

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

**RE: Portion of Former Vacuum Oil Refinery, Site #C828190
Emerging Contaminant Sampling Report**

Date June 19, 2020

Dear Mr. Sowers:

O'Brien & Gere Engineers, Inc., a Ramboll company (Ramboll) presents this Emerging Contaminants Sampling Letter Report for the Portion of Former Vacuum Oil Refinery, Site #C828190, located south of Flint Street, in Rochester, New York (Site). A Site map is presented as **Figure 1**.

Ramboll
Harro East Building
400 Andrews Street, Suite 710
Rochester, NY 14604
USA

Sampling for emerging contaminants (per-and polyfluoroalkyl substances [PFAS]) and 1,4-dioxane was requested by the New York State Department of Environmental Conservation (NYSDEC) in correspondence dated May 10, 2019. as requested in a letter dated May 10, 2019 from. Sampling was completed in accordance with the *Emerging Contaminants Sampling and Analysis Plan (SAP)*, dated December 18, 2019 as approved by NYSDEC in a letter dated January 28, 2020.

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F 585-263-2869
<https://ramboll.com>

Consistent with NYSDEC's guidance document *Guidelines for Sampling and Analysis of PFAS Under NYSDEC's part 375 Programs* dated January 2020 (PFAS Guidance), laboratory analysis for PFAS was completed by USEPA Method 537.1 with quantification of 21 compounds and 1,4-dioxane by USEPA Method 8270 SIM. 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

As outlined in the approved Work Plan, monitoring wells OVR-127, OVR-117, OVR-110, and OVR-131 were sampled on April 21, 2020 utilizing low-flow sampling methods and PFAS-free equipment. The monitoring wells were sampled consistent with the SAP and the October 2015 *Brownfield Cleanup Program Remedial Investigation (RI) Work Plan* prepared by Ramboll. Low flow sampling was completed utilizing PFAS free Peristaltic pumps and tubing. The four wells were purged and sampled consistent with the low-flow sampling techniques following protocols presented in the RI 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 for the PFAS and 1,4-dioxane analyses included one blind duplicate sample, one matrix spike/matrix spike duplicate (MS/MSD) sample pair, and one equipment blank. In addition, one field reagent blank (FRB) was collected as part of the PFAS QC samples. The duplicate (DUP-017) was collected from OVR-127 and the matrix spike/matrix spike duplicate from OVR-131.

Air Monitoring

Air monitoring was conducted during the purging and sampling of on-site wells. Since non-intrusive activities were conducted, the air monitoring activities consisted of periodic monitoring utilizing a photoionization detector (PID) calibrated prior to the start of field activities, including monitoring:

- Upon arrival at sampling (monitoring well) location,
- Opening of well cap, and
- During well purging, and
- Upon completion of sampling.

At no point during the activities conducted on-site, was the VOC level of 5 parts per million (ppm) exceeded. All recorded measurements were 0.0ppm.

Results

Laboratory analytical results for the sampled monitoring wells OVR-110, OVR-117, OVR-127, and OVR-131 are included in **Attachment 2**. A summary of the results compared to screening values identified in the NYSDEC PFAS Guidance is provided as **Table 1**.

As illustrated on Table 1, a few PFAS were detected in the groundwater samples and most of the detected concentrations were well below their respective screening values. The sample from well OVR-131 contained perfluorooctanesulfonic acid (PFOS) at 17 ng/L and perfluorooctanoic acid (PFOA) at 16 ng/L which are each above the 10 ng/L screening value presented in the referenced guidance document. Well OVR-131 is located on the northwestern portion of the site which is topographically lower and presumably hydraulically downgradient of 15 Flint Street parcel that is also in the NYSDEC Brownfield Clean Up Program.

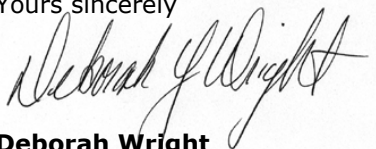
It is requested that the NYSDEC provide Ramboll and the City of Rochester with a copy of the emerging contaminant sampling results for neighboring properties, including 15 Flint Street (or properties north of

Flint Street (if available) to evaluate if the detection of PFAS and PFOS in well OVR-131 is potentially due to off-site migration of contaminated groundwater (from 15 Flint Street).

The concentrations of 1,4 dioxane were compared to the NYSDEC groundwater screening value of 1 µg/L. As illustrated on Table 1, 1,4 dioxane was only detected in OVR-117 and OVR-131 and neither of the detected concentrations exceeded the screening value.

Should you have any questions, please contact me at (315) 956-6377 or Joe Biondolillo at the City of Rochester at (585) 428-6649.

Yours sincerely



Deborah Wright

DIVISION MANAGER-2

004-E&H APPLIED SCIENCE/NRR RES

D 315-956-6377

M 315-546-4541

deborah.wright@ramboll.com

cc: Joseph Biondolillo – City of Rochester

List of Attachments: Table 1 – April 2020 Emerging Contaminants Groundwater Sampling Results
Figure 1 – Sampling Locations
Appendix A – Groundwater Sampling Logs
Attachment 1 – Data Usability Summary Report
Attachment 2 – Laboratory Report

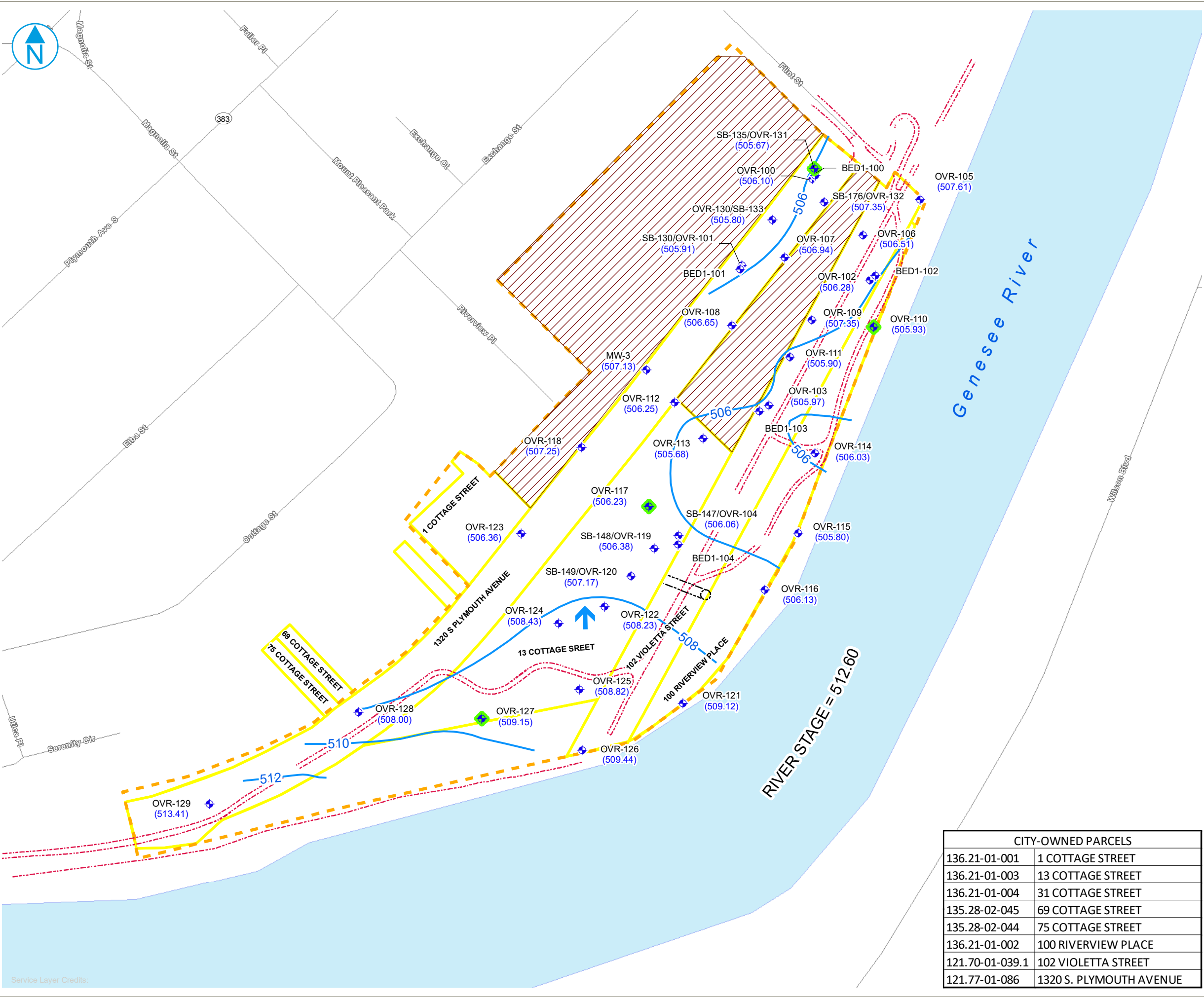
TABLE 1
APRIL 2020 EMERGING
CONTAMINANTS GROUNDWATER
SAMPLING RESULTS

Table 1
April 2020 Emerging Contaminants Groundwater Sampling Results
Portion of Former Vacuum Oil Refinery
Site #C828190
Rochester, New York

		Location: Sample Name: Sample Type: Sample Date:	OVR-110 OVR-110-042120 N 4/21/2020	OVR-117 OVR-117-042120 N 4/21/2020	OVR-127 OVR-127-042120 N 4/21/2020	OVR-127 DUP-017-042120 FD 4/21/2020	OVR-131 OVR-131-042120 N 4/21/2020	Equipment Blank EB-072919 EB 4/21/2020	Field Reagent Blank FRB-042120 FRB 4/21/2020
Group	Analyte	Criteria ^{1,2}							
Perfluoroalkyl sulfonates	Perfluorobutanesulfonic acid (PFBS)	100	4.8 U	4.5 U	4.6 U	4.7 U	6.2	4.1 U	4.2 U
	Perfluorohexanesulfonic acid (PFHxS)	100	4.8 UJ	4.5 U	4.6 U	4.7 U	3.5 J	4.1 U	4.2 U
	Perfluoroheptanesulfonic acid (PFHpS)	100	4.8 UJ	4.5 U	4.6 U	4.7 U	0.95 J	4.1 U	4.2 U
	Perfluorooctanesulfonic Acid (PFOS)	10	0.47 J	1.8 U	0.77 J	1.9 U	17	1.6 U	1.7 U
	Perfluorodecanesulfonic acid (PFDS)	100	4.8 UJ	4.5 U	4.6 U	4.7 U	4.7 U	4.1 U	4.2 U
Perfluoroalkyl carboxylates	Perfluorobutanoic acid (PFBA)	100	2.0 J	29	23	26	28	4.1 U	4.2 U
	Perfluoropentanoic acid (PFPeA)	100	4.8 U	4.5 U	4.6 UJ	4.7 UJ	55	4.1 U	4.2 U
	Perfluorohexanoic acid (PFHxA)	100	9.6 UJ	9.2 U	9.3 UJ	9.4 UJ	26	9.2 U	9.2 U
	Perfluoroheptanoic acid (PFHpA)	100	4.8 UJ	4.5 U	4.6 U	4.7 U	14	4.1 U	4.2 U
	Perfluorooctanoic acid (PFOA)	10	1.9 U	1.8 U	2.5	2.6 J	16	1.6 U	1.7 U
	Perfluorononanoic acid (PFNA)	100	4.8 UJ	4.5 U	4.6 U	4.7 U	1.9 J	4.1 U	4.2 U
	Perfluorodecanoic acid (PFDA)	100	4.8 UJ	4.5 U	4.6 U	4.7 U	4.7 U	4.1 U	4.2 U
	Perfluoroundecanoic acid (PFUA/PFUdA)	100	4.8 UJ	4.5 U	4.6 U	4.7 U	4.7 U	4.1 U	4.2 U
	Perfluorododecanoic acid (PFDoA)	100	4.8 UJ	4.5 U	4.6 U	4.7 U	4.7 U	4.1 U	4.2 U
	Perfluorotridecanoic acid (PFTriA/PFTrDA)	100	4.8 UJ	4.5 U	4.6 U	4.7 U	4.7 U	4.1 U	4.2 U
	Perfluorotetradecanoic acid (PFTA/PFTeDA)	100	4.8 UJ	4.5 U	4.6 U	4.7 U	4.7 U	4.1 U	4.2 U
Fluorinated Telomer Sulfonates	6:2 Fluorotelomer sulfonate (6:2 FTS)	100	4.8 U	4.5 UJ	4.6 UJ	4.7 UJ	1.2 J	4.1 U	4.2 U
	8:2 Fluorotelomer sulfonate (8:2 FTS)	100	4.8 U	4.5 U	4.6 U	4.7 U	4.7 U	4.1 U	4.2 U
Perfluorooctanesulfonamides	Perfluorooctanesulfonamide (FOSA)	100	4.8 U	4.5 U	4.6 U	4.7 U	4.7 U	4.1 U	4.2 U
Perfluorooctanesulfonamidoacetic acids	N-methyl perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	100	4.8 U	4.5 U	4.6 U	4.7 U	4.7 U	4.1 U	4.2 U
	N-ethyl perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	100	4.8 UJ	4.5 U	4.6 U	0.56 J	4.7 U	4.1 U	4.2 U
Other Compounds	1,4-Dioxane	1	0.04 U	0.06	0.04 U	0.04 U	0.15	0.04 U	-

Notes:
PFAS units in nanograms per liter (ng/L)
1,4 dioxane unit is micrograms per liter (µg/L)
Sample type N = Normal, FD = Field Duplicate, EB = Equipment Blank, FRB = Field Reagent Blank, MS/MSD = Matrix Spike/Matrix Spike Duplicate
¹ PFAS criteria are screening values as presented in *Guidelines for Sampling and Analysis of PFAS under NYSDEC's Part 375 Programs* ; NYSDEC January 2020
NC - No criteria exists
² 1,4 Dioxane criterion is the interim groundwater screening level used by NYSDEC.
U - Not Detected at the Detection Limit shown, J - Estimated Value, H - Biased High
Validated
Blue shaded values are above screening criteria

**FIGURE 1
SAMPLE LOCATIONS**



- WELL SAMPLED FOR EMERGING CONTAMINANTS
- MONITORING WELL
- GROUNDWATER CONTOUR
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- DRAINPIPE
- BIKE PATH
- NOT PART OF CITY OF ROCHESTER BROWNFIELD CLEANUP PROGRAM SITE; HOWEVER, THESE PARCELS ARE BEING INVESTIGATED BY OTHER ENTITIES.
- FORMER VACUUM OIL REFINERY SITE (APPROXIMATE)
- BROWNFIELD CLEANUP PROGRAM SITE LIMITS (APPROXIMATELY 15.4 ACRES)

Notes
-GROUNDWATER ELEVATION CONTOURS MEASUREMENT DECEMBER 2016
-RIVER STAGE FROM GENESEE RIVER GAUGING STATION AT FORD ST. BRIDGE, DECEMBER 5, 2016.



**EMERGING CONTAMINANTS
SAMPLE LOCATIONS
CITY OF ROCHESTER BROWNFIELD
CLEANUP PROGRAM
PORTION OF FORMER VACUUM OIL
REFINERY**

1, 13, 31, 69, AND 75 COTTAGE STREET;
100 RIVERVIEW PLACE;
102 VIOLETTA STREET; AND PORTION OF
1320 S. PLYMOUTH AVENUE
ROCHESTER, NEW YORK

FIGURE 01

O'BRIEN & GERE ENGINEERS, INC.
A RAMBOLL COMPANY





APPENDIX A GROUNDWATER SAMPLING LOGS



ATTACHMENT 1
DATA USABILITY SUMMARY REPORT

Data Usability Summary Report

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

Former Vacuum Oil Refinery EC
ALS Environmental SDG#R2003266
May 11, 2020
Revised; June 3, 2020
Sampling date: 4/21/2020

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

Former Vacuum Oil Refinery EC
SDG# R2003266

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the analytical data package for Ramboll(revised; June 3, 2020), project located at Former Vacuum Oil Refinery EC, ALS Environmental #R2003266 submitted to Vali-Data of WNY, LLC on May7, 2020. This DUSR has been prepared in general compliance with USEPA National Functional Guidelines(NFG), NYSDEC; 'Guidelines for Sampling and Analysis of PFAS'(1/2020)(NYSDEC guidelines) and NYSDEC Analytical Services Protocols. The laboratory performed the analyses using USEPA method Semi-Volatile Organics (8270D-SIM) and Perfluorinated Hydrocarbons (537 modified).

SEMIVOLATILE ORGANIC COMPOUNDS

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
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

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.

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.

Former Vacuum Oil Refinery EC

SDG# R2003266

HOLDING TIMES

All holding times for the sample were met.

INTERNAL STANDARD (IS)

All criteria were met.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met.

Alternate forms of regression were used with acceptable results.

CONTINUING CALIBRATION

All criteria were met.

GC/MS PERFORMANCE CHECK

All criteria were met.

PFAA

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

Former Vacuum Oil Refinery EC

SDG# R2003266

- 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 and Compound Quantitation.

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 13C5PFPeA and 13C2PFHxA was outside QC limits, low in OVR-127-042120 and should be qualified as estimated. The %Rec of 13C5PFPeA, 13C4PFBA and 13C2PFHxA was outside QC limits, low in DUP-017-042120 and should be qualified as estimated. The associated target analytes in these samples should be qualified as estimated high if detected or estimated if undetected.

The %Rec of 13C2-6:2FTS and 13C2-8:2FTS were outside QC limits, high in OVR-127-042120, OVR-117-042120, OVR-131-042120, DUP-017-042120 and OVR-131-042120MS/MSD and should be qualified as estimated. Associated target analytes in these samples should be qualified as estimated.

The %Rec of all of the surrogates except 13C5PFPeA, 13C8FOSA, 13C2-6:2FTS and 13C2-8:2FTS were outside QC limits, high in OVR-110-042120 and should be qualified as estimated. Associated target analytes of the non-conforming surrogates in this sample should be qualified as estimated.

INTERNAL STANDARD

All criteria were met.

METHOD BLANK

All the criteria were met except PFBS, PFDS, PFOA and 8:2FTS were detected above the MDL, below the reporting limit and are qualified as estimated in KQ2005615-04. These target analytes should be qualified as undetected at the reporting limit in associated samples in which they were detected below the reporting limit. These target analytes should be qualified as estimated in associated samples in which they were detected above the reporting limit but below 10x the blank concentration.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met except PFOS was detected in OVR-127-042120 but was not detected in DUP-017-042120. NetFOSAA was detected in DUP-017-042120 but was not detected in OVR-127-042120.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met.

COMPOUND QUANTITATION

All the criteria were met except PFOA was detected above the MDL, below the reporting limit and is qualified as estimated in EB-042120 and FRB-042120. 8:2 FTS was detected above the MDL, below the reporting limit and is qualified as estimated in FRB-042120. These target analytes should be qualified as undetected at the reporting limit in associated samples in which they were detected below the reporting limit. These target analytes should be qualified as estimated in associated samples in which they were detected above the reporting limit but below 10x the blank concentration.

INITIAL CALIBRATION

All criteria were met.

Alternate forms of regression were used on target analytes in which the %RSD>20.0%, with acceptable results.

CONTINUING CALIBRATION

All criteria were met.



**ATTACHMENT 2
LABORATORY REPORT**



May 06, 2020

Service Request No:R2003266

Ms. Deborah Wright
O'Brien & Gere Engineers, Incorporated
333 West Washington Street
Syracuse, NY 13221

Laboratory Results for: Former Vacuum Oil Refinery EC

Dear Ms.Wright,

Enclosed are the results of the sample(s) submitted to our laboratory April 21, 2020
For your reference, these analyses have been assigned our service request number **R2003266**.

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

CC: Amanda Young

ADDRESS

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ALS Group USA, Corp.
dba ALS Environmental



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Narrative Documents

ALS Environmental—Rochester Laboratory

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

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

www.alsglobal.com



Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC
Sample Matrix: Water

Service Request: R2003266
Date Received: 04/21/2020

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:

Seven water samples were received for analysis at ALS Environmental on 04/21/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

No significant anomalies were noted with this analysis.

Subcontracted Analytical Parameters:

No significant anomalies were noted with this analysis.

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

Approved by _____

Date 05/06/2020

SAMPLE DETECTION SUMMARY

CLIENT ID: OVR-117-042120			Lab ID: R2003266-002			
---------------------------	--	--	----------------------	--	--	--

Analyte	Results	Flag	MDL	MRL	Units	Method
1,4-Dioxane	0.060		0.027	0.040	ug/L	8270D SIM

CLIENT ID: OVR-131-042120			Lab ID: R2003266-006			
---------------------------	--	--	----------------------	--	--	--

Analyte	Results	Flag	MDL	MRL	Units	Method
1,4-Dioxane	0.15		0.027	0.040	ug/L	8270D SIM



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: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157

Service Request:R2003266

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2003266-001	OVR-127-042120	4/21/2020	1035
R2003266-002	OVR-117-042120	4/21/2020	1050
R2003266-003	EB-042120	4/21/2020	1130
R2003266-004	FRB-042120	4/21/2020	1135
R2003266-005	OVR-110-042120	4/21/2020	1300
R2003266-006	OVR-131-042120	4/21/2020	1320
R2003266-007	DUP-017-042120	4/21/2020	

Project Name Vacuum Oil Refinery EC						Project Number 61157								ANALYSIS REQUESTED (Include Method Number and Container Preservative)																																																		
Project Manager Deb Wright						Report CC Amanda Young								PRESERVATIVE	1	0					2		0	0																																								
Company/Address Ramboll														NUMBER OF CONTAINERS	PRESERVATIVE KEY: 0. NONE 1. HCL 2. HNO ₃ 3. H ₂ SO ₄ 4. NaOH 5. Zn Acetate 6. MeOH 7. NaHSO ₄ 8. Other _____																																																	
400 Andrews St., Suite 710																																																																
Rochester NY 14610																																																																
Phone # 585-295-7722						Email amanda.young@ramboll.com																																																										
Sampler's Signature [Signature]						Sampler's Printed Name Amanda Young / Kirsten Duree								REMARKS/ ALTERNATE DESCRIPTION																																																		
CLIENT SAMPLE ID						FOR OFFICE USE ONLY LAB ID		DATE		TIME		MATRIX																																																				
OVR-127-042120								4/21/20		10:35		GW	4	X							X							*	I SDG needed																																			
OVR-117-042120								4/21/20		10:50		GN	4	X							X							*																																				
EB-042120								4/21/20		11:30		GN	4	X							X							*																																				
FRB-042120								4/21/20		11:35		GN	4	X							X							*																																				
OVR-110-042120								4/21/20		13:00		GN	4	X							X							*																																				
OVR-131-042120								4/21/20		13:20		GN	4	X							X							*																																				
OVR-131-042120-MS								4/21/20		13:20		GN	4	X							X							*																																				
OVR-131-042120-MSD								4/21/20		13:20		GN	4	X							X							*																																				
IDW-042120								4/21/20		14:10		GN	11	X		X	X	X			X							*																																				
DUP-017-042120								4/21/20		—		GN	4	X							X							*																																				
SPECIAL INSTRUCTIONS/COMMENTS Metals # I SDG requested for all analyses (except IDW sample) 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 5/5/20													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 NYS ASP Level A+B NYEQUIS EDD Edata Yes No													INVOICE INFORMATION PO # 1200375 BILL TO: OBG - PO Box 487 333 West Washington St. Syosset NY 11792																									
STATE WHERE SAMPLES WERE COLLECTED													RELINQUISHED BY													RECEIVED BY													RELINQUISHED BY													RECEIVED BY												
Signature [Signature]													Signature [Signature]													Signature [Signature]													Signature [Signature]													Signature [Signature]												
Printed Name Amanda Young													Printed Name Daniel Ward													Printed Name													Printed Name													Printed Name												
Firm Ramboll													Firm ACS													Firm													Firm													Firm												
Date/Time 4/21/20 1525													Date/Time 4/21/20/1525													Date/Time													Date/Time													Date/Time												



Cooler Receipt and Preservation Check Form



Project/Client Ramboll CORB6

Folder Number _____

Cooler received on 4/21/2020

by: SW

COURIER: ALS UPS FEDEX VELOCITY CLIENT

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

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

8. Temperature Readings

Date: 4/24/2020 Time: 1535

ID: IR#7 IR#10

From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>7.90</u>	<u>0.90</u>	<u>4.30</u>				
Within 0-6°C?	☒ Y ☐ N	☒ Y ☐ N	☒ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
If <0°C, were samples frozen?	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N

If out of Temperature, note packing/ice condition: _____ Ice melted _____ Poorly Packed (described below) _____ Same Day Rele

& Client Approval to Run Samples: _____ Standing Approval _____ Client aware at drop-off _____ Client notified by: _____

All samples held in storage location: R007 by SW on 4/24/20 at 1535

5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? ☐ Y ☐ N

Cooler Breakdown/Preservation Check**: Date: 4/22/2020 Time: 0855 by: SW

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
13. Air Samples: Cassettes / Tubes Intact with MS? ☒ YES ☐ NO Canisters Pressurized ☒ YES ☐ NO Tedlar® Bags Inflated ☒ YES ☐ NO

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2		HNO ₃								
≤2		H ₂ SO ₄								
<4		NaHSO ₄								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		Zn Acetate	-	-						
		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: 91119-01

Explain all Discrepancies/ Other Comments:

*1 Vial: IDW-042170

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

Labels secondary reviewed by: SW

PC Secondary Review: 4/22/20

*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
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R2003266-001.01	PFC/537M,PFC/537M	4/22/2020	0857	SMO / GLAFORCE	4/28/2020
		4/22/2020	0858	SUBBED / GLAFORCE	4/28/2020
		4/23/2020	1631	K-OLC / SMO2	4/28/2020
		4/23/2020	1631	OLC 3 / SMO2	4/28/2020
		4/28/2020	1322	K-Disposed / NHILLIKER	4/28/2020
R2003266-001.02		4/22/2020	0857	SMO / GLAFORCE	
		4/22/2020	0858	SUBBED / GLAFORCE	
		4/23/2020	1631	K-OLC / SMO2	
		4/23/2020	1631	OLC 3 / SMO2	
		4/28/2020	1320	OLC 1 / BDAVIS	
		4/28/2020	1324	K-DELILAH / BDAVIS	
R2003266-001.03	8270D SIM	4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	
R2003266-001.04		4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	
R2003266-002.01	PFC/537M	4/22/2020	0857	SMO / GLAFORCE	4/28/2020
		4/22/2020	0858	SUBBED / GLAFORCE	4/28/2020
		4/23/2020	1631	K-OLC / SMO2	4/28/2020
		4/23/2020	1631	OLC 3 / SMO2	4/28/2020
		4/28/2020	1322	K-Disposed / NHILLIKER	4/28/2020
R2003266-002.02		4/22/2020	0857	SMO / GLAFORCE	
		4/22/2020	0858	SUBBED / GLAFORCE	
		4/23/2020	1631	K-OLC / SMO2	
		4/23/2020	1631	OLC 3 / SMO2	
		4/28/2020	1320	OLC 1 / BDAVIS	
		4/28/2020	1324	K-DELILAH / BDAVIS	
R2003266-002.03	8270D SIM	4/22/2020	0857	R-002 / GLAFORCE	

ALS Group USA, Corp.
dba ALS Environmental

Internal Chain of Custody Report

Client: O'Brien & Gere Engineers, Incorporated
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R2003266-002.04	8270D SIM	4/22/2020	0857	SMO / GLAFORCE	
		4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	
R2003266-003.01	PFC/537M	4/22/2020	0857	SMO / GLAFORCE	4/28/2020
		4/22/2020	0858	SUBBED / GLAFORCE	4/28/2020
		4/23/2020	1631	K-OLC / SMO2	4/28/2020
		4/23/2020	1631	OLC 3 / SMO2	4/28/2020
		4/28/2020	1322	K-Disposed / NHILLIKER	4/28/2020
R2003266-003.02		4/22/2020	0857	SMO / GLAFORCE	
		4/22/2020	0858	SUBBED / GLAFORCE	
		4/23/2020	1631	K-OLC / SMO2	
		4/23/2020	1631	OLC 3 / SMO2	
		4/28/2020	1320	OLC 1 / BDAVIS	
		4/28/2020	1324	K-DELILAH / BDAVIS	
R2003266-003.03	8270D SIM	4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	
R2003266-003.04		4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	
R2003266-004.01	PFC/537M	4/22/2020	0857	SMO / GLAFORCE	4/28/2020
		4/22/2020	0858	SUBBED / GLAFORCE	4/28/2020
		4/23/2020	1631	K-OLC / SMO2	4/28/2020
		4/23/2020	1631	OLC 3 / SMO2	4/28/2020
		4/28/2020	1322	K-Disposed / NHILLIKER	4/28/2020
R2003266-004.02		4/22/2020	0857	SMO / GLAFORCE	
		4/22/2020	0858	SUBBED / GLAFORCE	
		4/23/2020	1631	K-OLC / SMO2	

ALS Group USA, Corp.
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Internal Chain of Custody Report

Client: O'Brien & Gere Engineers, Incorporated
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
		4/23/2020	1631	OLC 3 / SMO2	
		4/28/2020	1320	OLC 1 / BDAVIS	
		4/28/2020	1324	K-DELILAH / BDAVIS	
R2003266-005.01					
	PFC/537M				
		4/22/2020	0857	SMO / GLAFORCE	4/28/2020
		4/22/2020	0858	SUBBED / GLAFORCE	4/28/2020
		4/23/2020	1631	K-OLC / SMO2	4/28/2020
		4/23/2020	1632	OLC 3 / SMO2	4/28/2020
		4/28/2020	1322	K-Disposed / NHILLIKER	4/28/2020
R2003266-005.02					
		4/22/2020	0857	SMO / GLAFORCE	
		4/22/2020	0858	SUBBED / GLAFORCE	
		4/23/2020	1631	K-OLC / SMO2	
		4/23/2020	1632	OLC 3 / SMO2	
		4/28/2020	1320	OLC 1 / BDAVIS	
		4/28/2020	1324	K-DELILAH / BDAVIS	
R2003266-005.03					
	8270D SIM				
		4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	
R2003266-005.04					
		4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	
R2003266-006.01					
	PFC/537M				
		4/22/2020	0857	SMO / GLAFORCE	4/28/2020
		4/22/2020	0858	SUBBED / GLAFORCE	4/28/2020
		4/23/2020	1631	K-OLC / SMO2	4/28/2020
		4/23/2020	1632	OLC 3 / SMO2	4/28/2020
		4/28/2020	1322	K-Disposed / NHILLIKER	4/28/2020
R2003266-006.02					
		4/22/2020	0857	SMO / GLAFORCE	
		4/22/2020	0858	SUBBED / GLAFORCE	
		4/23/2020	1631	K-OLC / SMO2	
		4/23/2020	1632	OLC 3 / SMO2	
		4/28/2020	1320	OLC 1 / BDAVIS	

ALS Group USA, Corp.
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Internal Chain of Custody Report

Client: O'Brien & Gere Engineers, Incorporated
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R2003266-006.03	8270D SIM	4/28/2020	1324	K-DELILAH / BDAVIS	
		4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	
R2003266-006.04		4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	
R2003266-006.05		4/22/2020	0857	SMO / GLAFORCE	4/28/2020
		4/22/2020	0858	SUBBED / GLAFORCE	4/28/2020
		4/23/2020	1631	K-OLC / SMO2	4/28/2020
		4/23/2020	1632	OLC 3 / SMO2	4/28/2020
		4/28/2020	1322	K-Disposed / NHILLIKER	4/28/2020
R2003266-006.06		4/22/2020	0857	SMO / GLAFORCE	4/28/2020
		4/22/2020	0858	SUBBED / GLAFORCE	4/28/2020
		4/23/2020	1631	K-OLC / SMO2	4/28/2020
		4/23/2020	1632	OLC 3 / SMO2	4/28/2020
		4/28/2020	1326	K-Disposed / NHILLIKER	4/28/2020
R2003266-006.09		4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	
R2003266-006.10		4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	
R2003266-006.11		4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	
R2003266-006.12		4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	

ALS Group USA, Corp.
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Internal Chain of Custody Report

Client: O'Brien & Gere Engineers, Incorporated
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R2003266-006.13					
		4/23/2020	1636	SMO / CGRAVES	
		4/24/2020	1407	K-OLC / SMO2	
		4/24/2020	1413	OLC 5 / SMO2	
R2003266-006.14					
		4/23/2020	1636	SMO / CGRAVES	
		4/24/2020	1407	K-OLC / SMO2	
		4/24/2020	1413	OLC 5 / SMO2	
R2003266-007.01					
	PFC/537M,PFC/537M				
		4/22/2020	0857	SMO / GLAFORCE	4/28/2020
		4/22/2020	0858	SUBBED / GLAFORCE	4/28/2020
		4/23/2020	1631	K-OLC / SMO2	4/28/2020
		4/23/2020	1633	OLC 3 / SMO2	4/28/2020
		4/28/2020	1322	K-Disposed / NHILLIKER	4/28/2020
R2003266-007.02					
		4/22/2020	0857	SMO / GLAFORCE	
		4/22/2020	0858	SUBBED / GLAFORCE	
		4/23/2020	1631	K-OLC / SMO2	
		4/23/2020	1633	OLC 3 / SMO2	
		4/28/2020	1320	OLC 1 / BDAVIS	
		4/28/2020	1324	K-DELILAH / BDAVIS	
R2003266-007.03					
	8270D SIM				
		4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	
R2003266-007.04					
		4/22/2020	0857	R-002 / GLAFORCE	
		4/22/2020	0857	SMO / GLAFORCE	



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



Rochester Lab ID # for State Certifications¹

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

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

ALS Laboratory Group

Acronyms

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

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266

Sample Name: OVR-127-042120
Lab Code: R2003266-001
Sample Matrix: Water

Date Collected: 04/21/20
Date Received: 04/21/20

Analysis Method
8270D SIM
PFC/537M

Extracted/Digested By
AFELSER
NHILLIKER

Analyzed By
AFELSER
CMULLER

Sample Name: OVR-127-042120
Lab Code: R2003266-001.R01
Sample Matrix: Water

Date Collected: 04/21/20
Date Received: 04/21/20

Analysis Method
PFC/537M

Extracted/Digested By
NHILLIKER

Analyzed By
CMULLER

Sample Name: OVR-117-042120
Lab Code: R2003266-002
Sample Matrix: Water

Date Collected: 04/21/20
Date Received: 04/21/20

Analysis Method
8270D SIM
PFC/537M

Extracted/Digested By
AFELSER
NHILLIKER

Analyzed By
AFELSER
CMULLER

Sample Name: EB-042120
Lab Code: R2003266-003
Sample Matrix: Water

Date Collected: 04/21/20
Date Received: 04/21/20

Analysis Method
8270D SIM
PFC/537M

Extracted/Digested By
AFELSER
NHILLIKER

Analyzed By
AFELSER
CMULLER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266

Sample Name: FRB-042120
Lab Code: R2003266-004
Sample Matrix: Water

Date Collected: 04/21/20
Date Received: 04/21/20

Analysis Method
PFC/537M

Extracted/Digested By
NHILLIKER

Analyzed By
CMULLER

Sample Name: OVR-110-042120
Lab Code: R2003266-005
Sample Matrix: Water

Date Collected: 04/21/20
Date Received: 04/21/20

Analysis Method
8270D SIM
PFC/537M

Extracted/Digested By
AFELSER
NHILLIKER

Analyzed By
AFELSER
CMULLER

Sample Name: OVR-131-042120
Lab Code: R2003266-006
Sample Matrix: Water

Date Collected: 04/21/20
Date Received: 04/21/20

Analysis Method
8270D SIM
PFC/537M

Extracted/Digested By
AFELSER
NHILLIKER

Analyzed By
AFELSER
CMULLER

Sample Name: DUP-017-042120
Lab Code: R2003266-007
Sample Matrix: Water

Date Collected: 04/21/20
Date Received: 04/21/20

Analysis Method
8270D SIM
PFC/537M

Extracted/Digested By
AFELSER
NHILLIKER

Analyzed By
AFELSER
CMULLER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266

Sample Name: DUP-017-042120
Lab Code: R2003266-007.R01
Sample Matrix: Water

Date Collected: 04/21/20
Date Received: 04/21/20

Analysis Method
PFC/537M

Extracted/Digested By
NHILLIKER

Analyzed By
CMULLER



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
9034 Sulfide Acid Soluble	9030B
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
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	



Sample Results

ALS Environmental—Rochester Laboratory

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

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

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Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 10:35
Date Received: 04/21/20 15:25

Sample Name: OVR-127-042120
Lab Code: R2003266-001

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

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

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.040 U	0.040	0.027	1	04/30/20 19:18	4/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	86	64 - 124	04/30/20 19:18	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 10:50
Date Received: 04/21/20 15:25

Sample Name: OVR-117-042120
Lab Code: R2003266-002

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

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

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.060	0.040	0.027	1	04/30/20 19:37	4/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	105	64 - 124	04/30/20 19:37	

ALS Group USA, Corp.
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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 11:30
Date Received: 04/21/20 15:25

Sample Name: EB-042120
Lab Code: R2003266-003

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

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

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.040 U	0.040	0.027	1	04/30/20 19:56	4/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	100	64 - 124	04/30/20 19:56	

ALS Group USA, Corp.
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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 13:00
Date Received: 04/21/20 15:25

Sample Name: OVR-110-042120
Lab Code: R2003266-005

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

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

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.040 U	0.040	0.027	1	04/30/20 20:14	4/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	99	64 - 124	04/30/20 20:14	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 13:20
Date Received: 04/21/20 15:25

Sample Name: OVR-131-042120
Lab Code: R2003266-006

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

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

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.15	0.040	0.027	1	04/30/20 20:32	4/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	104	64 - 124	04/30/20 20:32	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20
Date Received: 04/21/20 15:25

Sample Name: DUP-017-042120
Lab Code: R2003266-007

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

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

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.040 U	0.040	0.027	1	04/30/20 21:27	4/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	87	64 - 124	04/30/20 21:27	



QC Summary Forms

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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266

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

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

Sample Name	Lab Code	1,4-Dioxane-d8
		64-124
OVR-127-042120	R2003266-001	86
OVR-117-042120	R2003266-002	105
EB-042120	R2003266-003	100
OVR-110-042120	R2003266-005	99
OVR-131-042120	R2003266-006	104
DUP-017-042120	R2003266-007	87
Method Blank	RQ2004011-01	92
Lab Control Sample	RQ2004011-02	109
Duplicate Lab Control Sample	RQ2004011-03	102
OVR-131-042120 MS	RQ2004011-04	103
OVR-131-042120 DMS	RQ2004011-05	105

ALS Group USA, Corp.
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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20
Date Received: 04/21/20
Date Analyzed: 04/30/20
Date Extracted: 04/23/20

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

Sample Name: OVR-131-042120
Lab Code: R2003266-006
Analysis Method: 8270D SIM
Prep Method: EPA 3535A

Units: ug/L
Basis: NA

Matrix Spike RQ2004011-04					Duplicate Matrix Spike RQ2004011-05					
Analyte Name	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,4-Dioxane	0.15	10.5	10.0	103	10.7	10.0	106	33-146	2	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.

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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Analyzed: 04/30/20 18:24
Date Extracted: 04/23/20

Method Blank Summary**1,4-Dioxane by GC/MS****Sample Name:** Method Blank**Instrument ID:**R-MS-56**Lab Code:** RQ2004011-01**File ID:**I:\ACQUDATA\5975E\data\043020\AW172.D**Analysis Method:** 8270D SIM**Analysis Lot:**678719**Prep Method:** EPA 3535A**Extraction Lot:**357338

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ2004011-02	I:\ACQUDATA\5975E\data\043020\AW173.D\	04/30/20 18:42
Duplicate Lab Control Sample	RQ2004011-03	I:\ACQUDATA\5975E\data\043020\AW174.D\	04/30/20 19:00
OVR-127-042120	R2003266-001	I:\ACQUDATA\5975E\data\043020\AW175.D\	04/30/20 19:18
OVR-117-042120	R2003266-002	I:\ACQUDATA\5975E\data\043020\AW176.D\	04/30/20 19:37
EB-042120	R2003266-003	I:\ACQUDATA\5975E\data\043020\AW177.D\	04/30/20 19:56
OVR-110-042120	R2003266-005	I:\ACQUDATA\5975E\data\043020\AW178.D\	04/30/20 20:14
OVR-131-042120	R2003266-006	I:\ACQUDATA\5975E\data\043020\AW179.D\	04/30/20 20:32
OVR-131-042120MS	RQ2004011-04	I:\ACQUDATA\5975E\data\043020\AW180.D\	04/30/20 20:50
OVR-131-042120DMS	RQ2004011-05	I:\ACQUDATA\5975E\data\043020\AW181.D\	04/30/20 21:09
DUP-017-042120	R2003266-007	I:\ACQUDATA\5975E\data\043020\AW182.D\	04/30/20 21:27

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2004011-01

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

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

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.040 U	0.040	0.027	1	04/30/20 18:24	4/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	92	64 - 124	04/30/20 18:24	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Analyzed: 04/30/20 18:42
Date Extracted: 04/23/20

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

Sample Name: Lab Control Sample**Instrument ID:**R-MS-56**Lab Code:** RQ2004011-02**File ID:**I:\ACQUDATA\5975E\data\043020\AW173.D**Analysis Method:** 8270D SIM**Analysis Lot:**678719**Prep Method:** EPA 3535A**Extraction Lot:**357338

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	RQ2004011-01	I:\ACQUDATA\5975E\data\043020\AW172.D\	04/30/20 18:24
Duplicate Lab Control Sample	RQ2004011-03	I:\ACQUDATA\5975E\data\043020\AW174.D\	04/30/20 19:00
OVR-127-042120	R2003266-001	I:\ACQUDATA\5975E\data\043020\AW175.D\	04/30/20 19:18
OVR-117-042120	R2003266-002	I:\ACQUDATA\5975E\data\043020\AW176.D\	04/30/20 19:37
EB-042120	R2003266-003	I:\ACQUDATA\5975E\data\043020\AW177.D\	04/30/20 19:56
OVR-110-042120	R2003266-005	I:\ACQUDATA\5975E\data\043020\AW178.D\	04/30/20 20:14
OVR-131-042120	R2003266-006	I:\ACQUDATA\5975E\data\043020\AW179.D\	04/30/20 20:32
OVR-131-042120MS	RQ2004011-04	I:\ACQUDATA\5975E\data\043020\AW180.D\	04/30/20 20:50
OVR-131-042120DMS	RQ2004011-05	I:\ACQUDATA\5975E\data\043020\AW181.D\	04/30/20 21:09
DUP-017-042120	R2003266-007	I:\ACQUDATA\5975E\data\043020\AW182.D\	04/30/20 21:27

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Analyzed: 04/30/20

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

Units:ug/L
Basis:NA

			Lab Control Sample			Duplicate Lab Control Sample				
			RQ2004011-02			RQ2004011-03				
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,4-Dioxane	8270D SIM	10.8	10.0	108	10.0	10.0	100	58-124	7	30

ALS Group USA, Corp.
dba ALS Environmental

QC/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266
Date Analyzed: 04/30/20 17:42

Tune Summary
1,4-Dioxane by GC/MS

File ID: I:\ACQUDATA\5975E\data\043020\AW170.D\
Instrument ID: R-MS-56

Analytical Method: 8270D SIM
Analysis Lot: 678719

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	30.53	401246	Pass
68	69	0.00	2	1.45	7852	Pass
69	198	0.00	100	41.14	540737	Pass
70	69	0.00	2	0.50	2698	Pass
127	198	10	80	53.92	708685	Pass
197	198	0.00	2	0.51	6753	Pass
198	198	100	100	100.00	1314304	Pass
199	198	5	9	6.95	91352	Pass
275	198	10	60	17.23	226432	Pass
365	198	1	100	1.71	22485	Pass
441	442	0.01	24	16.62	68027	Pass
442	442	100	100	100.00	409259	Pass
443	442	15	24	19.30	79003	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	RQ2004321-02	I:\ACQUDATA\5975E\data\043020\AW171.D\	04/30/20 18:05	
Method Blank	RQ2004011-01	I:\ACQUDATA\5975E\data\043020\AW172.D\	04/30/20 18:24	
Lab Control Sample	RQ2004011-02	I:\ACQUDATA\5975E\data\043020\AW173.D\	04/30/20 18:42	
Duplicate Lab Control Sample	RQ2004011-03	I:\ACQUDATA\5975E\data\043020\AW174.D\	04/30/20 19:00	
OVR-127-042120	R2003266-001	I:\ACQUDATA\5975E\data\043020\AW175.D\	04/30/20 19:18	
OVR-117-042120	R2003266-002	I:\ACQUDATA\5975E\data\043020\AW176.D\	04/30/20 19:37	
EB-042120	R2003266-003	I:\ACQUDATA\5975E\data\043020\AW177.D\	04/30/20 19:56	
OVR-110-042120	R2003266-005	I:\ACQUDATA\5975E\data\043020\AW178.D\	04/30/20 20:14	
OVR-131-042120	R2003266-006	I:\ACQUDATA\5975E\data\043020\AW179.D\	04/30/20 20:32	
OVR-131-042120	RQ2004011-04	I:\ACQUDATA\5975E\data\043020\AW180.D\	04/30/20 20:50	
OVR-131-042120	RQ2004011-05	I:\ACQUDATA\5975E\data\043020\AW181.D\	04/30/20 21:09	
DUP-017-042120	R2003266-007	I:\ACQUDATA\5975E\data\043020\AW182.D\	04/30/20 21:27	

ALS Group USA, Corp.
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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266
Date Analyzed: 04/30/20 18:05

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

File ID: I:\ACQUDATA\5975E\data\043020\AW171.D\
Instrument ID: R-MS-56
Analysis Method: 8270D SIM

Lab Code: RQ2004321-02
Analysis Lot: 678719
Signal ID: 1

	Tetrahydrofuran-d8	
	Area	RT
Result ==>	73,670	3.57
Upper Limit ==>	147,340	3.74
Lower Limit ==>	36,835	3.40

Associated Analyses

Method Blank	RQ2004011-01	73579	3.55
Lab Control Sample	RQ2004011-02	76727	3.59
Duplicate Lab Control Sample	RQ2004011-03	74212	3.55
OVR-127-042120	R2003266-001	76100	3.59
OVR-117-042120	R2003266-002	69916	3.59
EB-042120	R2003266-003	81668	3.59
OVR-110-042120	R2003266-005	76482	3.59
OVR-131-042120	R2003266-006	73401	3.56
OVR-131-042120MS	RQ2004011-04	75991	3.57
OVR-131-042120DMS	RQ2004011-05	69226	3.51
DUP-017-042120	R2003266-007	76343	3.58



Raw Data

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Date Received: 04/21/20 15:25

Sample Name: OVR-127-042120
Lab Code: R2003266-001

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

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

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.040 U	0.040	0.027	1	04/30/20 19:18	4/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	86	64 - 124	04/30/20 19:18	

ALS Group USA, Corp.
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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 10:50
Date Received: 04/21/20 15:25

Sample Name: OVR-117-042120
Lab Code: R2003266-002

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

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

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.060	0.040	0.027	1	04/30/20 19:37	4/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	105	64 - 124	04/30/20 19:37	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 11:30
Date Received: 04/21/20 15:25

Sample Name: EB-042120
Lab Code: R2003266-003

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

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

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.040 U	0.040	0.027	1	04/30/20 19:56	4/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	100	64 - 124	04/30/20 19:56	

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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 13:00
Date Received: 04/21/20 15:25

Sample Name: OVR-110-042120
Lab Code: R2003266-005

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

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

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.040 U	0.040	0.027	1	04/30/20 20:14	4/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	99	64 - 124	04/30/20 20:14	

ALS Group USA, Corp.
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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 13:20
Date Received: 04/21/20 15:25

Sample Name: OVR-131-042120
Lab Code: R2003266-006

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

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

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.15	0.040	0.027	1	04/30/20 20:32	4/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	104	64 - 124	04/30/20 20:32	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20
Date Received: 04/21/20 15:25

Sample Name: DUP-017-042120
Lab Code: R2003266-007

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

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

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.040 U	0.040	0.027	1	04/30/20 21:27	4/23/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	87	64 - 124	04/30/20 21:27	

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW175.D
Acq On : 30 Apr 2020 7:18 pm
Operator : AFelser
Sample : R2003266-001
Misc : 357338 8270 DIOX
ALS Vial : 28 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:37:02 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

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

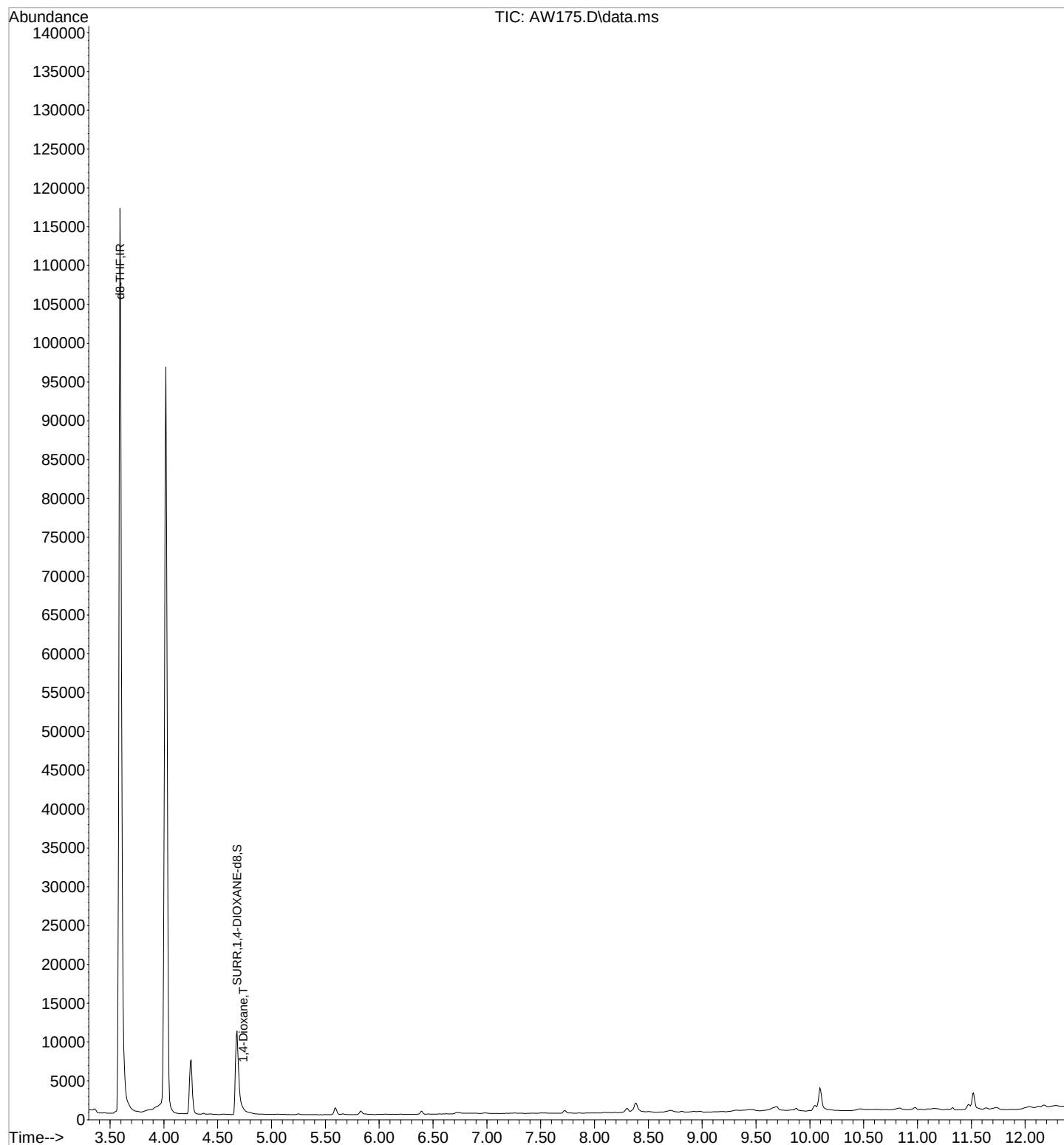
Internal Standards						
1) d8-THF	3.592	46	76100	500.00	PPB	0.02
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.679	96	12216	86.18	PPB	0.02
Spiked Amount 100.000	Range 70 - 130		Recovery	=	86.18%	
Target Compounds						
2) 1,4-Dioxane	4.736	88	156	0.91	PPB	Qvalue 96

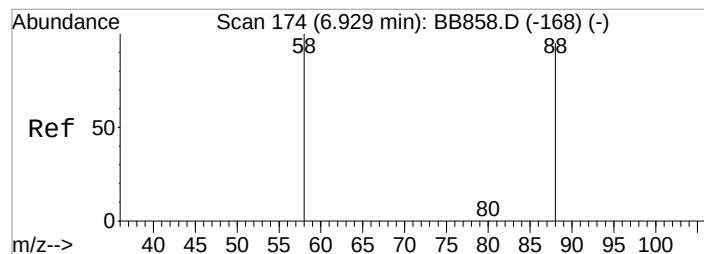
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW175.D
Acq On : 30 Apr 2020 7:18 pm
Operator : AFelser
Sample : R2003266-001
Misc : 357338 8270 DIOX
ALS Vial : 28 Sample Multiplier: 1

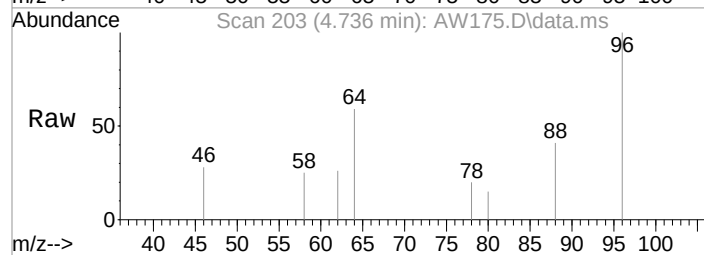
Inst : 5975 E

Quant Time: May 01 10:37:02 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

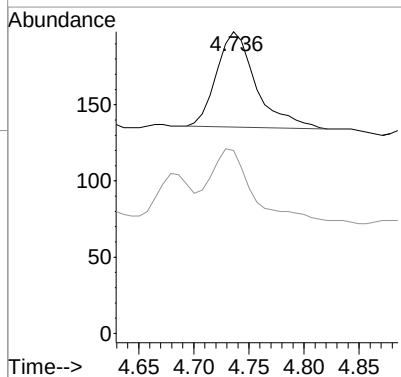
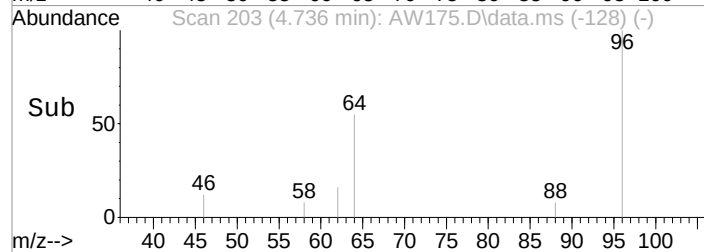




#2
1,4-Dioxane
Concen: 0.91 PPB
RT: 4.736 min Scan# 203
Delta R.T. 0.035 min
Lab File: AW175.D
Acq: 30 Apr 2020 7:18 pm



Tgt Ion: 88 Resp: 156
Ion Ratio Lower Upper
88 100
58 54.0 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW176.D
Acq On : 30 Apr 2020 7:37 pm
Operator : AFelser
Sample : R2003266-002
Misc : 357338 8270 DIOX
ALS Vial : 29 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:37:04 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

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

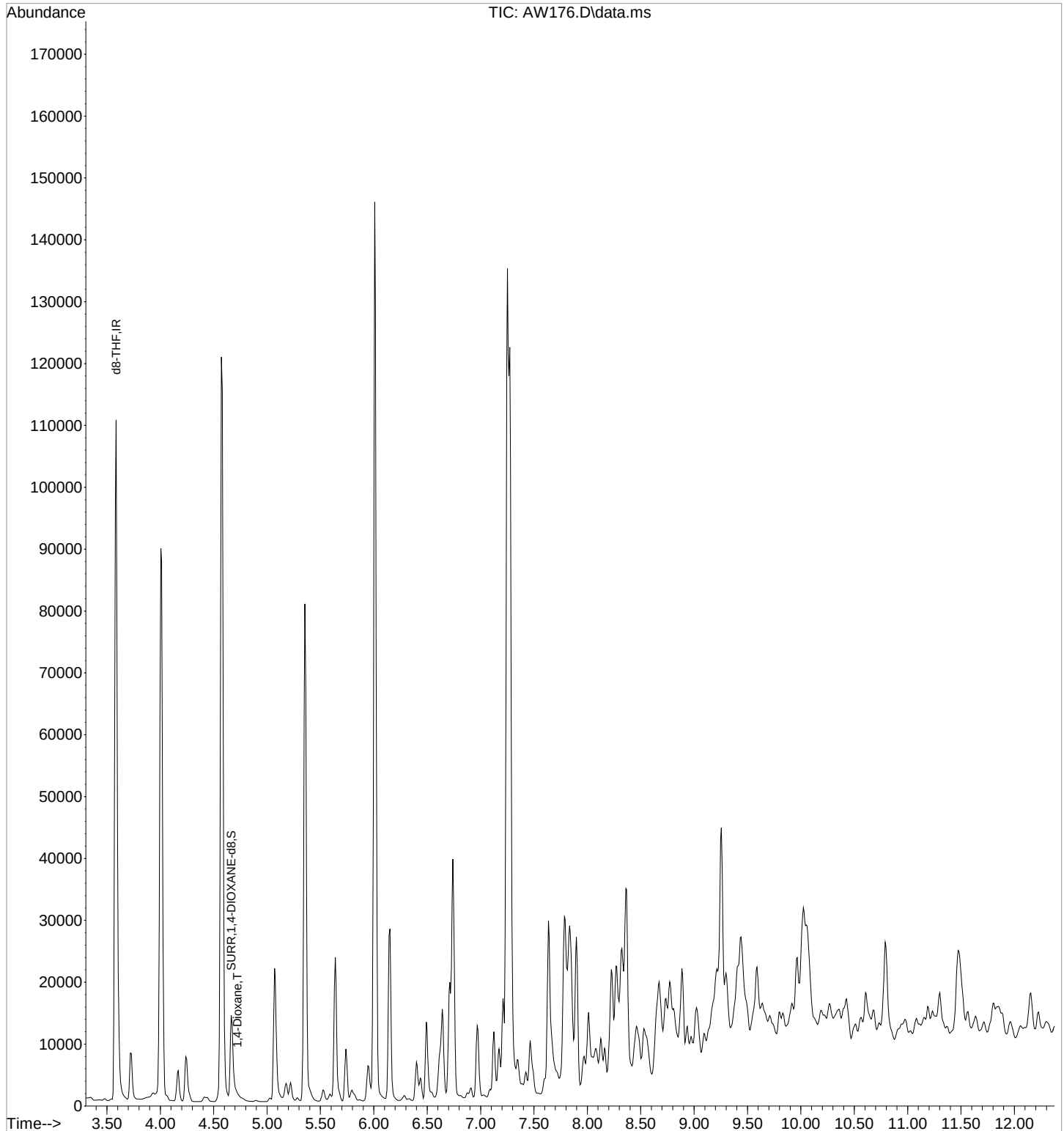
Internal Standards						
1) d8-THF	3.585	46	69916	500.00	PPB	0.01
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.665	96	13629	104.55	PPB	0.00
Spiked Amount	100.000	Range	70 - 130	Recovery	= 104.55%	
Target Compounds						
2) 1,4-Dioxane	4.722	88	420	2.98	PPB	Qvalue # 1

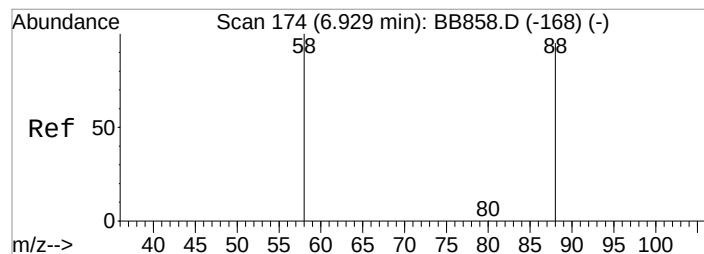
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW176.D
Acq On : 30 Apr 2020 7:37 pm
Operator : AFelser
Sample : R2003266-002
Misc : 357338 8270 DIOX
ALS Vial : 29 Sample Multiplier: 1

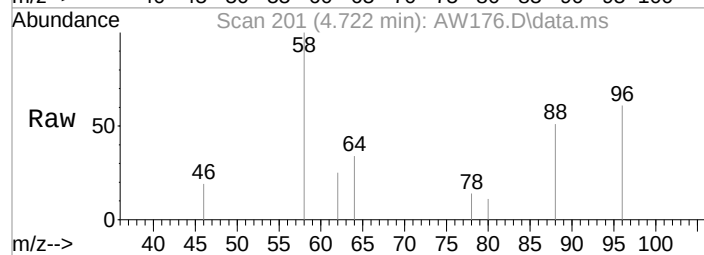
Inst : 5975 E

Quant Time: May 01 10:37:04 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

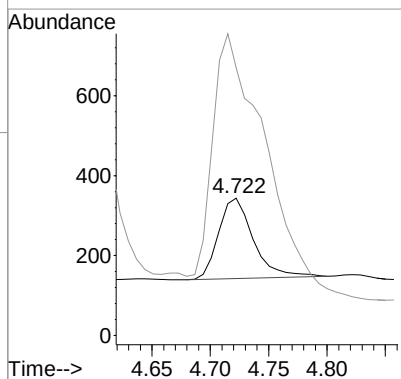
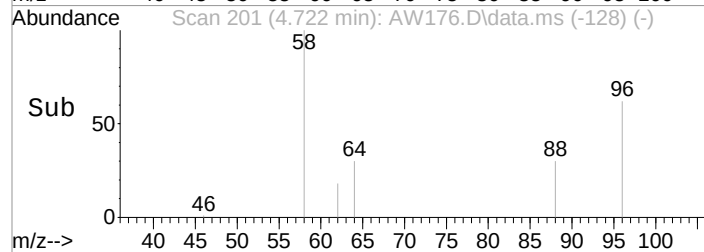




#2
1,4-Dioxane
Concen: 2.98 PPB
RT: 4.722 min Scan# 201
Delta R.T. 0.021 min
Lab File: AW176.D
Acq: 30 Apr 2020 7:37 pm



Tgt Ion: 88 Resp: 420
Ion Ratio Lower Upper
88 100
58 268.6 37.0 77.0#



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW177.D
Acq On : 30 Apr 2020 7:56 pm
Operator : AFelser
Sample : R2003266-003
Misc : 357338 8270 DIOX
ALS Vial : 30 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:37:06 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

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

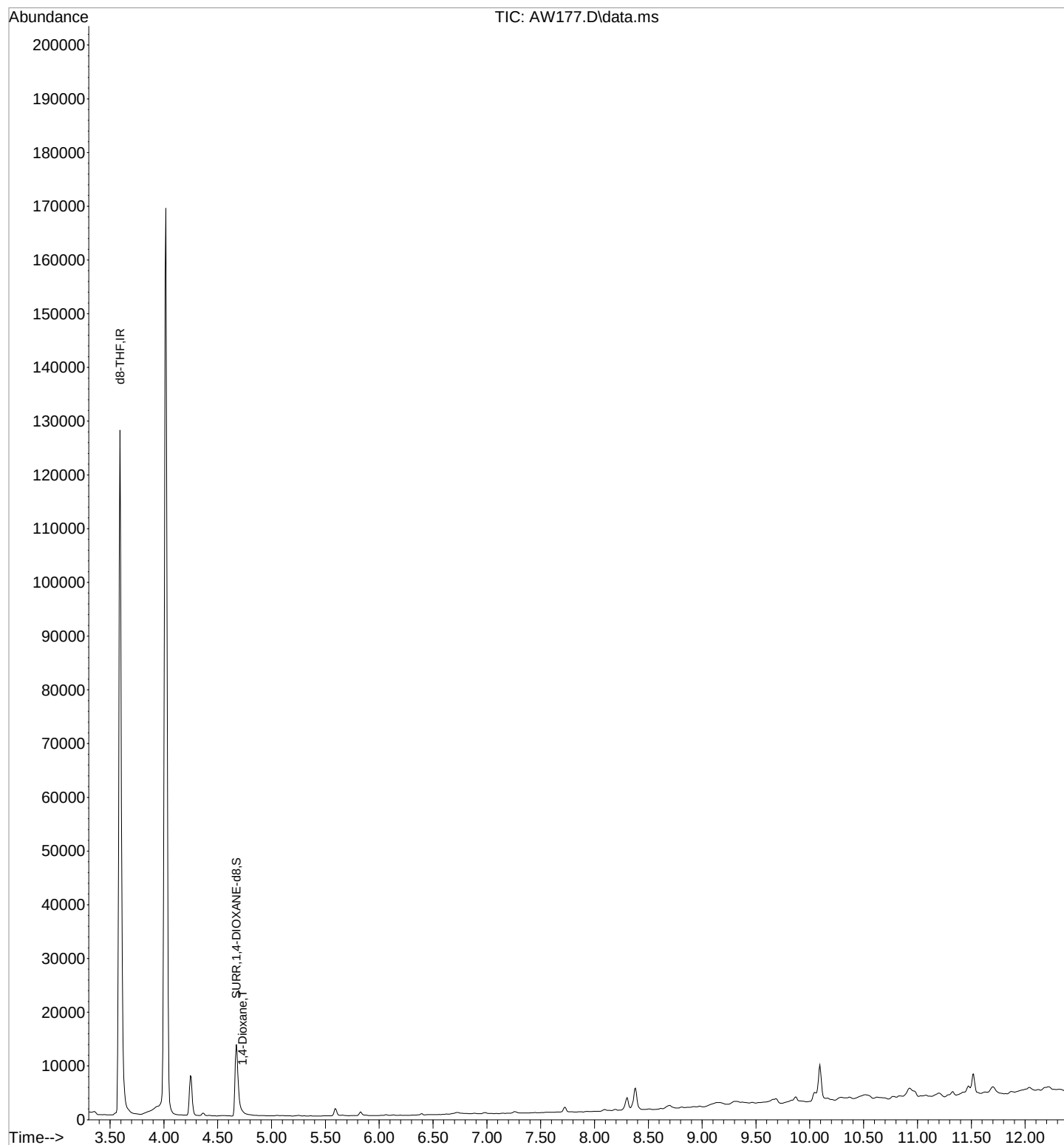
Internal Standards						
1) d8-THF	3.592	46	81668	500.00	PPB	0.02
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.672	96	15175	99.68	PPB	0.02
Spiked Amount 100.000	Range 70 - 130		Recovery	=	99.68%	
Target Compounds						
2) 1,4-Dioxane	4.729	88	133	0.69	PPB	Qvalue 81

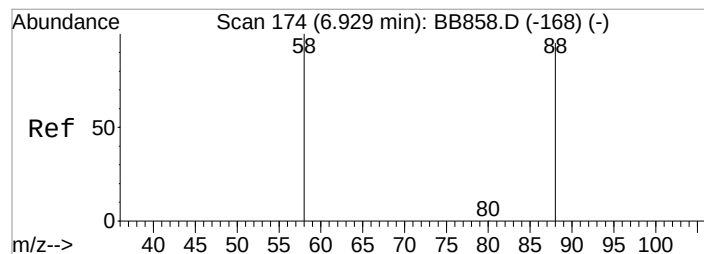
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW177.D
Acq On : 30 Apr 2020 7:56 pm
Operator : AFelser
Sample : R2003266-003
Misc : 357338 8270 DIOX
ALS Vial : 30 Sample Multiplier: 1

Inst : 5975 E

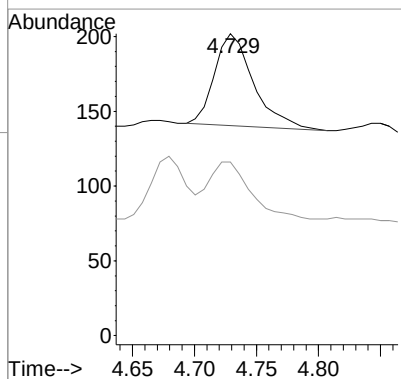
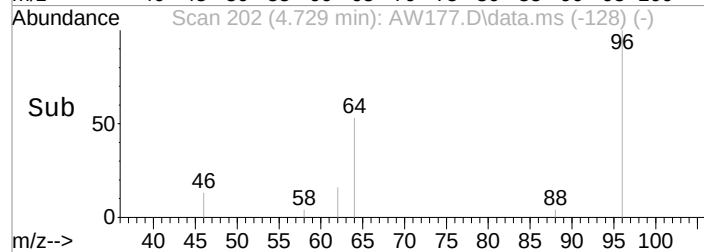
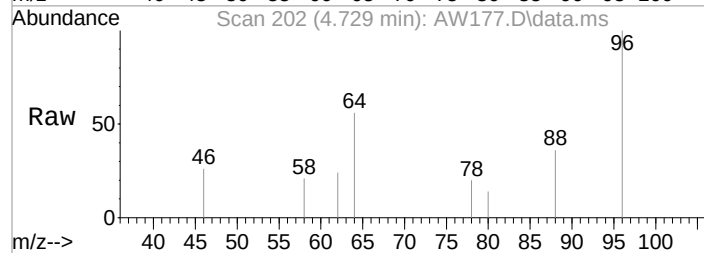
Quant Time: May 01 10:37:06 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration





#2
1,4-Dioxane
Concen: 0.69 PPB
RT: 4.729 min Scan# 202
Delta R.T. 0.028 min
Lab File: AW177.D
Acq: 30 Apr 2020 7:56 pm

Tgt Ion: 88 Resp: 133
Ion Ratio Lower Upper
88 100
58 43.2 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW178.D
Acq On : 30 Apr 2020 8:14 pm
Operator : AFelser
Sample : R2003266-005
Misc : 357338 8270 DIOX
ALS Vial : 31 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:37:08 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

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

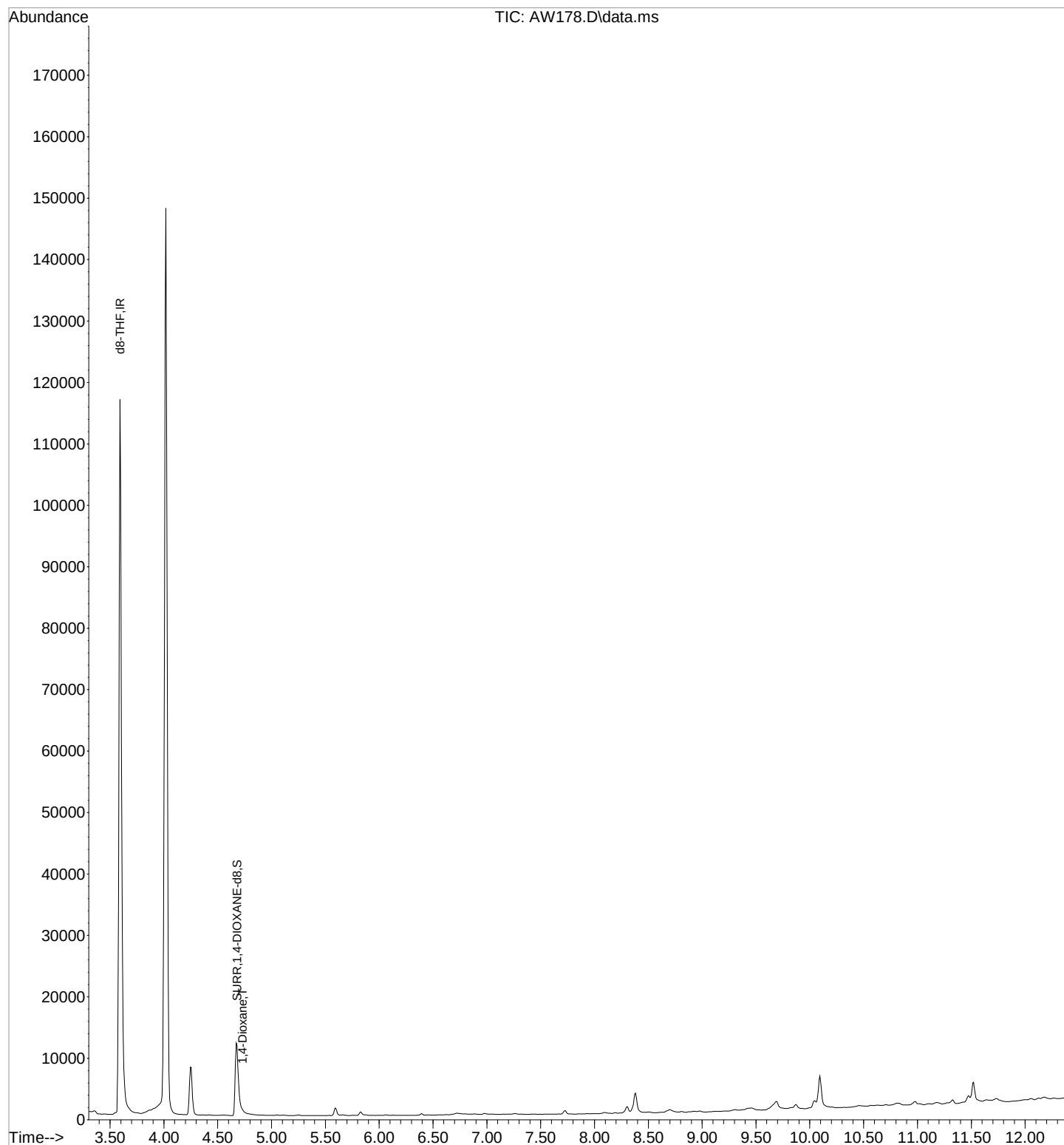
Internal Standards						
1) d8-THF	3.592	46	76482	500.00	PPB	0.02
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.679	96	14127	99.09	PPB	0.02
Spiked Amount 100.000	Range	70 - 130	Recovery	=	99.09%	
Target Compounds						
2) 1,4-Dioxane	4.729	88	128	0.71	PPB	Qvalue # 67

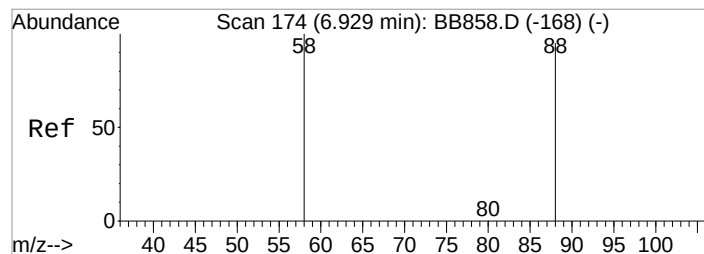
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW178.D
Acq On : 30 Apr 2020 8:14 pm
Operator : AFelser
Sample : R2003266-005
Misc : 357338 8270 DIOX
ALS Vial : 31 Sample Multiplier: 1

Inst : 5975 E

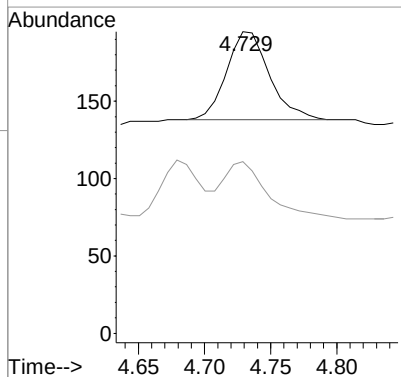
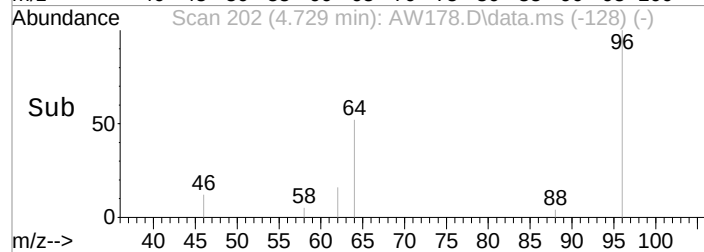
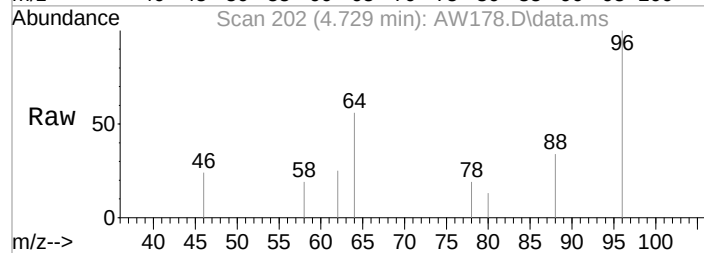
Quant Time: May 01 10:37:08 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration





#2
1,4-Dioxane
Concen: 0.71 PPB
RT: 4.729 min Scan# 202
Delta R.T. 0.028 min
Lab File: AW178.D
Acq: 30 Apr 2020 8:14 pm

Tgt Ion: 88 Resp: 128
Ion Ratio Lower Upper
88 100
58 32.5 37.0 77.0#



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW179.D
Acq On : 30 Apr 2020 8:32 pm
Operator : AFelser
Sample : R2003266-006
Misc : 357338 8270 DIOX
ALS Vial : 32 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:37:10 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

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

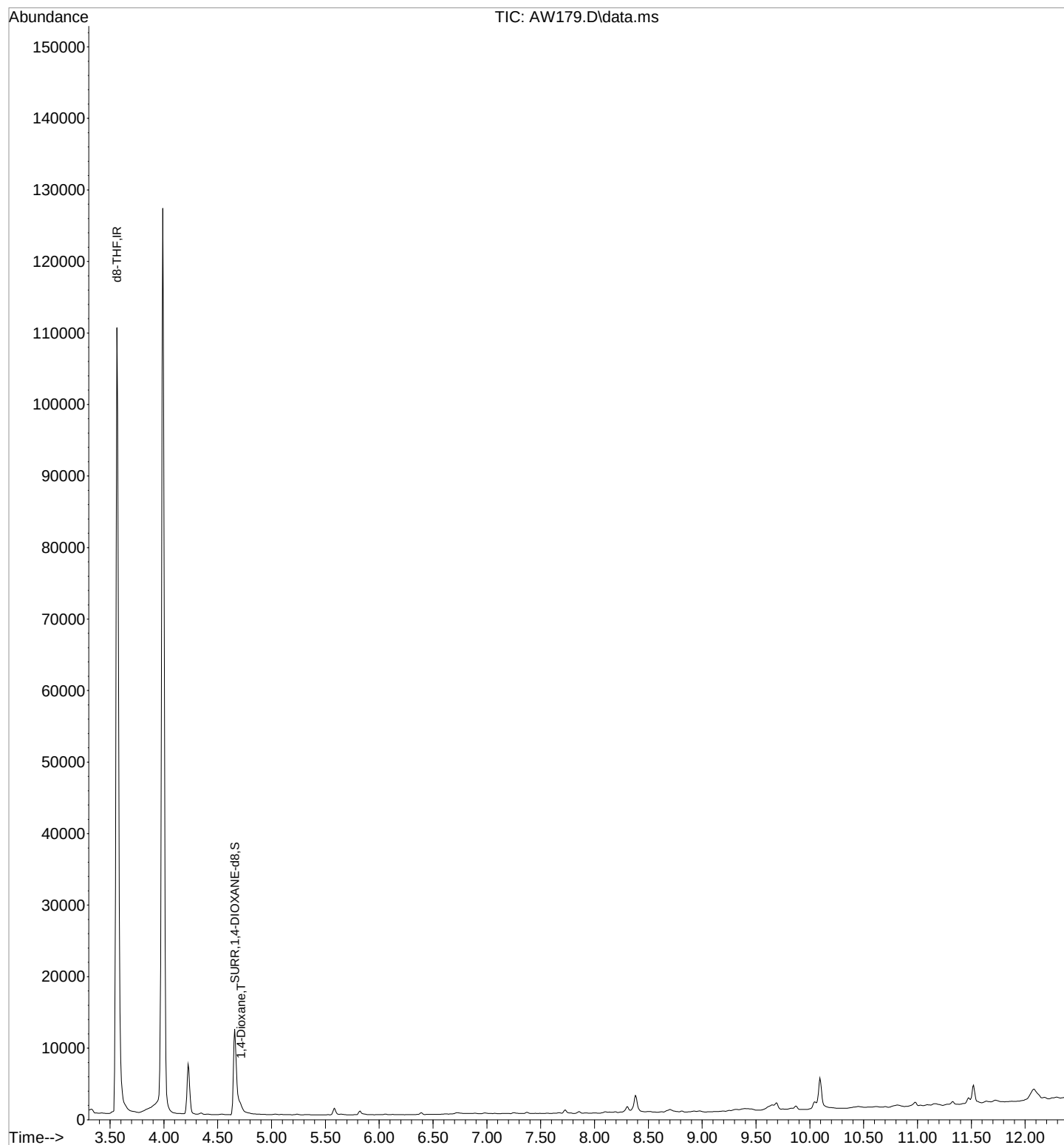
Internal Standards						
1) d8-THF	3.564	46	73401	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.658	96	14186	103.66	PPB	0.00
Spiked Amount	100.000	Range	70 - 130	Recovery	=	103.66%
Target Compounds						
2) 1,4-Dioxane	4.715	88	1062	7.40	PPB	Qvalue 90

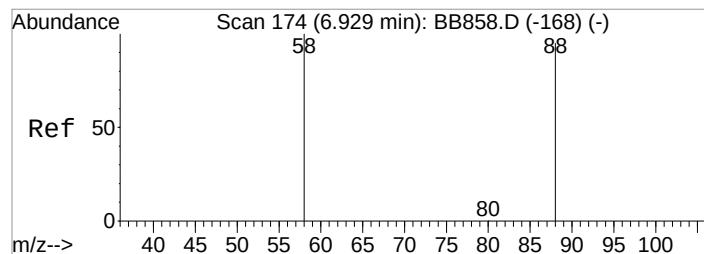
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW179.D
Acq On : 30 Apr 2020 8:32 pm
Operator : AFelser
Sample : R2003266-006
Misc : 357338 8270 DIOX
ALS Vial : 32 Sample Multiplier: 1

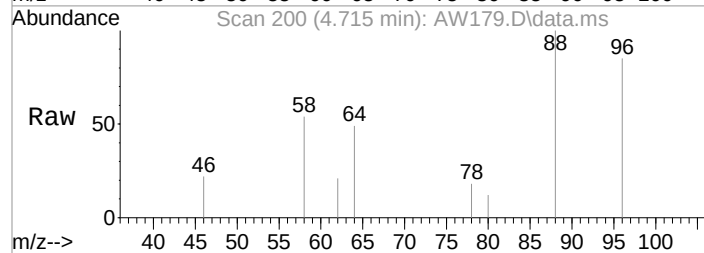
Inst : 5975 E

Quant Time: May 01 10:37:10 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

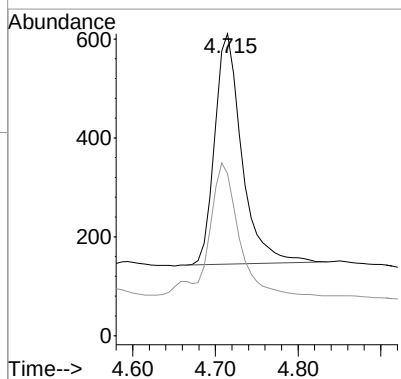
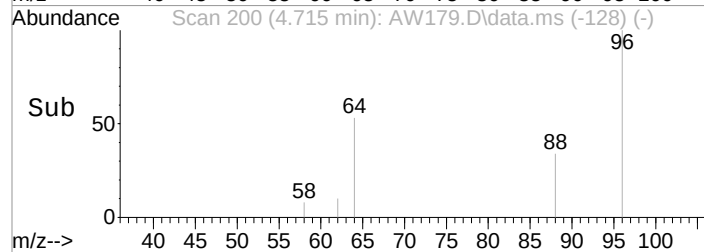




#2
1,4-Dioxane
Concen: 7.40 PPB
RT: 4.715 min Scan# 200
Delta R.T. 0.014 min
Lab File: AW179.D
Acq: 30 Apr 2020 8:32 pm



Tgt Ion: 88 Resp: 1062
Ion Ratio Lower Upper
88 100
58 50.0 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW182.D
Acq On : 30 Apr 2020 9:27 pm
Operator : AFelser
Sample : R2003266-007
Misc : 357338 8270 DIOX
ALS Vial : 35 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:37:16 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

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

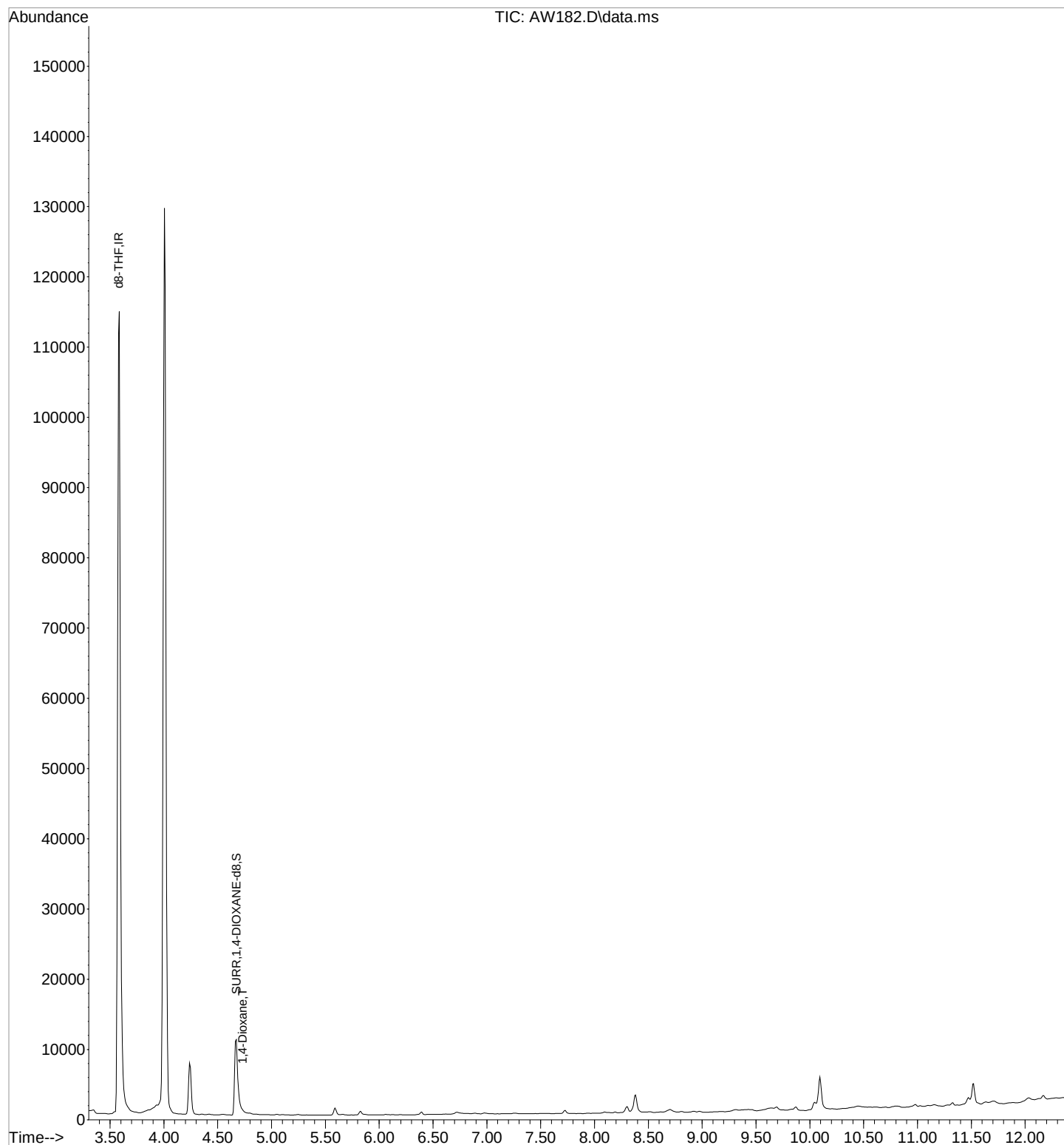
Internal Standards						
1) d8-THF	3.578	46	76343	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.672	96	12338	86.76	PPB	0.01
Spiked Amount 100.000	Range 70 - 130		Recovery	=	86.76%	
Target Compounds						
2) 1,4-Dioxane	4.729	88	168	0.98	PPB	Qvalue 74

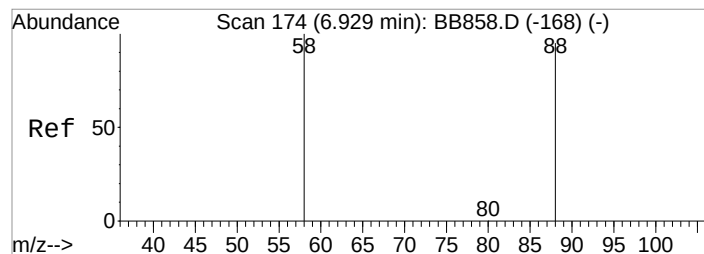
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW182.D
Acq On : 30 Apr 2020 9:27 pm
Operator : AFelser
Sample : R2003266-007
Misc : 357338 8270 DIOX
ALS Vial : 35 Sample Multiplier: 1

Inst : 5975 E

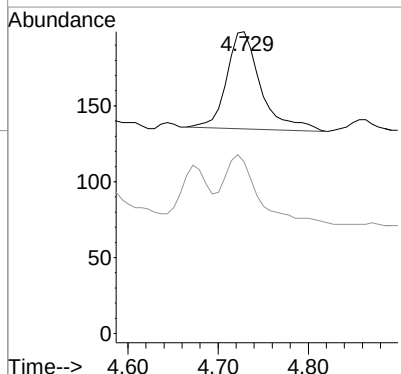
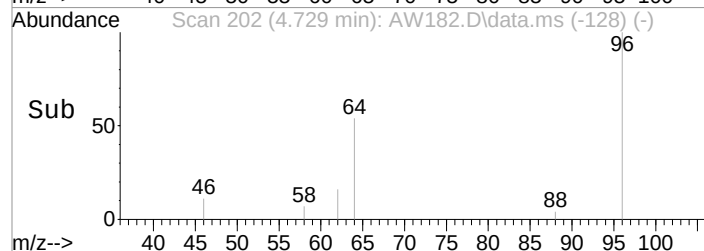
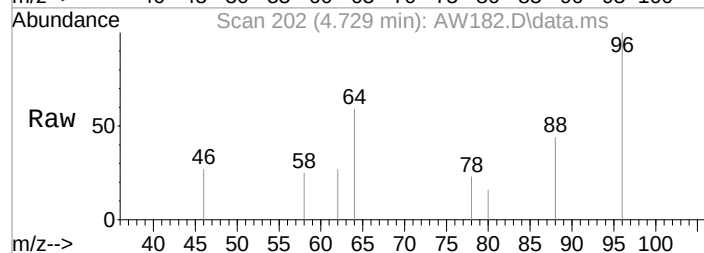
Quant Time: May 01 10:37:16 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration





