968	2121864	2121864	6	5.0000	ng/mL	----
PFHxA	M	4.206	37177	3965221	7	0.0194	ng/mL	----
PFHxA-13C	Auto	4.222	3965221	4049730	1	4.8710	ng/mL	----
PFHxA-13C_IS	Auto	4.222	3965221	3965221	7	5.0000	ng/mL	----
PFHpA	M	4.404	17926	4406727	8	0.0049	ng/mL	----
PFHpA-13C	Auto	4.408	4406727	4049730	1	4.6188	ng/mL	----
PFHpA-13C_IS	Auto	4.408	4406727	4406727	8	5.0000	ng/mL	----
PFOA	Auto	4.577	28558	4532728	9	0.0083	ng/mL	----
PFOA-13C	Auto	4.585	4532728	4049730	1	5.2459	ng/mL	----
PFOA-13C_IS	Auto	4.585	4532728	4532728	9	5.0000	ng/mL	----
PFNA	M	4.746	8552	4028066	10	-0.0003	ng/mL	----
PFNA-13C	Auto	4.765	4028066	4049730	1	5.8682	ng/mL	----
PFNA-13C_IS	Auto	4.765	4028066	4028066	10	5.0000	ng/mL	----
PFDA	M	4.939	10082	2872917	11	0.0173	ng/mL	----
PFDA-13C	Auto	4.950	2872917	4049730	1	4.9787	ng/mL	----
PFDA-13C_IS	Auto	4.950	2872917	2872917	11	5.0000	ng/mL	----
PFUnA	Auto	5.128	18703	3039781	12	0.0052	ng/mL	----
PFUnA-13C	Auto	5.130	3039781	4049730	1	4.8604	ng/mL	----
PFUnA-13C_IS	Auto	5.130	3039781	3039781	12	5.0000	ng/mL	----
PFDoA	Auto	5.293	8798	3394471	13	0.0111	ng/mL	----
PFDoA-13C	Auto	5.307	3394471	4049730	1	5.0388	ng/mL	----
PFDoA-13C_IS	Auto	5.307	3394471	3394471	13	5.0000	ng/mL	----
PFTrDA	M	5.474	4987	3639677	14	-0.0006	ng/mL	----
PFTeDA	Auto	5.624	35588	3639677	14	-0.0076	ng/mL	----
PFTeDA-13C	Auto	5.624	3639677	4049730	1	4.9039	ng/mL	----
PFTeDA-13C_IS	Auto	5.624	3639677	3639677	14	5.0000	ng/mL	----
PFHxDA	Auto	5.961	44724	4578237	15	0.0016	ng/mL	----
13C-PFHxDA	Auto	5.960	4578237	4049730	1	5.0379	ng/mL	----
13C-PFHxDA_IS	Auto	5.960	4578237	4578237	15	5.0000	ng/mL	----
PFODA	M	6.462	3480	4578237	15	0.0064	ng/mL	----
FOSA	Auto	5.249	930	1605507	16	0.0023	ng/mL	----
FOSA-13C	Auto	5.244	1605507	4049730	1	5.2065	ng/mL	----
FOSA-13C_IS	Auto	5.244	1605507	1605507	16	5.0000	ng/mL	----
N-MeFOSA	M	5.627	699	586111	17	0.0038	ng/mL	----
N-MeFOSA-d3	Auto	5.631	586111	4049730	1	4.8443	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.631	586111	586111	17	5.0000	ng/mL	----
N-EtFOSA	M	5.771	171	920242	18	0.0049	ng/mL	----
N-EtFOSA-d9	Auto	5.767	920242	4049730	1	5.1074	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.767	920242	920242	18	5.0000	ng/mL	----
N-MeFOSE	M	5.578	246	760639	19	0.0013	ng/mL	----
N-MeFOSE-d7	Auto	5.598	760639	4049730	1	5.1177	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.598	760639	760639	19	5.0000	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	788944	20	----	ng/mL	----
N-EtFOSE-d9	Auto	5.727	788944	4049730	1	5.2693	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.727	788944	788944	20	5.0000	ng/mL	----
N-MeFOSAA	ND(W/B)	----	----	441242	21	----	ng/mL	----

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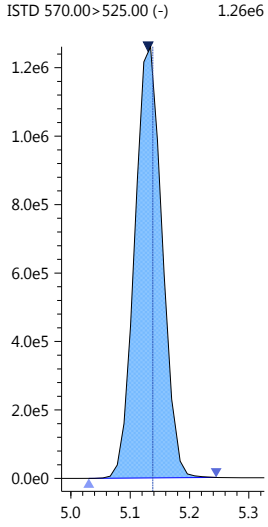
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-MeFOSAA-d3	Auto	5.046	441242	4049730	1	4.9582	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.046	441242	441242	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	382572	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.143	382572	4049730	1	4.7578	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.143	382572	382572	22	5.0000	ng/mL	----
4_2-FTS_1	Auto	4.181	595	347551	23	0.0069	ng/mL	----
4_2-FTS-13C	Auto	4.193	347551	4049730	1	4.6614	ng/mL	----
4_2-FTS-13C_IS	Auto	4.193	347551	347551	23	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.571	934	371858	24	0.0103	ng/mL	----
6_2-FTS-13C	Auto	4.573	371858	4049730	1	5.2910	ng/mL	----
6_2-FTS-13C_IS	Auto	4.573	371858	371858	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.935	15	176109	25	0.0005	ng/mL	----
8_2-FTS-13C	Auto	4.944	176109	4049730	1	4.3963	ng/mL	----
8_2-FTS-13C_IS	Auto	4.944	176109	176109	25	5.0000	ng/mL	----
10_2-FtS_1	M	5.310	22	176109	25	0.0008	ng/mL	----
HPFO_DA	M	4.295	635	2125891	26	0.0016	ng/mL	----
HFPO_DA-13C	Auto	4.292	2125891	4049730	1	5.2280	ng/mL	----
HFPO_DA-13C_IS	Auto	4.292	2125891	2125891	26	5.0000	ng/mL	----
ADONA	ND(W/B)	----	----	2125891	26	----	ng/mL	----

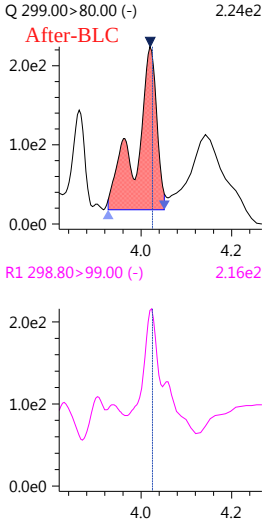
13C7-PFUnDA_IS

Conc 5.0000
RT 5.130 Area 4049730



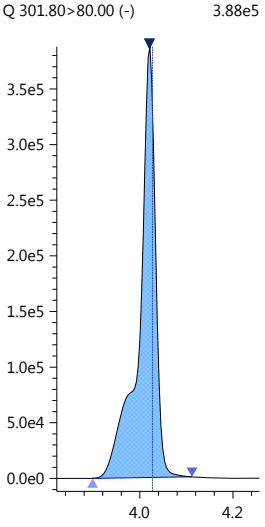
PFBS_1

Conc 0.0024
RT 4.020 Area 650
R#1 54.29 (0.00)



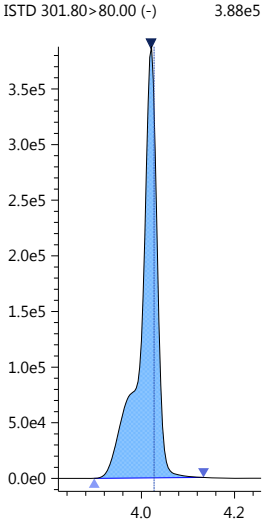
PFBS-13C

Conc 4.8432
RT 4.021 Area 939261



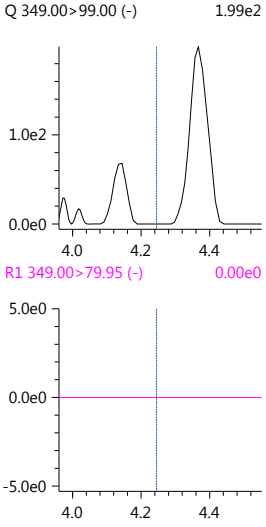
PFBS-13C_IS

Conc 5.0000
RT 4.021 Area 943830



PFPeS

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



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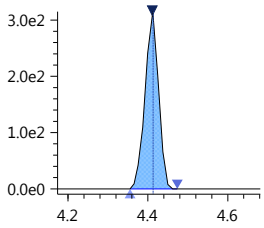
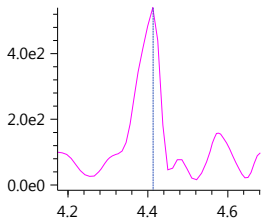
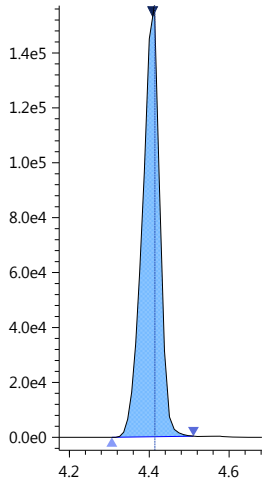
PFHxS_1
Conc 0.0056
RT 4.411 Area 739
R#1 139.26 (0.00)
Q 399.00>80.00 (-) 3.15e2



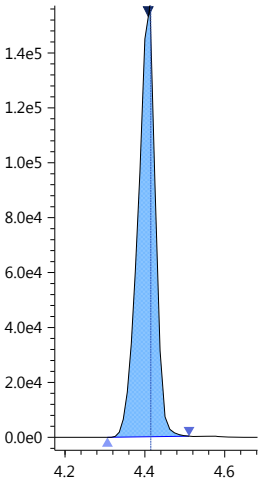
R1 399.00>99.00 (-) 5.40e2



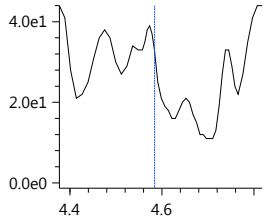
PFHxS-18O
Conc 4.2738
RT 4.408 Area 474347
Q 402.70>84.05 (-) 1.57e5



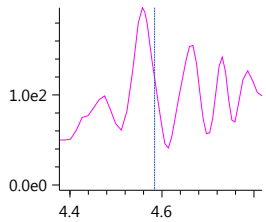
PFHxS-18O_IS
Conc 5.0000
RT 4.408 Area 474347
ISTD 402.70>84.05 (-) 1.57e5



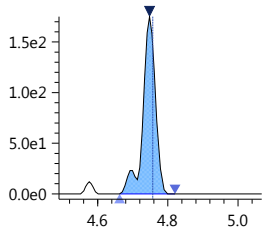
PFHpS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 449.00>80.15 (-) 4.40e1



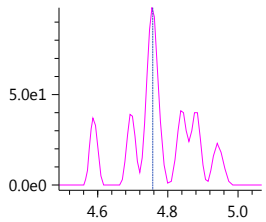
R1 449.00>99.20 (-) 1.97e2



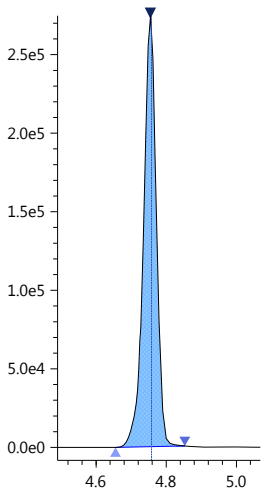
PFOS_1
Conc 0.0036
RT 4.748 Area 435
R#1 45.86 (0.00)
Q 499.00>80.00 (-) 1.75e2



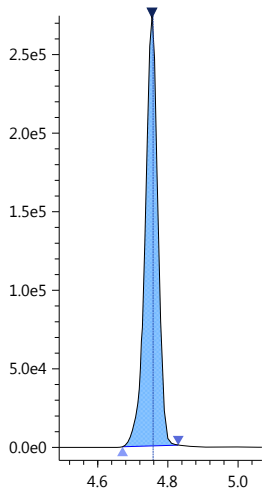
R1 499.00>99.00 (-) 9.80e1



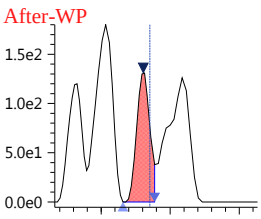
PFOS-13C
Conc 5.2464
RT 4.755 Area 693688
Q 502.80>80.05 (-) 2.75e5



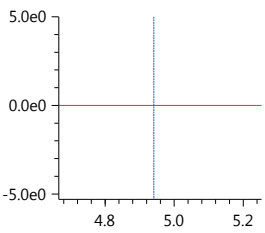
PFOS-13C_IS
Conc 5.0000
RT 4.755 Area 688552
ISTD 502.80>80.05 (-) 2.75e5



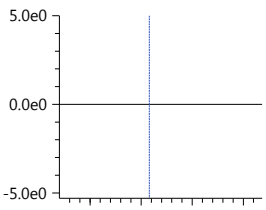
PFNS
Conc -0.0797
RT 4.922 Area 344
R#1 0.00 (0.00)
Q 549.00>99.00 (-) 1.80e2



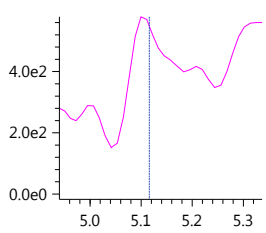
R1 549.00>79.95 (-) 0.00e0



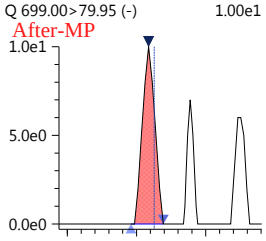
PFDS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 599.00>79.90 (-) 0.00e0



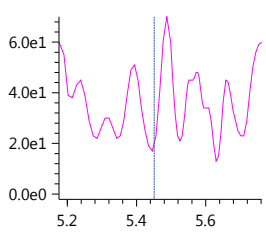
R1 599.00>99.10 (-) 5.79e2



PFDOS
Conc 0.0002
RT 5.435 Area 25
R#1 0.00 (0.00)
Q 699.00>79.95 (-) 1.00e1



R1 699.00>99.05 (-) 7.00e1



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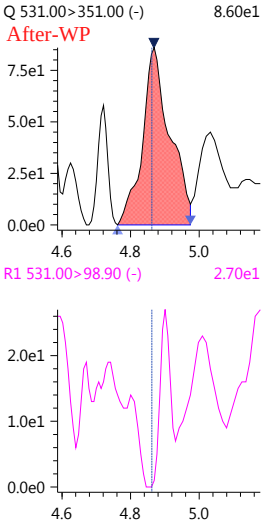
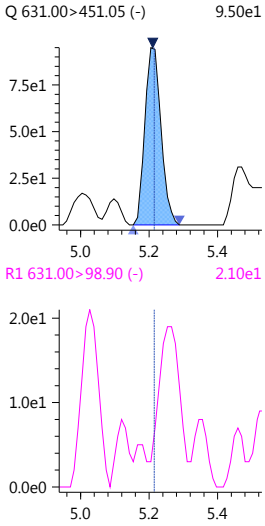
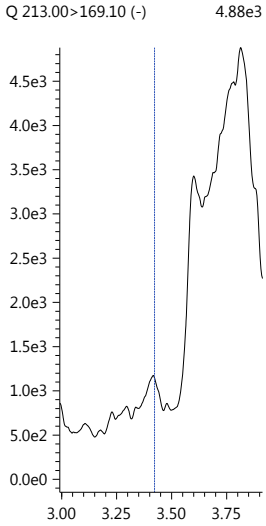
9Cl-PF3ONS
Conc 0.0005
RT 4.868 Area 476
R#1 0.00 (0.00)



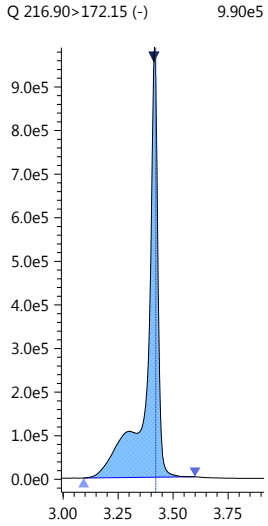
11Cl-PF3OUdS
Conc 0.0004
RT 5.211 Area 311
R#1 0.00 (0.00)



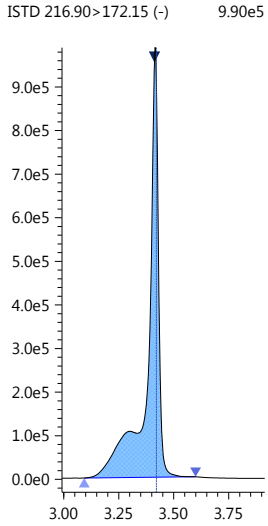
PFBA
Conc ----
RT ---- Area ----



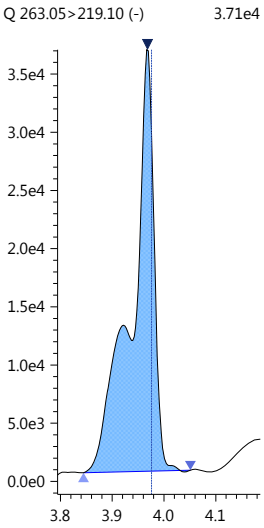
PFBA-13C
Conc 5.0037
RT 3.412 Area 3293049



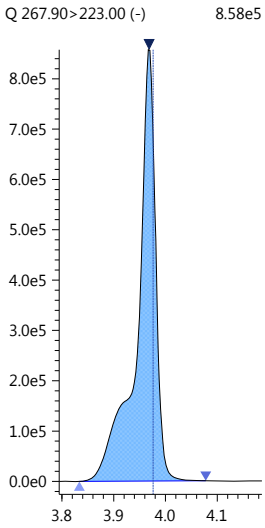
PFBA-13C_IS
Conc 5.0000
RT 3.412 Area 3293049



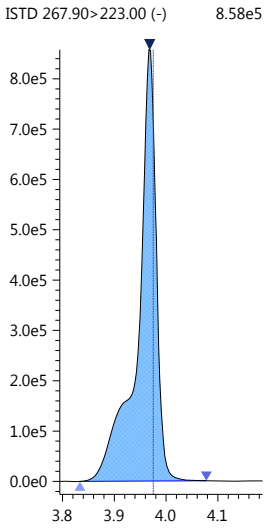
PFPeA
Conc 0.0064
RT 3.968 Area 108463



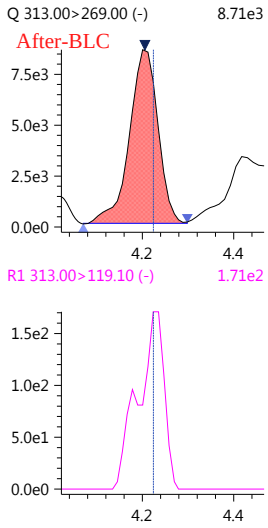
PFPeA-13C
Conc 5.1245
RT 3.968 Area 2121864



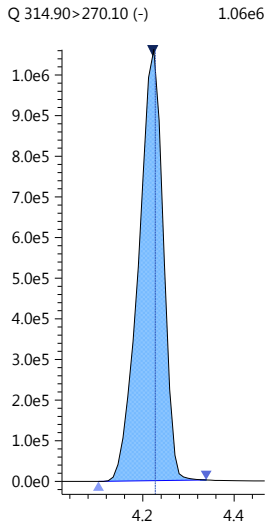
PFPeA-13C_IS
Conc 5.0000
RT 3.968 Area 2121864



PFHxA
Conc 0.0194
RT 4.206 Area 37177
R#1 1.04 (0.00)



PFHxA-13C
Conc 4.8710
RT 4.222 Area 3965221



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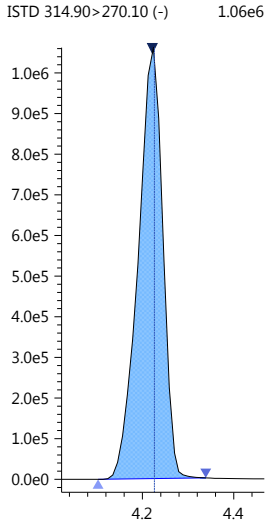
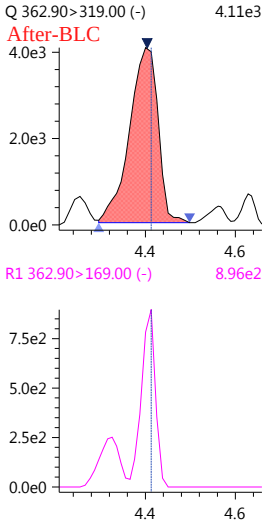
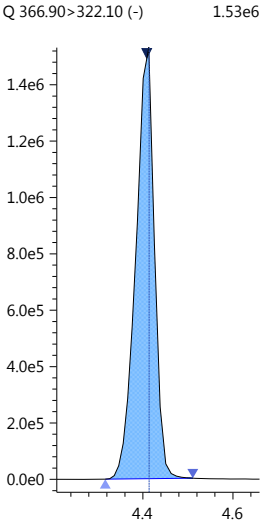
PFHxA-13C_IS
Conc 5.0000
RT 4.222 Area 3965221



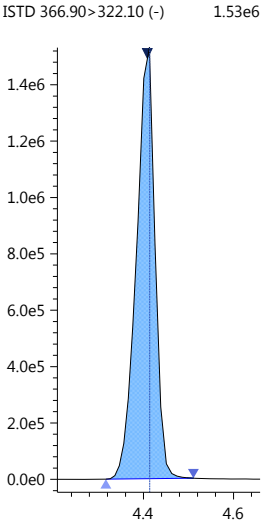
PFHpA
Conc 0.0049
RT 4.404 Area 17926
R#1 17.59 (0.00)



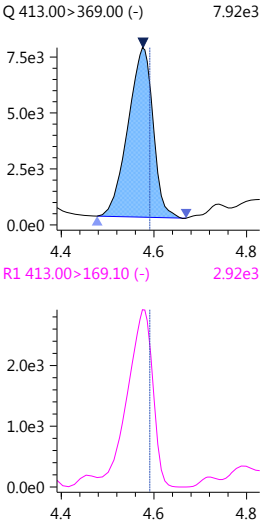
PFHpA-13C
Conc 4.6188
RT 4.408 Area 4406727



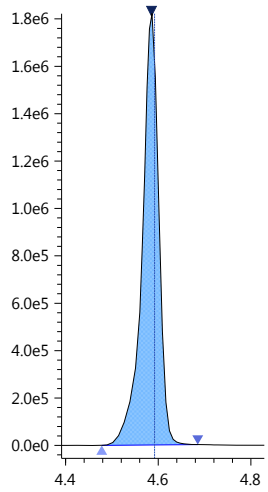
PFHpA-13C_IS
Conc 5.0000
RT 4.408 Area 4406727



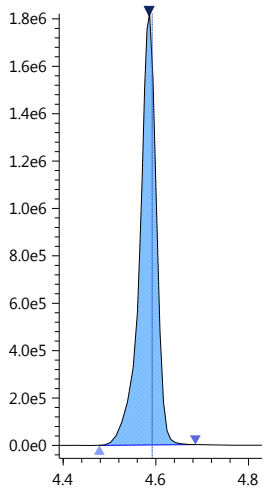
PFOA
Conc 0.0083
RT 4.577 Area 28558
R#1 37.51 (0.00)



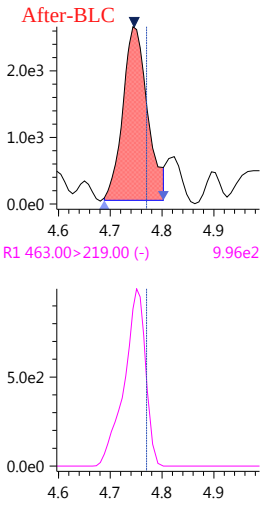
PFOA-13C
Conc 5.2459
RT 4.585 Area 4532728



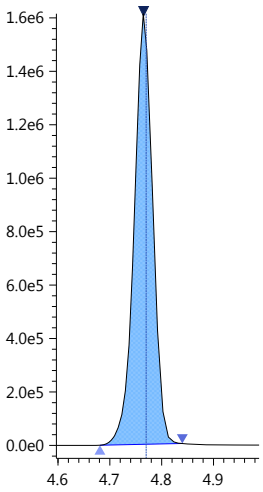
PFOA-13C_IS
Conc 5.0000
RT 4.585 Area 4532728



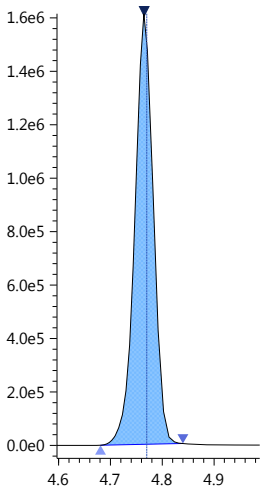
PFNA
Conc -0.0003
RT 4.746 Area 8552
R#1 42.56 (0.00)



PFNA-13C
Conc 5.8682
RT 4.765 Area 4028066



PFNA-13C_IS
Conc 5.0000
RT 4.765 Area 4028066



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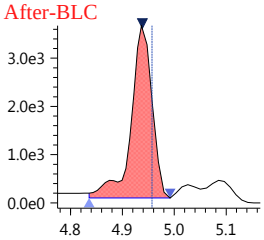
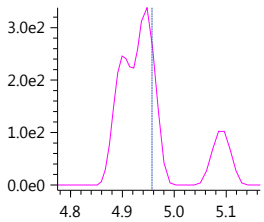
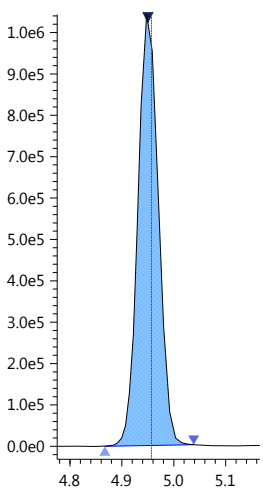
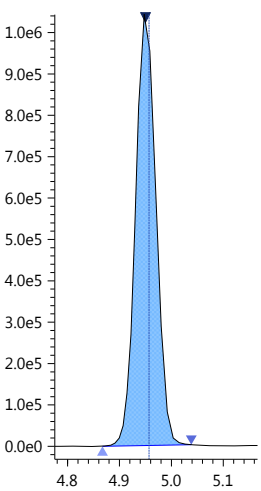
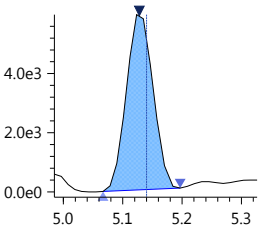
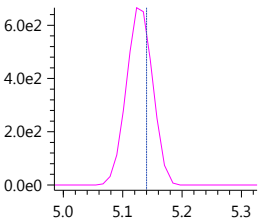
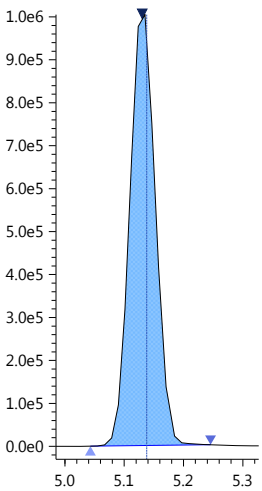
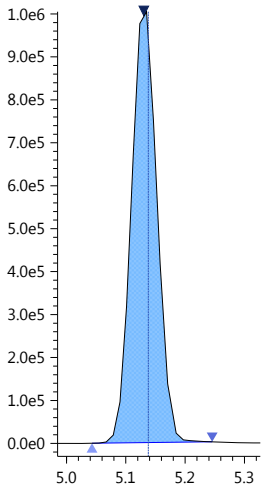
PFDA
Conc 0.0173
RT 4.939 Area 10082
R#1 9.12 (0.00)
Q 513.00>468.80 (-) 3.68e3
After-BLC

R1 513.00>219.10 (-) 3.38e2


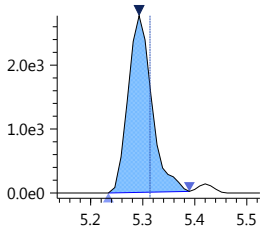
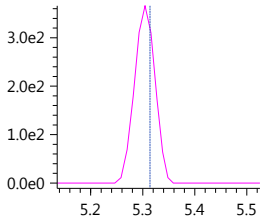
PFDA-13C
Conc 4.9787
RT 4.950 Area 2872917
Q 514.80>469.95 (-) 1.04e6


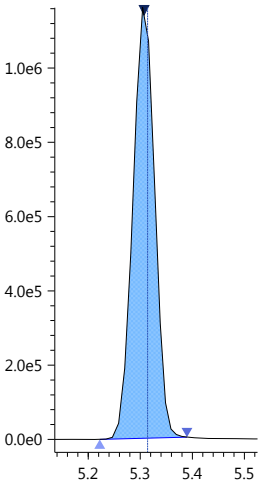
PFDA-13C_IS
Conc 5.0000
RT 4.950 Area 2872917
ISTD 514.80>469.95 (-) 1.04e6


PFUnA
Conc 0.0052
RT 5.128 Area 18703
R#1 11.24 (0.00)
Q 563.00>518.90 (-) 5.99e3

R1 563.00>219.00 (-) 6.66e2


PFUnA-13C
Conc 4.8604
RT 5.130 Area 3039781
Q 564.80>519.95 (-) 1.01e6


PFUnA-13C_IS
Conc 5.0000
RT 5.130 Area 3039781
ISTD 564.80>519.95 (-) 1.01e6


PFDoA
Conc 0.0111
RT 5.293 Area 8798
R#1 11.17 (0.00)
Q 613.05>569.00 (-) 2.77e3

R1 613.05>169.00 (-) 3.66e2


PFDoA-13C
Conc 5.0388
RT 5.307 Area 3394471
Q 614.80>569.95 (-) 1.16e6


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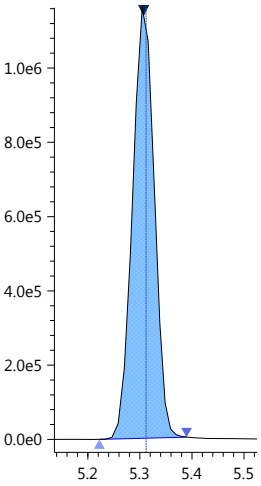
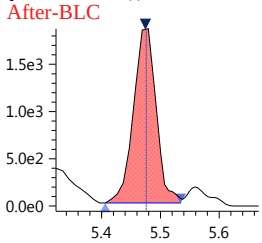
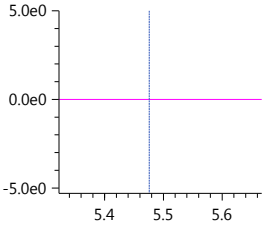
ISTD 614.80>569.95 (-) 1.16e6


PFTrDA
Conc -0.0006
RT 5.474 Area 4987
R#1 0.00 (0.00)
Q 663.00>618.90 (-) 1.88e3
After-BLC

R1 662.90>169.00 (-) 0.00e0


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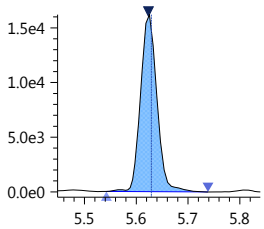
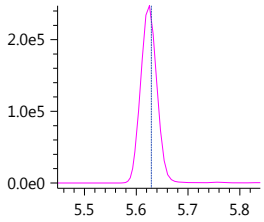
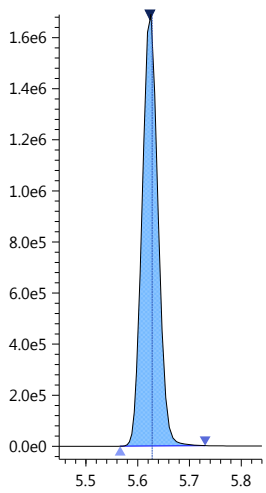
PFTeDA
Conc -0.0076
RT 5.624 Area 35588
R#1 1527.23 (0.00)
Q 713.40>669.00 (-) 1.62e4



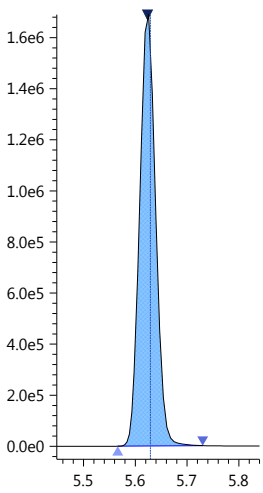
R1 713.40>169.10 (-) 2.47e5



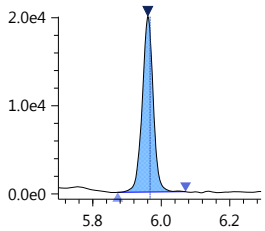
PFTeDA-13C
Conc 4.9039
RT 5.624 Area 3639677
Q 714.70>669.90 (-) 1.69e6



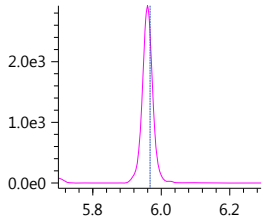
PFTeDA-13C_IS
Conc 5.0000
RT 5.624 Area 3639677
ISTD 714.70>669.90 (-) 1.69e6



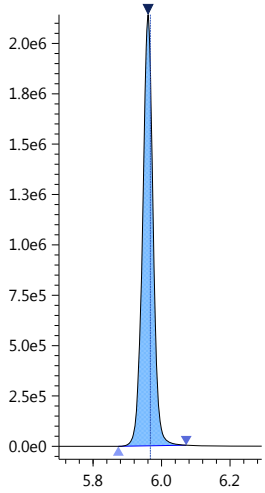
PFHxDA
Conc 0.0016
RT 5.961 Area 44724
R#1 14.68 (0.00)
Q 813.00>769.05 (-) 2.01e4



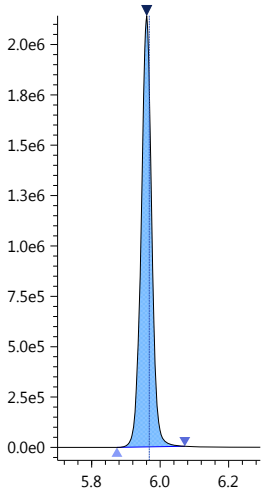
R1 813.00>218.95 (-) 2.92e3



13C-PFHxDA
Conc 5.0379
RT 5.960 Area 4578237
Q 815.00>770.05 (-) 2.14e6

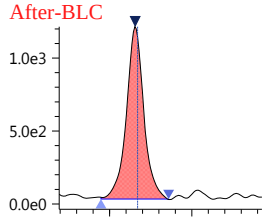


13C-PFHxDA_IS
Conc 5.0000
RT 5.960 Area 4578237
ISTD 815.00>770.05 (-) 2.14e6

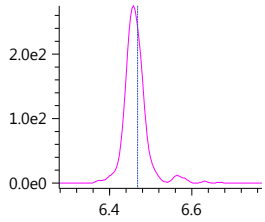


PFODA
Conc 0.0064
RT 6.462 Area 3480
R#1 21.21 (0.00)
Q 913.00>868.85 (-) 1.22e3

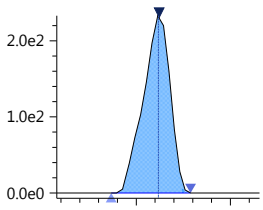
After-BLC



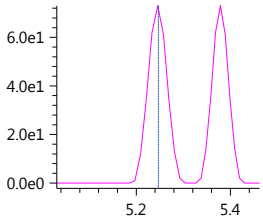
R1 913.00>169.00 (-) 2.75e2



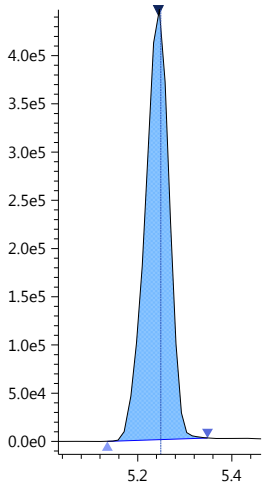
FOSA
Conc 0.0023
RT 5.249 Area 930
R#1 31.11 (0.00)
Q 498.20>78.00 (-) 2.33e2



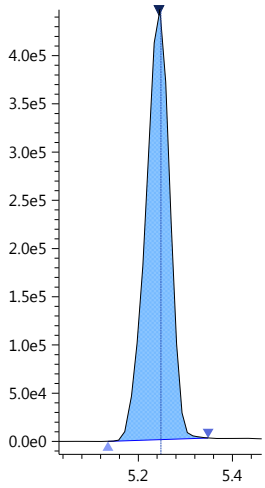
R1 498.20>64.10 (-) 7.30e1



FOSA-13C
Conc 5.2065
RT 5.244 Area 1605507
Q 506.00>78.05 (-) 4.48e5



FOSA-13C_IS
Conc 5.0000
RT 5.244 Area 1605507
ISTD 506.00>78.05 (-) 4.48e5



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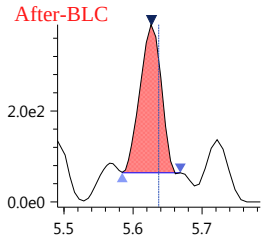
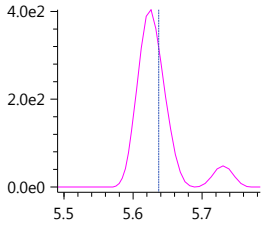
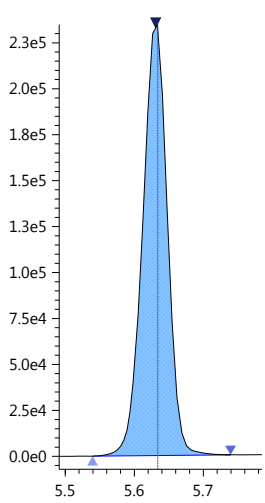
N-MeFOSA
Conc 0.0038
RT 5.627 Area 699
R#1 116.13 (0.00)
Q 512.00>169.10 (-) 3.90e2



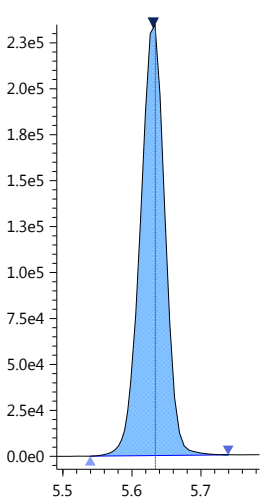
R1 512.00>219.00 (-) 4.04e2



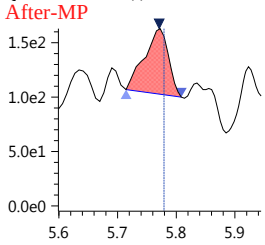
N-MeFOSA-d3
Conc 4.8443
RT 5.631 Area 586111
Q 514.90>168.90 (-) 2.35e5



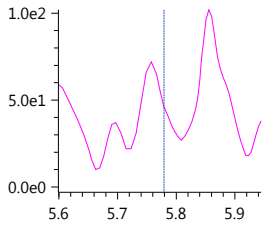
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.631 Area 586111
ISTD 514.90>168.90 (-) 2.35e5



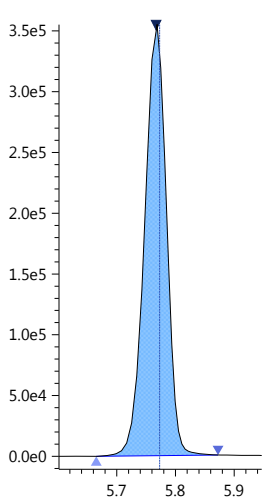
N-EtFOSA
Conc 0.0049
RT 5.771 Area 171
R#1 52.31 (0.00)
Q 526.90>169.10 (-) 1.63e2



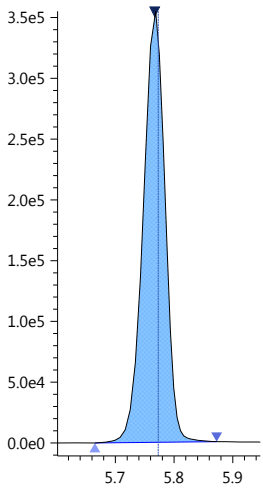
R1 526.90>219.00 (-) 1.02e2



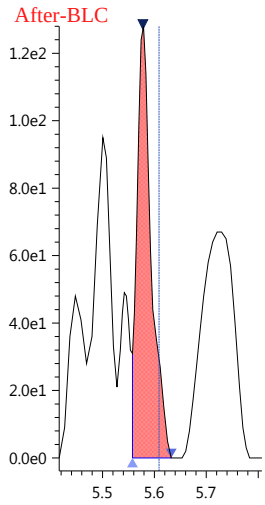
N-EtFOSA-d9
Conc 5.1074
RT 5.767 Area 920242
Q 530.90>169.15 (-) 3.55e5



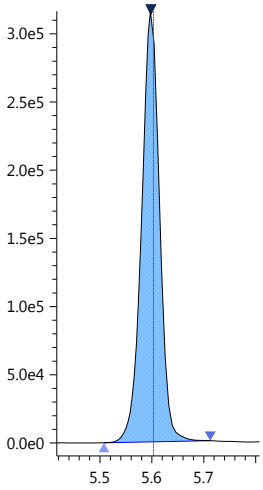
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.767 Area 920242
ISTD 530.90>169.15 (-) 3.55e5



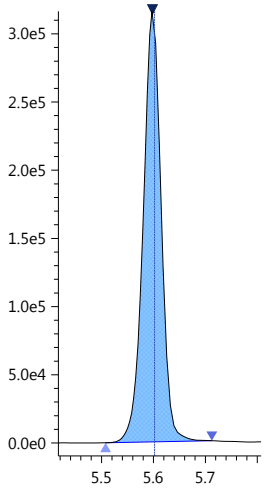
N-MeFOSE
Conc 0.0013
RT 5.578 Area 246
Q 616.00>59.00 (-) 1.28e2



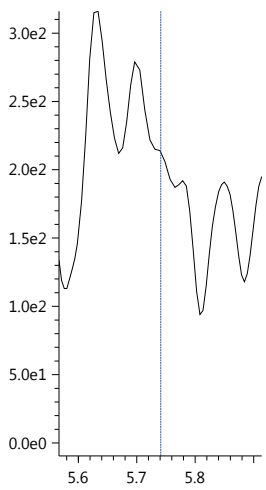
N-MeFOSE-d7
Conc 5.1177
RT 5.598 Area 760639
Q 622.70>59.10 (-) 3.17e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.598 Area 760639
ISTD 622.70>59.10 (-) 3.17e5