#2
1,4-Dioxane
Concen: 0.98 PPB
RT: 4.729 min Scan# 202
Delta R.T. 0.028 min
Lab File: AW182.D
Acq: 30 Apr 2020 9:27 pm

Tgt Ion: 88 Resp: 168
Ion Ratio Lower Upper
88 100
58 38.0 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW172.D
Acq On : 30 Apr 2020 6:24 pm
Operator : AFelser
Sample : RQ2004011-01
Misc : 357338 8270 DIOX
ALS Vial : 25 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:36:56 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

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

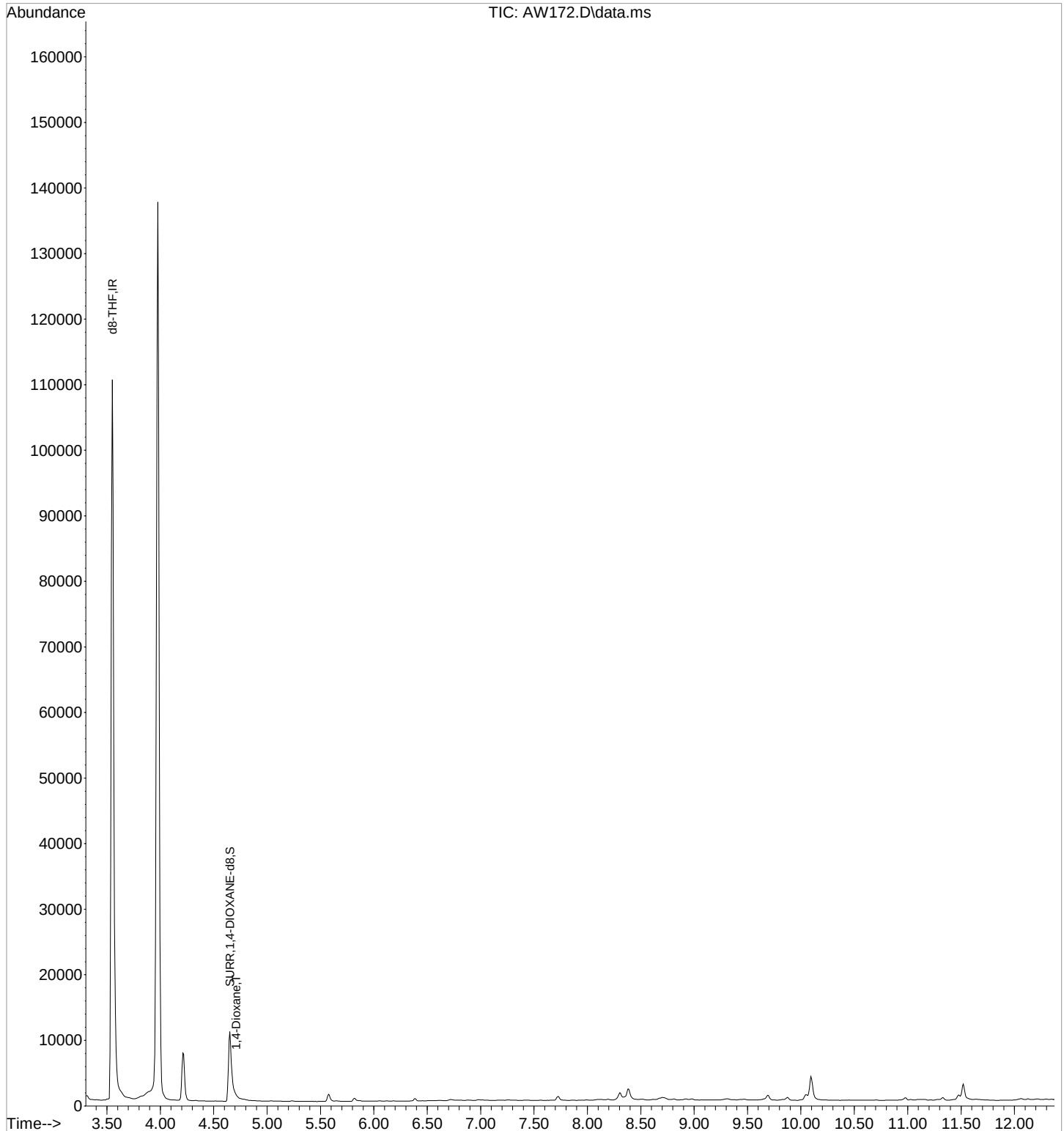
Internal Standards						
1) d8-THF	3.550	46	73579	500.00	PPB	#-0.02
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.651	96	12629	92.11	PPB	0.00
Spiked Amount 100.000	Range 70 - 130		Recovery	=	92.11%	
Target Compounds						
2) 1,4-Dioxane	4.708	88	113	0.64	PPB	Qvalue 92

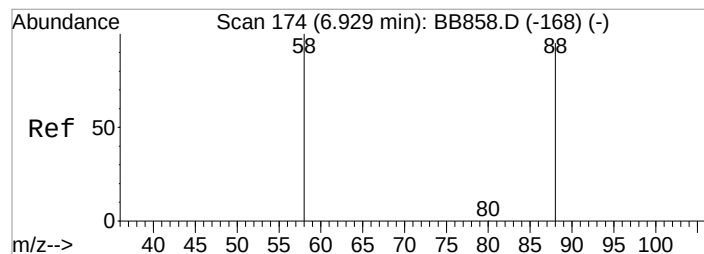
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW172.D
Acq On : 30 Apr 2020 6:24 pm
Operator : AFelser
Sample : RQ2004011-01
Misc : 357338 8270 DIOX
ALS Vial : 25 Sample Multiplier: 1

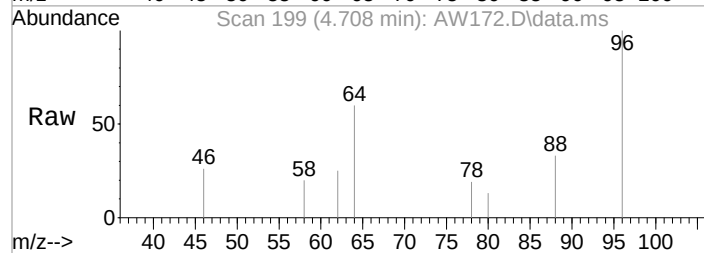
Inst : 5975 E

Quant Time: May 01 10:36:56 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

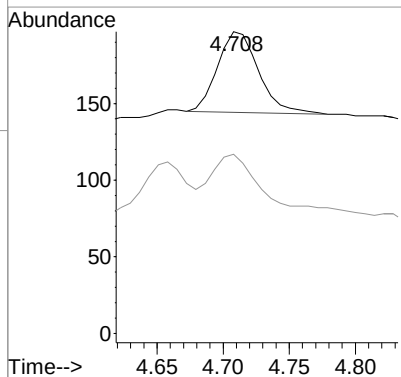
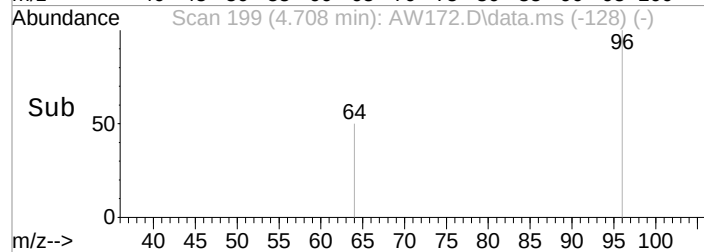




#2
1,4-Dioxane
Concen: 0.64 PPB
RT: 4.708 min Scan# 199
Delta R.T. 0.007 min
Lab File: AW172.D
Acq: 30 Apr 2020 6:24 pm



Tgt Ion: 88 Resp: 113
Ion Ratio Lower Upper
88 100
58 50.9 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW173.D
Acq On : 30 Apr 2020 6:42 pm
Operator : AFelser
Sample : RQ2004011-02
Misc : 357338 8270 DIOX
ALS Vial : 26 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:36:58 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

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

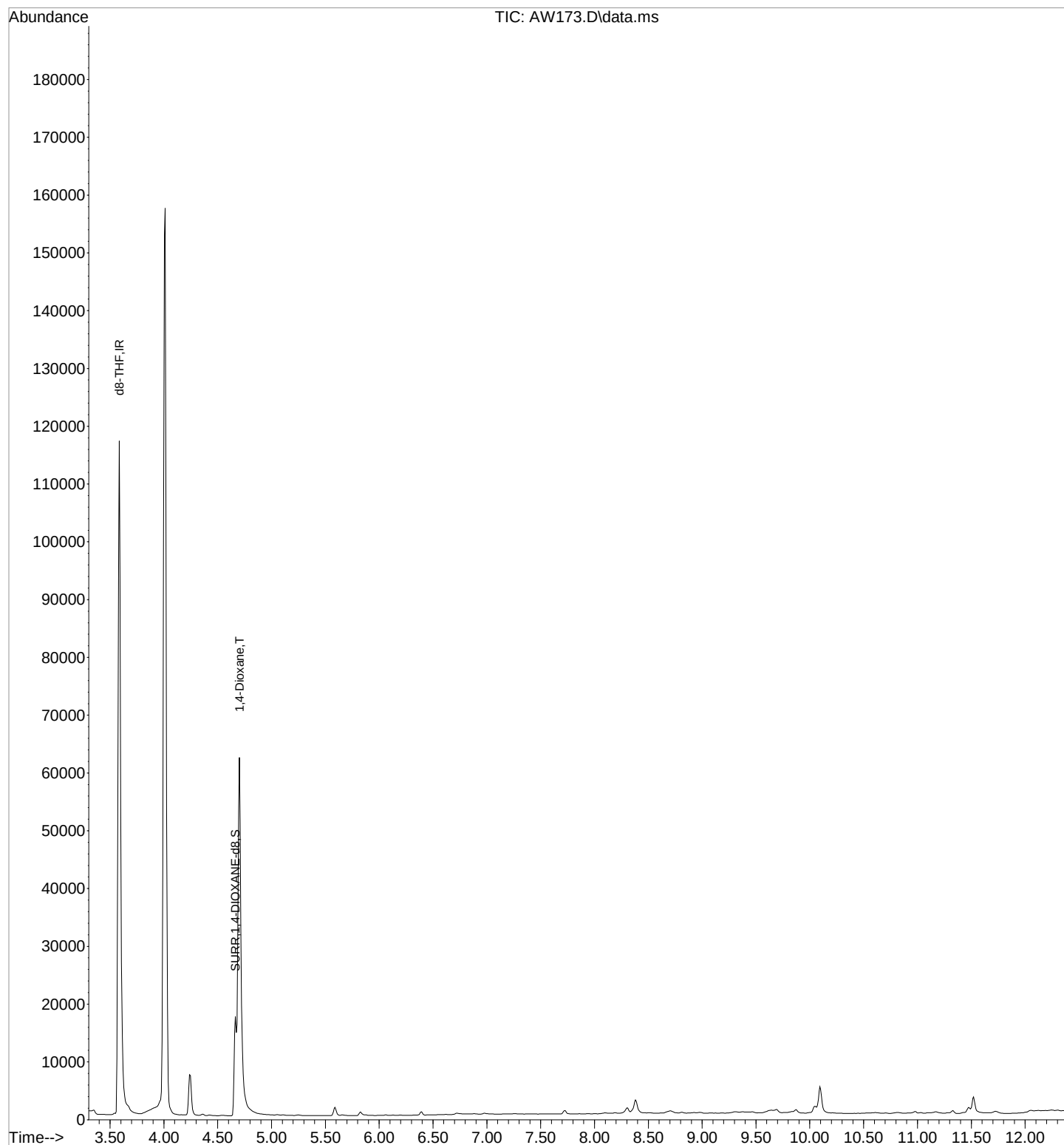
Internal Standards						
1) d8-THF	3.585	46	76727	500.00	PPB	0.01
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.665	96	15571	108.82	PPB	0.00
Spiked Amount	100.000	Range	70 - 130	Recovery	= 108.82%	
Target Compounds						
2) 1,4-Dioxane	4.701	88	80181	539.26	PPB	Qvalue 98

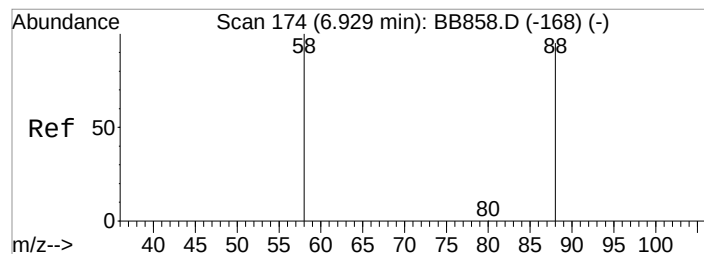
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW173.D
Acq On : 30 Apr 2020 6:42 pm
Operator : AFelser
Sample : RQ2004011-02
Misc : 357338 8270 DIOX
ALS Vial : 26 Sample Multiplier: 1

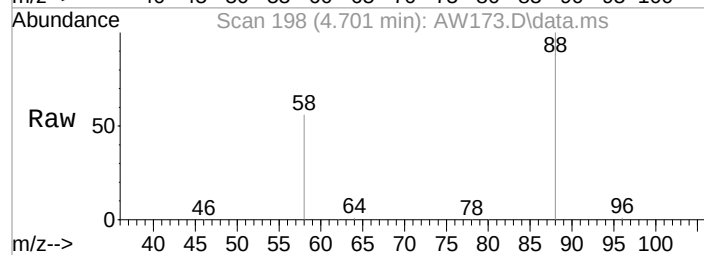
Inst : 5975 E

Quant Time: May 01 10:36:58 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

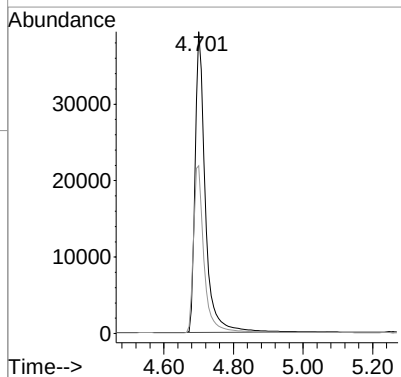
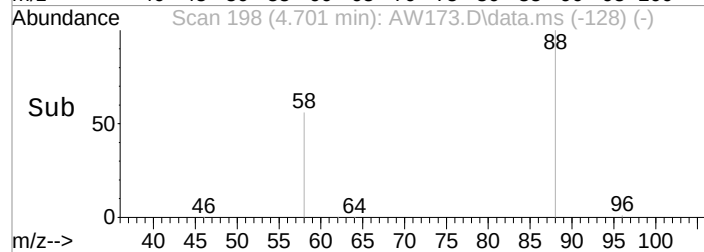




#2
1,4-Dioxane
Concen: 539.26 PPB
RT: 4.701 min Scan# 198
Delta R.T. -0.000 min
Lab File: AW173.D
Acq: 30 Apr 2020 6:42 pm



Tgt Ion: 88 Resp: 80181
Ion Ratio Lower Upper
88 100
58 55.5 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW174.D
Acq On : 30 Apr 2020 7:00 pm
Operator : AFelser
Sample : RQ2004011-03
Misc : 357338 8270 DIOX
ALS Vial : 27 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:37:00 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

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

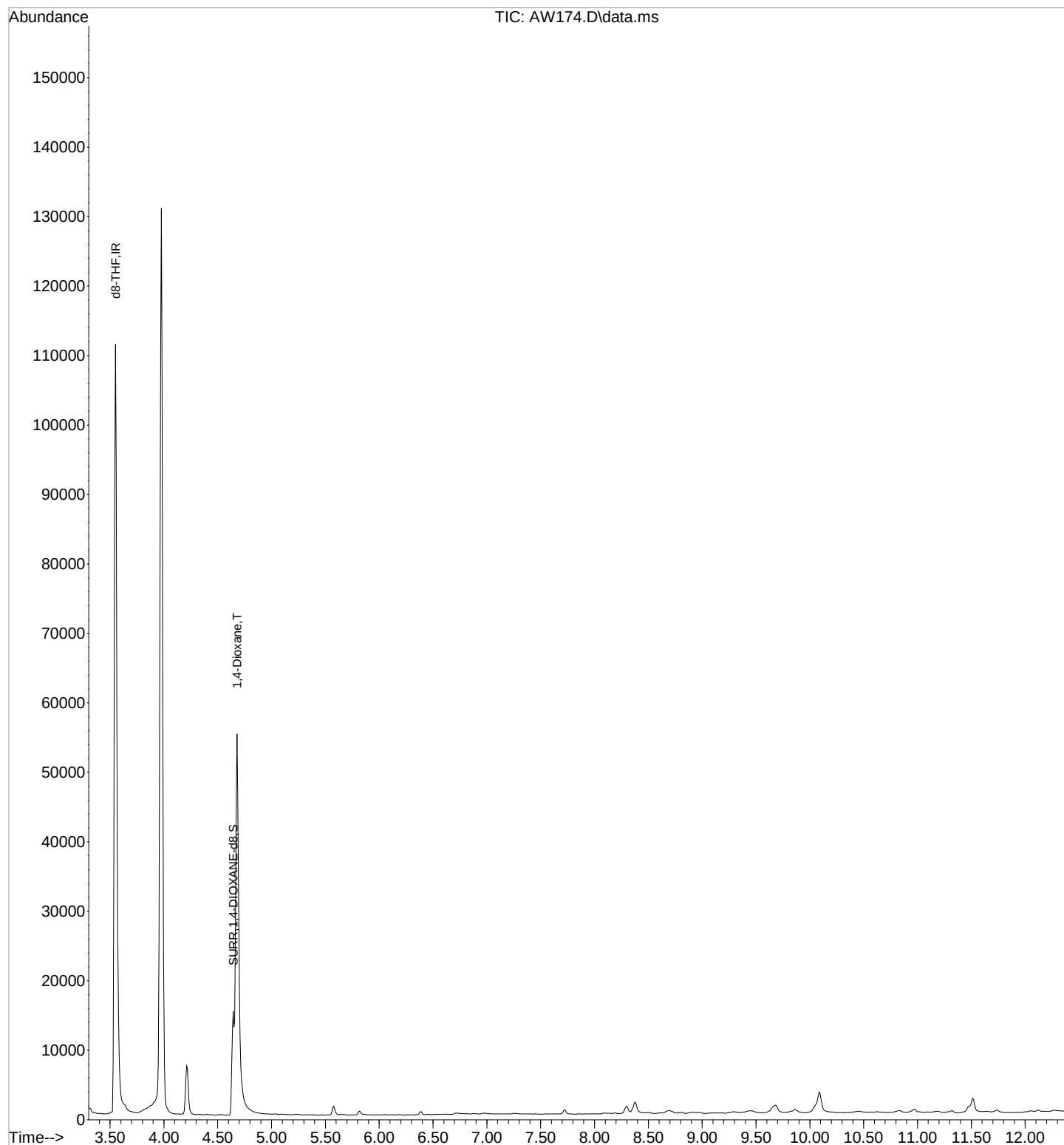
Internal Standards						
1) d8-THF	3.549	46	74212	500.00	PPB	-0.02
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.644	96	14059	101.62	PPB	-0.01
Spiked Amount	100.000	Range	70 - 130	Recovery	=	101.62%
Target Compounds						
2) 1,4-Dioxane	4.679	88	72029	501.33	PPB	Qvalue 99

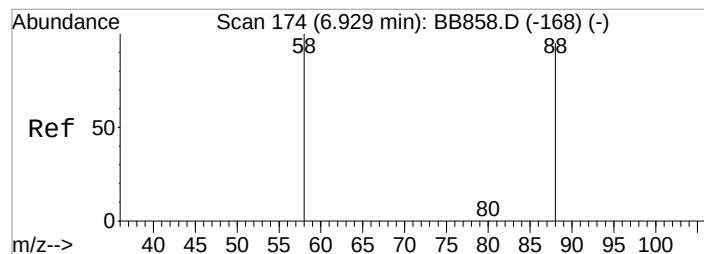
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW174.D
Acq On : 30 Apr 2020 7:00 pm
Operator : AFelser
Sample : RQ2004011-03
Misc : 357338 8270 DIOX
ALS Vial : 27 Sample Multiplier: 1

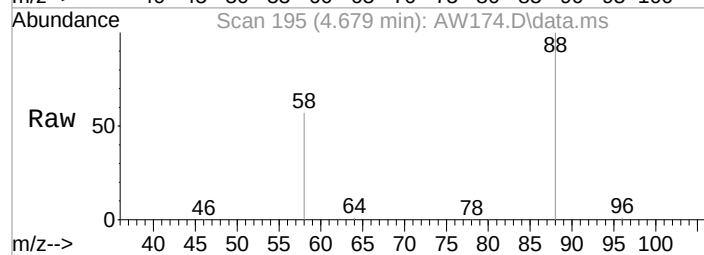
Inst : 5975 E

Quant Time: May 01 10:37:00 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

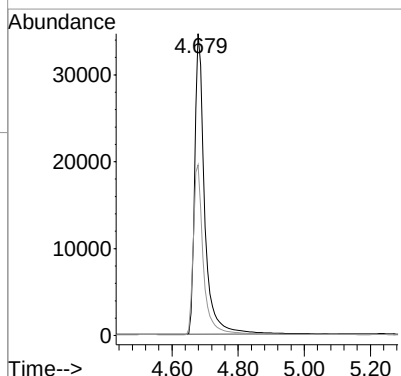
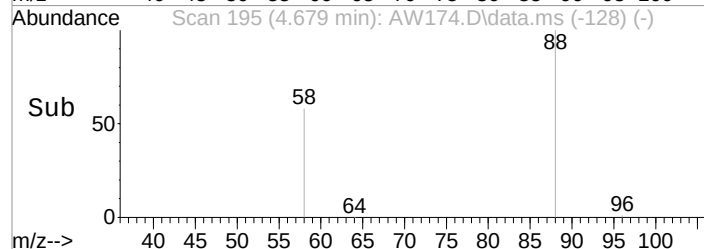




#2
1,4-Dioxane
Concen: 501.33 PPB
RT: 4.679 min Scan# 195
Delta R.T. -0.022 min
Lab File: AW174.D
Acq: 30 Apr 2020 7:00 pm



Tgt Ion: 88 Resp: 72029
Ion Ratio Lower Upper
88 100
58 56.5 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW180.D
Acq On : 30 Apr 2020 8:50 pm
Operator : AFelser
Sample : RQ2004011-04
Misc : 357338 8270 DIOX
ALS Vial : 33 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:37:12 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

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

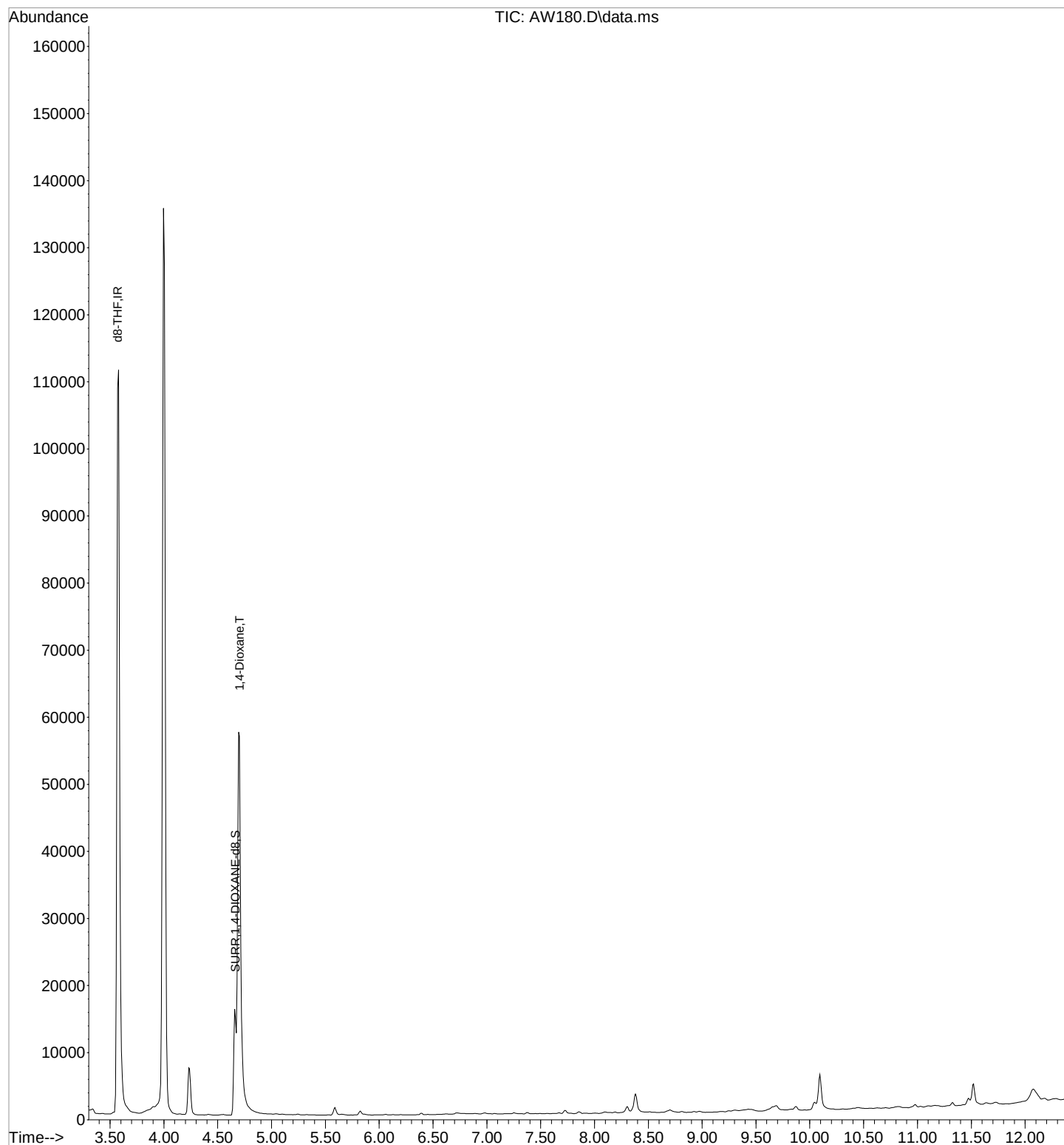
Internal Standards						
1) d8-THF	3.571	46	75991	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.665	96	14639	103.32	PPB	0.00
Spiked Amount 100.000	Range 70 - 130		Recovery	=	103.32%	
Target Compounds						Qvalue
2) 1,4-Dioxane	4.701	88	77055	523.46	PPB	92

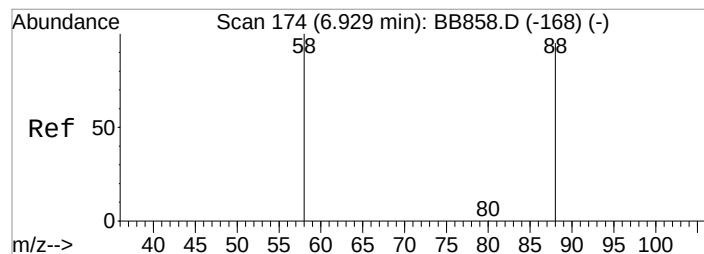
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW180.D
Acq On : 30 Apr 2020 8:50 pm
Operator : AFelser
Sample : RQ2004011-04
Misc : 357338 8270 DIOX
ALS Vial : 33 Sample Multiplier: 1

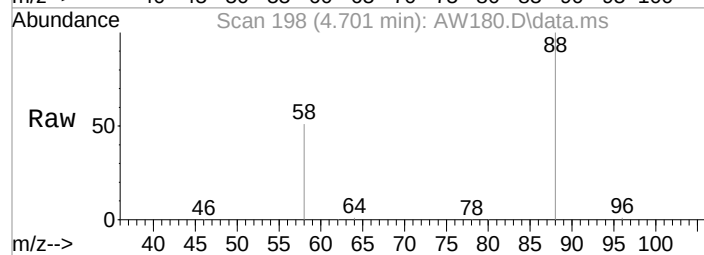
Inst : 5975 E

Quant Time: May 01 10:37:12 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

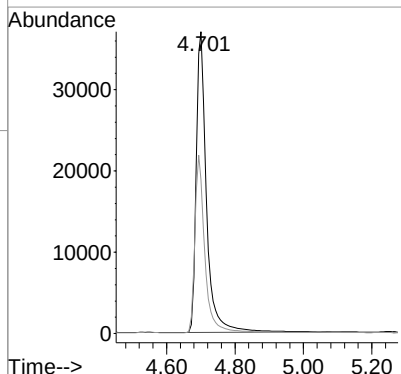
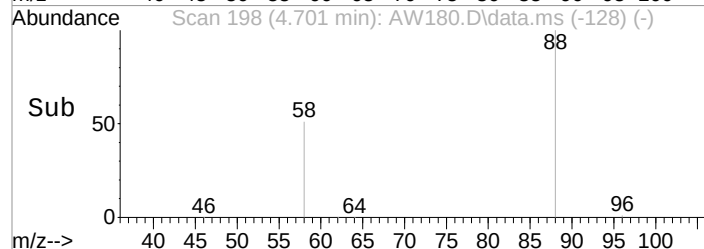




#2
1,4-Dioxane
Concen: 523.46 PPB
RT: 4.701 min Scan# 198
Delta R.T. -0.000 min
Lab File: AW180.D
Acq: 30 Apr 2020 8:50 pm



Tgt Ion: 88 Resp: 77055
Ion Ratio Lower Upper
88 100
58 50.9 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW181.D
Acq On : 30 Apr 2020 9:09 pm
Operator : AFelser
Sample : RQ2004011-05
Misc : 357338 8270 DIOX
ALS Vial : 34 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:37:14 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

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

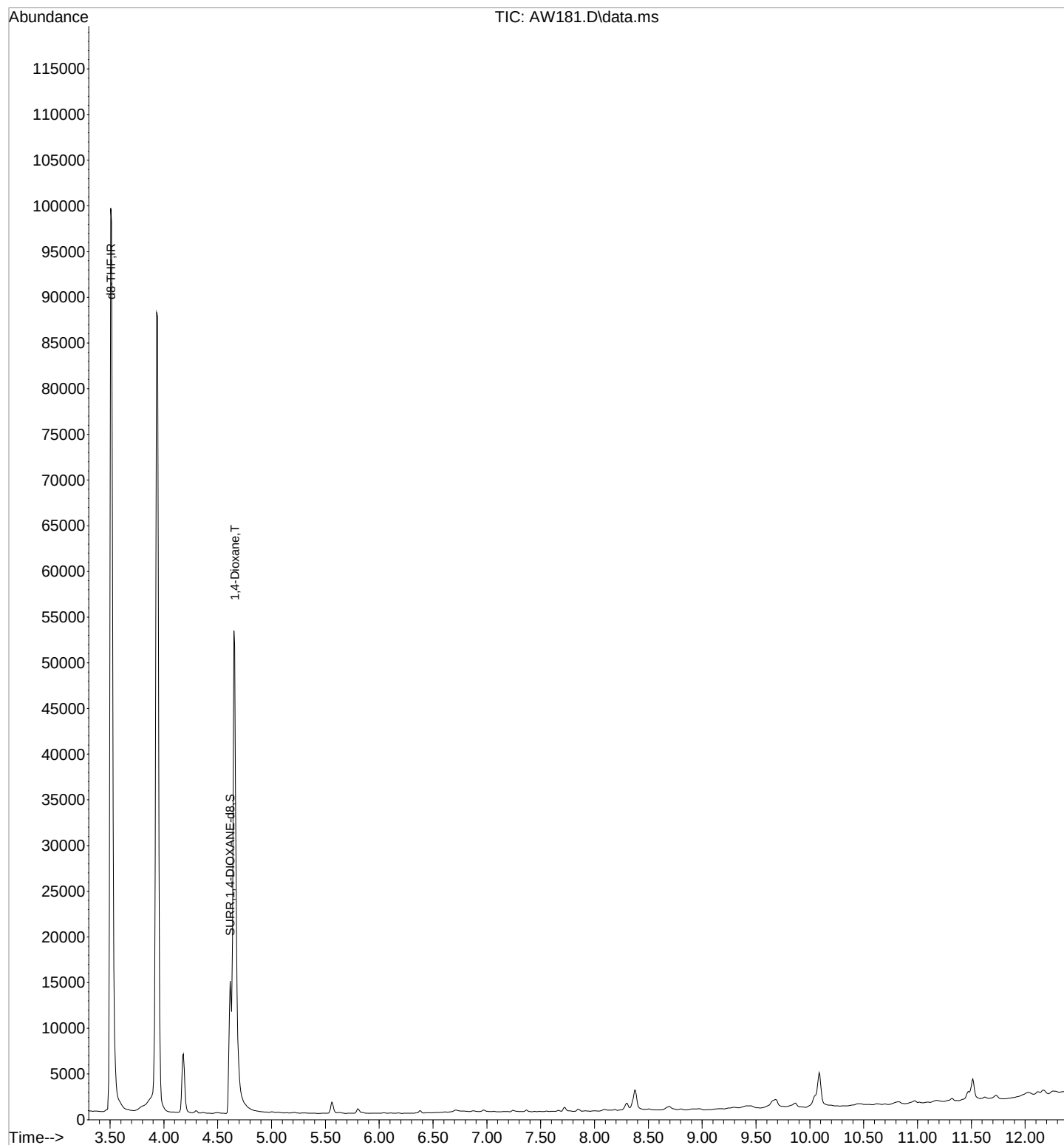
Internal Standards						
1) d8-THF	3.507	46	69226	500.00	PPB	-0.07
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.615	96	13531	104.83	PPB	-0.04
Spiked Amount	100.000	Range	70 - 130	Recovery	=	104.83%
Target Compounds						
2) 1,4-Dioxane	4.658	88	71805	535.31	PPB	Qvalue 92

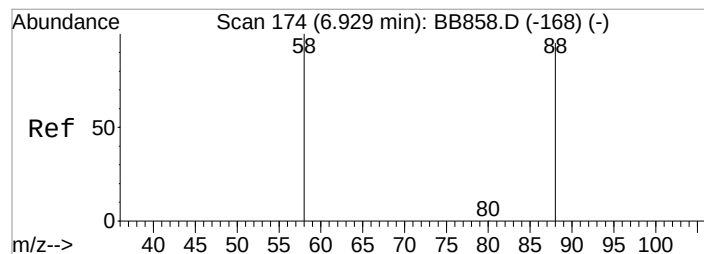
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW181.D
Acq On : 30 Apr 2020 9:09 pm
Operator : AFelser
Sample : RQ2004011-05
Misc : 357338 8270 DIOX
ALS Vial : 34 Sample Multiplier: 1

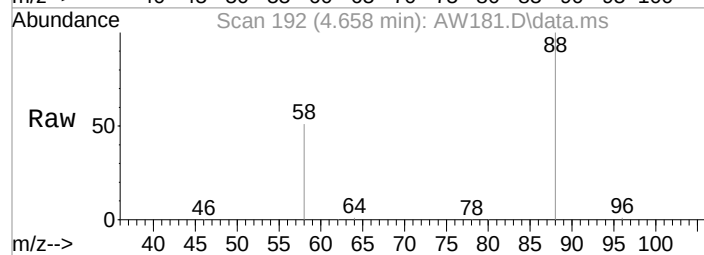
Inst : 5975 E

Quant Time: May 01 10:37:14 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

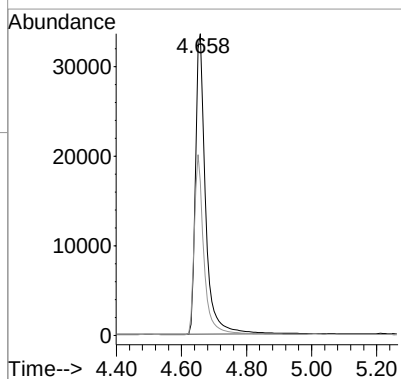
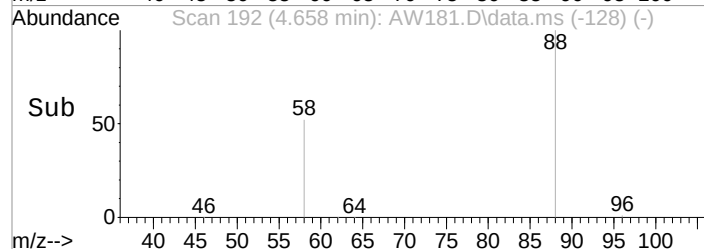




#2
1,4-Dioxane
Concen: 535.31 PPB
RT: 4.658 min Scan# 192
Delta R.T. -0.043 min
Lab File: AW181.D
Acq: 30 Apr 2020 9:09 pm



Tgt Ion: 88 Resp: 71805
Ion Ratio Lower Upper
88 100
58 50.8 37.0 77.0



Evaluate Continuing Calibration Report

1st AF 05/01/20
2nd OM 05/01/20

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW171.D
Acq On : 30 Apr 2020 6:05 pm
Operator : AFelser
Sample : CCV
Misc : 200 ppb STD 8270D/522
ALS Vial : 24 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:36:54 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 IR	d8-THF	500.000	500.000	0.0	101	0.00
2 T	1,4-Dioxane	200.000	204.821	-2.4	99	0.00
3 S	SURR,1,4-DIOXANE-d8	200.000	203.870	-1.9	97	0.00

(#) = Out of Range

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

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW171.D
Acq On : 30 Apr 2020 6:05 pm
Operator : AFelser
Sample : CCV
Misc : 200 ppb STD 8270D/522
ALS Vial : 24 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:36:54 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

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

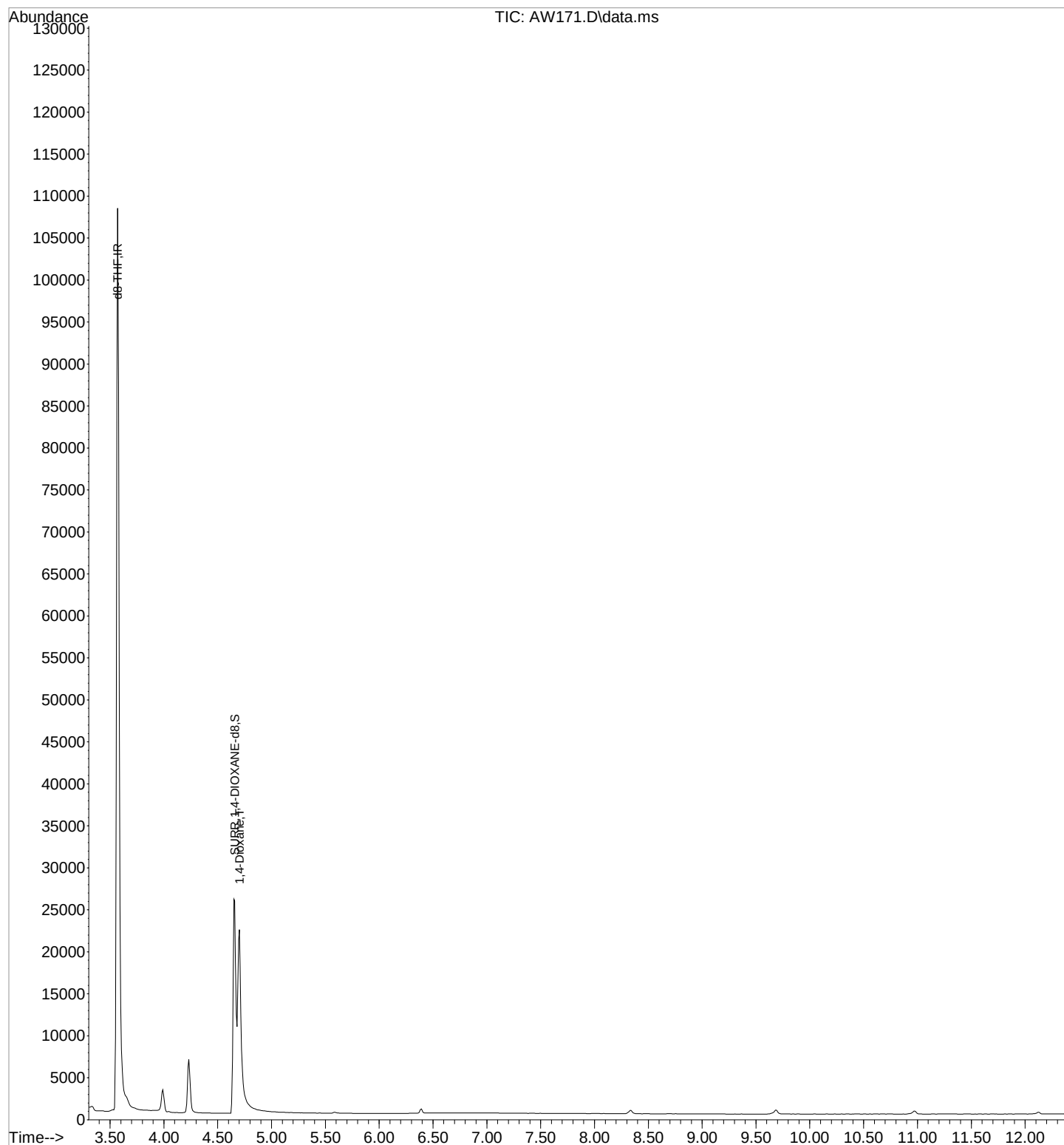
Internal Standards						
1) d8-THF	3.571	46	73670	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.658	96	28111	203.87	PPB	0.00
Spiked Amount 100.000	Range 70 - 130		Recovery	=	203.87%#	
Target Compounds						
2) 1,4-Dioxane	4.701	88	29007	204.82	PPB	Qvalue 98

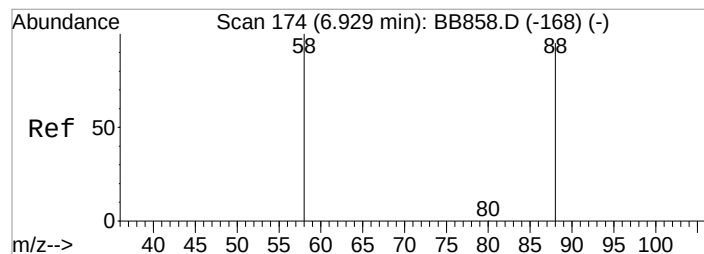
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW171.D
Acq On : 30 Apr 2020 6:05 pm
Operator : AFelser
Sample : CCV
Misc : 200 ppb STD 8270D/522
ALS Vial : 24 Sample Multiplier: 1

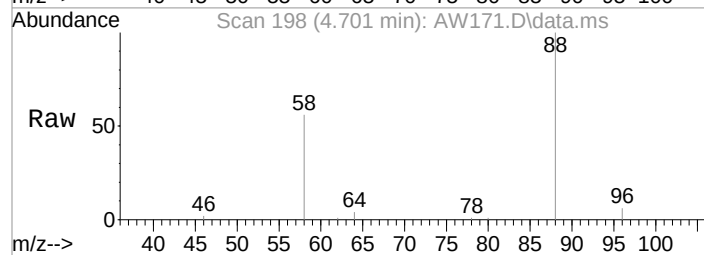
Inst : 5975 E

Quant Time: May 01 10:36:54 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

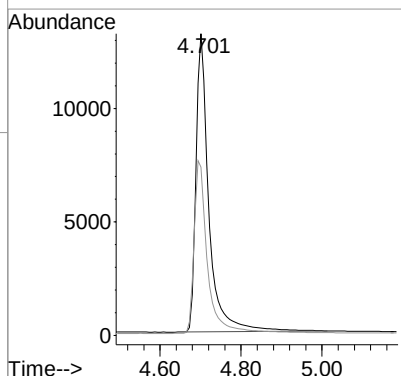
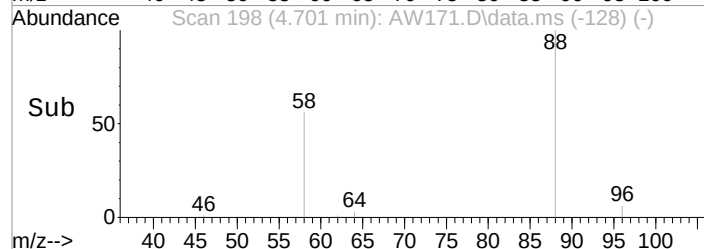




#2
1,4-Dioxane
Concen: 204.82 PPB
RT: 4.701 min Scan# 198
Delta R.T. -0.000 min
Lab File: AW171.D
Acq: 30 Apr 2020 6:05 pm



Tgt Ion: 88 Resp: 29007
Ion Ratio Lower Upper
88 100
58 55.5 37.0 77.0

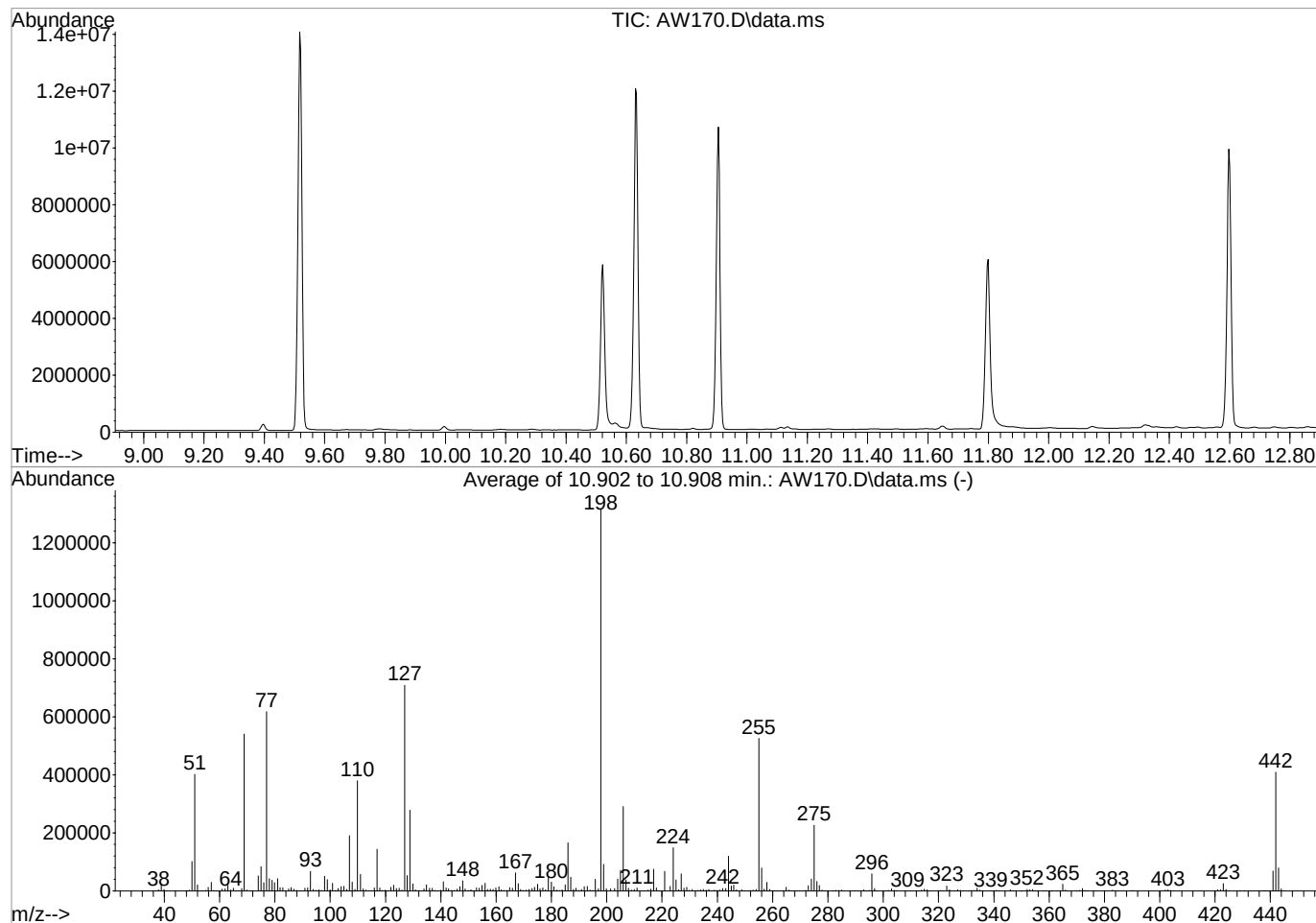


Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW170.D
Acq On : 30 Apr 2020 5:42 pm
Operator : AFelser
Sample : TUNE
Misc : DFTPP
ALS Vial : 3 Sample Multiplier: 1

Inst : 5975 E

Integration File: events.e

Method : I:\ACQUDATA\5975E\METHODS\DFTPPDI0.M
Title :
Last Update : Mon Feb 03 11:35:41 2020



Spectrum Information: Average of 10.902 to 10.908 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	30.5	401246	PASS
68	69	0.00	2	1.5	7852	PASS
70	69	0.00	2	0.5	2698	PASS
127	198	10	80	53.9	708685	PASS
197	198	0.00	2	0.5	6753	PASS
198	198	100	100	100.0	1314304	PASS
199	198	5	9	7.0	91352	PASS
275	198	10	60	17.2	226432	PASS
365	198	1	500	1.7	22485	PASS
441	442	0.01	24	16.6	68027	PASS
442	442	100	100	100.0	409259	PASS
443	442	15	24	19.3	79003	PASS

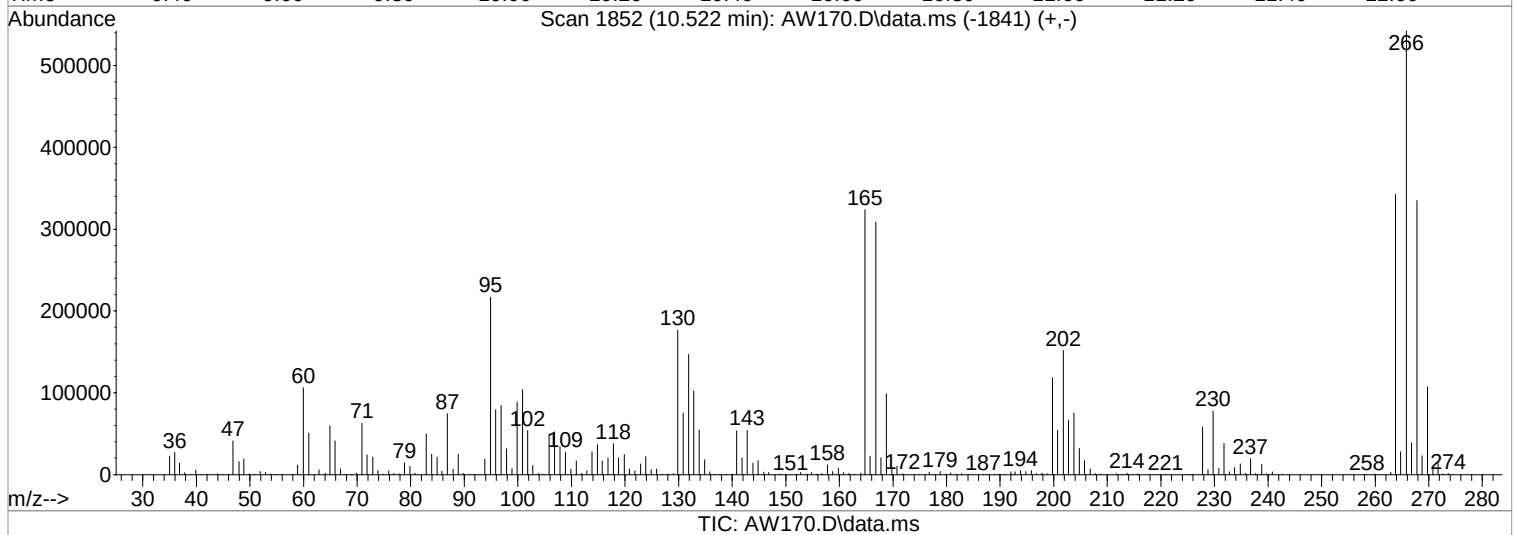
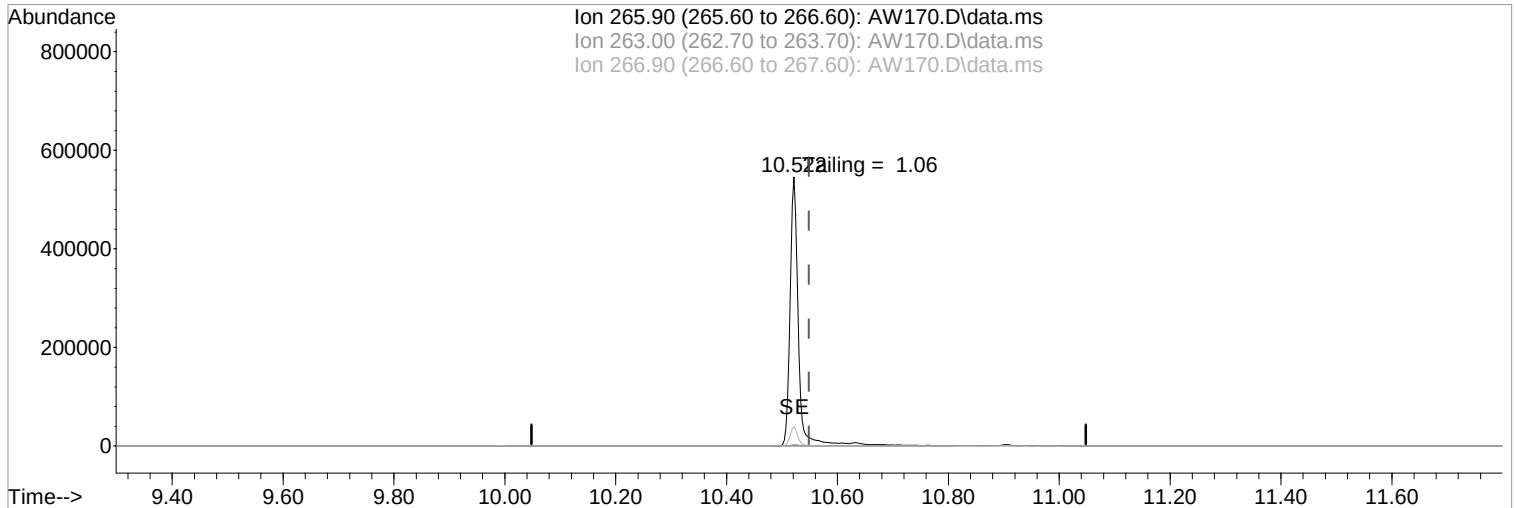
Quantitation Report (Qedit)

1st AF 05/01/20
2nd DM 05/01/20

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW170.D
Acq On : 30 Apr 2020 5:42 pm
Operator : AFelser
Sample : TUNE
Misc : DFTPP
ALS Vial : 3 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:35:58 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Mon Feb 03 11:35:41 2020
Response via : Initial Calibration



(5) Pentachlorophenol (T)

10.523min (-0.026) 121.32 ppm

response 5267259

Ion	Exp%	Act%
265.90	100.00	100.00
263.00	0.00	0.53
266.90	7.70	7.15
0.00	0.00	0.00

Manual Integration:

After

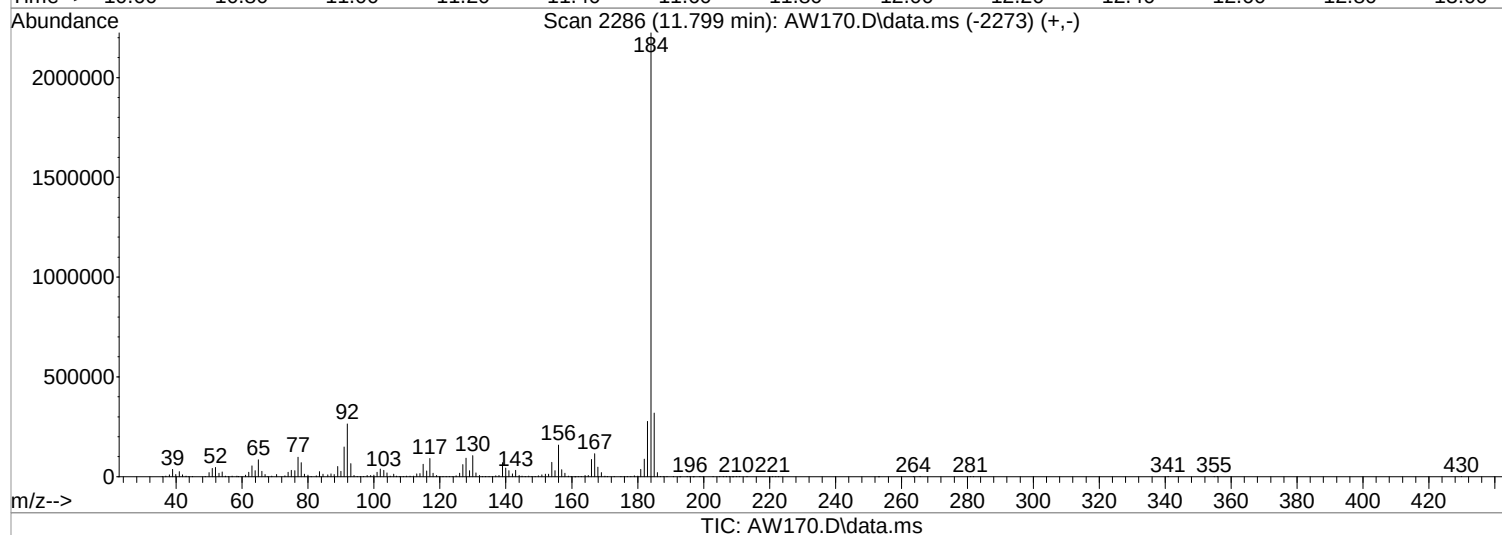
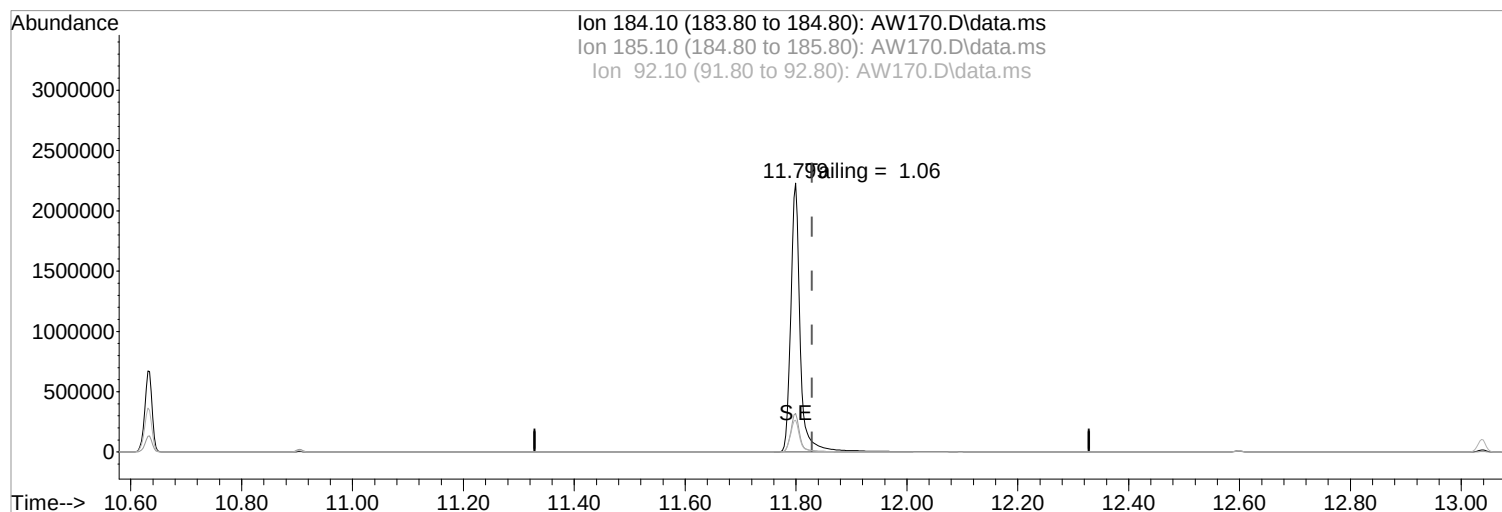
Other - TAILING

05/01/20

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW170.D
Acq On : 30 Apr 2020 5:42 pm
Operator : AFelser
Sample : TUNE
Misc : DFTPP
ALS Vial : 3 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:35:58 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Mon Feb 03 11:35:41 2020
Response via : Initial Calibration

**(8) Benzidine (T)**

11.800min (-0.029) 98.05 ppm

response 25628439

Ion	Exp%	Act%
184.10	100.00	100.00
185.10	13.80	14.31
92.10	10.70	11.83
0.00	0.00	0.00

Manual Integration:

After

Other - TAILING

05/01/20

Data Path : I:\ACQUDATA\5975E\DATA\043020\
 Data File : AW170.D
 Acq On : 30 Apr 2020 5:42 pm
 Operator : AFelser
 Sample : TUNE
 Misc : DFTPP
 ALS Vial : 3 Sample Multiplier: 1

Inst : 5975 E

Quant Time: May 01 10:35:58 2020
 Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
 Quant Title :
 QLast Update : Mon Feb 03 11:35:41 2020
 Response via : Initial Calibration

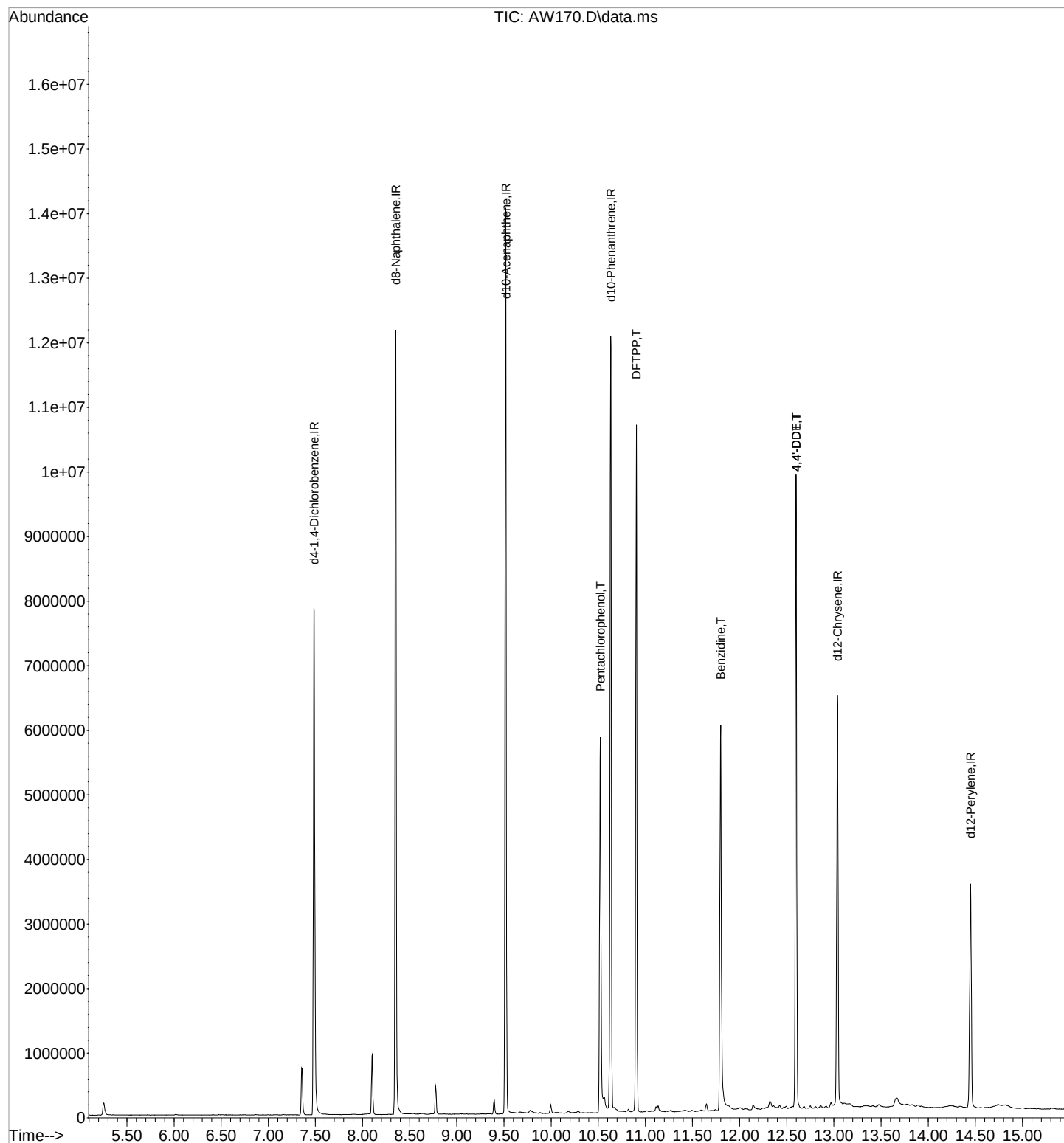
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d4-1,4-Dichlorobenzene	7.486	152	13826834	20.00	ppm	-0.02
2) d8-Naphthalene	8.352	136	51680938	20.00	ppm	-0.02
3) d10-Acenaphthene	9.519	164	27970710	20.00	ppm	-0.03
4) d10-Phenanthrene	10.633	188	40486214	20.00	ppm	-0.03
7) d12-Chrysene	13.039	240	18160584	20.00	ppm	-0.03
12) d12-Perylene	14.451	264	11274408	20.00	ppm	-0.05
Target Compounds						
5) Pentachlorophenol	10.523	266	5267259	121.32	ppm	Qvalue 98
6) DFTPP	10.906	198	11976499	71.50	ppm	# 51
8) Benzidine	11.800	184	25628439	98.05	ppm	# 98
9) 4,4'-DDE	12.600	246	790941	3.61	ppm	# 1
10) 4,4'-DDD	0.000		0	N.D.		
11) 4,4'-DDT	12.600	235	15446638	70.51	ppm	95

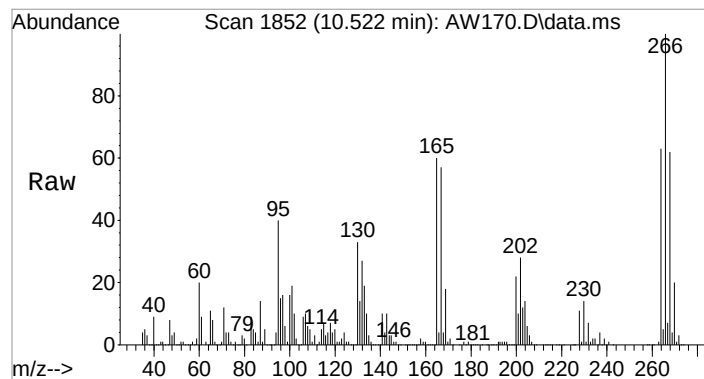
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\DATA\043020\
Data File : AW170.D
Acq On : 30 Apr 2020 5:42 pm
Operator : AFelser
Sample : TUNE
Misc : DFTPP
ALS Vial : 3 Sample Multiplier: 1

Inst : 5975 E

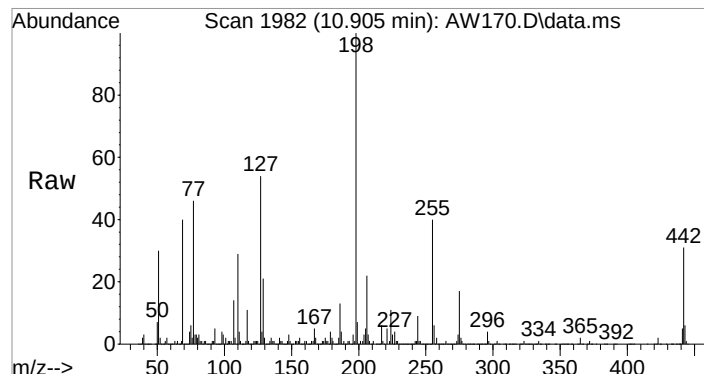
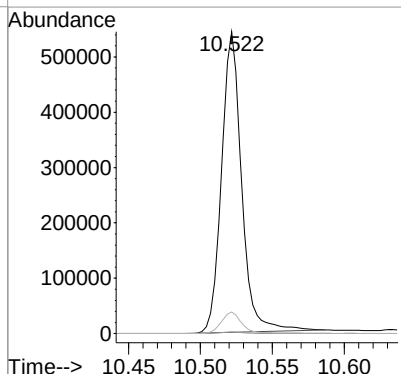
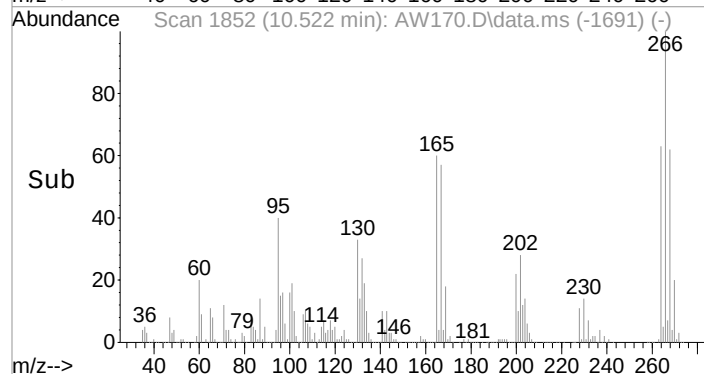
Quant Time: May 01 10:35:58 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Mon Feb 03 11:35:41 2020
Response via : Initial Calibration





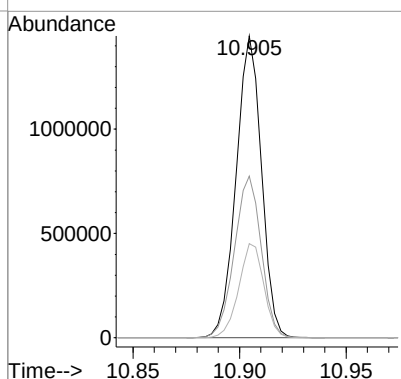
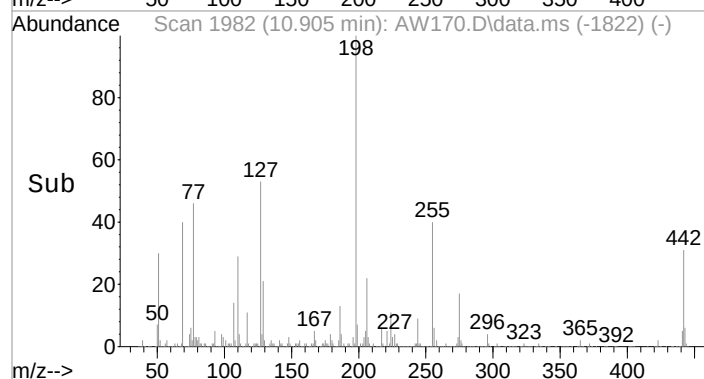
#5
Pentachlorophenol
Concen: 121.32 ppm
RT: 10.523 min Scan# 1852
Delta R.T. -0.026 min
Lab File: AW170.D
Acq: 30 Apr 2020 5:42 pm

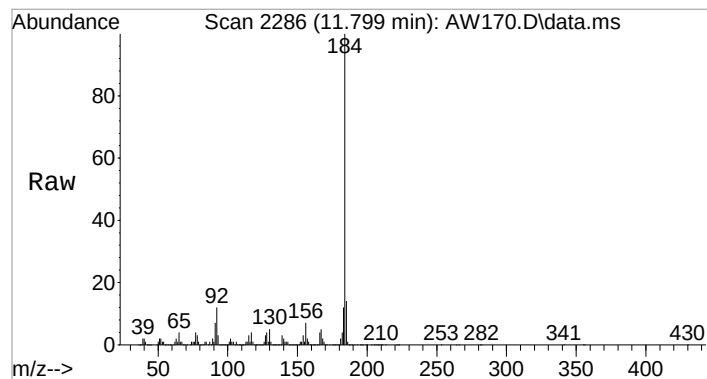
Tgt Ion:266 Resp: 5267259
Ion Ratio Lower Upper
266 100
263 0.5 0.0 20.0
267 7.2 0.0 27.7



#6
DFTPP
Concen: 71.50 ppm
RT: 10.906 min Scan# 1982
Delta R.T. -0.028 min
Lab File: AW170.D
Acq: 30 Apr 2020 5:42 pm

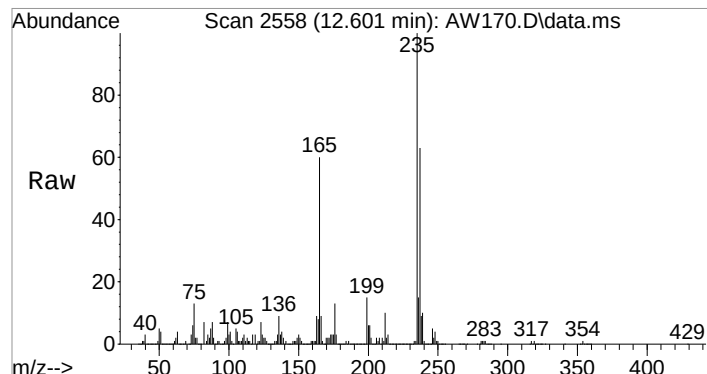
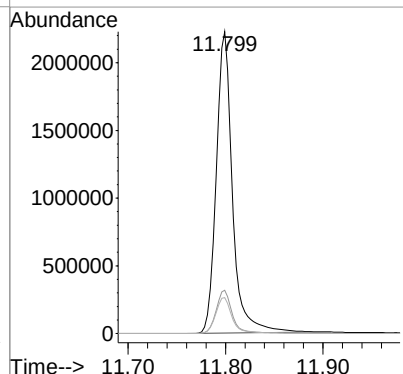
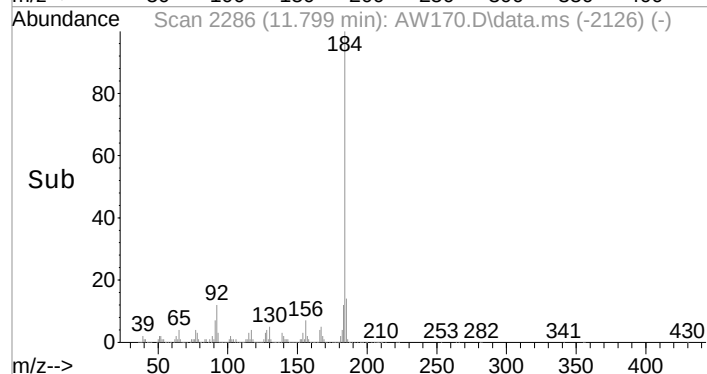
Tgt Ion:198 Resp:11976499
Ion Ratio Lower Upper
198 100
127 53.5 36.9 76.9
442 31.2 86.7 126.7#





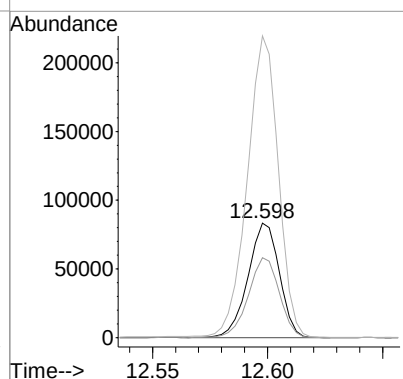
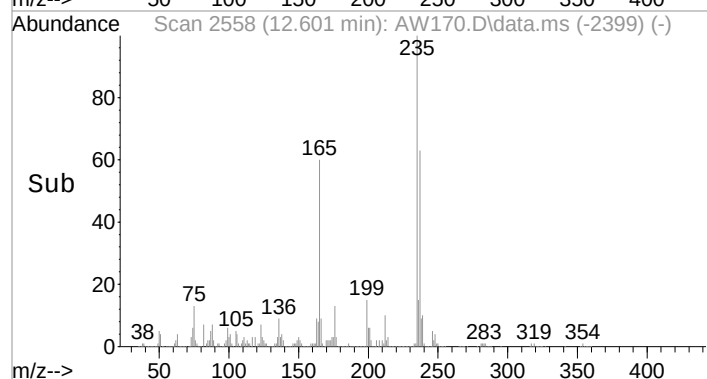
#8
Benzidine
Concen: 98.05 ppm
RT: 11.800 min Scan# 2286
Delta R.T. -0.029 min
Lab File: AW170.D
Acq: 30 Apr 2020 5:42 pm

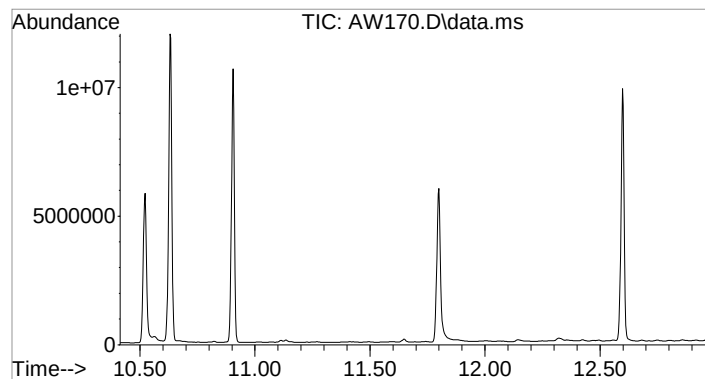
Tgt Ion:184 Resp:25628439
Ion Ratio Lower Upper
184 100
185 14.3 0.0 33.8
92 11.8 0.0 30.7



#9
4,4'-DDE
Concen: 3.61 ppm
RT: 12.600 min Scan# 2558
Delta R.T. -0.032 min
Lab File: AW170.D
Acq: 30 Apr 2020 5:42 pm

Tgt Ion:246 Resp: 790941
Ion Ratio Lower Upper
246 100
248 69.5 51.3 91.3
176 256.6 7.6 47.6#

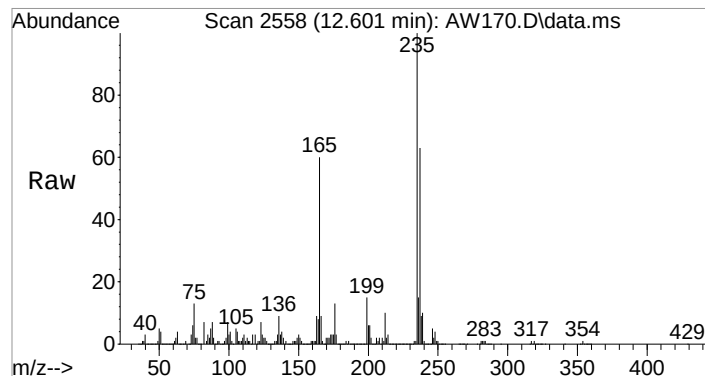
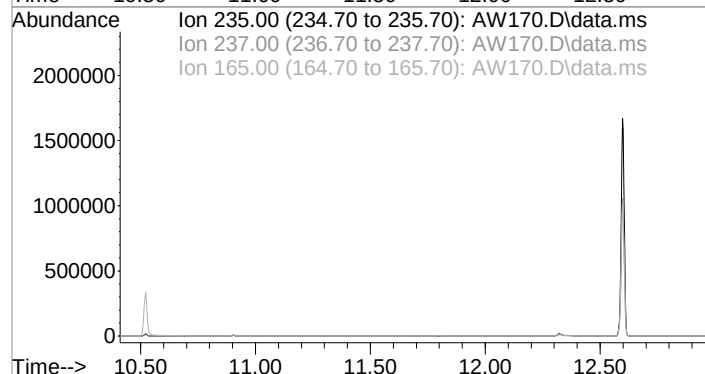




#10
4,4'-DDD
Concen: N.D.
Expected RT: 11.71 min

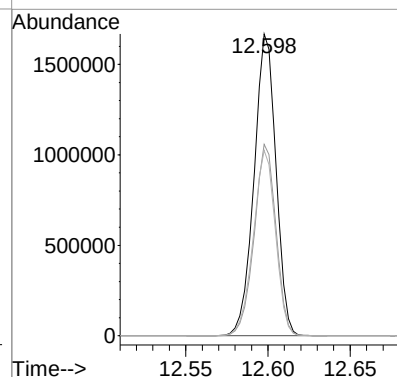
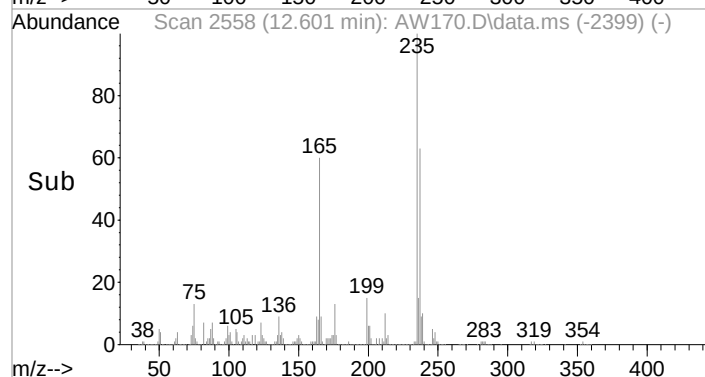
Lab File: AW170.D
Acq: 30 Apr 2020 5:42 pm

Tgt Ion: 235
Sig Exp Ratio
235 100
237 62.2
165 61.6



#11
4,4'-DDT
Concen: 70.51 ppm
RT: 12.600 min Scan# 2558
Delta R.T. -0.032 min
Lab File: AW170.D
Acq: 30 Apr 2020 5:42 pm

Tgt Ion: 235 Resp: 15446638
Ion Ratio Lower Upper
235 100
237 63.3 43.5 83.5
165 59.8 31.9 71.9



ALS Group USA, Corp.

DBA ALS Environmental

QC/QC Report

Date Analyzed: 4/30/20 9:58

ICAL Tune Summary
Semi-Volatile Organic Compounds by GC/MSFile ID: I:\ACQUDATA\5975E\data\043020\AW145.D
Instrument ID: R-MS-56

Analytical Method: 522

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Results Pass/Fail
50	95	15	40	17.6	7875	PASS
75	95	30	60	52.0	23341	PASS
95	95	100	100	100.0	44851	PASS
96	95	5	9	6.5	2931	PASS
173	174	0	2	0.6	198	PASS
174	95	50	120	70.3	31549	PASS
175	174	5	9	6.7	2110	PASS
176	174	95	101	97.7	30837	PASS
177	176	5	9	6.0	1846	PASS

Sample Name	Lab Code	File ID:	Date Analyzes: Q
BLK	BLK	I:\ACQUDATA\5975E\DATA\043020\AW147.D	4/30/20 10:45
STD 1	STD 1	I:\ACQUDATA\5975E\DATA\043020\AW148.D	4/30/20 11:04
STD 2	STD 2	I:\ACQUDATA\5975E\DATA\043020\AW149.D	4/30/20 11:22
STD 3	STD 3	I:\ACQUDATA\5975E\DATA\043020\AW150.D	4/30/20 11:39
STD 4	STD 4	I:\ACQUDATA\5975E\DATA\043020\AW151.D	4/30/20 11:58
STD 5	STD 5	I:\ACQUDATA\5975E\DATA\043020\AW152.D	4/30/20 12:16
STD 6	STD 6	I:\ACQUDATA\5975E\DATA\043020\AW153.D	4/30/20 12:34
STD 7	STD 7	I:\ACQUDATA\5975E\DATA\043020\AW154.D	4/30/20 12:52
STD 8	STD 8	I:\ACQUDATA\5975E\DATA\043020\AW155.D	4/30/20 13:10
STD 9	STD 9	I:\ACQUDATA\5975E\DATA\043020\AW156.D	4/30/20 13:28
ICV	ICV	I:\ACQUDATA\5975E\DATA\043020\AW157.D	4/30/20 13:47

ALS Group USA, Corp.