N-EtFOSE
Conc ----
RT ---- Area ----
Q 630.00>58.90 (-) 3.16e2



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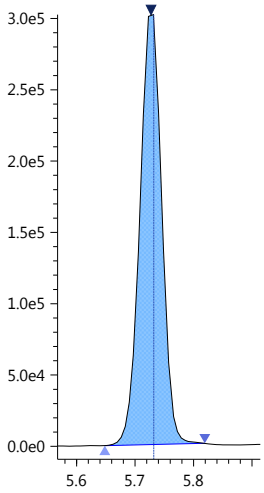
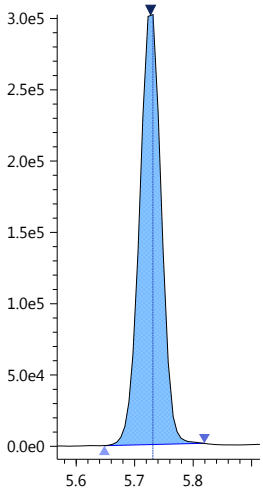
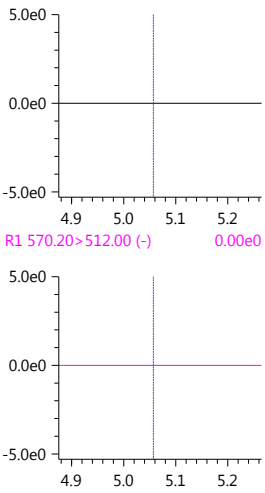
N-EtFOSE-d9
Conc 5.2693
RT 5.727 Area 788944
Q 638.70>59.10 (-) 3.03e5



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.727 Area 788944
ISTD 638.70>59.10 (-) 3.03e5

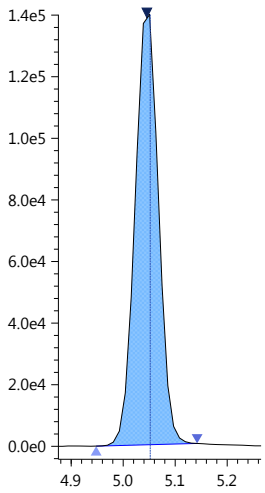


N-MeFOSAA
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 570.20>419.00 (-) 0.00e0

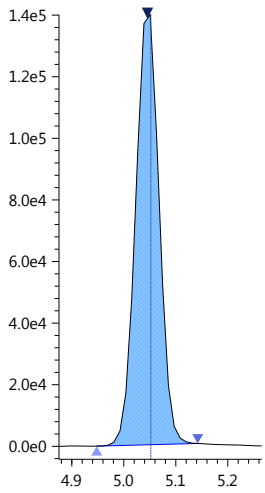


R1 570.20>512.00 (-) 0.00e0

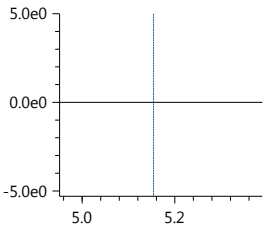
N-MeFOSAA-d3
Conc 4.9582
RT 5.046 Area 441242
Q 572.80>419.05 (-) 1.40e5



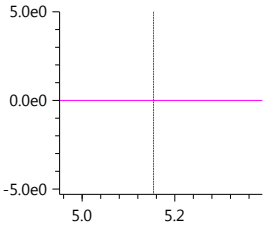
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.046 Area 441242
ISTD 572.80>419.05 (-) 1.40e5



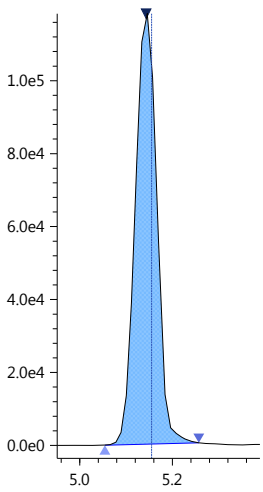
N-EtFOSAA
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 584.20>418.95 (-) 0.00e0



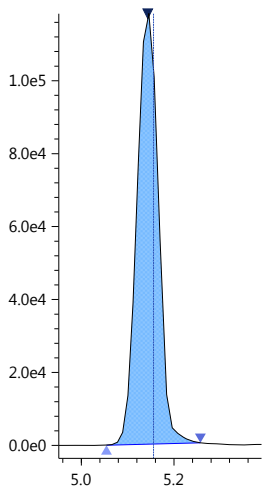
R1 584.20>526.10 (-) 0.00e0



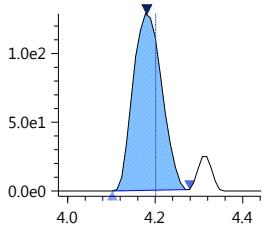
N-EtFOSAA-d5
Conc 4.7578
RT 5.143 Area 382572
Q 588.80>419.00 (-) 1.18e5



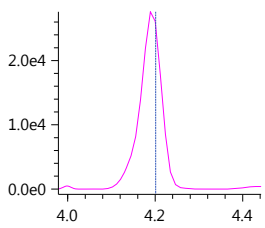
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.143 Area 382572
ISTD 588.80>419.00 (-) 1.18e5



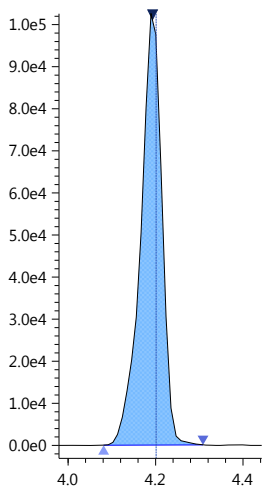
4_2-FTS_1
Conc 0.0069
RT 4.181 Area 595
R#1 17010.32 (0.00)
Q 327.00>307.05 (-) 1.29e2



R1 327.00>81.10 (-) 2.76e4



4_2-FTS-13C
Conc 4.6614
RT 4.193 Area 347551
Q 328.80>309.05 (-) 1.03e5



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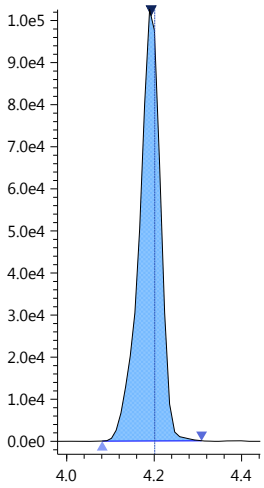
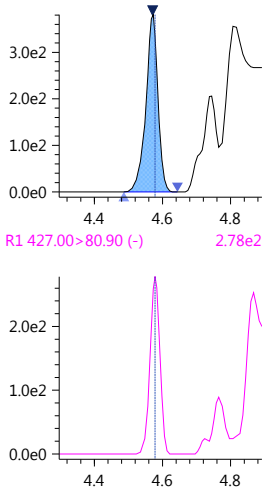
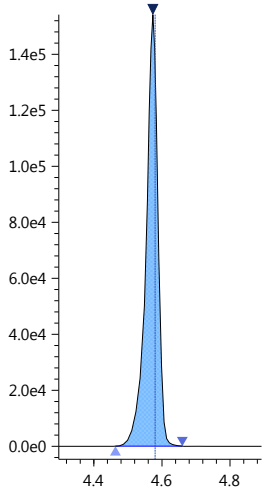
4_2-FTS-13C_IS
Conc 5.0000
RT 4.193 Area 347551
ISTD 328.80>309.05 (-) 1.03e5



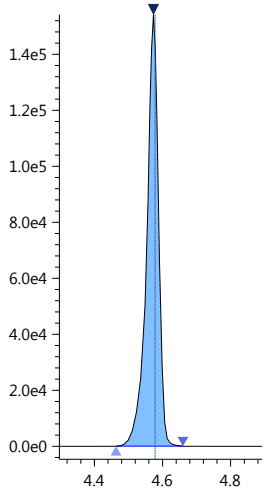
6_2-FTS_1
Conc 0.0103
RT 4.571 Area 934
R#1 51.54 (0.00)
Q 427.00>407.00 (-) 3.81e2



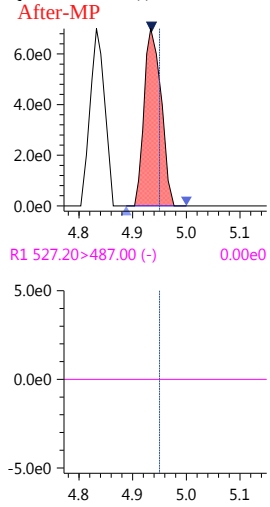
6_2-FTS-13C
Conc 5.2910
RT 4.573 Area 371858
Q 428.90>409.00 (-) 1.54e5



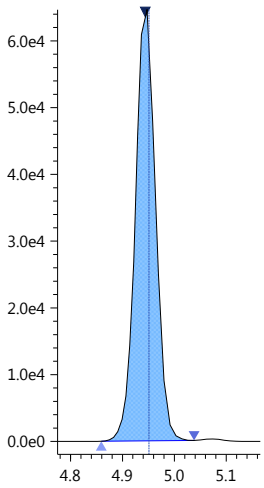
6_2-FTS-13C_IS
Conc 5.0000
RT 4.573 Area 371858
ISTD 428.90>409.00 (-) 1.54e5



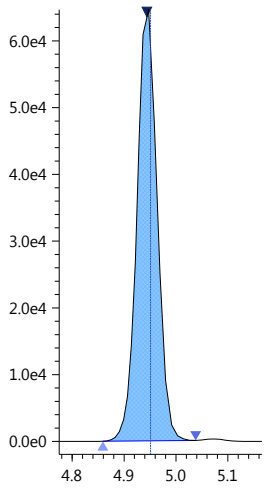
8_2-FTS_1
Conc 0.0005
RT 4.935 Area 15
R#1 0.00 (0.00)
Q 527.10>506.90 (-) 7.00e0



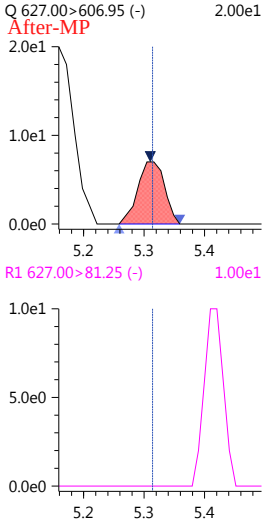
8_2-FTS-13C
Conc 4.3963
RT 4.944 Area 176109
Q 528.80>509.00 (-) 6.47e4



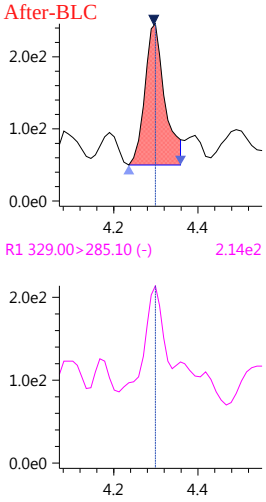
8_2-FTS-13C_IS
Conc 5.0000
RT 4.944 Area 176109
ISTD 528.80>509.00 (-) 6.47e4



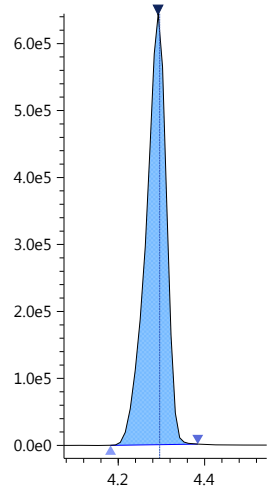
10_2-FtS_1
Conc 0.0008
RT 5.310 Area 22
R#1 0.00 (0.00)
Q 627.00>606.95 (-) 2.00e1



HPFO_DA
Conc 0.0016
RT 4.295 Area 635
R#1 53.18 (0.00)
Q 329.00>169.00 (-) 2.46e2



HFPO_DA-13C
Conc 5.2280
RT 4.292 Area 2125891
Q 332.00>286.80 (-) 6.45e5



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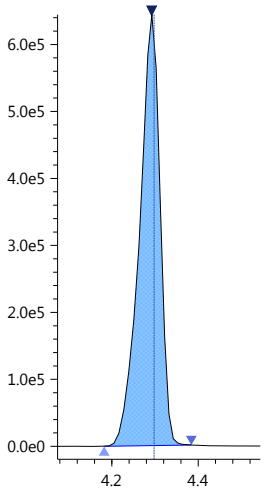
HFPO_DA-13C_IS

Conc 5.0000
RT 4.292 Area 2125891

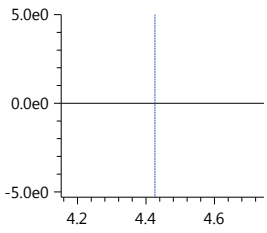
ISTD 332.00>286.80 (-) 6.45e5



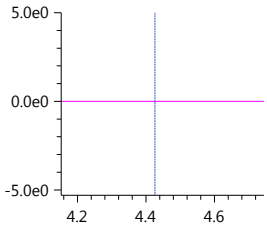
ADONA

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

Q 377.00>251.00 (-) 0.00e0



R1 377.00>84.95 (-) 0.00e0



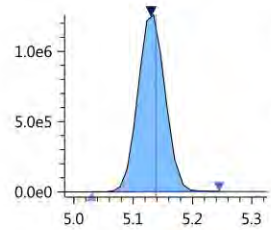
Insight Report

Printed at 8/8/2019 8:44:13 AM

190807_022

Sample ID: IB
Date acquired: 8/7/2019 7:09:25 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_022.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 1

13C7-PFUnDA_IS
Conc 5.0000
RT 5.130 Area 4049730
ISTD 570.00>525.00 (-) 1.26e6



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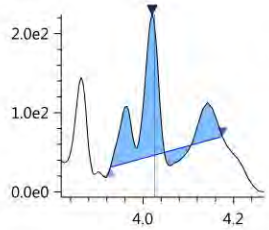
Conc 0.0020
RT 4.020 Area 550
Q 299.00>80.00 (-) 2.24e2



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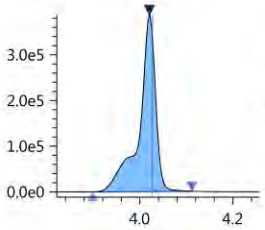
Conc 4.8432
RT 4.021 Area 939261
Q 301.80>80.00 (-) 3.88e5



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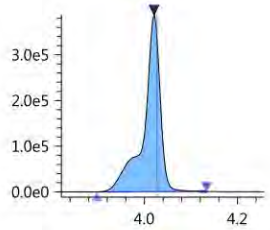

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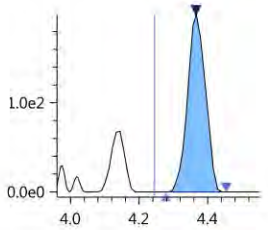
Conc 0.0064
RT 4.366 Area 727
Q 349.00>99.00 (-) 1.99e2



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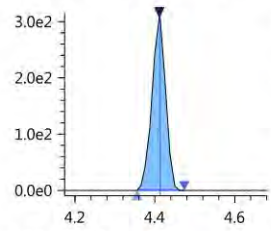
Conc 0.0056
RT 4.411 Area 739
Q 399.00>80.00 (-) 3.15e2



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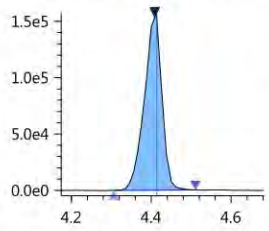
Conc 4.2738
RT 4.408 Area 474347
Q 402.70>84.05 (-) 1.57e5



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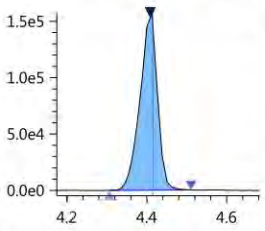

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Conc ----
RT ---- Area ----
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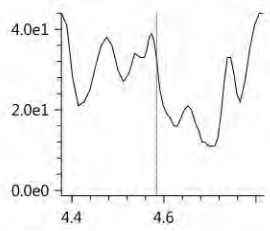

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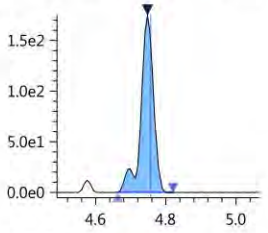
Q 499.00>80.00 (-) 1.75e2



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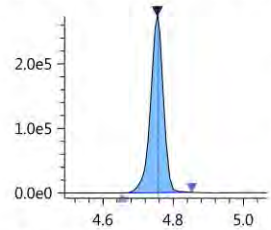
Q 502.80>80.05 (-) 2.75e5



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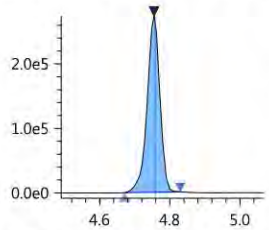

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Conc 0.0062
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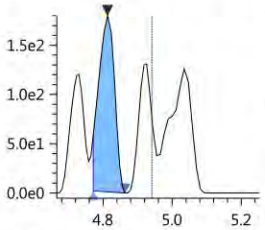
Q 549.00>99.00 (-) 1.80e2



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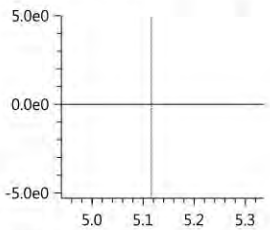
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



PFDOS
Conc ----
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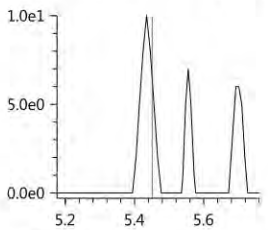

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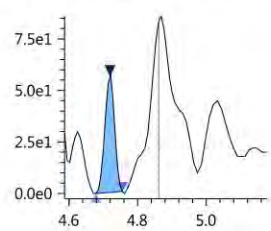
Q 531.00>351.00 (-) 8.60e1



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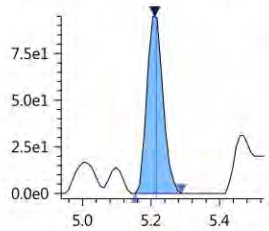
Q 631.00>451.05 (-) 9.50e1



PFBA
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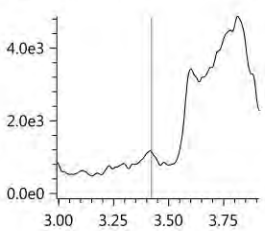
RT ---- Area ----
Q 213.00>169.10 (-) 4.88e3



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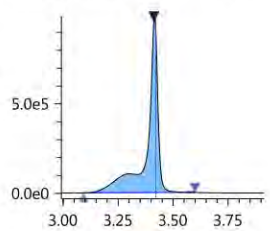

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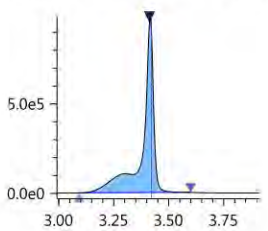

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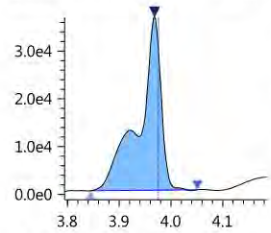
Q 263.05>219.10 (-) 3.71e4



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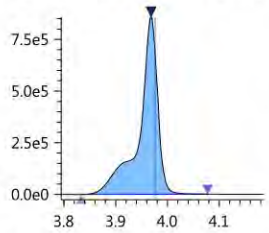
Q 267.90>223.00 (-) 8.58e5



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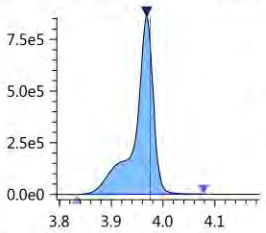

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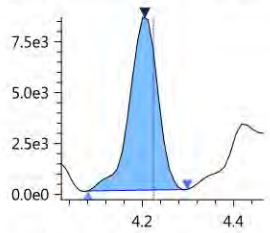
Q 313.00>269.00 (-) 8.71e3



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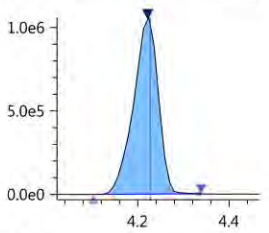

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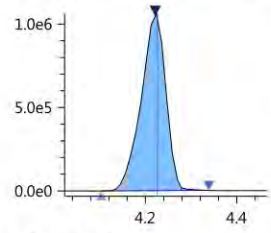

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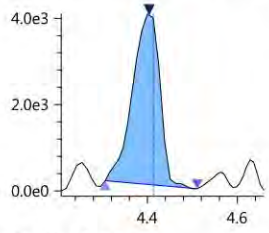
Q 362.90>319.00 (-) 4.11e3



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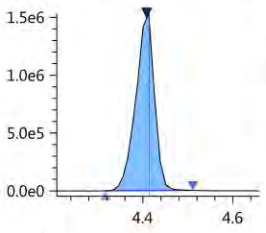
Q 366.90>322.10 (-) 1.53e6



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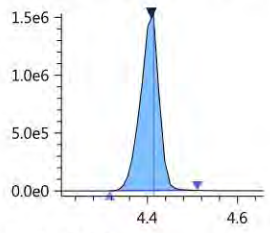

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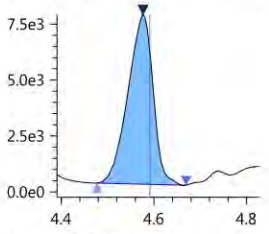
Q 413.00>369.00 (-) 7.92e3



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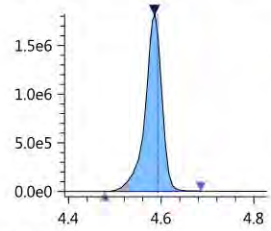
Q 416.80>372.05 (-) 1.82e6



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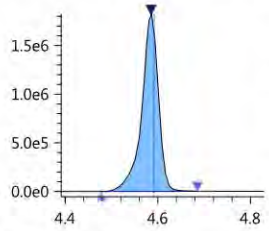

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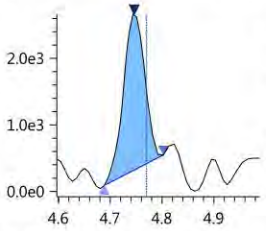
Conc 0.0088
RT 4.746 Area 6733
Q 463.00>418.90 (-) 2.66e3



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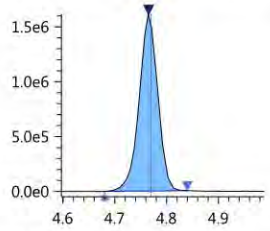

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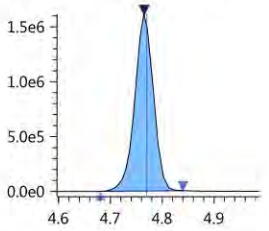

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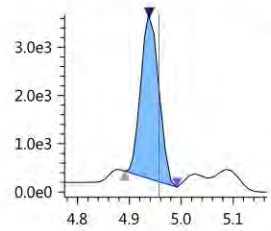
RT 4.939 Area 8270
Q 513.00>468.80 (-) 3.68e3



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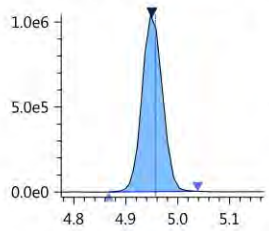
Q 514.80>469.95 (-) 1.04e6



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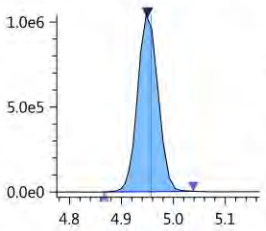

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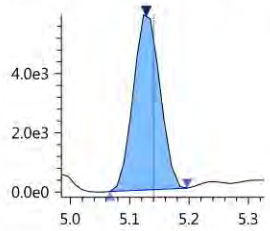
Q 563.00>518.90 (-) 5.99e3



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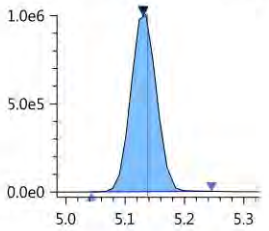

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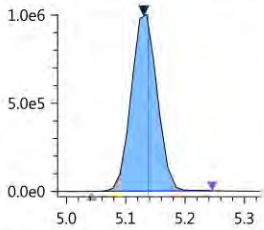

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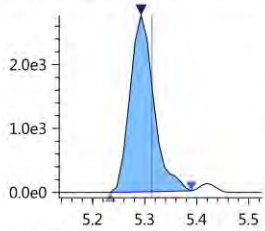
Q 613.05>569.00 (-) 2.77e3



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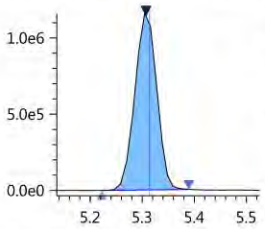
Q 614.80>569.95 (-) 1.16e6



PFDoA-13C_IS
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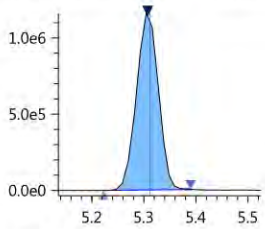
RT 5.307 Area 3394471
ISTD 614.80>569.95 (-) 1.16e6



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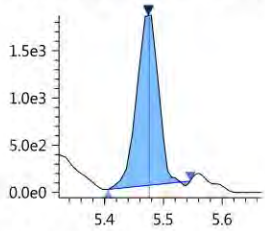
RT 5.474 Area 4653
Q 663.00>618.90 (-) 1.88e3



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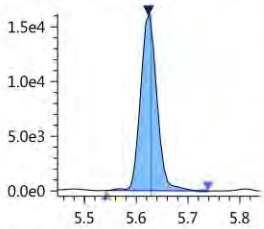
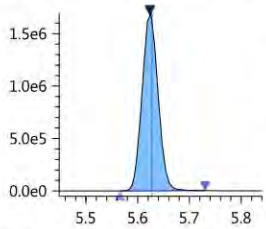
Q 713.40>669.00 (-) 1.62e4



PFTeDA-13C
Conc 4.9039
RT 5.624 Area 3639677
Q 714.70>669.90 (-) 1.69e6



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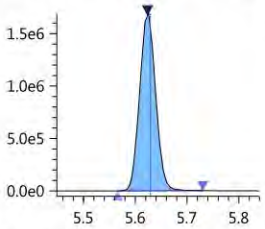
ISTD 714.70>669.90 (-) 1.69e6



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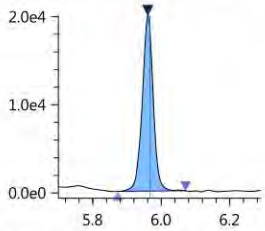

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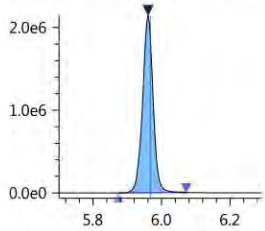

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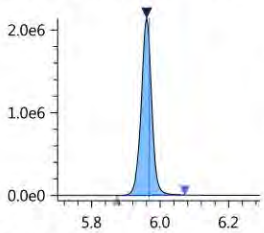

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RT 6.462 Area 3446
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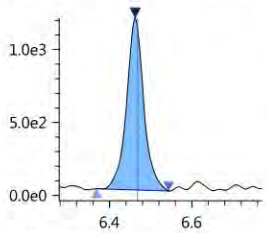

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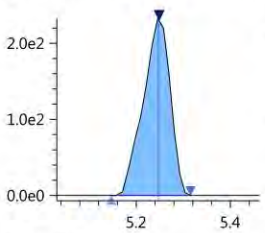

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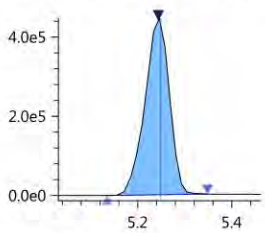
Q 506.00>78.05 (-) 4.48e5



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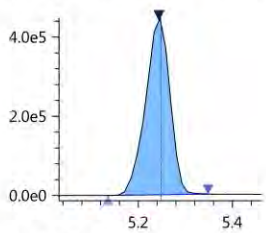
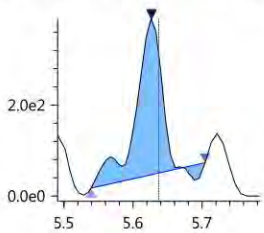


N-MeFOSA
Conc 0.0041
RT 5.627 Area 754
Q 512.00>169.10 (-) 3.90e2



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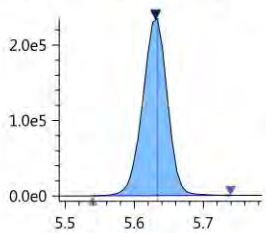
Conc 4.8443
RT 5.631 Area 586111
Q 514.90>168.90 (-) 2.35e5



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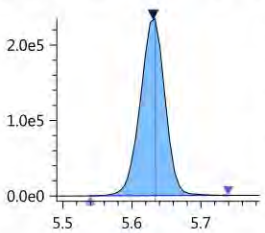

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Conc ----
RT ---- Area ----
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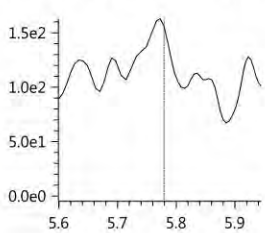

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Conc 5.1074
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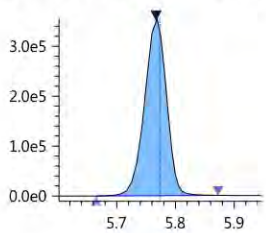
Q 530.90>169.15 (-) 3.55e5



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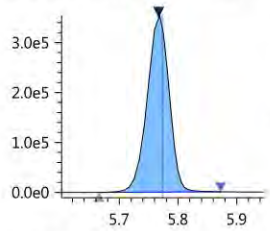
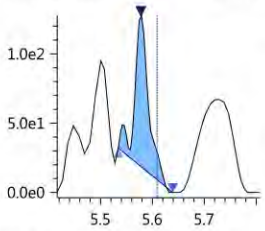
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.767 Area 920242
ISTD 530.90>169.15 (-) 3.55e5



N-MeFOSE
Conc 0.0011
RT 5.578 Area 202
Q 616.00>59.00 (-) 1.28e2



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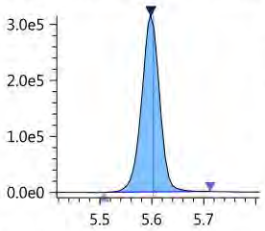
RT 5.598 Area 760639
Q 622.70>59.10 (-) 3.17e5



N-MeFOSE-d7_IS
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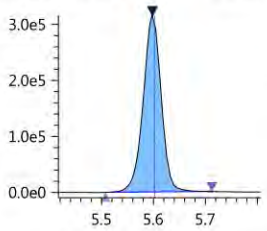
RT 5.598 Area 757809
ISTD 622.70>59.10 (-) 3.17e5



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Conc 0.0048
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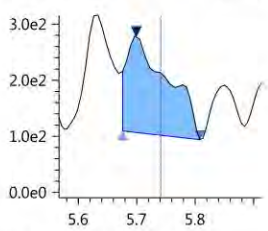
Q 630.00>58.90 (-) 3.16e2



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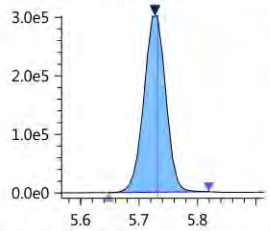
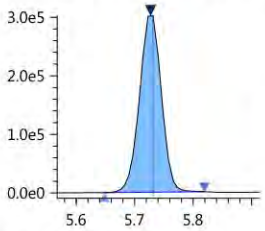
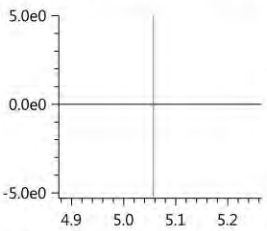
Q 638.70>59.10 (-) 3.03e5



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.727 Area 782550
ISTD 638.70>59.10 (-) 3.03e5



N-MeFOSAA
Conc ----
RT ---- Area ----
Q 570.20>419.00 (-) 0.00e0



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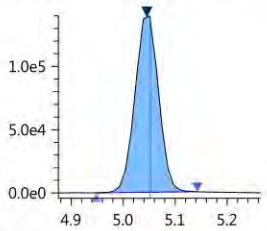
Conc 4.9582
RT 5.046 Area 441242
Q 572.80>419.05 (-) 1.40e5



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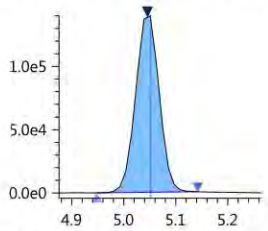
ISTD 572.80>419.05 (-) 1.40e5



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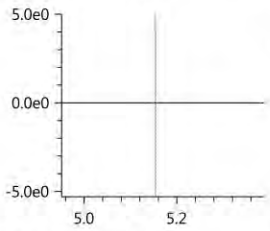
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



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Conc 4.7578
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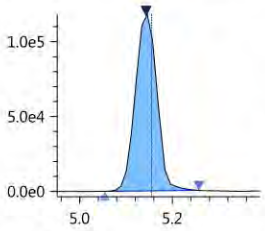
Q 588.80>419.00 (-) 1.18e5



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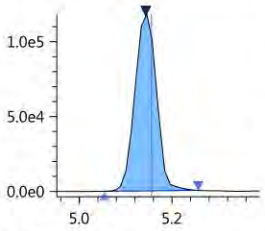
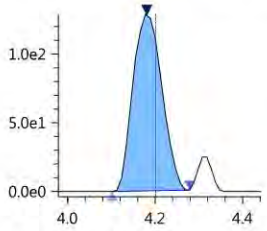
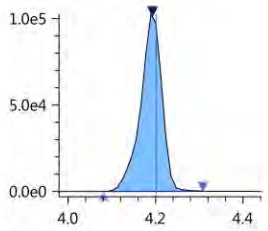
ISTD 588.80>419.00 (-) 1.18e5



4_2-FTS_1
Conc 0.0069
RT 4.181 Area 595
Q 327.00>307.05 (-) 1.29e2



4_2-FTS-13C
Conc 4.6614
RT 4.193 Area 347551
Q 328.80>309.05 (-) 1.03e5



4_2-FTS-13C_IS
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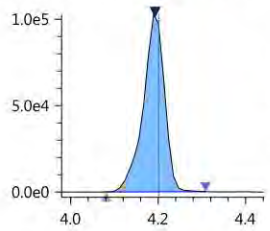
ISTD 328.80>309.05 (-) 1.03e5



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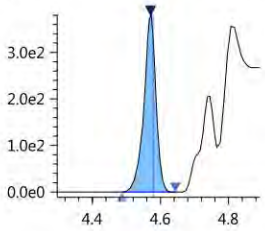
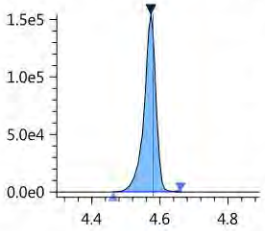
Conc 0.0096
RT 4.571 Area 934
Q 427.00>407.00 (-) 3.81e2



6_2-FTS-13C
Conc 5.2910
RT 4.573 Area 371858
Q 428.90>409.00 (-) 1.54e5



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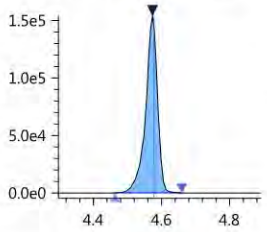
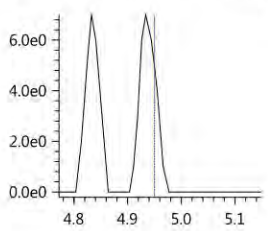
ISTD 428.90>409.00 (-) 1.54e5



8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 7.00e0



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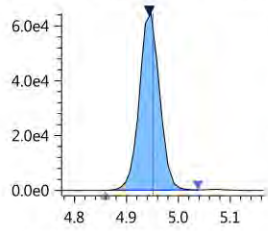
8_2-FTS-13C

Conc 4.3963
RT 4.944 Area 176109
Q 528.80>509.00 (-) 6.47e4



8_2-FTS-13C_IS

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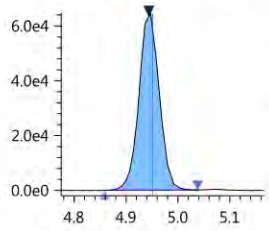
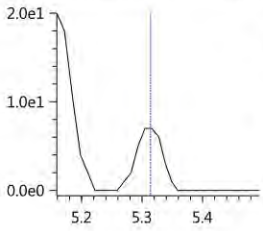
ISTD 528.80>509.00 (-) 6.47e4



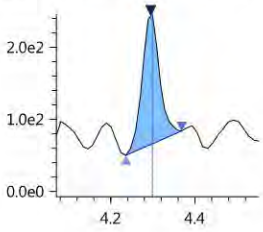
10_2-FtS_1

Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 2.00e1



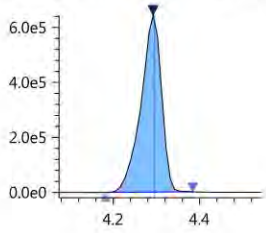
HPFO_DA

Conc 0.0013
RT 4.295 Area 520
Q 329.00>169.00 (-) 2.46e2



HFPO_DA-13C

Conc 5.2280
RT 4.292 Area 2125891
Q 332.00>286.80 (-) 6.45e5



HFPO_DA-13C_IS

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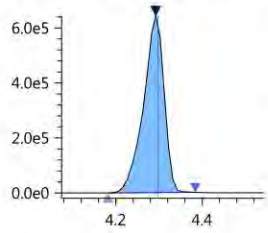
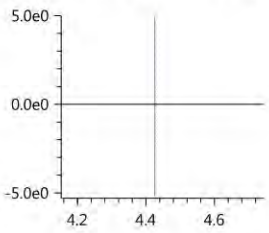


ADONA

Conc ----
RT ---- Area ----
Q 377.00>251.00 (-) 0.00e0



Insight Report

Printed at 8/8/2019 9:54:02 AM

190807_023

Sample ID: T-PFOA
Date acquired: 8/7/2019 7:19:59 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_023.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.142	1889	1889	1	5.0000	ng/mL	----
PFBS_1	ND(W/B)	----	----	----	2	----	ng/mL	----
PFBS-13C	ND(W/B)	----	----	1889	1	----	ng/mL	----
PFBS-13C_IS	ND(W/B)	----	----	----	2	----	ng/mL	----
PFPeS	ND(W/B)	----	----	----	2	----	ng/mL	----
PFHxS_1	Auto	4.425	314	----	3	0.0000	ng/mL	----
PFHxS-18O	ND(W/B)	----	----	1889	1	----	ng/mL	----
PFHxS-18O_IS	ND(W/B)	----	----	----	3	----	ng/mL	----
PFHpS_1	ND(W/B)	----	----	----	3	----	ng/mL	----
PFOS_1	ND(W/B)	----	----	----	4	----	ng/mL	----
PFOS-13C	ND(W/B)	----	----	1889	1	----	ng/mL	----
PFOS-13C_IS	ND(W/B)	----	----	----	4	----	ng/mL	----
PFNS	Auto	4.846	484	----	4	0.0000	ng/mL	----
PFDS_1	ND(W/B)	----	----	----	4	----	ng/mL	----
PFDOS	ND(W/B)	----	----	----	4	----	ng/mL	----
9Cl-PF3ONS	ND(W/B)	----	----	432	26	----	ng/mL	----
11Cl-PF3OUdS	ND(W/B)	----	----	432	26	----	ng/mL	----
PFBA	ND(W/B)	----	----	179	5	----	ng/mL	----
PFBA-13C	Auto	3.607	179	1889	1	0.5814	ng/mL	----
PFBA-13C_IS	Auto	3.607	179	179	5	5.0000	ng/mL	----
PFPeA	Auto	3.914	18453	----	6	0.0000	ng/mL	----
PFPeA-13C	ND(W/B)	----	----	1889	1	----	ng/mL	----
PFPeA-13C_IS	ND(W/B)	----	----	----	6	----	ng/mL	----
PFHxA	Auto	4.203	27179	2296	7	57.3813	ng/mL	----
PFHxA-13C	Auto	4.244	2296	1889	1	6.0448	ng/mL	----
PFHxA-13C_IS	Auto	4.244	2296	2296	7	5.0000	ng/mL	----
PFHpA	Auto	4.394	22347	1326	8	100.0343	ng/mL	----
PFHpA-13C	Auto	4.415	1326	1889	1	2.9795	ng/mL	----
PFHpA-13C_IS	Auto	4.415	1326	1326	8	5.0000	ng/mL	----
PFOA	Auto	4.582	1070150	1546	9	3129.9695	ng/mL	----
PFOA-13C	Auto	4.544	1506	1889	1	3.7349	ng/mL	----
PFOA-13C_IS	Auto	4.544	1546	1546	9	5.0000	ng/mL	----
PFNA	Auto	4.744	11676	777	10	83.5721	ng/mL	----
PFNA-13C	Auto	4.785	777	1889	1	2.4265	ng/mL	----
PFNA-13C_IS	Auto	4.785	777	777	10	5.0000	ng/mL	----
PFDA	Auto	4.920	7146	2128	11	16.5663	ng/mL	----
PFDA-13C	Auto	4.921	2128	1889	1	7.9041	ng/mL	----
PFDA-13C_IS	Auto	4.921	2128	2128	11	5.0000	ng/mL	----
PFUnA	Auto	5.114	9587	1571	12	34.6158	ng/mL	----
PFUnA-13C	Auto	5.121	1571	1889	1	5.3843	ng/mL	----
PFUnA-13C_IS	Auto	5.121	1571	1571	12	5.0000	ng/mL	----
PFDoA	Auto	5.279	13594	1428	13	76.8187	ng/mL	----
PFDoA-13C	Auto	5.249	1428	1889	1	4.5435	ng/mL	----
PFDoA-13C_IS	Auto	5.249	1428	1428	13	5.0000	ng/mL	----
PFTrDA	Auto	5.451	8920	798	14	78.3975	ng/mL	----
PFTeDA	Auto	5.616	2484	798	14	44.8359	ng/mL	----
PFTeDA-13C	Auto	5.610	798	1889	1	2.3038	ng/mL	----
PFTeDA-13C_IS	Auto	5.610	798	798	14	5.0000	ng/mL	----
PFHxDA	Auto	5.960	4299	3032	15	7.6325	ng/mL	----
13C-PFHxDA	Auto	5.961	3032	1889	1	7.1508	ng/mL	----
13C-PFHxDA_IS	Auto	5.961	3032	3032	15	5.0000	ng/mL	----
PFODA	Auto	6.459	1971	3032	15	5.4582	ng/mL	----
FOSA	Auto	5.155	287	609	16	1.8751	ng/mL	----
FOSA-13C	Auto	5.245	609	1889	1	4.2308	ng/mL	----
FOSA-13C_IS	Auto	5.245	609	609	16	5.0000	ng/mL	----
N-MeFOSA	Auto	5.612	1154	541	17	6.7710	ng/mL	----
N-MeFOSA-d3	Auto	5.637	541	1889	1	9.5872	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.637	541	541	17	5.0000	ng/mL	----
N-EtFOSA	ND(W/B)	----	----	703	18	----	ng/mL	----
N-EtFOSA-d9	Auto	5.776	703	1889	1	8.3593	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.776	703	703	18	5.0000	ng/mL	----
N-MeFOSE	Auto	5.660	161	808	19	0.7947	ng/mL	----
N-MeFOSE-d7	Auto	5.604	808	1889	1	11.6507	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.604	808	808	19	5.0000	ng/mL	----
N-EtFOSE	Auto	5.790	522	886	20	2.4088	ng/mL	----
N-EtFOSE-d9	Auto	5.731	886	1889	1	12.6901	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.731	886	886	20	5.0000	ng/mL	----
N-MeFOSAA	ND(W/B)	----	----	2196	21	----	ng/mL	----