DBA ALS Environmental

QC/QC Report

Date Analyzed: 4/30/20 10:21

ICAL Tune Summary
Semi Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\5975E\data\043020\AW146.D
Instrument ID: R-MS-56

Analytical Method: 8270D

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Results Pass/Fail
51	198	10	80	32.6	374373	PASS
68	69	0	2	1.4	6716	PASS
69	198	0	100	43.2	496287	PASS
70	69	0	2	0.5	2718	PASS
127	198	10	80	55.1	633403	PASS
197	198	0	2	0.6	6375	PASS
198	198	100	100	100.0	1148602	PASS
199	198	5	9	6.6	76097	PASS
275	198	10	60	16.5	189781	PASS
365	198	1	100	1.5	17425	PASS
441	442	0.01	24	15.9	53421	PASS
442	442	100	100	100.0	336171	PASS
443	442	15	24	19.0	63805	PASS

Sample Name	Lab Code	File ID:	Date Analyzes: Q
BLK	BLK	I:\ACQUDATA\5975E\DATA\043020\AW147.D	4/30/20 10:45
STD 1	STD 1	I:\ACQUDATA\5975E\DATA\043020\AW148.D	4/30/20 11:04
STD 2	STD 2	I:\ACQUDATA\5975E\DATA\043020\AW149.D	4/30/20 11:22
STD 3	STD 3	I:\ACQUDATA\5975E\DATA\043020\AW150.D	4/30/20 11:39
STD 4	STD 4	I:\ACQUDATA\5975E\DATA\043020\AW151.D	4/30/20 11:58
STD 5	STD 5	I:\ACQUDATA\5975E\DATA\043020\AW152.D	4/30/20 12:16
STD 6	STD 6	I:\ACQUDATA\5975E\DATA\043020\AW153.D	4/30/20 12:34
STD 7	STD 7	I:\ACQUDATA\5975E\DATA\043020\AW154.D	4/30/20 12:52
STD 8	STD 8	I:\ACQUDATA\5975E\DATA\043020\AW155.D	4/30/20 13:10
STD 9	STD 9	I:\ACQUDATA\5975E\DATA\043020\AW156.D	4/30/20 13:28
ICV	ICV	I:\ACQUDATA\5975E\DATA\043020\AW157.D	4/30/20 13:47

Analysis: 522 / 820 Dilox Analyst: A Fisher Run Method: SD100027 / REF THX / OPT100
 Date: 04/30/2020 Instr. 5975E Quant Method: SD100 643020.M
 Syringes: _____ LIMS Run#: 678719

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
1	BLW			AW143	—	
1	BLW			44	—	
2	REF THX		208992	45	Y	
3	DFT PP THX		208070	46	Y	
4	Int ALK			47	Y	
5	STD 1		209175	48	Y	
6	2		209176	49	Y	
7	3		209177	50	Y	
8	4		209178	51	Y	
9	5		209179	52	Y	
10	6		209180	53	Y	
11	7		209181	54	Y	
12	8		209182	55	Y	
13	↓ 9		209183	56	Y	
14	ICV		209184	57	Y	
15	CCV 2ppb		209176	58	Y	
16	RQ2004010-01			59	N	LL LCS fail
17	↓ -02			60	N	↓
18	↓ -03			61	N	
19	↓ -06			62	N	Rec 1
20	R2003206-001			63	N	LL LCS fail
21	↓ -002			64	N	↓
22	RQ2004010-04			65	N	
23	↓ -05			66	N	↓
19	↓ -06			67	N	Rec 1
19	↓ -06			68	N	Rec 1
24	CCV 200ppb		209180	69	Y	
3	DFT PP THX		208070	70	Y	
24	CCV 200ppb		208990	71	Y	
25	RQ2004011-01			72	Y	
26	↓ -02			73	Y	
27	↓ -03			74	Y	
28	R2003206-001			75	Y	
29	↓ -002			76	Y	Diss 1, Intake Int.
30	↓ -003			77	Y	
31	↓ -005			78	Y	
32	↓ -006			79	Y	
33	RQ2004011-04			80	Y	
34	↓ -05			81	Y	
35	R2003206-007			82	Y	

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

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

Runlog GCEXT r2 4/27/17

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Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW157.D
Acq On : 30 Apr 2020 1:47 pm
Operator : AFelser
Sample : ICV Inst : 5975 E
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 30 14:18:54 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

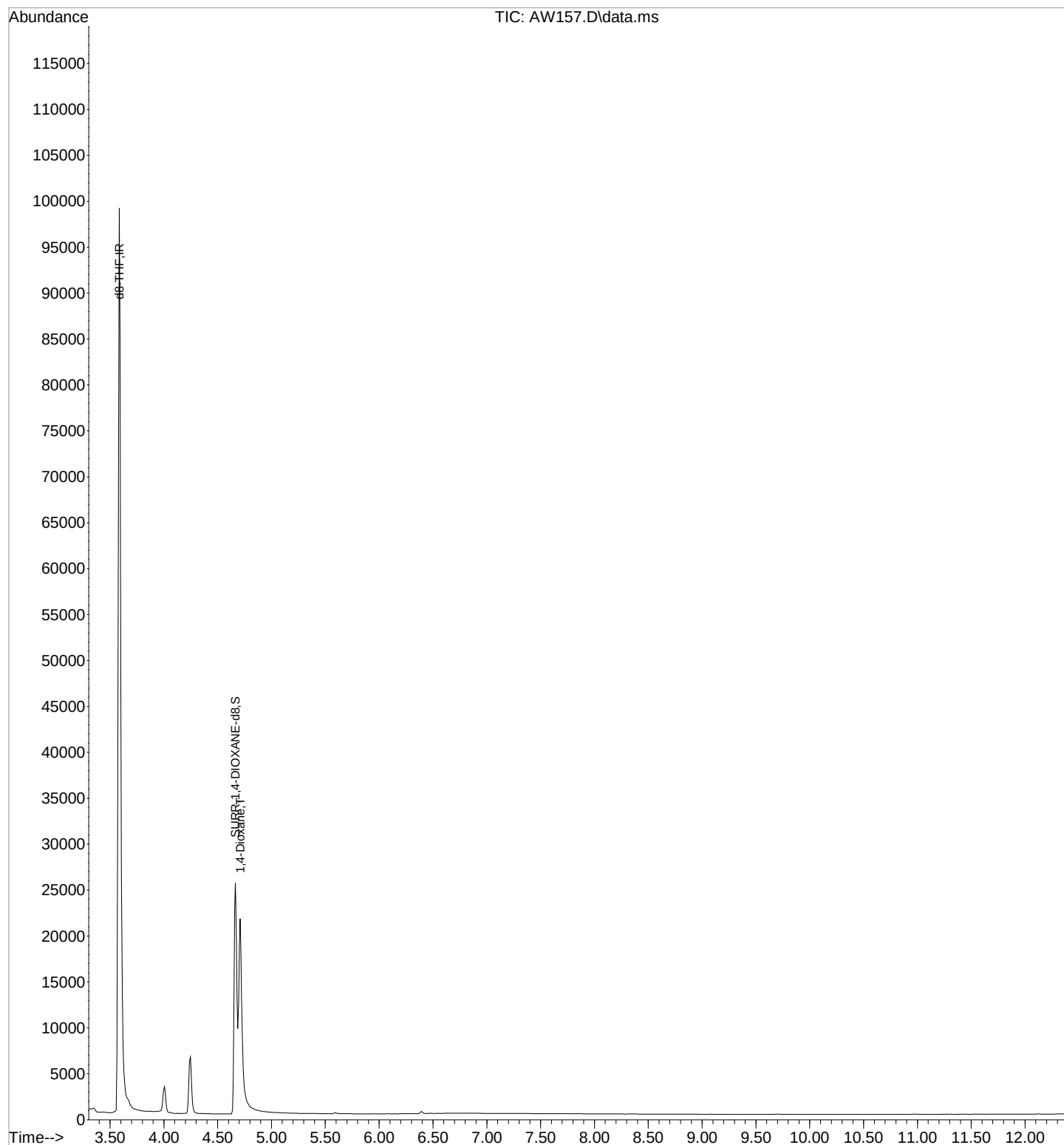
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

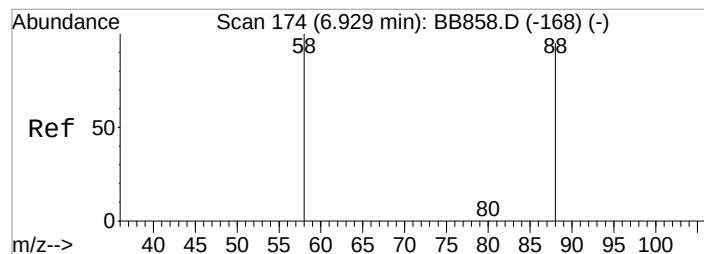
Internal Standards						
1) d8-THF	3.585	46	67277	500.00	PPB	0.01
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.665	96	26466	210.14	PPB	0.00
Spiked Amount 100.000	Range 70 - 130		Recovery	=	210.14%#	
Target Compounds						
2) 1,4-Dioxane	4.708	88	27831	215.14	PPB	Qvalue 100

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

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW157.D
Acq On : 30 Apr 2020 1:47 pm
Operator : AFelser
Sample : ICV
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 14 Sample Multiplier: 1
Inst : 5975 E

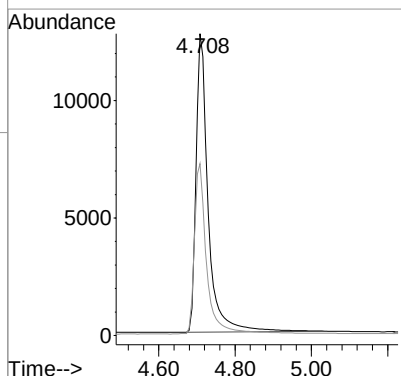
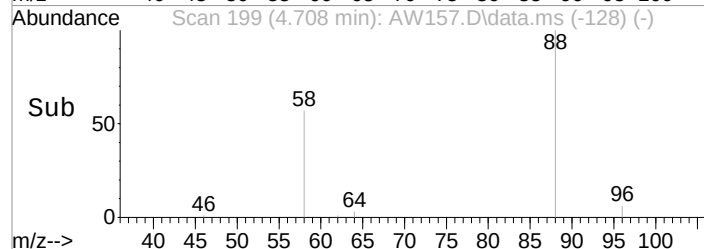
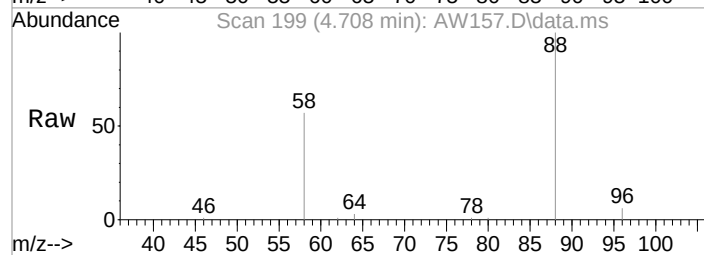
Quant Time: Apr 30 14:18:54 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration





#2
1,4-Dioxane
Concen: 215.14 PPB
RT: 4.708 min Scan# 199
Delta R.T. 0.007 min
Lab File: AW157.D
Acq: 30 Apr 2020 1:47 pm

Tgt Ion: 88 Resp: 27831
Ion Ratio Lower Upper
88 100
58 57.0 37.0 77.0

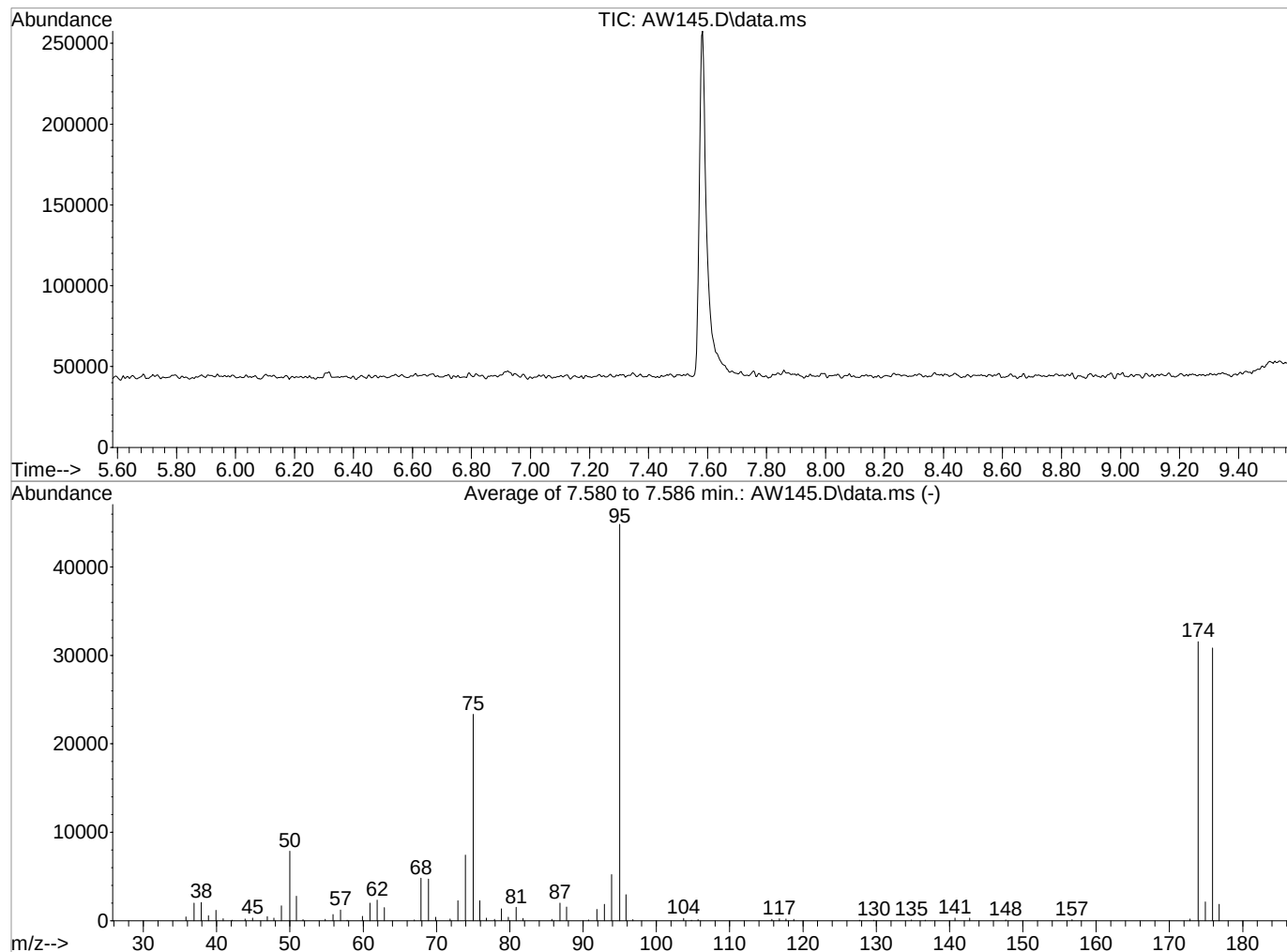


Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW145.D
Acq On : 30 Apr 2020 9:58 am
Operator : AFelser
Sample : TUNE
Misc : BFB
ALS Vial : 2 Sample Multiplier: 1

Inst : 5975 E

Integration File: events.e

Method : I:\ACQUDATA\5975E\METHODS\bfbtune.M
Title :
Last Update : Wed Mar 28 08:41:26 2012



Spectrum Information: Average of 7.580 to 7.586 min.

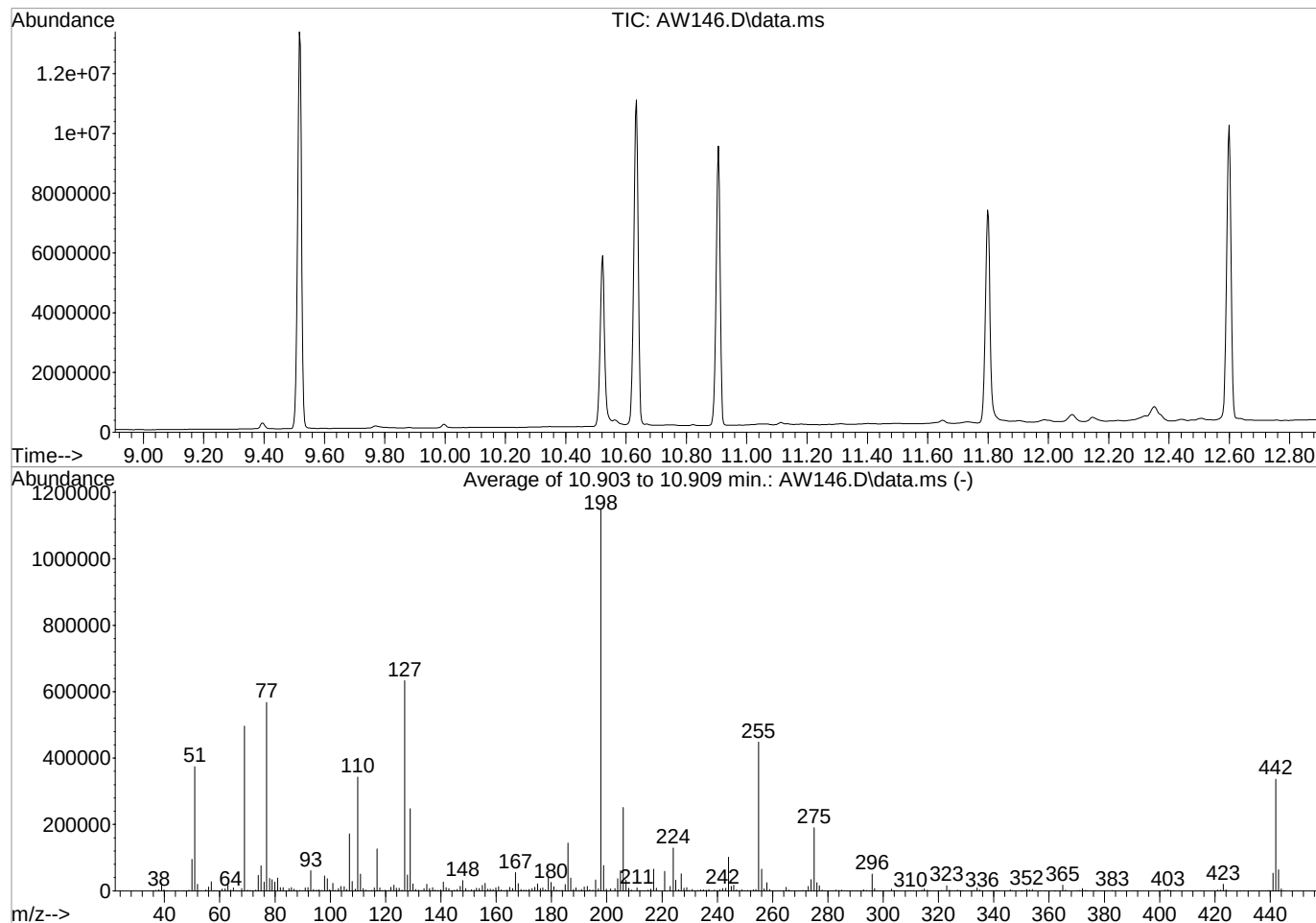
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.6	7875	PASS
75	95	30	60	52.0	23341	PASS
95	95	100	100	100.0	44851	PASS
96	95	5	9	6.5	2931	PASS
173	174	0.00	2	0.6	198	PASS
174	95	50	100	70.3	31549	PASS
175	174	5	9	6.7	2110	PASS
176	174	95	101	97.7	30837	PASS
177	176	5	9	6.0	1846	PASS

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW146.D
Acq On : 30 Apr 2020 10:21 am
Operator : AFelser
Sample : TUNE
Misc : DFTPP
ALS Vial : 3 Sample Multiplier: 1

Inst : 5975 E

Integration File: events.e

Method : I:\ACQUDATA\5975E\METHODS\DFTPPDI0.M
Title :
Last Update : Mon Feb 03 11:35:41 2020



Spectrum Information: Average of 10.903 to 10.909 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	32.6	374373	PASS
68	69	0.00	2	1.4	6716	PASS
70	69	0.00	2	0.5	2718	PASS
127	198	10	80	55.1	633403	PASS
197	198	0.00	2	0.6	6375	PASS
198	198	100	100	100.0	1148602	PASS
199	198	5	9	6.6	76097	PASS
275	198	10	60	16.5	189781	PASS
365	198	1	500	1.5	17425	PASS
441	442	0.01	24	15.9	53421	PASS
442	442	100	100	100.0	336171	PASS
443	442	15	24	19.0	63805	PASS

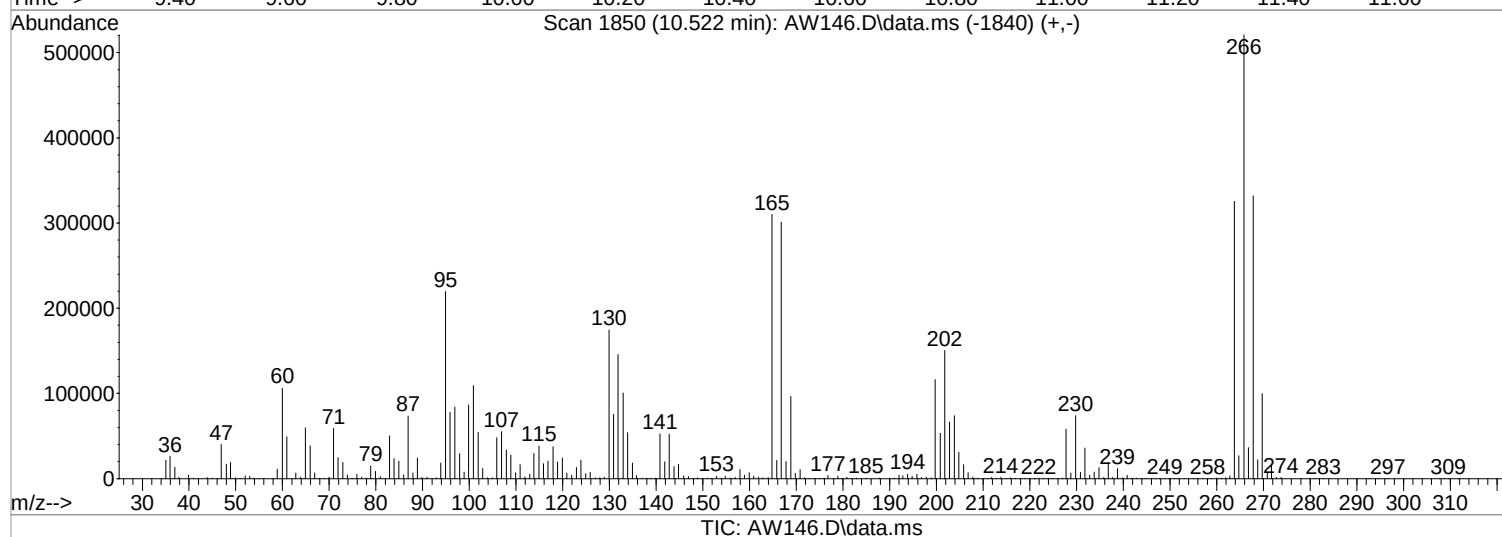
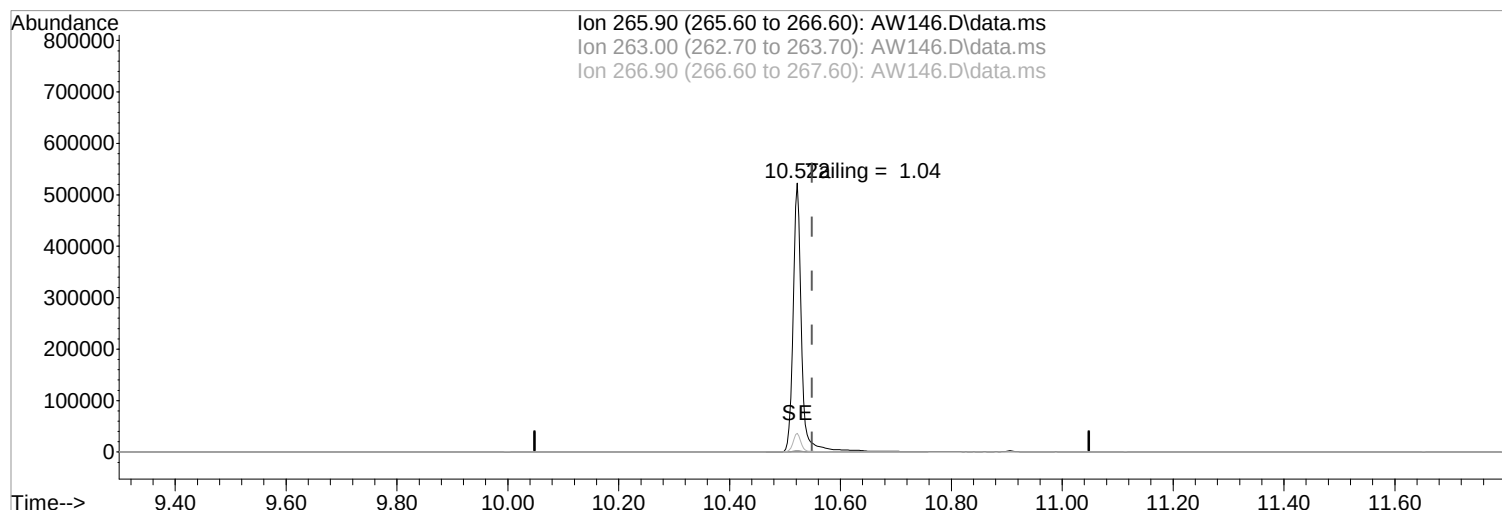
Quantitation Report (Qedit)

1st AF 05/01/20
2nd DM 05/01/20

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW146.D
Acq On : 30 Apr 2020 10:21 am
Operator : AFelser
Sample : TUNE
Misc : DFTPP
ALS Vial : 3 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Apr 30 10:56:27 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Mon Feb 03 11:35:41 2020
Response via : Initial Calibration



(5) Pentachlorophenol (T)

10.523min (-0.026) 135.78 ppm

response 5339909

Ion	Exp%	Act%
265.90	100.00	100.00
263.00	0.00	0.35
266.90	7.70	6.96
0.00	0.00	0.00

Manual Integration:

After

Other - TAILING

04/30/20

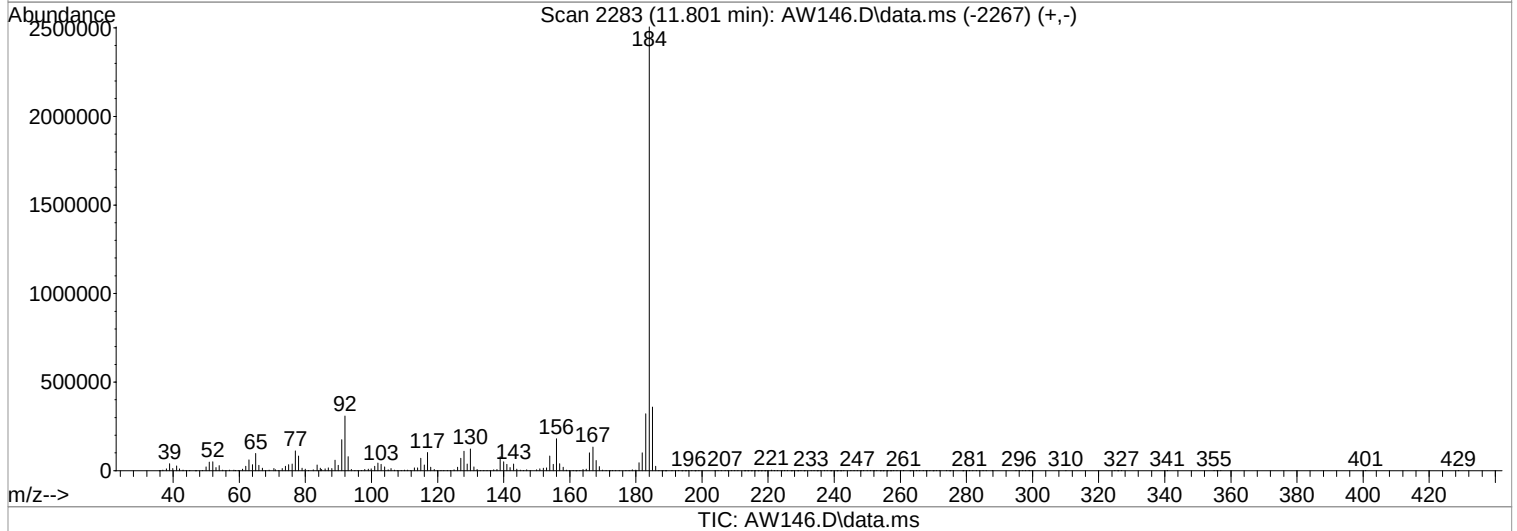
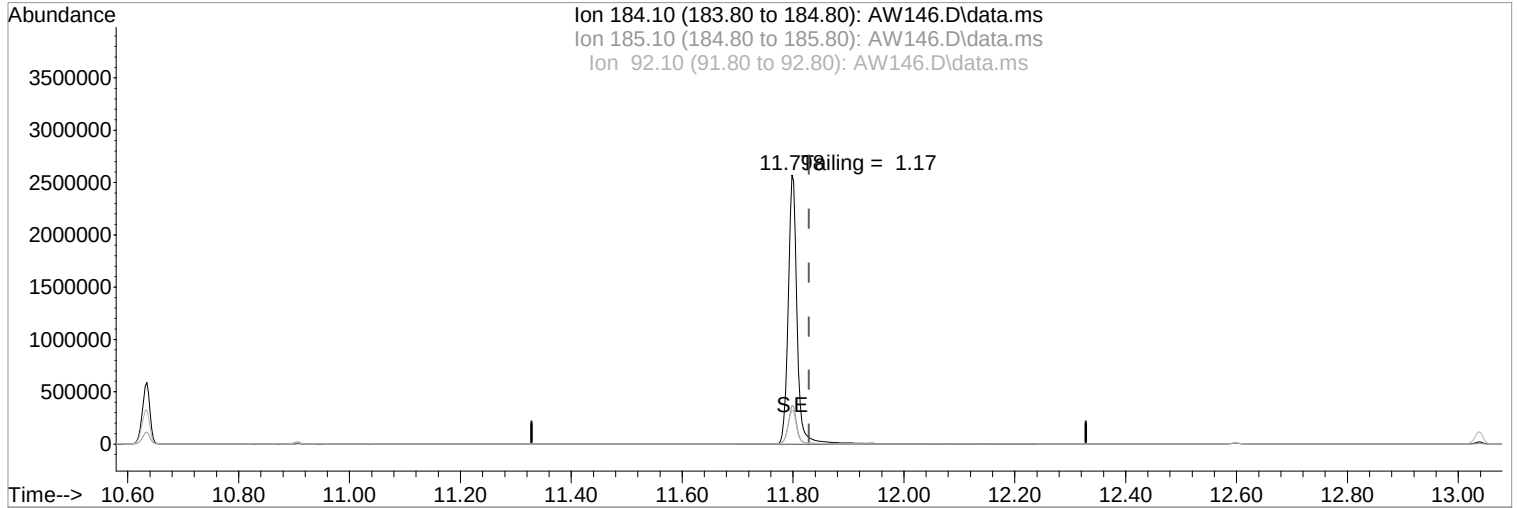
Quantitation Report (Qedit)

1st AF 05/01/20
2nd DM 05/01/20

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW146.D
Acq On : 30 Apr 2020 10:21 am
Operator : AFelser
Sample : TUNE
Misc : DFTPP
ALS Vial : 3 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Apr 30 10:56:27 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Mon Feb 03 11:35:41 2020
Response via : Initial Calibration



(8) Benzidine (T)

11.800min (-0.028) 103.01 ppm

response 28176202

Ion	Exp%	Act%
184.10	100.00	100.00
185.10	13.80	14.34
92.10	10.70	12.30
0.00	0.00	0.00

Manual Integration:

After

Other - TAILING

04/30/20

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW146.D
Acq On : 30 Apr 2020 10:21 am
Operator : AFelser
Sample : TUNE
Misc : DFTPP
ALS Vial : 3 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Apr 30 10:56:27 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Mon Feb 03 11:35:41 2020
Response via : Initial Calibration

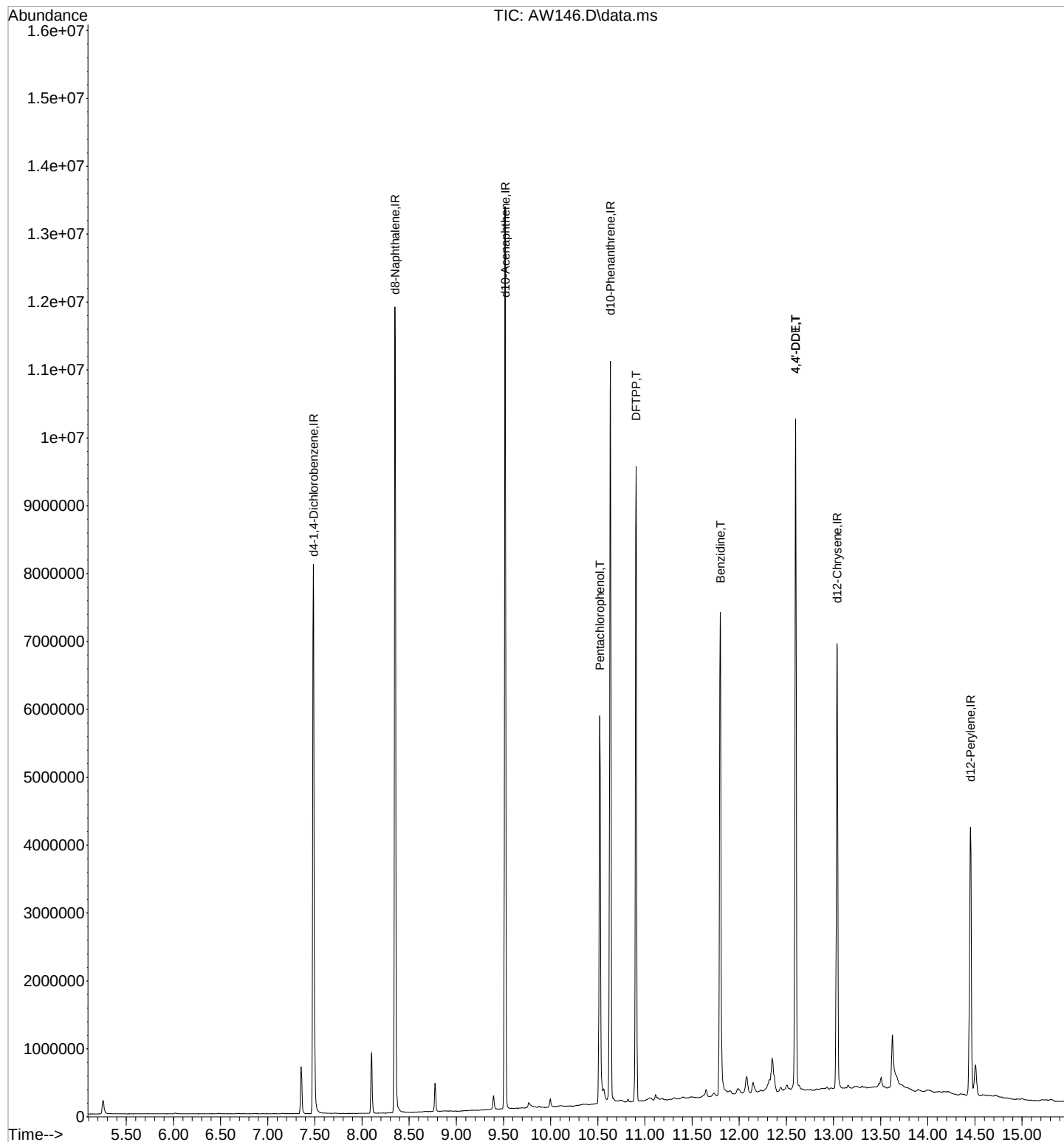
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d4-1,4-Dichlorobenzene	7.485	152	13995820	20.00	ppm	-0.02
2) d8-Naphthalene	8.351	136	52111447	20.00	ppm	-0.02
3) d10-Acenaphthene	9.519	164	26664704	20.00	ppm	-0.03
4) d10-Phenanthrene	10.635	188	36674310	20.00	ppm	-0.03
7) d12-Chrysene	13.040	240	19004173	20.00	ppm	-0.03
12) d12-Perylene	14.455	264	13008539	20.00	ppm	-0.04
Target Compounds						
5) Pentachlorophenol	10.523	266	5339909	135.78	ppm	Qvalue 98
6) DFTPP	10.907	198	10763076	70.94	ppm	# 50
8) Benzidine	11.800	184	28176202	103.01	ppm	# 97
9) 4,4'-DDE	12.600	246	815814	3.56	ppm	# 1
10) 4,4'-DDD	0.000		0	N.D.		
11) 4,4'-DDT	12.600	235	15718662	68.57	ppm	93

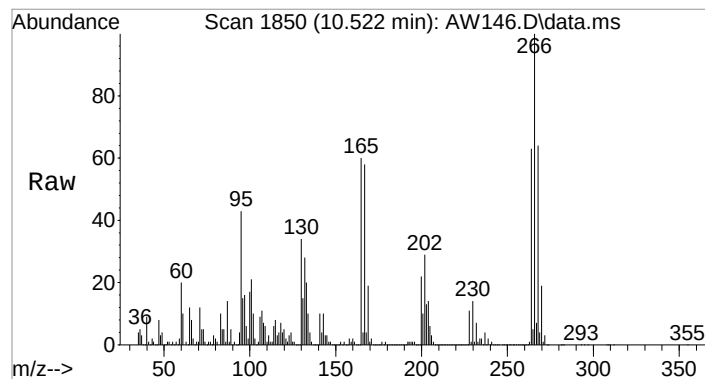
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW146.D
Acq On : 30 Apr 2020 10:21 am
Operator : AFelser
Sample : TUNE
Misc : DFTPP
ALS Vial : 3 Sample Multiplier: 1

Inst : 5975 E

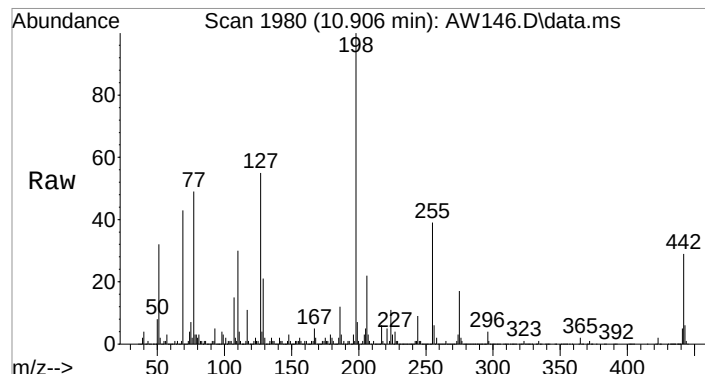
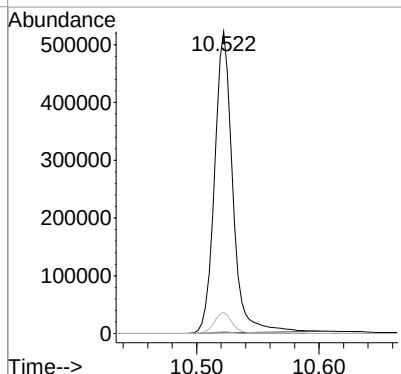
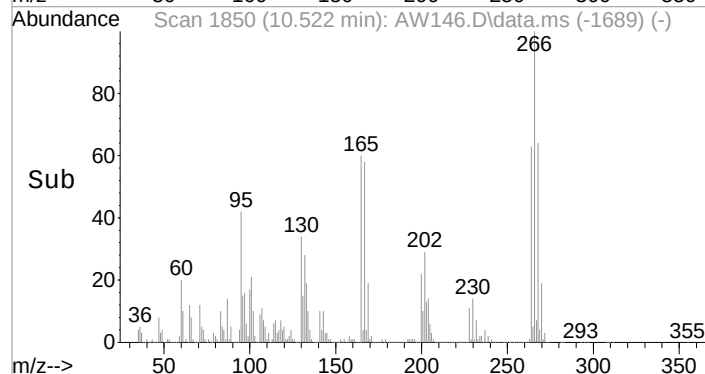
Quant Time: Apr 30 10:56:27 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Mon Feb 03 11:35:41 2020
Response via : Initial Calibration





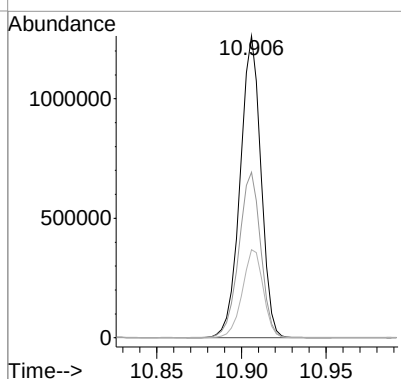
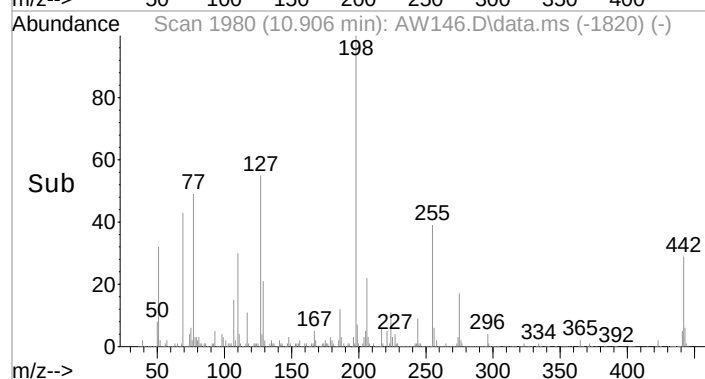
#5
Pentachlorophenol
Concen: 135.78 ppm
RT: 10.523 min Scan# 1850
Delta R.T. -0.026 min
Lab File: AW146.D
Acq: 30 Apr 2020 10:21 am

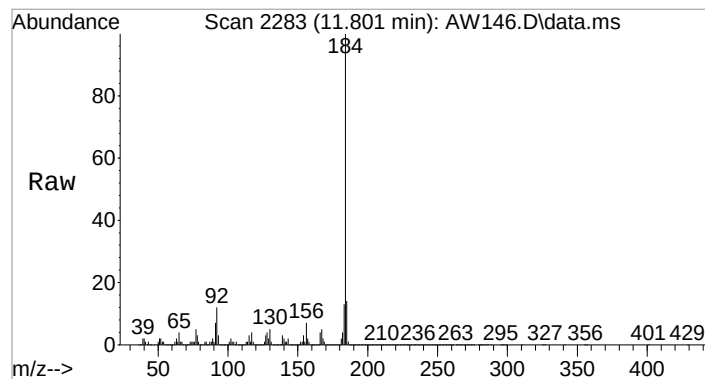
Tgt Ion:266 Resp: 5339909
Ion Ratio Lower Upper
266 100
263 0.4 0.0 20.0
267 7.0 0.0 27.7



#6
DFTPP
Concen: 70.94 ppm
RT: 10.907 min Scan# 1980
Delta R.T. -0.027 min
Lab File: AW146.D
Acq: 30 Apr 2020 10:21 am

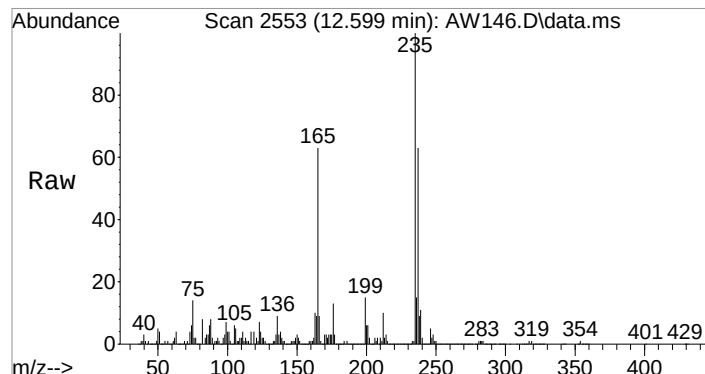
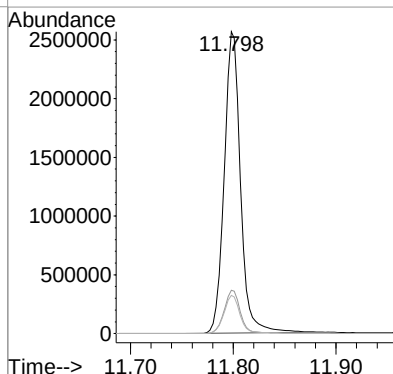
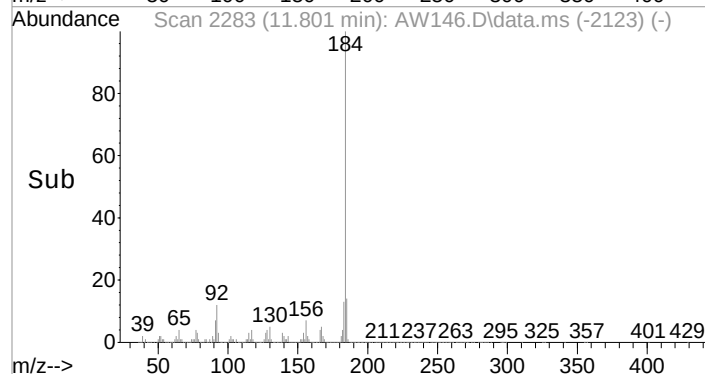
Tgt Ion:198 Resp:10763076
Ion Ratio Lower Upper
198 100
127 54.7 36.9 76.9
442 29.1 86.7 126.7#





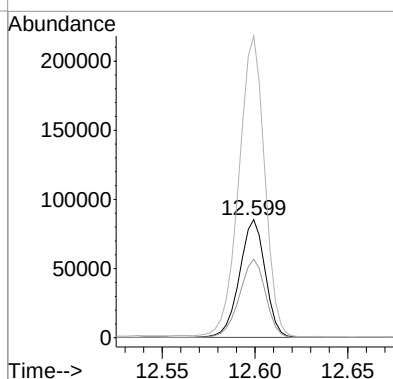
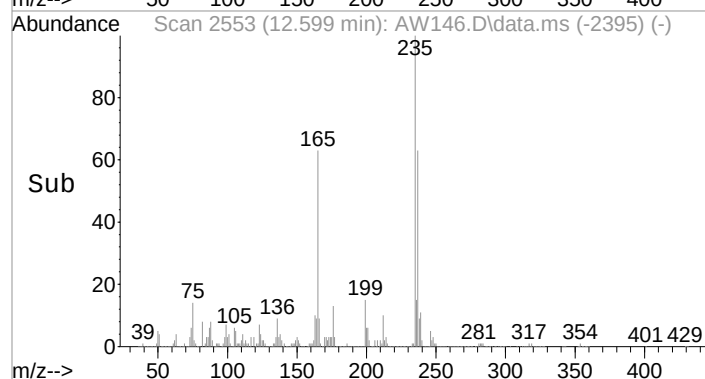
#8
Benzidine
Concen: 103.01 ppm
RT: 11.800 min Scan# 2283
Delta R.T. -0.028 min
Lab File: AW146.D
Acq: 30 Apr 2020 10:21 am

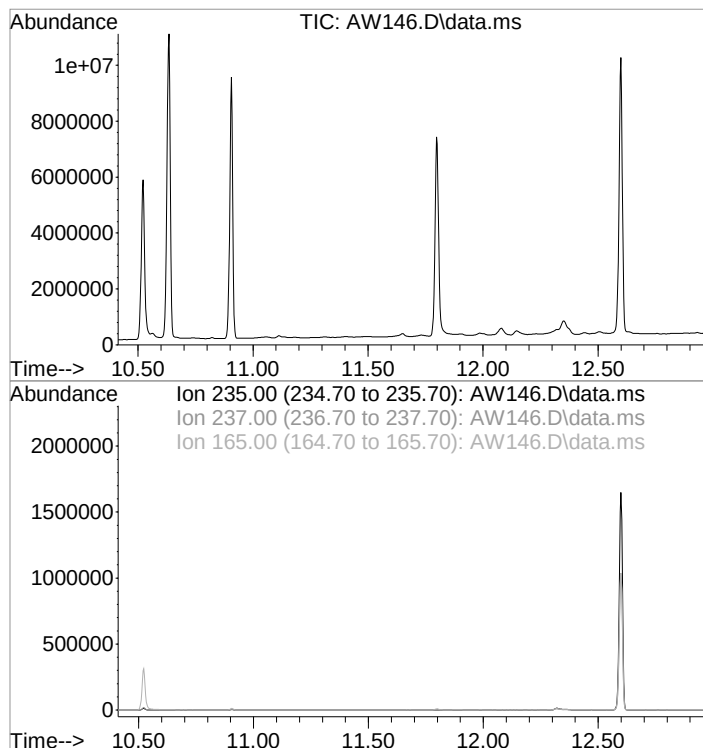
Tgt Ion:184 Resp:28176202
Ion Ratio Lower Upper
184 100
185 14.3 0.0 33.8
92 12.3 0.0 30.7



#9
4,4'-DDE
Concen: 3.56 ppm
RT: 12.600 min Scan# 2553
Delta R.T. -0.032 min
Lab File: AW146.D
Acq: 30 Apr 2020 10:21 am

Tgt Ion:246 Resp: 815814
Ion Ratio Lower Upper
246 100
248 66.3 51.3 91.3
176 255.4 7.6 47.6#

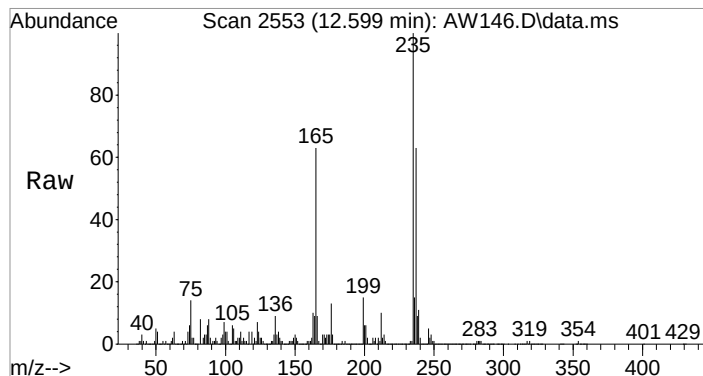




#10
4,4'-DDD
Concen: N.D.
Expected RT: 11.71 min

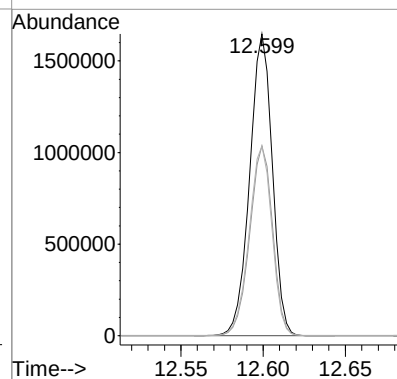
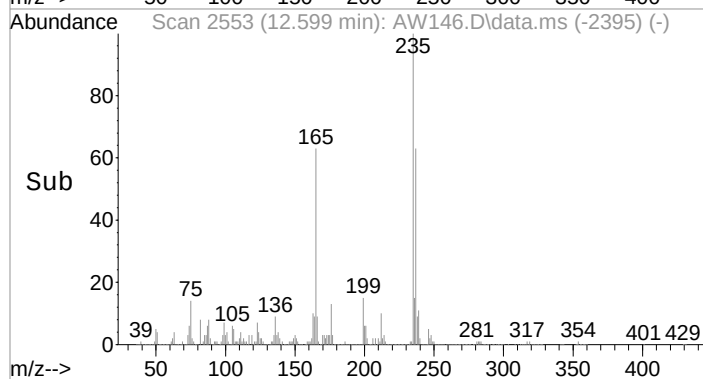
Lab File: AW146.D
Acq: 30 Apr 2020 10:21 am

Tgt Ion: 235
Sig Exp Ratio
235 100
237 62.2
165 61.6



#11
4,4'-DDT
Concen: 68.57 ppm
RT: 12.600 min Scan# 2553
Delta R.T. -0.031 min
Lab File: AW146.D
Acq: 30 Apr 2020 10:21 am

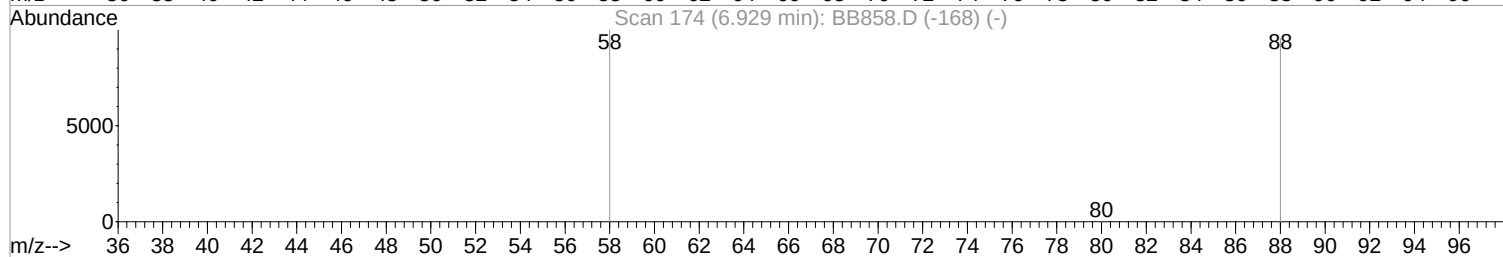
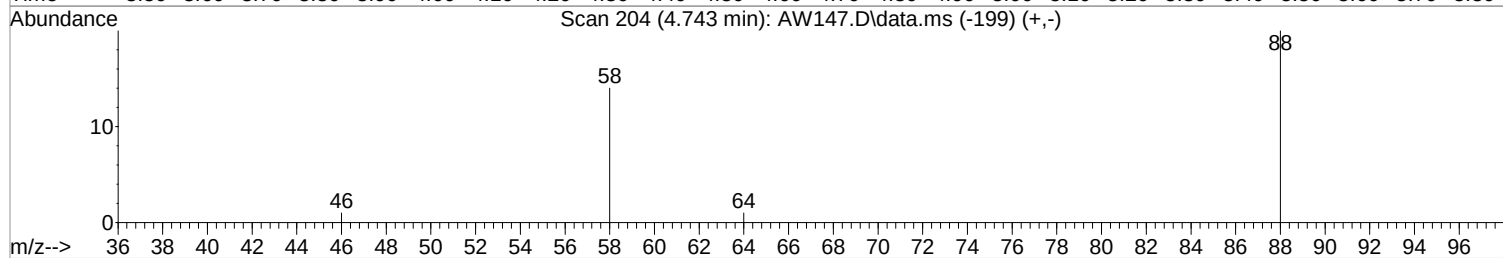
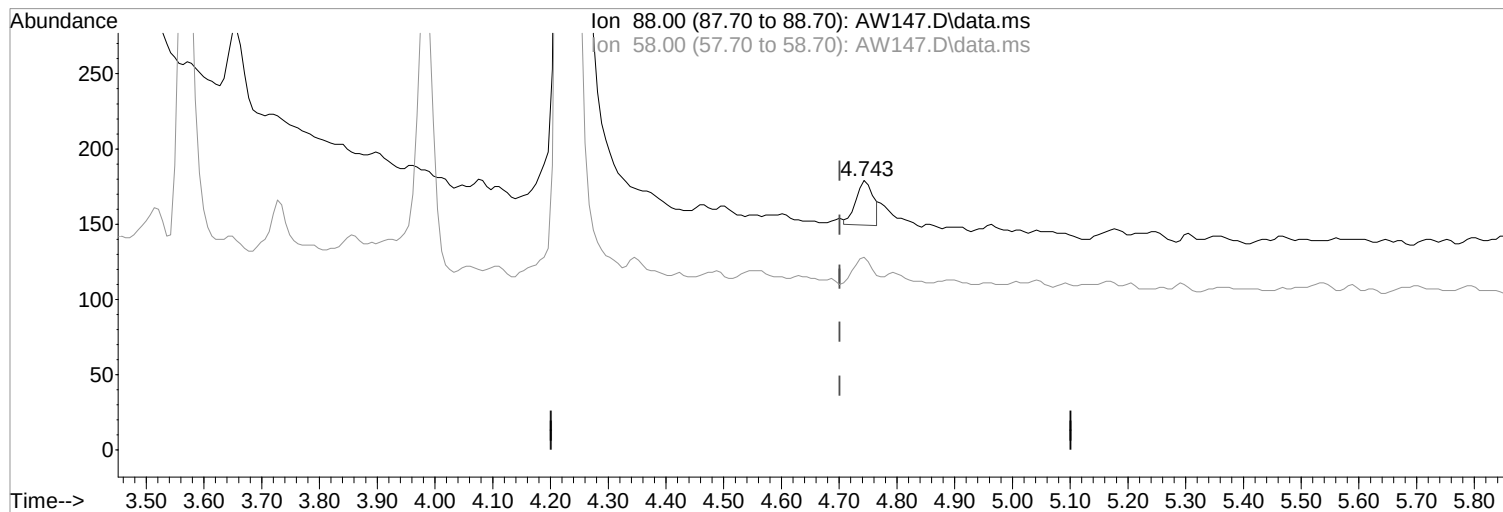
Tgt Ion: 235 Resp: 15718662
Ion Ratio Lower Upper
235 100
237 62.9 43.5 83.5
165 62.8 31.9 71.9



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW147.D
Acq On : 30 Apr 2020 10:45 am
Operator : AFelser
Sample : BLK
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 4 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Apr 30 13:43:46 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration



TIC: AW147.D\data.ms

(2) 1,4-Dioxane (T)

4.743min (+ 0.042) 0.28 PPB m

response 62

Ion	Exp%	Act%
88.00	100.00	100.00
58.00	57.00	71.51
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

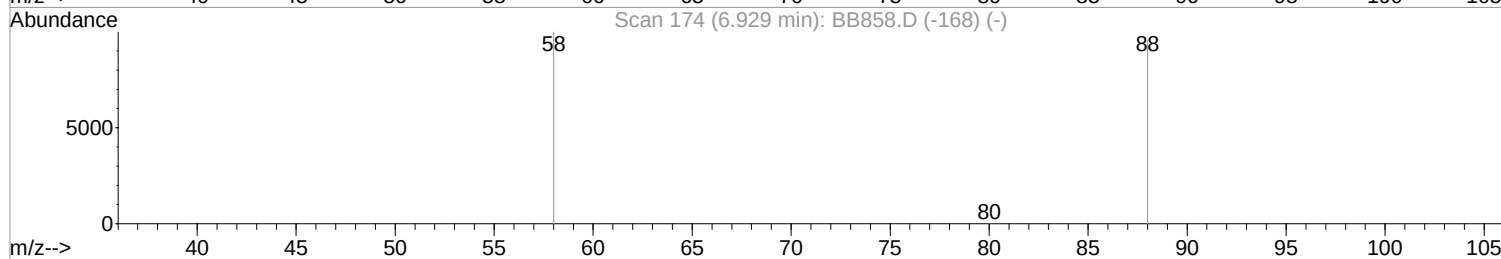
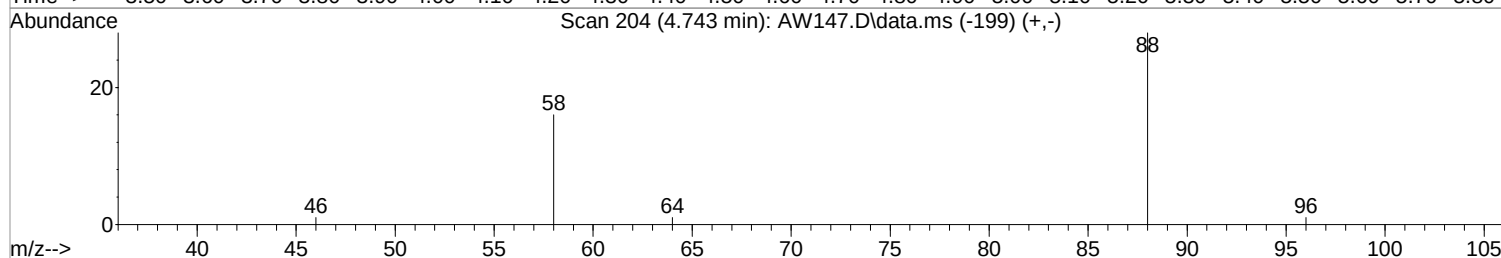
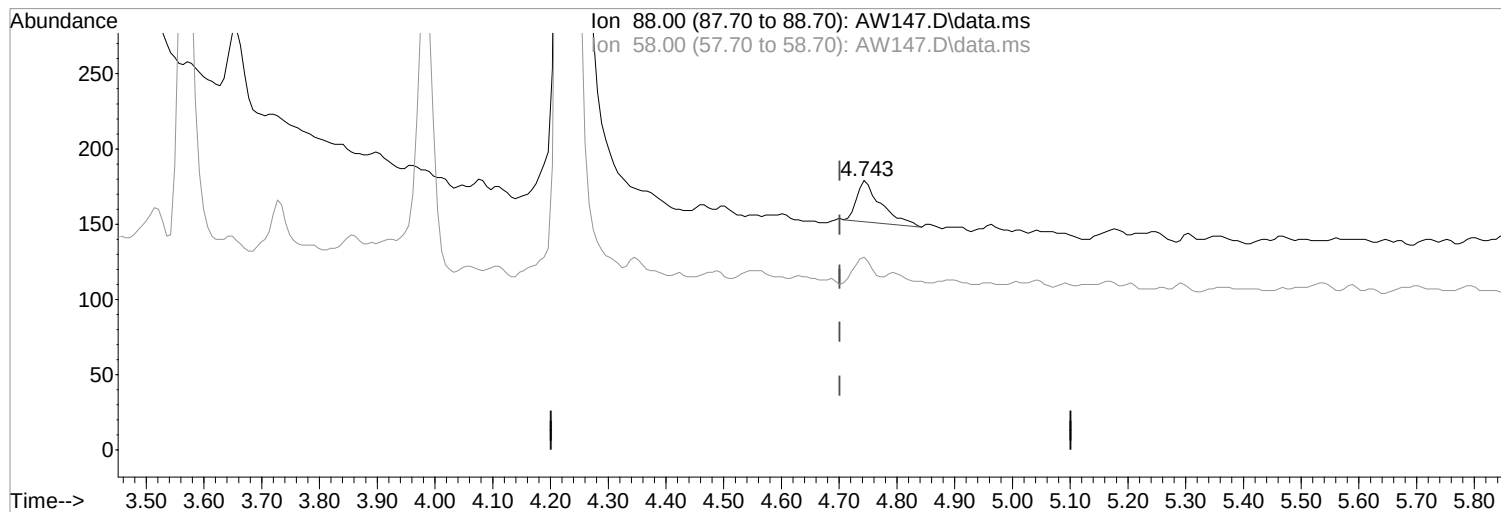
Poor integration.

04/30/20

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW147.D
Acq On : 30 Apr 2020 10:45 am
Operator : AFelser
Sample : BLK
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 4 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Apr 30 13:43:46 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration



TIC: AW147.D\data.ms

(2) 1,4-Dioxane (T)

4.743min (+ 0.042) 0.40 PPB

response 78

Manual Integration:

Before

04/30/20

Ion	Exp%	Act%
88.00	100.00	100.00
58.00	57.00	57.89
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW147.D
Acq On : 30 Apr 2020 10:45 am
Operator : AFelser
Sample : BLK Inst : 5975 E
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 30 13:44:06 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

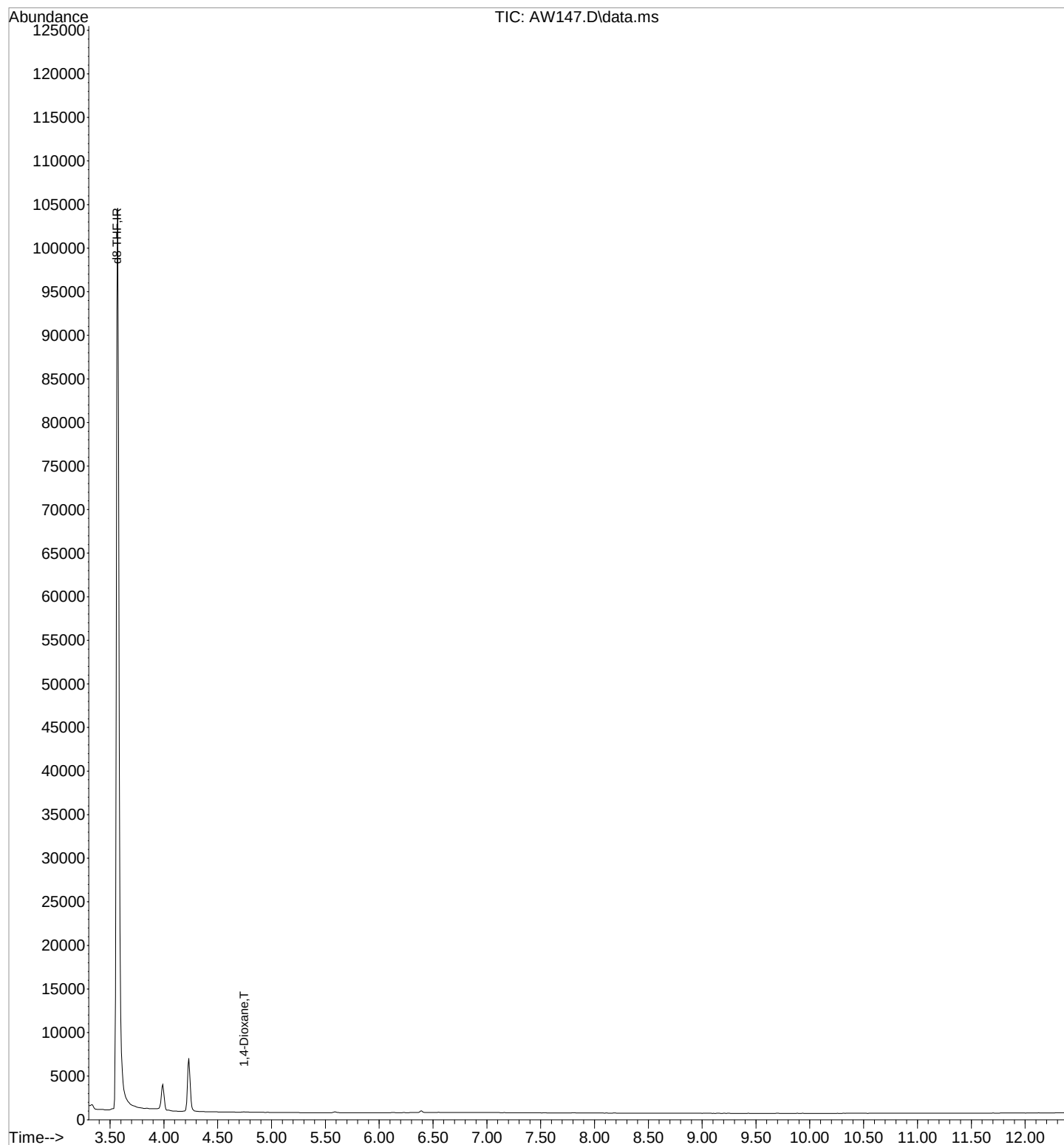
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

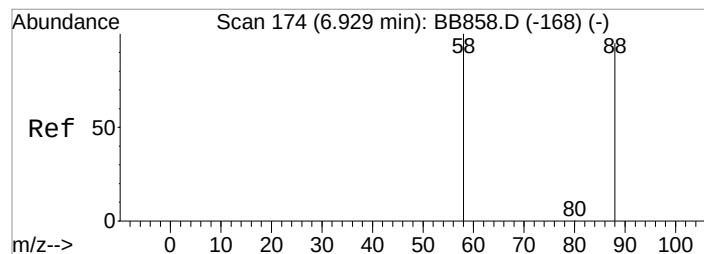
Internal Standards						
1) d8-THF	3.564	46	72584	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	0.000	96	0	0.00	PPB	
Spiked Amount	100.000	Range	70 - 130	Recovery	=	0.00%#
Target Compounds						
2) 1,4-Dioxane	4.743	88	62m	0.28	PPB	Qvalue

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

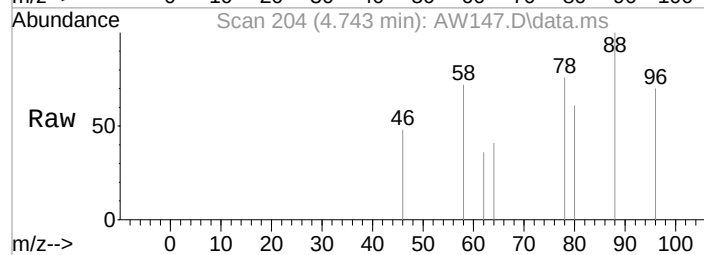
Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW147.D
Acq On : 30 Apr 2020 10:45 am
Operator : AFelser
Sample : BLK
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 4 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 13:44:06 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

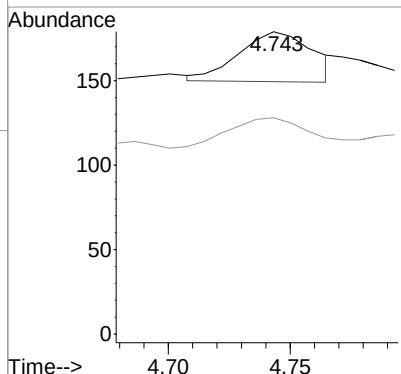
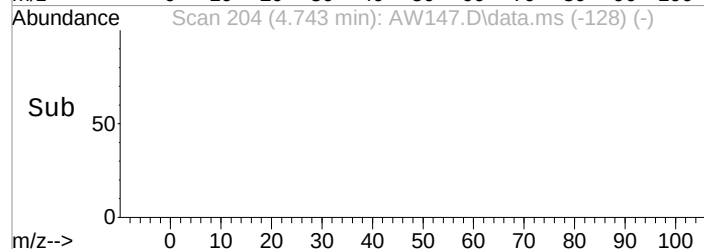




#2
1,4-Dioxane
Concen: 0.28 PPB m
RT: 4.743 min Scan# 204
Delta R.T. 0.042 min
Lab File: AW147.D
Acq: 30 Apr 2020 10:45 am



Tgt Ion: 88 Resp: 62
Ion Ratio Lower Upper
88 100
58 71.5 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW148.D
Acq On : 30 Apr 2020 11:04 am
Operator : AFelser
Sample : STD 1
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 5 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 11:36:14 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 06:48:33 2020
Response via : Initial Calibration

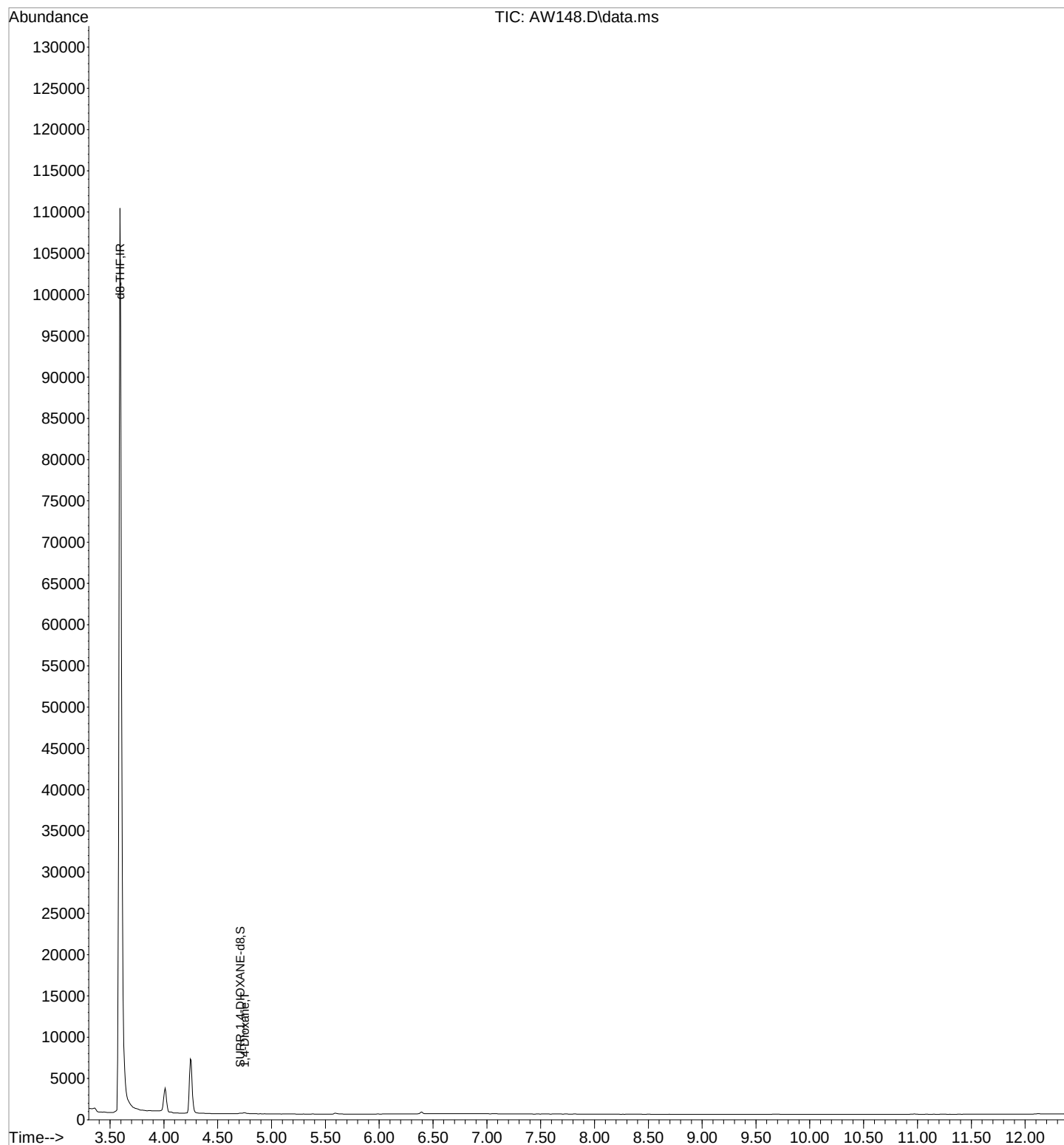
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

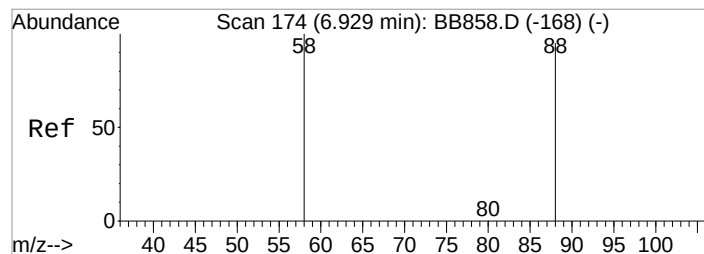
Internal Standards						
1) d8-THF	3.592	46	75653	500.00	PPB	0.01
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.708	96	113	1.31	PPB	0.05
Spiked Amount 100.000	Range 70 - 130		Recovery	=	1.31%#	
Target Compounds						
2) 1,4-Dioxane	4.750	88	172	1.67	PPB	Qvalue 99

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

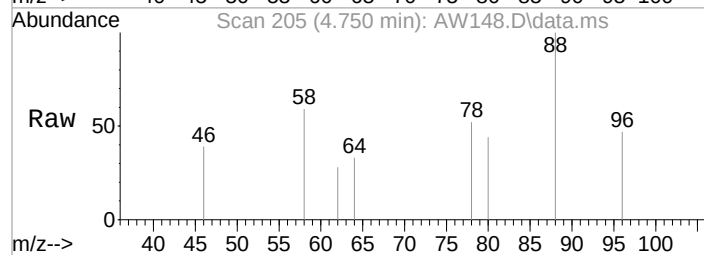
Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW148.D
Acq On : 30 Apr 2020 11:04 am
Operator : AFelser
Sample : STD 1
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 5 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 11:36:14 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 06:48:33 2020
Response via : Initial Calibration

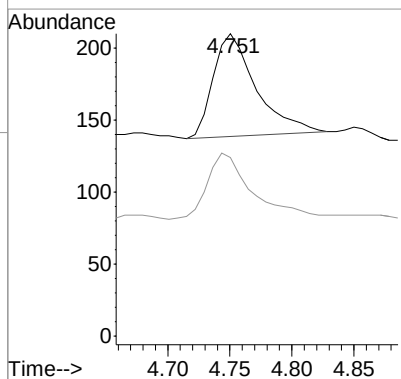
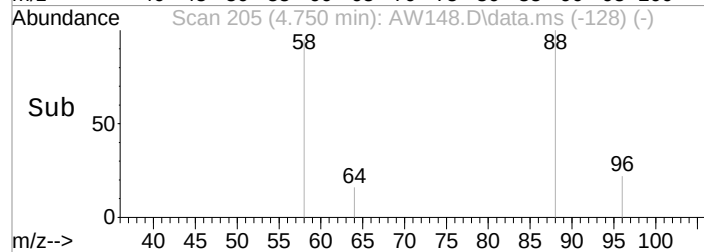




#2
1,4-Dioxane
Concen: 1.67 PPB
RT: 4.750 min Scan# 205
Delta R.T. 0.050 min
Lab File: AW148.D
Acq: 30 Apr 2020 11:04 am



Tgt Ion: 88 Resp: 172
Ion Ratio Lower Upper
88 100
58 57.4 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW149.D
Acq On : 30 Apr 2020 11:22 am
Operator : AFelser
Sample : STD 2
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 6 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 11:36:33 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 06:48:33 2020
Response via : Initial Calibration

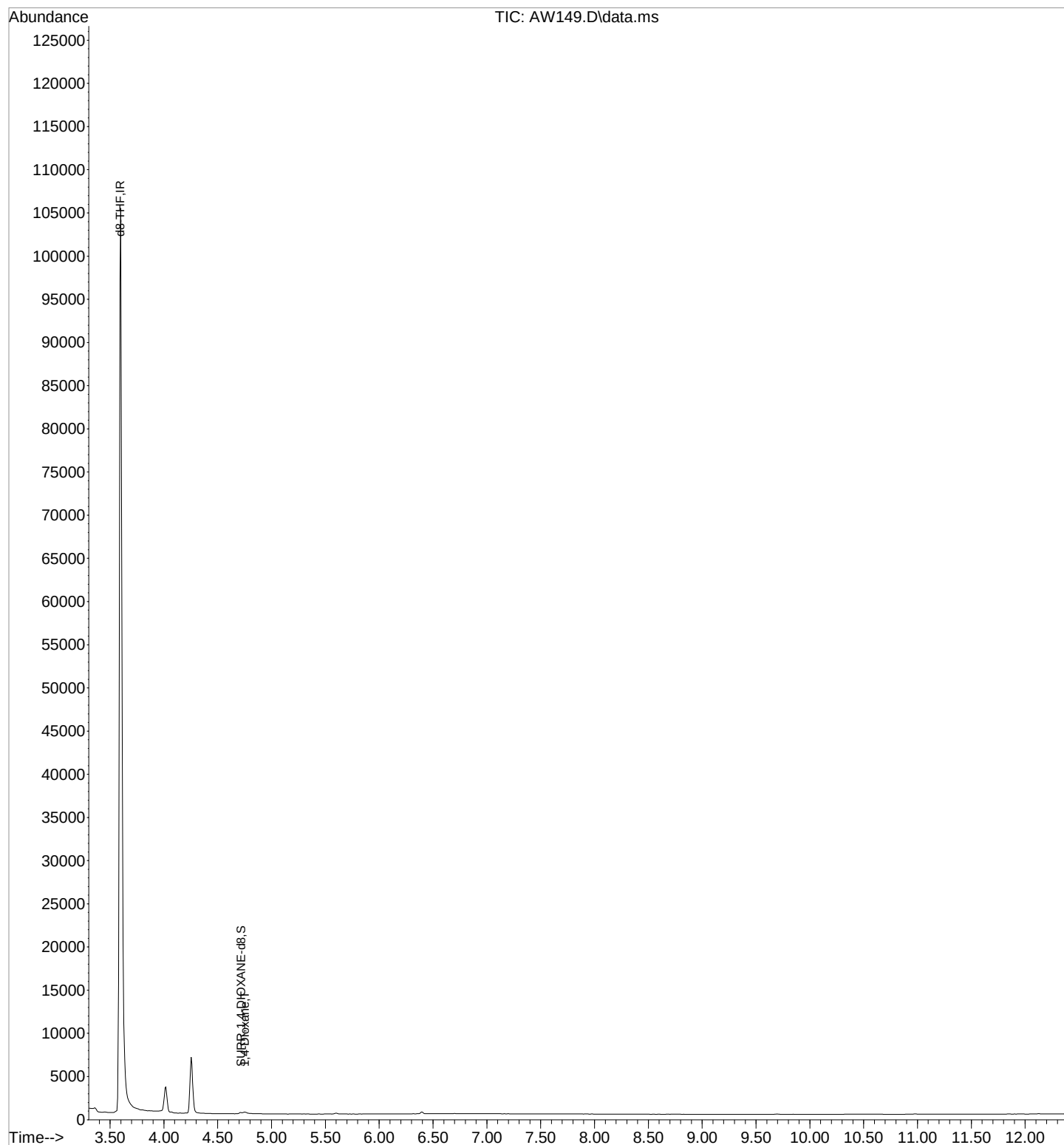
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

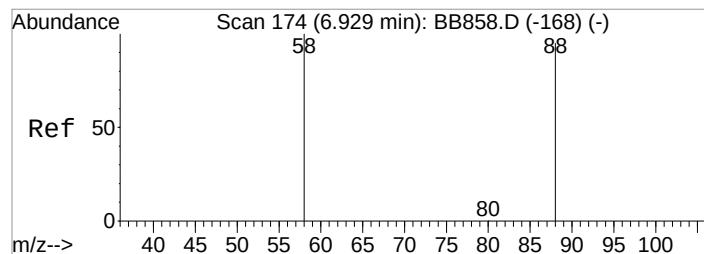
Internal Standards						
1) d8-THF	3.592	46	72378	500.00	PPB	0.01
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.715	96	219	2.02	PPB	0.06
Spiked Amount 100.000	Range 70 - 130		Recovery	=	2.02%#	
Target Compounds						
2) 1,4-Dioxane	4.750	88	296	2.50	PPB	Qvalue 100

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

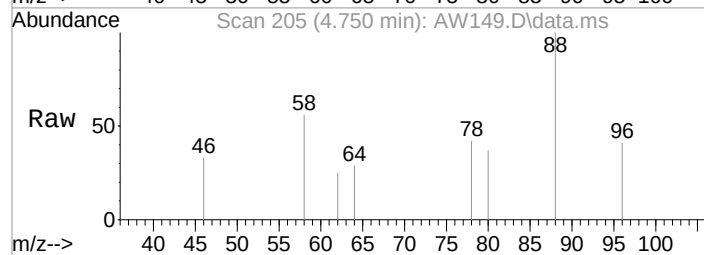
Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW149.D
Acq On : 30 Apr 2020 11:22 am
Operator : AFelser
Sample : STD 2
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 6 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 11:36:33 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 06:48:33 2020
Response via : Initial Calibration

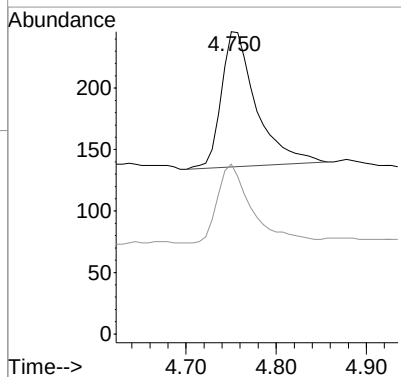
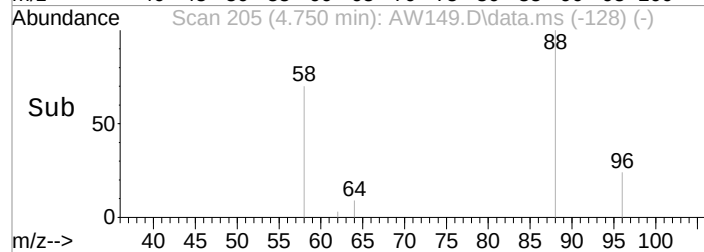




#2
1,4-Dioxane
Concen: 2.50 PPB
RT: 4.750 min Scan# 205
Delta R.T. 0.050 min
Lab File: AW149.D
Acq: 30 Apr 2020 11:22 am



Tgt Ion: 88 Resp: 296
Ion Ratio Lower Upper
88 100
58 56.9 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW150.D
Acq On : 30 Apr 2020 11:39 am
Operator : AFelser
Sample : STD 3
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 7 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 12:07:57 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 06:48:33 2020
Response via : Initial Calibration

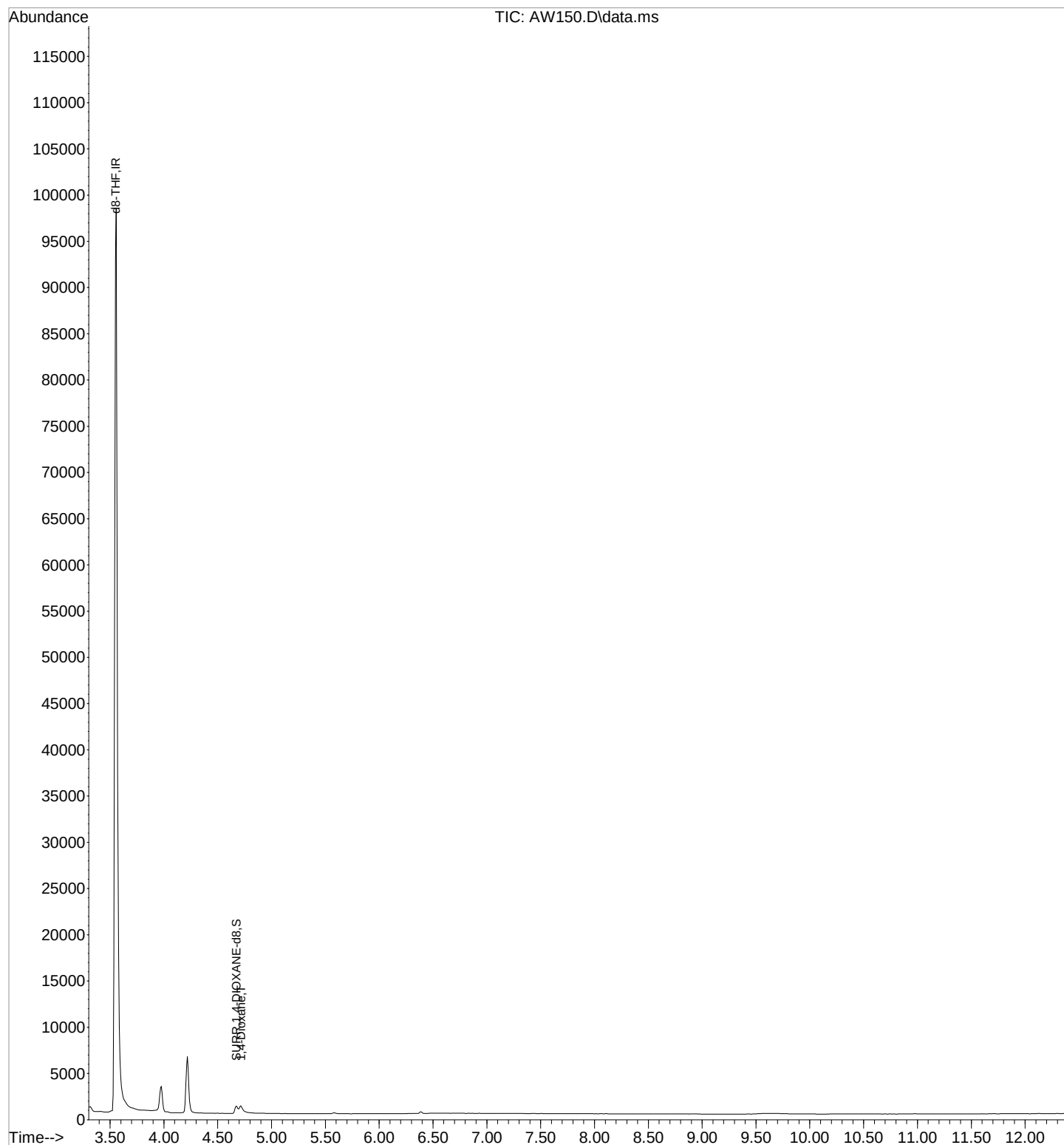
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

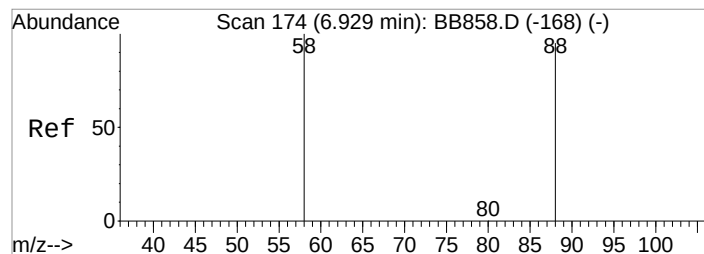
Internal Standards						
1) d8-THF	3.550	46	68660	500.00	PPB	-0.03
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.672	96	1065	7.85	PPB	0.02
Spiked Amount 100.000	Range 70 - 130		Recovery	=	7.85%#	
Target Compounds						
2) 1,4-Dioxane	4.715	88	1148	8.27	PPB	Qvalue 99

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

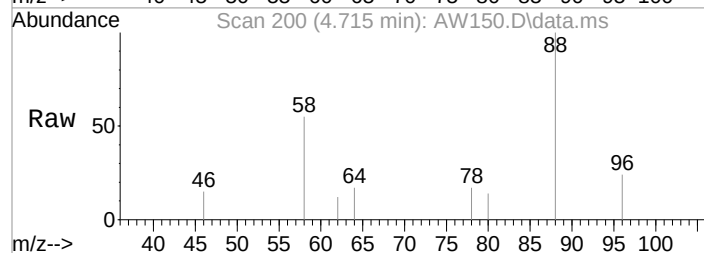
Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW150.D
Acq On : 30 Apr 2020 11:39 am
Operator : AFelser
Sample : STD 3
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 7 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 12:07:57 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 06:48:33 2020
Response via : Initial Calibration

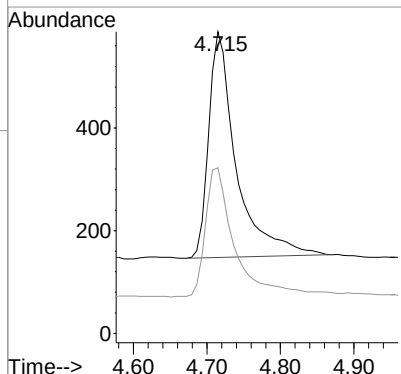
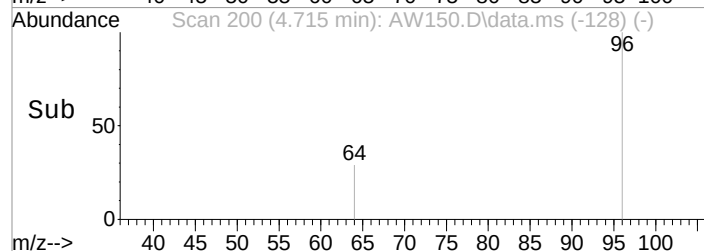




#2
1,4-Dioxane
Concen: 8.27 PPB
RT: 4.715 min Scan# 200
Delta R.T. 0.015 min
Lab File: AW150.D
Acq: 30 Apr 2020 11:39 am



Tgt Ion: 88 Resp: 1148
Ion Ratio Lower Upper
88 100
58 56.3 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW151.D
Acq On : 30 Apr 2020 11:58 am
Operator : AFelser
Sample : STD 4
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 8 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 12:11:21 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 12:08:26 2020
Response via : Initial Calibration

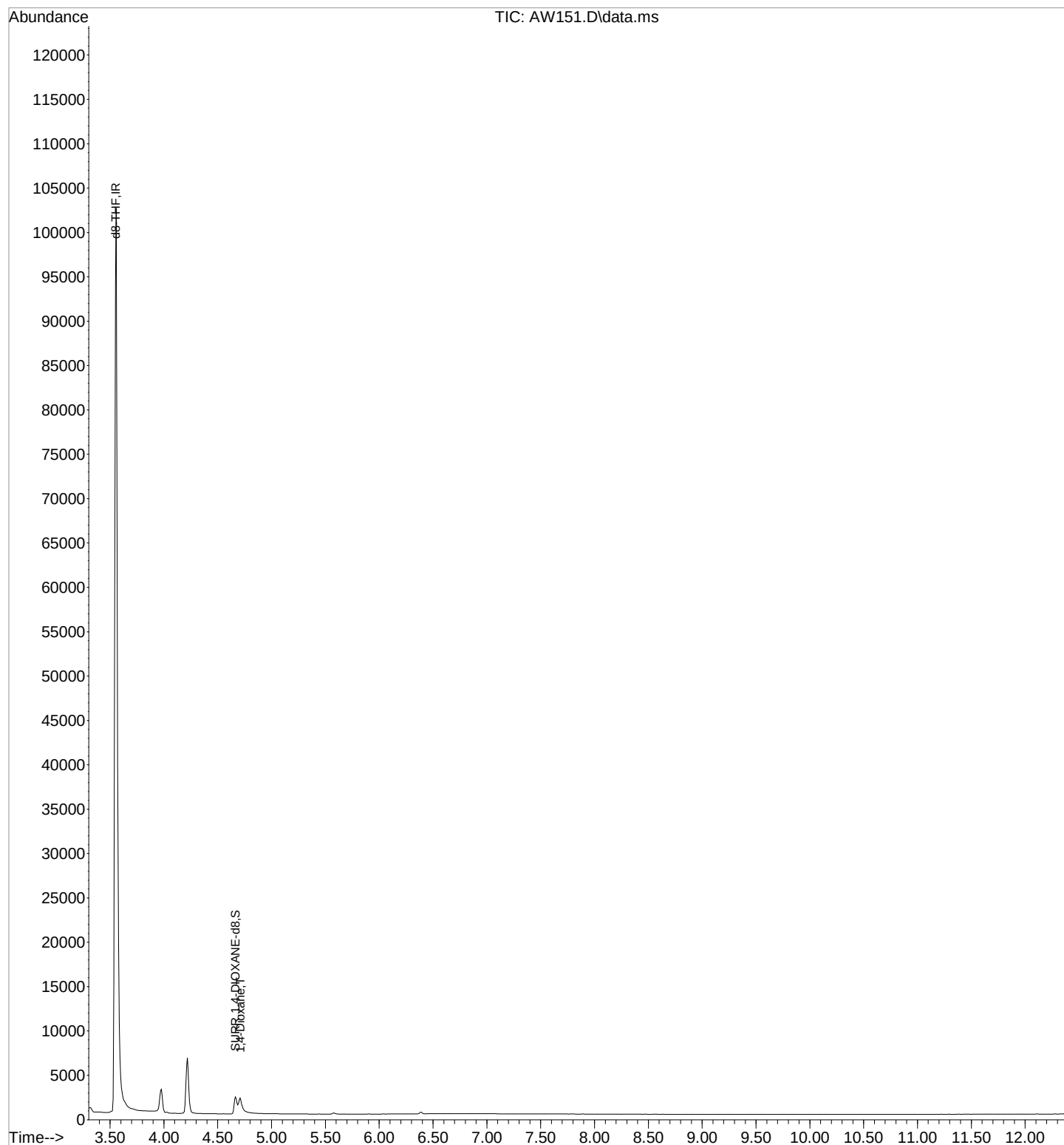
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

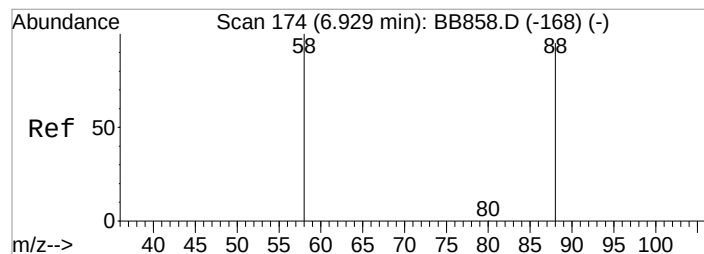
Internal Standards						
1) d8-THF	3.549	46	70016	500.00	PPB	-0.03
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.665	96	2444	16.89	PPB	0.00
Spiked Amount 100.000	Range 70 - 130		Recovery	=	16.89%#	
Target Compounds						
2) 1,4-Dioxane	4.708	88	2550	17.27	PPB	Qvalue 99