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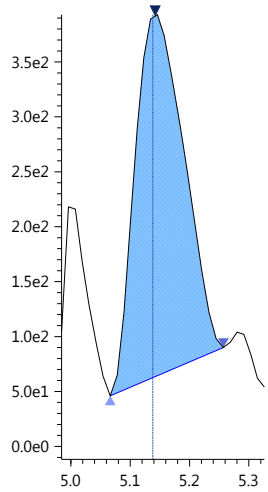
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-MeFOSAA-d3	Auto	5.067	2196	1889	1	52.8806	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.067	2196	2196	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.147	182	1364	22	1.0929	ng/mL	----
N-EtFOSAA-d5	Auto	5.153	1364	1889	1	36.3668	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.153	1364	1364	22	5.0000	ng/mL	----
4_2-FTS_1	ND(W/B)	----	----	418	23	----	ng/mL	----
4_2-FTS-13C	Auto	4.189	418	1889	1	12.0207	ng/mL	----
4_2-FTS-13C_IS	Auto	4.189	418	418	23	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.780	232	----	24	0.0000	ng/mL	----
6_2-FTS-13C	ND(W/B)	----	----	1889	1	----	ng/mL	----
6_2-FTS-13C_IS	ND(W/B)	----	----	----	24	----	ng/mL	----
8_2-FTS_1	ND(W/B)	----	----	----	25	----	ng/mL	----
8_2-FTS-13C	ND(W/B)	----	----	1889	1	----	ng/mL	----
8_2-FTS-13C_IS	ND(W/B)	----	----	----	25	----	ng/mL	----
10_2-FtS_1	ND(W/B)	----	----	----	25	----	ng/mL	----
HPFO_DA	Auto	4.354	651	432	26	8.0834	ng/mL	----
HFPO_DA-13C	Auto	4.292	432	1889	1	2.2794	ng/mL	----
HFPO_DA-13C_IS	Auto	4.292	432	432	26	5.0000	ng/mL	----
ADONA	ND(W/B)	----	----	432	26	----	ng/mL	----

13C7-PFUnDA_IS

Conc 5.0000
RT 5.142 Area 1889

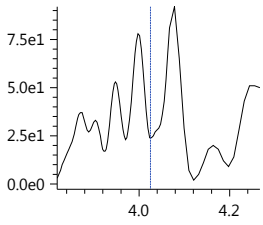
ISTD 570.00>525.00 (-) 3.93e2



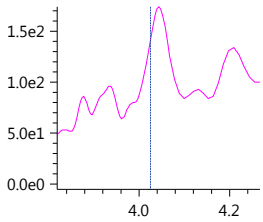
PFBS_1

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

Q 299.00>80.00 (-) 9.20e1



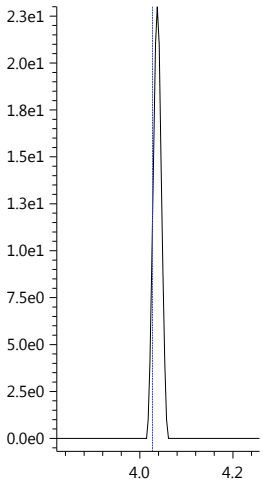
R1 298.80>99.00 (-) 1.74e2



PFBS-13C

Conc ----
RT ---- Area ----

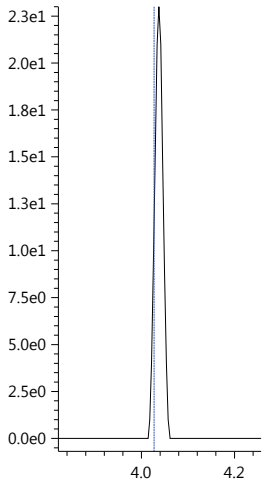
Q 301.80>80.00 (-) 2.30e1



PFBS-13C_IS

Conc ----
RT ---- Area ----

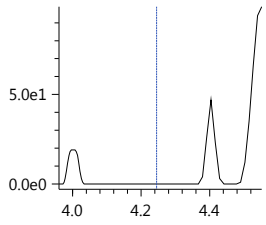
ISTD 301.80>80.00 (-) 2.30e1



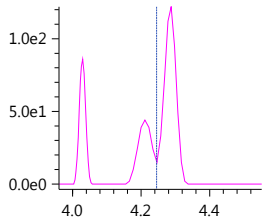
PFPeS

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

Q 349.00>99.00 (-) 9.90e1



R1 349.00>79.95 (-) 1.22e2



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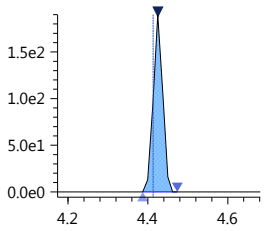
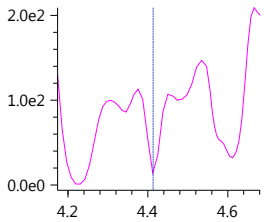
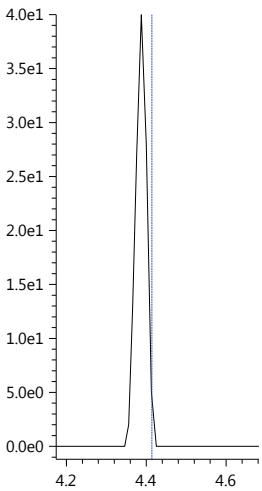
PFHxS_1
Conc 0.0000
RT 4.425 Area 314
R#1 0.00 (0.00)
Q 399.00>80.00 (-) 1.90e2



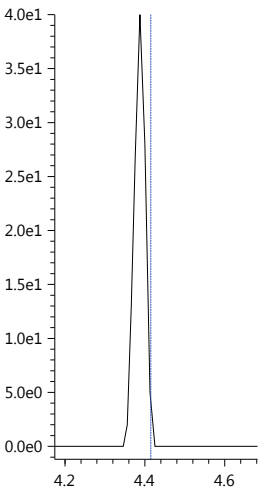
R1 399.00>99.00 (-) 2.09e2



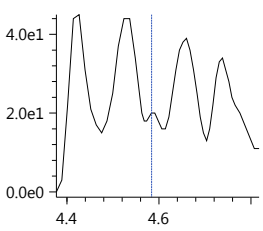
PFHxS-18O
Conc ----
RT ---- Area ----
Q 402.70>84.05 (-) 4.00e1



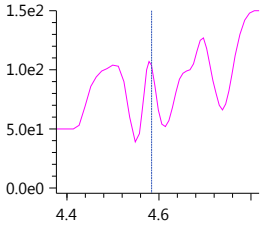
PFHxS-18O_IS
Conc ----
RT ---- Area ----
ISTD 402.70>84.05 (-) 4.00e1



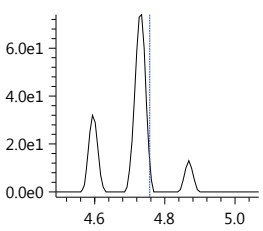
PFHpS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 449.00>80.15 (-) 4.50e1



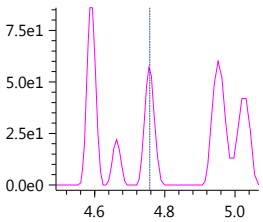
R1 449.00>99.20 (-) 1.50e2



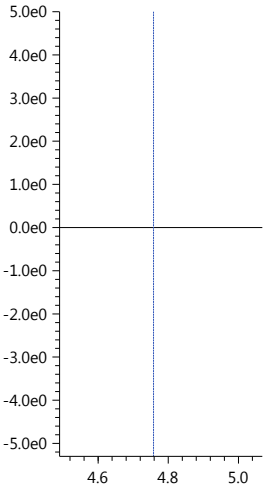
PFOS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 499.00>80.00 (-) 7.40e1



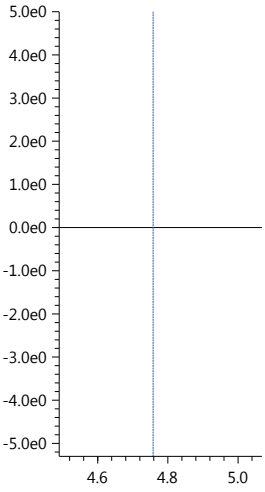
R1 499.00>99.00 (-) 8.60e1



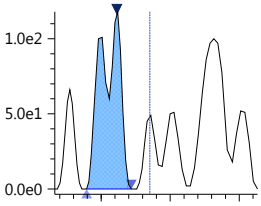
PFOS-13C
Conc ----
RT ---- Area ----
Q 502.80>80.05 (-) 0.00e0



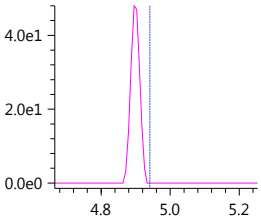
PFOS-13C_IS
Conc ----
RT ---- Area ----
ISTD 502.80>80.05 (-) 0.00e0



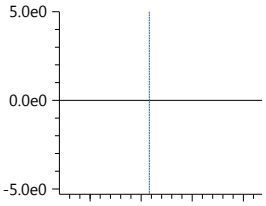
PFNS
Conc 0.0000
RT 4.846 Area 484
R#1 0.00 (0.00)
Q 549.00>99.00 (-) 1.18e2



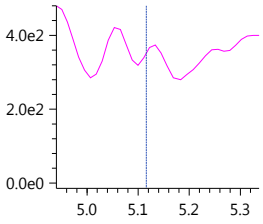
R1 549.00>79.95 (-) 4.80e1



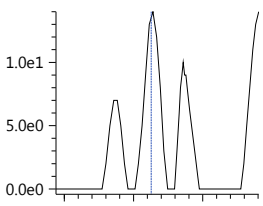
PFDS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 599.00>79.90 (-) 0.00e0



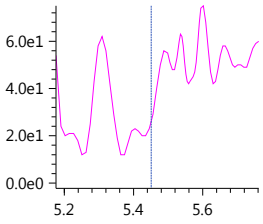
R1 599.00>99.10 (-) 4.80e2



PFDOS
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 699.00>79.95 (-) 1.40e1



R1 699.00>99.05 (-) 7.50e1



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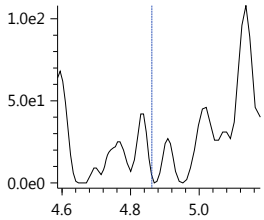
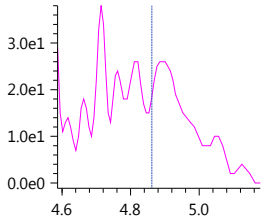
9Cl-PF3ONS

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

Q 531.00>351.00 (-) 1.08e2



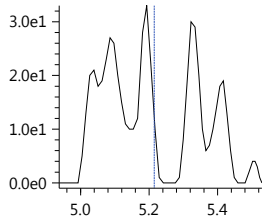
R1 531.00>98.90 (-) 3.80e1



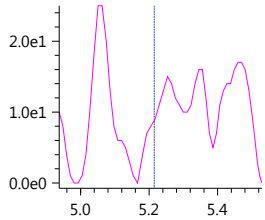
11Cl-PF3OUdS

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

Q 631.00>451.05 (-) 3.30e1



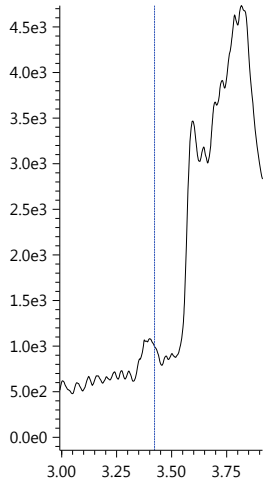
R1 631.00>98.90 (-) 2.50e1



PFBA

Conc ----
RT ---- Area ----

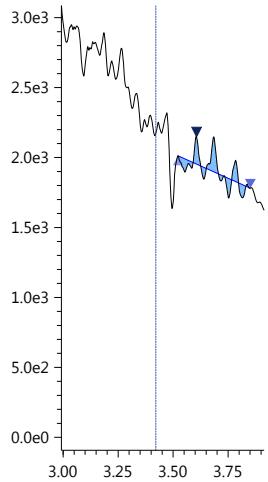
Q 213.00>169.10 (-) 4.73e3



PFBA-13C

Conc 0.5814
RT 3.607 Area 179

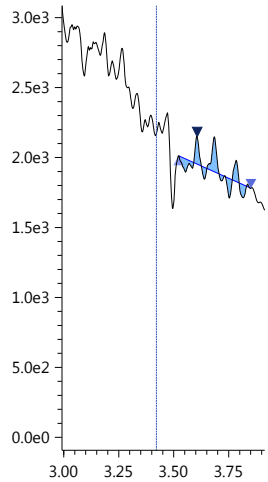
Q 216.90>172.15 (-) 3.09e3



PFBA-13C_IS

Conc 5.0000
RT 3.607 Area 179

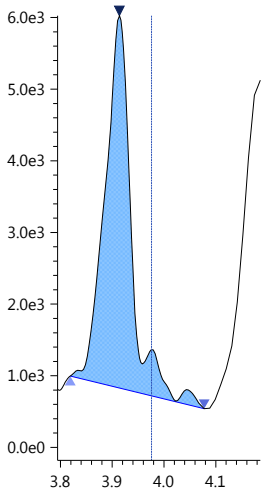
ISTD 216.90>172.15 (-) 3.09e3



PFPeA

Conc 0.0000
RT 3.914 Area 18453

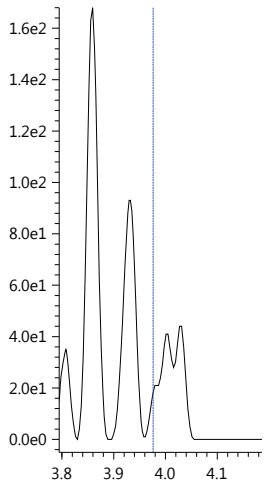
Q 263.05>219.10 (-) 6.03e3



PFPeA-13C

Conc ----
RT ---- Area ----

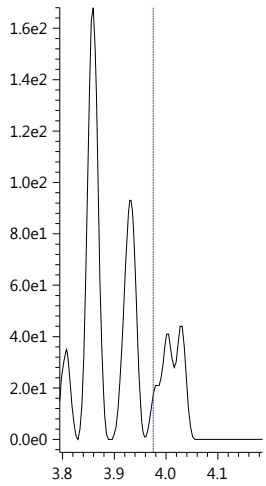
Q 267.90>223.00 (-) 1.68e2



PFPeA-13C_IS

Conc ----
RT ---- Area ----

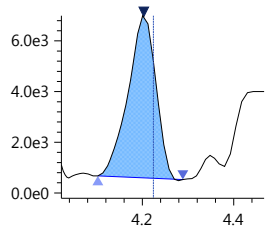
ISTD 267.90>223.00 (-) 1.68e2



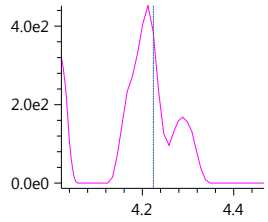
PFHxA

Conc 57.3813
RT 4.203 Area 27179
R#1 4.92 (0.00)

Q 313.00>269.00 (-) 6.99e3



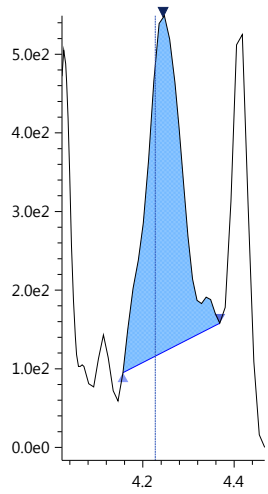
R1 313.00>119.10 (-) 4.52e2



PFHxA-13C

Conc 6.0448
RT 4.244 Area 2296

Q 314.90>270.10 (-) 5.49e2



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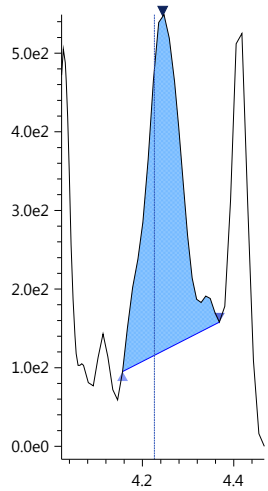
PFHxA-13C_IS
Conc 5.0000
RT 4.244 Area 2296



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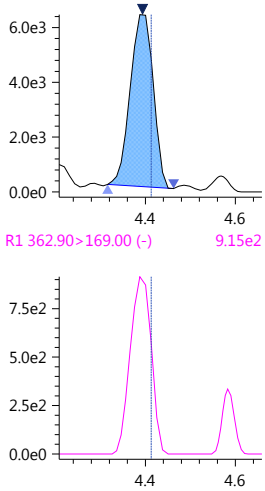
Conc 100.0343
RT 4.394 Area 22347
R#1 13.76 (0.00)



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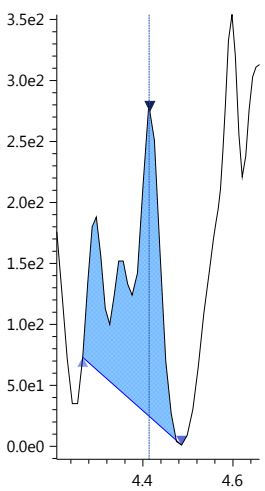
RT 4.415 Area 1326



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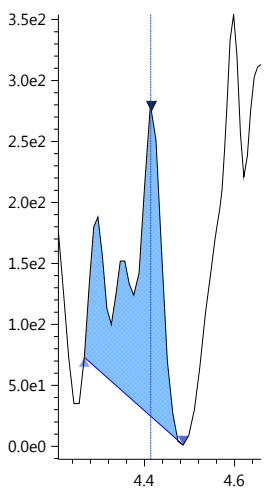
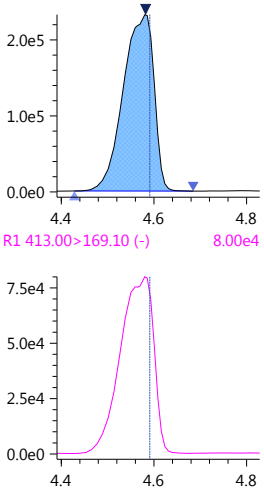


PFOA
Conc 3129.9695
RT 4.582 Area 1070150
R#1 34.24 (0.00)



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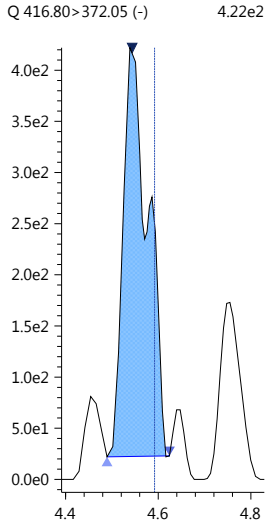
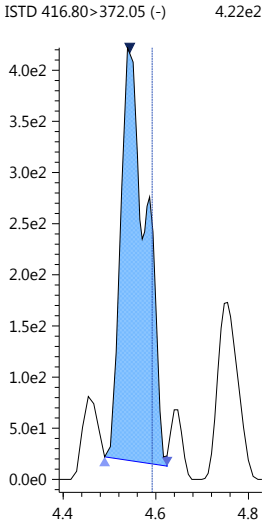
RT 4.544 Area 1506



PFOA-13C_IS
Conc 5.0000
RT 4.544 Area 1546



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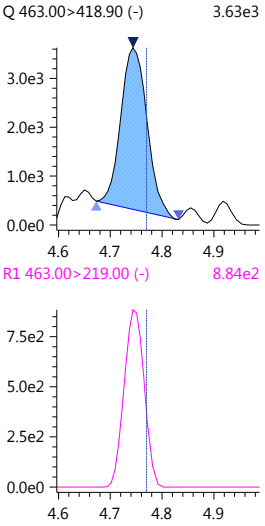
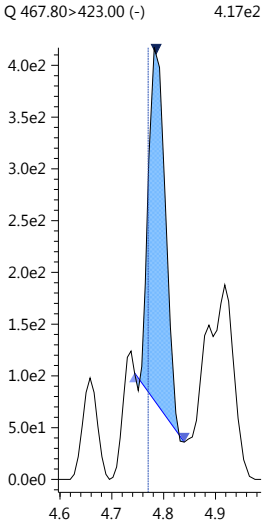
Conc 83.5721
RT 4.744 Area 11676
R#1 26.91 (0.00)



PFNA-13C
Conc 2.4265
RT 4.785 Area 777



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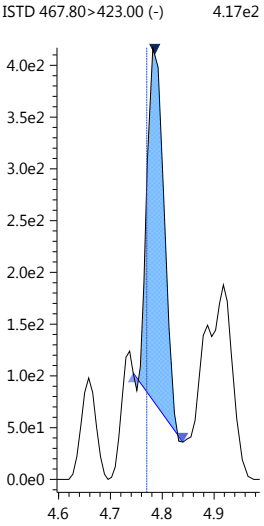
Conc 5.0000
RT 4.785 Area 777



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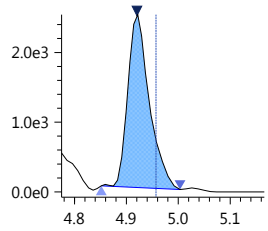
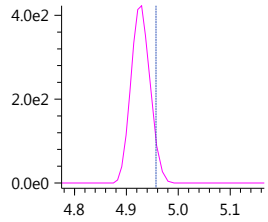
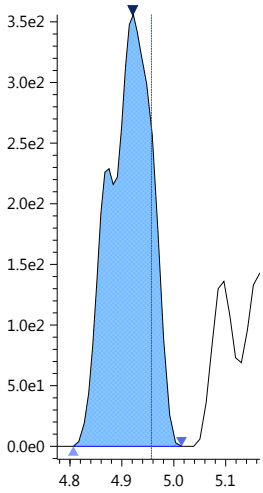
PFDA
Conc 16.5663
RT 4.920 Area 7146
R#1 16.94 (0.00)
Q 513.00>468.80 (-) 2.54e3



R1 513.00>219.10 (-) 4.23e2



PFDA-13C
Conc 7.9041
RT 4.921 Area 2128
Q 514.80>469.95 (-) 3.56e2



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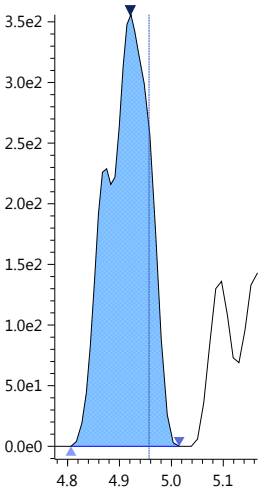

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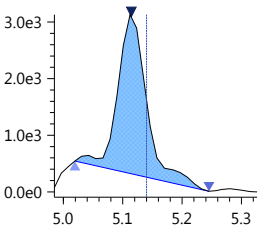
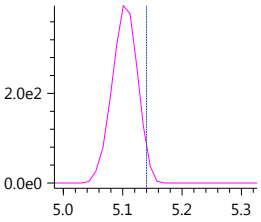
Conc 34.6158
RT 5.114 Area 9587
R#1 10.42 (0.00)
Q 563.00>518.90 (-) 3.13e3



R1 563.00>219.00 (-) 3.96e2



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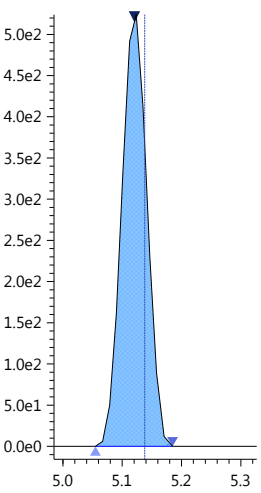
RT 5.121 Area 1571
Q 564.80>519.95 (-) 5.24e2



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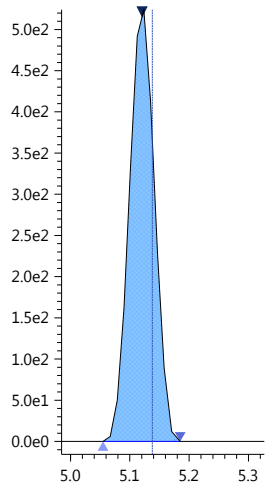
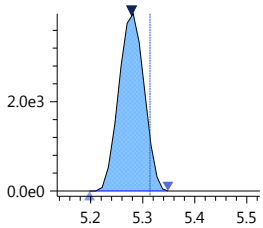
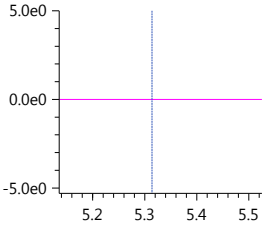
RT 5.121 Area 1571
ISTD 564.80>519.95 (-) 5.24e2



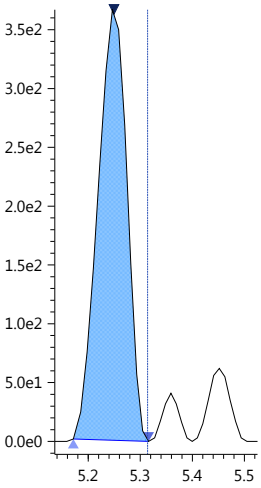
PFDoA
Conc 76.8187
RT 5.279 Area 13594
R#1 0.00 (0.00)
Q 613.05>569.00 (-) 3.97e3



R1 613.05>169.00 (-) 0.00e0



PFDoA-13C
Conc 4.5435
RT 5.249 Area 1428
Q 614.80>569.95 (-) 3.67e2



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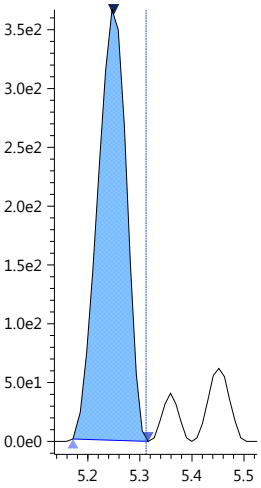

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Conc 78.3975
RT 5.451 Area 8920
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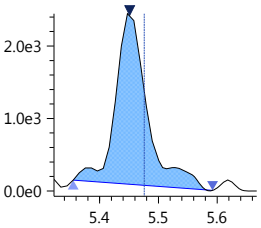
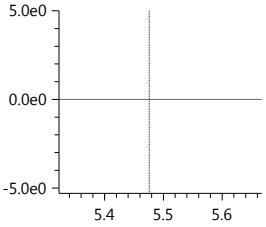
Q 663.00>618.90 (-) 2.45e3



R1 662.90>169.00 (-) 0.00e0



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Conc 44.8359
RT 5.616 Area 2484
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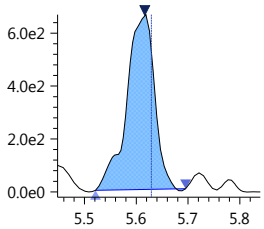
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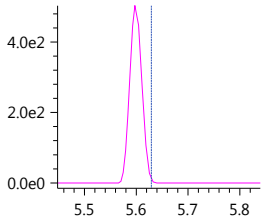

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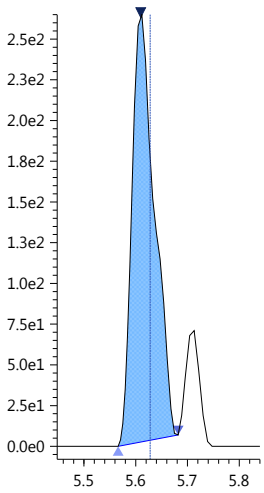

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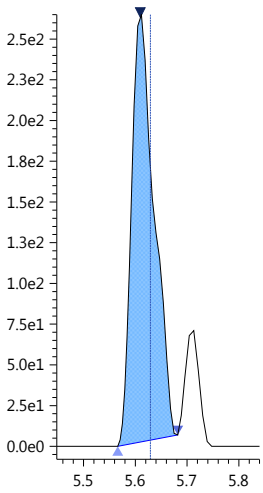

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Conc 7.6325
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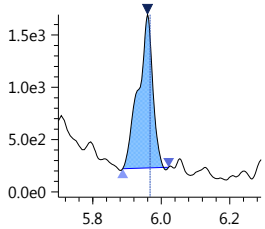
Q 813.00>769.05 (-) 1.70e3

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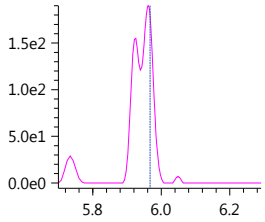

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Conc 7.1508
RT 5.961 Area 3032
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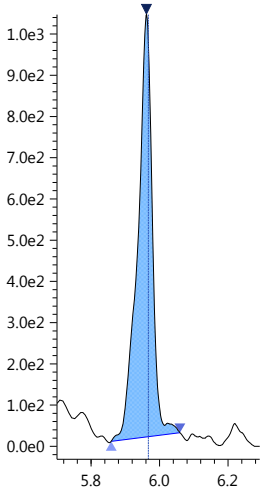

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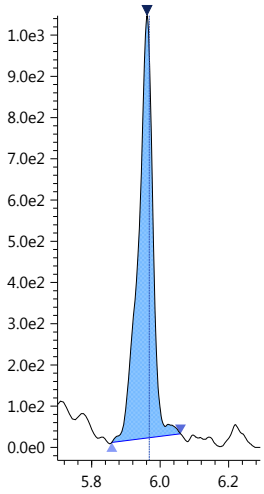

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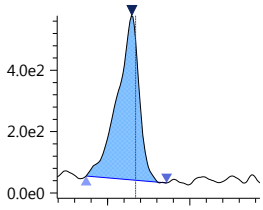
Conc 5.4582
RT 6.459 Area 1971
R#1 30.28 (0.00)
Q 913.00>868.85 (-) 5.78e2

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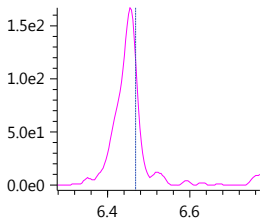

FOSA
Conc 1.8751
RT 5.155 Area 287
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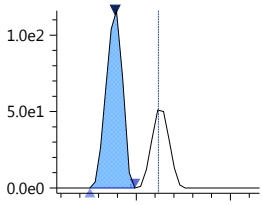
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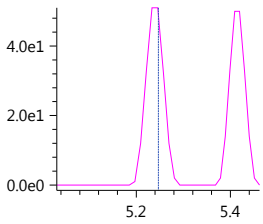

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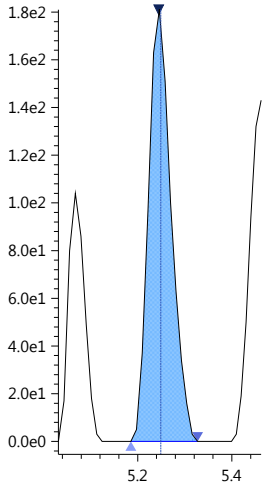
Q 506.00>78.05 (-) 1.81e2


FOSA-13C_IS
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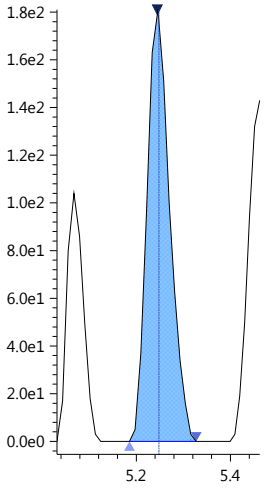
RT 5.245 Area 609
ISTD 506.00>78.05 (-) 1.81e2


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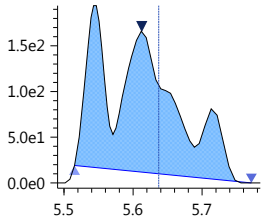
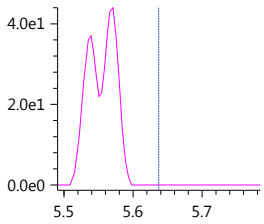
N-MeFOSA

Conc 6.7710
RT 5.612 Area 1154
R#1 0.00 (0.00)

Q 512.00>169.10 (-) 1.94e2



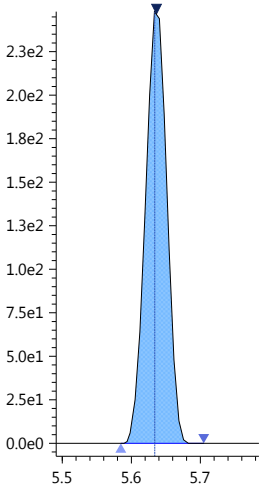
R1 512.00>219.00 (-) 4.40e1



N-MeFOSA-d3

Conc 9.5872
RT 5.637 Area 541

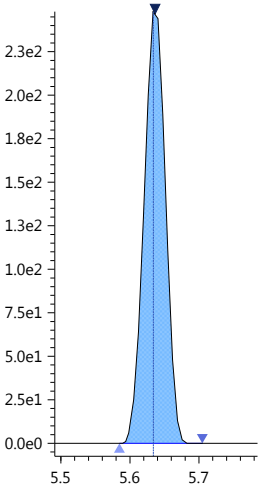
Q 514.90>168.90 (-) 2.48e2



N-MeFOSA-d3_IS

Conc 5.0000
RT 5.637 Area 541

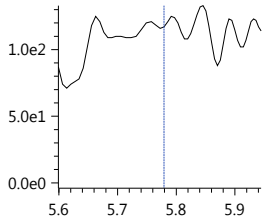
ISTD 514.90>168.90 (-) 2.48e2



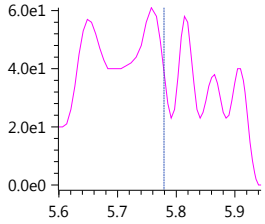
N-EtFOSA

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

Q 526.90>169.10 (-) 1.33e2



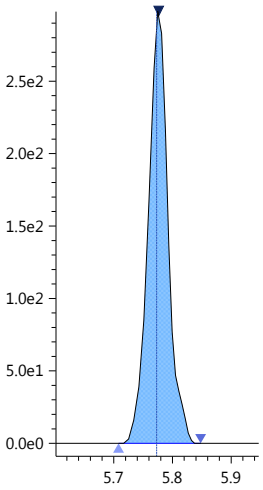
R1 526.90>219.00 (-) 6.10e1



N-EtFOSA-d9

Conc 8.3593
RT 5.776 Area 703

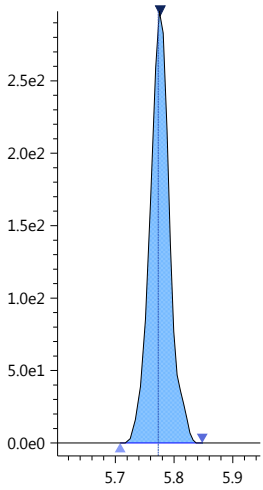
Q 530.90>169.15 (-) 2.98e2



N-EtFOSA-d9_IS

Conc 5.0000
RT 5.776 Area 703

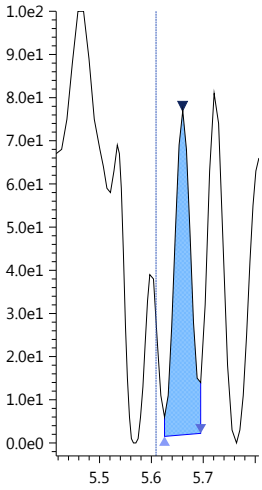
ISTD 530.90>169.15 (-) 2.98e2



N-MeFOSE

Conc 0.7947
RT 5.660 Area 161

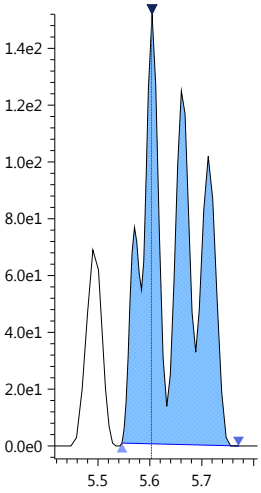
Q 616.00>59.00 (-) 1.00e2



N-MeFOSE-d7

Conc 11.6507
RT 5.604 Area 808

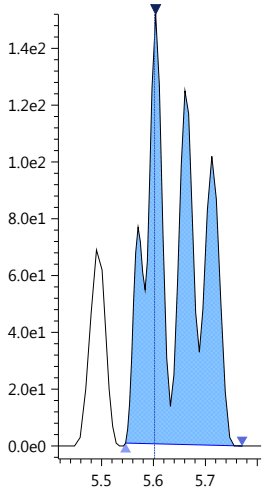
Q 622.70>59.10 (-) 1.52e2



N-MeFOSE-d7_IS

Conc 5.0000
RT 5.604 Area 808

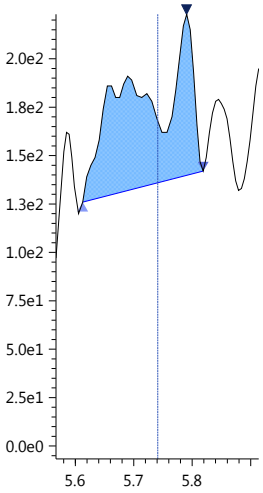
ISTD 622.70>59.10 (-) 1.52e2



N-EtFOSE

Conc 2.4088
RT 5.790 Area 522

Q 630.00>58.90 (-) 2.23e2



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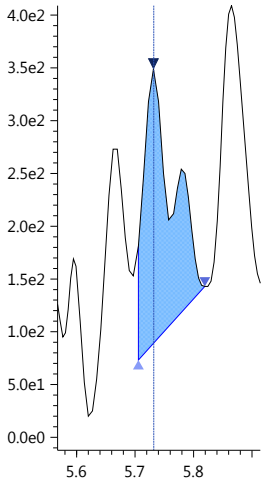
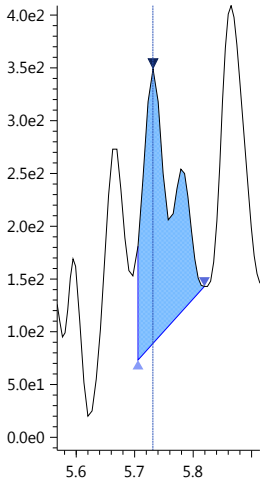
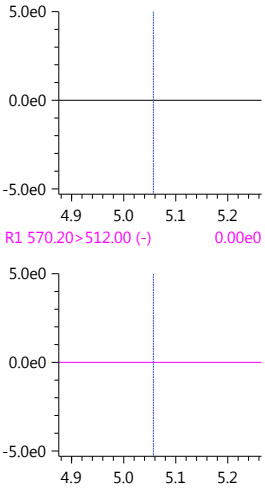
N-EtFOSE-d9
Conc 12.6901
RT 5.731 Area 886
Q 638.70>59.10 (-) 4.09e2



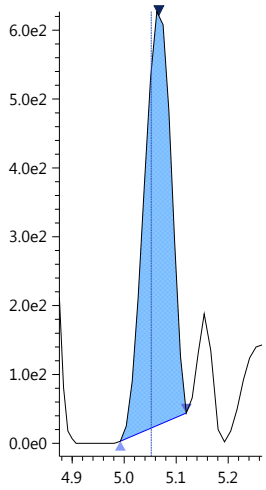
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.731 Area 886
ISTD 638.70>59.10 (-) 4.09e2



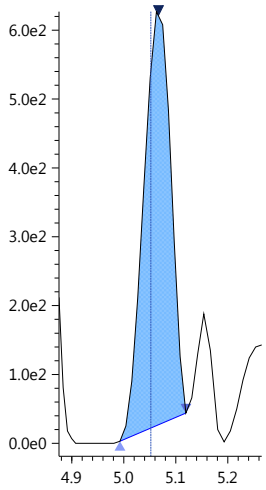
N-MeFOSAA
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 570.20>419.00 (-) 0.00e0



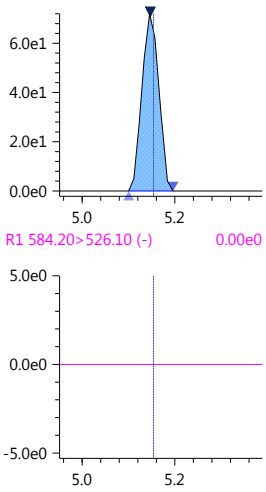
N-MeFOSAA-d3
Conc 52.8806
RT 5.067 Area 2196
Q 572.80>419.05 (-) 6.27e2



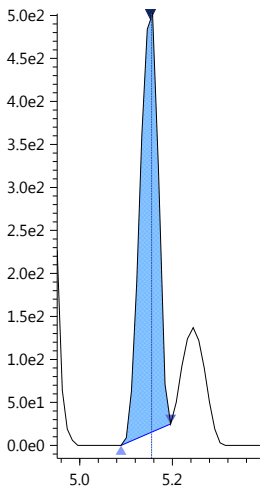
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.067 Area 2196
ISTD 572.80>419.05 (-) 6.27e2



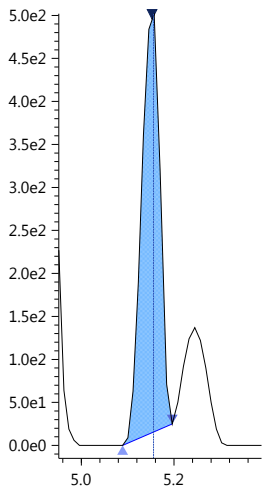
N-EtFOSAA
Conc 1.0929
RT 5.147 Area 182
R#1 0.00 (0.00)
Q 584.20>418.95 (-) 7.20e1



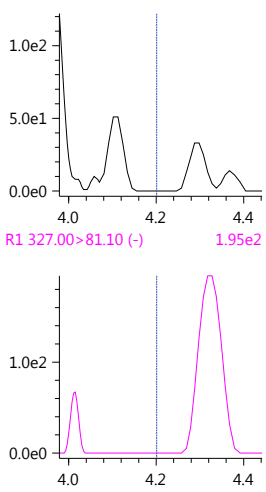
N-EtFOSAA-d5
Conc 36.3668
RT 5.153 Area 1364
Q 588.80>419.00 (-) 5.02e2



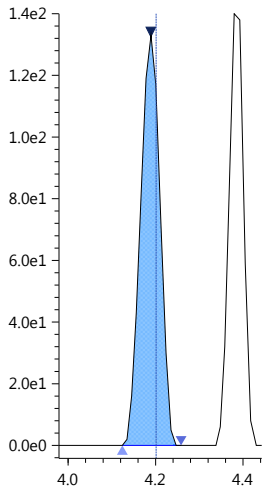
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.153 Area 1364
ISTD 588.80>419.00 (-) 5.02e2



4_2-FTS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 327.00>307.05 (-) 1.22e2



4_2-FTS-13C
Conc 12.0207
RT 4.189 Area 418
Q 328.80>309.05 (-) 1.40e2



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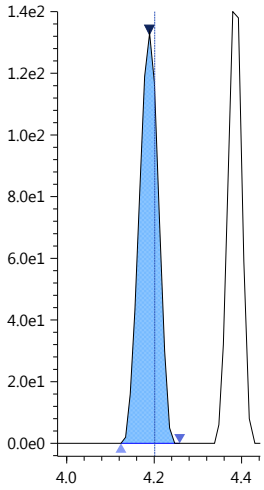
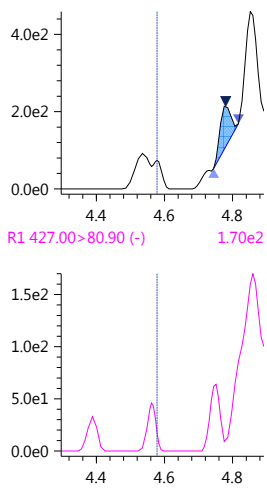
4_2-FTS-13C_IS
Conc 5.0000
RT 4.189 Area 418
ISTD 328.80>309.05 (-) 1.40e2