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

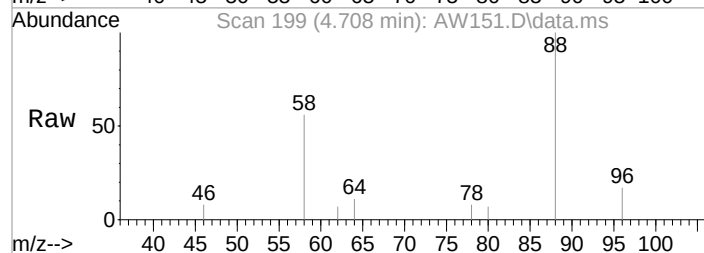
Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW151.D
Acq On : 30 Apr 2020 11:58 am
Operator : AFelser
Sample : STD 4
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 8 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 12:11:21 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 12:08:26 2020
Response via : Initial Calibration

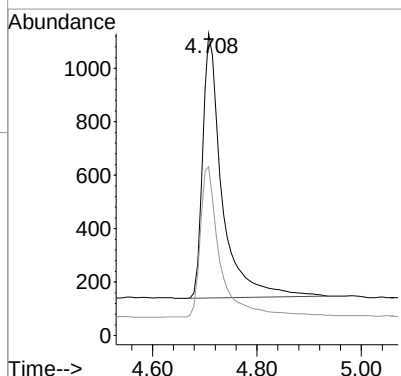
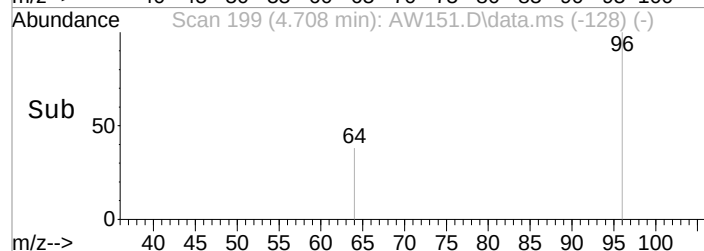




#2
1,4-Dioxane
Concen: 17.27 PPB
RT: 4.708 min Scan# 199
Delta R.T. 0.008 min
Lab File: AW151.D
Acq: 30 Apr 2020 11:58 am



Tgt Ion: 88 Resp: 2550
Ion Ratio Lower Upper
88 100
58 56.6 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW152.D
Acq On : 30 Apr 2020 12:16 pm
Operator : AFelser
Sample : STD 5
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 9 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 13:22:53 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 12:11:48 2020
Response via : Initial Calibration

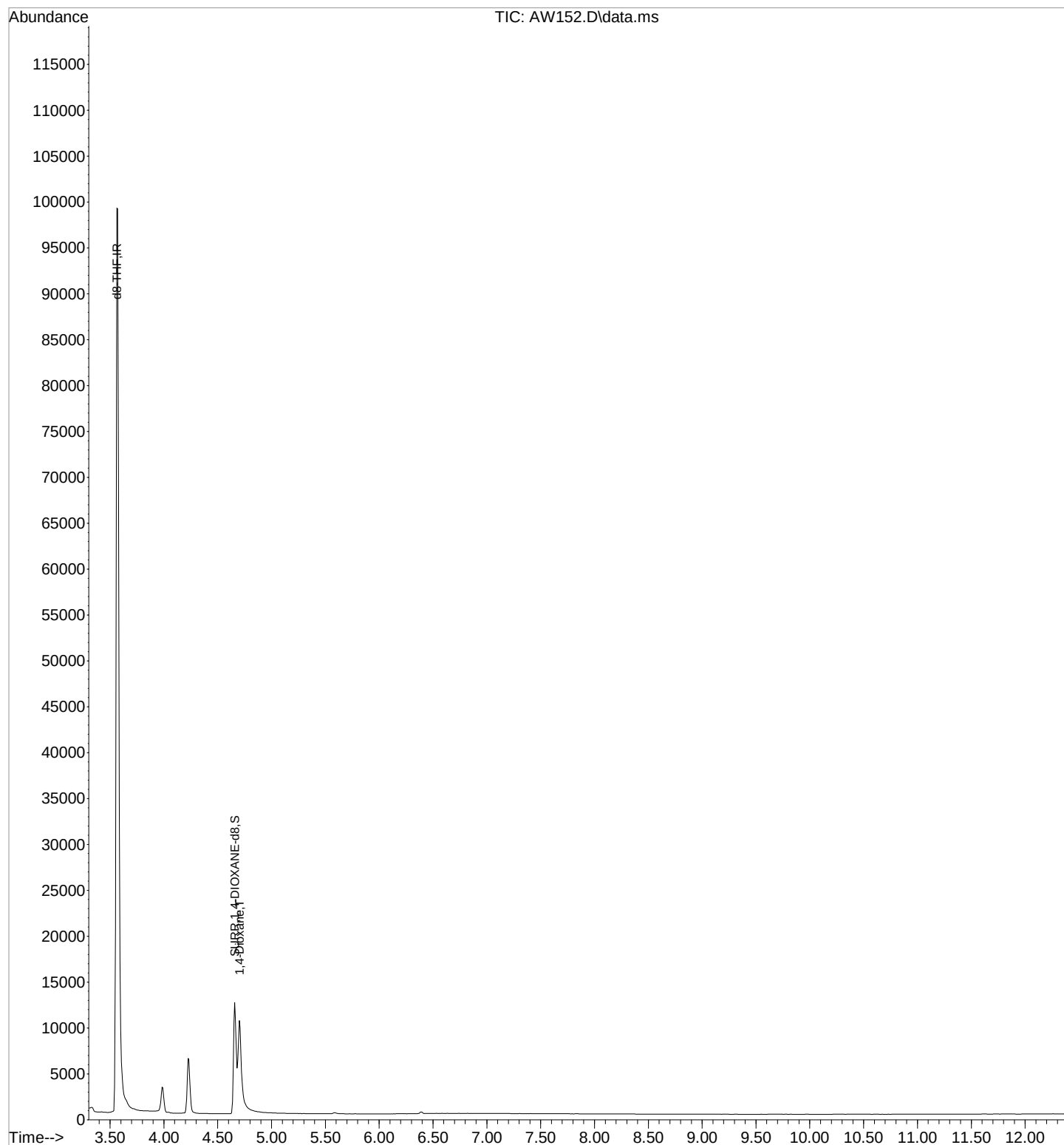
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

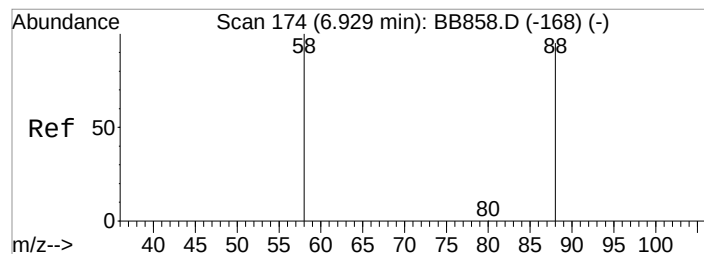
Internal Standards						
1) d8-THF	3.564	46	71321	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.658	96	13527	89.08	PPB	-0.03
Spiked Amount 100.000	Range 70 - 130		Recovery	=	89.08%	
Target Compounds						
2) 1,4-Dioxane	4.701	88	13758	88.49	PPB	Qvalue 96

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

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW152.D
Acq On : 30 Apr 2020 12:16 pm
Operator : AFelser
Sample : STD 5
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 9 Sample Multiplier: 1
Inst : 5975 E

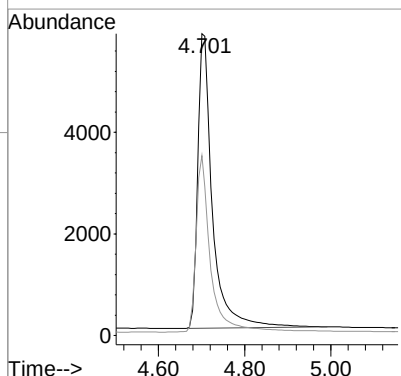
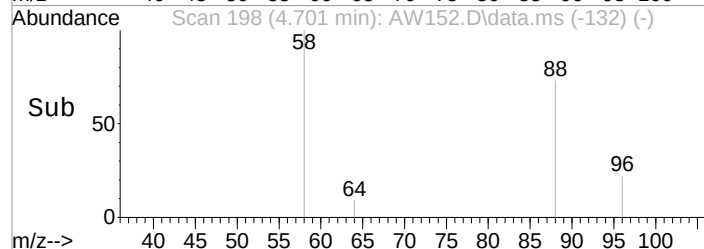
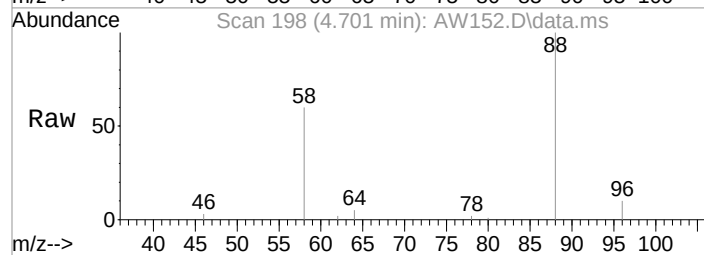
Quant Time: Apr 30 13:22:53 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 12:11:48 2020
Response via : Initial Calibration





#2
1,4-Dioxane
Concen: 88.49 PPB
RT: 4.701 min Scan# 198
Delta R.T. -0.032 min
Lab File: AW152.D
Acq: 30 Apr 2020 12:16 pm

Tgt Ion: 88 Resp: 13758
Ion Ratio Lower Upper
88 100
58 59.7 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW153.D
Acq On : 30 Apr 2020 12:34 pm
Operator : AFelser
Sample : STD 6
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 10 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 13:23:04 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 12:11:48 2020
Response via : Initial Calibration

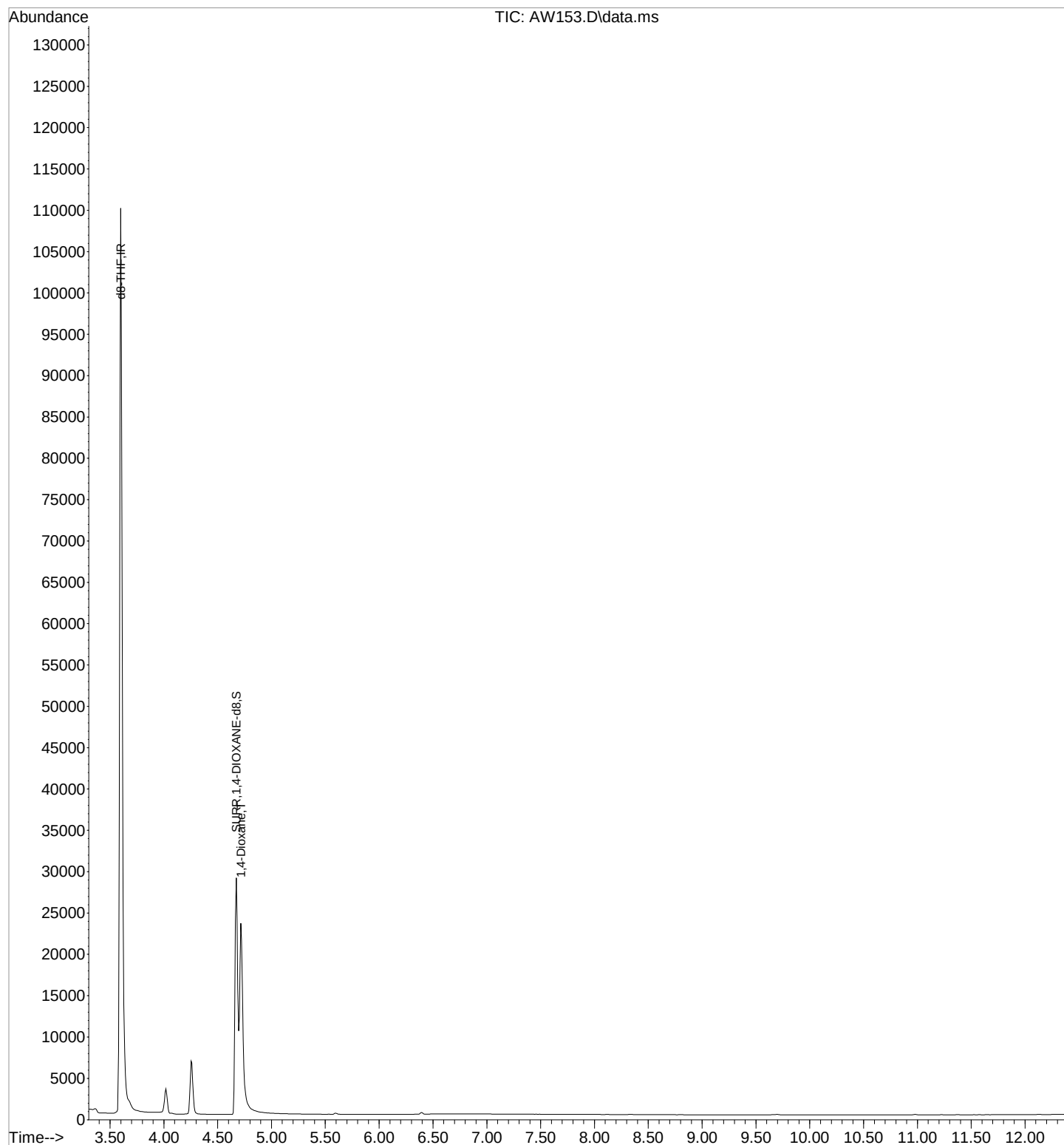
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

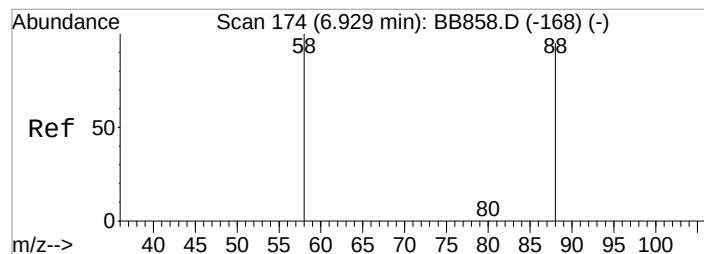
Internal Standards						
1) d8-THF	3.600	46	73119	500.00	PPB	0.03
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.672	96	29066	186.02	PPB	-0.02
Spiked Amount 100.000	Range 70 - 130		Recovery	=	186.02%#	
Target Compounds						
2) 1,4-Dioxane	4.715	88	29367	184.02	PPB	Qvalue 96

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

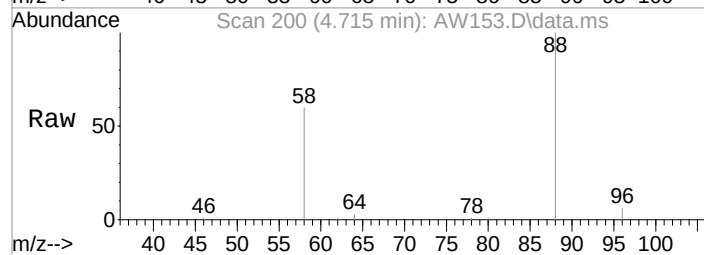
Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW153.D
Acq On : 30 Apr 2020 12:34 pm
Operator : AFelser
Sample : STD 6
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 10 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 13:23:04 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 12:11:48 2020
Response via : Initial Calibration

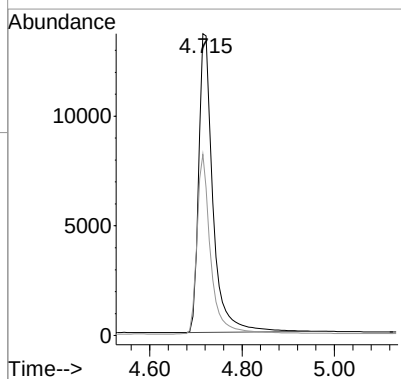
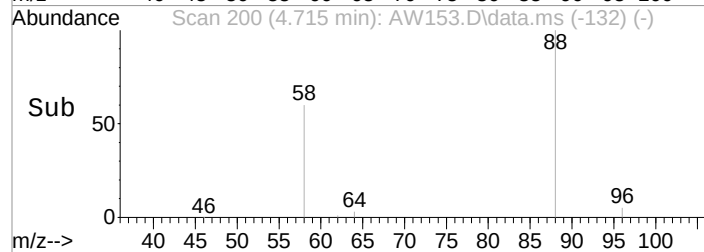




#2
1,4-Dioxane
Concen: 184.02 PPB
RT: 4.715 min Scan# 200
Delta R.T. -0.018 min
Lab File: AW153.D
Acq: 30 Apr 2020 12:34 pm



Tgt Ion: 88 Resp: 29367
Ion Ratio Lower Upper
88 100
58 60.1 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW154.D
Acq On : 30 Apr 2020 12:52 pm
Operator : AFelser
Sample : STD 7
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 11 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 13:23:14 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 12:11:48 2020
Response via : Initial Calibration

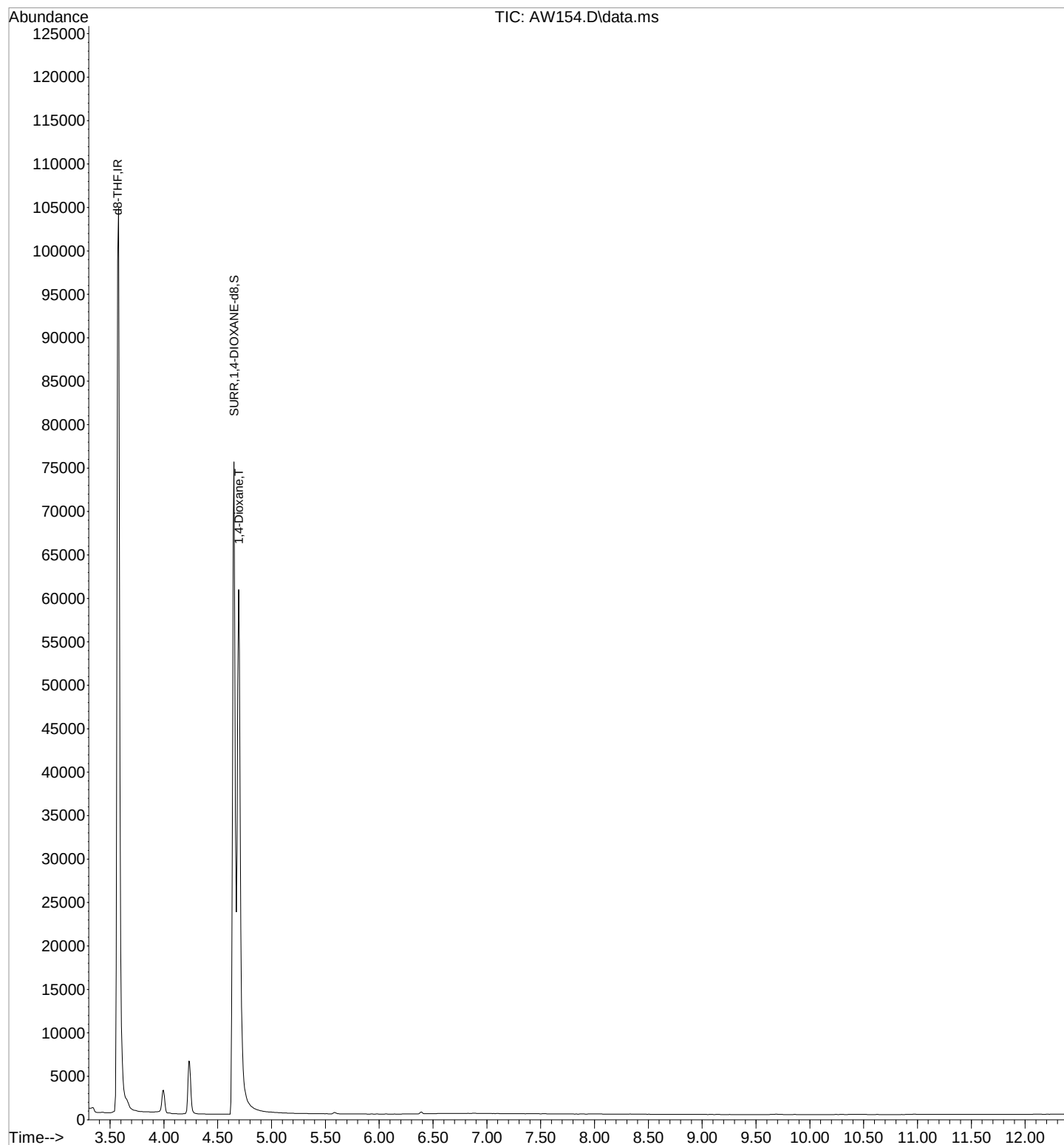
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

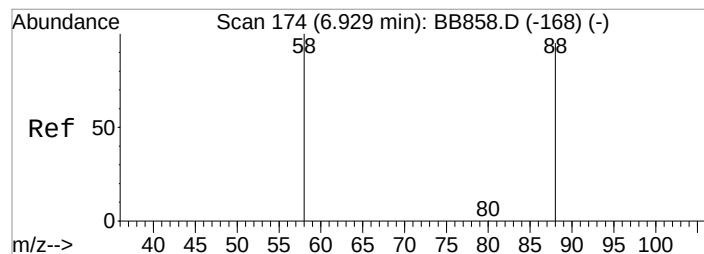
Internal Standards						
1) d8-THF	3.571	46	71893	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.651	96	72999	474.39	PPB	-0.04
Spiked Amount 100.000	Range 70 - 130		Recovery	= 474.39%#		
Target Compounds						
2) 1,4-Dioxane	4.693	88	75253	479.74	PPB	Qvalue 99

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

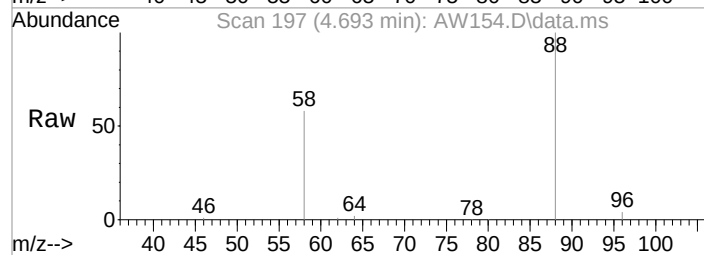
Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW154.D
Acq On : 30 Apr 2020 12:52 pm
Operator : AFelser
Sample : STD 7
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 11 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 13:23:14 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 12:11:48 2020
Response via : Initial Calibration

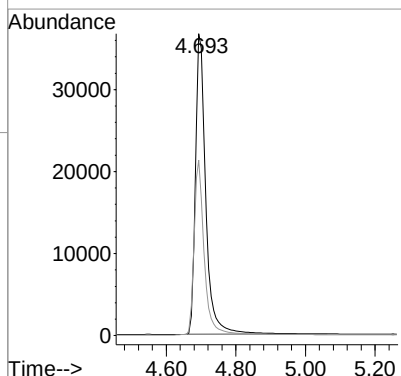
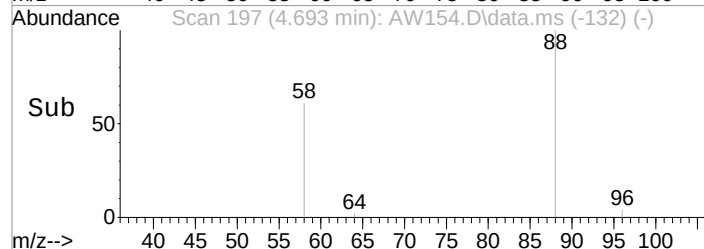




#2
1,4-Dioxane
Concen: 479.74 PPB
RT: 4.693 min Scan# 197
Delta R.T. -0.040 min
Lab File: AW154.D
Acq: 30 Apr 2020 12:52 pm



Tgt Ion: 88 Resp: 75253
Ion Ratio Lower Upper
88 100
58 58.1 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW155.D
Acq On : 30 Apr 2020 1:10 pm
Operator : AFelser
Sample : STD 8
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 12 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 13:23:25 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 12:11:48 2020
Response via : Initial Calibration

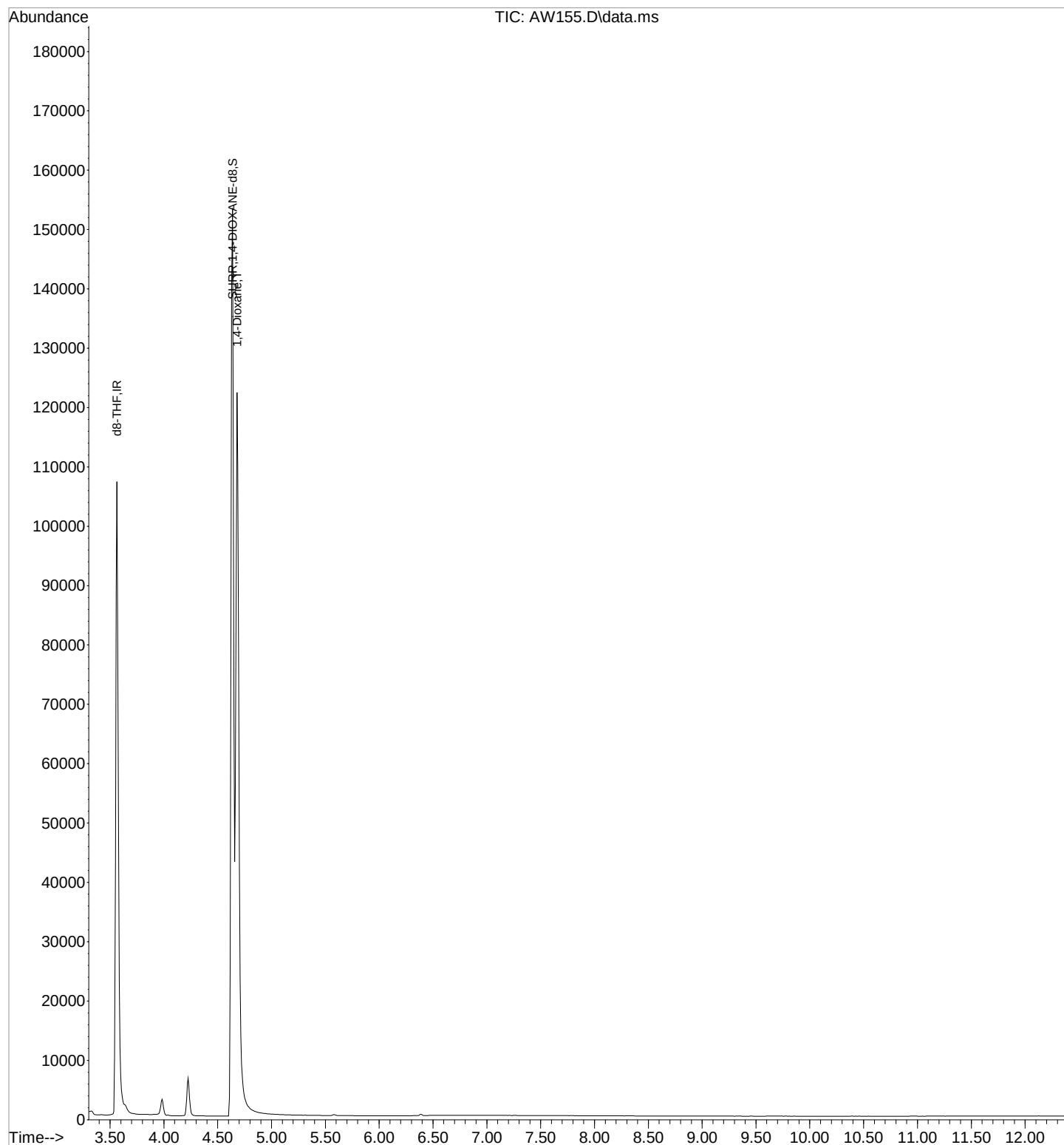
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

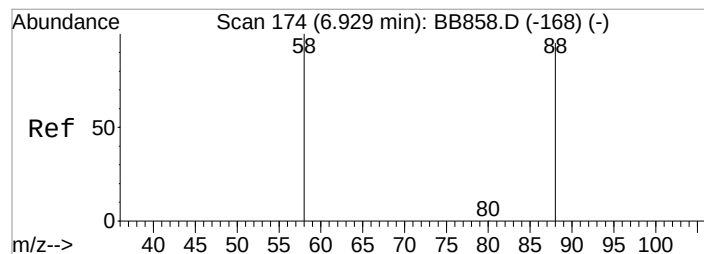
Internal Standards						
1) d8-THF	3.564	46	70151	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.637	96	144805	964.49	PPB	-0.05
Spiked Amount 100.000	Range 70 - 130		Recovery	=	964.49%#	
Target Compounds						Qvalue
2) 1,4-Dioxane	4.679	88	148362	970.96	PPB	97

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

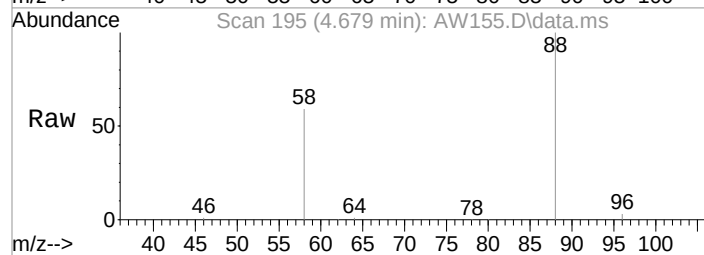
Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW155.D
Acq On : 30 Apr 2020 1:10 pm
Operator : AFelser
Sample : STD 8
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 12 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 13:23:25 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 12:11:48 2020
Response via : Initial Calibration

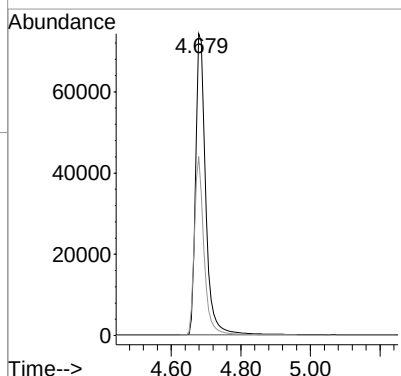
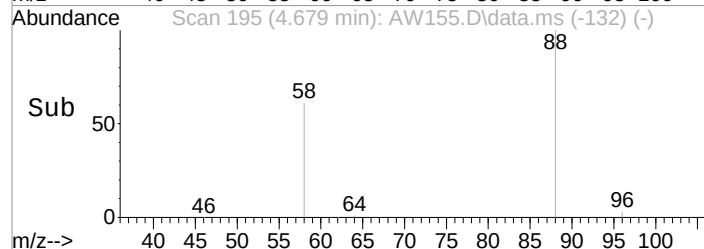




#2
1,4-Dioxane
Concen: 970.96 PPB
RT: 4.679 min Scan# 195
Delta R.T. -0.054 min
Lab File: AW155.D
Acq: 30 Apr 2020 1:10 pm



Tgt Ion: 88 Resp: 148362
Ion Ratio Lower Upper
88 100
58 59.2 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW156.D
Acq On : 30 Apr 2020 1:28 pm
Operator : AFelser
Sample : STD 9 Inst : 5975 E
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 30 13:42:05 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:24:13 2020
Response via : Initial Calibration

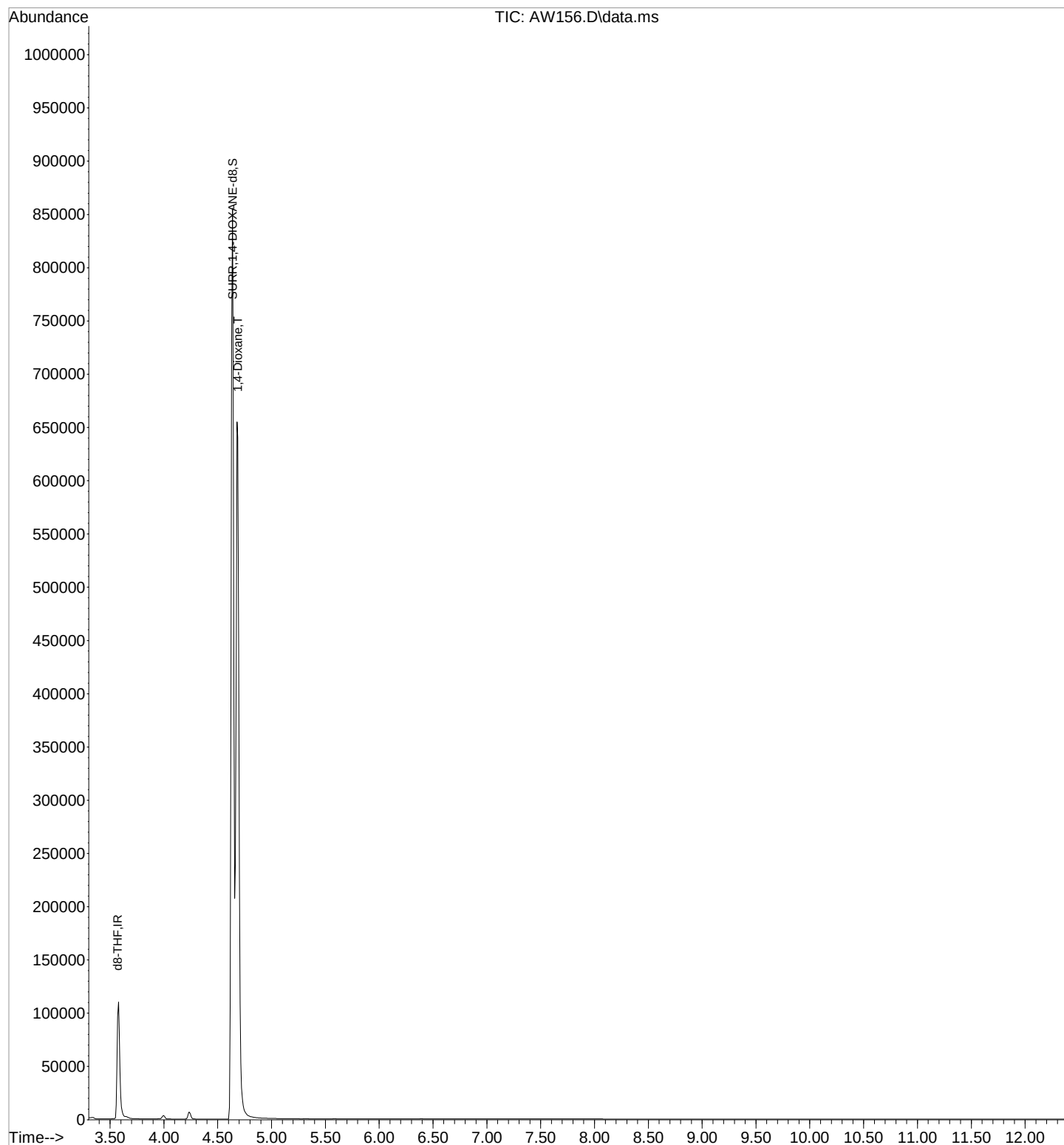
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

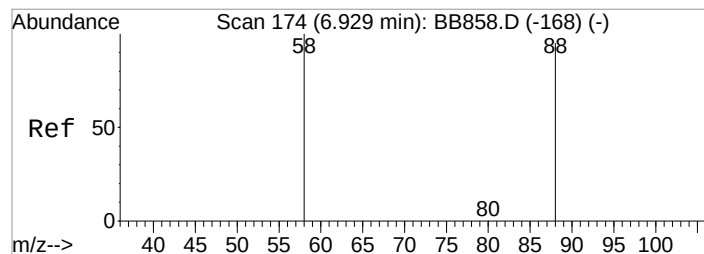
Internal Standards						
1) d8-THF	3.571	46	72936	500.00	PPB	0.00
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	4.637	96	753181	4852.94	PPB	-0.02
Spiked Amount 100.000	Range 70 - 130		Recovery	= 4852.94%#		
Target Compounds						Qvalue
2) 1,4-Dioxane	4.686	88	768519	4914.88	PPB	89

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

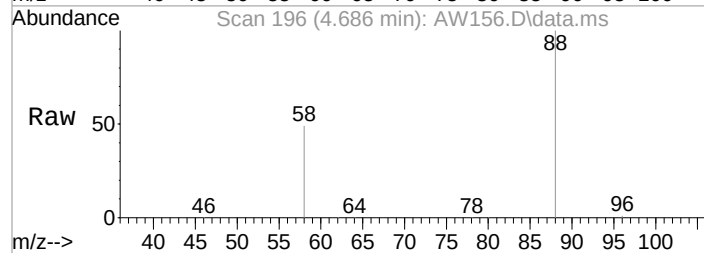
Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW156.D
Acq On : 30 Apr 2020 1:28 pm
Operator : AFelser
Sample : STD 9
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 13 Sample Multiplier: 1
Inst : 5975 E

Quant Time: Apr 30 13:42:05 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:24:13 2020
Response via : Initial Calibration

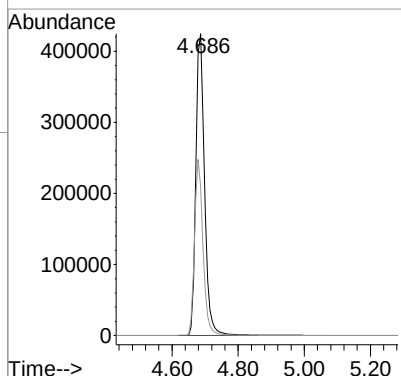
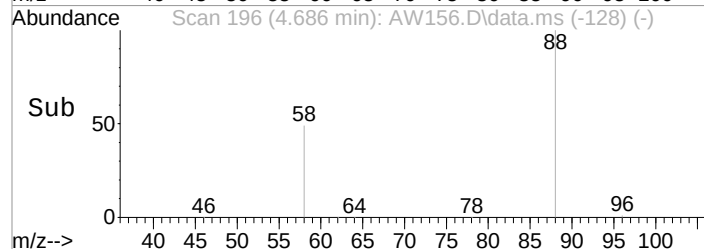




#2
1,4-Dioxane
Concen: 4914.88 PPB
RT: 4.686 min Scan# 196
Delta R.T. -0.014 min
Lab File: AW156.D
Acq: 30 Apr 2020 1:28 pm



Tgt Ion: 88 Resp: 768519
Ion Ratio Lower Upper
88 100
58 49.1 37.0 77.0



Evaluate Continuing Calibration Report

1st AF 05/01/20
2nd OM 05/01/20

Data Path : I:\ACQUDATA\5975E\data\043020\
Data File : AW157.D
Acq On : 30 Apr 2020 1:47 pm
Operator : AFelser
Sample : ICV Inst : 5975 E
Misc : Initial Calibration 522/8270D DIOX
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 30 14:18:54 2020
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX043020.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Thu Apr 30 13:42:58 2020
Response via : Initial Calibration

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 IR	d8-THF	500.000	500.000	0.0	92	0.01
2 T	1,4-Dioxane	200.000	215.143	-7.6	95	0.00
3 S	SURR,1,4-DIOXANE-d8	200.000	210.136	-5.1	91	0.00

(#) = Out of Range

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

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC

Service Request: R2003266
Calibration Date: 4/30/2020

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

Calibration ID: RC2000059

Signal ID: 1

Instrument ID: R-MS-56

#	Lab Code	Sample Name	File Location	Acquisition Date
01	RC2000059-01	STD 1	I:\ACQUDATA\5975E\data\043020\AW148.D	04/30/2020 11:04
02	RC2000059-02	STD 2	I:\ACQUDATA\5975E\data\043020\AW149.D	04/30/2020 11:22
03	RC2000059-03	STD 3	I:\ACQUDATA\5975E\data\043020\AW150.D	04/30/2020 11:39
04	RC2000059-04	STD 4	I:\ACQUDATA\5975E\data\043020\AW151.D	04/30/2020 11:58
05	RC2000059-05	STD 5	I:\ACQUDATA\5975E\data\043020\AW152.D	04/30/2020 12:16
06	RC2000059-06	STD 6	I:\ACQUDATA\5975E\data\043020\AW153.D	04/30/2020 12:34
07	RC2000059-07	STD 7	I:\ACQUDATA\5975E\data\043020\AW154.D	04/30/2020 12:52
08	RC2000059-08	STD 8	I:\ACQUDATA\5975E\data\043020\AW155.D	04/30/2020 13:10
09	RC2000059-09	STD 9	I:\ACQUDATA\5975E\data\043020\AW156.D	04/30/2020 13:28

Analyte

1,4-Dioxane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.000	1.137	02	2.000	1.022	03	10.000	0.836	04	20.000	0.9105
05	100.000	0.9645	06	200.000	1.004	07	500.000	1.047	08	1000.000	1.057
09	5000.000	1.054									

1,4-Dioxane-d8

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.000	0.7468	02	2.000	0.7564	03	10.000	0.7756	04	20.000	0.8727
05	100.000	0.9483	06	200.000	0.9938	07	500.000	1.015	08	1000.000	1.032
09	5000.000	1.033									

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC

Service Request: R2003266
Calibration Date: 4/30/2020

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

Calibration ID: RC2000059

Signal ID: 1

Instrument ID: R-MS-56

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
1,4-Dioxane	TRG	Quadratic	COD	0.9989	≥0.99	1.004	
1,4-Dioxane-d8	SURR	Quadratic	COD	0.9989	≥0.99	0.9082	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC

Service Request: R2003266
Calibration Date: 4/30/2020

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

Calibration ID: RC2000059

Signal ID: 1

Instrument ID: R-MS-56

#	Lab Code	Sample Name	File Location	Acquisition Date
10	RC2000059-10	ICV	I:\ACQUDATA\5975E\data\043020\AW157.D	04/30/2020 13:47

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
1,4-Dioxane	200	215	1.004E0	1.034E0	7.57	±20	Quadratic

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
1,4-Dioxane-d8	200	210	9.082E-1	9.835E-1	5.07	±20	Quadratic

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266
Date Analyzed: 04/30/20 18:05

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

Analysis Method: 8270D SIM
File ID: I:\ACQUADATA\5975E\data\043020\AW171.D\
Signal ID: 1

Calibration Date: 4/30/2020
Calibration ID: RC2000059
Analysis Lot: 678719
Units: ppb

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
1,4-Dioxane	200	205	1.0036	0.9922	102	2.4	±20	Quadratic

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
1,4-Dioxane-d8	200	204	0.9082	0.9616	102	1.9	±20	Quadratic

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266

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

Analysis Method:

Analysis Lot: 678719
Instrument ID: R-MS-56

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\5975E\data\043020\AW170.D\ZZZZZZZ		ZZZZZZZ	4/30/2020	17:42:00	
I:\ACQUDATA\5975E\data\043020\AW171.D\Continuing Calibration Verification		RQ2004321-02	4/30/2020	18:05:00	
I:\ACQUDATA\5975E\data\043020\AW172.D\Method Blank		RQ2004011-01	4/30/2020	18:24:00	
I:\ACQUDATA\5975E\data\043020\AW173.D\Lab Control Sample		RQ2004011-02	4/30/2020	18:42:00	
I:\ACQUDATA\5975E\data\043020\AW174.D\Duplicate Lab Control Sample		RQ2004011-03	4/30/2020	19:00:00	
I:\ACQUDATA\5975E\data\043020\AW175.D\OVR-127-042120		R2003266-001	4/30/2020	19:18:00	
I:\ACQUDATA\5975E\data\043020\AW176.D\OVR-117-042120		R2003266-002	4/30/2020	19:37:00	
I:\ACQUDATA\5975E\data\043020\AW177.D\EB-042120		R2003266-003	4/30/2020	19:56:00	
I:\ACQUDATA\5975E\data\043020\AW178.D\OVR-110-042120		R2003266-005	4/30/2020	20:14:00	
I:\ACQUDATA\5975E\data\043020\AW179.D\OVR-131-042120		R2003266-006	4/30/2020	20:32:00	
I:\ACQUDATA\5975E\data\043020\AW180.D\OVR-131-042120 MS		RQ2004011-04	4/30/2020	20:50:00	
I:\ACQUDATA\5975E\data\043020\AW181.D\OVR-131-042120 DMS		RQ2004011-05	4/30/2020	21:09:00	
I:\ACQUDATA\5975E\data\043020\AW182.D\OVR-017-042120		R2003266-007	4/30/2020	21:27:00	
I:\ACQUDATA\5975E\data\043020\AW183.D\ZZZZZZZ		ZZZZZZZ	4/30/2020	21:45:00	
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I:\ACQUDATA\5975E\data\043020\AW191.D\ZZZZZZZ		ZZZZZZZ	5/1/2020	00:06:00	
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I:\ACQUDATA\5975E\data\043020\AW195.D\ZZZZZZZ		ZZZZZZZ	5/1/2020	01:15:00	
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I:\ACQUDATA\5975E\data\043020\AW199.D\ZZZZZZZ		ZZZZZZZ	5/1/2020	02:24:00	
I:\ACQUDATA\5975E\data\043020\AW200.D\ZZZZZZZ		ZZZZZZZ	5/1/2020	02:41:00	
I:\ACQUDATA\5975E\data\043020\AW201.D\ZZZZZZZ		ZZZZZZZ	5/1/2020	02:59:00	
I:\ACQUDATA\5975E\data\043020\AW202.D\ZZZZZZZ		ZZZZZZZ	5/1/2020	03:16:00	
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I:\ACQUDATA\5975E\data\043020\AW206.D\ZZZZZZZ		ZZZZZZZ	5/1/2020	04:26:00	
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I:\ACQUDATA\5975E\data\043020\AW209.D\ZZZZZZZ		ZZZZZZZ	5/1/2020	05:20:00	

Analysis: 522 / 8770 Diox Analyst: AFisher Run Method: SD 04/24/20 / 8770 Diox / 027700
 Date: 04/30/2020 Instr. 5975E Quant Method: SD 04/30/20.M
 Syringes: LIMS Run#: 678719

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
1	BLW			AW143	—	
1	BLW			44	—	
2	REF THUE		208992	45	Y	
3	DETP THUE		208070	46	Y	
4	Int ALK			47	Y	
5	STD 1		209175	48	Y	
6	2		209176	49	Y	
7	3		209177	50	Y	
8	4		209178	51	Y	
9	5		209179	52	Y	
10	6		209180	53	Y	
11	7		209181	54	Y	
12	8		209182	55	Y	
13	9		209183	56	Y	
14	ICV		209184	57	Y	
15	CCV 2ppb		209176	58	Y	
16	RQ2004010-01			59	N	LL LCS fail
17	-02			60	N	↓
18	-03			61	N	
19	-06			62	N	Rec 1
20	R2003206-001			63	N	LL LCS fail
21	-002			64	N	↓
22	RQ2004010-04			65	N	
23	-05			66	N	↓
19	-06			67	N	Rec 1
19	-06			68	N	Rec 1
24	CCV 200ppb		209180	69	Y	
3	DETP THUE		208070	70	Y	
24	CCV 200ppb		209180	71	Y	
25	RQ2004011-01			72	Y	
26	-02			73	Y	
27	-03			74	Y	
28	R2003206-001			75	Y	
29	-002			76	Y	Disc 9, multiple ind.
30	-003			77	Y	
31	-005			78	Y	
32	-006			79	Y	
33	RQ2004011-04			80	Y	
34	-05			81	Y	
35	R2003206-007			82	Y	

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

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

Secondary : _____ exp: _____
 Secondary : _____ exp: _____

Runlog GCEXT r2 4/27/17

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Analysis: 8270 D10X Analyst: Afolner Run Method: 8D10X 4UG 2-F
 Date: 04/30/2020 Cont. Instr. 54752 Quant Method: 5D10X043020.M
 Syringes: LIMS Run#: 678619

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
36	R2003335-004			AW183	Y	
37	↓ -001			84	Y	
38	↓ -002			85	Y	
39	↓ -003			86	Y	
40	R2003336-002			87	Y	
41	↓ -001			88	Y	
42	RQ2004011-00			89	Y	
43	↓ -001			90	Y	
44	RQ2004272-01			91	Y	
45	↓ -002			92	Y	
46	↓ -003			93	Y	
47	R2003406-001			94	Y	
48	↓ -002			95	Y	
49	↓ -003			96	Y	
50	↓ -004			97	Y	
51	↓ -005			98	Y	
52	R2003435-001			99	Y	
53	RQ2004272-04			200	Y	
54	↓ -005			01	Y	
55	R2003435-002			02	Y	
56	↓ -003			03	Y	
57	↓ -004			04	Y	
58	↓ -005			05	Y	
59	RQ2004272-06			06	Y	
60	↓ -001			07	Y	
61	R2003435-006			08	Y	
62	↓ -007			09	Y	
63	↓ -008			10	N	surrogate, reported 1/10
64	↓ -009			11	N	out of range
65	↓ -010			12	N	↓
Afolner or putman						

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

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

Runlog GCEXT r2 4/27/17

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ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266

1,4-Dioxane by GC/MS

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

Extraction Lot: 357338
Extraction Date: 04/23/20 10:20

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
OVR-127-042120	R2003266-001	4/21/20	4/21/20	100 mL	2 mL	
OVR-117-042120	R2003266-002	4/21/20	4/21/20	100 mL	2 mL	
EB-042120	R2003266-003	4/21/20	4/21/20	100 mL	2 mL	
OVR-110-042120	R2003266-005	4/21/20	4/21/20	100 mL	2 mL	
OVR-131-042120	R2003266-006	4/21/20	4/21/20	100 mL	2 mL	
DUP-017-042120	R2003266-007	4/21/20	4/21/20	100 mL	2 mL	
Method Blank	RQ2004011-01MB	NA	NA	100 mL	2 mL	
Lab Control Sample	RQ2004011-02LCS	NA	NA	100 mL	2 mL	
Duplicate Lab Control Sample	RQ2004011-03DLCS	NA	NA	100 mL	2 mL	
Matrix Spike	RQ2004011-04MS	4/21/20	4/21/20	100 mL	2 mL	
Duplicate Matrix Spike	RQ2004011-05DMS	4/21/20	4/21/20	100 mL	2 mL	

Preparation Information Benchsheet

Prep Run#: 357338

Team: Semivoa GCMS/APEL SER

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

Status: Prepped
Prep Date/Time: 4/23/20 10:20

#	Lab Code	Client ID	B#	Amt. Ext.	Method / Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	Spike Amt./Inv. ID	Comments
1	RQ2004011-01	MB		100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL		200.0000 uL/206568; 10.0000 uL/208470	
2	RQ2004011-02	LCS		100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL		10.0000 uL/208470; 200.0000 uL/206568; 200.0000 uL/207676	
3	RQ2004011-03	DLCS		100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL		10.0000 uL/208470; 200.0000 uL/206568; 200.0000 uL/207676	
4	R2003266-001	QVR-127-042120	.03	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Cloudy, Slight yellow	10.0000 uL/208470; 200.0000 uL/207676	
5	R2003266-002	QVR-117-042120	.03	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Cloudy, Slight yellow	200.0000 uL/206568; 200.0000 uL/208470	
6	R2003266-003	EB-042120	.03	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Clear, Colorless	10.0000 uL/208470; 200.0000 uL/206568	
7	R2003266-005	QVR-110-042120	.03	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Clear, Colorless	200.0000 uL/206568; 200.0000 uL/208470	
8	R2003266-006	QVR-131-042120	.03	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Cloudy, Slight yellow	10.0000 uL/208470; 200.0000 uL/206568; 200.0000 uL/208470	
9	RQ2004011-04	R2003266-006 MS	.04	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Cloudy, Slight yellow	200.0000 uL/206568; 10.0000 uL/208470	
10	RQ2004011-05	R2003266-006 DMS	.04	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Cloudy, Slight yellow	10.0000 uL/208470; 200.0000 uL/207676; 200.0000 uL/206568; 10.0000 uL/208470	
11	R2003266-007	DUP-017-042120	.03	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Cloudy, Slight yellow	200.0000 uL/206568; 10.0000 uL/208470	
12	R2003335-004	2004211247A JER-1-683	.01	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Clear, Colorless	200.0000 uL/206568; 10.0000 uL/208470	
13	R2003335-001	2004211300A JER-1-483	.01	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Clear, Colorless	200.0000 uL/206568; 10.0000 uL/208470	
14	R2003335-002	2004211301A JER-1-483	.01	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Clear, Colorless	10.0000 uL/208470; 200.0000 uL/206568	
15	R2003335-003	2004211032A JER-1-563	.01	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Clear, Colorless	200.0000 uL/206568; 10.0000 uL/208470	
16	R2003336-002	HPOx Discharge 042220	.01	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Clear, Colorless	200.0000 uL/206568; 10.0000 uL/208470	
17	R2003336-001	TS Effluent 042220	.01	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Clear, Colorless	200.0000 uL/206568; 10.0000 uL/208470	
18	RQ2004011-06	R2003336-001 MS	.02	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Clear, Colorless	200.0000 uL/206568; 10.0000 uL/208470	
19	RQ2004011-07	R2003336-001 DMS	.02	100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Clear, Colorless	200.0000 uL/206568; 10.0000 uL/208470	

Spike Solutions

Name: 1,4-Dioxane-d8 1ppm Sur. Std. Inventory ID 206568 Logbook Ref. Expires On: 07/27/2020

Name: EPA 522 LCS Spike 5ppm Inventory ID 207676 Logbook Ref. Expires On: 08/08/2020

Name: SVOA Tetrahydrofuran-D8 100ppm Inventory ID 208470 Logbook Ref. Expires On: 09/28/2020

Prep Run#: 357338
Team: Semiova GCMS/AFELSER

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

Status: Prepped
Prep Date/Time: 4/23/20 10:20

Preparation Information Benchsheet

Preparation Materials

Method 522.400mg charcoal filters (207738)
Dichloromethane (Methylene Chloride) 99.9% MeCl₂ (208395)
pH Paper 0-14 (208628)

Eppendorf Pipette Repeater EXT #19 (200588)
Methanol Purge & Trap MeOH 205216 (205216)
Prepared Sodium Sulfate Na₂SO₄ (208676)

Water Deionized H₂O Millipore System (2263)
Sodium Bisulfate Monohydrate RG (205160)

Preparation Steps

Step: Extraction
Started: 4/23/20 10:20
Finished: 4/23/20 12:40
By: AFELSER
Comments

Comments:

Reviewed By:

Date:

4/24/2020

Spike Witness: KSERCU

Date:

Chain of Custody

Relinquished By:

Date:

Received By:

Date:

Extracts Examined
Yes No



Subcontracted Analytical Parameters

ALS Environmental—Rochester Laboratory

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

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May 06, 2020

Analytical Report for Service Request No: R2003266

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

RE: Former Vacuum Oil Refinery EC / 61157

Dear Janice Jaeger,

Enclosed are the results of the sample(s) submitted to our laboratory April 23, 2020
For your reference, these analyses have been assigned our service request number **R2003266**.

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 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



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Acronyms

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PFAS by HPLCMSMS

Raw Data

PFAS by HPLC/MS/MS

Acronyms

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

Inorganic Data Qualifiers

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

Metals Data Qualifiers

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

Organic Data Qualifiers

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

Additional Petroleum Hydrocarbon Specific Qualifiers

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

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

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

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

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



Case Narrative

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

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC
Sample Matrix: Water

Service Request: R2003266
Date Received: 04/23/2020

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:

Seven water samples were received for analysis at ALS Environmental on 04/23/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Organic LC:

Method PFC/537M, 04/29/2020: The lower control criterion was exceeded for one or more surrogates in samples OVR-127-042120 and DUP-017-042120 due to matrix interferences. Due to the presence of non-target background components that affected resolution of the surrogate, accurate quantitation was not optimal. Assuming the associated native analytes performed similar to the labeled analog, the effect on the reported results was minimal. A re-analysis of the samples was performed, but produced similar results. The results from the original analysis were reported. No further corrective action was appropriate.

Method PFC/537M, 04/29/2020: The upper control criterion was exceeded for one or more surrogates in sample OVR-127-042120, OVR-110-042120, OVR-131-042120, DUP-017-042120 and OVR-117-042120. The associated native analytes were not detected above the Method Reporting Limit (MRL) in this sample. The error associated with an elevated recovery equated to a high bias. Assuming the native analytes performed similar to the labeled analogs, the effect on the reported results was minimal. The quality of the sample data was not significantly affected. No further corrective action was appropriate.

Method PFC/537M, 04/29/2020: The control criteria was exceeded for one or more surrogates in Continuing Calibration Verification (CCV) KQ2005836-01. The recoveries of the associated native analytes were within control criteria, which indicated the analysis was in control. No further corrective action was appropriate.

Approved by Noel D. O'Neil

Date 05/06/2020



Chain of Custody

ALS Environmental—Kelso Laboratory
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Intra-Network Chain of Custody

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

ALS Contact: Janice Jaeger

Project Name: Former Vacuum Oil Refinery EC
Project Number: 61157
Project Manager: Deborah Wright
Company: O'Brien & Gere Engineers, Incorporated
QAP: LAB QAP

PFAS
PFC/537M

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
R2003266-001	OVR-127-042120	2	Water	4/21/20	1035	4/21/20	KELSO	IV
R2003266-002	OVR-117-042120	2	Water	4/21/20	1050	4/21/20	KELSO	IV
R2003266-003	EB-042120	2	Water	4/21/20	1130	4/21/20	KELSO	IV
R2003266-004	FRB-042120	2	Water	4/21/20	1135	4/21/20	KELSO	IV
R2003266-005	OVR-110-042120	2	Water	4/21/20	1300	4/21/20	KELSO	IV
R2003266-006	OVR-131-042120	6	Water	4/21/20	1320	4/21/20	KELSO	IV
R2003266-007	DUP-017-042120	2	Water	4/21/20		4/21/20	KELSO	IV

Test Comments

PFAS - PFC/537M

R2003266-001,2,3,4,5,6,7

NY 21 list

Folder Comments:

MRL U need Tier 2 and Tier 4

Run QC on sample R2003266-006 for PFC/537M/PFAS

Special Instructions/Comments pH Checked _____	Turnaround Requirements ☐ RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 ☐ STANDARD Requested FAX Date: _____ Requested Report Date: <u>05/08/20</u>	Report Requirements ☐ I. Results Only ☒ II. Results + QC Summaries ☐ III. Results + QC and Calibration Summaries ☒ IV. Data Validation Report with Raw Data PQL/MDL/J <u>Y</u> EDD <u>Y</u>	Invoice Information PO# 58R2003266 Bill to
---	--	---	---

Relinquished By:

[Signature] 4/22/2020 1400

Received By:

[Signature] 4/23/2020 1030

Airbill Number:

PC MH

Cooler Receipt and Preservation Form

Client ALS RochesterService Request K20R 2003266Received: 4/23/2020 Opened: 4/23/2020 By: CB Unloaded: 4/23/2020 By: CB

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? (Front)
- If present, were custody seals intact? (Y) N If present, were they signed and dated? Y (N)

Temp Blank	Sample 1	Sample 2	Sample 3	Sample 4	IR GUN	Cooler / COC ID	Tracking Number	NA	Filed
	<u>2.5</u>	<u>1.6</u>	<u>3.2</u>	<u>2.0</u>	<u>39801488WS</u>	<u>(NA)</u>	<u>1730 2429 4998</u>		

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	Broks	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:



PFAS by HPLC/MS/MS

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

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 10:35
Date Received: 04/21/20 15:25

Sample Name: OVR-127-042120
Lab Code: R2003266-001

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkane Sulfonic Acids							
Perfluorobutane sulfonic acid (PFBS)	4.2 J	4.6	0.28	1	04/29/20 00:29	4/27/20	
Perfluorohexane sulfonic acid (PFHxS)	4.6 U	4.6	1.3	1	04/29/20 00:29	4/27/20	
Perfluoroheptane sulfonic acid (PFHpS)	4.6 U	4.6	0.44	1	04/29/20 00:29	4/27/20	
Perfluorooctane sulfonic acid (PFOS)	0.77 J	1.9	0.44	1	04/29/20 00:29	4/27/20	
Perfluorodecane sulfonic acid (PFDS)	4.6 U	4.6	0.30	1	04/29/20 00:29	4/27/20	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	23	4.6	0.40	1	04/29/20 00:29	4/27/20	
Perfluoropentanoic acid (PFPeA)	4.6 U	4.6	1.7	1	04/29/20 00:29	4/27/20	
Perfluorohexanoic acid (PFHxA)	9.3 U	9.3	8.8	1	04/29/20 00:29	4/27/20	
Perfluoroheptanoic acid (PFHpA)	4.6 U	4.6	0.63	1	04/29/20 00:29	4/27/20	
Perfluorooctanoic acid (PFOA)	2.5	1.9	0.35	1	04/29/20 00:29	4/27/20	
Perfluorononanoic acid (PFNA)	4.6 U	4.6	1.1	1	04/29/20 00:29	4/27/20	
Perfluorodecanoic acid (PFDA)	4.6 U	4.6	1.2	1	04/29/20 00:29	4/27/20	
Perfluoroundecanoic acid (PFUnDA)	4.6 U	4.6	1.5	1	04/29/20 00:29	4/27/20	
Perfluorododecanoic acid (PFDoDA)	4.6 U	4.6	1.3	1	04/29/20 00:29	4/27/20	
Perfluorotridecanoic acid (PFTTrDA)	4.6 U	4.6	1.3	1	04/29/20 00:29	4/27/20	
Perfluorotetradecanoic acid (PFTeDA)	4.6 U	4.6	2.0	1	04/29/20 00:29	4/27/20	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	4.6 U	4.6	0.52	1	04/29/20 00:29	4/27/20	
N-Methyl perfluorooctane sulfonamidoacetic acid	4.6 U	4.6	1.4	1	04/29/20 00:29	4/27/20	
N-Ethyl perfluorooctane sulfonamidoacetic acid	4.6 U	4.6	0.50	1	04/29/20 00:29	4/27/20	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.6 U	4.6	0.55	1	04/29/20 00:29	4/27/20	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.26 J	4.6	0.15	1	04/29/20 00:29	4/27/20	

ALS Group USA, Corp.
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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 10:35
Date Received: 04/21/20 15:25

Sample Name: OVR-127-042120
Lab Code: R2003266-001

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	69	20 - 109	04/29/20 00:29	
18O2-PFHxS	80	26 - 122	04/29/20 00:29	
13C4-PFOS	91	25 - 121	04/29/20 00:29	
13C4-PFBA	27	27 - 124	04/29/20 00:29	
13C5-PFPeA	21	27 - 138	04/29/20 00:29	*
13C2-PFHxA	24	28 - 132	04/29/20 00:29	*
13C4-PFHpA	30	19 - 139	04/29/20 00:29	
13C4-PFOA	46	22 - 130	04/29/20 00:29	
13C5-PFNA	67	20 - 127	04/29/20 00:29	
13C2-PFDA	75	24 - 125	04/29/20 00:29	
13C2-PFUnDA	86	22 - 125	04/29/20 00:29	
13C2-PFDoDA	82	19 - 122	04/29/20 00:29	
13C2-PFTeDA	86	13 - 124	04/29/20 00:29	
13C8-FOSA	75	18 - 109	04/29/20 00:29	
D3-MeFOSAA	99	9 - 123	04/29/20 00:29	
D5-EtFOSAA	122	12 - 126	04/29/20 00:29	
13C2-6:2 FTS	385	10 - 226	04/29/20 00:29	*
13C2-8:2 FTS	349	10 - 202	04/29/20 00:29	*

ALS Group USA, Corp.
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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 10:50
Date Received: 04/21/20 15:25

Sample Name: OVR-117-042120
Lab Code: R2003266-002

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkane Sulfonic Acids							
Perfluorobutane sulfonic acid (PFBS)	4.5 U	4.5	0.28	1	04/29/20 00:39	4/27/20	
Perfluorohexane sulfonic acid (PFHxS)	4.5 U	4.5	1.3	1	04/29/20 00:39	4/27/20	
Perfluoroheptane sulfonic acid (PFHpS)	4.5 U	4.5	0.44	1	04/29/20 00:39	4/27/20	
Perfluorooctane sulfonic acid (PFOS)	1.8 U	1.8	0.44	1	04/29/20 00:39	4/27/20	
Perfluorodecane sulfonic acid (PFDS)	4.5 U	4.5	0.30	1	04/29/20 00:39	4/27/20	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	29	4.5	0.40	1	04/29/20 00:39	4/27/20	
Perfluoropentanoic acid (PFPeA)	4.5 U	4.5	1.7	1	04/29/20 00:39	4/27/20	
Perfluorohexanoic acid (PFHxA)	9.2 U	9.2	8.8	1	04/29/20 00:39	4/27/20	
Perfluoroheptanoic acid (PFHpA)	4.5 U	4.5	0.63	1	04/29/20 00:39	4/27/20	
Perfluorooctanoic acid (PFOA)	1.0 J	1.8	0.35	1	04/29/20 00:39	4/27/20	
Perfluorononanoic acid (PFNA)	4.5 U	4.5	1.1	1	04/29/20 00:39	4/27/20	
Perfluorodecanoic acid (PFDA)	4.5 U	4.5	1.2	1	04/29/20 00:39	4/27/20	
Perfluoroundecanoic acid (PFUnDA)	4.5 U	4.5	1.5	1	04/29/20 00:39	4/27/20	
Perfluorododecanoic acid (PFDoDA)	4.5 U	4.5	1.3	1	04/29/20 00:39	4/27/20	
Perfluorotridecanoic acid (PFTTrDA)	4.5 U	4.5	1.3	1	04/29/20 00:39	4/27/20	
Perfluorotetradecanoic acid (PFTeDA)	4.5 U	4.5	2.0	1	04/29/20 00:39	4/27/20	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	4.5 U	4.5	0.52	1	04/29/20 00:39	4/27/20	
N-Methyl perfluorooctane sulfonamidoacetic acid	4.5 U	4.5	1.4	1	04/29/20 00:39	4/27/20	
N-Ethyl perfluorooctane sulfonamidoacetic acid	4.5 U	4.5	0.50	1	04/29/20 00:39	4/27/20	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.5 U	4.5	0.55	1	04/29/20 00:39	4/27/20	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.18 J	4.5	0.15	1	04/29/20 00:39	4/27/20	

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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 10:50
Date Received: 04/21/20 15:25

Sample Name: OVR-117-042120
Lab Code: R2003266-002

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	99	20 - 109	04/29/20 00:39	
18O2-PFHxS	116	26 - 122	04/29/20 00:39	
13C4-PFOS	114	25 - 121	04/29/20 00:39	
13C4-PFBA	56	27 - 124	04/29/20 00:39	
13C5-PFPeA	39	27 - 138	04/29/20 00:39	
13C2-PFHxA	40	28 - 132	04/29/20 00:39	
13C4-PFHpA	42	19 - 139	04/29/20 00:39	
13C4-PFOA	52	22 - 130	04/29/20 00:39	
13C5-PFNA	72	20 - 127	04/29/20 00:39	
13C2-PFDA	78	24 - 125	04/29/20 00:39	
13C2-PFUnDA	88	22 - 125	04/29/20 00:39	
13C2-PFDoDA	90	19 - 122	04/29/20 00:39	
13C2-PFTeDA	94	13 - 124	04/29/20 00:39	
13C8-FOSA	68	18 - 109	04/29/20 00:39	
D3-MeFOSAA	84	9 - 123	04/29/20 00:39	
D5-EtFOSAA	95	12 - 126	04/29/20 00:39	
13C2-6:2 FTS	264	10 - 226	04/29/20 00:39	*
13C2-8:2 FTS	227	10 - 202	04/29/20 00:39	*

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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 11:30
Date Received: 04/21/20 15:25

Sample Name: EB-042120
Lab Code: R2003266-003

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkane Sulfonic Acids							
Perfluorobutane sulfonic acid (PFBS)	4.1 U	4.1	0.28	1	04/29/20 00:50	4/27/20	
Perfluorohexane sulfonic acid (PFHxS)	4.1 U	4.1	1.3	1	04/29/20 00:50	4/27/20	
Perfluoroheptane sulfonic acid (PFHpS)	4.1 U	4.1	0.44	1	04/29/20 00:50	4/27/20	
Perfluorooctane sulfonic acid (PFOS)	1.6 U	1.6	0.44	1	04/29/20 00:50	4/27/20	
Perfluorodecane sulfonic acid (PFDS)	4.1 U	4.1	0.30	1	04/29/20 00:50	4/27/20	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	4.1 U	4.1	0.40	1	04/29/20 00:50	4/27/20	
Perfluoropentanoic acid (PFPeA)	4.1 U	4.1	1.7	1	04/29/20 00:50	4/27/20	
Perfluorohexanoic acid (PFHxA)	9.2 U	9.2	8.8	1	04/29/20 00:50	4/27/20	
Perfluoroheptanoic acid (PFHpA)	4.1 U	4.1	0.63	1	04/29/20 00:50	4/27/20	
Perfluorooctanoic acid (PFOA)	0.41 J	1.6	0.35	1	04/29/20 00:50	4/27/20	
Perfluorononanoic acid (PFNA)	4.1 U	4.1	1.1	1	04/29/20 00:50	4/27/20	
Perfluorodecanoic acid (PFDA)	4.1 U	4.1	1.2	1	04/29/20 00:50	4/27/20	
Perfluoroundecanoic acid (PFUnDA)	4.1 U	4.1	1.5	1	04/29/20 00:50	4/27/20	
Perfluorododecanoic acid (PFDoDA)	4.1 U	4.1	1.3	1	04/29/20 00:50	4/27/20	
Perfluorotridecanoic acid (PFTrDA)	4.1 U	4.1	1.3	1	04/29/20 00:50	4/27/20	
Perfluorotetradecanoic acid (PFTeDA)	4.1 U	4.1	2.0	1	04/29/20 00:50	4/27/20	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	4.1 U	4.1	0.52	1	04/29/20 00:50	4/27/20	
N-Methyl perfluorooctane sulfonamidoacetic acid	4.1 U	4.1	1.4	1	04/29/20 00:50	4/27/20	
N-Ethyl perfluorooctane sulfonamidoacetic acid	4.1 U	4.1	0.50	1	04/29/20 00:50	4/27/20	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.1 U	4.1	0.55	1	04/29/20 00:50	4/27/20	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.1 U	4.1	0.15	1	04/29/20 00:50	4/27/20	

ALS Group USA, Corp.
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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 11:30
Date Received: 04/21/20 15:25

Sample Name: EB-042120
Lab Code: R2003266-003

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	72	20 - 109	04/29/20 00:50	
18O2-PFHxS	91	26 - 122	04/29/20 00:50	
13C4-PFOS	84	25 - 121	04/29/20 00:50	
13C4-PFBA	73	27 - 124	04/29/20 00:50	
13C5-PFPeA	72	27 - 138	04/29/20 00:50	
13C2-PFHxA	75	28 - 132	04/29/20 00:50	
13C4-PFHpA	98	19 - 139	04/29/20 00:50	
13C4-PFOA	93	22 - 130	04/29/20 00:50	
13C5-PFNA	104	20 - 127	04/29/20 00:50	
13C2-PFDA	93	24 - 125	04/29/20 00:50	
13C2-PFUnDA	92	22 - 125	04/29/20 00:50	
13C2-PFDoDA	86	19 - 122	04/29/20 00:50	
13C2-PFTeDA	90	13 - 124	04/29/20 00:50	
13C8-FOSA	66	18 - 109	04/29/20 00:50	
D3-MeFOSAA	93	9 - 123	04/29/20 00:50	
D5-EtFOSAA	95	12 - 126	04/29/20 00:50	
13C2-6:2 FTS	98	10 - 226	04/29/20 00:50	
13C2-8:2 FTS	98	10 - 202	04/29/20 00:50	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 11:35
Date Received: 04/21/20 15:25

Sample Name: FRB-042120
Lab Code: R2003266-004

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkane Sulfonic Acids							
Perfluorobutane sulfonic acid (PFBS)	4.2 U	4.2	0.28	1	04/29/20 01:00	4/27/20	
Perfluorohexane sulfonic acid (PFHxS)	4.2 U	4.2	1.3	1	04/29/20 01:00	4/27/20	
Perfluoroheptane sulfonic acid (PFHpS)	4.2 U	4.2	0.44	1	04/29/20 01:00	4/27/20	
Perfluorooctane sulfonic acid (PFOS)	1.7 U	1.7	0.44	1	04/29/20 01:00	4/27/20	
Perfluorodecane sulfonic acid (PFDS)	4.2 U	4.2	0.30	1	04/29/20 01:00	4/27/20	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	4.2 U	4.2	0.40	1	04/29/20 01:00	4/27/20	
Perfluoropentanoic acid (PFPeA)	4.2 U	4.2	1.7	1	04/29/20 01:00	4/27/20	
Perfluorohexanoic acid (PFHxA)	9.2 U	9.2	8.8	1	04/29/20 01:00	4/27/20	
Perfluoroheptanoic acid (PFHpA)	4.2 U	4.2	0.63	1	04/29/20 01:00	4/27/20	
Perfluorooctanoic acid (PFOA)	0.39 J	1.7	0.35	1	04/29/20 01:00	4/27/20	
Perfluorononanoic acid (PFNA)	4.2 U	4.2	1.1	1	04/29/20 01:00	4/27/20	
Perfluorodecanoic acid (PFDA)	4.2 U	4.2	1.2	1	04/29/20 01:00	4/27/20	
Perfluoroundecanoic acid (PFUnDA)	4.2 U	4.2	1.5	1	04/29/20 01:00	4/27/20	
Perfluorododecanoic acid (PFDoDA)	4.2 U	4.2	1.3	1	04/29/20 01:00	4/27/20	
Perfluorotridecanoic acid (PFTTrDA)	4.2 U	4.2	1.3	1	04/29/20 01:00	4/27/20	
Perfluorotetradecanoic acid (PFTeDA)	4.2 U	4.2	2.0	1	04/29/20 01:00	4/27/20	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	4.2 U	4.2	0.52	1	04/29/20 01:00	4/27/20	
N-Methyl perfluorooctane sulfonamidoacetic acid	4.2 U	4.2	1.4	1	04/29/20 01:00	4/27/20	
N-Ethyl perfluorooctane sulfonamidoacetic acid	4.2 U	4.2	0.50	1	04/29/20 01:00	4/27/20	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.2 U	4.2	0.55	1	04/29/20 01:00	4/27/20	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.18 J	4.2	0.15	1	04/29/20 01:00	4/27/20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 11:35
Date Received: 04/21/20 15:25

Sample Name: FRB-042120
Lab Code: R2003266-004

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	74	20 - 109	04/29/20 01:00	
18O2-PFHxS	94	26 - 122	04/29/20 01:00	
13C4-PFOS	82	25 - 121	04/29/20 01:00	
13C4-PFBA	71	27 - 124	04/29/20 01:00	
13C5-PFPeA	77	27 - 138	04/29/20 01:00	
13C2-PFHxA	78	28 - 132	04/29/20 01:00	
13C4-PFHpA	102	19 - 139	04/29/20 01:00	
13C4-PFOA	90	22 - 130	04/29/20 01:00	
13C5-PFNA	98	20 - 127	04/29/20 01:00	
13C2-PFDA	91	24 - 125	04/29/20 01:00	
13C2-PFUnDA	86	22 - 125	04/29/20 01:00	
13C2-PFDoDA	79	19 - 122	04/29/20 01:00	
13C2-PFTeDA	89	13 - 124	04/29/20 01:00	
13C8-FOSA	73	18 - 109	04/29/20 01:00	
D3-MeFOSAA	89	9 - 123	04/29/20 01:00	
D5-EtFOSAA	98	12 - 126	04/29/20 01:00	
13C2-6:2 FTS	90	10 - 226	04/29/20 01:00	
13C2-8:2 FTS	93	10 - 202	04/29/20 01:00	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 13:00
Date Received: 04/21/20 15:25

Sample Name: OVR-110-042120
Lab Code: R2003266-005

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkane Sulfonic Acids							
Perfluorobutane sulfonic acid (PFBS)	0.36 J	4.8	0.28	1	04/29/20 01:10	4/27/20	
Perfluorohexane sulfonic acid (PFHxS)	4.8 U	4.8	1.3	1	04/29/20 01:10	4/27/20	
Perfluoroheptane sulfonic acid (PFHpS)	4.8 U	4.8	0.44	1	04/29/20 01:10	4/27/20	
Perfluorooctane sulfonic acid (PFOS)	0.47 J	1.9	0.44	1	04/29/20 01:10	4/27/20	
Perfluorodecane sulfonic acid (PFDS)	4.8 U	4.8	0.30	1	04/29/20 01:10	4/27/20	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	2.0 J	4.8	0.40	1	04/29/20 01:10	4/27/20	
Perfluoropentanoic acid (PFPeA)	4.8 U	4.8	1.7	1	04/29/20 01:10	4/27/20	
Perfluorohexanoic acid (PFHxA)	9.6 U	9.6	8.8	1	04/29/20 01:10	4/27/20	
Perfluoroheptanoic acid (PFHpA)	4.8 U	4.8	0.63	1	04/29/20 01:10	4/27/20	
Perfluorooctanoic acid (PFOA)	0.50 J	1.9	0.35	1	04/29/20 01:10	4/27/20	
Perfluorononanoic acid (PFNA)	4.8 U	4.8	1.1	1	04/29/20 01:10	4/27/20	
Perfluorodecanoic acid (PFDA)	4.8 U	4.8	1.2	1	04/29/20 01:10	4/27/20	
Perfluoroundecanoic acid (PFUnDA)	4.8 U	4.8	1.5	1	04/29/20 01:10	4/27/20	
Perfluorododecanoic acid (PFDoDA)	4.8 U	4.8	1.3	1	04/29/20 01:10	4/27/20	
Perfluorotridecanoic acid (PFTTrDA)	4.8 U	4.8	1.3	1	04/29/20 01:10	4/27/20	
Perfluorotetradecanoic acid (PFTeDA)	4.8 U	4.8	2.0	1	04/29/20 01:10	4/27/20	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	4.8 U	4.8	0.52	1	04/29/20 01:10	4/27/20	
N-Methyl perfluorooctane sulfonamidoacetic acid	4.8 U	4.8	1.4	1	04/29/20 01:10	4/27/20	
N-Ethyl perfluorooctane sulfonamidoacetic acid	4.8 U	4.8	0.50	1	04/29/20 01:10	4/27/20	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.8 U	4.8	0.55	1	04/29/20 01:10	4/27/20	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.8 U	4.8	0.15	1	04/29/20 01:10	4/27/20	

ALS Group USA, Corp.
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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 13:00
Date Received: 04/21/20 15:25

Sample Name: OVR-110-042120
Lab Code: R2003266-005

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	134	20 - 109	04/29/20 01:10	*
18O2-PFHxS	177	26 - 122	04/29/20 01:10	*
13C4-PFOS	165	25 - 121	04/29/20 01:10	*
13C4-PFBA	126	27 - 124	04/29/20 01:10	*
13C5-PFPeA	121	27 - 138	04/29/20 01:10	
13C2-PFHxA	141	28 - 132	04/29/20 01:10	*
13C4-PFHpA	168	19 - 139	04/29/20 01:10	*
13C4-PFOA	167	22 - 130	04/29/20 01:10	*
13C5-PFNA	178	20 - 127	04/29/20 01:10	*
13C2-PFDA	170	24 - 125	04/29/20 01:10	*
13C2-PFUnDA	168	22 - 125	04/29/20 01:10	*
13C2-PFDoDA	168	19 - 122	04/29/20 01:10	*
13C2-PFTeDA	158	13 - 124	04/29/20 01:10	*
13C8-FOSA	45	18 - 109	04/29/20 01:10	
D3-MeFOSAA	180	9 - 123	04/29/20 01:10	*
D5-EtFOSAA	180	12 - 126	04/29/20 01:10	*
13C2-6:2 FTS	209	10 - 226	04/29/20 01:10	
13C2-8:2 FTS	176	10 - 202	04/29/20 01:10	

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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 13:20
Date Received: 04/21/20 15:25

Sample Name: OVR-131-042120
Lab Code: R2003266-006

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkane Sulfonic Acids							
Perfluorobutane sulfonic acid (PFBS)	6.2	4.7	0.28	1	04/29/20 01:21	4/27/20	
Perfluorohexane sulfonic acid (PFHxS)	3.5 J	4.7	1.3	1	04/29/20 01:21	4/27/20	
Perfluoroheptane sulfonic acid (PFHpS)	0.95 J	4.7	0.44	1	04/29/20 01:21	4/27/20	
Perfluorooctane sulfonic acid (PFOS)	17	1.9	0.44	1	04/29/20 01:21	4/27/20	
Perfluorodecane sulfonic acid (PFDS)	0.49 J	4.7	0.30	1	04/29/20 01:21	4/27/20	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	28	4.7	0.40	1	04/29/20 01:21	4/27/20	
Perfluoropentanoic acid (PFPeA)	55	4.7	1.7	1	04/29/20 01:21	4/27/20	
Perfluorohexanoic acid (PFHxA)	26	9.4	8.8	1	04/29/20 01:21	4/27/20	
Perfluoroheptanoic acid (PFHpA)	14	4.7	0.63	1	04/29/20 01:21	4/27/20	
Perfluorooctanoic acid (PFOA)	16	1.9	0.35	1	04/29/20 01:21	4/27/20	
Perfluorononanoic acid (PFNA)	1.9 J	4.7	1.1	1	04/29/20 01:21	4/27/20	
Perfluorodecanoic acid (PFDA)	4.7 U	4.7	1.2	1	04/29/20 01:21	4/27/20	
Perfluoroundecanoic acid (PFUnDA)	4.7 U	4.7	1.5	1	04/29/20 01:21	4/27/20	
Perfluorododecanoic acid (PFDoDA)	4.7 U	4.7	1.3	1	04/29/20 01:21	4/27/20	
Perfluorotridecanoic acid (PFTTrDA)	4.7 U	4.7	1.3	1	04/29/20 01:21	4/27/20	
Perfluorotetradecanoic acid (PFTeDA)	4.7 U	4.7	2.0	1	04/29/20 01:21	4/27/20	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	4.7 U	4.7	0.52	1	04/29/20 01:21	4/27/20	
N-Methyl perfluorooctane sulfonamidoacetic acid	4.7 U	4.7	1.4	1	04/29/20 01:21	4/27/20	
N-Ethyl perfluorooctane sulfonamidoacetic acid	4.7 U	4.7	0.50	1	04/29/20 01:21	4/27/20	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	1.2 J	4.7	0.55	1	04/29/20 01:21	4/27/20	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.25 J	4.7	0.15	1	04/29/20 01:21	4/27/20	

ALS Group USA, Corp.
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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20 13:20
Date Received: 04/21/20 15:25

Sample Name: OVR-131-042120
Lab Code: R2003266-006

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	72	20 - 109	04/29/20 01:21	
18O2-PFHxS	94	26 - 122	04/29/20 01:21	
13C4-PFOS	80	25 - 121	04/29/20 01:21	
13C4-PFBA	71	27 - 124	04/29/20 01:21	
13C5-PFPeA	52	27 - 138	04/29/20 01:21	
13C2-PFHxA	58	28 - 132	04/29/20 01:21	
13C4-PFHpA	73	19 - 139	04/29/20 01:21	
13C4-PFOA	75	22 - 130	04/29/20 01:21	
13C5-PFNA	91	20 - 127	04/29/20 01:21	
13C2-PFDA	88	24 - 125	04/29/20 01:21	
13C2-PFUnDA	91	22 - 125	04/29/20 01:21	
13C2-PFDoDA	81	19 - 122	04/29/20 01:21	
13C2-PFTeDA	84	13 - 124	04/29/20 01:21	
13C8-FOSA	68	18 - 109	04/29/20 01:21	
D3-MeFOSAA	104	9 - 123	04/29/20 01:21	
D5-EtFOSAA	116	12 - 126	04/29/20 01:21	
13C2-6:2 FTS	306	10 - 226	04/29/20 01:21	*
13C2-8:2 FTS	236	10 - 202	04/29/20 01:21	*

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20
Date Received: 04/21/20 15:25

Sample Name: DUP-017-042120
Lab Code: R2003266-007

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkane Sulfonic Acids							
Perfluorobutane sulfonic acid (PFBS)	3.6 J	4.7	0.28	1	04/29/20 01:52	4/27/20	
Perfluorohexane sulfonic acid (PFHxS)	4.7 U	4.7	1.3	1	04/29/20 01:52	4/27/20	
Perfluoroheptane sulfonic acid (PFHpS)	4.7 U	4.7	0.44	1	04/29/20 01:52	4/27/20	
Perfluorooctane sulfonic acid (PFOS)	1.9 U	1.9	0.44	1	04/29/20 01:52	4/27/20	
Perfluorodecane sulfonic acid (PFDS)	4.7 U	4.7	0.30	1	04/29/20 01:52	4/27/20	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	26	4.7	0.40	1	04/29/20 01:52	4/27/20	
Perfluoropentanoic acid (PFPeA)	4.7 U	4.7	1.7	1	04/29/20 01:52	4/27/20	
Perfluorohexanoic acid (PFHxA)	9.4 U	9.4	8.8	1	04/29/20 01:52	4/27/20	
Perfluoroheptanoic acid (PFHpA)	4.7 U	4.7	0.63	1	04/29/20 01:52	4/27/20	
Perfluorooctanoic acid (PFOA)	2.6	1.9	0.35	1	04/29/20 01:52	4/27/20	
Perfluorononanoic acid (PFNA)	4.7 U	4.7	1.1	1	04/29/20 01:52	4/27/20	
Perfluorodecanoic acid (PFDA)	4.7 U	4.7	1.2	1	04/29/20 01:52	4/27/20	
Perfluoroundecanoic acid (PFUnDA)	4.7 U	4.7	1.5	1	04/29/20 01:52	4/27/20	
Perfluorododecanoic acid (PFDoDA)	4.7 U	4.7	1.3	1	04/29/20 01:52	4/27/20	
Perfluorotridecanoic acid (PFTTrDA)	4.7 U	4.7	1.3	1	04/29/20 01:52	4/27/20	
Perfluorotetradecanoic acid (PFTeDA)	4.7 U	4.7	2.0	1	04/29/20 01:52	4/27/20	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	4.7 U	4.7	0.52	1	04/29/20 01:52	4/27/20	
N-Methyl perfluorooctane sulfonamidoacetic acid	4.7 U	4.7	1.4	1	04/29/20 01:52	4/27/20	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.56 J	4.7	0.50	1	04/29/20 01:52	4/27/20	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.7 U	4.7	0.55	1	04/29/20 01:52	4/27/20	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.22 J	4.7	0.15	1	04/29/20 01:52	4/27/20	

ALS Group USA, Corp.
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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20
Date Received: 04/21/20 15:25

Sample Name: DUP-017-042120
Lab Code: R2003266-007

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	67	20 - 109	04/29/20 01:52	
18O2-PFHxS	71	26 - 122	04/29/20 01:52	
13C4-PFOS	86	25 - 121	04/29/20 01:52	
13C4-PFBA	26	27 - 124	04/29/20 01:52	*
13C5-PFPeA	20	27 - 138	04/29/20 01:52	*
13C2-PFHxA	22	28 - 132	04/29/20 01:52	*
13C4-PFHpA	28	19 - 139	04/29/20 01:52	
13C4-PFOA	41	22 - 130	04/29/20 01:52	
13C5-PFNA	65	20 - 127	04/29/20 01:52	
13C2-PFDA	72	24 - 125	04/29/20 01:52	
13C2-PFUnDA	86	22 - 125	04/29/20 01:52	
13C2-PFDoDA	82	19 - 122	04/29/20 01:52	
13C2-PFTeDA	79	13 - 124	04/29/20 01:52	
13C8-FOSA	63	18 - 109	04/29/20 01:52	
D3-MeFOSAA	95	9 - 123	04/29/20 01:52	
D5-EtFOSAA	106	12 - 126	04/29/20 01:52	
13C2-6:2 FTS	322	10 - 226	04/29/20 01:52	*
13C2-8:2 FTS	313	10 - 202	04/29/20 01:52	*

ALS Group USA, Corp.
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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2005615-04

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkane Sulfonic Acids							
Perfluorobutane sulfonic acid (PFBS)	0.35 J	5.0	0.28	1	04/29/20 00:18	4/27/20	
Perfluorohexane sulfonic acid (PFHxS)	5.0 U	5.0	1.3	1	04/29/20 00:18	4/27/20	
Perfluoroheptane sulfonic acid (PFHpS)	5.0 U	5.0	0.44	1	04/29/20 00:18	4/27/20	
Perfluorooctane sulfonic acid (PFOS)	2.0 U	2.0	0.44	1	04/29/20 00:18	4/27/20	
Perfluorodecane sulfonic acid (PFDS)	0.35 J	5.0	0.30	1	04/29/20 00:18	4/27/20	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	5.0 U	5.0	0.40	1	04/29/20 00:18	4/27/20	
Perfluoropentanoic acid (PFPeA)	5.0 U	5.0	1.7	1	04/29/20 00:18	4/27/20	
Perfluorohexanoic acid (PFHxA)	10 U	10	8.8	1	04/29/20 00:18	4/27/20	
Perfluoroheptanoic acid (PFHpA)	5.0 U	5.0	0.63	1	04/29/20 00:18	4/27/20	
Perfluorooctanoic acid (PFOA)	0.52 J	2.0	0.35	1	04/29/20 00:18	4/27/20	
Perfluorononanoic acid (PFNA)	5.0 U	5.0	1.1	1	04/29/20 00:18	4/27/20	
Perfluorodecanoic acid (PFDA)	5.0 U	5.0	1.2	1	04/29/20 00:18	4/27/20	
Perfluoroundecanoic acid (PFUnDA)	5.0 U	5.0	1.5	1	04/29/20 00:18	4/27/20	
Perfluorododecanoic acid (PFDoDA)	5.0 U	5.0	1.3	1	04/29/20 00:18	4/27/20	
Perfluorotridecanoic acid (PFTTrDA)	5.0 U	5.0	1.3	1	04/29/20 00:18	4/27/20	
Perfluorotetradecanoic acid (PFTeDA)	5.0 U	5.0	2.0	1	04/29/20 00:18	4/27/20	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	5.0 U	5.0	0.52	1	04/29/20 00:18	4/27/20	
N-Methyl perfluorooctane sulfonamidoacetic acid	5.0 U	5.0	1.4	1	04/29/20 00:18	4/27/20	
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.0 U	5.0	0.50	1	04/29/20 00:18	4/27/20	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	5.0 U	5.0	0.55	1	04/29/20 00:18	4/27/20	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.19 J	5.0	0.15	1	04/29/20 00:18	4/27/20	

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Analytical Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2005615-04

Units: ng/L
Basis: NA

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	82	20 - 109	04/29/20 00:18	
18O2-PFHxS	93	26 - 122	04/29/20 00:18	
13C4-PFOS	91	25 - 121	04/29/20 00:18	
13C4-PFBA	79	27 - 124	04/29/20 00:18	
13C5-PFPeA	83	27 - 138	04/29/20 00:18	
13C2-PFHxA	95	28 - 132	04/29/20 00:18	
13C4-PFHpA	98	19 - 139	04/29/20 00:18	
13C4-PFOA	95	22 - 130	04/29/20 00:18	
13C5-PFNA	109	20 - 127	04/29/20 00:18	
13C2-PFDA	101	24 - 125	04/29/20 00:18	
13C2-PFUnDA	100	22 - 125	04/29/20 00:18	
13C2-PFDoDA	94	19 - 122	04/29/20 00:18	
13C2-PFTeDA	99	13 - 124	04/29/20 00:18	
13C8-FOSA	89	18 - 109	04/29/20 00:18	
D3-MeFOSAA	111	9 - 123	04/29/20 00:18	
D5-EtFOSAA	111	12 - 126	04/29/20 00:18	
13C2-6:2 FTS	97	10 - 226	04/29/20 00:18	
13C2-8:2 FTS	111	10 - 202	04/29/20 00:18	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266

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

Analysis Method: PFC/537M
Extraction Method: ALS SOP

Surrogate	Control Limits	OVR-127-042120	OVR-127-042120	OVR-117-042120
		R2003266-001	R2003266-001	R2003266-002
13C3-PFBS	20-109	69	66	99
18O2-PFHxS	26-122	80	71	116
13C4-PFOS	25-121	91	87	114
13C4-PFBA	27-124	27	25*	56
13C5-PFPeA	27-138	21*	19*	39
13C2-PFHxA	28-132	24*	21*	40
13C4-PFHpA	19-139	30	26	42
13C4-PFOA	22-130	46	44	52
13C5-PFNA	20-127	67	64	72
13C2-PFDA	24-125	75	76	78
13C2-PFUnDA	22-125	86	85	88
13C2-PFDoDA	19-122	82	85	90
13C2-PFTeDA	13-124	86	79	94
13C8-FOSA	18-109	75	70	68
D3-MeFOSAA	9-123	99	97	84
D5-EtFOSAA	12-126	122	111	95
13C2-6:2 FTS	10-226	385*	329*	264*
13C2-8:2 FTS	10-202	349*	355*	227*

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

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

ALS Group USA, Corp.
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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266

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

Analysis Method: PFC/537M
Extraction Method: ALS SOP

Surrogate	Control Limits	EB-042120	FRB-042120	OVR-110-042120
		R2003266-003	R2003266-004	R2003266-005
13C3-PFBS	20-109	72	74	134*
18O2-PFHxS	26-122	91	94	177*
13C4-PFOS	25-121	84	82	165*
13C4-PFBA	27-124	73	71	126*
13C5-PFPeA	27-138	72	77	121
13C2-PFHxA	28-132	75	78	141*
13C4-PFHpA	19-139	98	102	168*
13C4-PFOA	22-130	93	90	167*
13C5-PFNA	20-127	104	98	178*
13C2-PFDA	24-125	93	91	170*
13C2-PFUnDA	22-125	92	86	168*
13C2-PFDoDA	19-122	86	79	168*
13C2-PFTeDA	13-124	90	89	158*
13C8-FOSA	18-109	66	73	45
D3-MeFOSAA	9-123	93	89	180*
D5-EtFOSAA	12-126	95	98	180*
13C2-6:2 FTS	10-226	98	90	209
13C2-8:2 FTS	10-202	98	93	176

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

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266

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

Analysis Method: PFC/537M
Extraction Method: ALS SOP

Surrogate	Control Limits	OVR-131-042120	DUP-017-042120	DUP-017-042120
		R2003266-006	R2003266-007	R2003266-007
13C3-PFBS	20-109	72	67	65
18O2-PFHxS	26-122	94	71	83
13C4-PFOS	25-121	80	86	89
13C4-PFBA	27-124	71	26*	26*
13C5-PFPeA	27-138	52	20*	19*
13C2-PFHxA	28-132	58	22*	23*
13C4-PFHpA	19-139	73	28	31
13C4-PFOA	22-130	75	41	45
13C5-PFNA	20-127	91	65	63
13C2-PFDA	24-125	88	72	73
13C2-PFUnDA	22-125	91	86	86
13C2-PFDoDA	19-122	81	82	82
13C2-PFTeDA	13-124	84	79	83
13C8-FOSA	18-109	68	63	67
D3-MeFOSAA	9-123	104	95	87
D5-EtFOSAA	12-126	116	106	110
13C2-6:2 FTS	10-226	306*	322*	321*
13C2-8:2 FTS	10-202	236*	313*	320*

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: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266

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

Analysis Method: PFC/537M
Extraction Method: ALS SOP

Surrogate	Control Limits	Method Blank KQ2005615-04	Lab Control Sample KQ2005615-03	OVR-131-042120 KQ2005615-01
13C3-PFBS	20-109	82	77	73
18O2-PFHxS	26-122	93	82	93
13C4-PFOS	25-121	91	86	79
13C4-PFBA	27-124	79	74	66
13C5-PFPeA	27-138	83	78	49
13C2-PFHxA	28-132	95	83	56
13C4-PFHpA	19-139	98	90	71
13C4-PFOA	22-130	95	95	70
13C5-PFNA	20-127	109	102	85
13C2-PFDA	24-125	101	93	82
13C2-PFUnDA	22-125	100	94	87
13C2-PFDoDA	19-122	94	87	79
13C2-PFTeDA	13-124	99	95	79
13C8-FOSA	18-109	89	82	62
D3-MeFOSAA	9-123	111	104	103
D5-EtFOSAA	12-126	111	104	116
13C2-6:2 FTS	10-226	97	97	312*
13C2-8:2 FTS	10-202	111	91	231*

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: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266

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

Analysis Method: PFC/537M
Extraction Method: ALS SOP

Surrogate	Control Limits	OVR-131-042120
		KQ2005615-02
13C3-PFBS	20-109	72
18O2-PFHxS	26-122	93
13C4-PFOS	25-121	82
13C4-PFBA	27-124	67
13C5-PFPeA	27-138	51
13C2-PFHxA	28-132	57
13C4-PFHpA	19-139	67
13C4-PFOA	22-130	72
13C5-PFNA	20-127	89
13C2-PFDA	24-125	88
13C2-PFUnDA	22-125	87
13C2-PFDoDA	19-122	81
13C2-PFTeDA	13-124	85
13C8-FOSA	18-109	68
D3-MeFOSAA	9-123	107
D5-EtFOSAA	12-126	118
13C2-6:2 FTS	10-226	310*
13C2-8:2 FTS	10-202	254*

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: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266
Date Analyzed: 04/28/20 23:47

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

File ID: J:\LCMS06\Data\200428_b4\200428_052
Instrument ID: K-LCMS-06
Analysis Method: PFC/537M

Lab Code: KQ2005707-01
Analysis Lot: 678319
Signal ID: 1

	13C7-PFUnDA	
	Area	RT
Result ==>	3,558,616	5.090
Upper Limit ==>	7,117,232	6.09
Lower Limit ==>	1,779,308	4.09

Associated Analyses

Continuing Calibration Blank	KQ2005707-02	3675988	5.088
Lab Control Sample	KQ2005615-03	5873966	5.083
Method Blank	KQ2005615-04	5861185	5.083
OVR-127-042120	R2003266-001	4842124	5.083
OVR-117-042120	R2003266-002	3585765	5.085
EB-042120	R2003266-003	6336097	5.080
FRB-042120	R2003266-004	6005040	5.079
OVR-110-042120	R2003266-005	4893093	5.079
OVR-131-042120	R2003266-006	5205022	5.082
OVR-131-042120MS	KQ2005615-01	5323569	5.081
OVR-131-042120DMS	KQ2005615-02	5191568	5.083
DUP-017-042120	R2003266-007	4924447	5.088

ALS Group USA, Corp.
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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266
Date Analyzed: 04/30/20 11:48

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

File ID: J:\LCMS06\Data\200430_b3\200430_016
Instrument ID: K-LCMS-06
Analysis Method: PFC/537M

Lab Code: KQ2005836-01
Analysis Lot: 678575
Signal ID: 1

	13C7-PFUnDA	
	Area	RT
Result ==>	5,073,948	5.088
Upper Limit ==>	10,147,896	6.09
Lower Limit ==>	2,536,974	4.09

Associated Analyses

Continuing Calibration Blank	KQ2005836-02	5862149	5.077
OVR-127-042120	R2003266-001	5134289	5.076
DUP-017-042120	R2003266-007	5073480	5.081

ALS Group USA, Corp.
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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Collected: 04/21/20
Date Received: 04/21/20
Date Analyzed: 04/29/20
Date Extracted: 04/27/20

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

Sample Name: OVR-131-042120
Lab Code: R2003266-006
Analysis Method: PFC/537M
Prep Method: ALS SOP

Units: ng/L
Basis: NA

Analyte Name	Sample Result	Matrix Spike KQ2005615-01			Duplicate Matrix Spike KQ2005615-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Perfluorobutane sulfonic acid (PFBS)	6.2	34.1	25.8	108	33.2	25.4	106	61-140	3	30
Perfluorohexane sulfonic acid (PFHxS)	3.5 J	28.3	26.6	93	30.0	26.1	101	69-144	6	30
Perfluoroheptane sulfonic acid (PFHpS)	0.95 J	32.0	27.7	112	31.2	27.2	111	62-178	3	30
Perfluorooctane sulfonic acid (PFOS)	17	47.8	27.0	113	46.4	26.5	110	71-139	3	30
Perfluorodecane sulfonic acid (PFDS)	0.49 J	33.3	28.1	117	32.8	27.6	117	69-146	2	30
Perfluorobutanoic acid (PFBA)	28	58.9	29.1	105	60.0	28.6	111	51-157	2	30
Perfluoropentanoic acid (PFPeA)	55	86.3	29.1	107	91.9	28.6	129 *	67-127	6	30
Perfluorohexanoic acid (PFHxA)	26	56.0	29.1	103	53.7	28.6	97	71-138	4	30
Perfluoroheptanoic acid (PFHpA)	14	47.6	29.1	116	47.2	28.6	116	72-133	<1	30
Perfluorooctanoic acid (PFOA)	16	46.7	29.1	104	46.9	28.6	106	74-146	<1	30
Perfluorononanoic acid (PFNA)	1.9 J	33.1	29.1	107	32.3	28.6	106	69-148	2	30
Perfluorodecanoic acid (PFDA)	4.5 U	32.9	29.1	113	30.7	28.6	107	73-136	7	30
Perfluoroundecanoic acid (PFUnDA)	4.5 U	34.2	29.1	117	32.8	28.6	115	76-134	4	30
Perfluorododecanoic acid (PFDoDA)	4.5 U	37.0	29.1	127	34.9	28.6	122	71-138	6	30
Perfluorotridecanoic acid (PFTrDA)	4.5 U	33.1	29.1	114	30.8	28.6	108	65-140	7	30
Perfluorotetradecanoic acid (PFTeDA)	4.5 U	31.2	29.1	107	31.1	28.6	109	63-139	<1	30
Perfluorooctane sulfonamide (FOSA)	4.5 U	30.9	29.1	106	30.9	28.6	108	64-135	<1	30
N-Methyl perfluorooctane sulfonamidoacetic acid	4.5 U	28.8	29.1	99	29.3	28.6	103	69-151	2	30
N-Ethyl perfluorooctane sulfonamidoacetic acid	4.5 U	34.0	29.1	117	36.2	28.6	127	58-155	6	30
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	1.2 J	31.1	27.7	108	30.8	27.2	109	71-142	1	30
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.25 J	28.3	27.9	100	28.4	27.4	103	69-137	<1	30

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

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

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

ALS Group USA, Corp.
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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Analyzed: 04/29/20
Date Extracted: 04/27/20

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

Analysis Method: PFC/537M
Prep Method: ALS SOP

Units: ng/L
Basis: NA
Analysis Lot: 678319

Lab Control Sample
KQ2005615-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	36.0	30.4	118	71-142
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	30.7	30.7	100	69-137
N-Ethyl perfluorooctane sulfonamidoacetic acid	36.8	32.0	115	58-155
N-Methyl perfluorooctane sulfonamidoacetic acid	33.1	32.0	104	69-151
Perfluorobutane sulfonic acid (PFBS)	32.4	28.4	114	61-140
Perfluorobutanoic acid (PFBA)	36.6	32.0	114	51-157
Perfluorodecane sulfonic acid (PFDS)	32.2	30.9	104	69-146
Perfluorodecanoic acid (PFDA)	35.3	32.0	110	73-136
Perfluorododecanoic acid (PFDoDA)	38.4	32.0	120	71-138
Perfluoroheptane sulfonic acid (PFHpS)	40.1	30.5	132	62-178
Perfluoroheptanoic acid (PFHpA)	31.4	32.0	98	72-133
Perfluorohexane sulfonic acid (PFHxS)	31.9	29.2	109	69-144
Perfluorohexanoic acid (PFHxA)	34.5	32.0	108	71-138
Perfluorononanoic acid (PFNA)	34.8	32.0	109	69-148
Perfluorooctane sulfonamide (FOSA)	33.2	32.0	104	64-135
Perfluorooctane sulfonic acid (PFOS)	34.7	29.7	117	71-139
Perfluorooctanoic acid (PFOA)	35.5	32.0	111	74-146
Perfluoropentanoic acid (PFPeA)	36.7	32.0	115	67-127
Perfluorotetradecanoic acid (PFTeDA)	33.4	32.0	104	63-139
Perfluorotridecanoic acid (PFTrDA)	31.2	32.0	98	65-140
Perfluoroundecanoic acid (PFUnDA)	33.8	32.0	106	76-134

ALS Group USA, Corp.