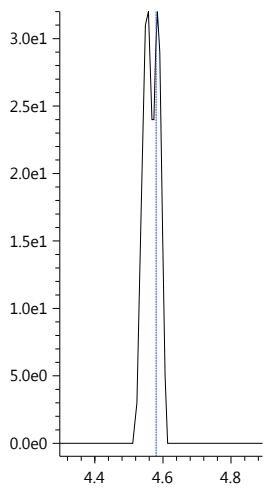


6_2-FTS_1
Conc 0.0000
RT 4.780 Area 232
R#1 0.00 (0.00)
Q 427.00>407.00 (-) 4.59e2

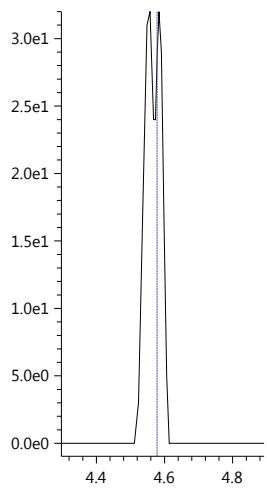


R1 427.00>80.90 (-) 1.70e2

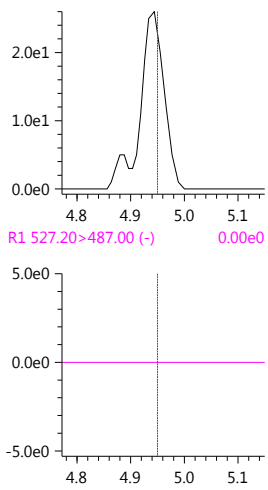
6_2-FTS-13C
Conc ----
RT ---- Area ----
Q 428.90>409.00 (-) 3.20e1



6_2-FTS-13C_IS
Conc ----
RT ---- Area ----
ISTD 428.90>409.00 (-) 3.20e1

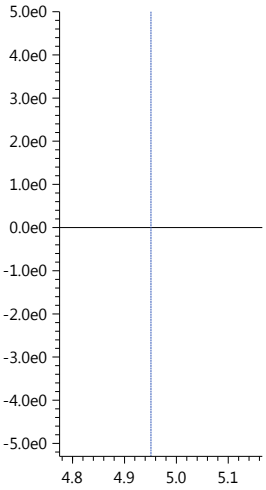


8_2-FTS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 527.10>506.90 (-) 2.60e1

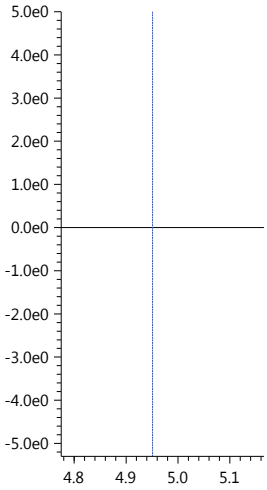


R1 527.20>487.00 (-) 0.00e0

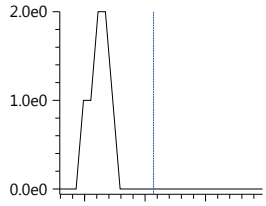
8_2-FTS-13C
Conc ----
RT ---- Area ----
Q 528.80>509.00 (-) 0.00e0



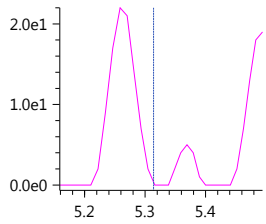
8_2-FTS-13C_IS
Conc ----
RT ---- Area ----
ISTD 528.80>509.00 (-) 0.00e0



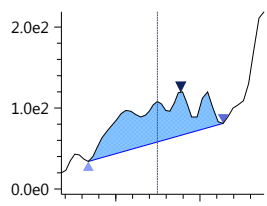
10_2-FtS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 627.00>606.95 (-) 2.00e0



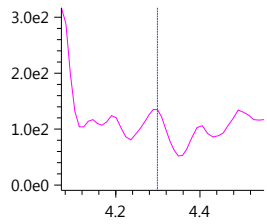
R1 627.00>81.25 (-) 2.20e1



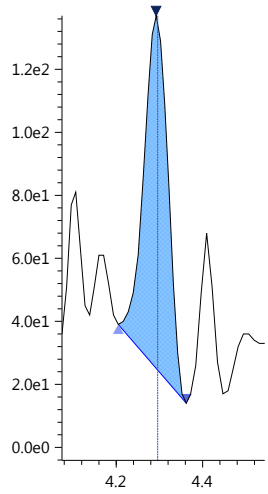
HPFO_DA
Conc 8.0834
RT 4.354 Area 651
R#1 0.00 (0.00)
Q 329.00>169.00 (-) 2.19e2



R1 329.00>285.10 (-) 3.17e2



HFPO_DA-13C
Conc 2.2794
RT 4.292 Area 432
Q 332.00>286.80 (-) 1.37e2



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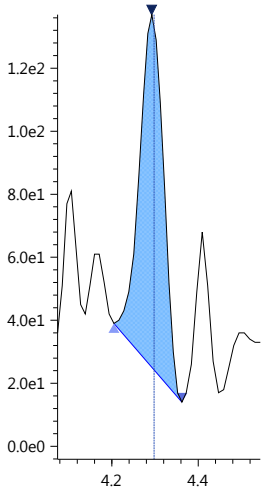
HFPO_DA-13C_IS

Conc 5.0000
RT 4.292 Area 432

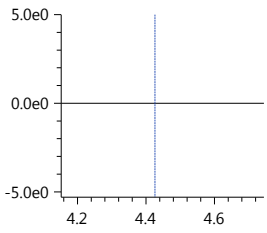
ISTD 332.00>286.80 (-) 1.37e2



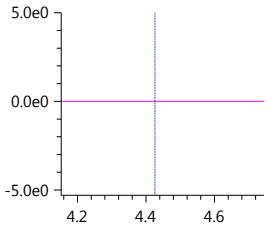
ADONA

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

Q 377.00>251.00 (-) 0.00e0



R1 377.00>84.95 (-) 0.00e0



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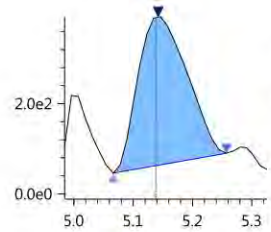
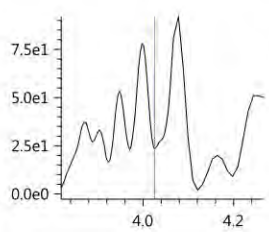
190807_023

Sample ID: T-PFOA
Date acquired: 8/7/2019 7:19:59 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190807_curve\190807_023.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 0

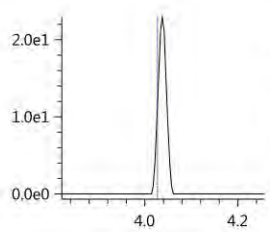
13C7-PFUnDA_IS
Conc 5.0000
RT 5.142 Area 1889
ISTD 570.00>525.00 (-) 3.93e2



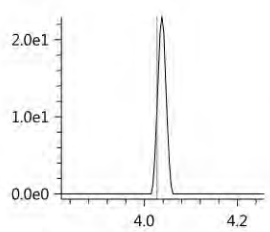
PFBS_1
Conc ----
RT ---- Area ----
Q 299.00>80.00 (-) 9.20e1



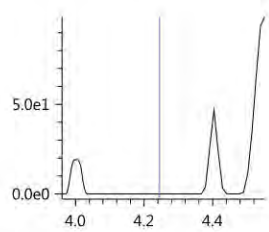
PFBS-13C
Conc ----
RT ---- Area ----
Q 301.80>80.00 (-) 2.30e1



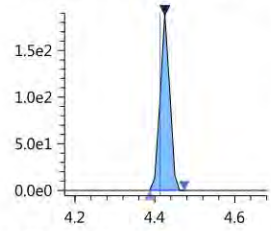
PFBS-13C_IS
Conc ----
RT ---- Area ----
ISTD 301.80>80.00 (-) 2.30e1



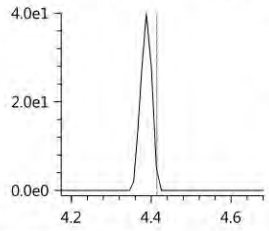
PFPeS
Conc ----
RT ---- Area ----
Q 349.00>99.00 (-) 9.90e1



PFHxS_1
Conc 0.0000
RT 4.425 Area 314
Q 399.00>80.00 (-) 1.90e2



PFHxS-18O
Conc ----
RT ---- Area ----
Q 402.70>84.05 (-) 4.00e1



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Conc ----
RT ---- Area ----
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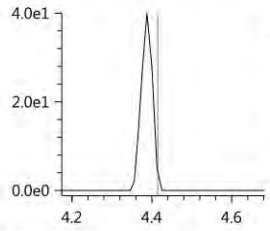
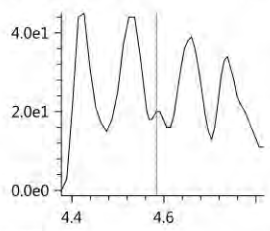
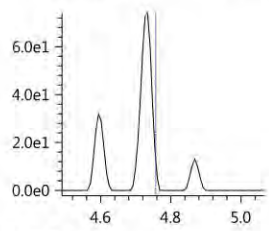


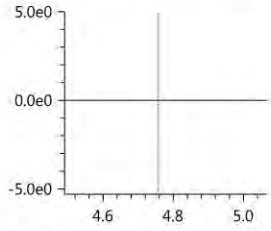
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 4.50e1



PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 7.40e1



PFOS-13C
Conc ----
RT ---- Area ----
Q 502.80>80.05 (-) 0.00e0



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Conc ----
RT ---- Area ----
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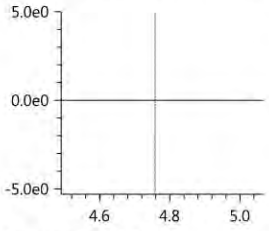

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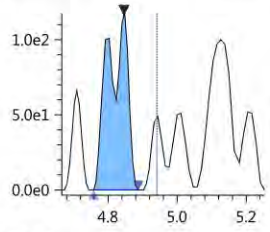
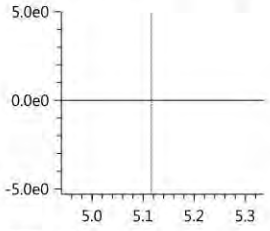
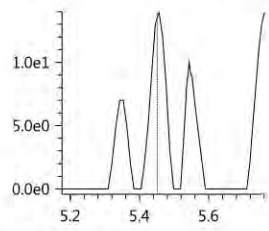
Conc 0.0000
RT 4.846 Area 484
Q 549.00>99.00 (-) 1.18e2



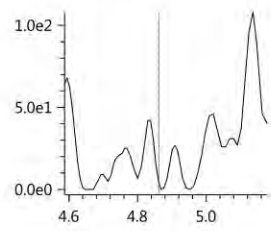
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



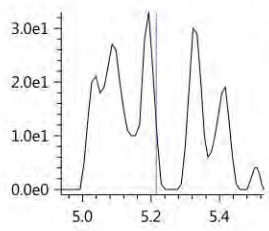
PFDOS
Conc ----
RT ---- Area ----
Q 699.00>79.95 (-) 1.40e1



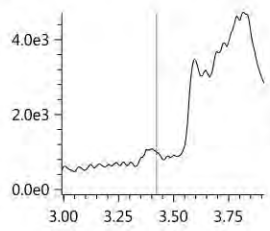
9Cl-PF3ONS
Conc ----
RT ---- Area ----
Q 531.00>351.00 (-) 1.08e2



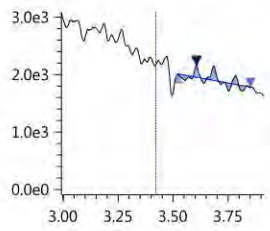
11Cl-PF3OUdS
Conc ----
RT ---- Area ----
Q 631.00>451.05 (-) 3.30e1



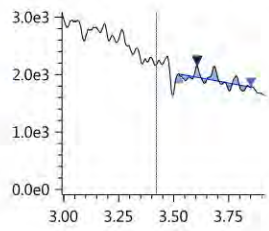
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 4.73e3



PFBA-13C
Conc 0.5814
RT 3.607 Area 179
Q 216.90>172.15 (-) 3.09e3



PFBA-13C_IS
Conc 5.0000
RT 3.607 Area 179
ISTD 216.90>172.15 (-) 3.09e3



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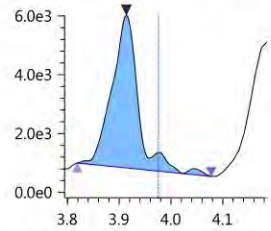
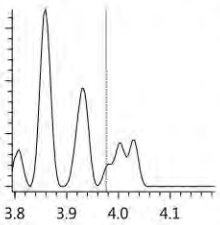
PFPeA
Conc 0.0000
RT 3.914 Area 18453
Q 263.05>219.10 (-) 6.03e3



PFPeA-13C
Conc ----
RT ---- Area ----
Q 267.90>223.00 (-) 1.68e2



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Conc ----
RT ---- Area ----
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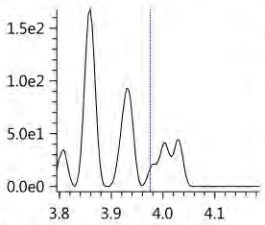
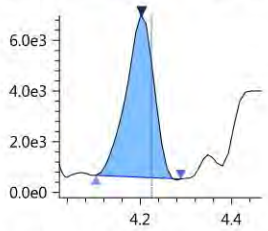
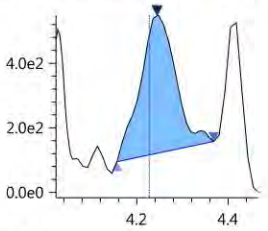


PFHxA
Conc 51.0590
RT 4.203 Area 27179
Q 313.00>269.00 (-) 6.99e3



PFHxA-13C
Conc 6.0448
RT 4.244 Area 2296
Q 314.90>270.10 (-) 5.49e2



PFHxA-13C_IS
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RT 4.244 Area 2296
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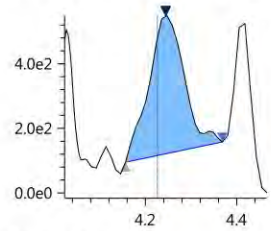
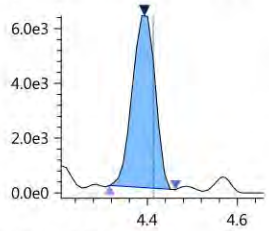
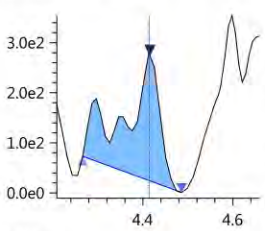


PFHpA
Conc 91.6534
RT 4.394 Area 22347
Q 362.90>319.00 (-) 6.47e3



PFHpA-13C
Conc 2.9795
RT 4.415 Area 1326
Q 366.90>322.10 (-) 3.54e2



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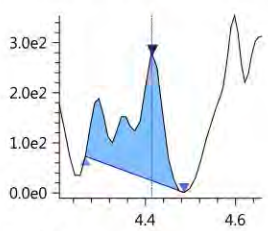

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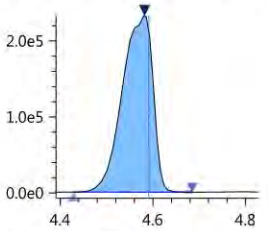
Conc 2855.1291
RT 4.582 Area 1070150
Q 413.00>369.00 (-) 2.33e5



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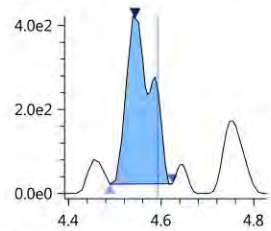
Q 416.80>372.05 (-) 4.22e2



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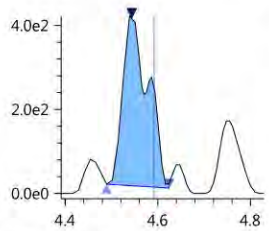

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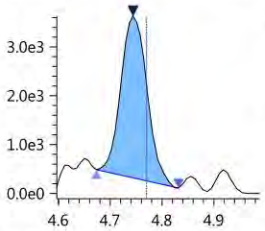
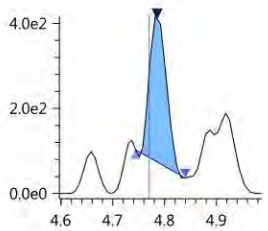
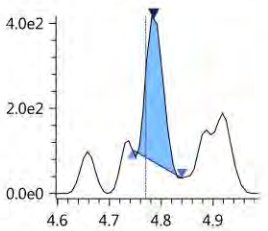
Conc 79.5271
RT 4.744 Area 11676
Q 463.00>418.90 (-) 3.63e3



PFNA-13C
Conc 2.4265
RT 4.785 Area 777
Q 467.80>423.00 (-) 4.17e2



PFNA-13C_IS
Conc 5.0000
RT 4.785 Area 777
ISTD 467.80>423.00 (-) 4.17e2



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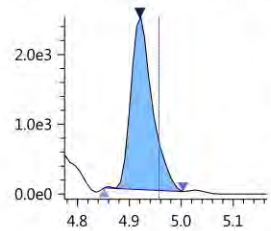
Conc 16.5818
RT 4.920 Area 7146
Q 513.00>468.80 (-) 2.54e3



PFDA-13C
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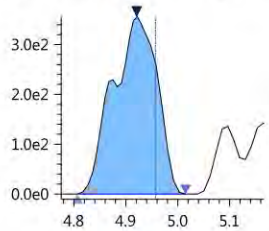
RT 4.921 Area 2128
Q 514.80>469.95 (-) 3.56e2



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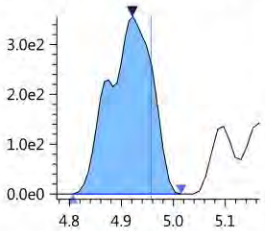

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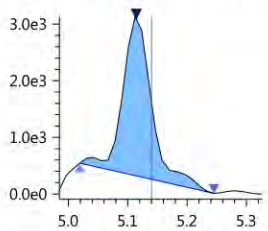
Q 563.00>518.90 (-) 3.13e3



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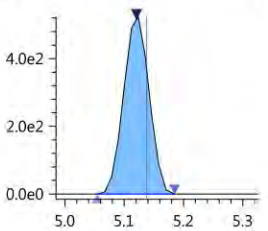

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PFUnA-13C_IS
Conc 5.0000
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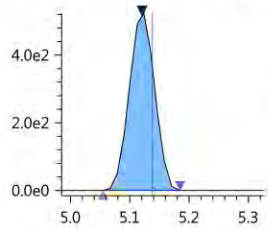
ISTD 564.80>519.95 (-) 5.24e2



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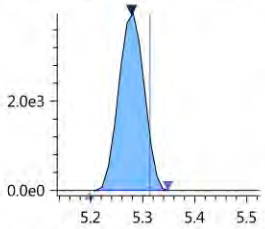
Q 613.05>569.00 (-) 3.97e3



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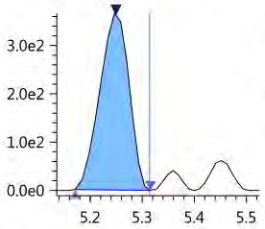
Q 614.80>569.95 (-) 3.67e2



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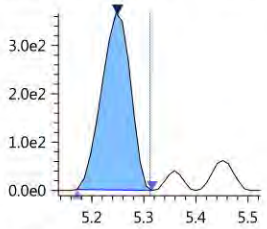

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Conc 74.9060
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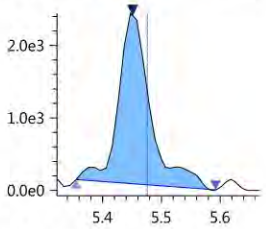
Q 663.00>618.90 (-) 2.45e3



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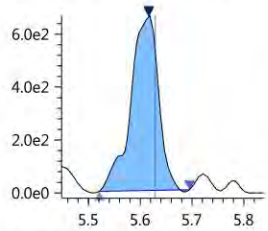
Q 713.40>669.00 (-) 6.70e2



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Conc 2.3038
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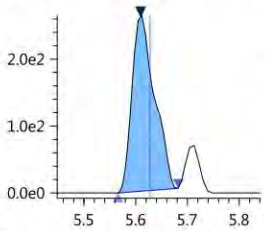
Q 714.70>669.90 (-) 2.65e2



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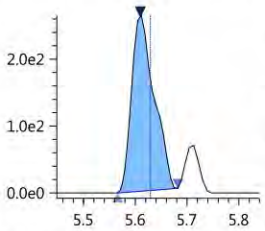

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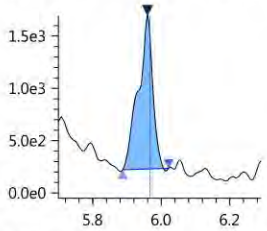
Q 813.00>769.05 (-) 1.70e3



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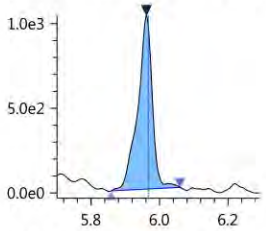
RT 5.961 Area 3032
Q 815.00>770.05 (-) 1.05e3