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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Analyzed: 04/29/20 00:18
Date Extracted: 04/27/20

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

Sample Name:	Method Blank	Instrument ID:	K-LCMS-06
Lab Code:	KQ2005615-04	File ID:	J:\LCMS06\Data\200428_b4\200428_055
Analysis Method:	PFC/537M	Analysis Lot:	678319,678575
Prep Method:	ALS SOP	Extraction Lot:	357465

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ2005615-03	J:\LCMS06\Data\200428_b4\200428_054	04/29/20 00:08
OVR-127-042120	R2003266-001	J:\LCMS06\Data\200428_b4\200428_056	04/29/20 00:29
OVR-117-042120	R2003266-002	J:\LCMS06\Data\200428_b4\200428_057	04/29/20 00:39
EB-042120	R2003266-003	J:\LCMS06\Data\200428_b4\200428_058	04/29/20 00:50
FRB-042120	R2003266-004	J:\LCMS06\Data\200428_b4\200428_059	04/29/20 01:00
OVR-110-042120	R2003266-005	J:\LCMS06\Data\200428_b4\200428_060	04/29/20 01:10
OVR-131-042120	R2003266-006	J:\LCMS06\Data\200428_b4\200428_061	04/29/20 01:21
OVR-131-042120MS	KQ2005615-01	J:\LCMS06\Data\200428_b4\200428_062	04/29/20 01:31
OVR-131-042120DMS	KQ2005615-02	J:\LCMS06\Data\200428_b4\200428_063	04/29/20 01:42
DUP-017-042120	R2003266-007	J:\LCMS06\Data\200428_b4\200428_064	04/29/20 01:52
OVR-127-042120	R2003266-001	J:\LCMS06\Data\200430_b3\200430_021	04/30/20 12:40
DUP-017-042120	R2003266-007	J:\LCMS06\Data\200430_b3\200430_023	04/30/20 13:01

ALS Group USA, Corp.

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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266
Date Analyzed: 04/29/20 00:08
Date Extracted: 04/27/20

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

Sample Name: Lab Control Sample **Instrument ID:** K-LCMS-06
Lab Code: KQ2005615-03 **File ID:** J:\LCMS06\Data\200428_b4\200428_054
Analysis Method: PFC/537M **Analysis Lot:** 678319,678575
Prep Method: ALS SOP **Extraction Lot:** 357465

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ2005615-04	J:\LCMS06\Data\200428_b4\200428_055	04/29/20 00:18
OVR-127-042120	R2003266-001	J:\LCMS06\Data\200428_b4\200428_056	04/29/20 00:29
OVR-117-042120	R2003266-002	J:\LCMS06\Data\200428_b4\200428_057	04/29/20 00:39
EB-042120	R2003266-003	J:\LCMS06\Data\200428_b4\200428_058	04/29/20 00:50
FRB-042120	R2003266-004	J:\LCMS06\Data\200428_b4\200428_059	04/29/20 01:00
OVR-110-042120	R2003266-005	J:\LCMS06\Data\200428_b4\200428_060	04/29/20 01:10
OVR-131-042120	R2003266-006	J:\LCMS06\Data\200428_b4\200428_061	04/29/20 01:21
OVR-131-042120MS	KQ2005615-01	J:\LCMS06\Data\200428_b4\200428_062	04/29/20 01:31
OVR-131-042120DMS	KQ2005615-02	J:\LCMS06\Data\200428_b4\200428_063	04/29/20 01:42
DUP-017-042120	R2003266-007	J:\LCMS06\Data\200428_b4\200428_064	04/29/20 01:52
OVR-127-042120	R2003266-001	J:\LCMS06\Data\200430_b3\200430_021	04/30/20 12:40
DUP-017-042120	R2003266-007	J:\LCMS06\Data\200430_b3\200430_023	04/30/20 13:01

ALS Group USA, Corp.
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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC

Service Request: R2003266
Calibration Date: 4/17/2020

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

Calibration ID: KC2000203
Instrument ID: K-LCMS-06

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC2000203-01	0.05 PPB ICAL	200417_023	04/17/2020 17:35
02	KC2000203-02	0.10 PPB ICAL	200417_024	04/17/2020 17:45
03	KC2000203-03	0.50 PPB ICAL	200417_025	04/17/2020 17:56
04	KC2000203-04	1.0 PPB ICAL	200417_026	04/17/2020 18:06
05	KC2000203-05	5.0 PPB ICAL	200417_027	04/17/2020 18:17
06	KC2000203-06	10.0 PPB ICAL	200417_028	04/17/2020 18:27
07	KC2000203-07	15.0 PPB ICAL	200417_030	04/17/2020 18:48

Analyte

13C2-6:2 FTS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.06655	02	5.0000	0.0821	03	5.0000	0.06255	04	5.0000	0.06458
05	5.0000	0.06288	06	5.0000	0.06588	07	5.0000	0.06516			

13C2-8:2 FTS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.05188	02	5.0000	0.06808	03	5.0000	0.05145	04	5.0000	0.05479
05	5.0000	0.05163	06	5.0000	0.05265	07	5.0000	0.05034			

13C2-PFDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.5826	02	5.0000	0.7403	03	5.0000	0.5731	04	5.0000	0.6141
05	5.0000	0.5611	06	5.0000	0.5948	07	5.0000	0.5653			

13C2-PFDoDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.845	02	5.0000	1.078	03	5.0000	0.8014	04	5.0000	0.8444
05	5.0000	0.8401	06	5.0000	0.8793	07	5.0000	0.9293			

13C2-PFHxA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.7658	02	5.0000	0.9028	03	5.0000	0.7762	04	5.0000	0.8021
05	5.0000	0.7837	06	5.0000	0.8031	07	5.0000	0.8739			

13C2-PFTeDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.6555	02	5.0000	0.8374	03	5.0000	0.6708	04	5.0000	0.6843
05	5.0000	0.6697	06	5.0000	0.7289	07	5.0000	0.7143			

13C2-PFUnDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.7362	02	5.0000	0.921	03	5.0000	0.7023	04	5.0000	0.7417
05	5.0000	0.6969	06	5.0000	0.7527	07	5.0000	0.727			

13C3-PFBS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1749	02	5.0000	0.2301	03	5.0000	0.1741	04	5.0000	0.1824

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC

Service Request: R2003266
Calibration Date: 4/17/2020

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

Calibration ID: KC2000203
Instrument ID: K-LCMS-06

Signal ID: 1

Analyte

13C3-PFBS											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
05	5.0000	0.1816	06	5.0000	0.2079	07	5.0000	0.2174			
13C4-PFBA											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.4715	02	5.0000	0.612	03	5.0000	0.4587	04	5.0000	0.4951
05	5.0000	0.4983	06	5.0000	0.5708	07	5.0000	0.5962			
13C4-PFHpA											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.7097	02	5.0000	0.998	03	5.0000	0.6922	04	5.0000	0.7195
05	5.0000	0.6738	06	5.0000	0.6963	07	5.0000	0.6739			
13C4-PFOA											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.8688	02	5.0000	1.113	03	5.0000	0.8507	04	5.0000	0.8931
05	5.0000	0.8268	06	5.0000	0.8542	07	5.0000	0.8396			
13C4-PFOS											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1403	02	5.0000	0.1843	03	5.0000	0.1395	04	5.0000	0.1473
05	5.0000	0.1474	06	5.0000	0.1618	07	5.0000	0.1636			
13C5-PFNA											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.6211	02	5.0000	0.8536	03	5.0000	0.6281	04	5.0000	0.6605
05	5.0000	0.6003	06	5.0000	0.6745	07	5.0000	0.6253			
13C5-PFPeA											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.2703	02	5.0000	0.3484	03	5.0000	0.2692	04	5.0000	0.2818
05	5.0000	0.2825	06	5.0000	0.308	07	5.0000	0.3235			
13C8-FOSA											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.3645	02	5.0000	0.4693	03	5.0000	0.3726	04	5.0000	0.4004
05	5.0000	0.3898	06	5.0000	0.4176	07	5.0000	0.4151			
18O2-PFHxS											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1083	02	5.0000	0.1341	03	5.0000	0.09966	04	5.0000	0.1065
05	5.0000	0.106	06	5.0000	0.1014	07	5.0000	0.1145			
6:2 Fluorotelomer sulfonic acid (6:2 FTS)											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0476	1.201	02	0.0951	1.171	03	0.4756	1.297	04	0.9512	1.193
05	4.7558	1.135	06	9.5117	1.066	07	14.2676	1.039			

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC

Service Request: R2003266
Calibration Date: 4/17/2020

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

Calibration ID: KC2000203
Instrument ID: K-LCMS-06

Signal ID: 1

Analyte

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

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0480	0.915	02	0.0960	0.8454	03	0.4800	0.9004	04	0.9600	0.8253
05	4.8002	0.7854	06	9.6004	0.7541	07	14.4007	0.7433			

D3-MeFOSAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.104	02	5.0000	0.1344	03	5.0000	0.1001	04	5.0000	0.1076
05	5.0000	0.1139	06	5.0000	0.1186	07	5.0000	0.1247			

D5-EtFOSAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.09853	02	5.0000	0.1293	03	5.0000	0.09691	04	5.0000	0.1033
05	5.0000	0.1009	06	5.0000	0.1051	07	5.0000	0.1062			

N-Ethyl perfluorooctane sulfonamidoacetic acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.4178	02	0.1000	0.3934	03	0.5000	0.5714	04	1.0000	0.5708
05	5.0000	0.5508	06	10.0000	0.5972	07	15.0000	0.5333			

N-Methyl perfluorooctane sulfonamidoacetic acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.5782	02	0.1000	0.5956	03	0.5000	0.648	04	1.0000	0.6399
05	5.0000	0.6366	06	10.0000	0.6209	07	15.0000	0.6321			

Perfluorobutane sulfonic acid (PFBS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0444	1.293	02	0.0887	1.137	03	0.4437	1.11	04	0.8874	1.128
05	4.4368	1.158	06	8.8737	1.13	07	13.3106	1.094			

Perfluorobutanoic acid (PFBA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.02	02	0.1000	0.9562	03	0.5000	0.9887	04	1.0000	0.9568
05	5.0000	0.9819	06	10.0000	0.9617	07	15.0000	0.97			

Perfluorodecane sulfonic acid (PFDS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0482	0.823	02	0.0965	0.654	03	0.4823	0.8201	04	0.9647	0.7935
05	4.8233	0.8118	06	9.6467	0.8185	07	14.4700	0.821			

Perfluorodecanoic acid (PFDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.219	02	0.1000	1.159	03	0.5000	1.041	04	1.0000	0.9781
05	5.0000	1.025	06	10.0000	1.014	07	15.0000	0.9959			

Perfluorododecanoic acid (PFDoDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.4256	02	0.1000	0.4792	03	0.5000	0.595	04	1.0000	0.5372
05	5.0000	0.5734	06	10.0000	0.5876	07	15.0000	0.5482			

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC

Service Request: R2003266
Calibration Date: 4/17/2020

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

Calibration ID: KC2000203
Instrument ID: K-LCMS-06

Signal ID: 1

Analyte

Perfluoroheptane sulfonic acid (PFHpS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0477	1.468	02	0.0953	1.476	03	0.4767	1.568	04	0.9534	1.531
05	4.7672	1.55	06	9.5344	1.793	07	14.3016	1.529			

Perfluoroheptanoic acid (PFHpA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.044	02	0.1000	1.043	03	0.5000	0.9493	04	1.0000	0.8418
05	5.0000	0.8949	06	10.0000	0.8648	07	15.0000	0.9151			

Perfluorohexane sulfonic acid (PFHxS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	0.0913	1.477	03	0.4565	1.29	04	0.9131	1.24	05	4.5654	1.224
06	9.1308	1.308	07	13.6961	1.23						

Perfluorohexanoic acid (PFHxA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.181	02	0.1000	1.004	03	0.5000	1.003	04	1.0000	0.9368
05	5.0000	0.9714	06	10.0000	1.005	07	15.0000	0.9736			

Perfluorononanoic acid (PFNA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.101	02	0.1000	0.932	03	0.5000	0.8511	04	1.0000	0.8171
05	5.0000	0.893	06	10.0000	0.8845	07	15.0000	0.906			

Perfluorooctane sulfonamide (FOSA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.206	02	0.1000	1.303	03	0.5000	1.25	04	1.0000	1.14
05	5.0000	1.124	06	10.0000	1.191	07	15.0000	1.169			

Perfluorooctane sulfonic acid (PFOS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0465	0.8568	02	0.0929	0.827	03	0.4646	0.8593	04	0.9292	0.8463
05	4.6461	0.8571	06	9.2923	0.8446	07	13.9384	0.8377			

Perfluorooctanoic acid (PFOA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.474	02	0.1000	1.402	03	0.5000	1.302	04	1.0000	1.229
05	5.0000	1.267	06	10.0000	1.308	07	15.0000	1.267			

Perfluoropentanoic acid (PFPeA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	3.492	02	0.1000	2.569	03	0.5000	2.214	04	1.0000	2.117
05	5.0000	2.126	06	10.0000	2.113	07	15.0000	2.08			

Perfluorotetradecanoic acid (PFTeDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.735	02	0.1000	1.017	03	0.5000	0.5352	04	1.0000	0.4931
05	5.0000	0.4584	06	10.0000	0.4378	07	15.0000	0.4424			

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC

Service Request: R2003266
Calibration Date: 4/17/2020

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

Calibration ID: KC2000203
Instrument ID: K-LCMS-06

Signal ID: 1

Analyte

Perfluorotridecanoic acid (PFTrDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.035	02	0.1000	0.9887	03	0.5000	0.9927	04	1.0000	0.9512
05	5.0000	1.009	06	10.0000	0.9506	07	15.0000	0.9577			

Perfluoroundecanoic acid (PFUnDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1	02	0.1000	0.8694	03	0.5000	0.8308	04	1.0000	0.7739
05	5.0000	0.7865	06	10.0000	0.7768	07	15.0000	0.7724			

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC

Service Request: R2003266
Calibration Date: 4/17/2020

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

Calibration ID: KC2000203
Instrument ID: K-LCMS-06

Signal ID: 1

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
13C2-6:2 FTS	SURR	Average RF	% RSD	10.1	≤20	0.0671	
13C2-8:2 FTS	SURR	Average RF	% RSD	11.4	≤20	0.0544	
13C2-PFDA	SURR	Average RF	% RSD	10.4	≤20	0.6045	
13C2-PFDoDA	SURR	Average RF	% RSD	10.4	≤20	0.8883	
13C2-PFHxA	SURR	Average RF	% RSD	6.4	≤20	0.8154	
13C2-PFTeDA	SURR	Average RF	% RSD	8.8	≤20	0.7087	
13C2-PFUnDA	SURR	Average RF	% RSD	10.1	≤20	0.754	
13C3-PFBS	SURR	Average RF	% RSD	11.6	≤20	0.1955	
13C4-PFBA	SURR	Average RF	% RSD	11.8	≤20	0.5289	
13C4-PFHpA	SURR	Average RF	% RSD	15.7	≤20	0.7376	
13C4-PFOA	SURR	Average RF	% RSD	11.2	≤20	0.8923	
13C4-PFOS	SURR	Average RF	% RSD	10.4	≤20	0.1549	
13C5-PFNA	SURR	Average RF	% RSD	13.0	≤20	0.6662	
13C5-PFPeA	SURR	Average RF	% RSD	10.1	≤20	0.2977	
13C8-FOSA	SURR	Average RF	% RSD	8.6	≤20	0.4042	
18O2-PFHxS	SURR	Average RF	% RSD	10.6	≤20	0.11	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	TRG	Average RF	% RSD	7.6	≤20	1.157	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	TRG	Average RF	% RSD	8.2	≤20	0.8241	
D3-MeFOSAA	SURR	Average RF	% RSD	10.6	≤20	0.1147	
D5-EtFOSAA	SURR	Average RF	% RSD	10.3	≤20	0.1057	
N-Ethyl perfluorooctane sulfonamidoacetic acid	TRG	Average RF	% RSD	15.5	≤20	0.5192	
N-Methyl perfluorooctane sulfonamidoacetic acid	TRG	Average RF	% RSD	4.1	≤20	0.6216	
Perfluorobutane sulfonic acid (PFBS)	TRG	Average RF	% RSD	5.8	≤20	1.15	
Perfluorobutanoic acid (PFBA)	TRG	Average RF	% RSD	2.3	≤20	0.9765	
Perfluorodecane sulfonic acid (PFDS)	TRG	Average RF	% RSD	7.8	≤20	0.7917	
Perfluorodecanoic acid (PFDA)	TRG	Average RF	% RSD	8.6	≤20	1.062	
Perfluorododecanoic acid (PFDoDA)	TRG	Linear	R2	0.9979	≥0.99	0.5352	
Perfluoroheptane sulfonic acid (PFHpS)	TRG	Average RF	% RSD	7.0	≤20	1.559	
Perfluoroheptanoic acid (PFHpA)	TRG	Linear	R2	0.9992	≥0.99	0.9361	
Perfluorohexane sulfonic acid (PFHxS)	TRG	Linear	R2	0.9992	≥0.99	1.295	
Perfluorohexanoic acid (PFHxA)	TRG	Linear	R2	0.9997	≥0.99	1.011	

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC

Service Request: R2003266
Calibration Date: 4/17/2020

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

Calibration ID: KC2000203

Signal ID: 1

Instrument ID: K-LCMS-06

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Perfluorononanoic acid (PFNA)	TRG	Linear	R2	0.9995	≥0.99	0.9121	
Perfluorooctane sulfonamide (FOSA)	TRG	Average RF	% RSD	5.2	≤20	1.198	
Perfluorooctane sulfonic acid (PFOS)	TRG	Average RF	% RSD	1.4	≤20	0.847	
Perfluorooctanoic acid (PFOA)	TRG	Linear	R2	0.9994	≥0.99	1.321	
Perfluoropentanoic acid (PFPeA)	TRG	Linear	R2	0.9999	≥0.99	2.387	
Perfluorotetradecanoic acid (PFTeDA)	TRG	Linear	R2	0.9998	≥0.99	0.7312	
Perfluorotridecanoic acid (PFTrDA)	TRG	Linear	R2	0.9995	≥0.99	0.9836	
Perfluoroundecanoic acid (PFUnDA)	TRG	Linear	R2	0.9995	≥0.99	0.83	

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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC

Service Request: R2003266
Calibration Date: 4/17/2020

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

Calibration ID: KC2000203
Instrument ID: K-LCMS-06

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
08	KC2000203-08	1.0 PPB ICV	200417_032	04/17/2020 19:09

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	0.844	1.15E0	1.094E0	-4.905	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	0.910	1.295E0	1.262E0	-0.339	±30	Linear
Perfluoroheptane sulfonic acid (PFHpS)	0.953	0.922	1.559E0	1.507E0	-3.329	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.852	8.47E-1	7.765E-1	-8.315	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	0.955	7.917E-1	7.839E-1	-0.983	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	0.935	9.765E-1	9.128E-1	-6.519	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	0.924	2.387E0	1.994E0	-7.599	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	0.953	1.011E0	9.414E-1	-4.725	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	0.940	9.361E-1	8.487E-1	-5.968	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	0.967	1.321E0	1.239E0	-3.323	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	0.947	9.121E-1	8.501E-1	-5.255	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	0.959	1.062E0	1.018E0	-4.087	±30	Average RF
Perfluoroundecanoic acid (PFUnDA)	1.00	0.930	8.3E-1	7.35E-1	-6.998	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	0.940	5.352E-1	5.294E-1	-5.994	±30	Linear
Perfluorotridecanoic acid (PFTTrDA)	1.00	0.960	9.836E-1	9.293E-1	-3.964	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	0.975	7.312E-1	4.877E-1	-2.486	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	0.896	1.198E0	1.073E0	-10.448	±30	Average RF
N-Methyl perfluorooctane sulfonamidoacetic acid	1.00	1.28	6.216E-1	7.98E-1	28.37	±30	Average RF
N-Ethyl perfluorooctane sulfonamidoacetic acid	1.00	1.28	5.192E-1	6.655E-1	28.16	±30	Average RF
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	0.925	1.157E0	1.126E0	-2.717	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	0.903	8.241E-1	7.751E-1	-5.954	±30	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
13C3-PFBS	5.00	4.67	1.955E-1	1.824E-1	-6.685	±30	Average RF
18O2-PFHxS	5.00	4.61	1.1E-1	1.015E-1	-7.757	±30	Average RF
13C4-PFOS	5.00	4.85	1.549E-1	1.501E-1	-3.073	±30	Average RF
13C4-PFBA	5.00	4.70	5.289E-1	4.969E-1	-6.053	±30	Average RF
13C5-PFPeA	5.00	4.83	2.977E-1	2.877E-1	-3.358	±30	Average RF
13C2-PFHxA	5.00	4.79	8.154E-1	7.811E-1	-4.199	±30	Average RF
13C4-PFHpA	5.00	4.62	7.376E-1	6.819E-1	-7.559	±30	Average RF
13C4-PFOA	5.00	5.00	8.923E-1	8.919E-1	-0.044	±30	Average RF

ALS Group USA, Corp.
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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC

Service Request: R2003266
Calibration Date: 4/17/2020

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

Calibration ID: KC2000203
Instrument ID: K-LCMS-06

Signal ID: 1

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
13C5-PFNA	5.00	4.85	6.662E-1	6.465E-1	-2.963	±30	Average RF
13C2-PFDA	5.00	5.10	6.045E-1	6.167E-1	2.02	±30	Average RF
13C2-PFUnDA	5.00	5.01	7.54E-1	7.548E-1	0.104	±30	Average RF
13C2-PFDoDA	5.00	4.99	8.883E-1	8.872E-1	-0.118	±30	Average RF
13C2-PFTeDA	5.00	4.92	7.087E-1	6.98E-1	-1.518	±30	Average RF
13C8-FOSA	5.00	4.89	4.042E-1	3.951E-1	-2.252	±30	Average RF
D3-MeFOSAA	5.00	4.84	1.147E-1	1.111E-1	-3.160	±30	Average RF
D5-EtFOSAA	5.00	4.95	1.057E-1	1.047E-1	-0.950	±30	Average RF
13C2-6:2 FTS	5.00	4.99	6.71E-2	6.698E-2	-0.176	±30	Average RF
13C2-8:2 FTS	5.00	5.24	5.44E-2	5.703E-2	4.84	±30	Average RF

ALS Group USA, Corp.
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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266
Date Analyzed: 04/30/20 11:48

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

Analysis Method: PFC/537M
File ID: J:\LCMS06\Data\200430_b3\200430_016
Signal ID: 1

Calibration Date: 4/17/2020
Calibration ID: KC2000203
Analysis Lot: 678575
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	0.930	1.15	1.2053	105	NA	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	0.856	1.295	1.1891	93.8	-6.2	±30	Linear
Perfluoroheptane sulfonic acid (PFHpS)	0.953	0.857	1.5592	1.4021	89.9	NA	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.947	0.847	0.8628	102	NA	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	1.02	0.7917	0.8333	105	NA	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	1.02	0.9765	0.9942	102	NA	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	1.08	2.3874	2.3228	108	8.1	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	0.973	1.0107	0.9612	97.3	-2.7	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	1.02	0.9361	0.9213	102	2.2	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	0.994	1.3213	1.2726	99.4	-0.7	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	0.977	0.9121	0.8765	97.7	-2.3	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	0.966	1.0617	1.0254	96.6	NA	±30	Average RF
Perfluoroundecanoic acid (PFUnDA)	1.00	0.936	0.83	0.7394	93.6	-6.4	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	0.985	0.5352	0.555	98.5	-1.5	±30	Linear
Perfluorotridecanoic acid (PFTrDA)	1.00	1.02	0.9836	0.9882	102	2.2	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	0.945	0.7312	0.4743	94.5	-5.5	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	0.968	1.1976	1.1596	96.8	NA	±30	Average RF
N-Methyl perfluorooctane sulfonamidoacetic acid	1.00	1.06	0.6216	0.6571	106	NA	±30	Average RF
N-Ethyl perfluorooctane sulfonamidoacetic acid	1.00	1.13	0.5192	0.5875	113	NA	±30	Average RF
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	0.978	1.1574	1.1902	103	NA	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	0.961	0.8241	0.8251	100	NA	±30	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
13C3-PFBS	5.00	5.49	0.1955	0.2148	110	NA	±30	Average RF
18O2-PFHxS	5.00	6.79	0.11	0.1495	136*	NA	±30	Average RF
13C4-PFOS	5.00	5.60	0.1549	0.1734	112	NA	±30	Average RF
13C4-PFBA	5.00	5.07	0.5289	0.5365	101	NA	±30	Average RF
13C5-PFPeA	5.00	4.92	0.2977	0.2927	98.3	NA	±30	Average RF
13C2-PFHxA	5.00	4.87	0.8154	0.7944	97.4	NA	±30	Average RF
13C4-PFHpA	5.00	5.94	0.7376	0.8765	119	NA	±30	Average RF
13C4-PFOA	5.00	5.33	0.8923	0.9506	107	NA	±30	Average RF
13C5-PFNA	5.00	5.91	0.6662	0.787	118	NA	±30	Average RF

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QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157

Service Request: R2003266
Date Analyzed: 04/30/20 11:48

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

Analysis Method: PFC/537M
File ID: J:\LCMS06\Data\200430_b3\200430_016
Signal ID: 1

Calibration Date: 4/17/2020
Calibration ID: KC2000203
Analysis Lot: 678575
Units: ng/mL

13C2-PFDA	5.00	5.30	0.6045	0.6413	106	NA	±30	Average RF
13C2-PFUnDA	5.00	5.13	0.754	0.7732	103	NA	±30	Average RF
13C2-PFDoDA	5.00	5.23	0.8883	0.9291	105	NA	±30	Average RF
13C2-PFTeDA	5.00	5.62	0.7087	0.7962	112	NA	±30	Average RF
13C8-FOSA	5.00	4.80	0.4042	0.3881	96.0	NA	±30	Average RF
D3-MeFOSAA	5.00	5.68	0.1147	0.1303	114	NA	±30	Average RF
D5-EtFOSAA	5.00	5.92	0.1057	0.1252	118	NA	±30	Average RF
13C2-6:2 FTS	5.00	5.04	0.0671	0.0677	101	NA	±30	Average RF
13C2-8:2 FTS	5.00	4.55	0.0544	0.0495	91.0	NA	±30	Average RF

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157

Service Request:R2003266

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

Analysis Method: PFC/537M**Analysis Lot:**678319**Instrument ID:**K-LCMS-06

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\LCMS06\Data\200428_b4\200428_052	Continuing Calibration Verification	KQ2005707-01	4/28/2020	23:47	
J:\LCMS06\Data\200428_b4\200428_053	Continuing Calibration Blank	KQ2005707-02	4/28/2020	23:57	
J:\LCMS06\Data\200428_b4\200428_054	Lab Control Sample	KQ2005615-03	4/29/2020	00:08	
J:\LCMS06\Data\200428_b4\200428_055	Method Blank	KQ2005615-04	4/29/2020	00:18	
J:\LCMS06\Data\200428_b4\200428_056	OVR-127-042120	R2003266-001	4/29/2020	00:29	
J:\LCMS06\Data\200428_b4\200428_057	OVR-117-042120	R2003266-002	4/29/2020	00:39	
J:\LCMS06\Data\200428_b4\200428_058	EB-042120	R2003266-003	4/29/2020	00:50	
J:\LCMS06\Data\200428_b4\200428_059	FRB-042120	R2003266-004	4/29/2020	01:00	
J:\LCMS06\Data\200428_b4\200428_060	OVR-110-042120	R2003266-005	4/29/2020	01:10	
J:\LCMS06\Data\200428_b4\200428_061	OVR-131-042120	R2003266-006	4/29/2020	01:21	
J:\LCMS06\Data\200428_b4\200428_062	OVR-131-042120 MS	KQ2005615-01	4/29/2020	01:31	
J:\LCMS06\Data\200428_b4\200428_063	OVR-131-042120 DMS	KQ2005615-02	4/29/2020	01:42	
J:\LCMS06\Data\200428_b4\200428_064	DUP-017-042120	R2003266-007	4/29/2020	01:52	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157

Service Request:R2003266

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

Analysis Method: PFC/537M**Analysis Lot:**678575**Instrument ID:**K-LCMS-06

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\LCMS06\Data\200430_b3\200430_016	Continuing Calibration Verification	KQ2005836-01	4/30/2020	11:48	
J:\LCMS06\Data\200430_b3\200430_017	Continuing Calibration Blank	KQ2005836-02	4/30/2020	11:58	
J:\LCMS06\Data\200430_b3\200430_018	ZZZZZZZ	ZZZZZZZ	4/30/2020	12:09	
J:\LCMS06\Data\200430_b3\200430_019	ZZZZZZZ	ZZZZZZZ	4/30/2020	12:19	
J:\LCMS06\Data\200430_b3\200430_020	ZZZZZZZ	ZZZZZZZ	4/30/2020	12:30	

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: Ramboll US Corp (Syracuse)
Project: Former Vacuum Oil Refinery EC/61157
Sample Matrix: Water

Service Request: R2003266

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

Prep Method: ALS SOP
Analytical Method: PFC/537M

Extraction Lot: 357465
Extraction Date: 04/27/20 09:27

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
Matrix Spike	KQ2005615-01MS	4/21/20	4/21/20	275.0000 mL	8 mL	
Duplicate Matrix Spike	KQ2005615-02DMS	4/21/20	4/21/20	280.0000 mL	8 mL	
Lab Control Sample	KQ2005615-03LCS	NA	NA	250 mL	8 mL	
Method Blank	KQ2005615-04MB	NA	NA	250 mL	8 mL	
OVR-127-042120	R2003266-001	4/21/20	4/21/20	270.0000 mL	8 mL	
OVR-117-042120	R2003266-002	4/21/20	4/21/20	275.0000 mL	8 mL	
EB-042120	R2003266-003	4/21/20	4/21/20	305.0000 mL	8 mL	
FRB-042120	R2003266-004	4/21/20	4/21/20	300.0000 mL	8 mL	
OVR-110-042120	R2003266-005	4/21/20	4/21/20	260.0000 mL	8 mL	
OVR-131-042120	R2003266-006	4/21/20	4/21/20	265.0000 mL	8 mL	
DUP-017-042120	R2003266-007	4/21/20	4/21/20	265.0000 mL	8 mL	



Raw Data

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



PFAS by HPLC/MS/MS

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

Preparation Information Benchsheet

Prep Run#: 357465
Team: Organic LC/NHILLIKER
Number of Copies to make: 1

Prep WorkFlow: OLC_PFAS_SPE_L
Prep Method: ALS SOP

Status: Draft
Prep Date/Time: 4/27/20 09:27 AM

#	Lab Code	Client ID	B#	✓	Method / Test	Matrix	Amt. Ext. (μ L)	pH	Int. Vol	Final Vol	Surr Amt (μ L)	Spike Amt (μ L)
1	R2003266-001	OVR-127-042120 ①	.01	✓	PFC/537M / PFAS	Water	270	3.5	N/A	8 μ L	20/20	N/A
2	R2003266-002	OVR-117-042120 ① ②	.01	✓	PFC/537M / PFAS	Water	275					
3	R2003266-003	EB-042120	.01	✓	PFC/537M / PFAS	Water	305					
4	R2003266-004	FRB-042120	.01	✓	PFC/537M / PFAS	Water	300					
5	R2003266-005	OVR-110-042120 ①	.01	✓	PFC/537M / PFAS	Water	260					
6	R2003266-006	OVR-131-042120 ①	.01	✓	PFC/537M / PFAS	Water	265					
7	R2003266-007	DUP-017-042120 ①	.01	✓	PFC/537M / PFAS	Water	265					
8	KQ2005615-01	R2003266-006 MS ①	.05	✓	PFC/537M / PFAS	Liquid	275					40
9	KQ2005615-02	R2003266-006 DMS ①	.05	✓	PFC/537M / PFAS	Liquid	280					
10	KQ2005615-03	LCS			PFC/537M / PFAS	Liquid	250					
11	KQ2005615-04	MB			PFC/537M / PFAS	Liquid						N/A

① Samples light yellow - light orange strong fuel odor.

② Sample labelled as bottle .07, but this sample does not exist in LIMS. Also, 3266-006.06 should be in tub OLC 3, but it is not. Analyst believes the bottle labelled .07 is actually .06.

(3+4) (3+4)
• VQ2005615 = KQ2005614. Prepared concurrently with PR#357464. Placed on separate benchsheets due to LIMS reporting requirements.

Comments: DB (20440 μ L), Ostwald (970 μ L), Pascal (10 μ L)

Surrogate ID: 19-OLC-01-75F 2 ppm xp 12/11/23

Witnessed By: 19-OLC-01-79E 2 ppm xp 10/11/20

Analyst: Noah Hilliker

Assisted By:

Spike ID: 19-OLC-02-91A 200 ppb xp 6/9/20

Preparation Information Benchsheet

Prep Run#: 357465

Team: Organic LC/NHILLIKER

Number of Copies to make: 1

Prep WorkFlow: OLC_PFAS_SPE_L

Prep Method: ALS SOP

Status: Prepped

Prep Date/Time: 4/27/20 09:27

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	R2003266-001	OVR-127-042120	.01	PFC/537M/PFAS		Water	270.0000mL	8.00mL	
2	R2003266-002	OVR-117-042120	.01	PFC/537M/PFAS		Water	275.0000mL	8.00mL	
3	R2003266-003	EB-042120	.01	PFC/537M/PFAS		Water	305.0000mL	8.00mL	
4	R2003266-004	FRB-042120	.01	PFC/537M/PFAS		Water	300.0000mL	8.00mL	
5	R2003266-005	OVR-110-042120	.01	PFC/537M/PFAS		Water	260.0000mL	8.00mL	
6	R2003266-006	OVR-131-042120	.01	PFC/537M/PFAS		Water	265.0000mL	8.00mL	
7	R2003266-007	DUP-017-042120	.01	PFC/537M/PFAS		Water	265.0000mL	8.00mL	
8	KQ2005615-01	R2003266-006 MS	.05	PFC/537M/PFAS		Liquid	275.0000mL	8.00mL	
9	KQ2005615-02	R2003266-006 DMS	.06	PFC/537M/PFAS		Liquid	280.0000mL	8.00mL	
10	KQ2005615-03	LCS		PFC/537M/PFAS		Liquid	250mL	8.00mL	
11	KQ2005615-04	MB		PFC/537M/PFAS		Liquid	250mL	8.00mL	

Spiking Solutions

Name:	PFC Isotopes 2ppm	Inventory ID	208426	Logbook Ref:	19-OLC-01-79E	Expires On:	10/01/2020
KQ2005615-01	20.00µL	KQ2005615-03	20.00µL	KQ2005615-04	20.00µL	R2003266-001	20.00µL
R2003266-003	20.00µL	R2003266-005	20.00µL	R2003266-006	20.00µL	R2003266-007	20.00µL
Name:	PFC Targets 200ppb mix	Inventory ID	208529	Logbook Ref:	19-OLC-02-91A	Expires On:	06/09/2020
KQ2005615-01	40.00µL	KQ2005615-03	40.00µL				

Name:	PFC IS	Inventory ID	208633	Logbook Ref:	19-OLC-02-91B	Expires On:	10/03/2020
KQ2005615-01	10.00µL	KQ2005615-03	10.00µL	KQ2005615-04	10.00µL	R2003266-001	10.00µL
R2003266-003	10.00µL	R2003266-004	10.00µL	R2003266-006	10.00µL	R2003266-007	10.00µL
Name:	PFC Isotopes 2ppm	Inventory ID	209073	Logbook Ref:	19-OLC-01-75F	Expires On:	12/04/2023
KQ2005615-01	20.00µL	KQ2005615-03	20.00µL	KQ2005615-04	20.00µL	R2003266-001	20.00µL
R2003266-003	20.00µL	R2003266-004	20.00µL	R2003266-006	20.00µL	R2003266-007	20.00µL

Preparation Information Benchsheet

Prep Run#: 357465
Team: Organic LC/NHILLIKER
Status: Prepped
Prep Date/Time: 4/27/20 09:27

Prep WorkFlow: OLC_PFAS_SPE_L
Prep Method: ALS SOP

Preparation Steps

Step:	Extraction Start	Step:	Final Volume
Started:	4/27/20 09:27	Started:	4/27/20 18:15
Finished:	4/27/20 18:15	Finished:	4/28/20 12:46
By:	NHILLIKER	By:	NHILLIKER
Comments	Comments	Comments	

Comments:

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By:	<u>NHILLIKER</u>	Date:	<u>4/28/20</u>	Extracts Examined
Received By:	<u>CMYLLER</u>	Date:	<u>4/28/2020</u>	<u>Yes</u> No

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

Waters

Service Request R2003266 **Workgroup** VQ2005615

6cc 200mg Strata XL-AW Cartridge Sorbent Lot # S322-0027

Envi-Carb Lot # N/A

0.1% NH₄OH in MeOH Lot# 19-OLC-02-91I MeOH Lot# DY116-US

Reagent Water Lot# S9219

Acetic Acid (LCMS Grade) Lot# SHB1L4015

25% NH₄OH Lot# N/A

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

Extraction (Manifold) Start (Time/Date/Initial): 3:39 pm 4/27/20 NH

Extraction (Manifold) Stop (Time/Date/Initial): 6:15 pm 4/27/20 NH

IS solution (13C7-PFUnDA 500ppb) Lot #: 19-OLC-02-91B

Nylon Filter Lot#: 91082103 0.45 µm

Extract Storage: Carrot Top

Completed(Time/Date/Initial): 12:46 pm 4/28/20 NH

Comments/Observations:

Bench Sheet Review Check List

- | |
|--|
| <ul style="list-style-type: none">☐ Hold Times Met (if no, Reason: _____)☐ Prep date, dept, method, product code correct in stealth☐ Spike Information correct☐ Weights/Volumes and units correct on raw and final bench sheets☐ Sample IDs have been checked—Bottle numbers appended if required☐ Names present for: Started by, Completed by, relinquished by, and witnessed by.☐ Training has been circled☐ Extract Storage recorded☐ Additional Prep Sheet completely filled out (NA or line out Blanks)☐ All clean-ups have been noted on additional prep sheet☐ Signed service request with Form V, if applicable, has been attached |
|--|

Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200428_b4\200428_056
Lab ID: R2003266-001.R01
RunType: N/A
Matrix: Water

Date Acquired: 4/29/20 00:29
Batch ID: 678319
Analysis Method: PFC/537M/PFAS

Validations

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

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	13C5-PFPeA	21	27	138	RR to confirm
	13C2-PFHxA	24	28	132	RR to confirm
	13C2-6:2 FTS	385	10	226	High bias ND
	13C2-8:2 FTS	349	10	202	High bias ND

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200428_b4\200428_056	Instrument:	K-LCMS-06
Acqu Date:	4/29/20 00:29	Vial:	5
Run Type:	N/A	Dilution:	1
Lab ID:	R2003266-001.R01	Raw Units:	ng/mL

Bottle ID:	R2003266-001.01	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678319	Prep Lot:	357465	Report Group:	R2003266
Analysis	PFC/537M	Prep Method:	ALS SOP		
		Prep Date:	4/27/20		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.083	-0.01	4842124	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.992	-0.02	657786	3.4747	69	20 - 109	Y
18O2-PFHxS	4.381	-0.01	424770	3.9857	80	26 - 122	Y
13C4-PFOS	4.708	-0.01	681324	4.5420	91	25 - 121	Y
13C4-PFBA	3.351	-0.03	683188	1.3337	27	27 - 124	Y
13C5-PFPeA	3.938	-0.02	298347	1.0350	21 *	27 - 138	Y
13C2-PFHxA	4.198	-0.01	946770	1.1990	24 *	28 - 132	Y
13C4-PFHpA	4.382	-0.01	1085417	1.5195	30	19 - 139	Y
13C4-PFOA	4.546	-0.01	1992378	2.3056	46	22 - 130	Y
13C5-PFNA	4.722	-0.01	2159120	3.3466	67	20 - 127	Y
13C2-PFDA	4.902	-0.01	2190373	3.7417	75	24 - 125	Y
13C2-PFUnDA	5.083	-0.01	3148506	4.3120	86	22 - 125	Y
13C2-PFDoDA	5.259	-0.01	3547463	4.1240	82	19 - 122	Y
13C2-PFTeDA	5.581	-0.01	2961410	4.3148	86	13 - 124	Y
13C8-FOSA	5.195	-0.01	1465701	3.7448	75	18 - 109	Y
D3-MeFOSAA	5.002	-0.01	547930	4.9308	99	9 - 123	Y
D5-EtFOSAA	5.097	-0.01	625030	6.1040	122	12 - 126	Y
13C2-6:2 FTS	4.537	-0.01	1250322	19.2412	385 *	10 - 226	Y
13C2-8:2 FTS	4.903	-0.01	918185	17.4286	349 *	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)	3.991	-0.02	21301	0.1408	4.2	J	Y
Perfluorohexane sulfonic acid (PFHxS)	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: 5/5/20 13:35

\\alprews001\starlims\LIMSRpts\QuantValidation.rpt

Data File: J:\LCMS06\Data\200428_b4\200428_056
Acqu Date: 4/29/20 00:29
Run Type: N/A
Lab ID: R2003266-001.R01

Instrument: K-LCMS06
Vial: 5
Dilution: 1
Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.710	-0.01	2996	0.0260	0.77	J	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.352	-0.03	105005	0.7870	23		Y
Perfluoropentanoic acid (PFPeA)	0		0	0	0	U	Y
Perfluorohexanoic acid (PFHxA)	0		0	0	0	U	Y
Perfluoroheptanoic acid (PFHpA)	0		0	0	0	U	Y
Perfluorooctanoic acid (PFOA)	4.544	-0.02	46653	0.0837	2.5		Y
Perfluorononanoic acid (PFNA)	0		0	0	0	U	Y
Perfluorodecanoic acid (PFDA)	4.904	-0.01	6598	0.0142	0.42	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.084	-0.01	8033	0.0025	0.074	U	Y
Perfluorododecanoic acid (PFDoDA)	5.261	-0.01	4056	0.0232	0.69	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.426	-0.01	6899	0.0076	0.23	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.581	-0.01	37444	0.0033	0.098	U	Y
Perfluorooctane sulfonamide (FOSA)	5.194	-0.01	3104	0.0088	0.26	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.003	0.00	410	0.0060	0.18	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.131	+0.02	108	0.0017	0.050	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.535	-0.01	4664	0.0161	0.48	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.901	-0.01	1314	0.0087	0.26	J	Y

Prep Amount: 270.0000 mL
Prep Final Amount: 8.00 mL

Dilution: 1
Basis Factor: 100.00

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

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

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

Printed: 5/5/20 13:35

\alprews001\starlims\LIMSReps\QuantValidation.rpt

Insight Report

Printed at 5/5/2020 1:30:49 PM

200428_056

Sample ID: R2003266-001

Date acquired: 4/29/2020 12:29:07 AM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200428_b4\200428_056.lcd

Vial: 40 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.083	4842124	4842124	1	5.0000	ng/mL	----
PFBS_1	M	3.991	21301	657786	2	0.1408	ng/mL	----
PFBS-13C	Auto	3.992	657786	4842124	1	3.4747	ng/mL	----
PFBS-13C_IS	Auto	3.992	657786	657786	2	5.0000	ng/mL	----
PFHxS_1	ND(W/B)	----	----	424770	3	----	ng/mL	----
PFHxS-18O	Auto	4.381	424770	4842124	1	3.9857	ng/mL	----
PFHxS-18O_IS	Auto	4.381	424770	424770	3	5.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	424770	3	----	ng/mL	----
PFOS_1	M	4.710	2996	681324	4	0.0260	ng/mL	----
PFOS-13C	Auto	4.708	681324	4842124	1	4.5420	ng/mL	----
PFOS-13C_IS	Auto	4.708	681324	681324	4	5.0000	ng/mL	----
PFDS_1	ND(W/B)	----	----	681324	4	----	ng/mL	----
PFBA	Auto	3.352	105005	683188	5	0.7870	ng/mL	----
PFBA-13C	Auto	3.351	683188	4842124	1	1.3337	ng/mL	----
PFBA-13C_IS	Auto	3.351	683188	683188	5	5.0000	ng/mL	----
PFPeA	ND(W/B)	----	----	298347	6	----	ng/mL	----
PFPeA-13C	Auto	3.938	298347	4842124	1	1.0350	ng/mL	----
PFPeA-13C_IS	Auto	3.938	298347	298347	6	5.0000	ng/mL	----
PFHxA	ND(W/B)	----	----	946770	7	----	ng/mL	----
PFHxA-13C	Auto	4.198	946770	4842124	1	1.1990	ng/mL	----
PFHxA-13C_IS	Auto	4.198	946770	946770	7	5.0000	ng/mL	----
PFHpA	ND(W/B)	----	----	1085417	8	----	ng/mL	----
PFHpA-13C	Auto	4.382	1085417	4842124	1	1.5195	ng/mL	----
PFHpA-13C_IS	Auto	4.382	1085417	1085417	8	5.0000	ng/mL	----
PFOA	M	4.544	46653	1992378	9	0.0837	ng/mL	----
PFOA-13C	Auto	4.546	1992378	4842124	1	2.3056	ng/mL	----
PFOA-13C_IS	Auto	4.546	1992378	1992378	9	5.0000	ng/mL	----
PFNA	ND(W/B)	----	----	2159120	10	----	ng/mL	----
PFNA-13C	Auto	4.722	2159120	4842124	1	3.3466	ng/mL	----
PFNA-13C_IS	Auto	4.722	2159120	2159120	10	5.0000	ng/mL	----
PFDA	Auto	4.904	6598	2190373	11	0.0142	ng/mL	----
PFDA-13C	Auto	4.902	2190373	4842124	1	3.7417	ng/mL	----
PFDA-13C_IS	Auto	4.902	2190373	2190373	11	5.0000	ng/mL	----
PFUnA	Auto	5.084	8033	3148506	12	0.0025	ng/mL	----
PFUnA-13C	Auto	5.083	3148506	4842124	1	4.3120	ng/mL	----
PFUnA-13C_IS	Auto	5.083	3148506	3148506	12	5.0000	ng/mL	----
PFDoA	Auto	5.261	4056	3547463	13	0.0232	ng/mL	----
PFDoA-13C	Auto	5.259	3547463	4842124	1	4.1240	ng/mL	----
PFDoA-13C_IS	Auto	5.259	3547463	3547463	13	5.0000	ng/mL	----
PFTTrDA	Auto	5.426	6899	2961410	14	0.0076	ng/mL	----
PFTTeDA	Auto	5.581	37444	2961410	14	0.0033	ng/mL	----
PFTTeDA-13C	Auto	5.581	2961410	4842124	1	4.3148	ng/mL	----
PFTTeDA-13C_IS	Auto	5.581	2961410	2961410	14	5.0000	ng/mL	----
FOSA	Auto	5.194	3104	1465701	16	0.0088	ng/mL	----
FOSA-13C	Auto	5.195	1465701	4842124	1	3.7448	ng/mL	----
FOSA-13C_IS	Auto	5.195	1465701	1465701	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.003	410	547930	21	0.0060	ng/mL	----
N-MeFOSAA-d3	Auto	5.002	547930	4842124	1	4.9308	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.002	547930	547930	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.131	108	625030	22	0.0017	ng/mL	----
N-EtFOSAA-d5	Auto	5.097	625030	4842124	1	6.1040	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.097	625030	625030	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.535	4664	1250322	24	0.0161	ng/mL	----
6_2-FTS-13C	Auto	4.537	1250322	4842124	1	19.2412	ng/mL	----
6_2-FTS-13C_IS	Auto	4.537	1250322	1250322	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.901	1314	918185	25	0.0087	ng/mL	----
8_2-FTS-13C	Auto	4.903	918185	4842124	1	17.4286	ng/mL	----
8_2-FTS-13C_IS	Auto	4.903	918185	918185	25	5.0000	ng/mL	----

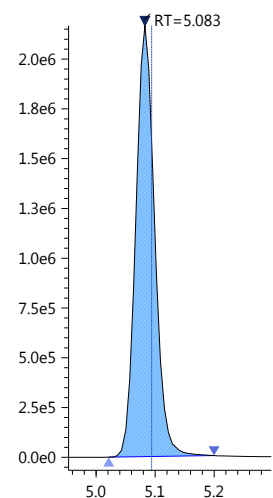
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13C7-PFUnDA_IS

Conc 5.0000
 Area 4842124

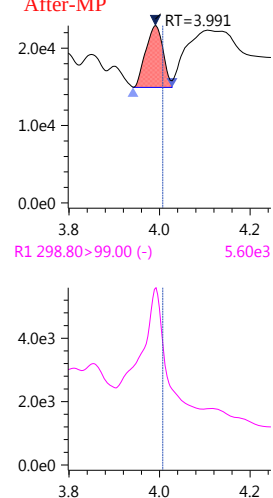
ISTD 570.00>525.00 (-) 2.17e6



PFBS_1

Conc 0.1408
 Area 21301
 R#1 39.09 (0.00)

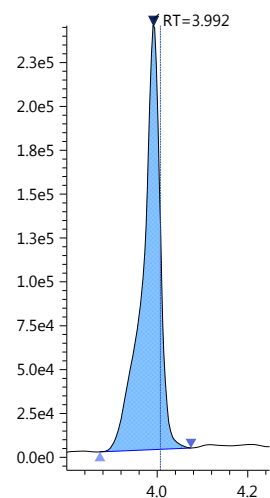
Q 299.00>80.00 (-) 2.29e4



PFBS-13C

Conc 3.4747
 Area 657786

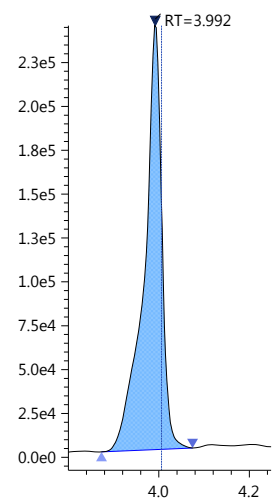
Q 301.80>80.00 (-) 2.46e5



PFBS-13C_IS

Conc 5.0000
 Area 657786

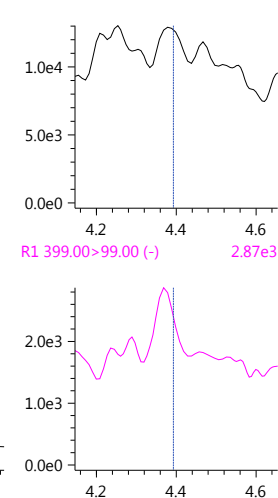
ISTD 301.80>80.00 (-) 2.46e5



PFHxS_1

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

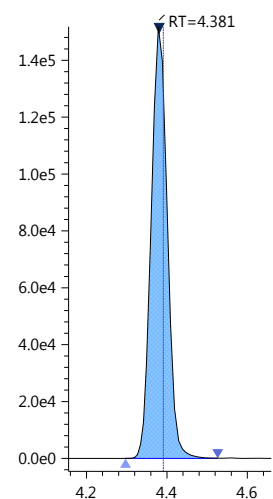
Q 399.00>80.00 (-) 1.30e4



PFHxS-180

Conc 3.9857
 Area 424770

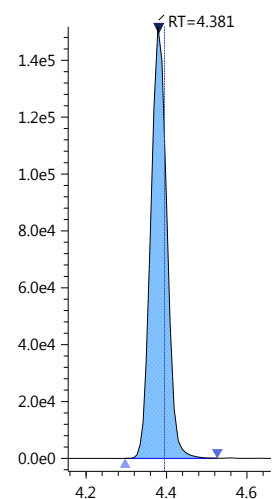
Q 402.70>84.05 (-) 1.52e5



PFHxS-180_IS

Conc 5.0000
 Area 424770

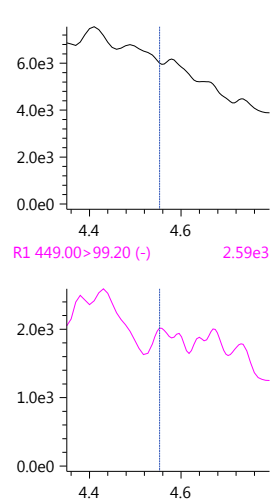
ISTD 402.70>84.05 (-) 1.52e5



PFHpS_1

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

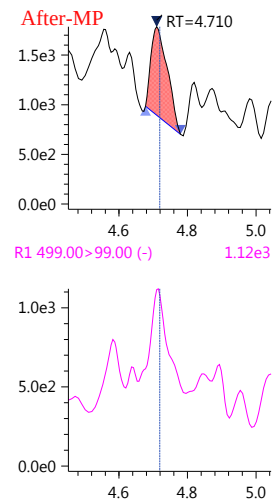
Q 449.00>80.15 (-) 7.56e3



PFOS_1

Conc 0.0260
 Area 2996
 R#1 60.59 (0.00)

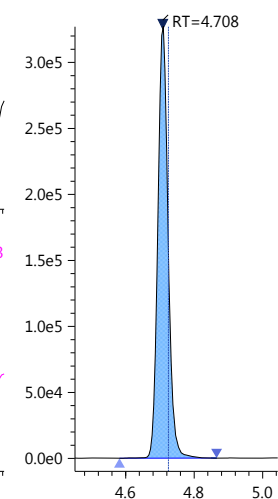
Q 499.00>80.00 (-) 1.79e3



PFOS-13C

Conc 4.5420
 Area 681324

Q 502.80>80.05 (-) 3.27e5



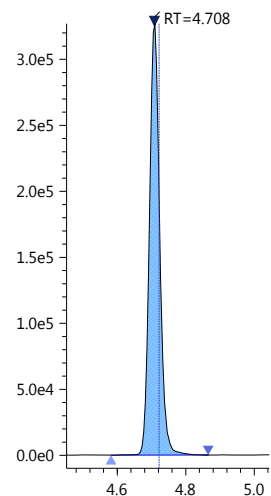
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PFOS-13C_IS

Conc 5.0000
 Area 681324

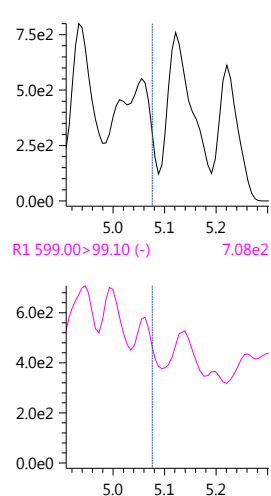
ISTD 502.80>80.05 (-) 3.27e5



PFDS_1

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

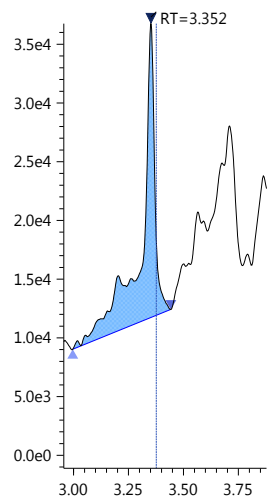
Q 599.00>79.90 (-)



PFBA

Conc 0.7870
 Area 105005

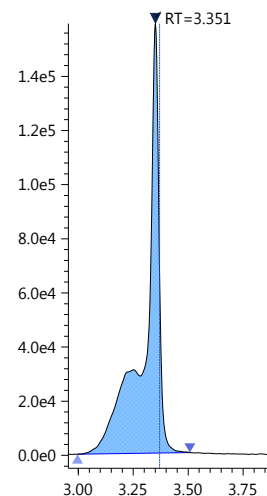
Q 213.00>169.10 (-)



PFBA-13C

Conc 1.3337
 Area 683188

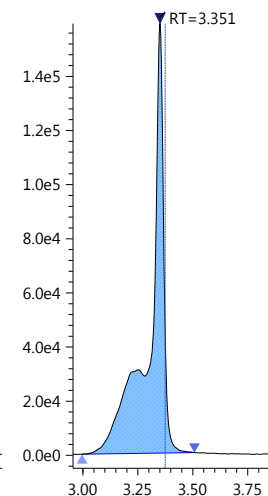
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
 Area 683188

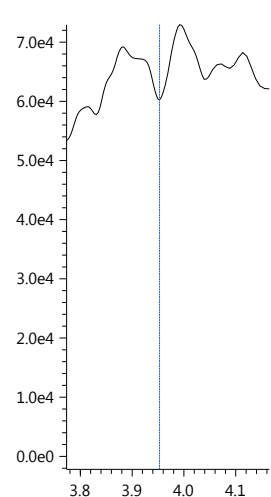
ISTD 216.90>172.15 (-)



PFPeA

Conc ----
 Area ----

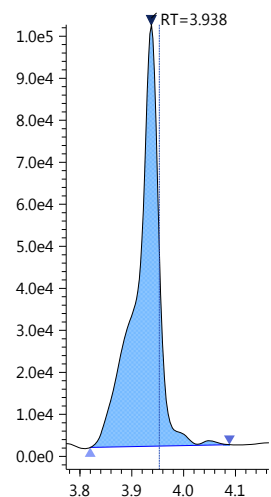
Q 263.05>219.10 (-)



PFPeA-13C

Conc 1.0350
 Area 298347

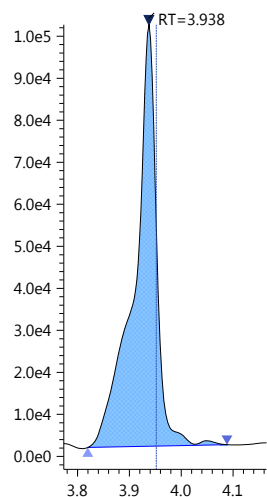
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 Area 298347

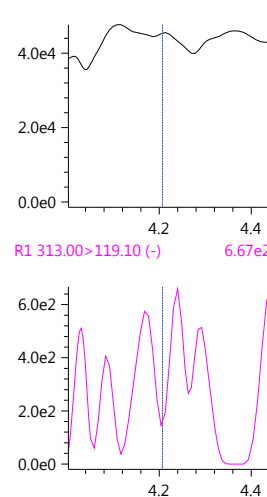
ISTD 267.90>223.00 (-)



PFHxA

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

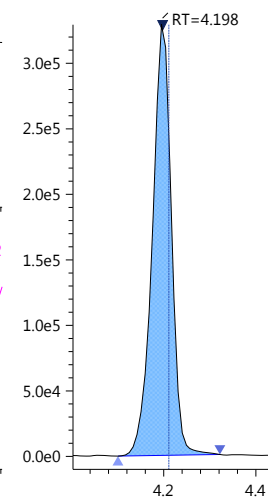
Q 313.00>269.00 (-)



PFHxA-13C

Conc 1.1990
 Area 946770

Q 314.90>270.10 (-)



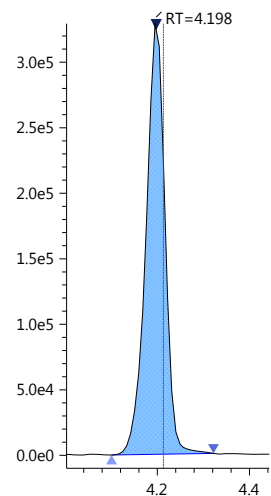
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PFHxA-13C_IS

Conc 5.0000
 Area 946770

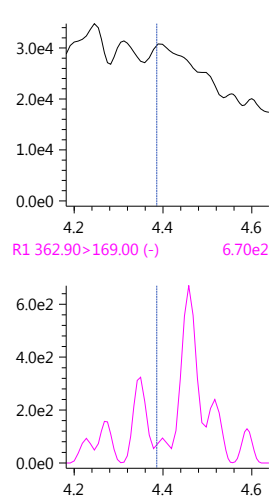
ISTD 314.90>270.10 (-) 3.29e5



PFHpA

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

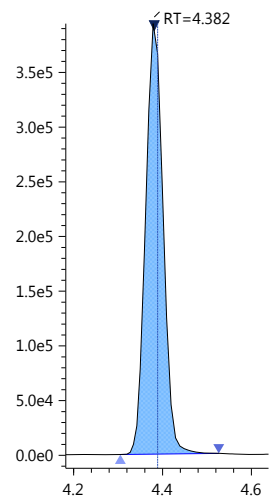
Q 362.90>319.00 (-) 3.48e4



PFHpA-13C

Conc 1.5195
 Area 1085417

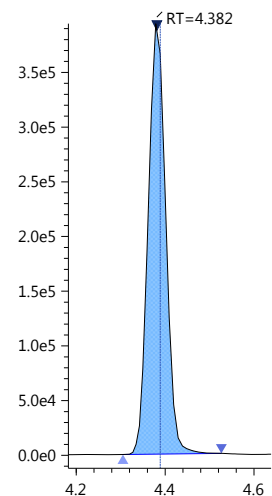
Q 366.90>322.10 (-) 3.95e5



PFHpA-13C_IS

Conc 5.0000
 Area 1085417

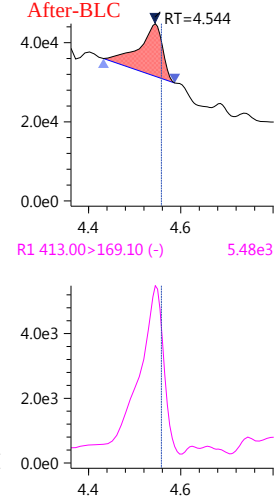
ISTD 366.90>322.10 (-) 3.95e5



PFOA

Conc 0.0837
 Area 46653
 R#1 36.08 (0.00)

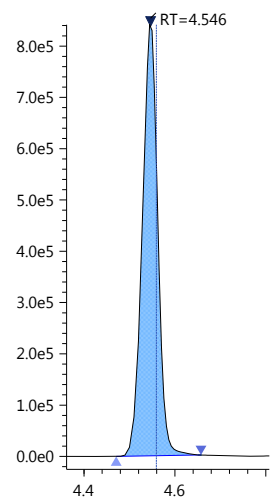
Q 413.00>369.00 (-) 4.48e4



PFOA-13C

Conc 2.3056
 Area 1992378

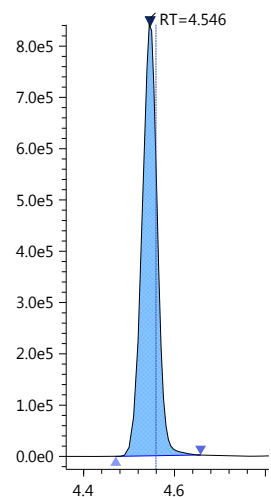
Q 416.80>372.05 (-) 8.42e5



PFOA-13C_IS

Conc 5.0000
 Area 1992378

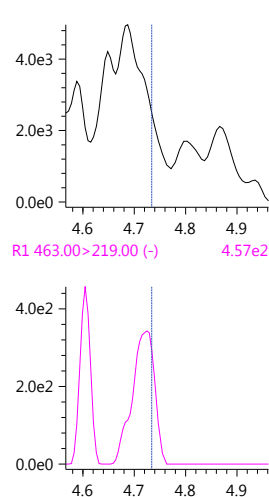
ISTD 416.80>372.05 (-) 8.42e5



PFNA

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

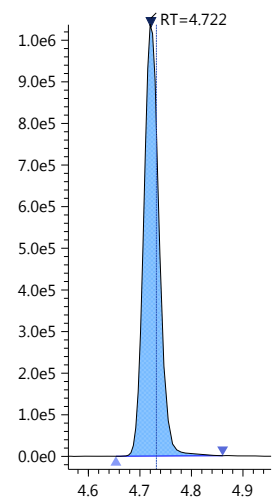
Q 463.00>418.90 (-) 4.96e3



PFNA-13C

Conc 3.3466
 Area 2159120

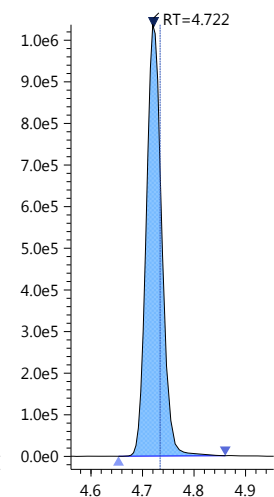
Q 467.80>423.00 (-) 1.04e6



PFNA-13C_IS

Conc 5.0000
 Area 2159120

ISTD 467.80>423.00 (-) 1.04e6



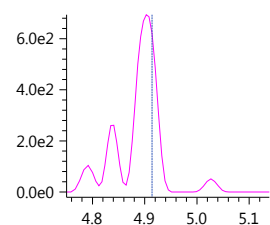
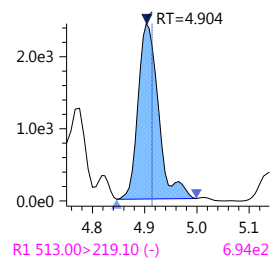
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PFDA

Conc 0.0142
Area 6598
R#1 23.78 (0.00)

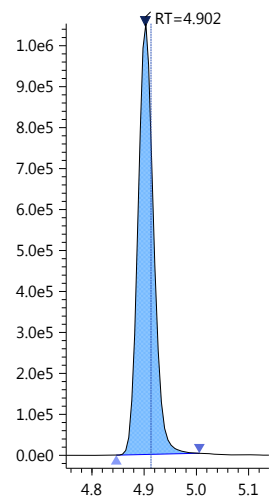
Q 513.00>468.80 (-) 2.46e3



PFDA-13C

Conc 3.7417
Area 2190373

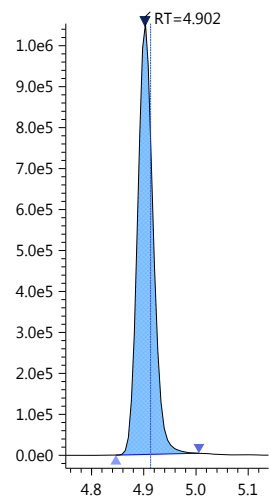
Q 514.80>469.95 (-) 1.05e6



PFDA-13C_IS

Conc 5.0000
Area 2190373

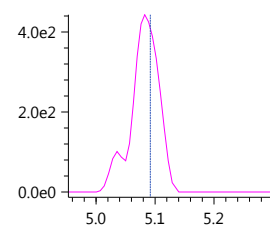
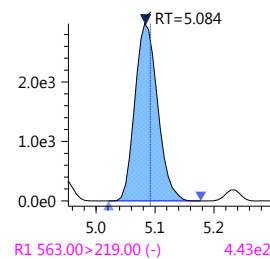
ISTD 514.80>469.95 (-) 1.05e6



PFUnA

Conc 0.0025
Area 8033
R#1 13.66 (0.00)

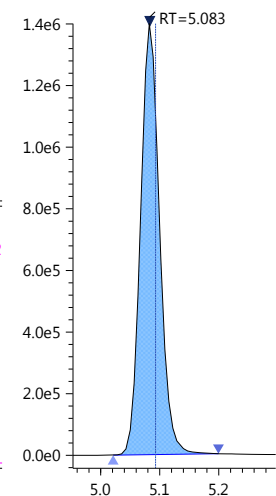
Q 563.00>518.90 (-) 2.98e3



PFUnA-13C

Conc 4.3120
Area 3148506

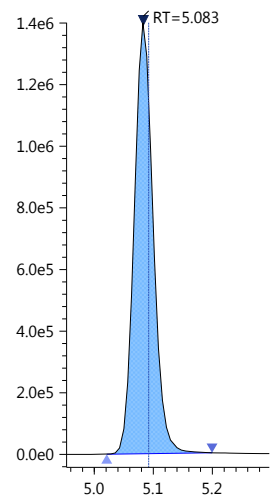
Q 564.80>519.95 (-) 1.40e6



PFUnA-13C_IS

Conc 5.0000
Area 3148506

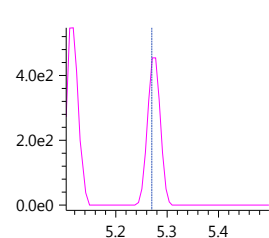
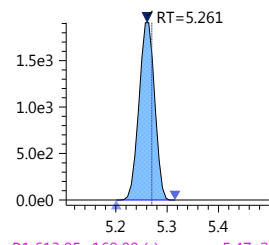
ISTD 564.80>519.95 (-) 1.40e6



PFDaA

Conc 0.0232
Area 4056
R#1 7.46 (0.00)

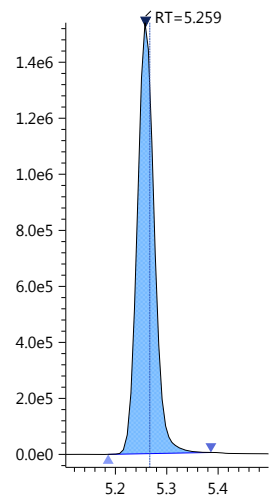
Q 613.05>569.00 (-) 1.91e3



PFDaA-13C

Conc 4.1240
Area 3547463

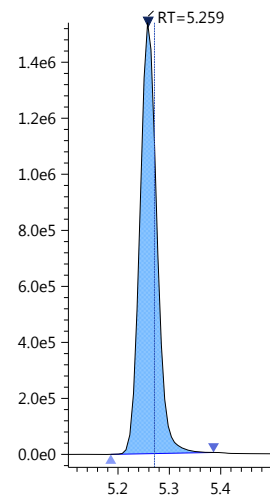
Q 614.80>569.95 (-) 1.54e6



PFDaA-13C_IS

Conc 5.0000
Area 3547463

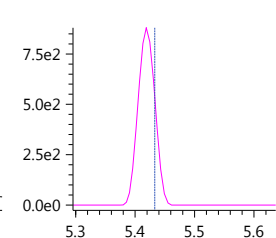
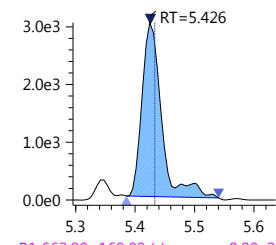
ISTD 614.80>569.95 (-) 1.54e6



PFTrDA

Conc 0.0076
Area 6899
R#1 21.26 (0.00)

Q 663.00>618.90 (-) 3.07e3

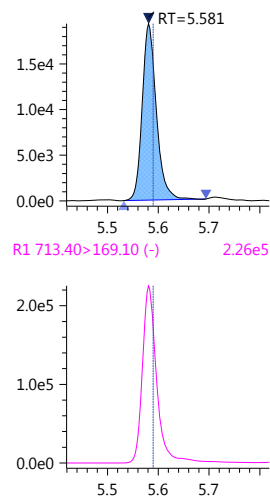


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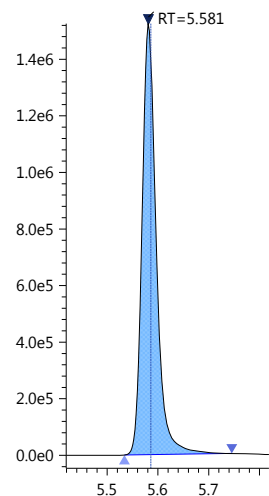
PFTeDA

Conc 0.0033
 Area 37444
 R#1 1184.47 (0.00)
 Q 713.40>669.00 (-) 1.94e4



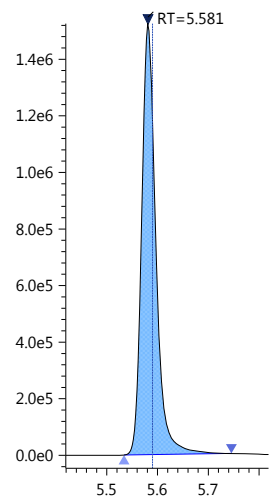
PFTeDA-13C

Conc 4.3148
 Area 2961410
 Q 714.70>669.90 (-) 1.53e6



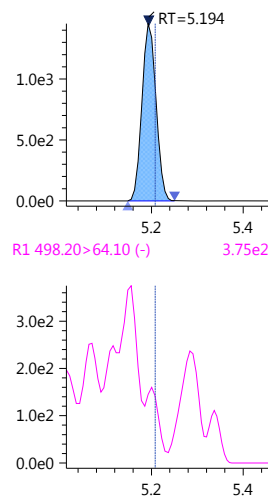
PFTeDA-13C_IS

Conc 5.0000
 Area 2961410
 ISTD 714.70>669.90 (-) 1.53e6



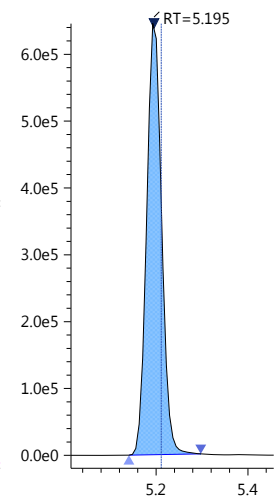
FOSA

Conc 0.0088
 Area 3104
 R#1 0.00 (0.00)
 Q 498.20>78.00 (-) 1.45e3



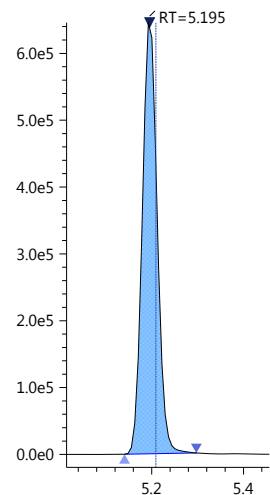
FOSA-13C

Conc 3.7448
 Area 1465701
 Q 506.00>78.05 (-) 6.46e5



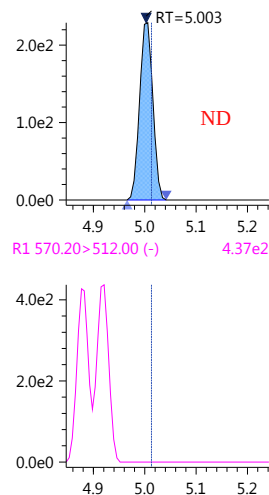
FOSA-13C_IS

Conc 5.0000
 Area 1465701
 ISTD 506.00>78.05 (-) 6.46e5



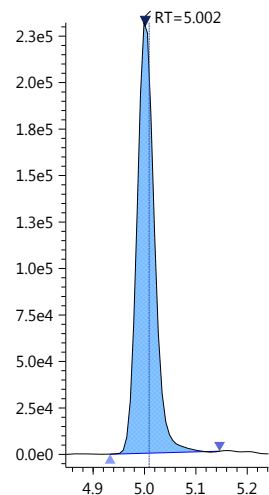
N-MeFOSAA

Conc 0.0060
 Area 410
 R#1 0.00 (0.00)
 Q 570.20>419.00 (-) 2.29e2



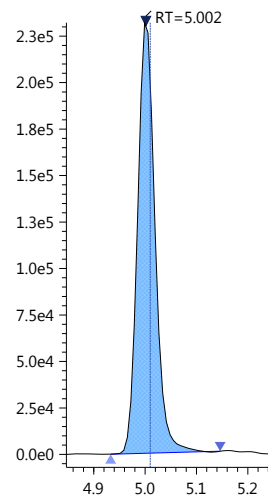
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Conc 4.9308
 Area 547930
 Q 572.80>419.05 (-) 2.32e5



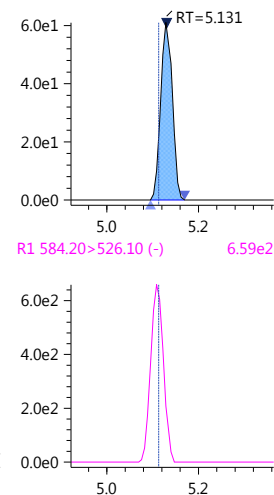
N-MeFOSAA-d3_IS

Conc 5.0000
 Area 547930
 ISTD 572.80>419.05 (-) 2.32e5



N-EtFOSAA

Conc 0.0017
 Area 108
 R#1 0.00 (0.00)
 Q 584.20>418.95 (-) 6.10e1



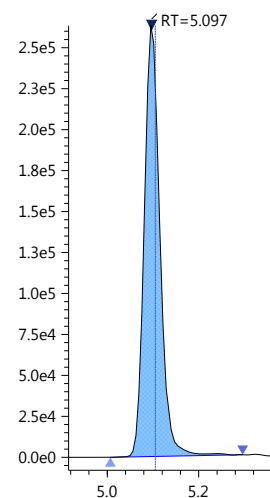
Insight Report

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N-EtFOSAA-d5

Conc 6.1040
Area 625030

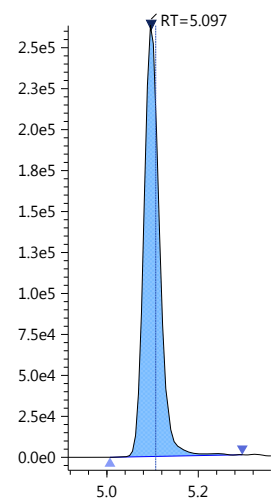
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
Area 625030

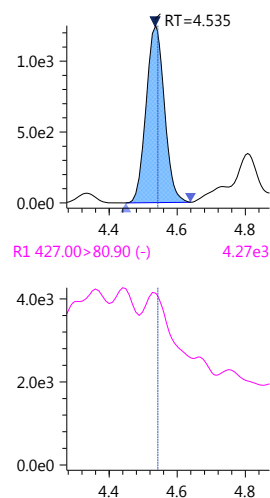
ISTD 588.80>419.00 (-)



6_2-FTS_1

Conc 0.0161
Area 4664
R#1 56.47 (0.00)

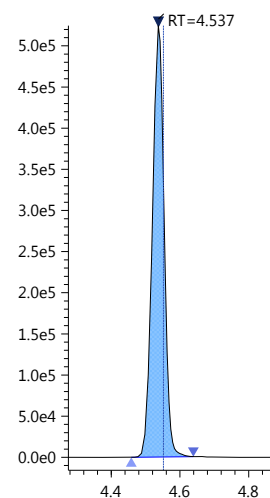
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 19.2412
Area 1250322

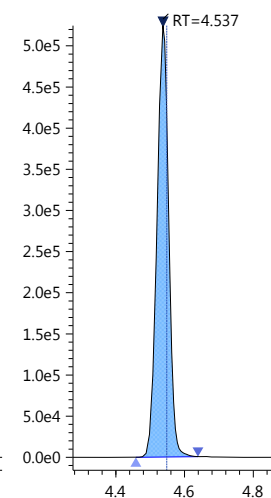
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
Area 1250322

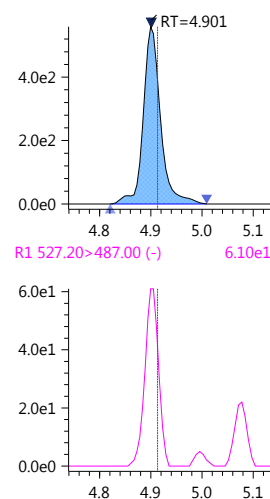
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 0.0087
Area 1314
R#1 11.17 (0.00)

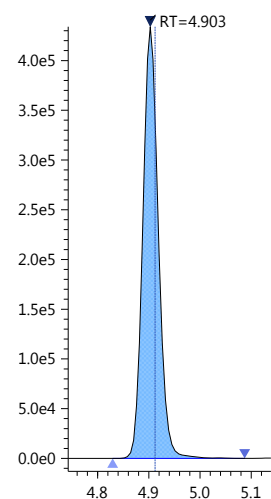
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 17.4286
Area 918185

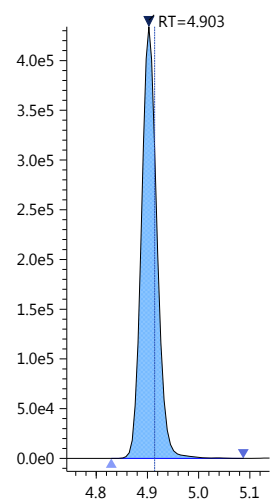
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
Area 918185

ISTD 528.80>509.00 (-)



Insight Report

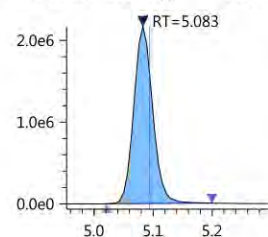
Printed at 5/5/2020 1:20:51 PM

200428_056

Sample ID: R2003266-001
Date acquired: 4/29/2020 12:29:07 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200428_b4\200428_056.lcd
Vial: 40 | Inj. Volume: 15.0000uL | Tray: 3

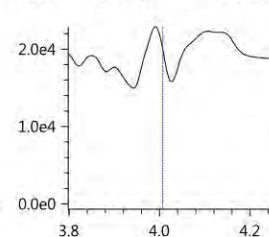
13C7-PFUnDA_IS

Conc 5.0000
Area 4842124
ISTD 570.00>525.00 (-)



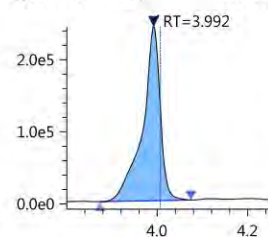
PFBS_1

Conc ----
Area ----
Q 299.00>80.00 (-)



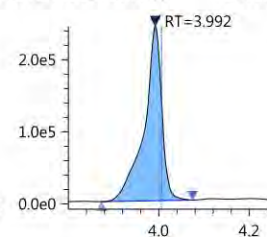
PFBS-13C

Conc 3.4747
Area 657786
Q 301.80>80.00 (-)



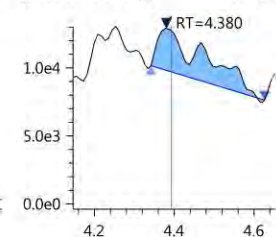
PFBS-13C_IS

Conc 5.0000
Area 657786
ISTD 301.80>80.00 (-)



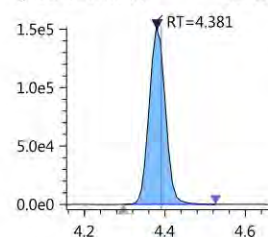
PFHxS_1

Conc 0.2366
Area 26784
Q 399.00>80.00 (-)



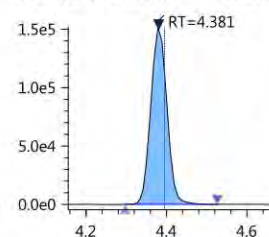
PFHxS-180

Conc 3.9857
Area 424770
Q 402.70>84.05 (-)



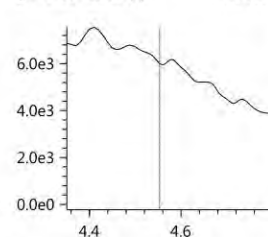
PFHxS-180_IS

Conc 5.0000
Area 424770
ISTD 402.70>84.05 (-)



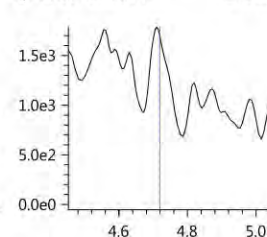
PFHpS_1

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



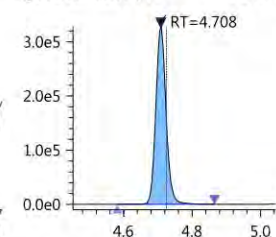
PFOS_1

Conc ----
Area ----
Q 499.00>80.00 (-)



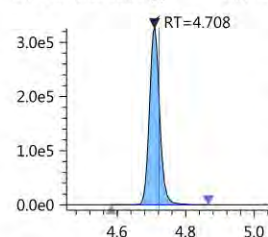
PFOS-13C

Conc 4.5420
Area 681324
Q 502.80>80.05 (-)



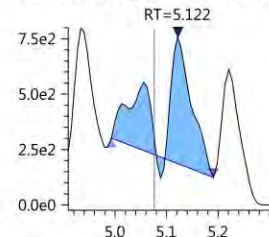
PFOS-13C_IS

Conc 5.0000
Area 681324
ISTD 502.80>80.05 (-)



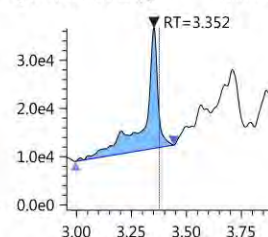
PFDS_1

Conc 0.0227
Area 2447
Q 599.00>79.90 (-)



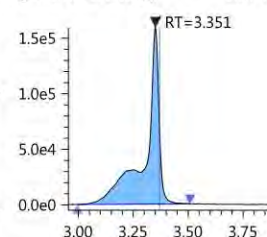
PFBA

Conc 0.7870
Area 105005
Q 213.00>169.10 (-)



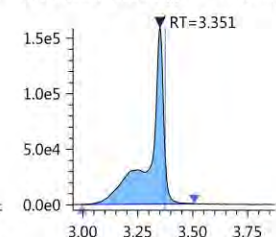
PFBA-13C

Conc 1.3337
Area 683188
Q 216.90>172.15 (-)



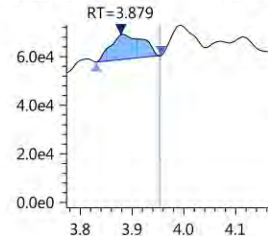
PFBA-13C_IS

Conc 5.0000
Area 683188
ISTD 216.90>172.15 (-)



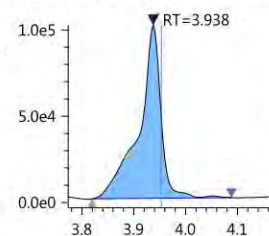
PFPeA

Conc 0.3248
Area 44235
Q 263.05>219.10 (-)



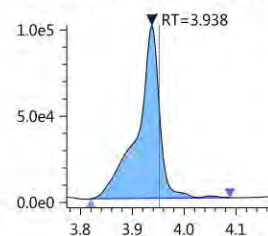
PFPeA-13C

Conc 1.0350
Area 298347
Q 267.90>223.00 (-)



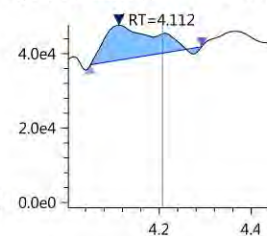
PFPeA-13C_IS

Conc 5.0000
Area 298347
ISTD 267.90>223.00 (-)



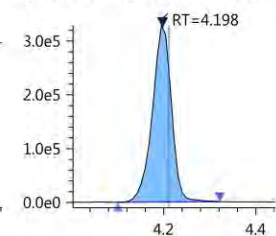
PFHxA

Conc 0.3497
Area 66162
Q 313.00>269.00 (-)



PFHxA-13C

Conc 1.1990
Area 946770
Q 314.90>270.10 (-)



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PFHxA-13C_IS

Conc 5.0000

Area 946770

ISTD 314.90>270.10 (-)

3.29e5

PFHpA

Conc ----

Area ----

Q 362.90>319.00 (-)

PFHpA-13C

Conc 1.5195

Area 1085417

Q 366.90>322.10 (-)

PFHpA-13C_IS

Conc 5.0000

Area 1085417

ISTD 366.90>322.10 (-)

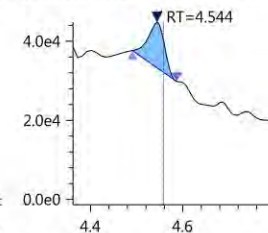
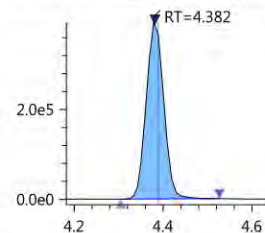
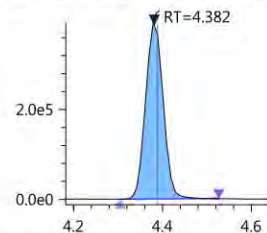
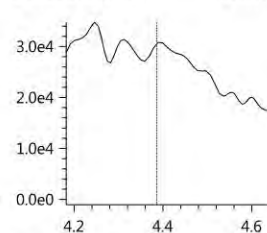
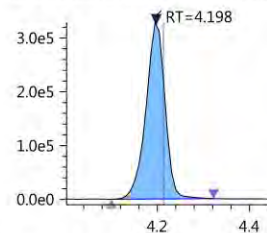
PFOA

Conc 0.0477

Area 28430

Q 413.00>369.00 (-)

4.48e4



PFOA-13C

Conc 2.3056

Area 1992378

Q 416.80>372.05 (-)

8.42e5

PFOA-13C_IS

Conc 5.0000

Area 1992378

ISTD 416.80>372.05 (-)

PFNA

Conc 0.0349

Area 15192

Q 463.00>418.90 (-)

PFNA-13C

Conc 3.3466

Area 2159120

Q 467.80>423.00 (-)

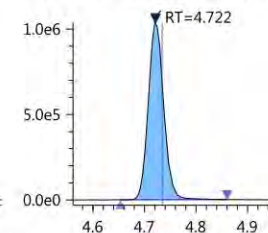
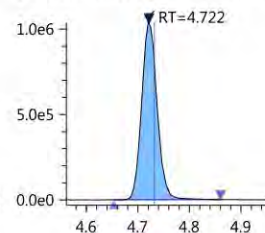
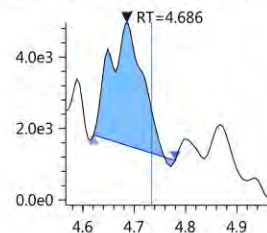
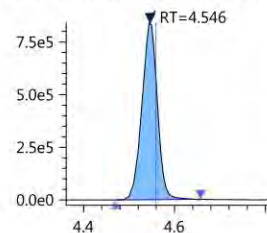
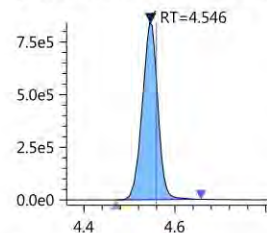
PFNA-13C_IS

Conc 5.0000

Area 2159120

ISTD 467.80>423.00 (-)

1.04e6



PFDA

Conc 0.0142

Area 6598

Q 513.00>468.80 (-)

2.46e3

PFDA-13C

Conc 3.7417

Area 2190373

Q 514.80>469.95 (-)

PFDA-13C_IS

Conc 5.0000

Area 2190373

ISTD 514.80>469.95 (-)

PFUnA

Conc 0.0025

Area 8033

Q 563.00>518.90 (-)

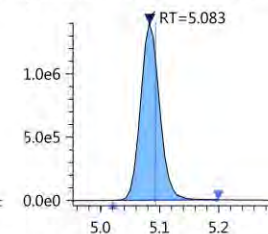
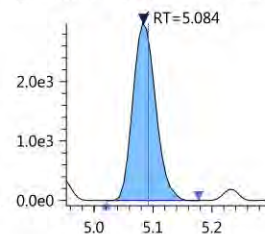
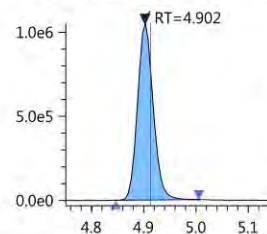
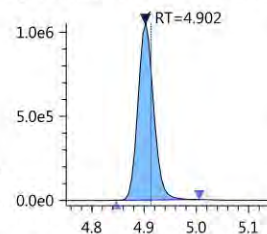
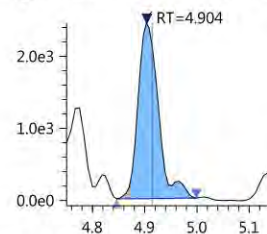
PFUnA-13C

Conc 4.3120

Area 3148506

Q 564.80>519.95 (-)

1.40e6



PFUnA-13C_IS

Conc 5.0000

Area 3148506

ISTD 564.80>519.95 (-)

1.40e6

PFDaA

Conc 0.0232

Area 4056

Q 613.05>569.00 (-)

PFDaA-13C

Conc 4.1240

Area 3547463

Q 614.80>569.95 (-)

PFDaA-13C_IS

Conc 5.0000

Area 3547463

ISTD 614.80>569.95 (-)

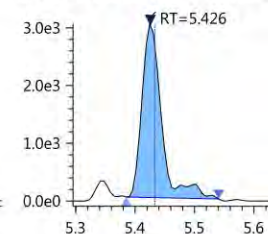
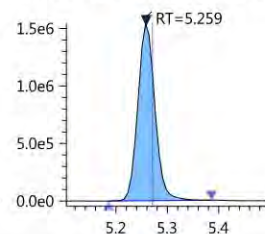
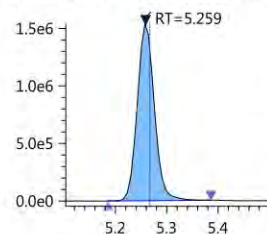
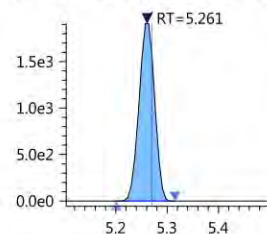
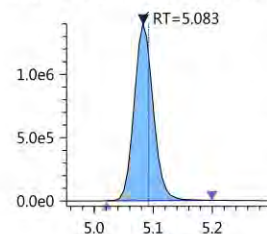
PFTTrDA

Conc 0.0076

Area 6899

Q 663.00>618.90 (-)

3.07e3



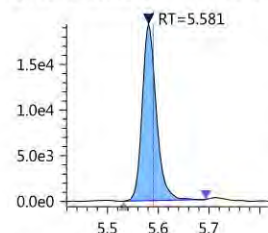
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PFTeDA

Conc 0.0033
Area 37444

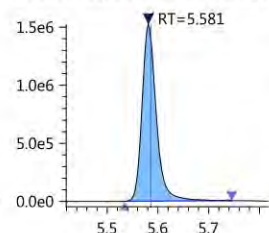
Q 713.40>669.00 (-)



PFTeDA-13C

Conc 4.3148
Area 2961410

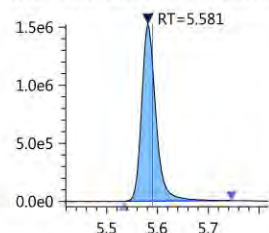
Q 714.70>669.90 (-)



PFTeDA-13C_IS

Conc 5.0000
Area 2961410

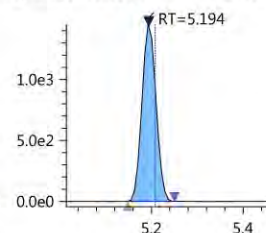
ISTD 714.70>669.90 (-)



FOSA

Conc 0.0088
Area 3104

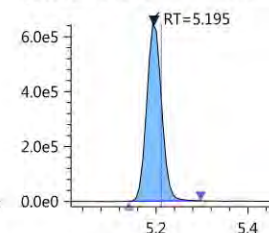
Q 498.20>78.00 (-)



FOSA-13C

Conc 3.7448
Area 1465701

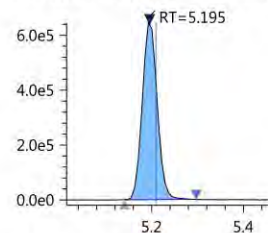
Q 506.00>78.05 (-)



FOSA-13C_IS

Conc 5.0000
Area 1465701

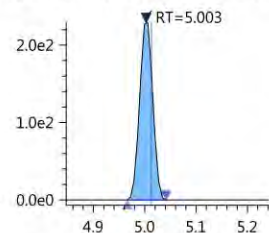
ISTD 506.00>78.05 (-)



N-MeFOSAA

Conc 0.0060
Area 410

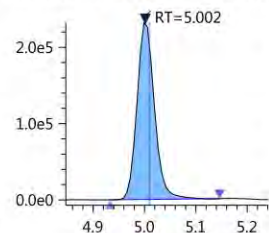
Q 570.20>419.00 (-)



N-MeFOSAA-d3

Conc 4.9308
Area 547930

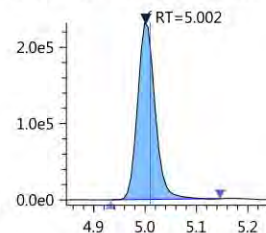
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
Area 547930

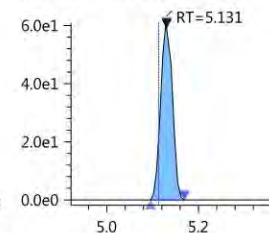
ISTD 572.80>419.05 (-)



N-EtFOSAA

Conc 0.0017
Area 108

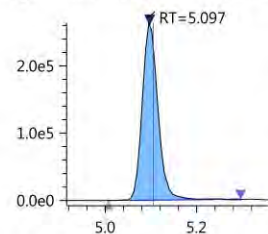
Q 584.20>418.95 (-)



N-EtFOSAA-d5

Conc 6.1040
Area 625030

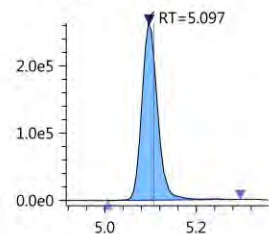
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
Area 625030

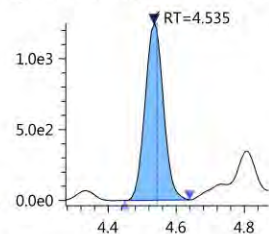
ISTD 588.80>419.00 (-)



6_2-FTS_1

Conc 0.0161
Area 4664

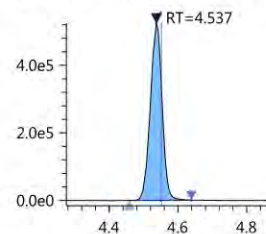
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 19.2412
Area 1250322

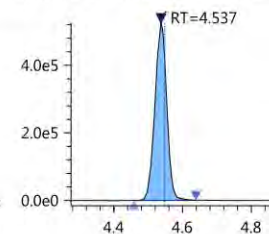
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6_2-FTS-13C_IS

Conc 5.0000
Area 1250322

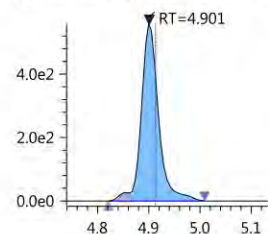
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8_2-FTS_1

Conc 0.0087
Area 1314

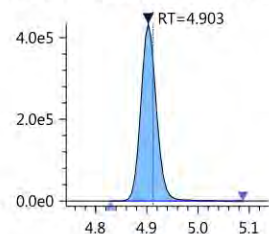
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 17.4286
Area 918185

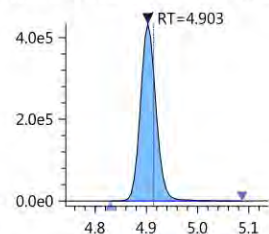
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
Area 918185

ISTD 528.80>509.00 (-)



Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200430_b3\200430_021
Lab ID: R2003266-001
RunType: N/A
Matrix: Water

Date Acquired: 4/30/20 12:40
Batch ID: 678575
Analysis Method: PFC/537M/PFAS

Validations

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

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	18O2-PFHxS	136	70	130	Native ok
Surrogates	13C4-PFBA	25	27	124	See original
	13C5-PFPeA	19	27	138	Confirms low
	13C2-PFHxA	21	28	132	Confirms low
	13C2-6:2 FTS	329	10	226	High bias ND
	13C2-8:2 FTS	355	10	202	High bias ND

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200430_b3\200430_021	Instrument:	K-LCMS-06
Acqu Date:	4/30/20 12:40	Vial:	6
Run Type:	N/A	Dilution:	1
Lab ID:	R2003266-001	Raw Units:	ng/mL

Bottle ID:	R2003266-001.01	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678575	Prep Lot:	357465	Report Group:	R2003266
Analysis	PFC/537M	Prep Method:	ALS SOP		
		Prep Date:	4/27/20		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.076	-0.01	5134289	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.989	-0.02	657504	3.2756	66	20 - 109	N
18O2-PFHxS	4.379	-0.01	403364	3.5695	71	26 - 122	N
13C4-PFOS	4.702	-0.01	690898	4.3437	87	25 - 121	N
13C4-PFBA	3.346	-0.03	685458	1.2620	25 *	27 - 124	N
13C5-PFPeA	3.934	-0.02	295441	0.9666	19 *	27 - 138	N
13C2-PFHxA	4.196	-0.01	875207	1.0453	21 *	28 - 132	N
13C4-PFHpA	4.380	-0.01	1003013	1.3242	26	19 - 139	N
13C4-PFOA	4.541	-0.02	2015535	2.1996	44	22 - 130	N
13C5-PFNA	4.715	-0.01	2174285	3.1783	64	20 - 127	N
13C2-PFDA	4.896	-0.01	2357069	3.7974	76	24 - 125	N
13C2-PFUnDA	5.076	-0.01	3276418	4.2318	85	22 - 125	N
13C2-PFDoDA	5.254	-0.01	3878732	4.2525	85	19 - 122	N
13C2-PFTeDA	5.576	-0.01	2858269	3.9276	79	13 - 124	N
13C8-FOSA	5.191	-0.01	1455424	3.5069	70	18 - 109	N
D3-MeFOSAA	4.995	-0.01	573148	4.8642	97	9 - 123	N
D5-EtFOSAA	5.091	-0.01	605087	5.5730	111	12 - 126	N
13C2-6:2 FTS	4.532	-0.02	1134125	16.4599	329 *	10 - 226	N
13C2-8:2 FTS	4.896	-0.01	991690	17.7527	355 *	10 - 202	N

Target Compounds

Final Conc.Units: ng/L						
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.986	-0.02	17507	0.1158	3.4	N
Perfluorohexane sulfonic acid (PFHxS)	0		0	0	0	N

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

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

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

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Data File: J:\LCMS06\Data\200430_b3\200430_021

Instrument: K-LCMS06 05/06/20

Acqu Date: 4/30/20 12:40

Vial: 6

Run Type: N/A

Dilution: 1

Lab ID: R2003266-001

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	N
Perfluorooctane sulfonic acid (PFOS)	4.698	-0.02	1252	0.0107	0.32	U	N
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	N
Perfluorobutanoic acid (PFBA)	3.347	-0.03	99359	0.7422	22		N
Perfluoropentanoic acid (PFPeA)	0		0	0	0	U	N
Perfluorohexanoic acid (PFHxA)	0		0	0	0	U	N
Perfluoroheptanoic acid (PFHpA)	4.375	-0.02	28902	0.1512	4.5	J	N
Perfluorooctanoic acid (PFOA)	4.534	-0.02	46437	0.0822	2.4		N
Perfluorononanoic acid (PFNA)	4.723	-0.01	7154	0.0139	0.41	U	N
Perfluorodecanoic acid (PFDA)	4.894	-0.01	6430	0.0128	0.38	U	N
Perfluoroundecanoic acid (PFUnDA)	5.080	-0.01	5185	-0.0037	0	U	N
Perfluorododecanoic acid (PFDoDA)	5.252	-0.01	7774	0.0308	0.91	U	N
Perfluorotridecanoic acid (PFTrDA)	5.417	-0.01	7591	0.0093	0.28	U	N
Perfluorotetradecanoic acid (PFTeDA)	5.576	-0.01	33914	-0.0056	0	U	N
Perfluorooctane sulfonamide (FOSA)	5.188	-0.01	2132	0.0061	0.18	U	N
N-Methyl perfluorooctane sulfonamidoacetic acid	5.011	+0.00	930	0.0131	0.39	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	N
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.533	-0.01	4827	0.0184	0.55	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.895	-0.01	1598	0.0098	0.29	J	N

Prep Amount: 270.0000 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 5/5/2020 2:08:10 PM

200430_021

Sample ID: R2003266-001

Date acquired: 4/30/2020 12:40:55 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200430_b3\200430_021.lcd

Vial: 4 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.076	5134289	5134289	1	5.0000	ng/mL	----
PFBS_1	M	3.986	17507	657504	2	0.1158	ng/mL	----
PFBS-13C	Auto	3.989	657504	5134289	1	3.2756	ng/mL	----
PFBS-13C_IS	Auto	3.989	657504	657504	2	5.0000	ng/mL	----
PFHxS_1	ND(W/B)	----	----	403364	3	----	ng/mL	----
PFHxS-18O	Auto	4.379	403364	5134289	1	3.5695	ng/mL	----
PFHxS-18O_IS	Auto	4.379	403364	403364	3	5.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	403364	3	----	ng/mL	----
PFOS_1	M	4.698	1252	690898	4	0.0107	ng/mL	----
PFOS-13C	Auto	4.702	690898	5134289	1	4.3437	ng/mL	----
PFOS-13C_IS	Auto	4.702	690898	690898	4	5.0000	ng/mL	----
PFDS_1	ND(W/B)	----	----	690898	4	----	ng/mL	----
PFBA	M	3.347	99359	685458	5	0.7422	ng/mL	----
PFBA-13C	Auto	3.346	685458	5134289	1	1.2620	ng/mL	----
PFBA-13C_IS	Auto	3.346	685458	685458	5	5.0000	ng/mL	----
PFPeA	ND(W/B)	----	----	295441	6	----	ng/mL	----
PFPeA-13C	Auto	3.934	295441	5134289	1	0.9666	ng/mL	----
PFPeA-13C_IS	Auto	3.934	295441	295441	6	5.0000	ng/mL	----
PFHxA	ND(W/B)	----	----	875207	7	----	ng/mL	----
PFHxA-13C	Auto	4.196	875207	5134289	1	1.0453	ng/mL	----
PFHxA-13C_IS	Auto	4.196	875207	875207	7	5.0000	ng/mL	----
PFHpA	M	4.375	28902	1003013	8	0.1512	ng/mL	----
PFHpA-13C	Auto	4.380	1003013	5134289	1	1.3242	ng/mL	----
PFHpA-13C_IS	Auto	4.380	1003013	1003013	8	5.0000	ng/mL	----
PFOA	Auto	4.534	46437	2015535	9	0.0822	ng/mL	----
PFOA-13C	Auto	4.541	2015535	5134289	1	2.1996	ng/mL	----
PFOA-13C_IS	Auto	4.541	2015535	2015535	9	5.0000	ng/mL	----
PFNA	M	4.723	7154	2174285	10	0.0139	ng/mL	----
PFNA-13C	Auto	4.715	2174285	5134289	1	3.1783	ng/mL	----
PFNA-13C_IS	Auto	4.715	2174285	2174285	10	5.0000	ng/mL	----
PFDA	Auto	4.894	6430	2357069	11	0.0128	ng/mL	----
PFDA-13C	Auto	4.896	2357069	5134289	1	3.7974	ng/mL	----
PFDA-13C_IS	Auto	4.896	2357069	2357069	11	5.0000	ng/mL	----
PFUnA	M	5.080	5185	3276418	12	-0.0037	ng/mL	----
PFUnA-13C	Auto	5.076	3276418	5134289	1	4.2318	ng/mL	----
PFUnA-13C_IS	Auto	5.076	3276418	3276418	12	5.0000	ng/mL	----
PFDoA	Auto	5.252	7774	3878732	13	0.0308	ng/mL	----
PFDoA-13C	Auto	5.254	3878732	5134289	1	4.2525	ng/mL	----
PFDoA-13C_IS	Auto	5.254	3878732	3878732	13	5.0000	ng/mL	----
PFTrDA	Auto	5.417	7591	2858269	14	0.0093	ng/mL	----
PFTeDA	Auto	5.576	33914	2858269	14	-0.0056	ng/mL	----
PFTeDA-13C	Auto	5.576	2858269	5134289	1	3.9276	ng/mL	----
PFTeDA-13C_IS	Auto	5.576	2858269	2858269	14	5.0000	ng/mL	----
FOSA	Auto	5.188	2132	1455424	16	0.0061	ng/mL	----
FOSA-13C	Auto	5.191	1455424	5134289	1	3.5069	ng/mL	----
FOSA-13C_IS	Auto	5.191	1455424	1455424	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.011	930	573148	21	0.0131	ng/mL	----
N-MeFOSAA-d3	Auto	4.995	573148	5134289	1	4.8642	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.995	573148	573148	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	605087	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.091	605087	5134289	1	5.5730	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.091	605087	605087	22	5.0000	ng/mL	----
6_2-FTS_1	M	4.533	4827	1134125	24	0.0184	ng/mL	----
6_2-FTS-13C	Auto	4.532	1134125	5134289	1	16.4599	ng/mL	----
6_2-FTS-13C_IS	Auto	4.532	1134125	1134125	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.895	1598	991690	25	0.0098	ng/mL	----
8_2-FTS-13C	Auto	4.896	991690	5134289	1	17.7527	ng/mL	----
8_2-FTS-13C_IS	Auto	4.896	991690	991690	25	5.0000	ng/mL	----

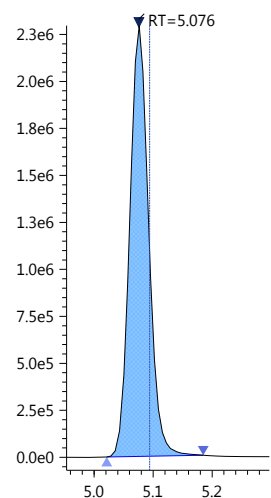
Insight Report

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13C7-PFUnDA_IS

Conc 5.0000
 Area 5134289

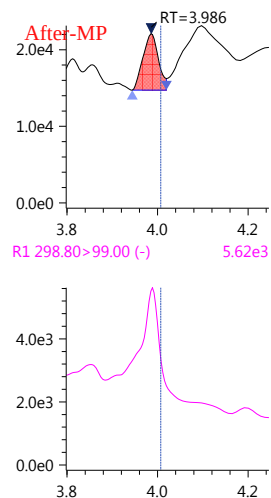
ISTD 570.00>525.00 (-) 2.30e6



PFBS_1

Conc 0.1158
 Area 17507
 R#1 39.24 (0.00)

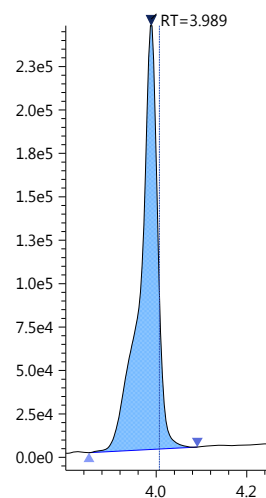
Q 299.00>80.00 (-) 2.32e4



PFBS-13C

Conc 3.2756
 Area 657504

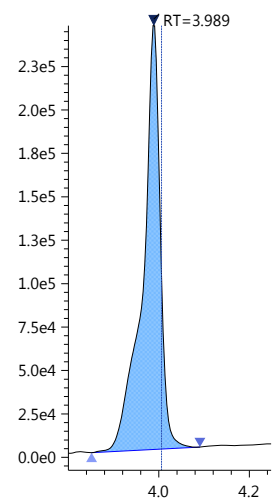
Q 301.80>80.00 (-) 2.49e5



PFBS-13C_IS

Conc 5.0000
 Area 657504

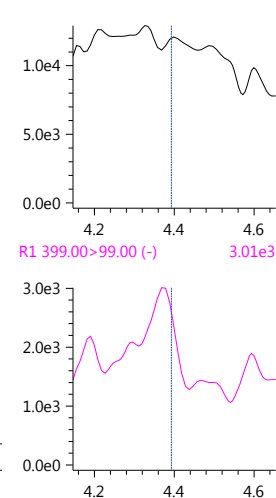
ISTD 301.80>80.00 (-) 2.49e5



PFHxS_1

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

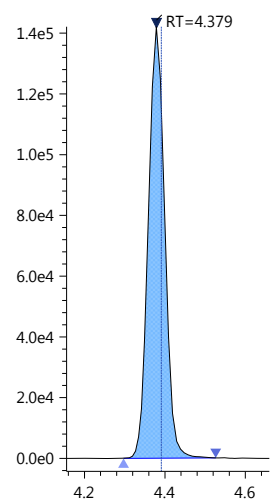
Q 399.00>80.00 (-) 1.29e4



PFHxS-180

Conc 3.5695
 Area 403364

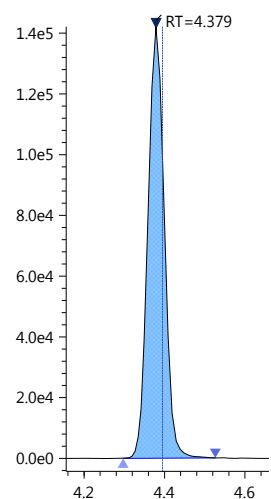
Q 402.70>84.05 (-) 1.42e5



PFHxS-180_IS

Conc 5.0000
 Area 403364

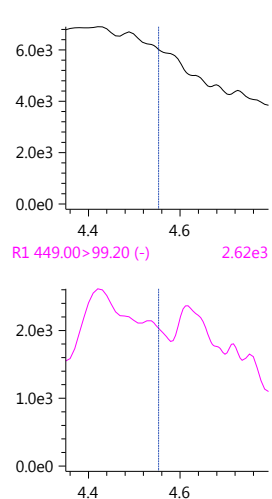
ISTD 402.70>84.05 (-) 1.42e5



PFHpS_1

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

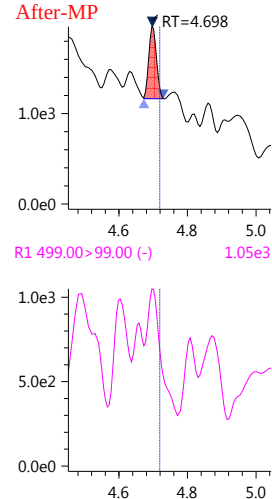
Q 449.00>80.15 (-) 6.90e3



PFOS_1

Conc 0.0107
 Area 1252
 R#1 55.92 (0.00)

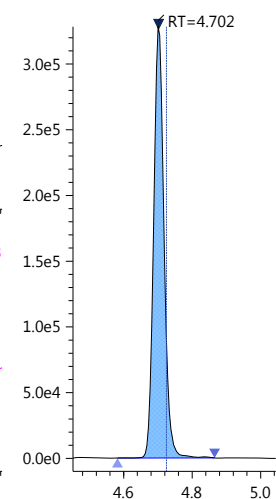
Q 499.00>80.00 (-) 1.96e3



PFOS-13C

Conc 4.3437
 Area 690898

Q 502.80>80.05 (-) 3.28e5



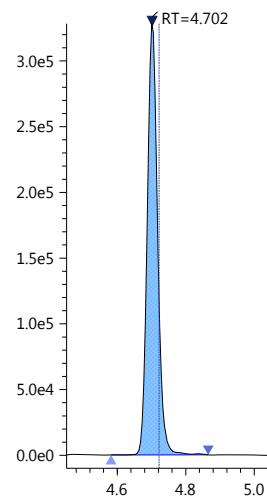
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PFOS-13C_IS

Conc 5.0000
Area 690898

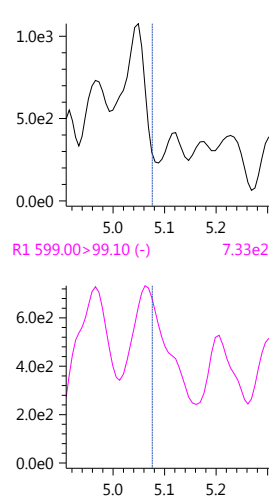
ISTD 502.80>80.05 (-)



PFDS_1

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

Q 599.00>79.90 (-)

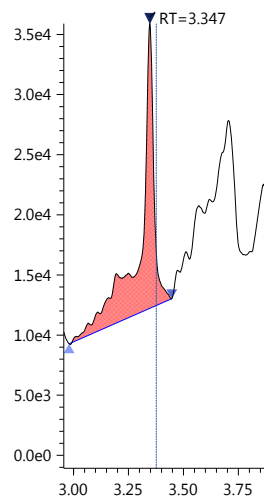


PFBA

Conc 0.7422
Area 99359

After-MP

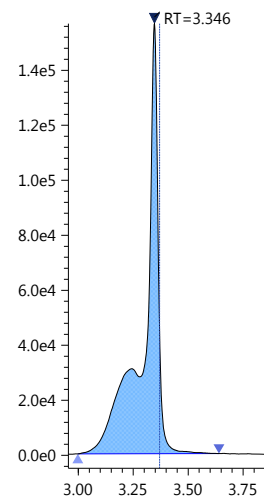
Q 213.00>169.10 (-)



PFBA-13C

Conc 1.2620
Area 685458

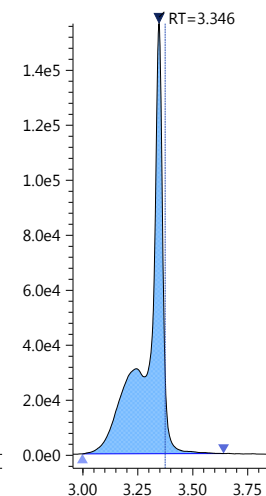
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 685458

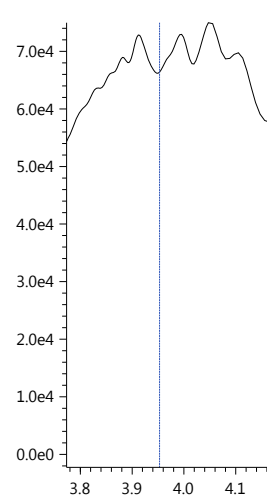
ISTD 216.90>172.15 (-)



PFPeA

Conc ----
Area ----

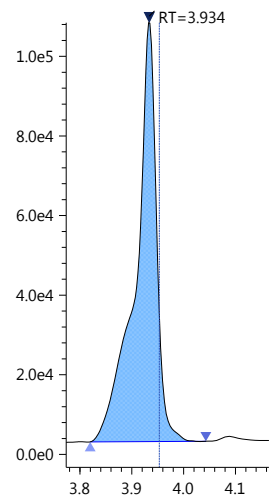
Q 263.05>219.10 (-)



PFPeA-13C

Conc 0.9666
Area 295441

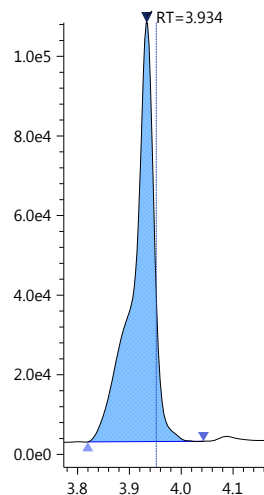
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 295441

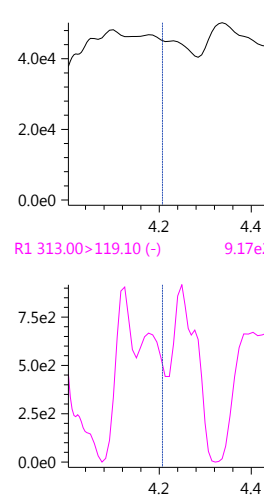
ISTD 267.90>223.00 (-)



PFHxA

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

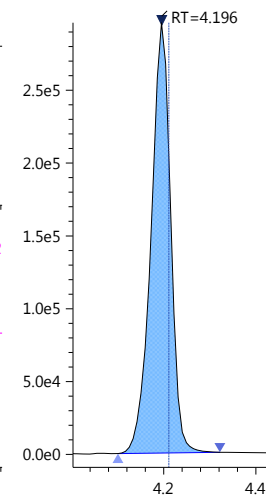
Q 313.00>269.00 (-)



PFHxA-13C

Conc 1.0453
Area 875207

Q 314.90>270.10 (-)



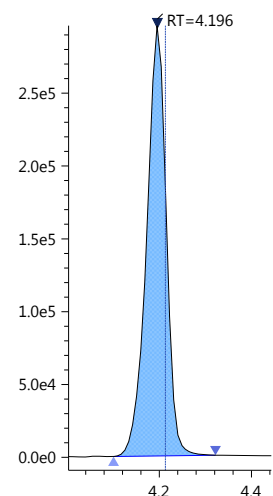
Insight Report

Printed at 5/5/2020 2:08:10 PM

PFHxA-13C_IS

Conc 5.0000
Area 875207

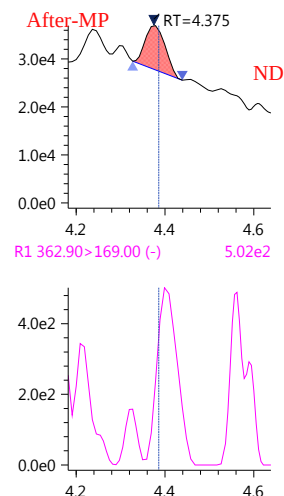
ISTD 314.90>270.10 (-) 2.96e5



PFHpA

Conc 0.1512
Area 28902
R#1 0.84 (0.00)

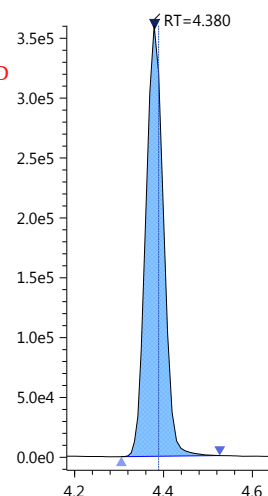
Q 362.90>319.00 (-) 3.70e4



PFHpA-13C

Conc 1.3242
Area 1003013

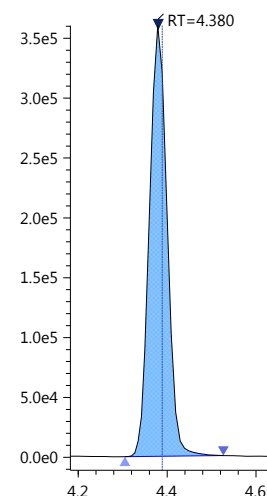
Q 366.90>322.10 (-) 3.61e5



PFHpA-13C_IS

Conc 5.0000
Area 1003013

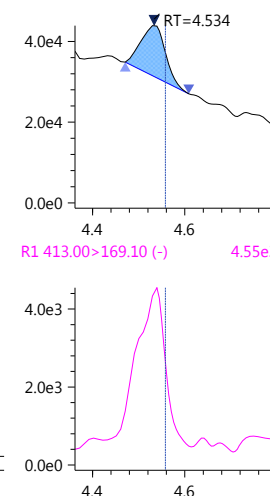
ISTD 366.90>322.10 (-) 3.61e5



PFOA

Conc 0.0822
Area 46437
R#1 27.71 (0.00)

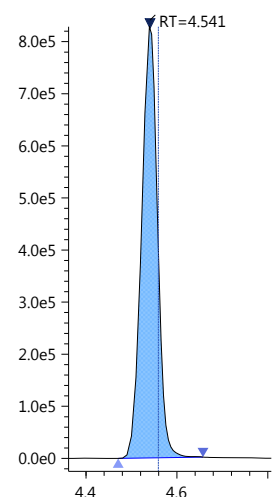
Q 413.00>369.00 (-) 4.39e4



PFOA-13C

Conc 2.1996
Area 2015535

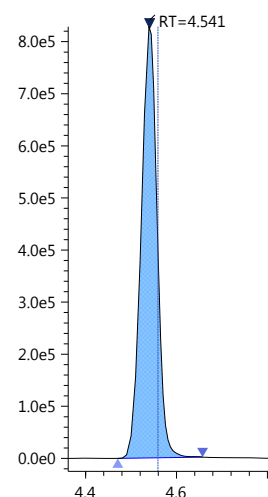
Q 416.80>372.05 (-) 8.29e5



PFOA-13C_IS

Conc 5.0000
Area 2015535

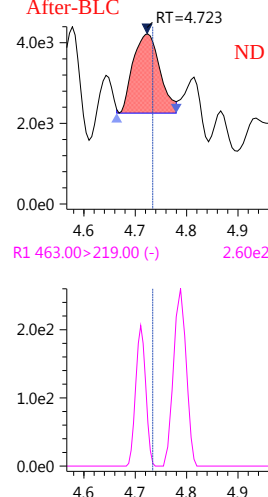
ISTD 416.80>372.05 (-) 8.29e5



PFNA

Conc 0.0139
Area 7154
R#1 0.00 (0.00)

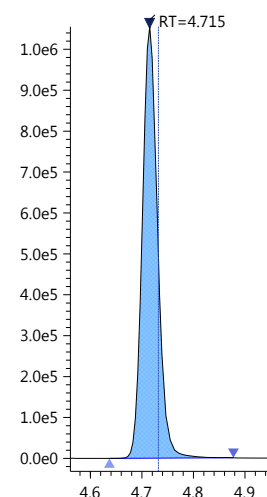
Q 463.00>418.90 (-) 4.40e3



PFNA-13C

Conc 3.1783
Area 2174285

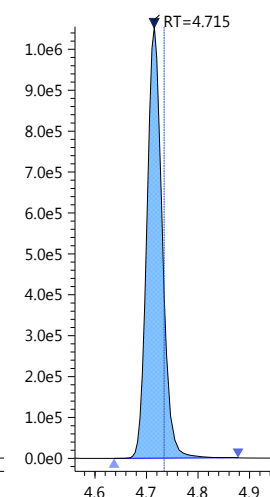
Q 467.80>423.00 (-) 1.06e6



PFNA-13C_IS

Conc 5.0000
Area 2174285

ISTD 467.80>423.00 (-) 1.06e6

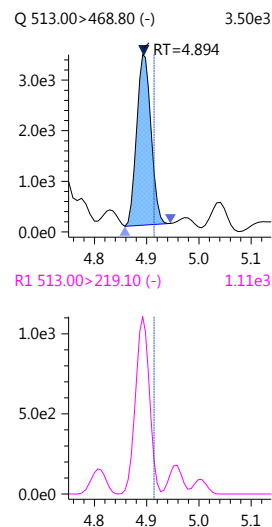


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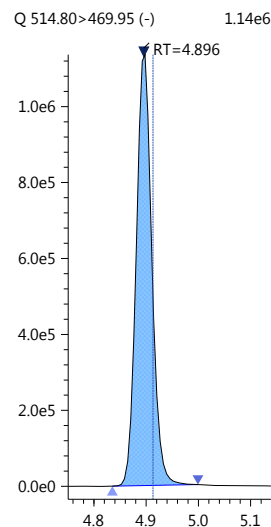
PFDA

Conc 0.0128
Area 6430
R#1 28.77 (0.00)



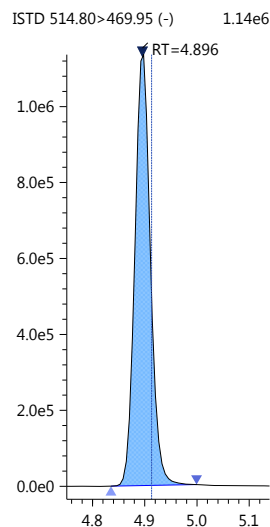
PFDA-13C

Conc 3.7974
Area 2357069



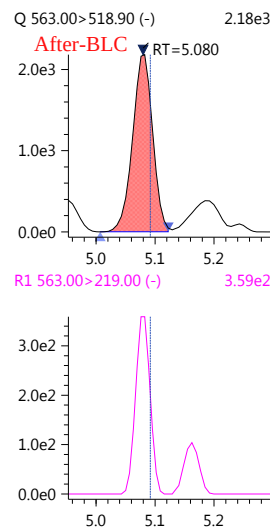
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Conc 5.0000
Area 2357069



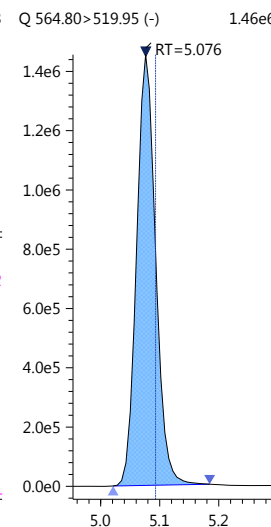
PFUnA

Conc -0.0037
Area 5185
R#1 17.03 (0.00)



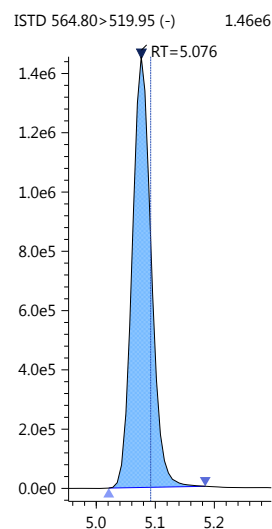
PFUnA-13C

Conc 4.2318
Area 3276418



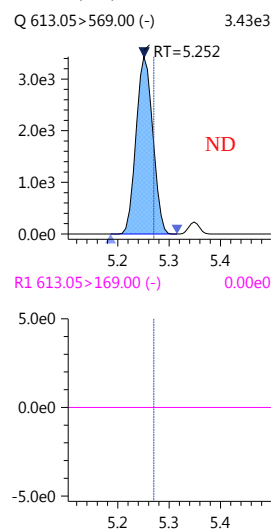
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Conc 5.0000
Area 3276418



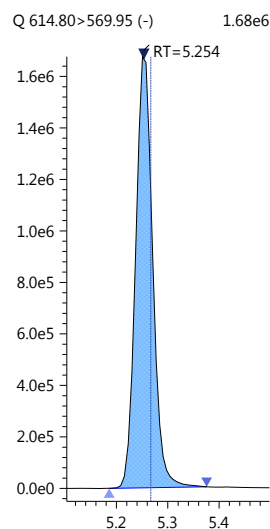
PFDaA

Conc 0.0308
Area 7774
R#1 0.00 (0.00)



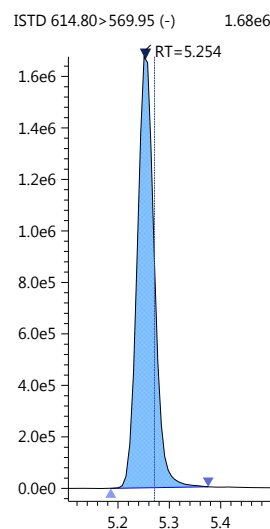
PFDaA-13C

Conc 4.2525
Area 3878732



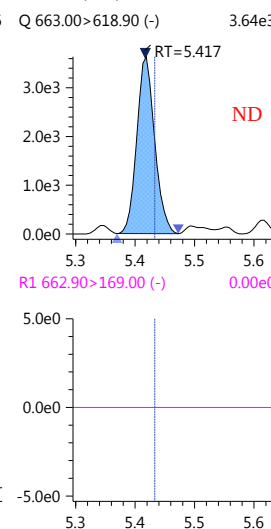
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Conc 5.0000
Area 3878732



PFTrDA

Conc 0.0093
Area 7591
R#1 0.00 (0.00)

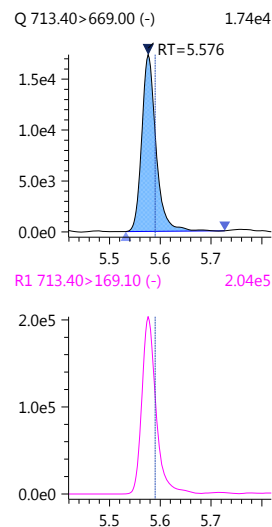


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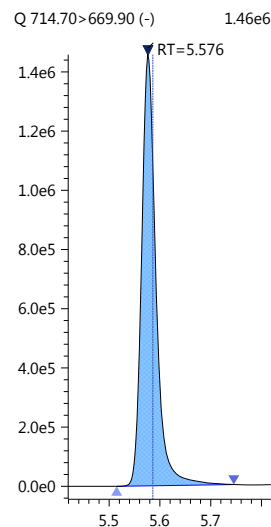
PFTeDA

Conc -0.0056
Area 33914
R#1 1176.93 (0.00)



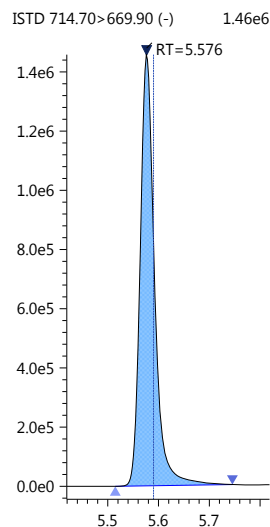
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Conc 3.9276
Area 2858269



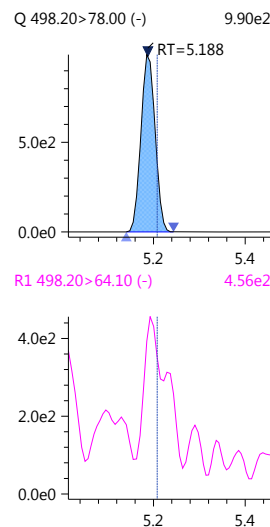
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Conc 5.0000
Area 2858269



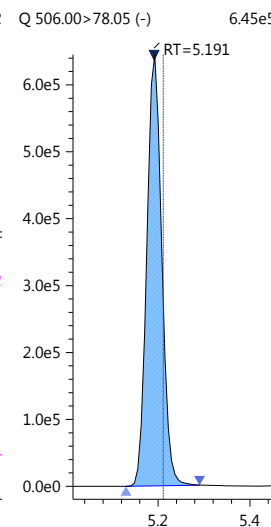
FOSA

Conc 0.0061
Area 2132
R#1 16.26 (0.00)



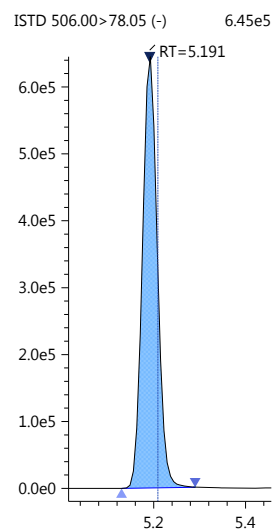
FOSA-13C

Conc 3.5069
Area 1455424



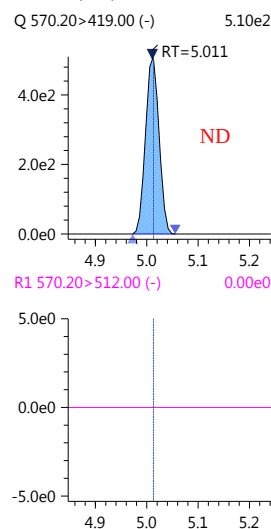
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Conc 5.0000
Area 1455424



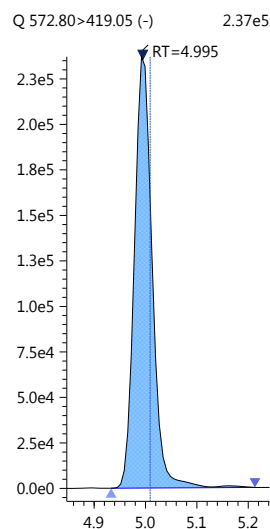
N-MeFOSAA

Conc 0.0131
Area 930
R#1 0.00 (0.00)



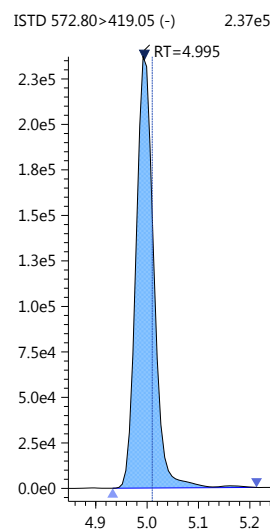
N-MeFOSAA-d3

Conc 4.8642
Area 573148



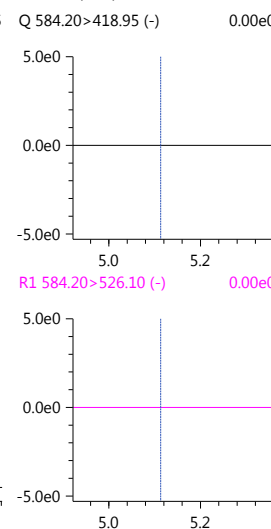
N-MeFOSAA-d3_IS

Conc 5.0000
Area 573148



N-EtFOSAA

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

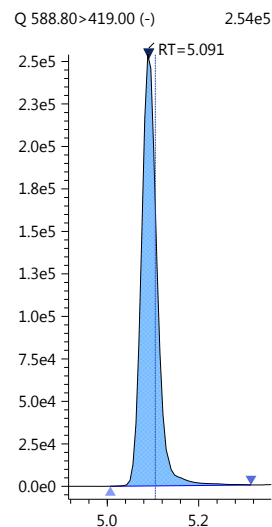


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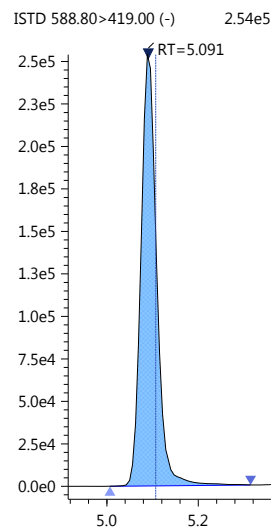
N-EtFOSAA-d5

Conc 5.5730
Area 605087



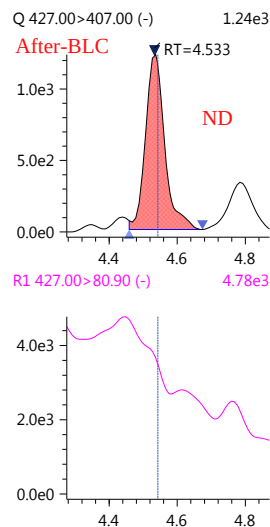
N-EtFOSAA-d5_IS

Conc 5.0000
Area 605087



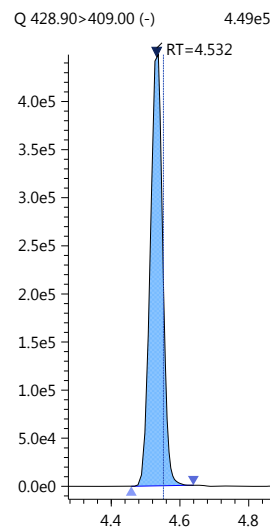
6_2-FTS_1

Conc 0.0184
Area 4827
R#1 5.78 (0.00)



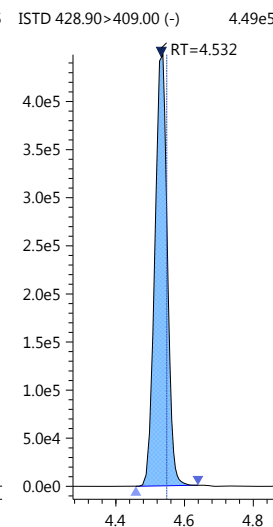
6_2-FTS-13C

Conc 16.4599
Area 1134125



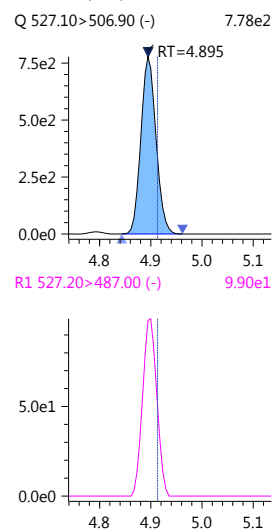
6_2-FTS-13C_IS

Conc 5.0000
Area 1134125



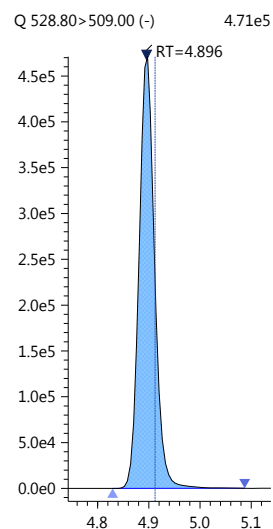
8_2-FTS_1

Conc 0.0098
Area 1598
R#1 12.66 (0.00)



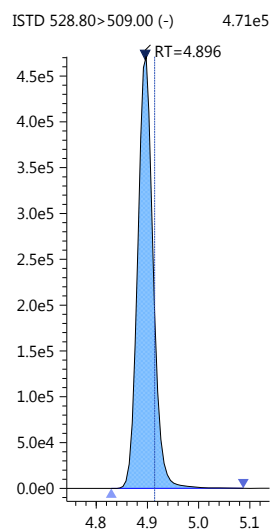
8_2-FTS-13C

Conc 17.7527
Area 991690



8_2-FTS-13C_IS

Conc 5.0000
Area 991690



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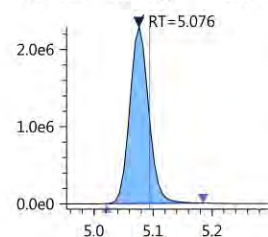
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200430_021

Sample ID: R2003266-001
Date acquired: 4/30/2020 12:40:55 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200430_b3\200430_021.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 2

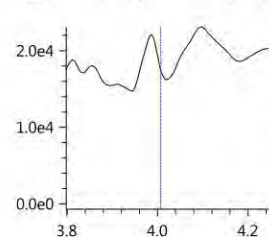
13C7-PFUnDA_IS

Conc 5.0000
Area 5134289
ISTD 570.00>525.00 (-)



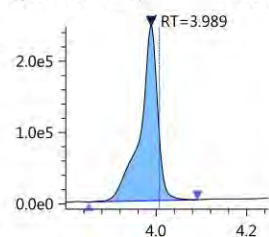
PFBS_1

Conc ----
Area ----
Q 299.00>80.00 (-)



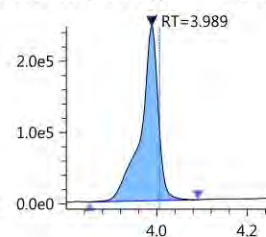
PFBS-13C

Conc 3.2756
Area 657504
Q 301.80>80.00 (-)



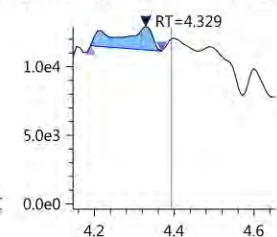
PFBS-13C_IS

Conc 5.0000
Area 657504
ISTD 301.80>80.00 (-)



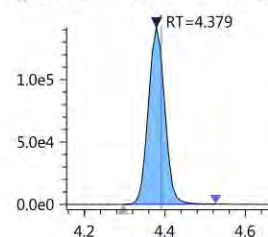
PFHxS_1

Conc 0.0794
Area 9670
Q 399.00>80.00 (-)



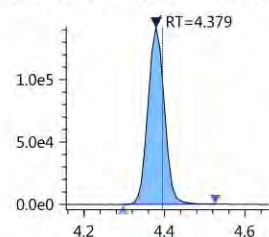
PFHxS-180

Conc 3.5695
Area 403364
Q 402.70>84.05 (-)



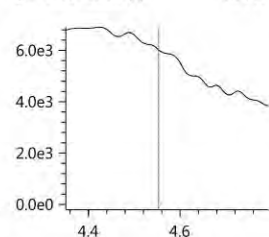
PFHxS-180_IS

Conc 5.0000
Area 403364
ISTD 402.70>84.05 (-)



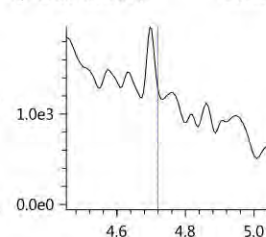
PFHpS_1

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



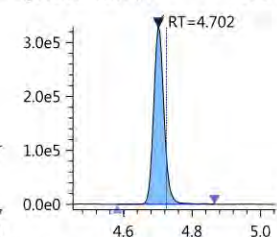
PFOS_1

Conc ----
Area ----
Q 499.00>80.00 (-)



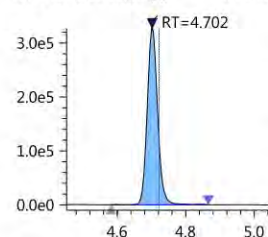
PFOS-13C

Conc 4.3437
Area 690898
Q 502.80>80.05 (-)



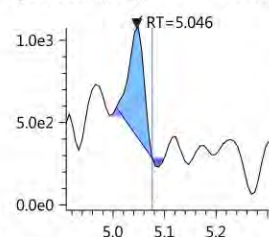
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Conc 5.0000
Area 690898
ISTD 502.80>80.05 (-)



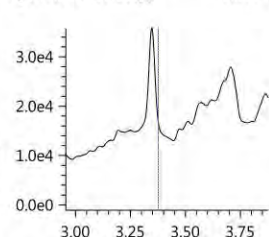
PFDS_1

Conc 0.0122
Area 1337
Q 599.00>79.90 (-)



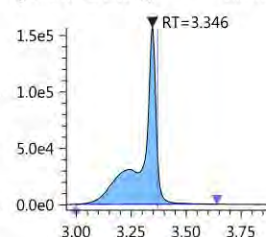
PFBA

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



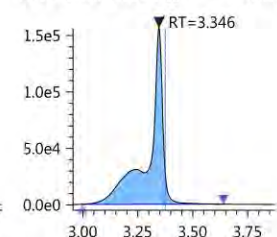
PFBA-13C

Conc 1.2620
Area 685458
Q 216.90>172.15 (-)



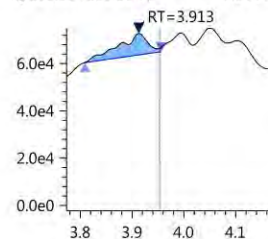
PFBA-13C_IS

Conc 5.0000
Area 685458
ISTD 216.90>172.15 (-)



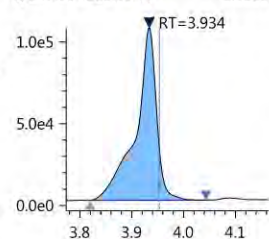
PFPeA

Conc 0.2649
Area 36402
Q 263.05>219.10 (-)



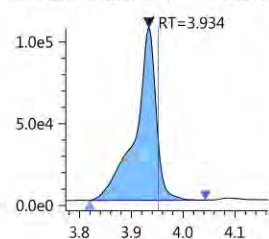
PFPeA-13C

Conc 0.9666
Area 295441
Q 267.90>223.00 (-)



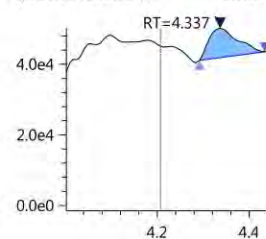
PFPeA-13C_IS

Conc 5.0000
Area 295441
ISTD 267.90>223.00 (-)



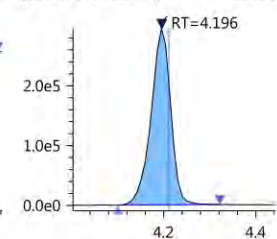
PFHxA

Conc 0.2019
Area 35752
Q 313.00>269.00 (-)



PFHxA-13C

Conc 1.0453
Area 875207
Q 314.90>270.10 (-)



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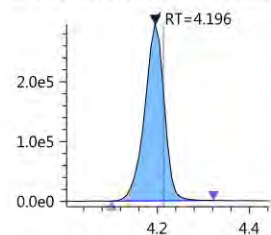
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PFHxA-13C_IS

Conc 5.0000

Area 875207

ISTD 314.90>270.10 (-) 2.96e5

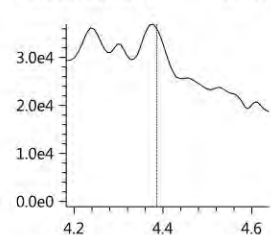


PFHpA

Conc ----

Area ----

Q 362.90>319.00 (-) 3.70e4

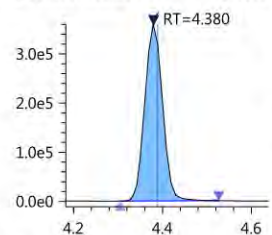


PFHpA-13C

Conc 1.3242

Area 1003013

Q 366.90>322.10 (-) 3.61e5

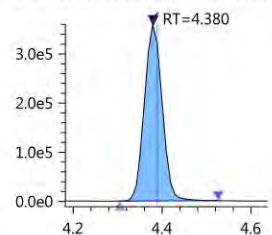


PFHpA-13C_IS

Conc 5.0000

Area 1003013

ISTD 366.90>322.10 (-) 3.61e5

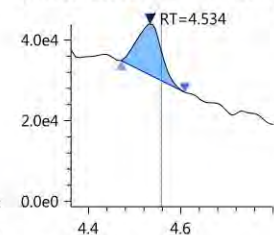


PFOA

Conc 0.0822

Area 46437

Q 413.00>369.00 (-) 4.39e4

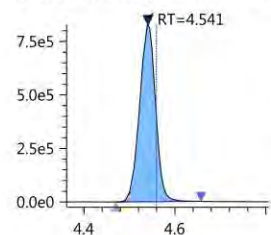


PFOA-13C

Conc 2.1996

Area 2015535

Q 416.80>372.05 (-) 8.29e5

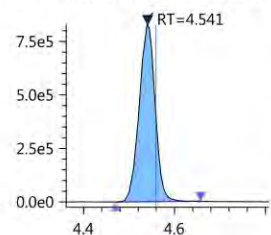


PFOA-13C_IS

Conc 5.0000

Area 2015535

ISTD 416.80>372.05 (-) 8.29e5

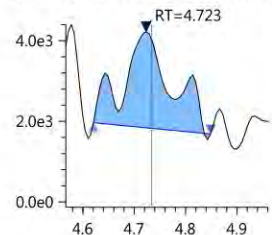


PFNA

Conc 0.0351

Area 15380

Q 463.00>418.90 (-) 4.40e3

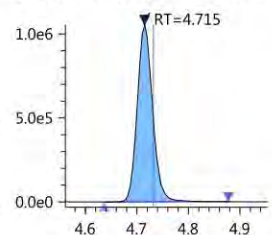


PFNA-13C

Conc 3.1783

Area 2174285

Q 467.80>423.00 (-) 1.06e6

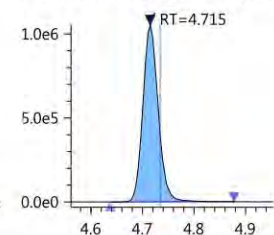


PFNA-13C_IS

Conc 5.0000

Area 2174285

ISTD 467.80>423.00 (-) 1.06e6

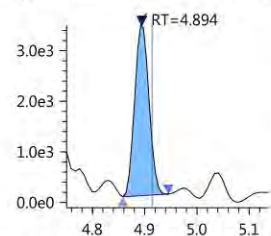


PFDA

Conc 0.0128

Area 6430

Q 513.00>468.80 (-) 3.50e3

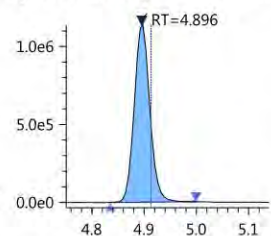


PFDA-13C

Conc 3.7974

Area 2357069

Q 514.80>469.95 (-) 1.14e6

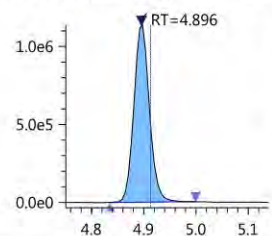


PFDA-13C_IS

Conc 5.0000

Area 2357069

ISTD 514.80>469.95 (-) 1.14e6

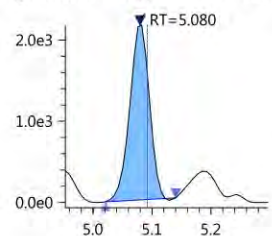


PFUnA

Conc -0.0040

Area 5006

Q 563.00>518.90 (-) 2.18e3

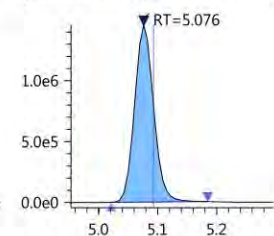


PFUnA-13C

Conc 4.2318

Area 3276418

Q 564.80>519.95 (-) 1.46e6

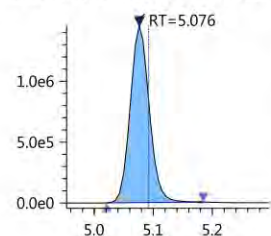


PFUnA-13C_IS

Conc 5.0000

Area 3276418

ISTD 564.80>519.95 (-) 1.46e6

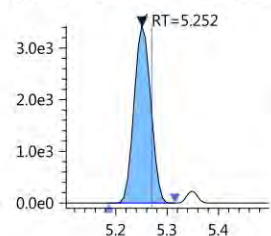


PFDaA

Conc 0.0308

Area 7774

Q 613.05>569.00 (-) 3.43e3

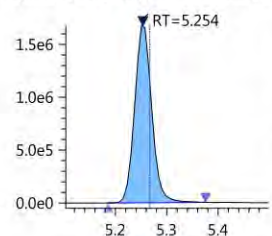


PFDaA-13C

Conc 4.2525

Area 3878732

Q 614.80>569.95 (-) 1.68e6

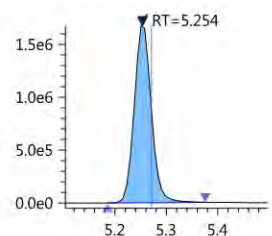


PFDaA-13C_IS

Conc 5.0000

Area 3878732

ISTD 614.80>569.95 (-) 1.68e6

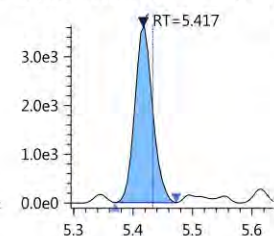


PFTrDA

Conc 0.0093

Area 7591

Q 663.00>618.90 (-) 3.64e3

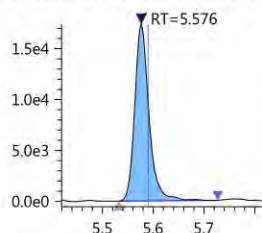


Insight Report

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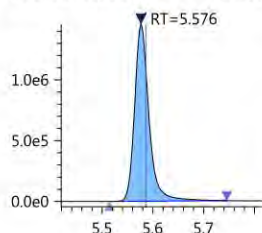
PFTeDA

Conc -0.0056
Area 33914
Q 713.40>669.00 (-)



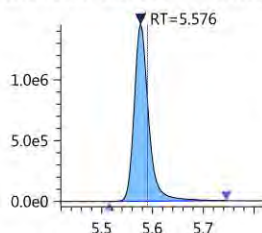
PFTeDA-13C

Conc 3.9276
Area 2858269
Q 714.70>669.90 (-)



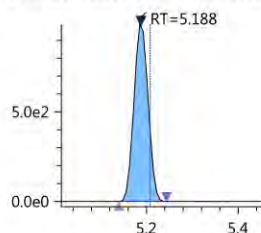
PFTeDA-13C_IS

Conc 5.0000
Area 2858269
ISTD 714.70>669.90 (-)



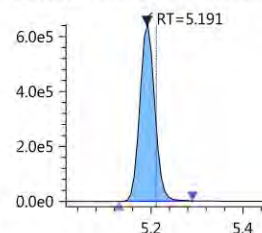
FOSA

Conc 0.0061
Area 2132
Q 498.20>78.00 (-)



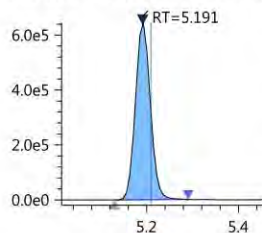
FOSA-13C

Conc 3.5069
Area 1455424
Q 506.00>78.05 (-)



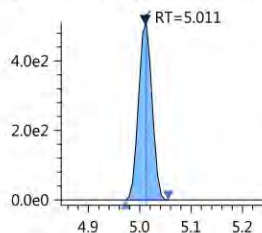
FOSA-13C_IS

Conc 5.0000
Area 1455424
ISTD 506.00>78.05 (-)



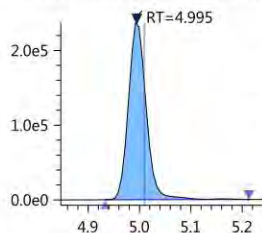
N-MeFOSAA

Conc 0.0131
Area 930
Q 570.20>419.00 (-)



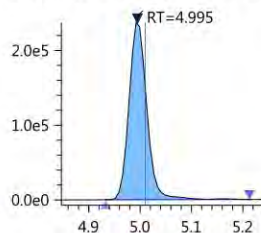
N-MeFOSAA-d3

Conc 4.8642
Area 573148
Q 572.80>419.05 (-)



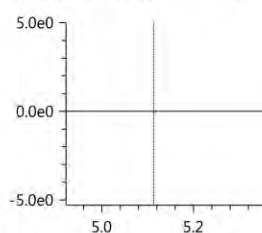
N-MeFOSAA-d3_IS

Conc 5.0000
Area 573148
ISTD 572.80>419.05 (-)



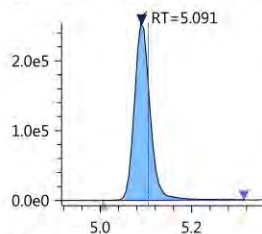
N-EtFOSAA

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



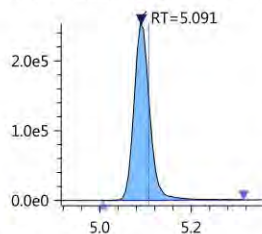
N-EtFOSAA-d5

Conc 5.5730
Area 605087
Q 588.80>419.00 (-)



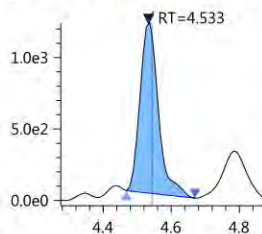
N-EtFOSAA-d5_IS

Conc 5.0000
Area 605087
ISTD 588.80>419.00 (-)



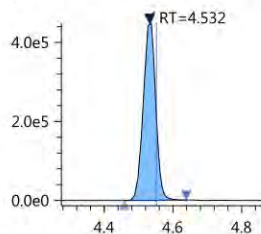
6_2-FTS_1

Conc 0.0170
Area 4474
Q 427.00>407.00 (-)



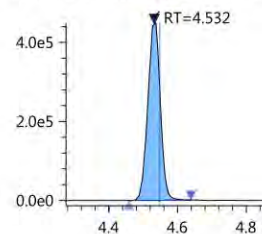
6_2-FTS-13C

Conc 16.4599
Area 1134125
Q 428.90>409.00 (-)



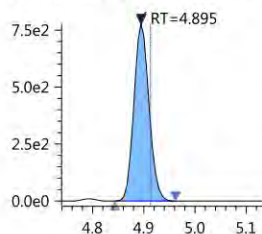
6_2-FTS-13C_IS

Conc 5.0000
Area 1134125
ISTD 428.90>409.00 (-)



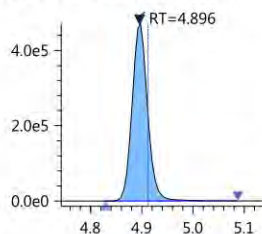
8_2-FTS_1

Conc 0.0098
Area 1598
Q 527.10>506.90 (-)



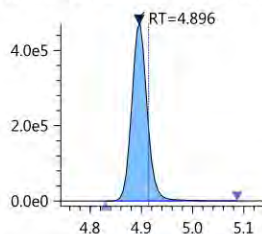
8_2-FTS-13C

Conc 17.7527
Area 991690
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
Area 991690
ISTD 528.80>509.00 (-)



Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200428_b4\200428_057
Lab ID: R2003266-002
RunType: N/A
Matrix: Water

Date Acquired: 4/29/20 00:39
Batch ID: 678319
Analysis Method: PFC/537M/PFAS

Validations

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

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	13C2-6:2 FTS	264	10	226	High bias ND
	13C2-8:2 FTS	227	10	202	High bias ND

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200428_b4\200428_057	Instrument:	K-LCMS-06
Acqu Date:	4/29/20 00:39	Vial:	6
Run Type:	N/A	Dilution:	1
Lab ID:	R2003266-002	Raw Units:	ng/mL

Bottle ID:	R2003266-002.01	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678319	Prep Lot:	357465	Report Group:	R2003266
Analysis	PFC/537M	Prep Method:	ALS SOP		
		Prep Date:	4/27/20		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.085	-0.01	3585765	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.993	-0.02	692416	4.9392	99	20 - 109	Y
18O2-PFHxS	4.382	-0.01	457453	5.7964	116	26 - 122	Y
13C4-PFOS	4.708	-0.01	631758	5.6871	114	25 - 121	Y
13C4-PFBA	3.352	-0.03	1063485	2.8036	56	27 - 124	Y
13C5-PFPeA	3.938	-0.02	410992	1.9253	39	27 - 138	Y
13C2-PFHxA	4.198	-0.01	1161608	1.9865	40	28 - 132	Y
13C4-PFHpA	4.382	-0.01	1101803	2.0828	42	19 - 139	Y
13C4-PFOA	4.547	-0.01	1676946	2.6205	52	22 - 130	Y
13C5-PFNA	4.721	-0.01	1720539	3.6012	72	20 - 127	Y
13C2-PFDA	4.903	-0.01	1684033	3.8847	78	24 - 125	Y
13C2-PFUnDA	5.085	-0.01	2375958	4.3941	88	22 - 125	Y
13C2-PFDoDA	5.261	-0.01	2859186	4.4884	90	19 - 122	Y
13C2-PFTeDA	5.582	-0.01	2395548	4.7133	94	13 - 124	Y
13C8-FOSA	5.198	0.00	985839	3.4013	68	18 - 109	Y
D3-MeFOSAA	5.004	0.00	344415	4.1853	84	9 - 123	Y
D5-EtFOSAA	5.099	0.00	361650	4.7693	95	12 - 126	Y
13C2-6:2 FTS	4.537	-0.01	635916	13.2149	264 *	10 - 226	Y
13C2-8:2 FTS	4.903	-0.01	442814	11.3503	227 *	10 - 202	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	0		0	0	0	U	Y
Perfluorohexane sulfonic acid (PFHxS)	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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Data File: J:\LCMS06\Data\200428_b4\200428_057
Acqu Date: 4/29/20 00:39
Run Type: N/A
Lab ID: R2003266-002

Instrument: K-LCMS06
Vial: 6
Dilution: 1
Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	0		0	0	0	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.355	-0.03	208422	1.0035	29		Y
Perfluoropentanoic acid (PFPeA)	0		0	0	0	U	Y
Perfluorohexanoic acid (PFHxA)	0		0	0	0	U	Y
Perfluoroheptanoic acid (PFHpA)	0		0	0	0	U	Y
Perfluorooctanoic acid (PFOA)	4.548	-0.01	18261	0.0344	1.0	J	Y
Perfluorononanoic acid (PFNA)	4.717	-0.01	7245	0.0191	0.56	U	Y
Perfluorodecanoic acid (PFDA)	4.898	-0.01	4167	0.0117	0.34	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.082	-0.01	5611	0.0013	0.038	U	Y
Perfluorododecanoic acid (PFDoDA)	5.273	+0.01	3421	0.0237	0.69	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.431	0.00	4780	0.0059	0.17	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.582	-0.01	31873	0.0109	0.32	U	Y
Perfluorooctane sulfonamide (FOSA)	5.199		2255	0.0095	0.28	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.999	-0.01	613	0.0143	0.42	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.536	-0.01	1806	0.0123	0.36	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.905	-0.01	450	0.0062	0.18	J	Y

Prep Amount: 275.0000 mL
Prep Final Amount: 8.00 mL

Dilution: 1
Basis Factor: 100.00

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

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

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

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Insight Report

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200428_057

Sample ID: R2003266-002

Date acquired: 4/29/2020 12:39:33 AM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200428_b4\200428_057.lcd

Vial: 41 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.085	3585765	3585765	1	5.0000	ng/mL	----
PFBS_1	ND(W/B)	----	----	692416	2	----	ng/mL	----
PFBS-13C	Auto	3.993	692416	3585765	1	4.9392	ng/mL	----
PFBS-13C_IS	Auto	3.993	692416	692416	2	5.0000	ng/mL	----
PFHxS_1	ND(W/B)	----	----	457453	3	----	ng/mL	----
PFHxS-18O	Auto	4.382	457453	3585765	1	5.7964	ng/mL	----
PFHxS-18O_IS	Auto	4.382	457453	457453	3	5.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	457453	3	----	ng/mL	----
PFOS_1	ND(W/B)	----	----	631758	4	----	ng/mL	----
PFOS-13C	Auto	4.708	631758	3585765	1	5.6871	ng/mL	----
PFOS-13C_IS	Auto	4.708	631758	631758	4	5.0000	ng/mL	----
PFDS_1	ND(W/B)	----	----	631758	4	----	ng/mL	----
PFBA	M	3.355	208422	1063485	5	1.0035	ng/mL	----
PFBA-13C	Auto	3.352	1063485	3585765	1	2.8036	ng/mL	----
PFBA-13C_IS	Auto	3.352	1063485	1063485	5	5.0000	ng/mL	----
PFPeA	ND(W/B)	----	----	410992	6	----	ng/mL	----
PFPeA-13C	Auto	3.938	410992	3585765	1	1.9253	ng/mL	----
PFPeA-13C_IS	Auto	3.938	410992	410992	6	5.0000	ng/mL	----
PFHxA	ND(W/B)	----	----	1161608	7	----	ng/mL	----
PFHxA-13C	Auto	4.198	1161608	3585765	1	1.9865	ng/mL	----
PFHxA-13C_IS	Auto	4.198	1161608	1161608	7	5.0000	ng/mL	----
PFHpA	ND(W/B)	----	----	1101803	8	----	ng/mL	----
PFHpA-13C	Auto	4.382	1101803	3585765	1	2.0828	ng/mL	----
PFHpA-13C_IS	Auto	4.382	1101803	1101803	8	5.0000	ng/mL	----
PFOA	M	4.548	18261	1676946	9	0.0344	ng/mL	----
PFOA-13C	Auto	4.547	1676946	3585765	1	2.6205	ng/mL	----
PFOA-13C_IS	Auto	4.547	1676946	1676946	9	5.0000	ng/mL	----
PFNA	M	4.717	7245	1720539	10	0.0191	ng/mL	----
PFNA-13C	Auto	4.721	1720539	3585765	1	3.6012	ng/mL	----
PFNA-13C_IS	Auto	4.721	1720539	1720539	10	5.0000	ng/mL	----
PFDA	Auto	4.898	4167	1684033	11	0.0117	ng/mL	----
PFDA-13C	Auto	4.903	1684033	3585765	1	3.8847	ng/mL	----
PFDA-13C_IS	Auto	4.903	1684033	1684033	11	5.0000	ng/mL	----
PFUnA	Auto	5.082	5611	2375958	12	0.0013	ng/mL	----
PFUnA-13C	Auto	5.085	2375958	3585765	1	4.3941	ng/mL	----
PFUnA-13C_IS	Auto	5.085	2375958	2375958	12	5.0000	ng/mL	----
PFDoA	Auto	5.273	3421	2859186	13	0.0237	ng/mL	----
PFDoA-13C	Auto	5.261	2859186	3585765	1	4.4884	ng/mL	----
PFDoA-13C_IS	Auto	5.261	2859186	2859186	13	5.0000	ng/mL	----
PFTrDA	Auto	5.431	4780	2395548	14	0.0059	ng/mL	----
PFTeDA	Auto	5.582	31873	2395548	14	0.0109	ng/mL	----
PFTeDA-13C	Auto	5.582	2395548	3585765	1	4.7133	ng/mL	----
PFTeDA-13C_IS	Auto	5.582	2395548	2395548	14	5.0000	ng/mL	----
FOSA	Auto	5.199	2255	985839	16	0.0095	ng/mL	----
FOSA-13C	Auto	5.198	985839	3585765	1	3.4013	ng/mL	----
FOSA-13C_IS	Auto	5.198	985839	985839	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	4.999	613	344415	21	0.0143	ng/mL	----
N-MeFOSAA-d3	Auto	5.004	344415	3585765	1	4.1853	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.004	344415	344415	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	361650	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.099	361650	3585765	1	4.7693	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.099	361650	361650	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.536	1806	635916	24	0.0123	ng/mL	----
6_2-FTS-13C	Auto	4.537	635916	3585765	1	13.2149	ng/mL	----
6_2-FTS-13C_IS	Auto	4.537	635916	635916	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.905	450	442814	25	0.0062	ng/mL	----
8_2-FTS-13C	Auto	4.903	442814	3585765	1	11.3503	ng/mL	----
8_2-FTS-13C_IS	Auto	4.903	442814	442814	25	5.0000	ng/mL	----

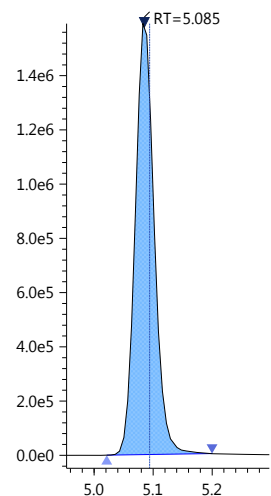
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13C7-PFUnDA_IS

Conc 5.0000
Area 3585765

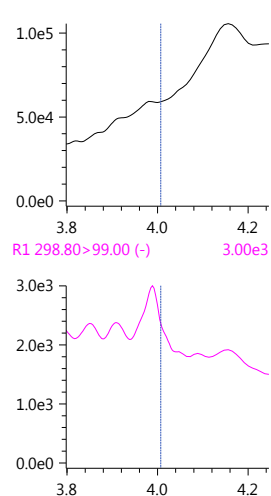
ISTD 570.00>525.00 (-) 1.59e6



PFBS_1

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

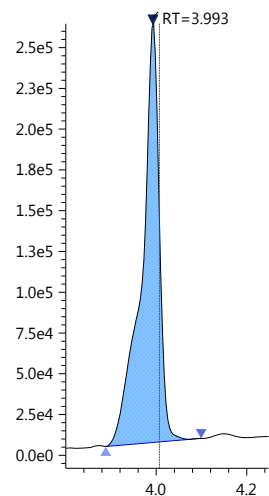
Q 299.00>80.00 (-)