13C-PFHxDA_IS
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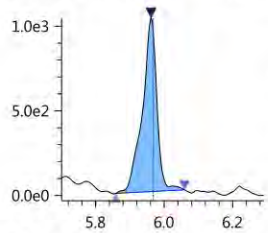
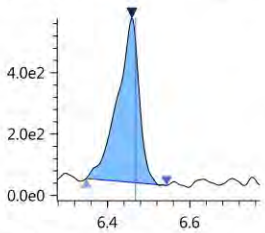
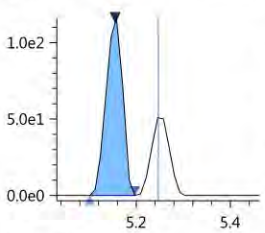
RT 5.961 Area 3032
ISTD 815.00>770.05 (-) 1.05e3



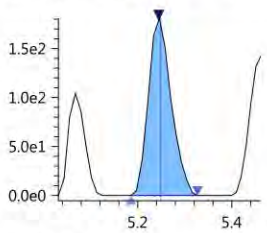
PFODA
Conc 2.1660
RT 6.459 Area 1971
Q 913.00>868.85 (-) 5.78e2



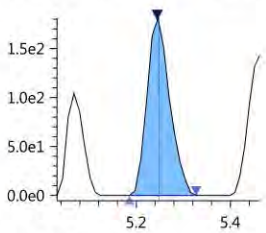
FOSA
Conc 1.8754
RT 5.155 Area 287
Q 498.20>78.00 (-) 1.16e2



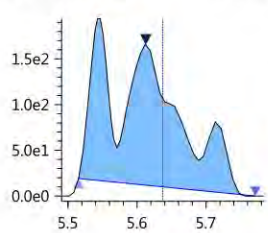
FOSA-13C
Conc 4.2308
RT 5.245 Area 609
Q 506.00>78.05 (-) 1.81e2



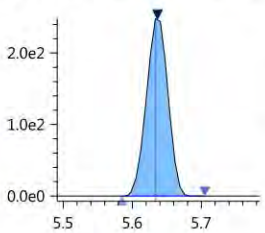
FOSA-13C_IS
Conc 5.0000
RT 5.245 Area 609
ISTD 506.00>78.05 (-) 1.81e2



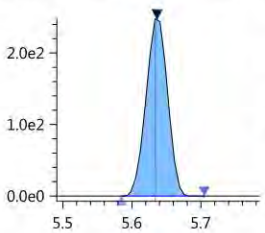
N-MeFOSA
Conc 4.2521
RT 5.612 Area 723
Q 512.00>169.10 (-) 1.94e2



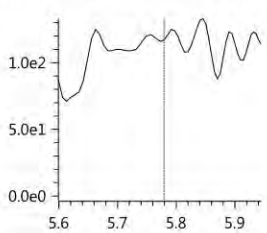
N-MeFOSA-d3
Conc 9.5872
RT 5.637 Area 541
Q 514.90>168.90 (-) 2.48e2



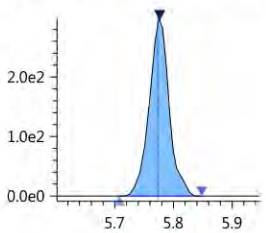
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.637 Area 541
ISTD 514.90>168.90 (-) 2.48e2



N-EtFOSA
Conc ----
RT ---- Area ----
Q 526.90>169.10 (-) 1.33e2



N-EtFOSA-d9
Conc 8.3593
RT 5.776 Area 703
Q 530.90>169.15 (-) 2.98e2



Insight Report

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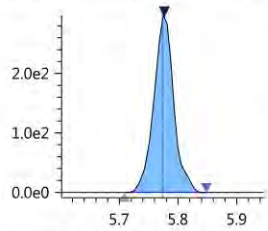
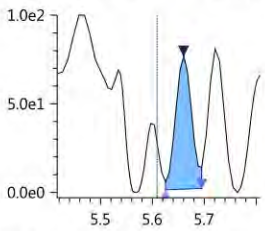
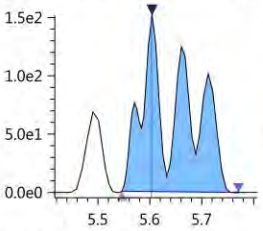
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.776 Area 703
ISTD 530.90>169.15 (-) 2.98e2



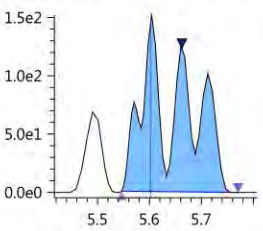
N-MeFOSE
Conc 1.4207
RT 5.660 Area 161
Q 616.00>59.00 (-) 1.00e2



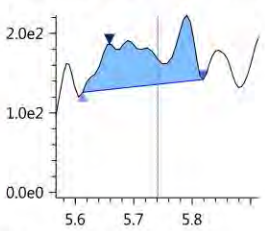
N-MeFOSE-d7
Conc 11.6507
RT 5.604 Area 808
Q 622.70>59.10 (-) 1.52e2



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.663 Area 449
ISTD 622.70>59.10 (-) 1.52e2



N-EtFOSE
Conc 2.0248
RT 5.658 Area 315
Q 630.00>58.90 (-) 2.23e2



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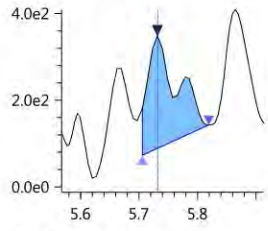
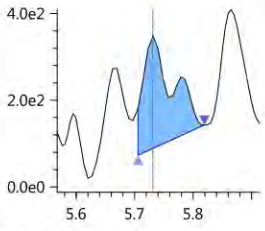
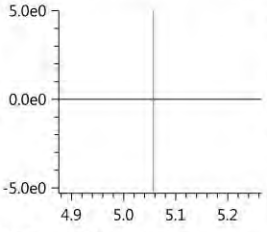
Conc 12.6901
RT 5.731 Area 886
Q 638.70>59.10 (-) 4.09e2



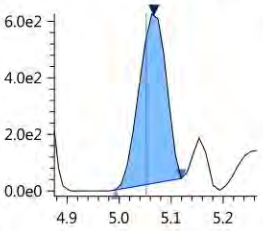
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.865 Area 642
ISTD 638.70>59.10 (-) 4.09e2



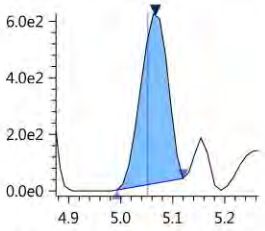
N-MeFOSAA
Conc ----
RT ---- Area ----
Q 570.20>419.00 (-) 0.00e0



N-MeFOSAA-d3
Conc 52.8806
RT 5.067 Area 2196
Q 572.80>419.05 (-) 6.27e2



N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.067 Area 2196
ISTD 572.80>419.05 (-) 6.27e2



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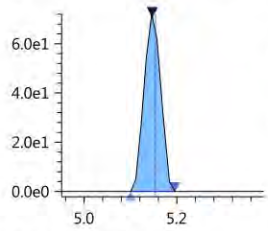
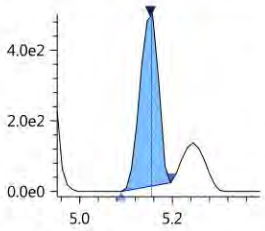
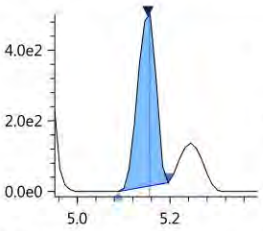
Conc 1.3292
RT 5.147 Area 182
Q 584.20>418.95 (-) 7.20e1



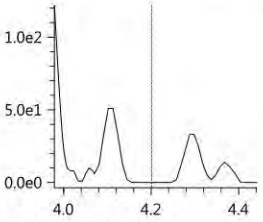
N-EtFOSAA-d5
Conc 36.3668
RT 5.153 Area 1364
Q 588.80>419.00 (-) 5.02e2



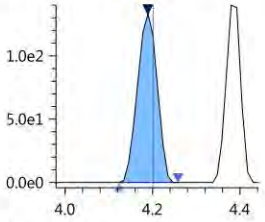
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.153 Area 1364
ISTD 588.80>419.00 (-) 5.02e2



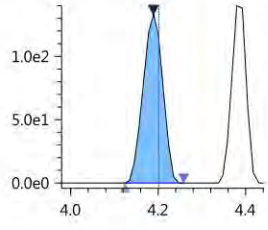
4_2-FTS_1
Conc ----
RT ---- Area ----
Q 327.00>307.05 (-) 1.22e2



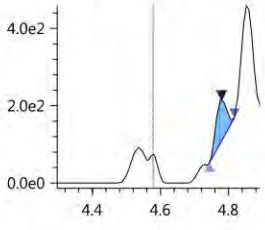
4_2-FTS-13C
Conc 12.0207
RT 4.189 Area 418
Q 328.80>309.05 (-) 1.40e2



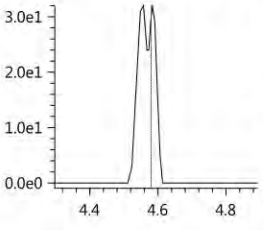
4_2-FTS-13C_IS
Conc 5.0000
RT 4.189 Area 418
ISTD 328.80>309.05 (-) 1.40e2



6_2-FTS_1
Conc 0.0000
RT 4.780 Area 232
Q 427.00>407.00 (-) 4.59e2



6_2-FTS-13C
Conc ----
RT ---- Area ----
Q 428.90>409.00 (-) 3.20e1



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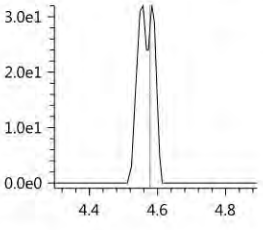
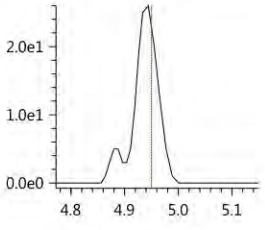
Conc ----
RT ---- Area ----
ISTD 428.90>409.00 (-) 3.20e1



8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 2.60e1

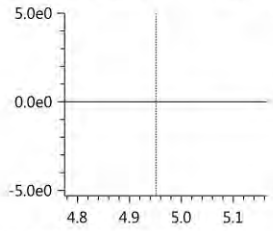


Insight Report

Printed at 8/8/2019 8:44:13 AM

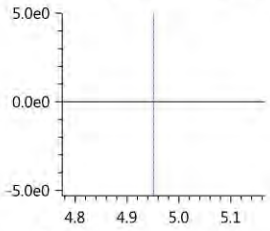
8_2-FTS-13C

Conc ----
RT ---- Area ----
Q 528.80>509.00 (-) 0.00e0



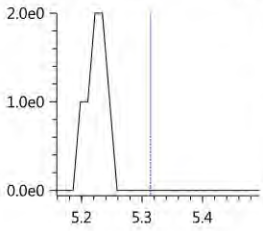
8_2-FTS-13C_IS

Conc ----
RT ---- Area ----
ISTD 528.80>509.00 (-) 0.00e0



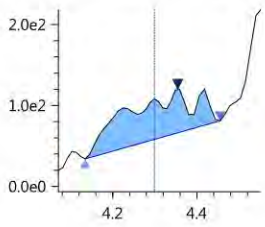
10_2-FtS_1

Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 2.00e0



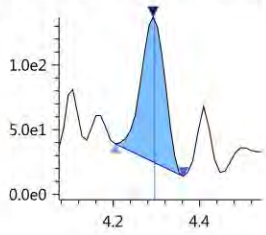
HPFO_DA

Conc 8.0834
RT 4.354 Area 651
Q 329.00>169.00 (-) 2.19e2



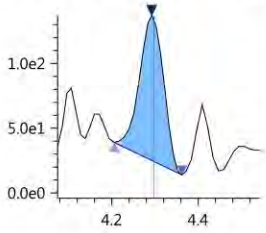
HFPO_DA-13C

Conc 2.2794
RT 4.292 Area 432
Q 332.00>286.80 (-) 1.37e2



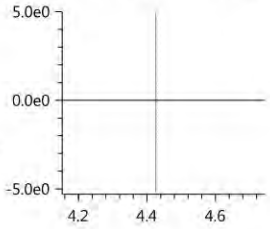
HFPO_DA-13C_IS

Conc 5.0000
RT 4.292 Area 432
ISTD 332.00>286.80 (-) 1.37e2



ADONA

Conc ----
RT ---- Area ----
Q 377.00>251.00 (-) 0.00e0



190812_b1

ICAL Date: 8/5/2019
Std. xp: 10/19/2019
ICAL ID: KC190319
LIMS ID: 646922

st Review: LDomreis
2nd Review: AUG 13 2019
Column: Phenomenex EVO-C18 100X4.6 mm S/N: H19-179327
Mobile Phases **A:** 5mM Ammonium Acetate in H2O 19-OLC-02-41K **B:** 5mM Ammonium Acetate In MeOH 19-OLC-02-41L

ALS Environmental
LCMS06 -Shimadzu 8050

	Sample Name		File Name	Acquisition Method	Dilution	R	
1	1.0 PPB CCV	19-OLC-01-44B	190812_007	PFAS_190807_35_CM.lcm	1x	☒	High HpS, PFNS, PFDS, High bias samples ND. High PFDA, DoA, MeFOSAA, EtFOSAA, 8:2 surr, natives ok.
2	IB	19-OLC-01-44A	190812_008	PFAS_190807_35_CM.lcm	1x	☒	High EtFOSAA, MeFOSAA, FOSA, TeDA, DoA, PFDA, PFNA, HxA surr, High bias ND
3	KQ1911251-06	MB	190812_009	PFAS_190807_35_CM.lcm	1x	☒	
4	KQ1911251-05	LCS	190812_010	PFAS_190807_35_CM.lcm	1x	☒	
5	K1907270-001		190812_011	PFAS_190807_35_CM.lcm	1x	☒	High 4:2 surr, High bias ND
6	K1907270-002		190812_012	PFAS_190807_35_CM.lcm	1x	☒	High PFOA, PFNA, PFDA, DoA surr, high bias ND
7	K1907270-003		190812_013	PFAS_190807_35_CM.lcm	1x	☒	High HxA surr, High bias ND
8	K1907270-004		190812_014	PFAS_190807_35_CM.lcm	1x	☒	High PFDA, DoA surr, High bias ND
9	K1907067-002RE		190812_015	PFAS_190807_35_CM.lcm	1x	☒	High HxA surr, High bias ND
10	KQ1911251-01	K1907067-002RE MS	190812_016	PFAS_190807_35_CM.lcm	1x	☒	
11	KQ1911251-02	K1907067-002RE DMS	190812_017	PFAS_190807_35_CM.lcm	1x	☒	
12	R1907111-001RE		190812_018	PFAS_190807_35_CM.lcm	1x	☒	
13	KQ1911251-03	R1907111-001RE MS	190812_019	PFAS_190807_35_CM.lcm	1x	☒	
14	KQ1911251-04	R1907111-001RE DMS	190812_020	PFAS_190807_35_CM.lcm	1x	☒	High PFBA, HxA, PFNA surr, natives ok

J:\LCMS06\Data\190812_b1\190812_b1 inject log

190807_b8

ALS Environmental

ICAL Date: 8/7/2019
Std. xp: 10/19/2019
ICAL ID: KC1900319
LIMS ID: 646328

1st Review: LDomreis
2nd Review:
LCMS06 -Shimadzu 8050
Column: Phenomenex EVO-C18 100X4.6 mm S/N: H19-179327
Mobile Phases **A:** 5mM Ammonium Acetate in H2O 19-OLC-01-43A **B:** 5mM Ammonium Acetate In MeOH 19-OLC-01-43B

	Sample Name		File Name	Acquisition Method	Dilution	R	
1	1.0 PPB CCV	19-OLC-01-42B	190807_141	PFAS_190807_35_CM.lcm	1x	☒	high HxS, HpA, PFNA, PFDA, EtFOSAA surr, native ok. High PFNS, PFDS, 4:2, samples ND
2	IB	19-OLC-01-42A	190807_142	PFAS_190807_35_CM.lcm	1x	☒	high PFOS, HxA, PFNA, PFDA, DoA, FOSA, HFPO-DA surr, high bias ND. High EtFOSAA, high bias, < MRL
3	KQ1910949-06	MB	190807_143	PFAS_190807_35_CM.lcm	1x	☒	
4	KQ1910949-05	LCS	190807_144	PFAS_190807_35_CM.lcm	1x	☒	
5	K1906950-001		190807_145	PFAS_190807_35_CM.lcm	1x	☒	
6	K1906950-002		190807_146	PFAS_190807_35_CM.lcm	1x	☒	high HxS surr, high bias ND
7	K1906950-003		190807_147	PFAS_190807_35_CM.lcm	1x	☒	
8	K1906950-004		190807_148	PFAS_190807_35_CM.lcm	1x	☒	
9	K1906953-001		190807_149	PFAS_190807_35_CM.lcm	1x	☒	high PFNA surr, high bias ND
10	K1907061-001		190807_150	PFAS_190807_35_CM.lcm	1x	☒	
11	K1907067-001		190807_151	PFAS_190807_35_CM.lcm	1x	☒	
12	K1907067-002		190807_152	PFAS_190807_35_CM.lcm	1x	☒	Sample re-extracted with new MS/DMS
13	KQ1910949-03	K1907067-002 MS	190807_153	PFAS_190807_35_CM.lcm	1x		NR, MS/DMS not spiked with surrogate due to lab oversight. See benchsheet. Re-extracted with parent sample
14	KQ1910949-04	K1907067-002 DMS	190807_154	PFAS_190807_35_CM.lcm	1x		NR, MS/DMS not spiked with surrogate due to lab oversight. See benchsheet. Re-extracted with parent sample
15	K1907067-003		190807_155	PFAS_190807_35_CM.lcm	1x	☒	high HxS surr, high bias ND
16	K1907067-004		190807_156	PFAS_190807_35_CM.lcm	1x	☒	high HxS, PFNA surr, high bias ND
17	K1907067-005		190807_157	PFAS_190807_35_CM.lcm	1x	☒	high PFNA surr, high bias ND
18	K1907067-006		190807_158	PFAS_190807_35_CM.lcm	1x	☒	
19	K1907067-007		190807_159	PFAS_190807_35_CM.lcm	1x	☒	
20	R1907111-001		190807_160	PFAS_190807_35_CM.lcm	1x	☒	Sample re-extracted with new MS/DMS. High PFBA surr, target > MRL, see re-extract. High TeDA, HxA surr, ND
21	KQ1910949-01	R1907111-001 MS	190807_161	PFAS_190807_35_CM.lcm	1x		NR, MS/DMS not spiked with surrogate due to lab oversight. See benchsheet. Re-extracted with parent sample
22	KQ1910949-02	R1907111-001 DMS	190807_162	PFAS_190807_35_CM.lcm	1x		NR, MS/DMS not spiked with surrogate due to lab oversight. See benchsheet. Re-extracted with parent sample
23	R1907111-002		190807_163	PFAS_190807_35_CM.lcm	1x	☒	
24	R1907111-003		190807_164	PFAS_190807_35_CM.lcm	1x	☒	high PFBA surr, target > MRL, RR to confirm
25	R1907111-004		190807_165	PFAS_190807_35_CM.lcm	1x	☒	
26	R1907111-005		190807_166	PFAS_190807_35_CM.lcm	1x	☒	

J:\LCMS06\Data\190807_b8\190807_b8 inject log

190812_b4

1st Review: Cmuller AUG 14 2019
2nd Review:
Column: Phenomenex EVO-C18 100X4.6 mm S/N: H19-179327
Mobile Phases **A:** 5mM Ammonium Acetate in H2O 19-OLC-02-41K **B:** 5mM Ammonium Acetate In MeOH 19-OLC-02-41L

ALS Environmental
LCMS06 -Shimadzu 8050

ICAL Date: 8/5/2019
Std. xp: 10/19/2019
ICAL ID: KC1900319
LIMS ID: 646926

	Sample Name		File Name	Acquisition Method	Dilution	R	
1	1.0 PPB CCV	19-OLC-01-44B	190812_054	PFAS_190807_35_CM.lcm	1x	☒	High PFOA, DoDA surr
2	IB	19-OLC-01-44A	190812_055	PFAS_190807_35_CM.lcm	1x	☒	
3	K1906510-005		190812_056	PFAS_190807_35_CM.lcm	1x		low IS
4	R1907111-003		190812_057	PFAS_190807_35_CM.lcm	1x	☒	Report passing PFBA
5	K1906897-002		190812_058	PFAS_190807_35_CM.lcm	1x	☒	Confirms low EtFOSA surr
6	K1906897-004		190812_059	PFAS_190807_35_CM.lcm	1x	☒	RR with passing DoDA surr in ccv. Report passing TeDA, TrDA
7	K1906889-001		190812_060	PFAS_190807_35_CM.lcm	1x		See dilution

J:\LCMS06\Data\190812_b4\190812_b4 inject log

Analysis: PFC	IS/Lot/Exp.: 500 ppb PFUnDA 19-OLC-01-420 exp 1/31/20			Filter lot: 81961103		Solvent/Lot: NA	
Sample ID	IS Amount	Sample Aliquot	Final Volume	Dilution Factor	Date Prepared	Analyst	Analyte for dilution
K1906510-005	10 uL	990 uL	1 mL	1X	8/12/2019	ESD	low FOSA surr in original, high FOSA surr in CCV, false return to control
R1907111-003	10 uL	990 uL	1 mL	1X	8/12/2019		PFBA (high surr, > MRL)
K1906897-002	10 uL	990 uL	1 mL	1x	8/12/2019		low EtFOSA surr
K1906897-004	10 uL	990 uL	1 mL	1x	8/12/2019		Low DoDA, TeDA surr (+TrDA)
K1906889-001	10 uL	990 uL	1 mL	1x	8/12/2019		HFPO-DA, PFOA

6510 = Boo Kitty
6897 = [Snowball
6889 = [Snowball
R7111 = Snowball

pipets = Pascal, volumetric disposable pyrex pipets (1.0 mL)