PFBS-13C

Conc 4.9392
Area 692416

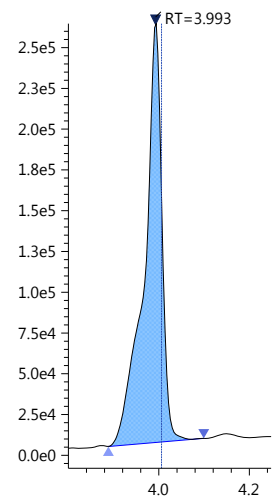
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
Area 692416

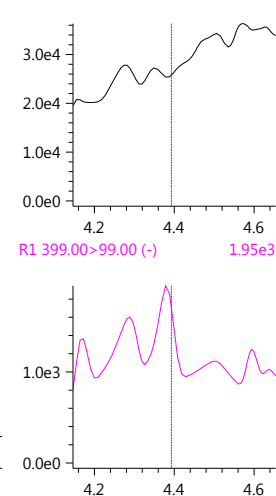
ISTD 301.80>80.00 (-) 2.65e5



PFHxS_1

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

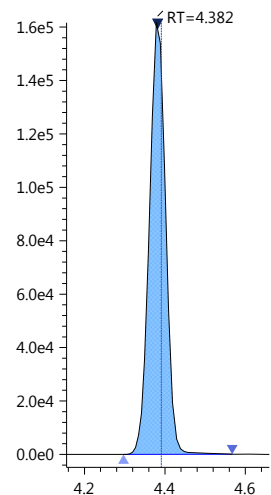
Q 399.00>80.00 (-) 3.63e4



PFHxS-180

Conc 5.7964
Area 457453

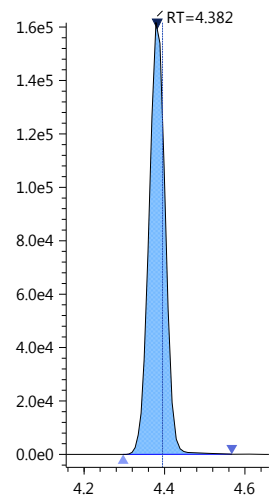
Q 402.70>84.05 (-) 1.62e5



PFHxS-180_IS

Conc 5.0000
Area 457453

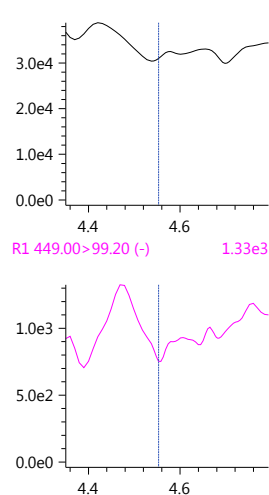
ISTD 402.70>84.05 (-) 1.62e5



PFHpS_1

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

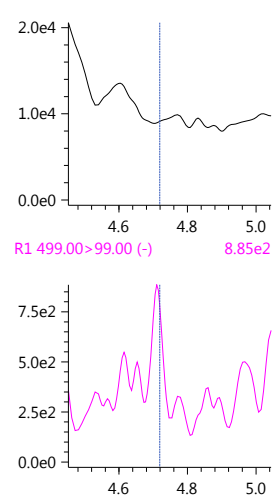
Q 449.00>80.15 (-)



PFOS_1

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

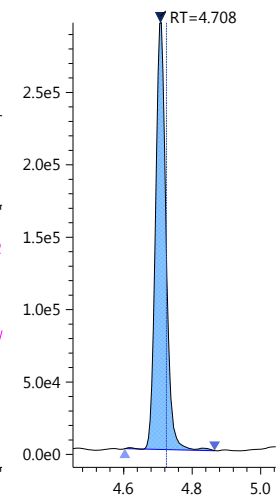
Q 499.00>80.00 (-) 2.06e4



PFOS-13C

Conc 5.6871
Area 631758

Q 502.80>80.05 (-) 2.98e5



Insight Report

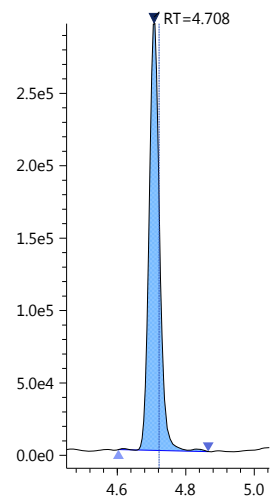
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PFOS-13C_IS

Conc 5.0000
Area 631758

ISTD 502.80>80.05 (-)

2.98e5

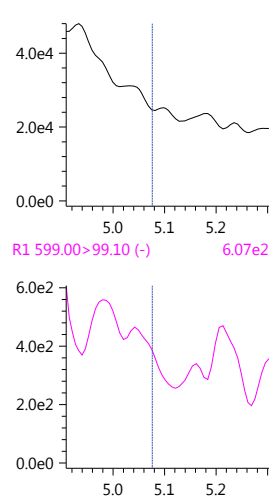


PFDS_1

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

Q 599.00>79.90 (-)

4.80e4



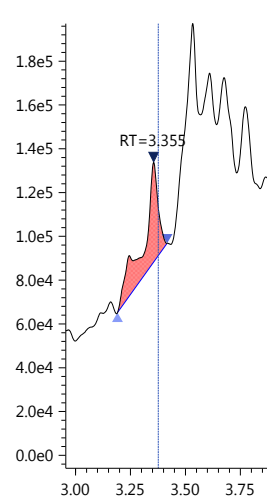
PFBA

Conc 1.0035
Area 208422

After-WP

Q 213.00>169.10 (-)

1.97e5

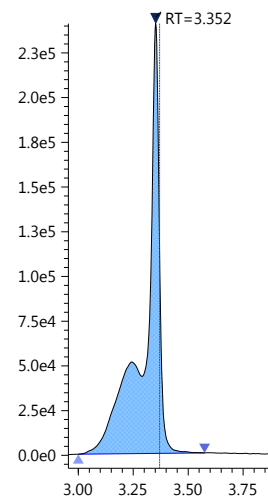


PFBA-13C

Conc 2.8036
Area 1063485

Q 216.90>172.15 (-)

2.41e5

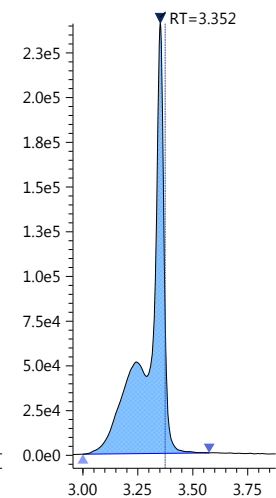


PFBA-13C_IS

Conc 5.0000
Area 1063485

ISTD 216.90>172.15 (-)

2.41e5

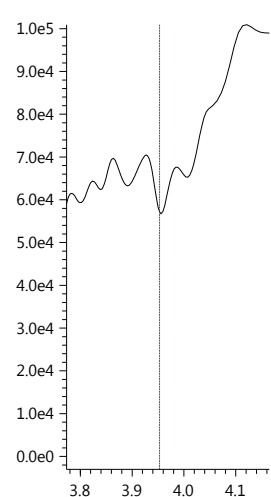


PFPeA

Conc ----
Area ----

Q 263.05>219.10 (-)

1.01e5

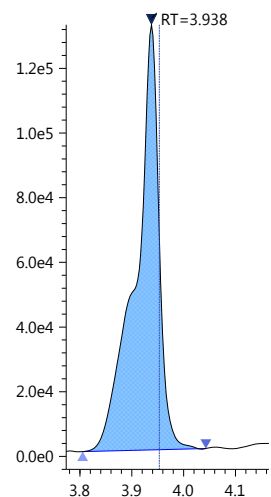


PFPeA-13C

Conc 1.9253
Area 410992

Q 267.90>223.00 (-)

1.33e5

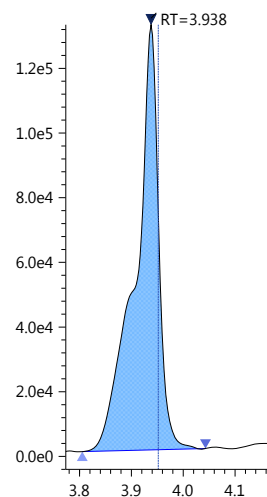


PFPeA-13C_IS

Conc 5.0000
Area 410992

ISTD 267.90>223.00 (-)

1.33e5

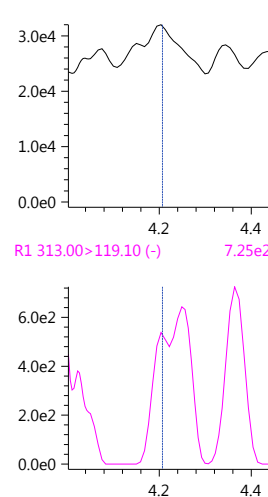


PFHxA

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

Q 313.00>269.00 (-)

3.20e4

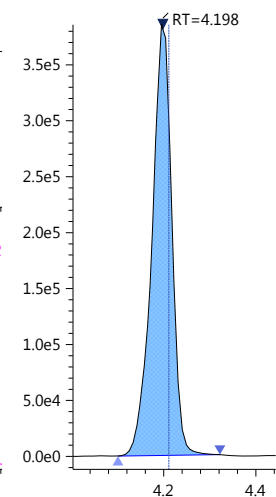


PFHxA-13C

Conc 1.9865
Area 1161608

Q 314.90>270.10 (-)

3.86e5



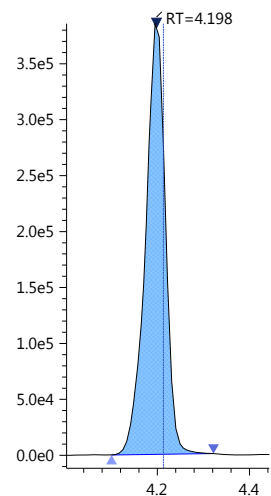
Insight Report

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PFHxA-13C_IS

Conc 5.0000
 Area 1161608

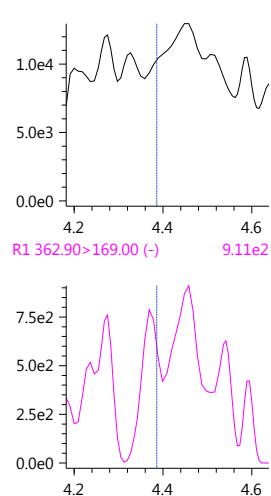
ISTD 314.90>270.10 (-) 3.86e5



PFHpA

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

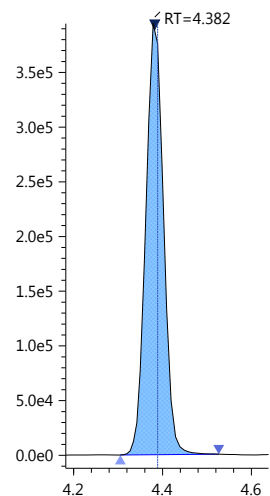
Q 362.90>319.00 (-) 1.30e4



PFHpA-13C

Conc 2.0828
 Area 1101803

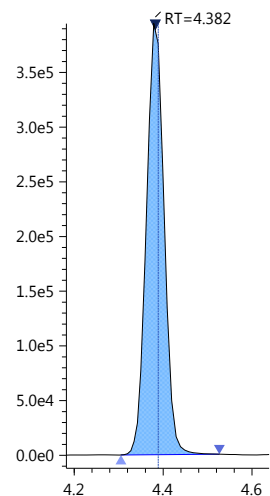
Q 366.90>322.10 (-) 3.95e5



PFHpA-13C_IS

Conc 5.0000
 Area 1101803

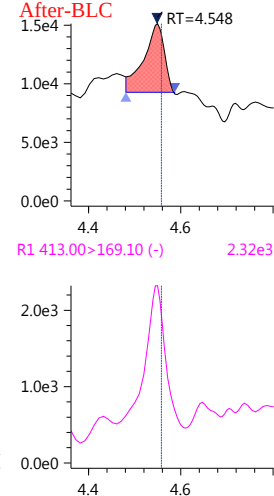
ISTD 366.90>322.10 (-) 3.95e5



PFOA

Conc 0.0344
 Area 18261
 R#1 29.12 (0.00)

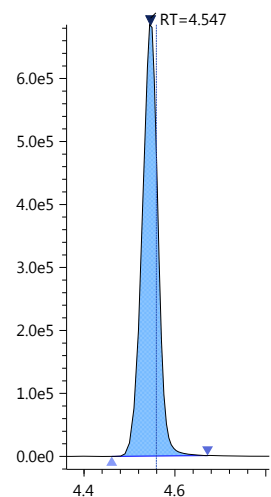
Q 413.00>369.00 (-) 1.51e4



PFOA-13C

Conc 2.6205
 Area 1676946

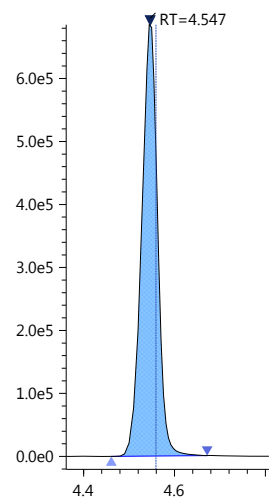
Q 416.80>372.05 (-) 6.85e5



PFOA-13C_IS

Conc 5.0000
 Area 1676946

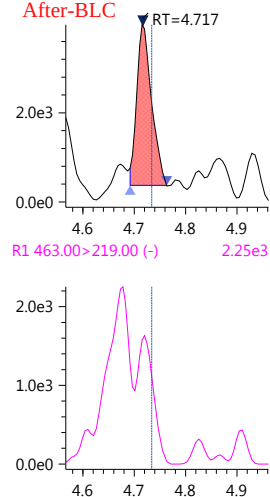
ISTD 416.80>372.05 (-) 6.85e5



PFNA

Conc 0.0191
 Area 7245
 R#1 29.58 (0.00)

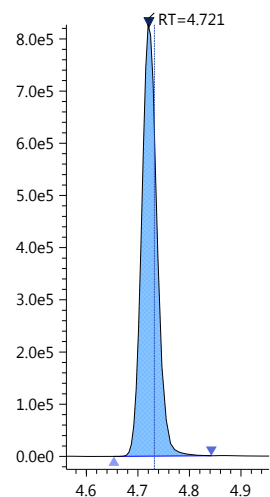
Q 463.00>418.90 (-) 3.98e3



PFNA-13C

Conc 3.6012
 Area 1720539

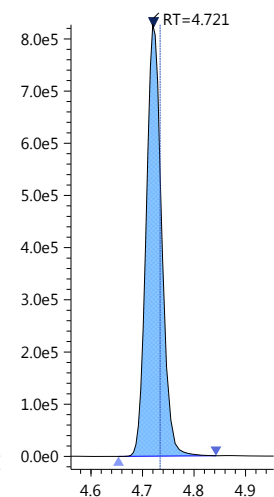
Q 467.80>423.00 (-) 8.27e5



PFNA-13C_IS

Conc 5.0000
 Area 1720539

ISTD 467.80>423.00 (-) 8.27e5

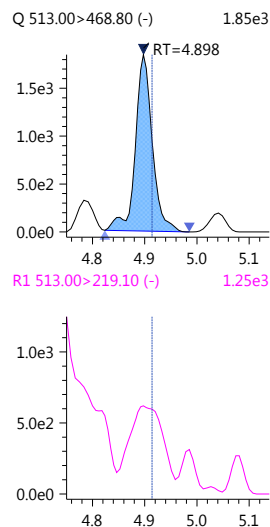


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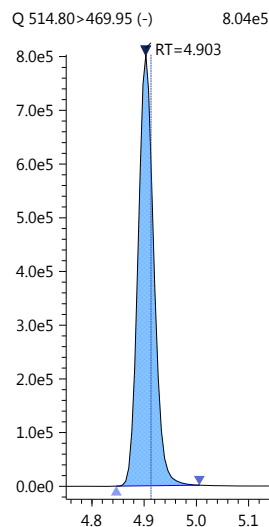
PFDA

Conc 0.0117
 Area 4167
 R#1 5.96 (0.00)



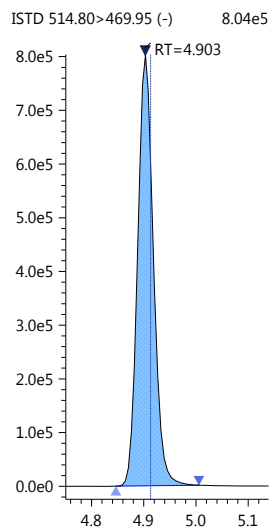
PFDA-13C

Conc 3.8847
 Area 1684033



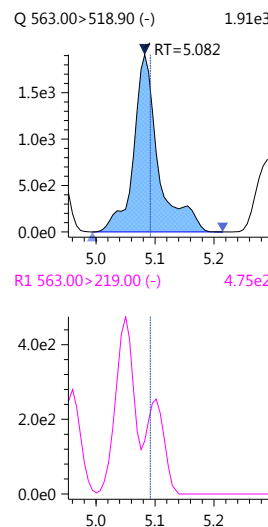
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Conc 5.0000
 Area 1684033



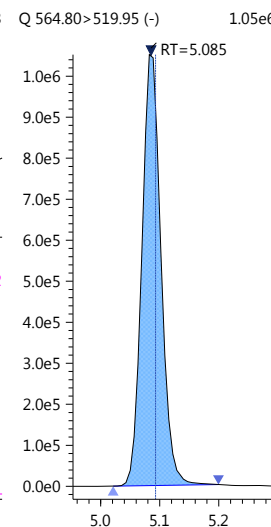
PFUnA

Conc 0.0013
 Area 5611
 R#1 6.70 (0.00)



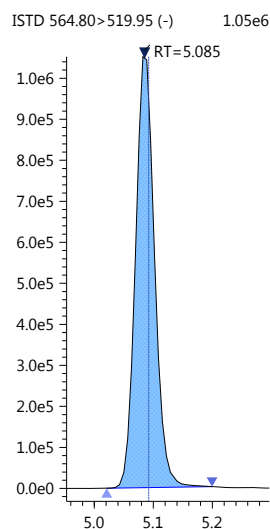
PFUnA-13C

Conc 4.3941
 Area 2375958



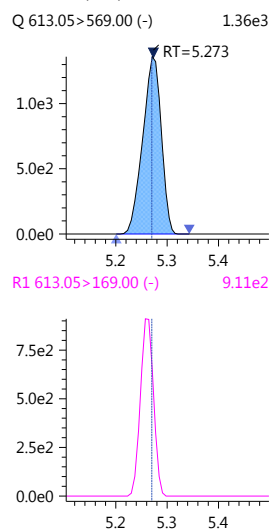
PFUnA-13C_IS

Conc 5.0000
 Area 2375958



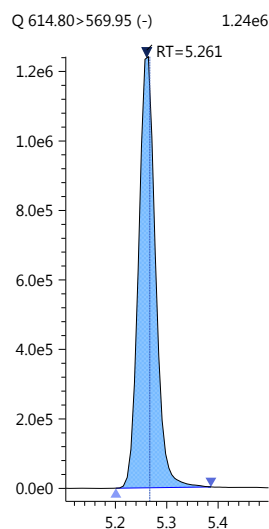
PFDaA

Conc 0.0237
 Area 3421
 R#1 47.41 (0.00)



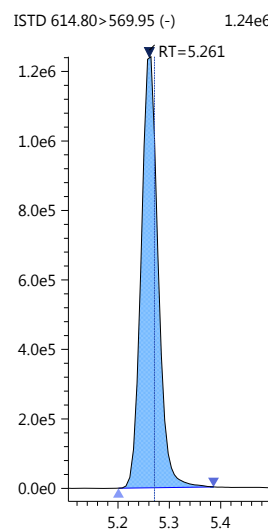
PFDaA-13C

Conc 4.4884
 Area 2859186



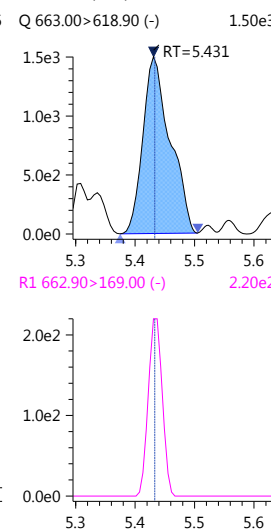
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Conc 5.0000
 Area 2859186



PFTrDA

Conc 0.0059
 Area 4780
 R#1 15.38 (0.00)

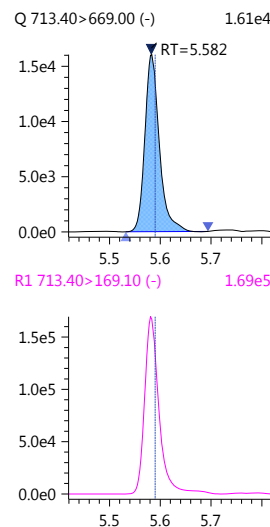


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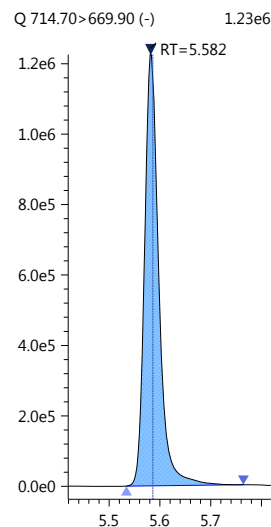
PFTeDA

Conc 0.0109
Area 31873
R#1 1058.88 (0.00)



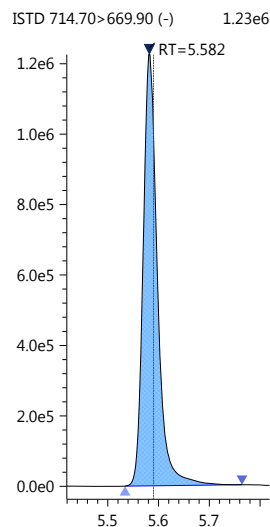
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Conc 4.7133
Area 2395548



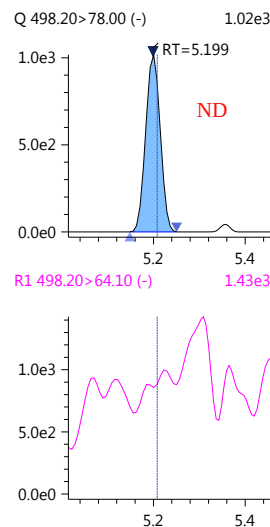
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Conc 5.0000
Area 2395548



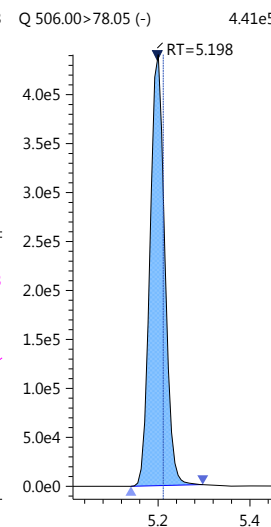
FOSA

Conc 0.0095
Area 2255
R#1 7.31 (0.00)



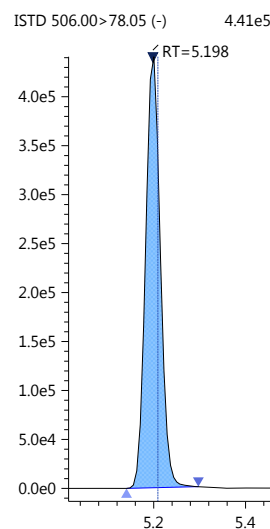
FOSA-13C

Conc 3.4013
Area 985839



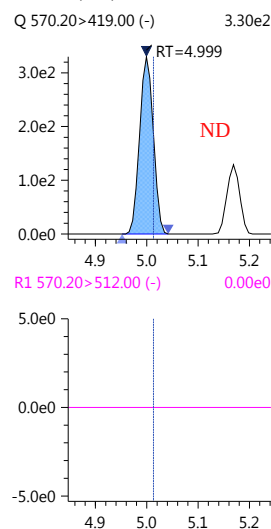
FOSA-13C_IS

Conc 5.0000
Area 985839



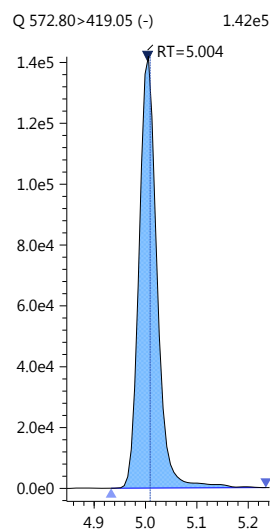
N-MeFOSAA

Conc 0.0143
Area 613
R#1 0.00 (0.00)



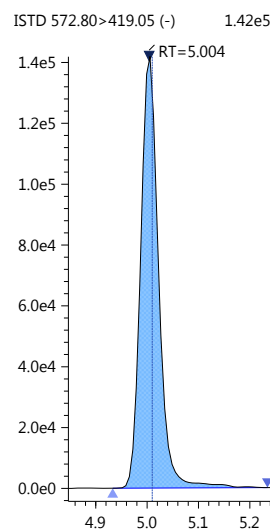
N-MeFOSAA-d3

Conc 4.1853
Area 344415



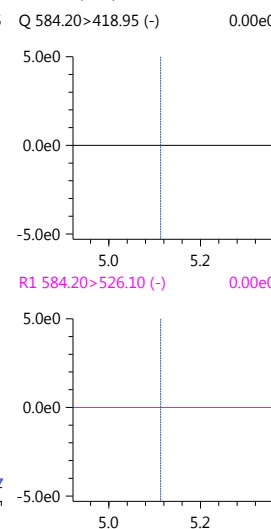
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Conc 5.0000
Area 344415



N-EtFOSAA

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



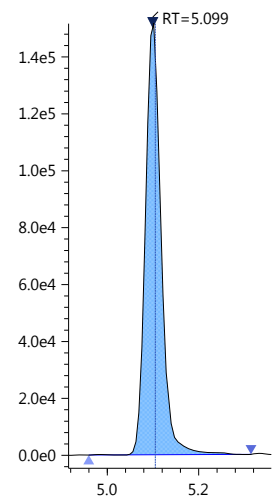
Insight Report

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N-EtFOSAA-d5

Conc 4.7693
 Area 361650

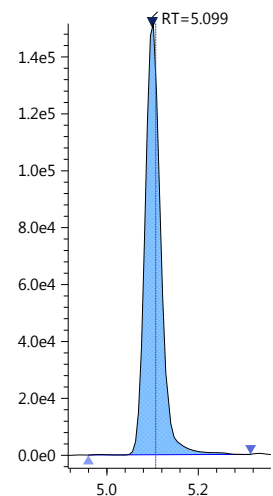
Q 588.80>419.00 (-) 1.52e5



N-EtFOSAA-d5_IS

Conc 5.0000
 Area 361650

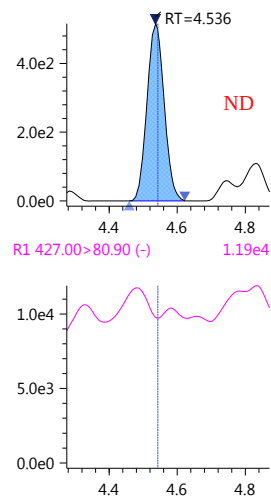
ISTD 588.80>419.00 (-) 1.52e5



6_2-FTS_1

Conc 0.0123
 Area 1806
 R#1 0.00 (0.00)

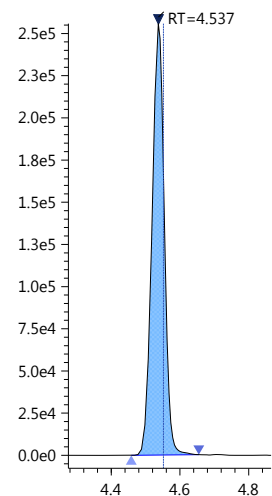
Q 427.00>407.00 (-) 5.16e2



6_2-FTS-13C

Conc 13.2149
 Area 635916

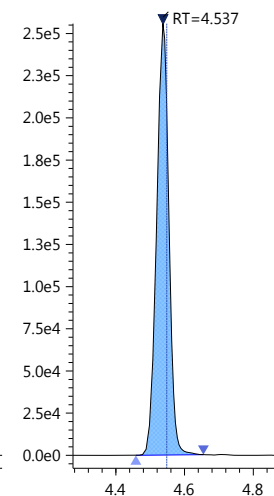
Q 428.90>409.00 (-) 2.56e5



6_2-FTS-13C_IS

Conc 5.0000
 Area 635916

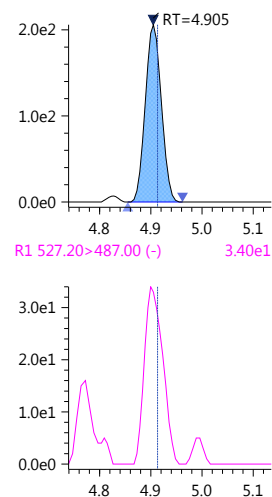
ISTD 428.90>409.00 (-) 2.56e5



8_2-FTS_1

Conc 0.0062
 Area 450
 R#1 15.46 (0.00)

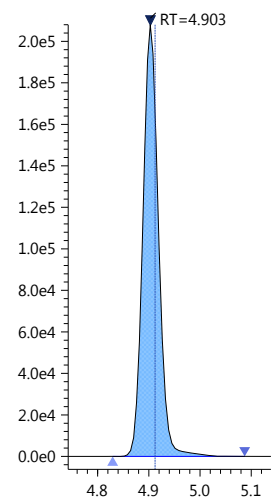
Q 527.10>506.90 (-) 2.06e2



8_2-FTS-13C

Conc 11.3503
 Area 442814

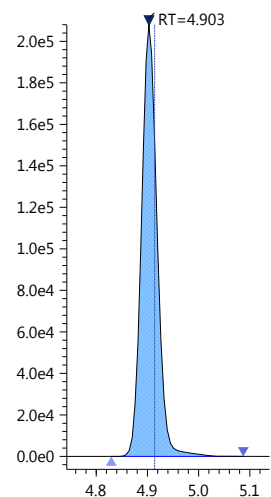
Q 528.80>509.00 (-) 2.08e5



8_2-FTS-13C_IS

Conc 5.0000
 Area 442814

ISTD 528.80>509.00 (-) 2.08e5



Insight Report

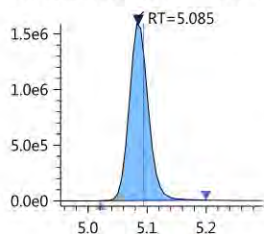
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200428_057

Sample ID: R2003266-002
Date acquired: 4/29/2020 12:39:33 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200428_b4\200428_057.lcd
Vial: 41 | Inj. Volume: 15.0000uL | Tray: 3

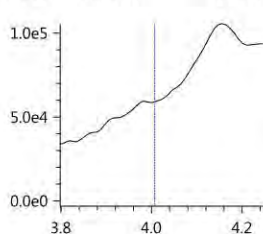
13C7-PFUnDA_IS

Conc 5.0000
Area 3585765
ISTD 570.00>525.00 (-) 1.59e6



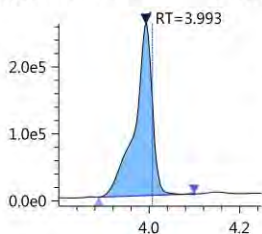
PFBS_1

Conc ----
Area ----
Q 299.00>80.00 (-) 1.06e5



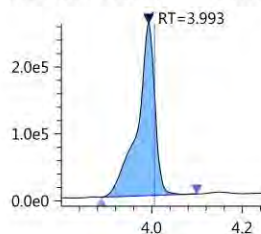
PFBS-13C

Conc 4.9392
Area 692416
Q 301.80>80.00 (-) 2.65e5



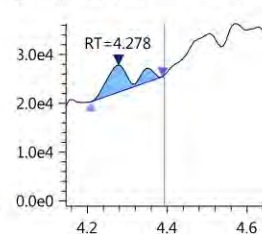
PFBS-13C_IS

Conc 5.0000
Area 692416
ISTD 301.80>80.00 (-) 2.65e5



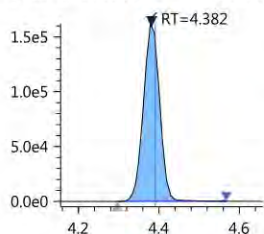
PFHxS_1

Conc 0.2030
Area 25024
Q 399.00>80.00 (-) 3.63e4



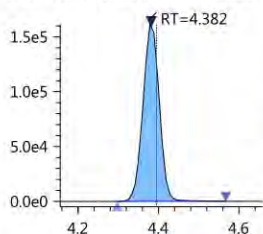
PFHxS-180

Conc 5.7964
Area 457453
Q 402.70>84.05 (-) 1.62e5



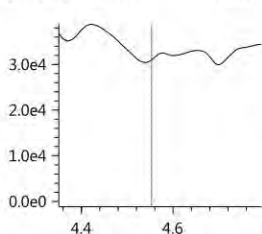
PFHxS-180_IS

Conc 5.0000
Area 457453
ISTD 402.70>84.05 (-) 1.62e5



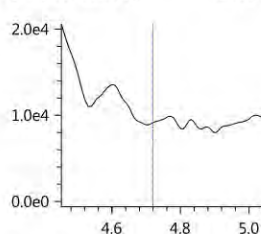
PFHpS_1

Conc ----
Area ----
Q 449.00>80.15 (-) 3.88e4



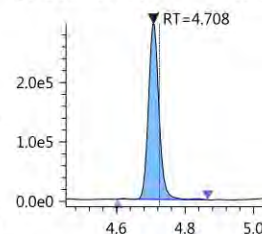
PFOS_1

Conc ----
Area ----
Q 499.00>80.00 (-) 2.06e4



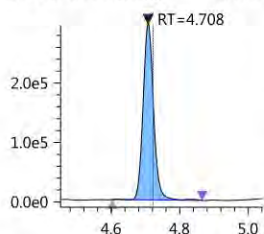
PFOS-13C

Conc 5.6871
Area 631758
Q 502.80>80.05 (-) 2.98e5



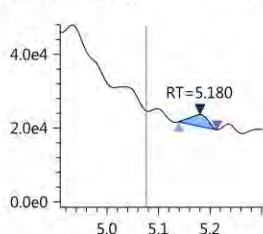
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Conc 5.0000
Area 631758
ISTD 502.80>80.05 (-) 2.98e5



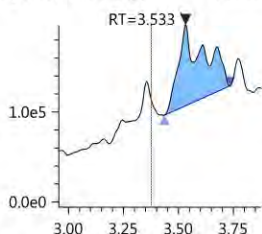
PFDS_1

Conc 0.0776
Area 7764
Q 599.00>79.90 (-) 4.80e4



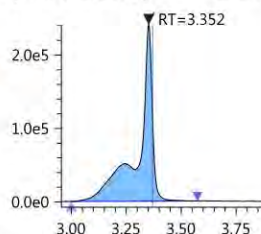
PFBA

Conc 3.4980
Area 726509
Q 213.00>169.10 (-) 1.97e5



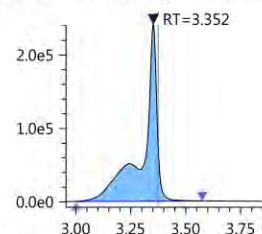
PFBA-13C

Conc 2.8036
Area 1063485
Q 216.90>172.15 (-) 2.41e5



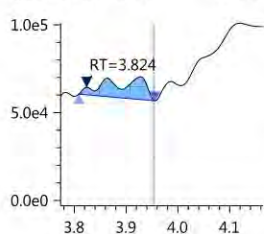
PFBA-13C_IS

Conc 5.0000
Area 1063485
ISTD 216.90>172.15 (-) 2.41e5



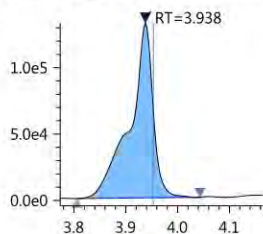
PFPeA

Conc 0.3078
Area 58015
Q 263.05>219.10 (-) 1.01e5



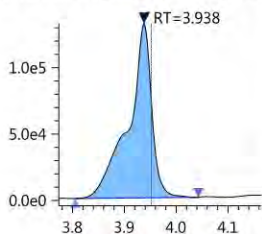
PFPeA-13C

Conc 1.9253
Area 410992
Q 267.90>223.00 (-) 1.33e5



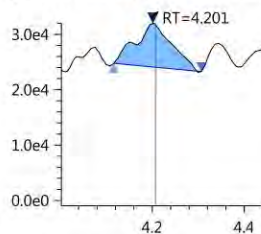
PFPeA-13C_IS

Conc 5.0000
Area 410992
ISTD 267.90>223.00 (-) 1.33e5



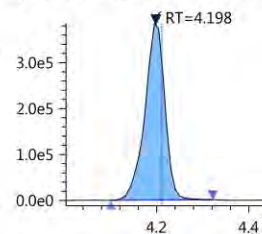
PFHxA

Conc 0.1829
Area 43124
Q 313.00>269.00 (-) 3.20e4



PFHxA-13C

Conc 1.9865
Area 1161608
Q 314.90>270.10 (-) 3.86e5

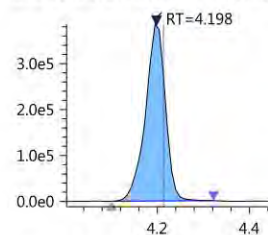


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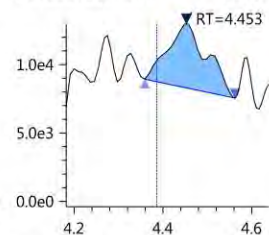
PFHxA-13C_IS

Conc 5.0000
Area 1161608
ISTD 314.90>270.10 (-)



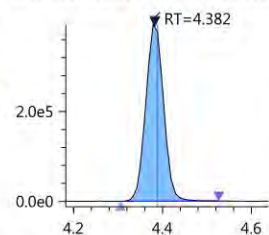
PFHpA

Conc 0.1358
Area 28716
Q 362.90>319.00 (-)



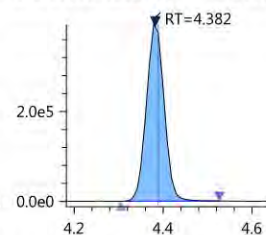
PFHpA-13C

Conc 2.0828
Area 1101803
Q 366.90>322.10 (-)



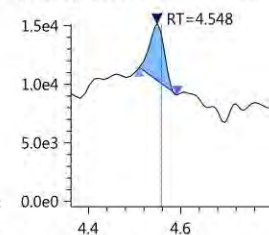
PFHpA-13C_IS

Conc 5.0000
Area 1101803
ISTD 366.90>322.10 (-)



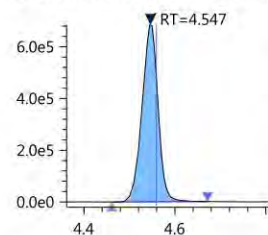
PFOA

Conc 0.0161
Area 10474
Q 413.00>369.00 (-)



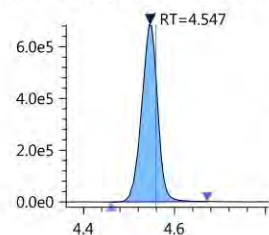
PFOA-13C

Conc 2.6205
Area 1676946
Q 416.80>372.05 (-)



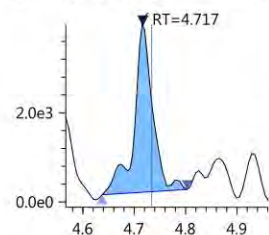
PFOA-13C_IS

Conc 5.0000
Area 1676946
ISTD 416.80>372.05 (-)



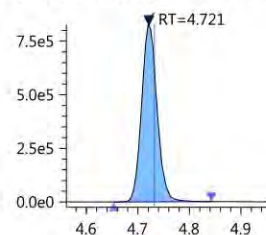
PFNA

Conc 0.0265
Area 9529
Q 463.00>418.90 (-)



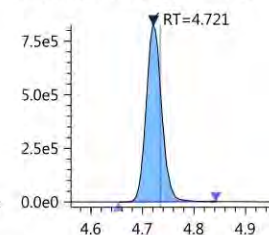
PFNA-13C

Conc 3.6012
Area 1720539
Q 467.80>423.00 (-)



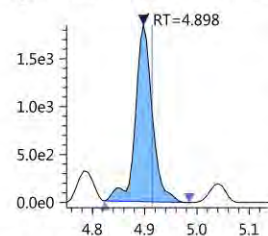
PFNA-13C_IS

Conc 5.0000
Area 1720539
ISTD 467.80>423.00 (-)



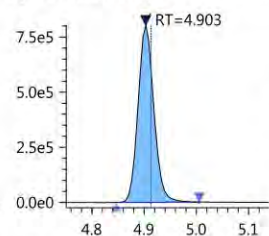
PFDA

Conc 0.0117
Area 4167
Q 513.00>468.80 (-)



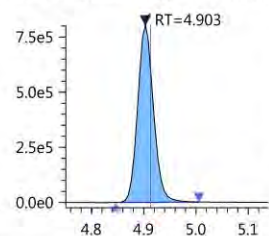
PFDA-13C

Conc 3.8847
Area 1684033
Q 514.80>469.95 (-)



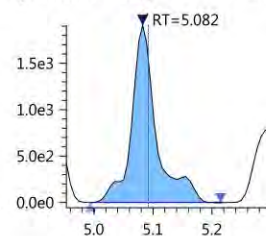
PFDA-13C_IS

Conc 5.0000
Area 1684033
ISTD 514.80>469.95 (-)



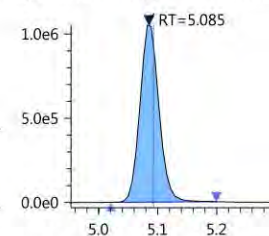
PFUnA

Conc 0.0013
Area 5611
Q 563.00>518.90 (-)



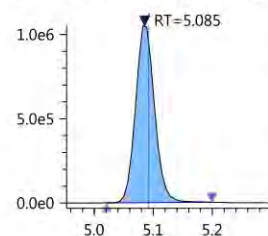
PFUnA-13C

Conc 4.3941
Area 2375958
Q 564.80>519.95 (-)



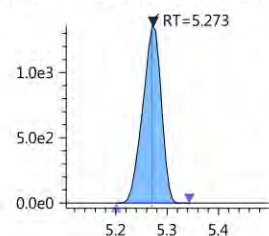
PFUnA-13C_IS

Conc 5.0000
Area 2375958
ISTD 564.80>519.95 (-)



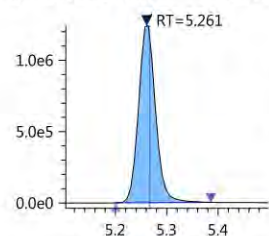
PFDaA

Conc 0.0237
Area 3421
Q 613.05>569.00 (-)



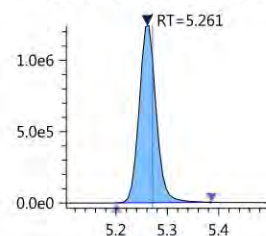
PFDaA-13C

Conc 4.4884
Area 2859186
Q 614.80>569.95 (-)



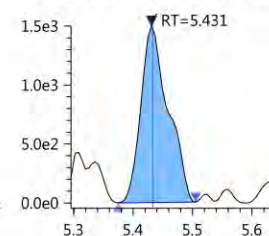
PFDaA-13C_IS

Conc 5.0000
Area 2859186
ISTD 614.80>569.95 (-)



PFTrDA

Conc 0.0059
Area 4780
Q 663.00>618.90 (-)



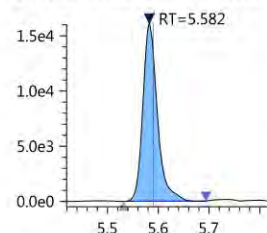
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PFTeDA

Conc 0.0109
Area 31873

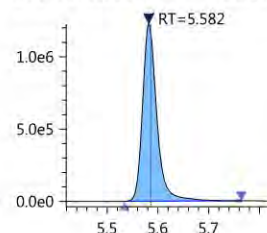
Q 713.40>669.00 (-) 1.61e4



PFTeDA-13C

Conc 4.7133
Area 2395548

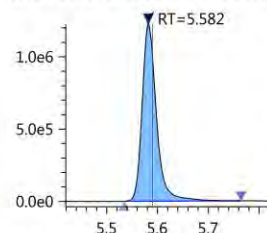
Q 714.70>669.90 (-) 1.23e6



PFTeDA-13C_IS

Conc 5.0000
Area 2395548

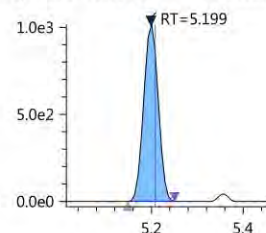
ISTD 714.70>669.90 (-) 1.23e6



FOSA

Conc 0.0095
Area 2255

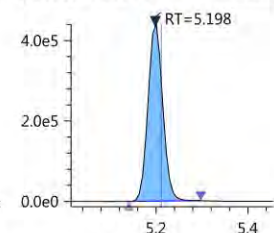
Q 498.20>78.00 (-) 1.02e3



FOSA-13C

Conc 3.4013
Area 985839

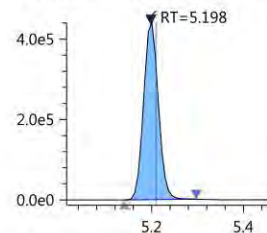
Q 506.00>78.05 (-) 4.41e5



FOSA-13C_IS

Conc 5.0000
Area 985839

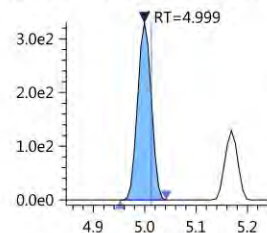
ISTD 506.00>78.05 (-) 4.41e5



N-MeFOSAA

Conc 0.0143
Area 613

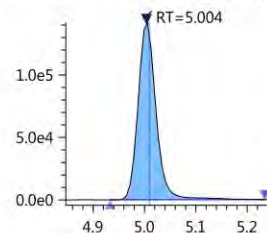
Q 570.20>419.00 (-) 3.30e2



N-MeFOSAA-d3

Conc 4.1853
Area 344415

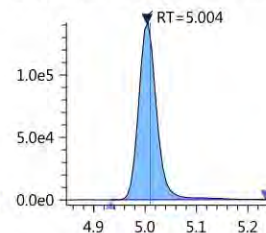
Q 572.80>419.05 (-) 1.42e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 344415

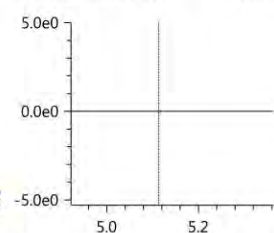
ISTD 572.80>419.05 (-) 1.42e5



N-EtFOSAA

Conc ----
Area ----

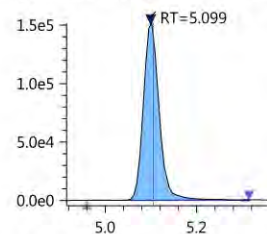
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5

Conc 4.7693
Area 361650

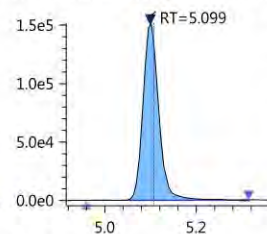
Q 588.80>419.00 (-) 1.52e5



N-EtFOSAA-d5_IS

Conc 5.0000
Area 361650

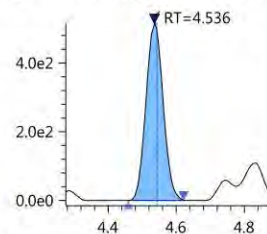
ISTD 588.80>419.00 (-) 1.52e5



6_2-FTS_1

Conc 0.0123
Area 1806

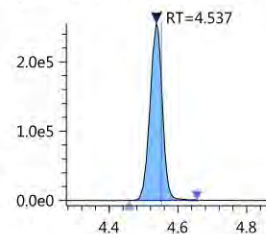
Q 427.00>407.00 (-) 5.16e2



6_2-FTS-13C

Conc 13.2149
Area 635916

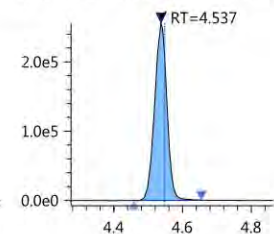
Q 428.90>409.00 (-) 2.56e5



6_2-FTS-13C_IS

Conc 5.0000
Area 635916

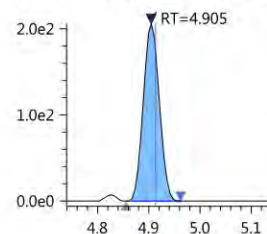
ISTD 428.90>409.00 (-) 2.56e5



8_2-FTS_1

Conc 0.0062
Area 450

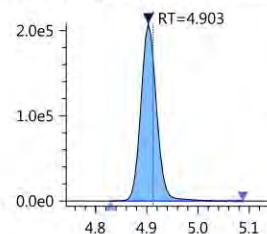
Q 527.10>506.90 (-) 2.06e2



8_2-FTS-13C

Conc 11.3503
Area 442814

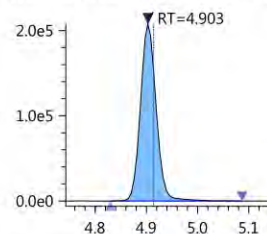
Q 528.80>509.00 (-) 2.08e5



8_2-FTS-13C_IS

Conc 5.0000
Area 442814

ISTD 528.80>509.00 (-) 2.08e5



Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200428_b4\200428_058
Lab ID: R2003266-003
RunType: N/A
Matrix: Water

Date Acquired: 4/29/20 00:50
Batch ID: 678319
Analysis Method: PFC/537M/PFAS

Validations

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

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File:	J:\LCMS06\Data\200428_b4\200428_058	Instrument:	K-LCMS-06
Acqu Date:	4/29/20 00:50	Vial:	7
Run Type:	N/A	Dilution:	1
Lab ID:	R2003266-003	Raw Units:	ng/mL

Bottle ID:	R2003266-003.01	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678319	Prep Lot:	357465	Report Group:	R2003266
Analysis	PFC/537M	Prep Method:	ALS SOP		
		Prep Date:	4/27/20		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.080	-0.01	6336097	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.997	-0.01	896515	3.6191	72	20 - 109	Y
18O2-PFHxS	4.380	-0.01	633214	4.5407	91	26 - 122	Y
13C4-PFOS	4.709	-0.01	822700	4.1913	84	25 - 121	Y
13C4-PFBA	3.360	-0.02	2462475	3.6738	73	27 - 124	Y
13C5-PFPeA	3.943	-0.01	1364579	3.6177	72	27 - 138	Y
13C2-PFHxA	4.199	-0.01	3888577	3.7634	75	28 - 132	Y
13C4-PFHpA	4.381	-0.01	4561112	4.8795	98	19 - 139	Y
13C4-PFOA	4.549	-0.01	5232150	4.6270	93	22 - 130	Y
13C5-PFNA	4.722	-0.01	4384697	5.1937	104	20 - 127	Y
13C2-PFDA	4.900	-0.01	3554008	4.6397	93	24 - 125	Y
13C2-PFUnDA	5.080	-0.01	4405203	4.6106	92	22 - 125	Y
13C2-PFDoDA	5.255	-0.01	4855469	4.3136	86	19 - 122	Y
13C2-PFTeDA	5.578	-0.01	4020557	4.4768	90	13 - 124	Y
13C8-FOSA	5.193	-0.01	1691702	3.3031	66	18 - 109	Y
D3-MeFOSAA	4.999	-0.01	674351	4.6376	93	9 - 123	Y
D5-EtFOSAA	5.094	-0.01	636732	4.7521	95	12 - 126	Y
13C2-6:2 FTS	4.540	-0.01	416857	4.9024	98	10 - 226	Y
13C2-8:2 FTS	4.900	-0.01	336659	4.8836	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)	3.995	-0.01	1854	0.0090	0.24	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.376	-0.01	3311	0.0041	0.11	U	Y

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

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

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

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Data File: J:\LCMS06\Data\200428_b4\200428_058
Acqu Date: 4/29/20 00:50
Run Type: N/A
Lab ID: R2003266-003

Instrument: K-LCMS06
Vial: 7
Dilution: 1
Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.541	-0.01	1236	0.0063	0.17	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.712	-0.01	1791	0.0129	0.34	U	Y
Perfluorodecane sulfonic acid (PFDS)	5.101	+0.03	486	0.0037	0.097	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.941	-0.01	33006	0.0281	0.74	U	Y
Perfluorohexanoic acid (PFHxA)	4.193	-0.02	19250	0.0190	0.50	U	Y
Perfluoroheptanoic acid (PFHpA)	4.376	-0.02	11926	0.0045	0.12	U	Y
Perfluorooctanoic acid (PFOA)	4.546	-0.01	32023	0.0156	0.41	J	Y
Perfluorononanoic acid (PFNA)	4.709	-0.02	11576	0.0103	0.27	U	Y
Perfluorodecanoic acid (PFDA)	4.893	-0.02	10126	0.0134	0.35	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.076	-0.02	10859	0.0020	0.052	U	Y
Perfluorododecanoic acid (PFDoDA)	5.252	-0.02	9496	0.0304	0.80	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.421	-0.01	11681	0.0106	0.28	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.579	-0.01	44745	-0.0140	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.191	-0.01	3592	0.0089	0.23	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.995	-0.01	813	0.0097	0.25	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.099	-0.01	496	0.0075	0.20	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.537	-0.01	969	0.0100	0.26	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.900	-0.01	249	0.0045	0.12	U	Y

Prep Amount: 305.0000 mL
Prep Final Amount: 8.00 mL

Dilution: 1
Basis Factor: 100.00

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

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

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

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Insight Report

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200428_058

Sample ID: R2003266-003

Date acquired: 4/29/2020 12:50:01 AM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200428_b4\200428_058.lcd

Vial: 42 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.080	6336097	6336097	1	5.0000	ng/mL	----
PFBS_1	Auto	3.995	1854	896515	2	0.0090	ng/mL	----
PFBS-13C	Auto	3.997	896515	6336097	1	3.6191	ng/mL	----
PFBS-13C_IS	Auto	3.997	896515	896515	2	5.0000	ng/mL	----
PFHxS_1	Auto	4.376	3311	633214	3	0.0041	ng/mL	----
PFHxS-18O	Auto	4.380	633214	6336097	1	4.5407	ng/mL	----
PFHxS-18O_IS	Auto	4.380	633214	633214	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.541	1236	633214	3	0.0063	ng/mL	----
PFOS_1	Auto	4.712	1791	822700	4	0.0129	ng/mL	----
PFOS-13C	Auto	4.709	822700	6336097	1	4.1913	ng/mL	----
PFOS-13C_IS	Auto	4.709	822700	822700	4	5.0000	ng/mL	----
PFDS_1	Auto	5.101	486	822700	4	0.0037	ng/mL	----
PFBA	ND(W/B)	----	----	2462475	5	----	ng/mL	----
PFBA-13C	Auto	3.360	2462475	6336097	1	3.6738	ng/mL	----
PFBA-13C_IS	Auto	3.360	2462475	2462475	5	5.0000	ng/mL	----
PFPeA	M	3.941	33006	1364579	6	0.0281	ng/mL	----
PFPeA-13C	Auto	3.943	1364579	6336097	1	3.6177	ng/mL	----
PFPeA-13C_IS	Auto	3.943	1364579	1364579	6	5.0000	ng/mL	----
PFHxA	M	4.193	19250	3888577	7	0.0190	ng/mL	----
PFHxA-13C	Auto	4.199	3888577	6336097	1	3.7634	ng/mL	----
PFHxA-13C_IS	Auto	4.199	3888577	3888577	7	5.0000	ng/mL	----
PFHpA	M	4.376	11926	4561112	8	0.0045	ng/mL	----
PFHpA-13C	Auto	4.381	4561112	6336097	1	4.8795	ng/mL	----
PFHpA-13C_IS	Auto	4.381	4561112	4561112	8	5.0000	ng/mL	----
PFOA	Auto	4.546	32023	5232150	9	0.0156	ng/mL	----
PFOA-13C	Auto	4.549	5232150	6336097	1	4.6270	ng/mL	----
PFOA-13C_IS	Auto	4.549	5232150	5232150	9	5.0000	ng/mL	----
PFNA	Auto	4.709	11576	4384697	10	0.0103	ng/mL	----
PFNA-13C	Auto	4.722	4384697	6336097	1	5.1937	ng/mL	----
PFNA-13C_IS	Auto	4.722	4384697	4384697	10	5.0000	ng/mL	----
PFDA	Auto	4.893	10126	3554008	11	0.0134	ng/mL	----
PFDA-13C	Auto	4.900	3554008	6336097	1	4.6397	ng/mL	----
PFDA-13C_IS	Auto	4.900	3554008	3554008	11	5.0000	ng/mL	----
PFUnA	Auto	5.076	10859	4405203	12	0.0020	ng/mL	----
PFUnA-13C	Auto	5.080	4405203	6336097	1	4.6106	ng/mL	----
PFUnA-13C_IS	Auto	5.080	4405203	4405203	12	5.0000	ng/mL	----
PFDoA	Auto	5.252	9496	4855469	13	0.0304	ng/mL	----
PFDoA-13C	Auto	5.255	4855469	6336097	1	4.3136	ng/mL	----
PFDoA-13C_IS	Auto	5.255	4855469	4855469	13	5.0000	ng/mL	----
PFTTrDA	Auto	5.421	11681	4020557	14	0.0106	ng/mL	----
PFTTeDA	Auto	5.579	44745	4020557	14	-0.0140	ng/mL	----
PFTTeDA-13C	Auto	5.578	4020557	6336097	1	4.4768	ng/mL	----
PFTTeDA-13C_IS	Auto	5.578	4020557	4020557	14	5.0000	ng/mL	----
FOSA	Auto	5.191	3592	1691702	16	0.0089	ng/mL	----
FOSA-13C	Auto	5.193	1691702	6336097	1	3.3031	ng/mL	----
FOSA-13C_IS	Auto	5.193	1691702	1691702	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	4.995	813	674351	21	0.0097	ng/mL	----
N-MeFOSAA-d3	Auto	4.999	674351	6336097	1	4.6376	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.999	674351	674351	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.099	496	636732	22	0.0075	ng/mL	----
N-EtFOSAA-d5	Auto	5.094	636732	6336097	1	4.7521	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.094	636732	636732	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.537	969	416857	24	0.0100	ng/mL	----
6_2-FTS-13C	Auto	4.540	416857	6336097	1	4.9024	ng/mL	----
6_2-FTS-13C_IS	Auto	4.540	416857	416857	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.900	249	336659	25	0.0045	ng/mL	----
8_2-FTS-13C	Auto	4.900	336659	6336097	1	4.8836	ng/mL	----
8_2-FTS-13C_IS	Auto	4.900	336659	336659	25	5.0000	ng/mL	----

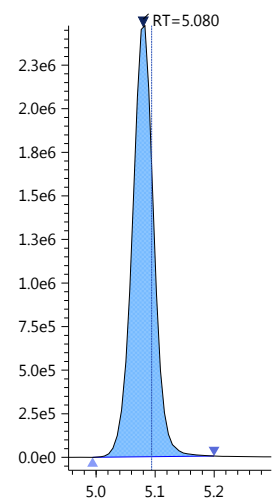
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13C7-PFUnDA_IS

Conc 5.0000
Area 6336097

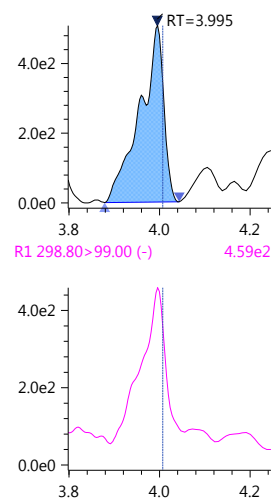
ISTD 570.00>525.00 (-) 2.48e6



PFBS_1

Conc 0.0090
Area 1854
R#1 71.56 (0.00)

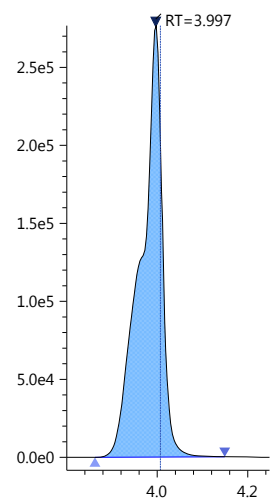
Q 299.00>80.00 (-) 5.09e2



PFBS-13C

Conc 3.6191
Area 896515

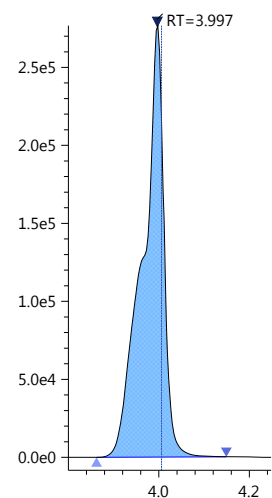
Q 301.80>80.00 (-) 2.77e5



PFBS-13C_IS

Conc 5.0000
Area 896515

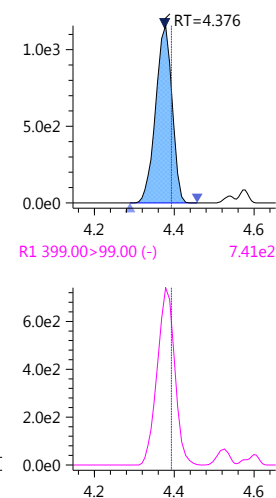
ISTD 301.80>80.00 (-) 2.77e5



PFHxS_1

Conc 0.0041
Area 3311
R#1 65.15 (0.00)

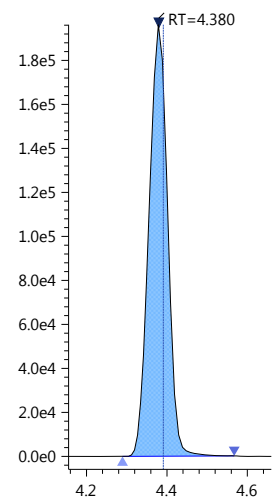
Q 399.00>80.00 (-) 1.16e3



PFHxS-180

Conc 4.5407
Area 633214

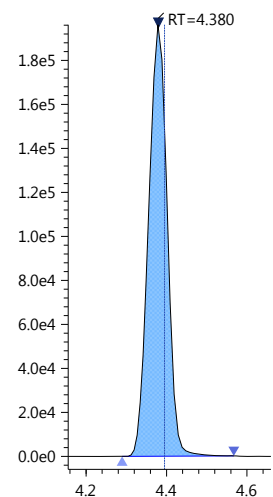
Q 402.70>84.05 (-) 1.96e5



PFHxS-180_IS

Conc 5.0000
Area 633214

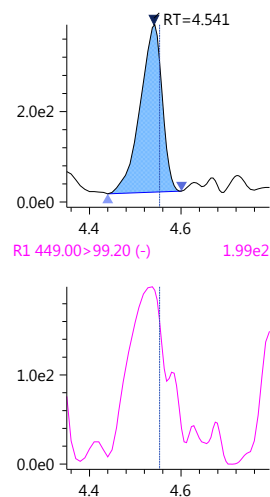
ISTD 402.70>84.05 (-) 1.96e5



PFHpS_1

Conc 0.0063
Area 1236
R#1 45.74 (0.00)

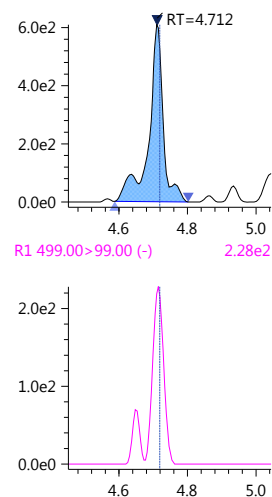
Q 449.00>80.15 (-) 3.92e2



PFOS_1

Conc 0.0129
Area 1791
R#1 37.37 (0.00)

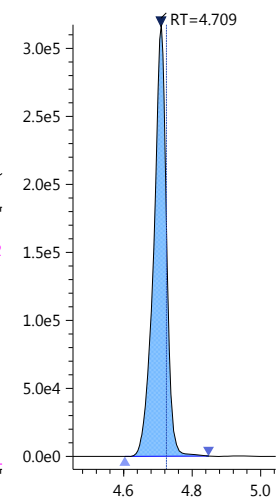
Q 499.00>80.00 (-) 6.10e2



PFOS-13C

Conc 4.1913
Area 822700

Q 502.80>80.05 (-) 3.17e5



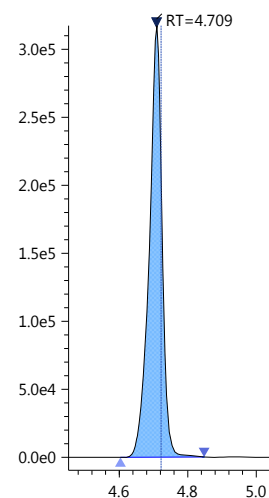
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PFOS-13C_IS

Conc 5.0000
Area 822700

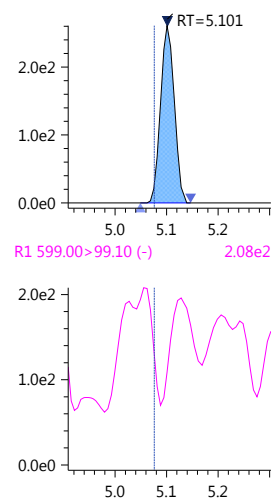
ISTD 502.80>80.05 (-)



PFDS_1

Conc 0.0037
Area 486
R#1 0.00 (0.00)

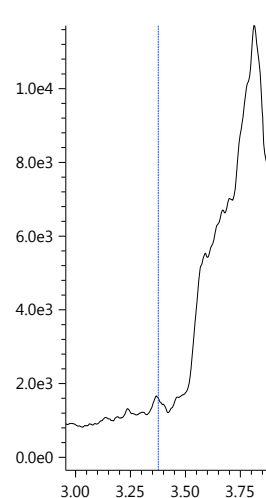
Q 599.00>79.90 (-)



PFBA

Conc ----
Area ----

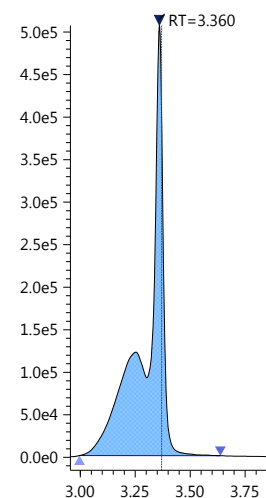
Q 213.00>169.10 (-)



PFBA-13C

Conc 3.6738
Area 2462475

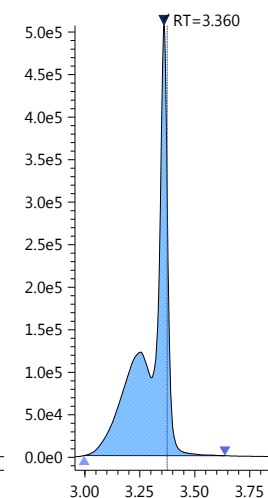
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 2462475

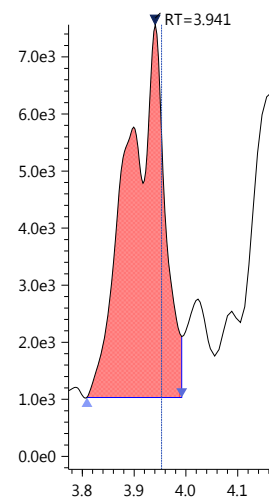
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.0281
Area 33006

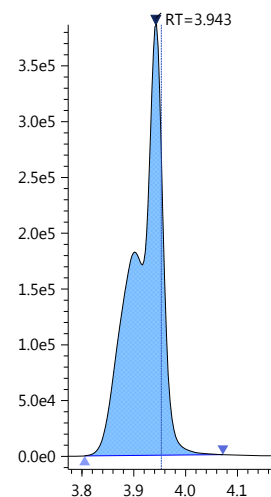
After-BLC
Q 263.05>219.10 (-)



PFPeA-13C

Conc 3.6177
Area 1364579

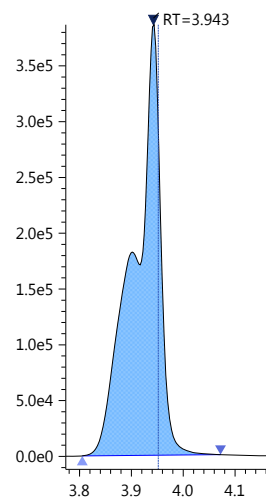
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1364579

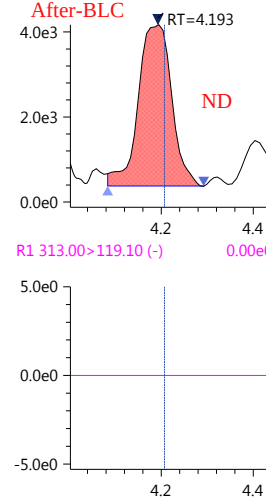
ISTD 267.90>223.00 (-)



PFHxA

Conc 0.0190
Area 19250
R#1 0.00 (0.00)

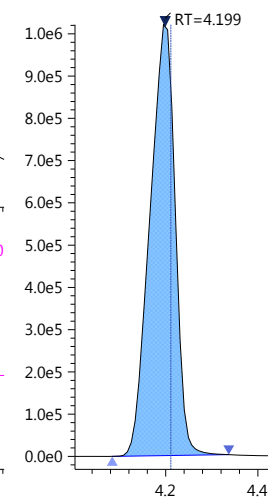
Q 313.00>269.00 (-)



PFHxA-13C

Conc 3.7634
Area 3888577

Q 314.90>270.10 (-)



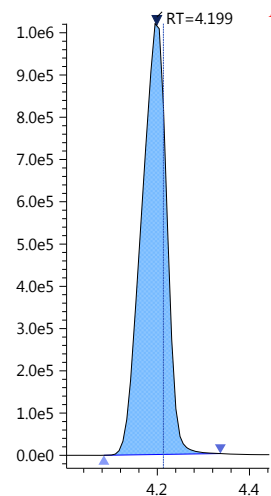
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PFHxA-13C_IS

Conc 5.0000
Area 3888577

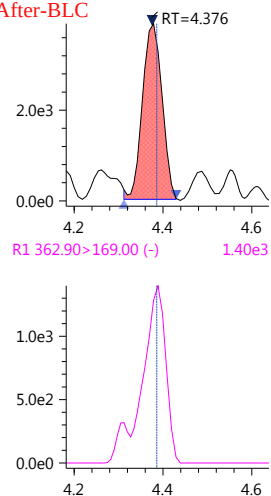
ISTD 314.90>270.10 (-) 1.02e6



PFHpA

Conc 0.0045
Area 11926
R#1 29.56 (0.00)

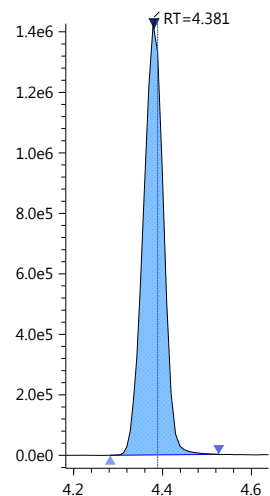
Q 362.90>319.00 (-) 3.91e3



PFHpA-13C

Conc 4.8795
Area 4561112

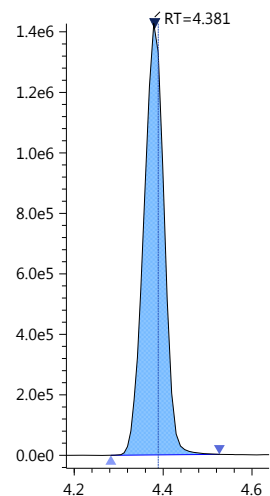
Q 366.90>322.10 (-) 1.43e6



PFHpA-13C_IS

Conc 5.0000
Area 4561112

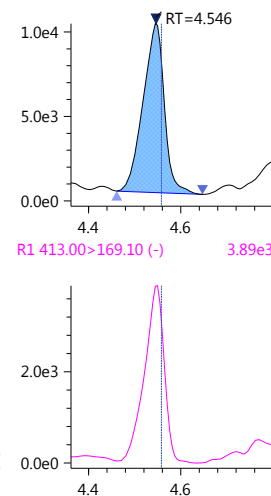
ISTD 366.90>322.10 (-) 1.43e6



PFOA

Conc 0.0156
Area 32023
R#1 39.24 (0.00)

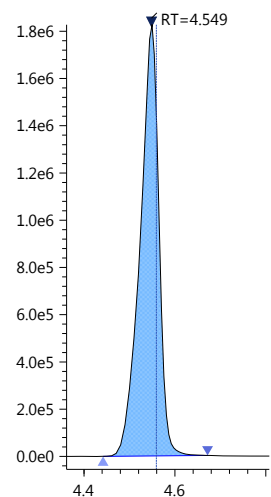
Q 413.00>369.00 (-) 1.05e4



PFOA-13C

Conc 4.6270
Area 5232150

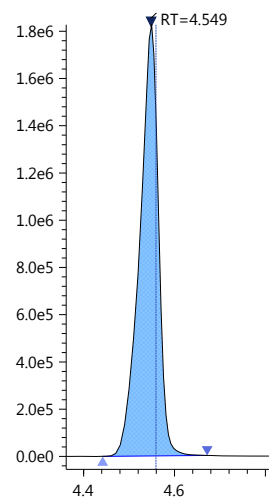
Q 416.80>372.05 (-) 1.83e6



PFOA-13C_IS

Conc 5.0000
Area 5232150

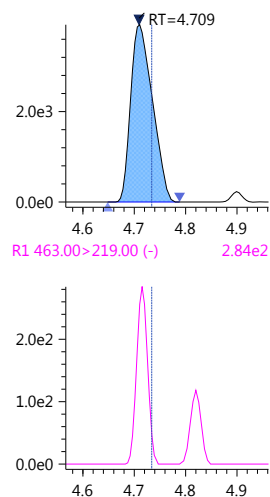
ISTD 416.80>372.05 (-) 1.83e6



PFNA

Conc 0.0103
Area 11576
R#1 7.26 (0.00)

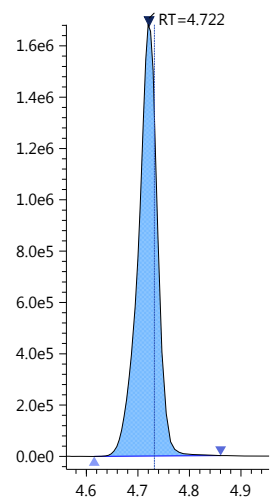
Q 463.00>418.90 (-) 3.92e3



PFNA-13C

Conc 5.1937
Area 4384697

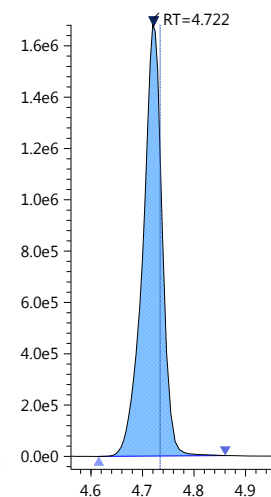
Q 467.80>423.00 (-) 1.68e6



PFNA-13C_IS

Conc 5.0000
Area 4384697

ISTD 467.80>423.00 (-) 1.68e6

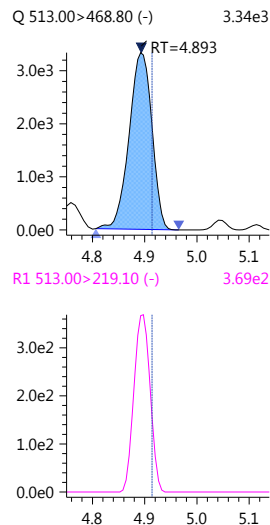


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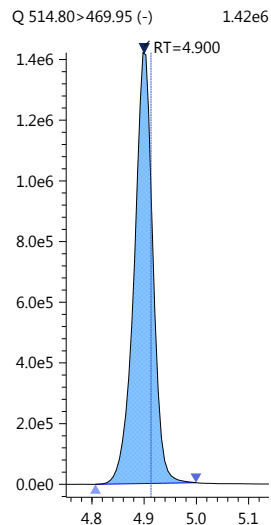
PFDA

Conc 0.0134
Area 10126
R#1 11.50 (0.00)



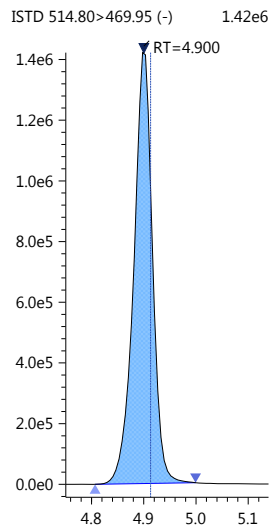
PFDA-13C

Conc 4.6397
Area 3554008



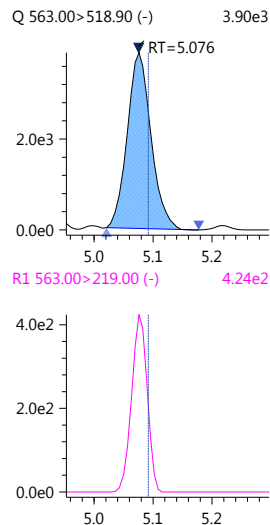
PFDA-13C_IS

Conc 5.0000
Area 3554008



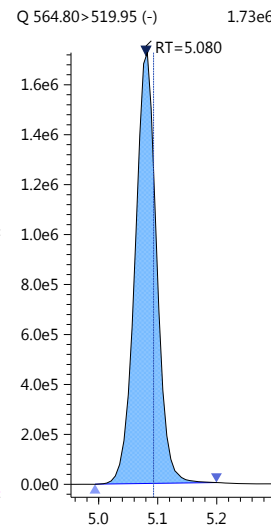
PFUnA

Conc 0.0020
Area 10859
R#1 11.24 (0.00)



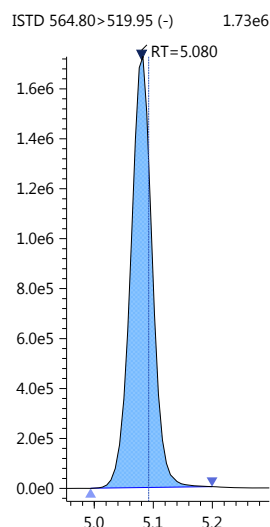
PFUnA-13C

Conc 4.6106
Area 4405203



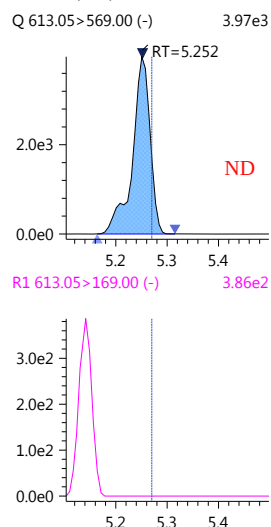
PFUnA-13C_IS

Conc 5.0000
Area 4405203



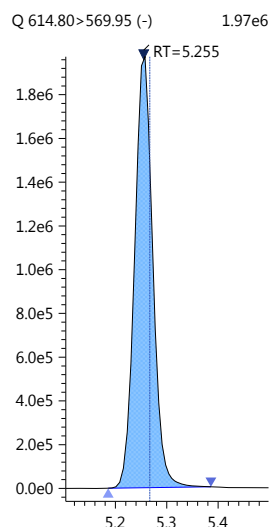
PFDaA

Conc 0.0304
Area 9496
R#1 0.00 (0.00)



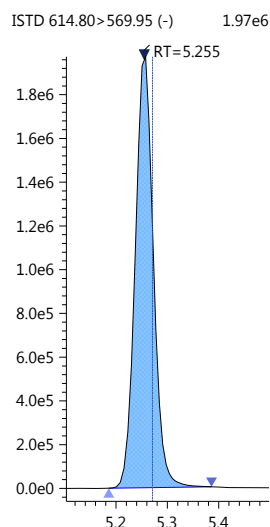
PFDaA-13C

Conc 4.3136
Area 4855469



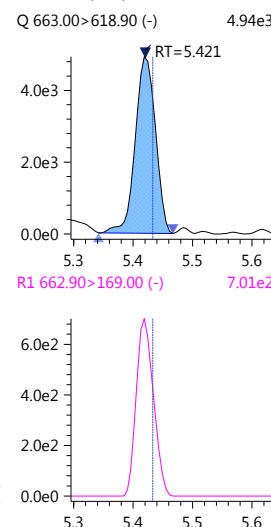
PFDaA-13C_IS

Conc 5.0000
Area 4855469



PFTrDA

Conc 0.0106
Area 11681
R#1 12.74 (0.00)



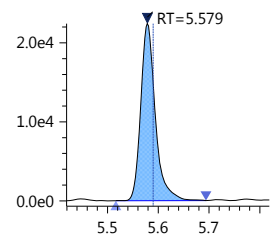
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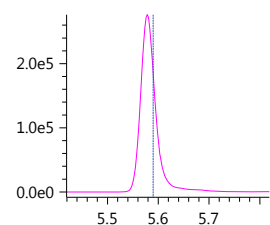
PFTeDA

Conc -0.0140
Area 44745
R#1 1225.80 (0.00)

Q 713.40>669.00 (-) 2.24e4



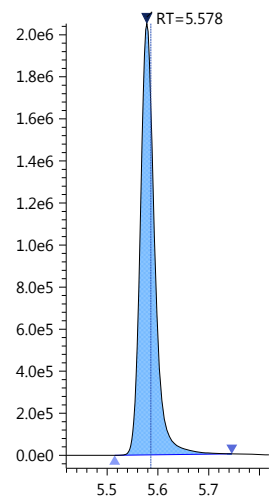
R1 713.40>169.10 (-) 2.76e5



PFTeDA-13C

Conc 4.4768
Area 4020557

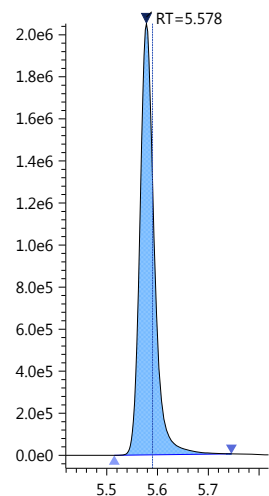
Q 714.70>669.90 (-) 2.05e6



PFTeDA-13C_IS

Conc 5.0000
Area 4020557

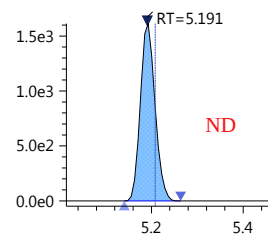
ISTD 714.70>669.90 (-) 2.05e6



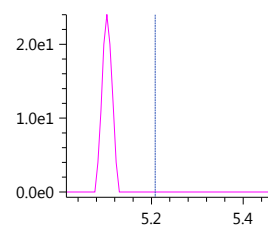
FOSA

Conc 0.0089
Area 3592
R#1 0.00 (0.00)

Q 498.20>78.00 (-) 1.61e3



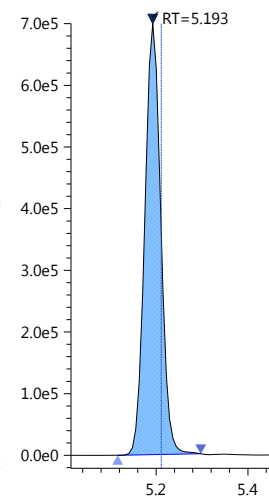
R1 498.20>64.10 (-) 2.40e1



FOSA-13C

Conc 3.3031
Area 1691702

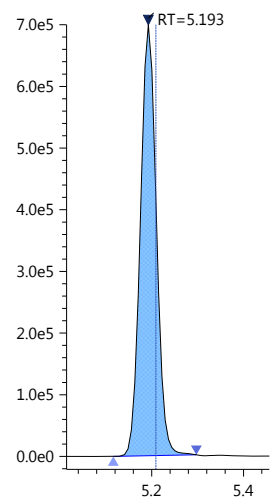
Q 506.00>78.05 (-) 7.00e5



FOSA-13C_IS

Conc 5.0000
Area 1691702

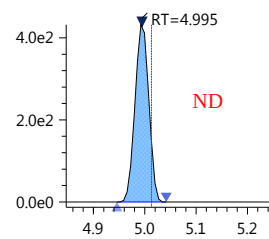
ISTD 506.00>78.05 (-) 7.00e5



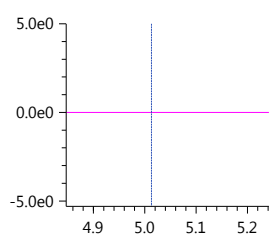
N-MeFOSAA

Conc 0.0097
Area 813
R#1 0.00 (0.00)

Q 570.20>419.00 (-) 4.32e2



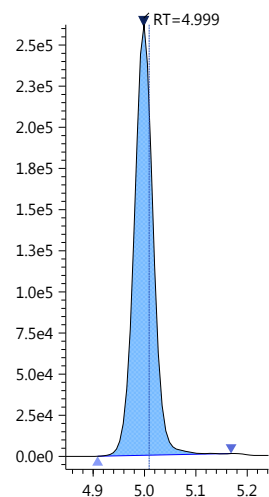
R1 570.20>512.00 (-) 0.00e0



N-MeFOSAA-d3

Conc 4.6376
Area 674351

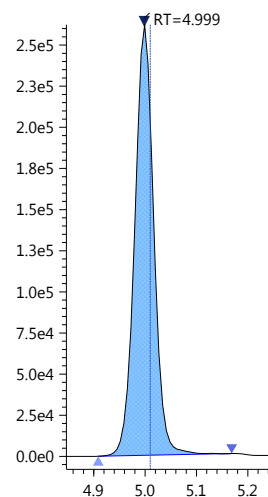
Q 572.80>419.05 (-) 2.62e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 674351

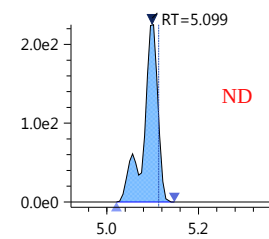
ISTD 572.80>419.05 (-) 2.62e5



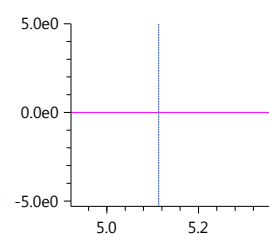
N-EtFOSAA

Conc 0.0075
Area 496
R#1 0.00 (0.00)

Q 584.20>418.95 (-) 2.25e2



R1 584.20>526.10 (-) 0.00e0

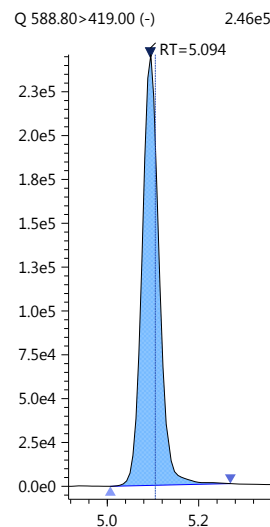


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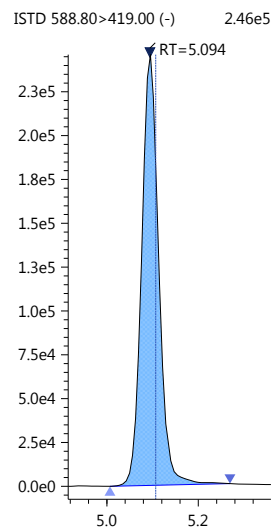
N-EtFOSAA-d5

Conc 4.7521
 Area 636732



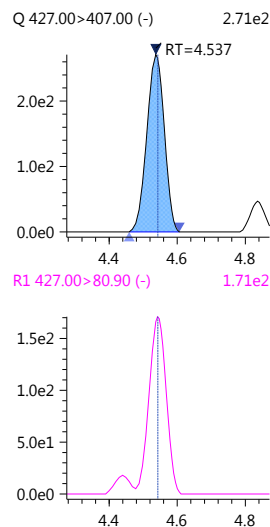
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Conc 5.0000
 Area 636732



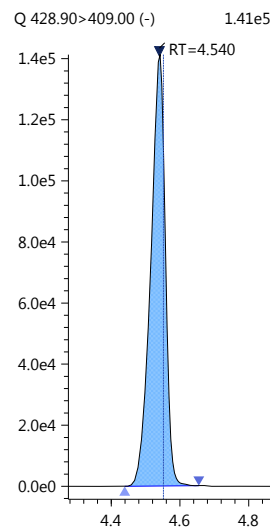
6_2-FTS_1

Conc 0.0100
 Area 969
 R#1 54.40 (0.00)



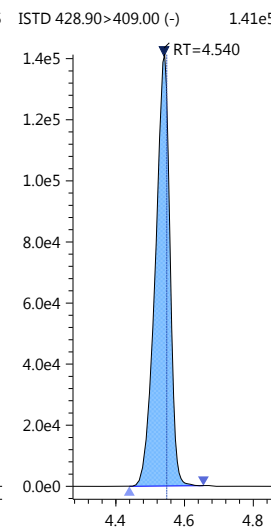
6_2-FTS-13C

Conc 4.9024
 Area 416857



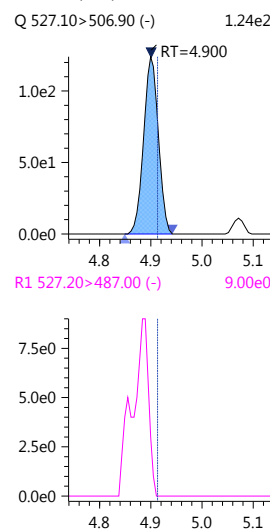
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Conc 5.0000
 Area 416857



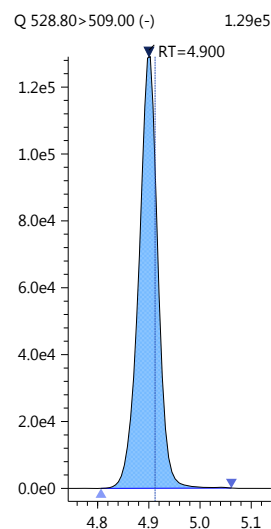
8_2-FTS_1

Conc 0.0045
 Area 249
 R#1 0.00 (0.00)



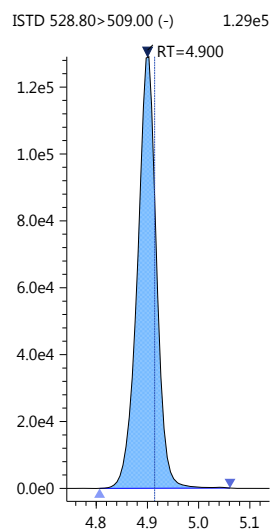
8_2-FTS-13C

Conc 4.8836
 Area 336659



8_2-FTS-13C_IS

Conc 5.0000
 Area 336659



Insight Report

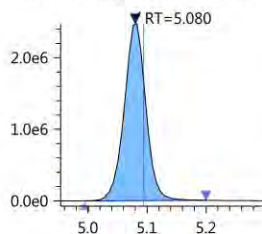
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200428_058

Sample ID: R2003266-003
Date acquired: 4/29/2020 12:50:01 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200428_b4\200428_058.lcd
Vial: 42 | Inj. Volume: 15.0000uL | Tray: 3

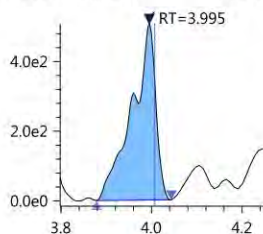
13C7-PFUnDA_IS

Conc 5.0000
Area 6336097
ISTD 570.00>525.00 (-)



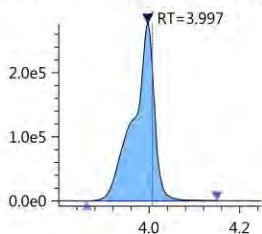
PFBS_1

Conc 0.0090
Area 1854
Q 299.00>80.00 (-)



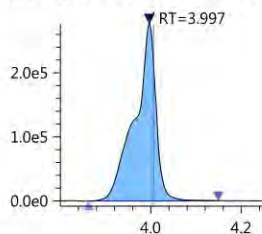
PFBS-13C

Conc 3.6191
Area 896515
Q 301.80>80.00 (-)



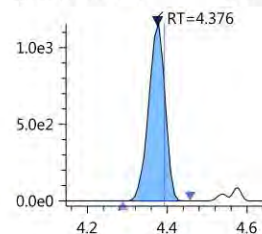
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ISTD 301.80>80.00 (-)



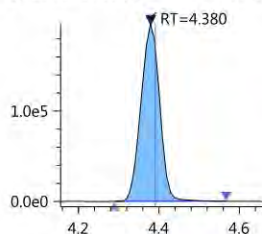
PFHxS_1

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Area 3311
Q 399.00>80.00 (-)



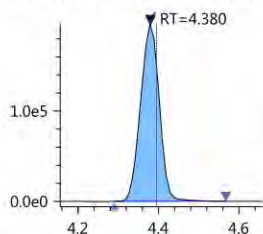
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Conc 4.5407
Area 633214
Q 402.70>84.05 (-)



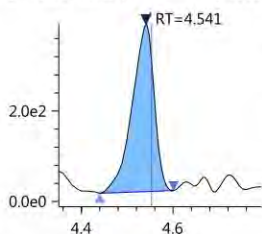
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Conc 5.0000
Area 633214
ISTD 402.70>84.05 (-)



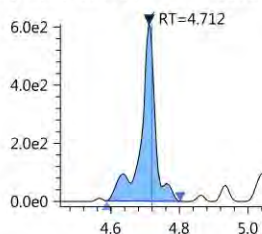
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Area 1236
Q 449.00>80.15 (-)



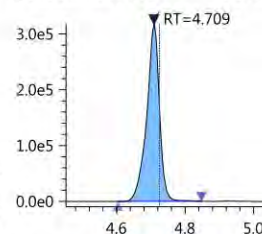
PFOS_1

Conc 0.0129
Area 1791
Q 499.00>80.00 (-)



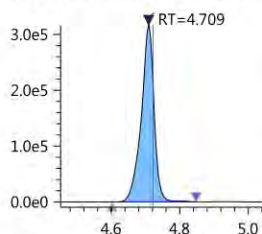
PFOS-13C

Conc 4.1913
Area 822700
Q 502.80>80.05 (-)



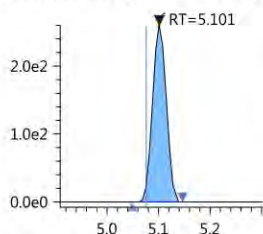
PFOS-13C_IS

Conc 5.0000
Area 822700
ISTD 502.80>80.05 (-)



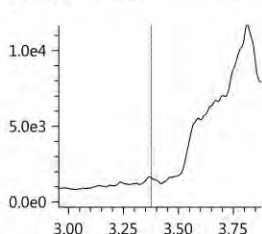
PFDS_1

Conc 0.0037
Area 486
Q 599.00>79.90 (-)



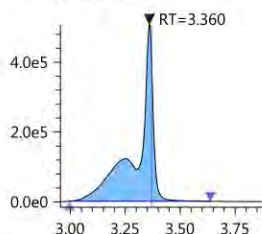
PFBA

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



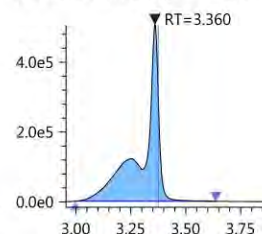
PFBA-13C

Conc 3.6738
Area 2462475
Q 216.90>172.15 (-)



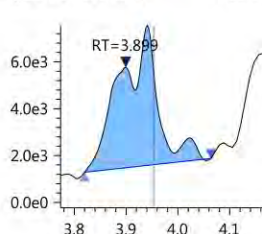
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Conc 5.0000
Area 2462475
ISTD 216.90>172.15 (-)



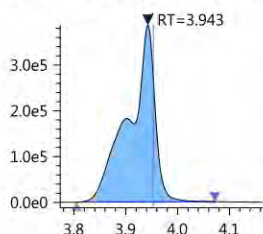
PFPeA

Conc 0.0233
Area 30244
Q 263.05>219.10 (-)



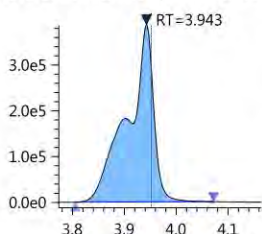
PFPeA-13C

Conc 3.6177
Area 1364579
Q 267.90>223.00 (-)



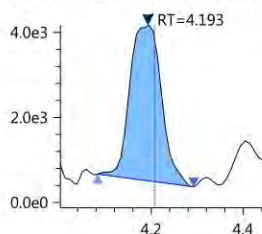
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Conc 5.0000
Area 1364579
ISTD 267.90>223.00 (-)



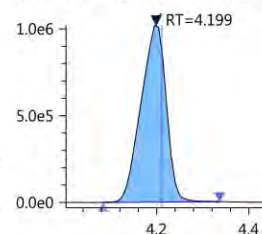
PFHxA

Conc 0.0167
Area 17482
Q 313.00>269.00 (-)



PFHxA-13C

Conc 3.7634
Area 3888577
Q 314.90>270.10 (-)



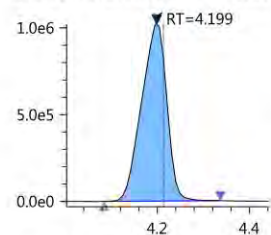
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PFHxA-13C_IS

Conc 5.0000
Area 3888577

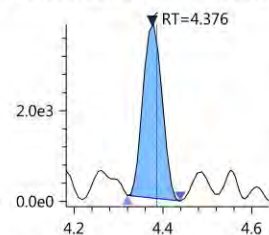
ISTD 314.90>270.10 (-) 1.02e6



PFHpA

Conc 0.0041
Area 11595

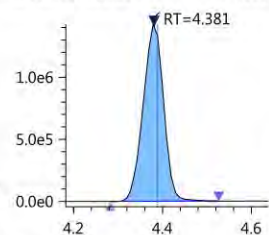
Q 362.90>319.00 (-) 3.91e3



PFHpA-13C

Conc 4.8795
Area 4561112

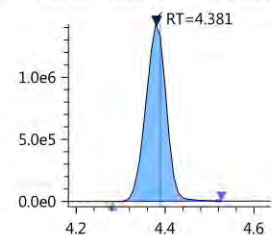
Q 366.90>322.10 (-) 1.43e6



PFHpA-13C_IS

Conc 5.0000
Area 4561112

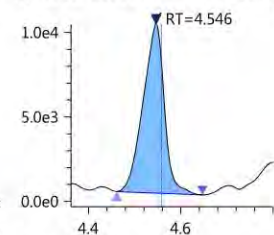
ISTD 366.90>322.10 (-) 1.43e6



PFOA

Conc 0.0156
Area 32023

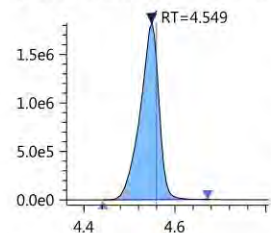
Q 413.00>369.00 (-) 1.05e4



PFOA-13C

Conc 4.6270
Area 5232150

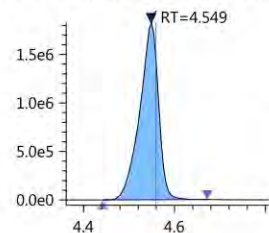
Q 416.80>372.05 (-) 1.83e6



PFOA-13C_IS

Conc 5.0000
Area 5232150

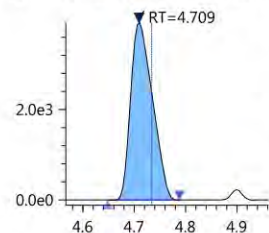
ISTD 416.80>372.05 (-) 1.83e6



PFNA

Conc 0.0103
Area 11576

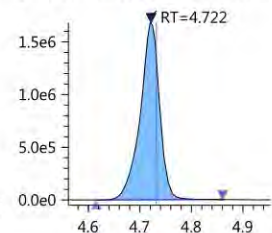
Q 463.00>418.90 (-) 3.92e3



PFNA-13C

Conc 5.1937
Area 4384697

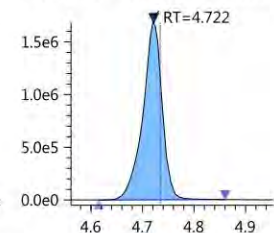
Q 467.80>423.00 (-) 1.68e6



PFNA-13C_IS

Conc 5.0000
Area 4384697

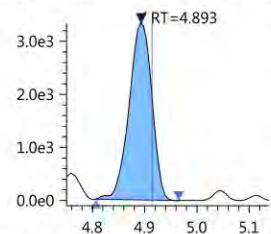
ISTD 467.80>423.00 (-) 1.68e6



PFDA

Conc 0.0134
Area 10126

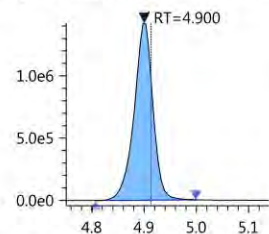
Q 513.00>468.80 (-) 3.34e3



PFDA-13C

Conc 4.6397
Area 3554008

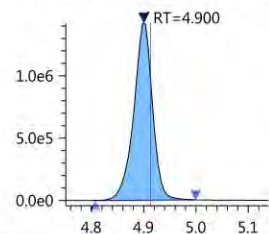
Q 514.80>469.95 (-) 1.42e6



PFDA-13C_IS

Conc 5.0000
Area 3554008

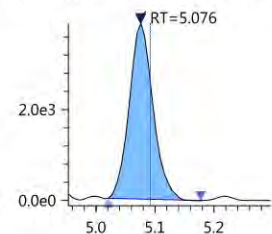
ISTD 514.80>469.95 (-) 1.42e6



PFUnA

Conc 0.0020
Area 10859

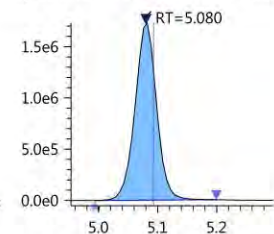
Q 563.00>518.90 (-) 3.90e3



PFUnA-13C

Conc 4.6106
Area 4405203

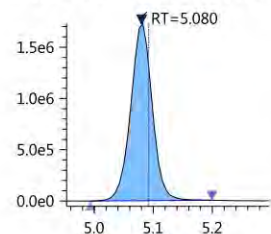
Q 564.80>519.95 (-) 1.73e6



PFUnA-13C_IS

Conc 5.0000
Area 4405203

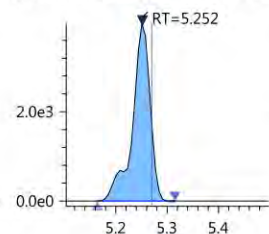
ISTD 564.80>519.95 (-) 1.73e6



PFDaA

Conc 0.0304
Area 9496

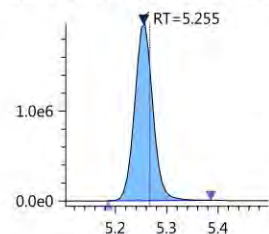
Q 613.05>569.00 (-) 3.97e3



PFDaA-13C

Conc 4.3136
Area 4855469

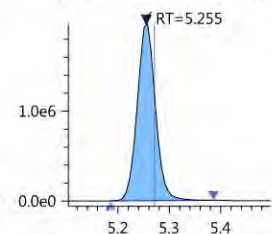
Q 614.80>569.95 (-) 1.97e6



PFDaA-13C_IS

Conc 5.0000
Area 4855469

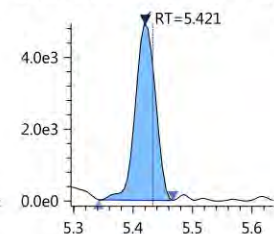
ISTD 614.80>569.95 (-) 1.97e6



PFTTrDA

Conc 0.0106
Area 11681

Q 663.00>618.90 (-) 4.94e3



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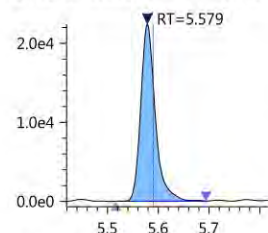
PFTeDA

Conc -0.0140

Area 44745

Q 713.40>669.00 (-)

2.24e4



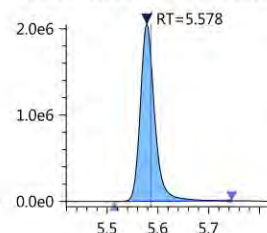
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Conc 4.4768

Area 4020557

Q 714.70>669.90 (-)

2.05e6



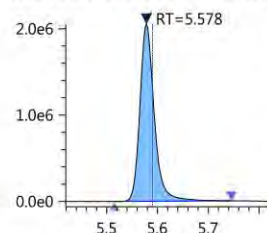
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Conc 5.0000

Area 4020557

ISTD 714.70>669.90 (-)

2.05e6



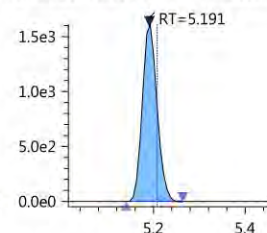
FOSA

Conc 0.0089

Area 3592

Q 498.20>78.00 (-)

1.61e3



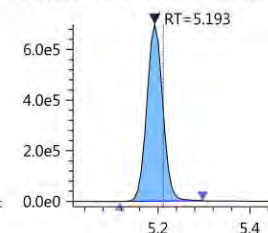
FOSA-13C

Conc 3.3031

Area 1691702

Q 506.00>78.05 (-)

7.00e5



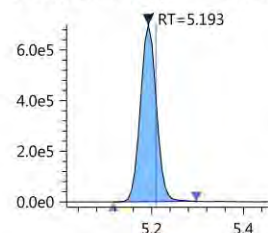
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Conc 5.0000

Area 1691702

ISTD 506.00>78.05 (-)

7.00e5



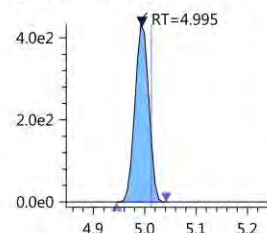
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Conc 0.0097

Area 813

Q 570.20>419.00 (-)

4.32e2



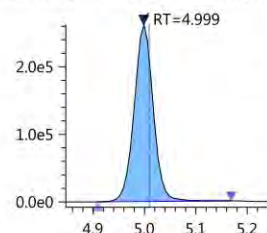
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Conc 4.6376

Area 674351

Q 572.80>419.05 (-)

2.62e5



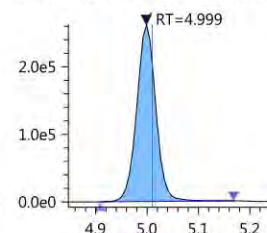
N-MeFOSAA-d3_IS

Conc 5.0000

Area 674351

ISTD 572.80>419.05 (-)

2.62e5



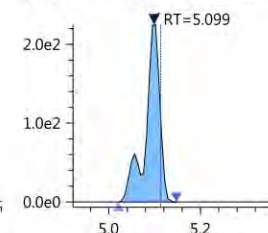
N-EtFOSAA

Conc 0.0075

Area 496

Q 584.20>418.95 (-)

2.25e2



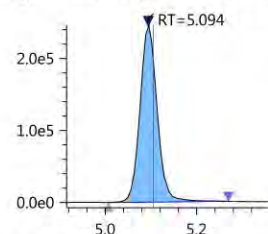
N-EtFOSAA-d5

Conc 4.7521

Area 636732

Q 588.80>419.00 (-)

2.46e5



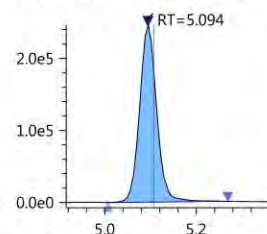
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Conc 5.0000

Area 636732

ISTD 588.80>419.00 (-)

2.46e5



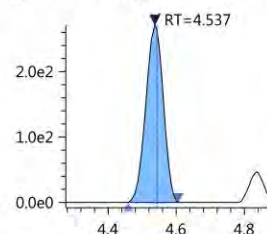
6_2-FTS_1

Conc 0.0100

Area 969

Q 427.00>407.00 (-)

2.71e2



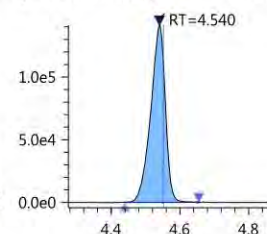
6_2-FTS-13C

Conc 4.9024

Area 416857

Q 428.90>409.00 (-)

1.41e5



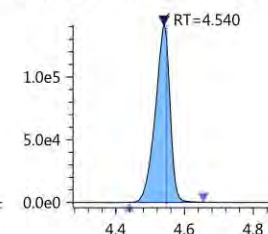
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Conc 5.0000

Area 416857

ISTD 428.90>409.00 (-)

1.41e5



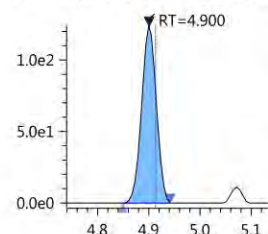
8_2-FTS_1

Conc 0.0045

Area 249

Q 527.10>506.90 (-)

1.24e2



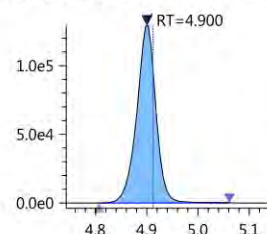
8_2-FTS-13C

Conc 4.8836

Area 336659

Q 528.80>509.00 (-)

1.29e5



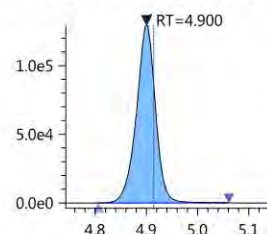
8_2-FTS-13C_IS

Conc 5.0000

Area 336659

ISTD 528.80>509.00 (-)

1.29e5



Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200428_b4\200428_059
Lab ID: R2003266-004
RunType: N/A
Matrix: Water

Date Acquired: 4/29/20 01:00
Batch ID: 678319
Analysis Method: PFC/537M/PFAS

Validations

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

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200428_b4\200428_059	Instrument:	K-LCMS-06
Acqu Date:	4/29/20 01:00	Vial:	8
Run Type:	N/A	Dilution:	1
Lab ID:	R2003266-004	Raw Units:	ng/mL

Bottle ID:	R2003266-004.01	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678319	Prep Lot:	357465	Report Group:	R2003266
Analysis	PFC/537M	Prep Method:	ALS SOP		
		Prep Date:	4/27/20		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.079	-0.01	6005040	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.996	-0.01	867796	3.6963	74	20 - 109	Y
18O2-PFHxS	4.380	-0.01	622382	4.7090	94	26 - 122	Y
13C4-PFOS	4.708	-0.01	760827	4.0897	82	25 - 121	Y
13C4-PFBA	3.359	-0.02	2262370	3.5613	71	27 - 124	Y
13C5-PFPeA	3.941	-0.01	1378425	3.8558	77	27 - 138	Y
13C2-PFHxA	4.198	-0.01	3843261	3.9246	78	28 - 132	Y
13C4-PFHpA	4.381	-0.01	4513462	5.0948	102	19 - 139	Y
13C4-PFOA	4.548	-0.01	4816784	4.4945	90	22 - 130	Y
13C5-PFNA	4.721	-0.01	3919403	4.8985	98	20 - 127	Y
13C2-PFDA	4.899	-0.01	3318036	4.5704	91	24 - 125	Y
13C2-PFUnDA	5.080	-0.01	3882147	4.2871	86	22 - 125	Y
13C2-PFDoDA	5.257	-0.01	4216888	3.9528	79	19 - 122	Y
13C2-PFTeDA	5.581	-0.01	3776930	4.4374	89	13 - 124	Y
13C8-FOSA	5.193	-0.01	1776328	3.6595	73	18 - 109	Y
D3-MeFOSAA	4.998	-0.01	613308	4.4503	89	9 - 123	Y
D5-EtFOSAA	5.094	-0.01	619306	4.8768	98	12 - 126	Y
13C2-6:2 FTS	4.539	-0.01	362916	4.5034	90	10 - 226	Y
13C2-8:2 FTS	4.899	-0.01	304260	4.6569	93	10 - 202	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.989	-0.02	2072	0.0104	0.28	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.388		2359	-0.0017	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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Data File: J:\LCMS06\Data\200428_b4\200428_059
Acqu Date: 4/29/20 01:00
Run Type: N/A
Lab ID: R2003266-004

Instrument: K-LCMS06
Vial: 8
Dilution: 1
Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.538	-0.01	1133	0.0058	0.15	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.704	-0.02	1698	0.0132	0.35	U	Y
Perfluorodecane sulfonic acid (PFDS)	5.068	0.00	801	0.0066	0.18	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.942	-0.01	22199	0.0088	0.23	U	Y
Perfluorohexanoic acid (PFHxA)	4.194	-0.02	20074	0.0204	0.54	U	Y
Perfluoroheptanoic acid (PFHpA)	4.362	-0.03	12434	0.0053	0.14	U	Y
Perfluorooctanoic acid (PFOA)	4.546	-0.01	28196	0.0146	0.39	J	Y
Perfluorononanoic acid (PFNA)	4.708	-0.02	8056	0.0070	0.19	U	Y
Perfluorodecanoic acid (PFDA)	4.901	-0.01	6013	0.0085	0.23	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.077	-0.01	5991	-0.0039	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.257	-0.01	5906	0.0255	0.68	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.424	-0.01	9927	0.0092	0.25	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.580	-0.01	43674	-0.0090	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.192	-0.01	3187	0.0075	0.20	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.994	-0.01	811	0.0106	0.28	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.528	-0.02	1018	0.0121	0.32	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.896	-0.01	337	0.0067	0.18	J	Y

Prep Amount: 300.0000 mL
Prep Final Amount: 8.00 mL

Dilution: 1
Basis Factor: 100.00

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

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

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

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Insight Report

Printed at 5/5/2020 1:30:49 PM

200428_059

Sample ID: R2003266-004

Date acquired: 4/29/2020 1:00:30 AM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200428_b4\200428_059.lcd

Vial: 43 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.079	6005040	6005040	1	5.0000	ng/mL	----
PFBS_1	M	3.989	2072	867796	2	0.0104	ng/mL	----
PFBS-13C	Auto	3.996	867796	6005040	1	3.6963	ng/mL	----
PFBS-13C_IS	Auto	3.996	867796	867796	2	5.0000	ng/mL	----
PFHxS_1	M	4.388	2359	622382	3	-0.0017	ng/mL	----
PFHxS-18O	Auto	4.380	622382	6005040	1	4.7090	ng/mL	----
PFHxS-18O_IS	Auto	4.380	622382	622382	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.538	1133	622382	3	0.0058	ng/mL	----
PFOS_1	Auto	4.704	1698	760827	4	0.0132	ng/mL	----
PFOS-13C	Auto	4.708	760827	6005040	1	4.0897	ng/mL	----
PFOS-13C_IS	Auto	4.708	760827	760827	4	5.0000	ng/mL	----
PFDS_1	Auto	5.068	801	760827	4	0.0066	ng/mL	----
PFBA	ND(W/B)	----	----	2262370	5	----	ng/mL	----
PFBA-13C	Auto	3.359	2262370	6005040	1	3.5613	ng/mL	----
PFBA-13C_IS	Auto	3.359	2262370	2262370	5	5.0000	ng/mL	----
PFPeA	M	3.942	22199	1378425	6	0.0088	ng/mL	----
PFPeA-13C	Auto	3.941	1378425	6005040	1	3.8558	ng/mL	----
PFPeA-13C_IS	Auto	3.941	1378425	1378425	6	5.0000	ng/mL	----
PFHxA	M	4.194	20074	3843261	7	0.0204	ng/mL	----
PFHxA-13C	Auto	4.198	3843261	6005040	1	3.9246	ng/mL	----
PFHxA-13C_IS	Auto	4.198	3843261	3843261	7	5.0000	ng/mL	----
PFHpA	M	4.362	12434	4513462	8	0.0053	ng/mL	----
PFHpA-13C	Auto	4.381	4513462	6005040	1	5.0948	ng/mL	----
PFHpA-13C_IS	Auto	4.381	4513462	4513462	8	5.0000	ng/mL	----
PFOA	M	4.546	28196	4816784	9	0.0146	ng/mL	----
PFOA-13C	Auto	4.548	4816784	6005040	1	4.4945	ng/mL	----
PFOA-13C_IS	Auto	4.548	4816784	4816784	9	5.0000	ng/mL	----
PFNA	Auto	4.708	8056	3919403	10	0.0070	ng/mL	----
PFNA-13C	Auto	4.721	3919403	6005040	1	4.8985	ng/mL	----
PFNA-13C_IS	Auto	4.721	3919403	3919403	10	5.0000	ng/mL	----
PFDA	Auto	4.901	6013	3318036	11	0.0085	ng/mL	----
PFDA-13C	Auto	4.899	3318036	6005040	1	4.5704	ng/mL	----
PFDA-13C_IS	Auto	4.899	3318036	3318036	11	5.0000	ng/mL	----
PFUnA	M	5.077	5991	3882147	12	-0.0039	ng/mL	----
PFUnA-13C	Auto	5.080	3882147	6005040	1	4.2871	ng/mL	----
PFUnA-13C_IS	Auto	5.080	3882147	3882147	12	5.0000	ng/mL	----
PFDoA	Auto	5.257	5906	4216888	13	0.0255	ng/mL	----
PFDoA-13C	Auto	5.257	4216888	6005040	1	3.9528	ng/mL	----
PFDoA-13C_IS	Auto	5.257	4216888	4216888	13	5.0000	ng/mL	----
PFTTrDA	Auto	5.424	9927	3776930	14	0.0092	ng/mL	----
PFTTeDA	Auto	5.580	43674	3776930	14	-0.0090	ng/mL	----
PFTTeDA-13C	Auto	5.581	3776930	6005040	1	4.4374	ng/mL	----
PFTTeDA-13C_IS	Auto	5.581	3776930	3776930	14	5.0000	ng/mL	----
FOSA	Auto	5.192	3187	1776328	16	0.0075	ng/mL	----
FOSA-13C	Auto	5.193	1776328	6005040	1	3.6595	ng/mL	----
FOSA-13C_IS	Auto	5.193	1776328	1776328	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	4.994	811	613308	21	0.0106	ng/mL	----
N-MeFOSAA-d3	Auto	4.998	613308	6005040	1	4.4503	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.998	613308	613308	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	619306	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.094	619306	6005040	1	4.8768	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.094	619306	619306	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.528	1018	362916	24	0.0121	ng/mL	----
6_2-FTS-13C	Auto	4.539	362916	6005040	1	4.5034	ng/mL	----
6_2-FTS-13C_IS	Auto	4.539	362916	362916	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.896	337	304260	25	0.0067	ng/mL	----
8_2-FTS-13C	Auto	4.899	304260	6005040	1	4.6569	ng/mL	----
8_2-FTS-13C_IS	Auto	4.899	304260	304260	25	5.0000	ng/mL	----

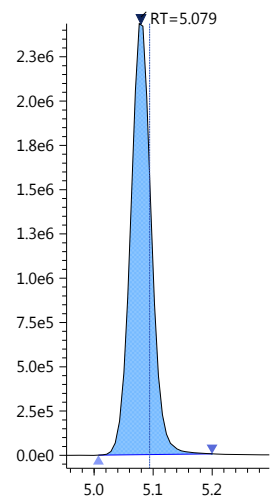
Insight Report

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13C7-PFUnDA_IS

Conc 5.0000
Area 6005040

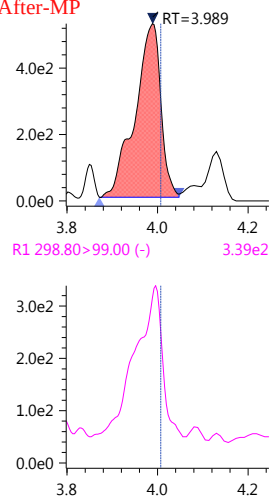
ISTD 570.00>525.00 (-) 2.44e6



PFBS_1

Conc 0.0104
Area 2072
R#1 50.00 (0.00)

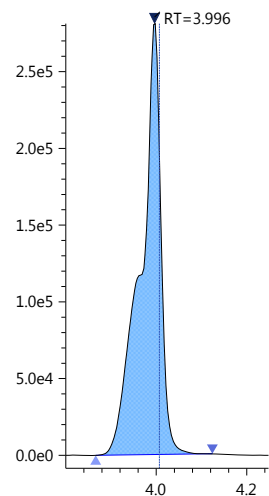
Q 299.00>80.00 (-) 5.34e2



PFBS-13C

Conc 3.6963
Area 867796

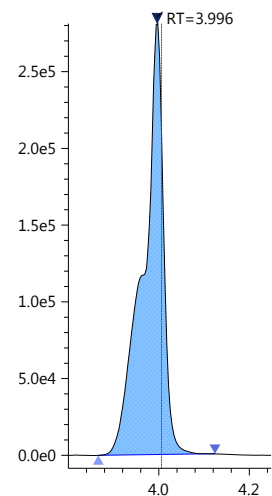
Q 301.80>80.00 (-) 2.81e5



PFBS-13C_IS

Conc 5.0000
Area 867796

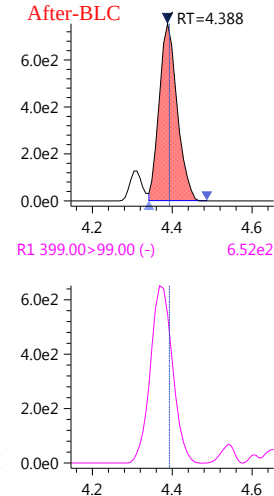
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PFHxS_1

Conc -0.0017
Area 2359
R#1 48.05 (0.00)

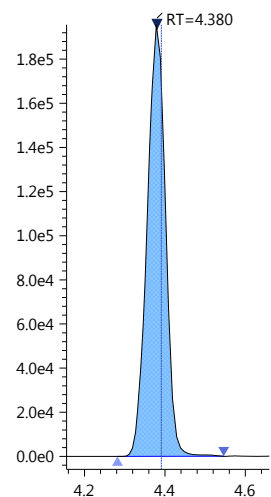
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PFHxS-180

Conc 4.7090
Area 622382

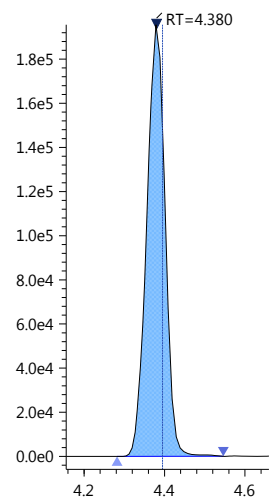
Q 402.70>84.05 (-) 1.96e5



PFHxS-180_IS

Conc 5.0000
Area 622382

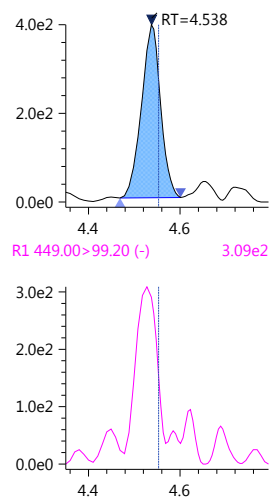
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PFHpS_1

Conc 0.0058
Area 1133
R#1 72.94 (0.00)

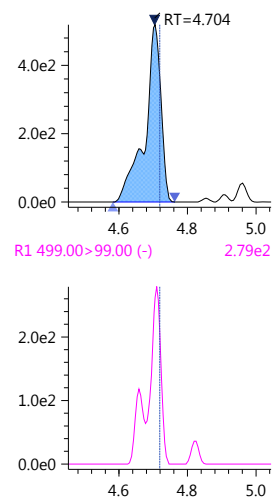
Q 449.00>80.15 (-) 4.00e2



PFOS_1

Conc 0.0132
Area 1698
R#1 52.66 (0.00)

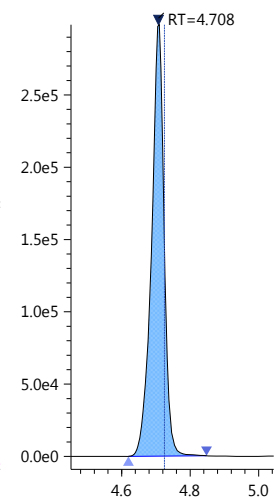
Q 499.00>80.00 (-) 5.19e2



PFOS-13C

Conc 4.0897
Area 760827

Q 502.80>80.05 (-) 2.99e5



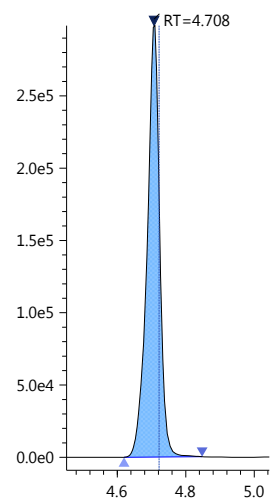
Insight Report

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PFOS-13C_IS

Conc 5.0000
Area 760827

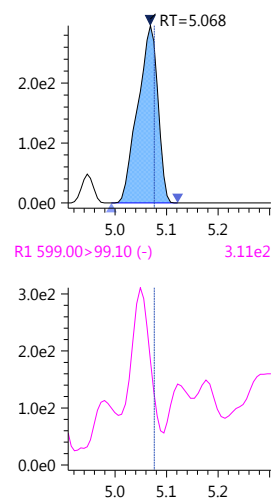
ISTD 502.80>80.05 (-) 2.99e5



PFDS_1

Conc 0.0066
Area 801
R#1 17.04 (0.00)

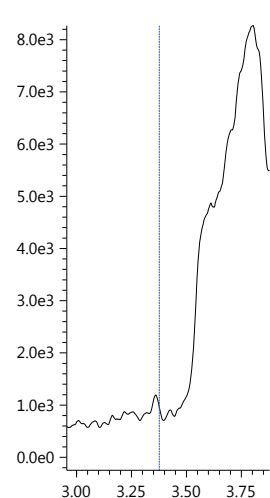
Q 599.00>79.10 (-) 2.96e2



PFBA

Conc ----
Area ----

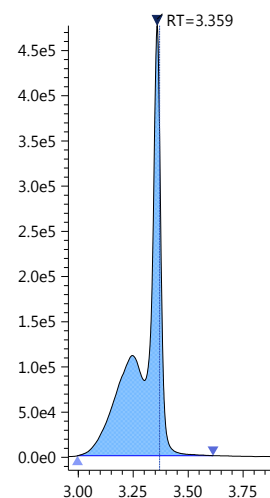
Q 213.00>169.10 (-) 8.27e3



PFBA-13C

Conc 3.5613
Area 2262370

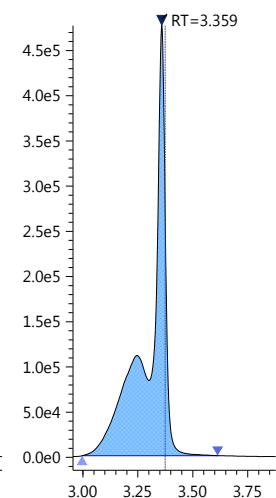
Q 216.90>172.15 (-) 4.78e5



PFBA-13C_IS

Conc 5.0000
Area 2262370

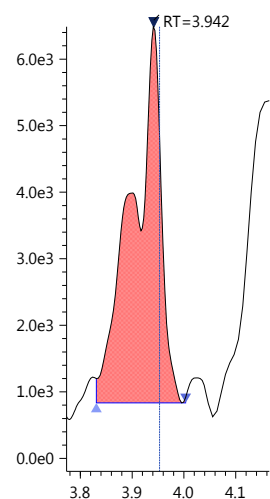
ISTD 216.90>172.15 (-) 4.78e5



PFPeA

Conc 0.0088
Area 22199
After-BLC

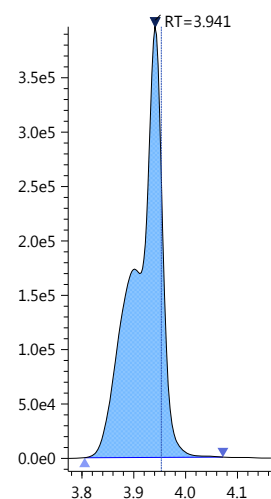
Q 263.05>219.10 (-) 6.49e3



PFPeA-13C

Conc 3.8558
Area 1378425

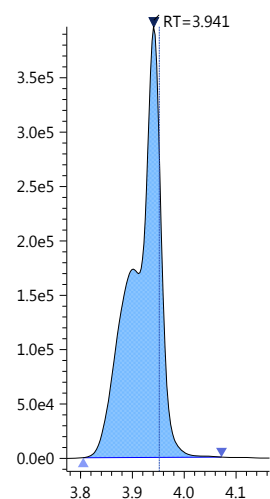
Q 267.90>223.00 (-) 3.97e5



PFPeA-13C_IS

Conc 5.0000
Area 1378425

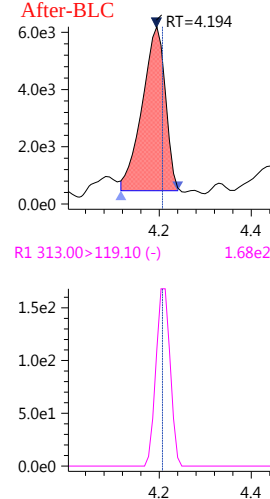
ISTD 267.90>223.00 (-) 3.97e5



PFHxA

Conc 0.0204
Area 20074
R#1 2.02 (0.00)
After-BLC

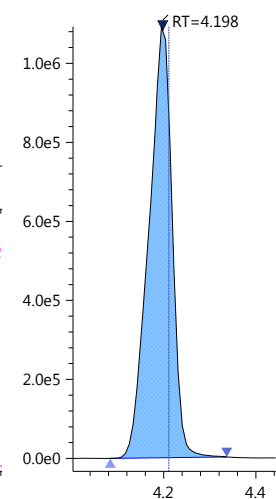
Q 313.00>269.00 (-) 6.20e3



PFHxA-13C

Conc 3.9246
Area 3843261

Q 314.90>270.10 (-) 1.09e6



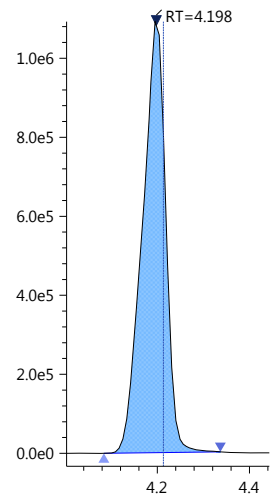
Insight Report

Printed at 5/5/2020 1:30:49 PM

PFHxA-13C_IS

Conc 5.0000
Area 3843261

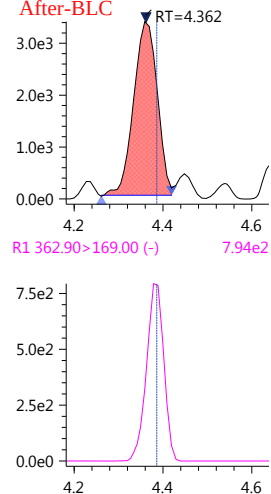
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PFHpA

Conc 0.0053
Area 12434
R#1 9.77 (0.00)

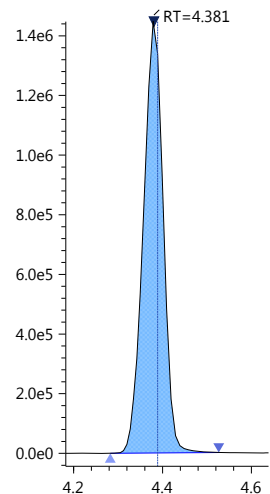
Q 362.90>319.00 (-) 3.42e3



PFHpA-13C

Conc 5.0948
Area 4513462

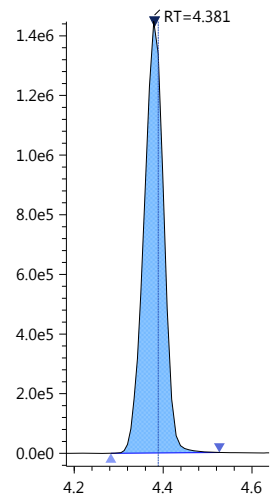
Q 366.90>322.10 (-) 1.45e6



PFHpA-13C_IS

Conc 5.0000
Area 4513462

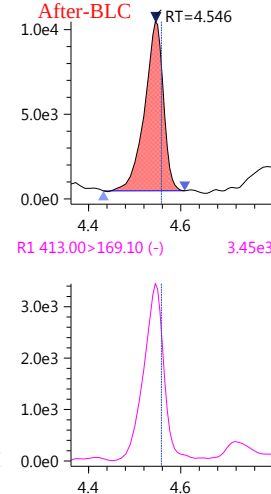
ISTD 366.90>322.10 (-) 1.45e6



PFOA

Conc 0.0146
Area 28196
R#1 33.01 (0.00)

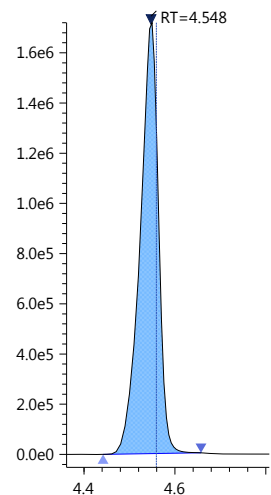
Q 413.00>369.00 (-) 1.05e4



PFOA-13C

Conc 4.4945
Area 4816784

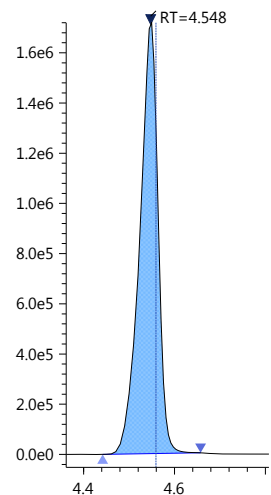
Q 416.80>372.05 (-) 1.72e6



PFOA-13C_IS

Conc 5.0000
Area 4816784

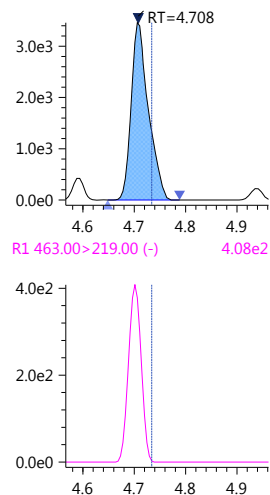
ISTD 416.80>372.05 (-) 1.72e6



PFNA

Conc 0.0070
Area 8056
R#1 8.46 (0.00)

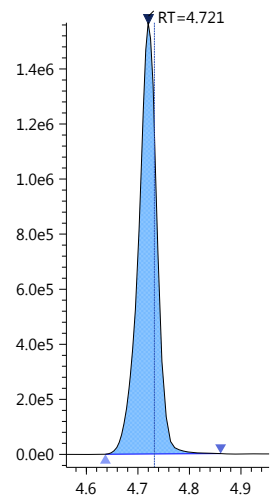
Q 463.00>418.90 (-) 3.46e3



PFNA-13C

Conc 4.8985
Area 3919403

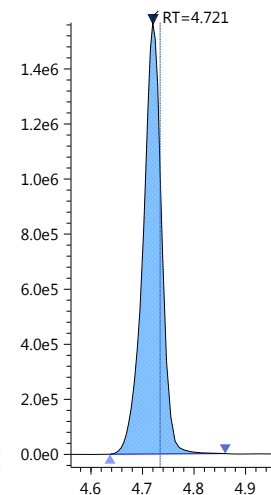
Q 467.80>423.00 (-) 1.57e6



PFNA-13C_IS

Conc 5.0000
Area 3919403

ISTD 467.80>423.00 (-) 1.57e6

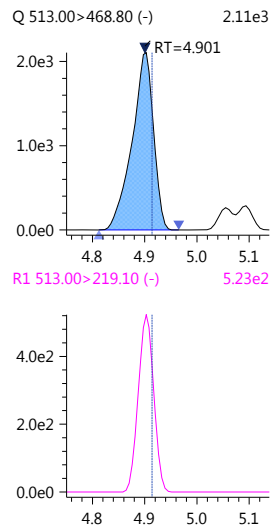


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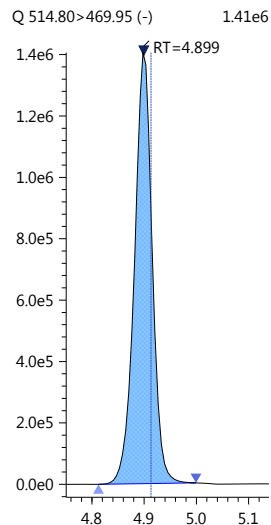
PFDA

Conc 0.0085
Area 6013
R#1 25.15 (0.00)



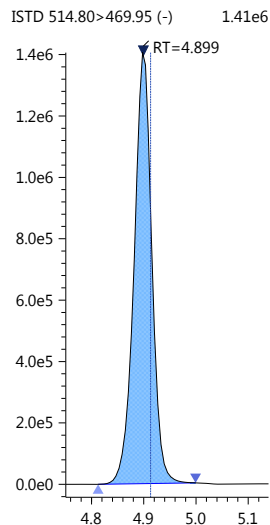
PFDA-13C

Conc 4.5704
Area 3318036



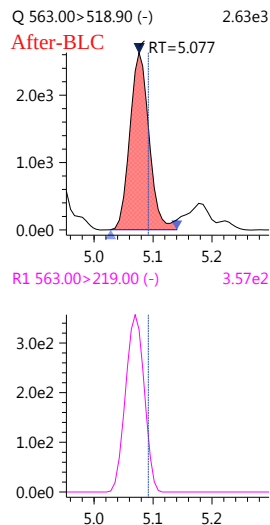
PFDA-13C_IS

Conc 5.0000
Area 3318036



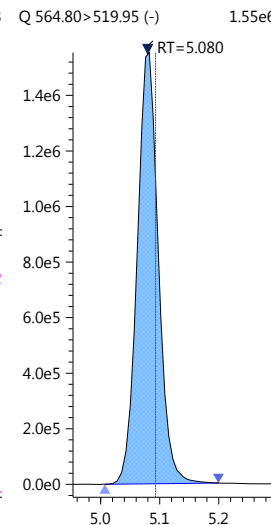
PFUnA

Conc -0.0039
Area 5991
R#1 12.70 (0.00)



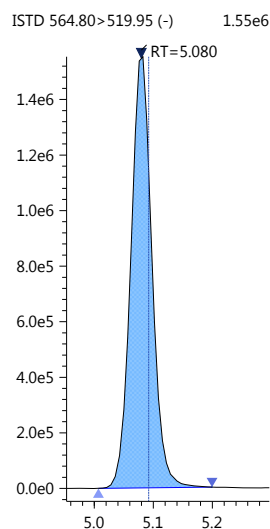
PFUnA-13C

Conc 4.2871
Area 3882147



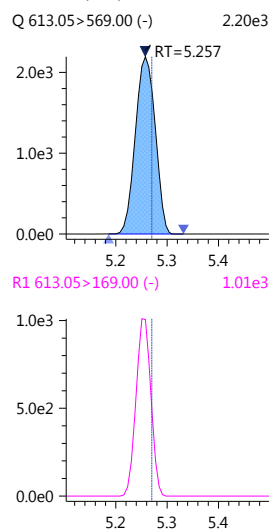
PFUnA-13C_IS

Conc 5.0000
Area 3882147



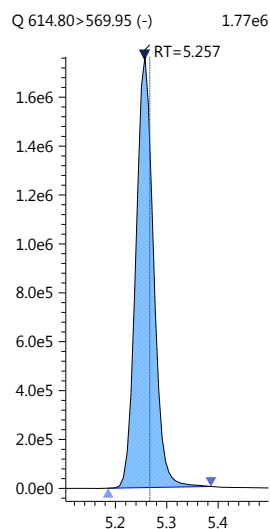
PFD0A

Conc 0.0255
Area 5906
R#1 47.08 (0.00)



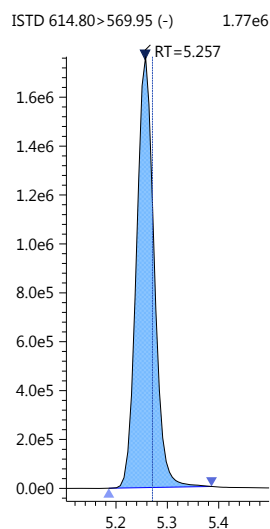
PFD0A-13C

Conc 3.9528
Area 4216888



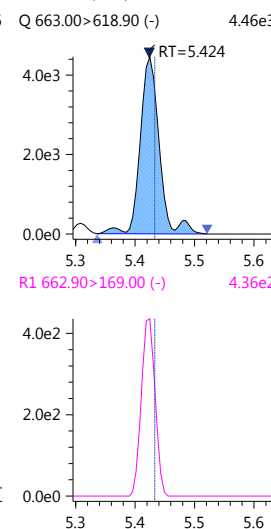
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Conc 5.0000
Area 4216888



PFTrDA

Conc 0.0092
Area 9927
R#1 10.10 (0.00)

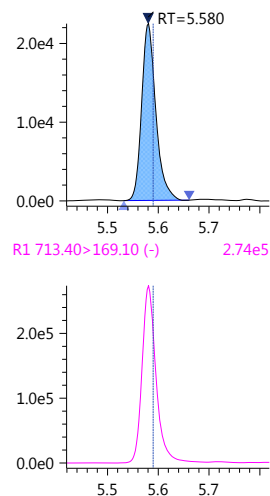


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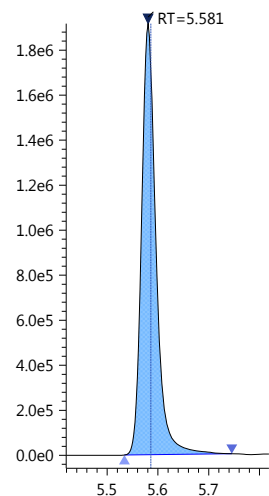
PFTeDA

Conc -0.0090
 Area 43674
 R#1 1230.09 (0.00)
 Q 713.40>669.00 (-) 2.25e4



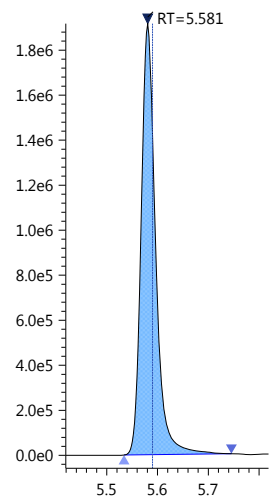
PFTeDA-13C

Conc 4.4374
 Area 3776930
 Q 714.70>669.90 (-) 1.92e6



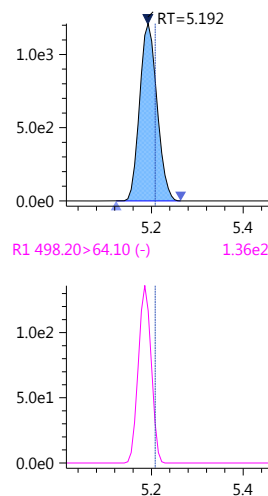
PFTeDA-13C_IS

Conc 5.0000
 Area 3776930
 ISTD 714.70>669.90 (-) 1.92e6



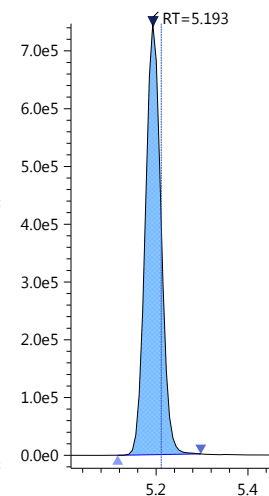
FOSA

Conc 0.0075
 Area 3187
 R#1 9.68 (0.00)
 Q 498.20>78.00 (-) 1.21e3



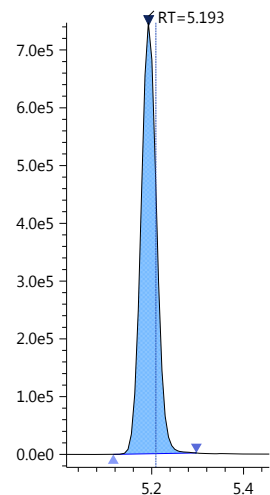
FOSA-13C

Conc 3.6595
 Area 1776328
 Q 506.00>78.05 (-) 7.47e5



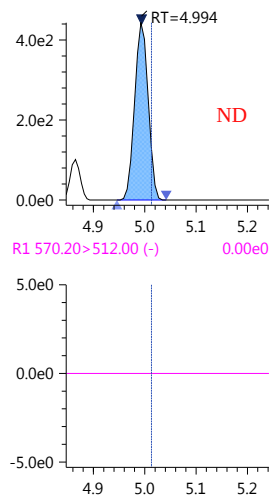
FOSA-13C_IS

Conc 5.0000
 Area 1776328
 ISTD 506.00>78.05 (-) 7.47e5



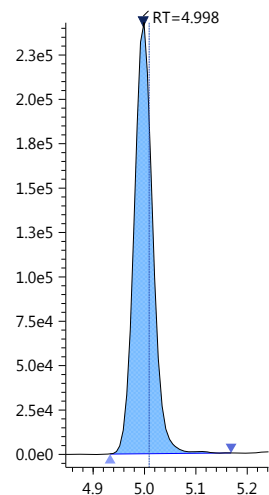
N-MeFOSAA

Conc 0.0106
 Area 811
 R#1 0.00 (0.00)
 Q 570.20>419.00 (-) 4.43e2



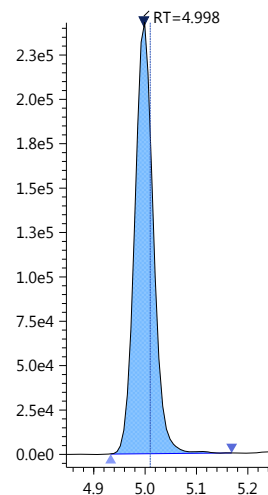
N-MeFOSAA-d3

Conc 4.4503
 Area 613308
 Q 572.80>419.05 (-) 2.43e5



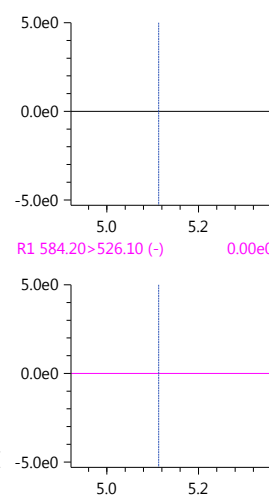
N-MeFOSAA-d3_IS

Conc 5.0000
 Area 613308
 ISTD 572.80>419.05 (-) 2.43e5



N-EtFOSAA

Conc ----
 Area ----
 R#1 ---- (0.00)
 Q 584.20>418.95 (-) 0.00e0

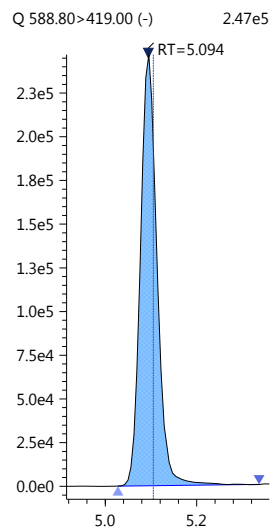


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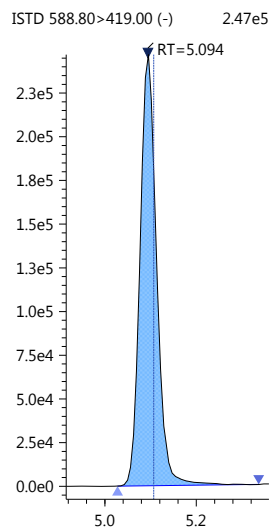
N-EtFOSAA-d5

Conc 4.8768
 Area 619306



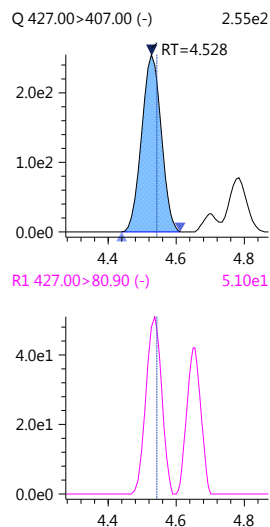
N-EtFOSAA-d5_IS

Conc 5.0000
 Area 619306



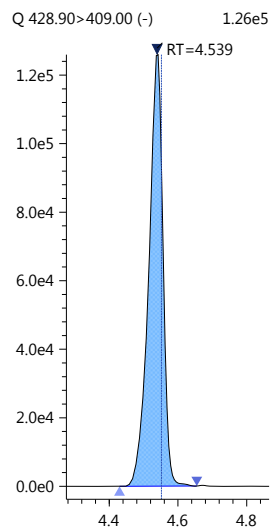
6_2-FTS_1

Conc 0.0121
 Area 1018
 R#1 20.25 (0.00)



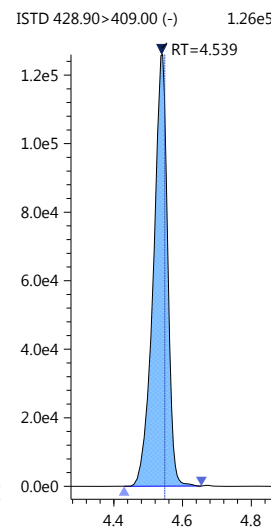
6_2-FTS-13C

Conc 4.5034
 Area 362916



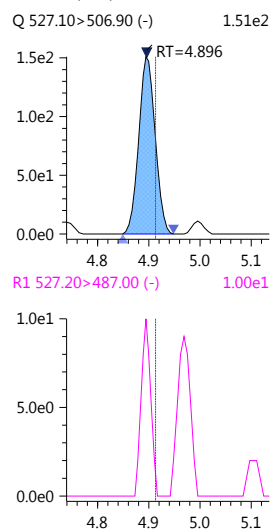
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Conc 5.0000
 Area 362916



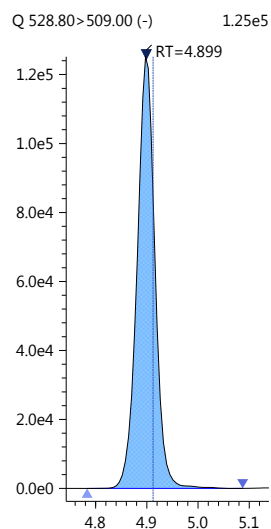
8_2-FTS_1

Conc 0.0067
 Area 337
 R#1 6.83 (0.00)



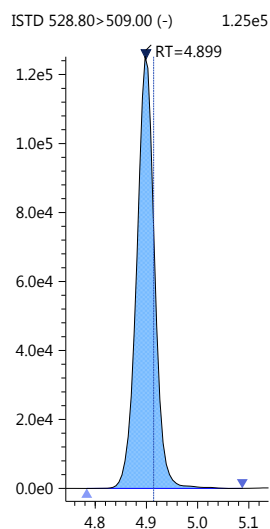
8_2-FTS-13C

Conc 4.6569
 Area 304260



8_2-FTS-13C_IS

Conc 5.0000
 Area 304260



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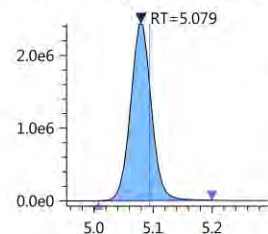
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200428_059

Sample ID: R2003266-004
Date acquired: 4/29/2020 1:00:30 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200428_b4\200428_059.lcd
Vial: 43 | Inj. Volume: 15.0000uL | Tray: 3

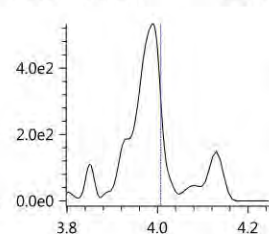
13C7-PFUnDA_IS

Conc 5.0000
Area 6005040
ISTD 570.00>525.00 (-)



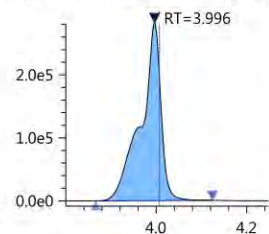
PFBS_1

Conc ----
Area ----
Q 299.00>80.00 (-)



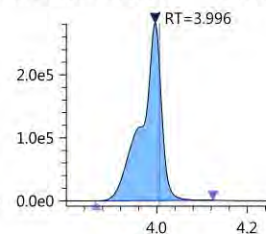
PFBS-13C

Conc 3.6963
Area 867796
Q 301.80>80.00 (-)



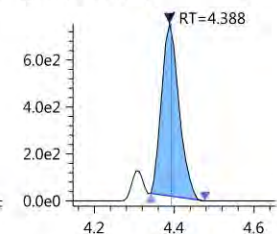
PFBS-13C_IS

Conc 5.0000
Area 867796
ISTD 301.80>80.00 (-)



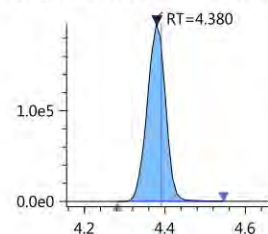
PFHxS_1

Conc -0.0025
Area 2237
Q 399.00>80.00 (-)



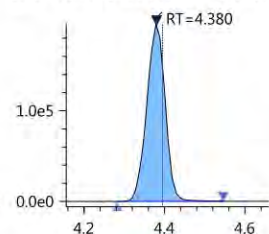
PFHxS-180

Conc 4.7090
Area 622382
Q 402.70>84.05 (-)



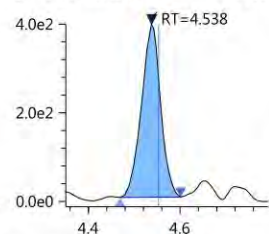
PFHxS-180_IS

Conc 5.0000
Area 622382
ISTD 402.70>84.05 (-)



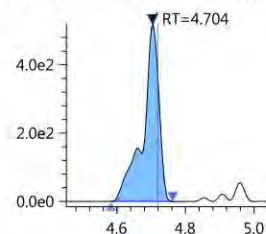
PFHpS_1

Conc 0.0058
Area 1133
Q 449.00>80.15 (-)



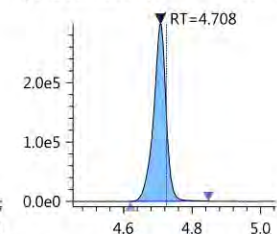
PFOS_1

Conc 0.0132
Area 1698
Q 499.00>80.00 (-)



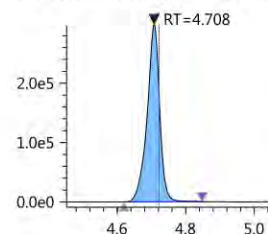
PFOS-13C

Conc 4.0897
Area 760827
Q 502.80>80.05 (-)



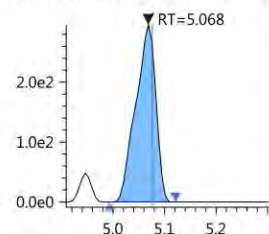
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Conc 5.0000
Area 760827
ISTD 502.80>80.05 (-)



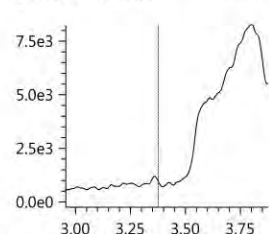
PFDS_1

Conc 0.0066
Area 801
Q 599.00>79.90 (-)



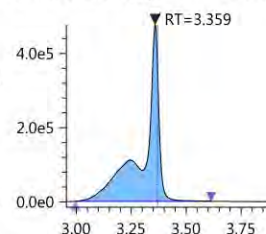
PFBA

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



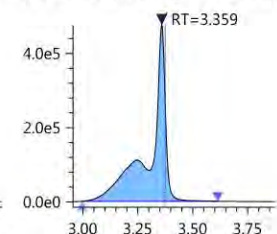
PFBA-13C

Conc 3.5613
Area 2262370
Q 216.90>172.15 (-)



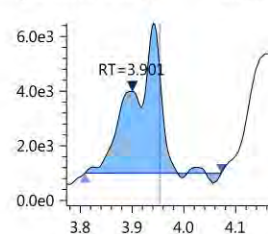
PFBA-13C_IS

Conc 5.0000
Area 2262370
ISTD 216.90>172.15 (-)



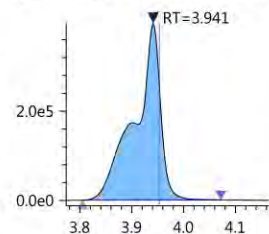
PFPeA

Conc 0.0061
Area 20671
Q 263.05>219.10 (-)



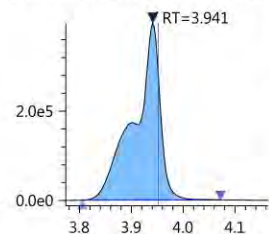
PFPeA-13C

Conc 3.8558
Area 1378425
Q 267.90>223.00 (-)



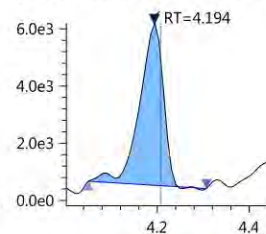
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Conc 5.0000
Area 1378425
ISTD 267.90>223.00 (-)



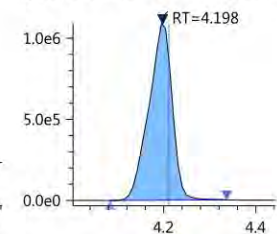
PFHxA

Conc 0.0205
Area 20171
Q 313.00>269.00 (-)



PFHxA-13C

Conc 3.9246
Area 3843261
Q 314.90>270.10 (-)



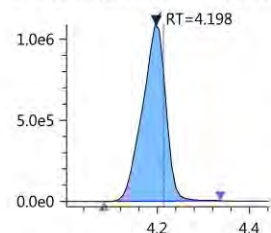
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PFHxA-13C_IS

Conc 5.0000
 Area 3843261

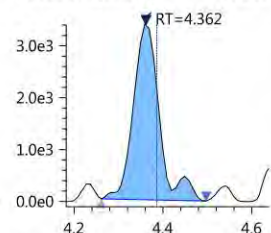
ISTD 314.90>270.10 (-) 1.09e6



PFHpA

Conc 0.0070
 Area 13863

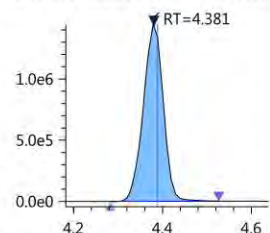
Q 362.90>319.00 (-) 3.42e3



PFHpA-13C

Conc 5.0948
 Area 4513462

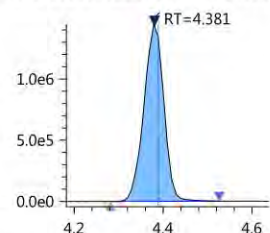
Q 366.90>322.10 (-) 1.45e6



PFHpA-13C_IS

Conc 5.0000
 Area 4513462

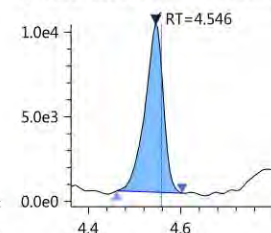
ISTD 366.90>322.10 (-) 1.45e6



PFOA

Conc 0.0140
 Area 27488

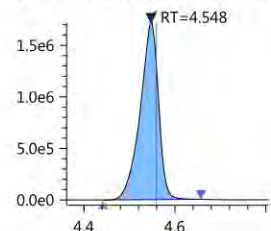
Q 413.00>369.00 (-) 1.05e4



PFOA-13C

Conc 4.4945
 Area 4816784

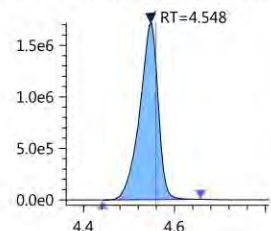
Q 416.80>372.05 (-) 1.72e6



PFOA-13C_IS

Conc 5.0000
 Area 4816784

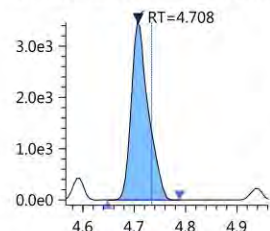
ISTD 416.80>372.05 (-) 1.72e6



PFNA

Conc 0.0070
 Area 8056

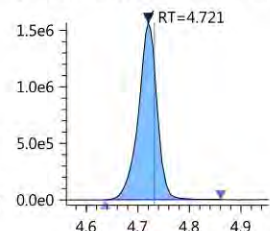
Q 463.00>418.90 (-) 3.46e3



PFNA-13C

Conc 4.8985
 Area 3919403

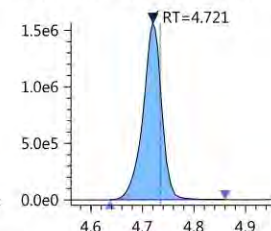
Q 467.80>423.00 (-) 1.57e6



PFNA-13C_IS

Conc 5.0000
 Area 3919403

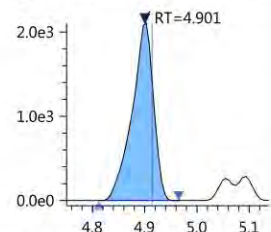
ISTD 467.80>423.00 (-) 1.57e6



PFDA

Conc 0.0085
 Area 6013

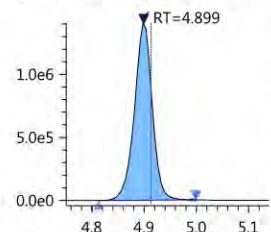
Q 513.00>468.80 (-) 2.11e3



PFDA-13C

Conc 4.5704
 Area 3318036

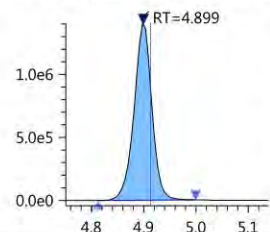
Q 514.80>469.95 (-) 1.41e6



PFDA-13C_IS

Conc 5.0000
 Area 3318036

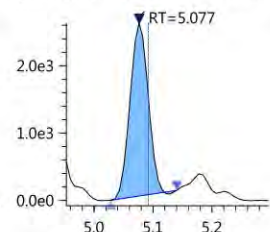
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PFUnA

Conc -0.0047
 Area 5505

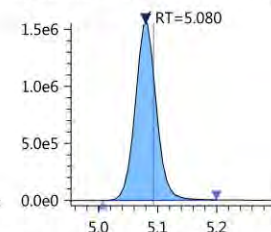
Q 563.00>518.90 (-) 2.63e3



PFUnA-13C

Conc 4.2871
 Area 3882147

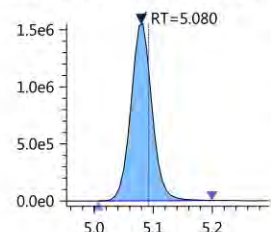
Q 564.80>519.95 (-) 1.55e6



PFUnA-13C_IS

Conc 5.0000
 Area 3882147

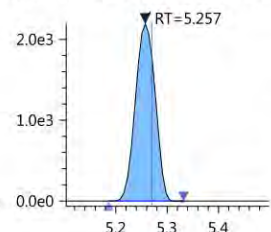
ISTD 564.80>519.95 (-) 1.55e6



PFDaA

Conc 0.0255
 Area 5906

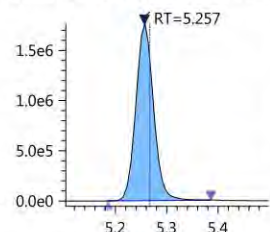
Q 613.05>569.00 (-) 2.20e3



PFDaA-13C

Conc 3.9528
 Area 4216888

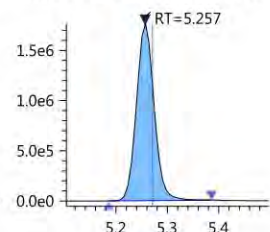
Q 614.80>569.95 (-) 1.77e6



PFDaA-13C_IS

Conc 5.0000
 Area 4216888

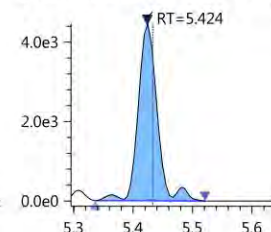
ISTD 614.80>569.95 (-) 1.77e6



PFTrDA

Conc 0.0092
 Area 9927

Q 663.00>618.90 (-) 4.46e3

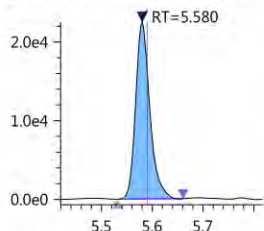


Insight Report

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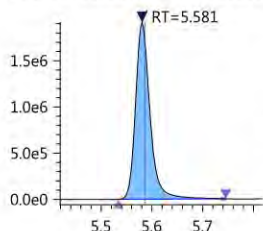
PFTeDA

Conc -0.0090
Area 43674
Q 713.40>669.00 (-) 2.25e4



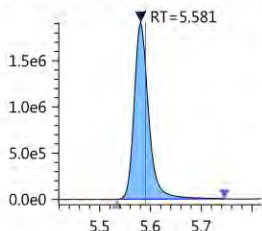
PFTeDA-13C

Conc 4.4374
Area 3776930
Q 714.70>669.90 (-) 1.92e6



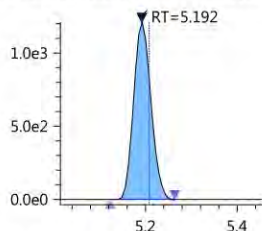
PFTeDA-13C_IS

Conc 5.0000
Area 3776930
ISTD 714.70>669.90 (-) 1.92e6



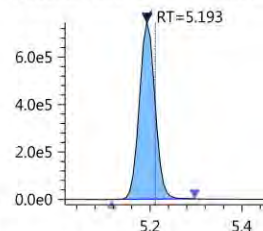
FOSA

Conc 0.0075
Area 3187
Q 498.20>78.00 (-) 1.21e3



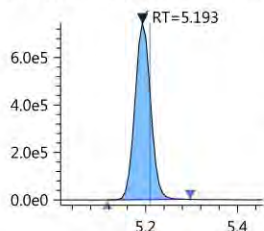
FOSA-13C

Conc 3.6595
Area 1776328
Q 506.00>78.05 (-) 7.47e5



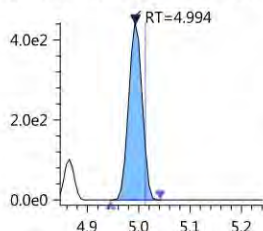
FOSA-13C_IS

Conc 5.0000
Area 1776328
ISTD 506.00>78.05 (-) 7.47e5



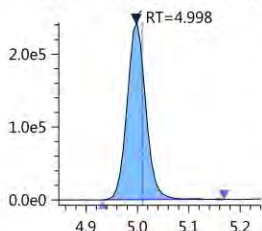
N-MeFOSAA

Conc 0.0106
Area 811
Q 570.20>419.00 (-) 4.43e2



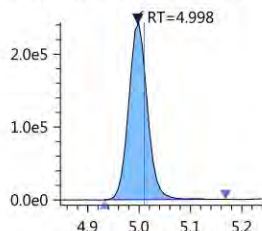
N-MeFOSAA-d3

Conc 4.4503
Area 613308
Q 572.80>419.05 (-) 2.43e5



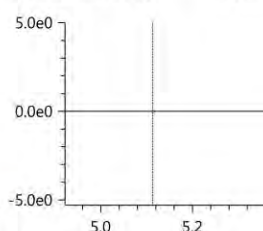
N-MeFOSAA-d3_IS

Conc 5.0000
Area 613308
ISTD 572.80>419.05 (-) 2.43e5



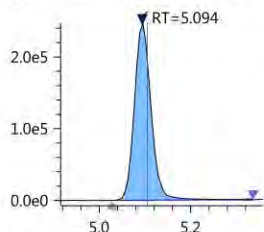
N-EtFOSAA

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



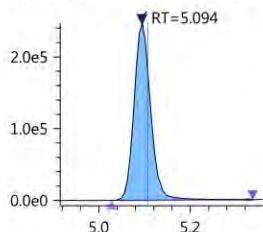
N-EtFOSAA-d5

Conc 4.8768
Area 619306
Q 588.80>419.00 (-) 2.47e5



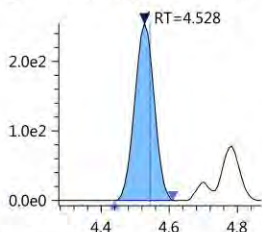
N-EtFOSAA-d5_IS

Conc 5.0000
Area 619306
ISTD 588.80>419.00 (-) 2.47e5



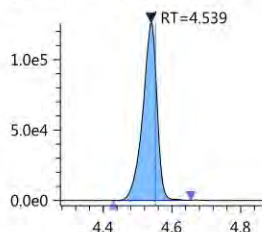
6_2-FTS_1

Conc 0.0121
Area 1018
Q 427.00>407.00 (-) 2.55e2



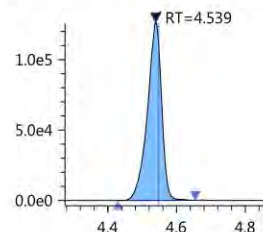
6_2-FTS-13C

Conc 4.5034
Area 362916
Q 428.90>409.00 (-) 1.26e5



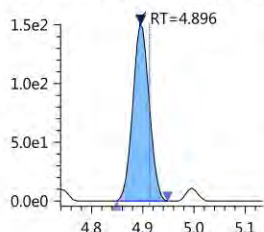
6_2-FTS-13C_IS

Conc 5.0000
Area 362916
ISTD 428.90>409.00 (-) 1.26e5



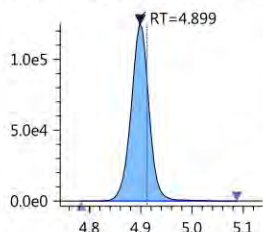
8_2-FTS_1

Conc 0.0067
Area 337
Q 527.10>506.90 (-) 1.51e2



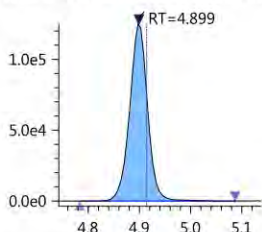
8_2-FTS-13C

Conc 4.6569
Area 304260
Q 528.80>509.00 (-) 1.25e5



8_2-FTS-13C_IS

Conc 5.0000
Area 304260
ISTD 528.80>509.00 (-) 1.25e5



Validation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File: J:\LCMS06\Data\200428_b4\200428_060
Lab ID: R2003266-005.R01
RunType: N/A
Matrix: Water

Date Acquired: 4/29/20 01:10
Batch ID: 678319
Analysis Method: PFC/537M/PFAS

Validations

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

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	13C3-PFBS	134	20	109	High bias ND
	18O2-PFHxS	177	26	122	High bias ND
	13C4-PFOS	165	25	121	High bias ND
	13C4-PFBA	126	27	124	High bias ND
	13C2-PFHxA	141	28	132	High bias ND
	13C4-PFHpA	168	19	139	High bias ND
	13C4-PFOA	167	22	130	High bias ND
	13C5-PFNA	178	20	127	High bias ND
	13C2-PFDA	170	24	125	High bias ND
	13C2-PFUnDA	168	22	125	High bias ND
	13C2-PFDoDA	168	19	122	High bias ND
	13C2-PFTeDA	158	13	124	High bias ND
	D3-MeFOSAA	180	9	123	High bias ND
	D5-EtFOSAA	180	12	126	High bias ND

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200428_b4\200428_060	Instrument:	K-LCMS-06
Acqu Date:	4/29/20 01:10	Vial:	9
Run Type:	N/A	Dilution:	1
Lab ID:	R2003266-005.R01	Raw Units:	ng/mL

Bottle ID:	R2003266-005.01	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678319	Prep Lot:	357465	Report Group:	R2003266
Analysis	PFC/537M	Prep Method:	ALS SOP		
		Prep Date:	4/27/20		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.079	-0.01	4893093	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.994	-0.02	1278866	6.6851	134 *	20 - 109	Y
18O2-PFHxS	4.381	-0.01	953539	8.8541	177 *	26 - 122	Y
13C4-PFOS	4.707	-0.01	1251279	8.2546	165 *	25 - 121	Y
13C4-PFBA	3.359	-0.02	3270143	6.3175	126 *	27 - 124	Y
13C5-PFPeA	3.940	-0.01	1758715	6.0376	121	27 - 138	Y
13C2-PFHxA	4.198	-0.01	5613692	7.0352	141 *	28 - 132	Y
13C4-PFHpA	4.382	-0.01	6054165	8.3869	168 *	19 - 139	Y
13C4-PFOA	4.547	-0.01	7296517	8.3555	167 *	22 - 130	Y
13C5-PFNA	4.721	-0.01	5789481	8.8801	178 *	20 - 127	Y
13C2-PFDA	4.899	-0.01	5025422	8.4954	170 *	24 - 125	Y
13C2-PFUnDA	5.079	-0.01	6186598	8.3845	168 *	22 - 125	Y
13C2-PFDoDA	5.255	-0.01	7301189	8.3993	168 *	19 - 122	Y
13C2-PFTeDA	5.578	-0.01	5493408	7.9206	158 *	13 - 124	Y
13C8-FOSA	5.192	-0.01	887475	2.2438	45	18 - 109	Y
D3-MeFOSAA	4.997	-0.01	1010704	9.0005	180 *	9 - 123	Y
D5-EtFOSAA	5.093	-0.01	928902	8.9771	180 *	12 - 126	Y
13C2-6:2 FTS	4.538	-0.01	687655	10.4721	209	10 - 226	Y
13C2-8:2 FTS	4.899	-0.01	468055	8.7919	176	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)	3.993	-0.02	3413	0.0116	0.36	J	Y
Perfluorohexane sulfonic acid (PFHxS)	4.385	0.00	3273	-0.0031	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: 5/5/20 13:35

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Data File: J:\LCMS06\Data\200428_b4\200428_060
Acqu Date: 4/29/20 01:10
Run Type: N/A
Lab ID: R2003266-005.R01

Instrument: K-LCMS06
Vial: 9
Dilution: 1
Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.537	-0.01	2296	0.0077	0.24	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.708	-0.01	3244	0.0153	0.47	J	Y
Perfluorodecane sulfonic acid (PFDS)	5.069	0.00	1026	0.0052	0.16	U	Y
Perfluorobutanoic acid (PFBA)	3.360	-0.02	41991	0.0658	2.0	J	Y
Perfluoropentanoic acid (PFPeA)	3.941	-0.01	30554	0.0118	0.36	U	Y
Perfluorohexanoic acid (PFHxA)	4.192	-0.02	34670	0.0253	0.78	U	Y
Perfluoroheptanoic acid (PFHpA)	4.377	-0.02	17422	0.0060	0.18	U	Y
Perfluorooctanoic acid (PFOA)	4.547	-0.01	46160	0.0164	0.50	J	Y
Perfluorononanoic acid (PFNA)	4.715	-0.02	11935	0.0071	0.22	U	Y
Perfluorodecanoic acid (PFDA)	4.896	-0.02	13514	0.0127	0.39	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.080	-0.01	8328	-0.0052	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.254	-0.01	10588	0.0259	0.80	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.422	-0.01	11067	0.0060	0.18	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.578	-0.01	63428	-0.0092	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.194	-0.01	664	0.0031	0.095	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.003	0.00	819	0.0065	0.20	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.095	-0.01	606	0.0063	0.19	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.542	-0.01	1833	0.0115	0.35	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.898	-0.01	373	0.0048	0.15	U	Y

Prep Amount: 260.0000 mL
Prep Final Amount: 8.00 mL

Dilution: 1
Basis Factor: 100.00

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

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

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

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Insight Report

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200428_060

Sample ID: R2003266-005

Date acquired: 4/29/2020 1:10:57 AM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200428_b4\200428_060.lcd

Vial: 44 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA-IS	Auto	5.079	4893093	4893093	1	5.0000	ng/mL	----
PFBS_1	Auto	3.993	3413	1278866	2	0.0116	ng/mL	----
PFBS-13C	Auto	3.994	1278866	4893093	1	6.6851	ng/mL	----
PFBS-13C-IS	Auto	3.994	1278866	1278866	2	5.0000	ng/mL	----
PFHxS_1	Auto	4.385	3273	953539	3	-0.0031	ng/mL	----
PFHxS-18O	Auto	4.381	953539	4893093	1	8.8541	ng/mL	----
PFHxS-18O-IS	Auto	4.381	953539	953539	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.537	2296	953539	3	0.0077	ng/mL	----
PFOS_1	Auto	4.708	3244	1251279	4	0.0153	ng/mL	----
PFOS-13C	Auto	4.707	1251279	4893093	1	8.2546	ng/mL	----
PFOS-13C-IS	Auto	4.707	1251279	1251279	4	5.0000	ng/mL	----
PFDS_1	Auto	5.069	1026	1251279	4	0.0052	ng/mL	----
PFBA	M	3.360	41991	3270143	5	0.0658	ng/mL	----
PFBA-13C	Auto	3.359	3270143	4893093	1	6.3175	ng/mL	----
PFBA-13C-IS	Auto	3.359	3270143	3270143	5	5.0000	ng/mL	----
PFPeA	M	3.941	30554	1758715	6	0.0118	ng/mL	----
PFPeA-13C	Auto	3.940	1758715	4893093	1	6.0376	ng/mL	----
PFPeA-13C-IS	Auto	3.940	1758715	1758715	6	5.0000	ng/mL	----
PFHxA	Auto	4.192	34670	5613692	7	0.0253	ng/mL	----
PFHxA-13C	Auto	4.198	5613692	4893093	1	7.0352	ng/mL	----
PFHxA-13C-IS	Auto	4.198	5613692	5613692	7	5.0000	ng/mL	----
PFHpA	M	4.377	17422	6054165	8	0.0060	ng/mL	----
PFHpA-13C	Auto	4.382	6054165	4893093	1	8.3869	ng/mL	----
PFHpA-13C-IS	Auto	4.382	6054165	6054165	8	5.0000	ng/mL	----
PFOA	M	4.547	46160	7296517	9	0.0164	ng/mL	----
PFOA-13C	Auto	4.547	7296517	4893093	1	8.3555	ng/mL	----
PFOA-13C-IS	Auto	4.547	7296517	7296517	9	5.0000	ng/mL	----
PFNA	Auto	4.715	11935	5789481	10	0.0071	ng/mL	----
PFNA-13C	Auto	4.721	5789481	4893093	1	8.8801	ng/mL	----
PFNA-13C-IS	Auto	4.721	5789481	5789481	10	5.0000	ng/mL	----
PFDA	Auto	4.896	13514	5025422	11	0.0127	ng/mL	----
PFDA-13C	Auto	4.899	5025422	4893093	1	8.4954	ng/mL	----
PFDA-13C-IS	Auto	4.899	5025422	5025422	11	5.0000	ng/mL	----
PFUnA	Auto	5.080	8328	6186598	12	-0.0052	ng/mL	----
PFUnA-13C	Auto	5.079	6186598	4893093	1	8.3845	ng/mL	----
PFUnA-13C-IS	Auto	5.079	6186598	6186598	12	5.0000	ng/mL	----
PFDoA	Auto	5.254	10588	7301189	13	0.0259	ng/mL	----
PFDoA-13C	Auto	5.255	7301189	4893093	1	8.3993	ng/mL	----
PFDoA-13C-IS	Auto	5.255	7301189	7301189	13	5.0000	ng/mL	----
PFTTrDA	Auto	5.422	11067	5493408	14	0.0060	ng/mL	----
PFTTeDA	Auto	5.578	63428	5493408	14	-0.0092	ng/mL	----
PFTTeDA-13C	Auto	5.578	5493408	4893093	1	7.9206	ng/mL	----
PFTTeDA-13C-IS	Auto	5.578	5493408	5493408	14	5.0000	ng/mL	----
FOSA	Auto	5.194	664	887475	16	0.0031	ng/mL	----
FOSA-13C	Auto	5.192	887475	4893093	1	2.2438	ng/mL	----
FOSA-13C-IS	Auto	5.192	887475	887475	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.003	819	1010704	21	0.0065	ng/mL	----
N-MeFOSAA-d3	Auto	4.997	1010704	4893093	1	9.0005	ng/mL	----
N-MeFOSAA-d3-IS	Auto	4.997	1010704	1010704	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.095	606	928902	22	0.0063	ng/mL	----
N-EtFOSAA-d5	Auto	5.093	928902	4893093	1	8.9771	ng/mL	----
N-EtFOSAA-d5-IS	Auto	5.093	928902	928902	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.542	1833	687655	24	0.0115	ng/mL	----
6_2-FTS-13C	Auto	4.538	687655	4893093	1	10.4721	ng/mL	----
6_2-FTS-13C-IS	Auto	4.538	687655	687655	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.898	373	468055	25	0.0048	ng/mL	----
8_2-FTS-13C	Auto	4.899	468055	4893093	1	8.7919	ng/mL	----
8_2-FTS-13C-IS	Auto	4.899	468055	468055	25	5.0000	ng/mL	----

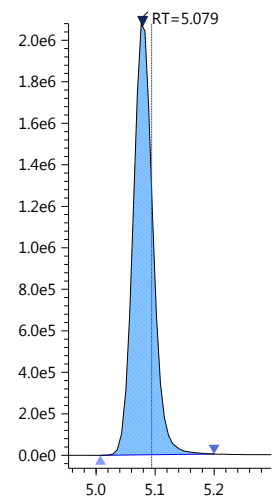
Insight Report

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13C7-PFUnDA_IS

Conc 5.0000
Area 4893093

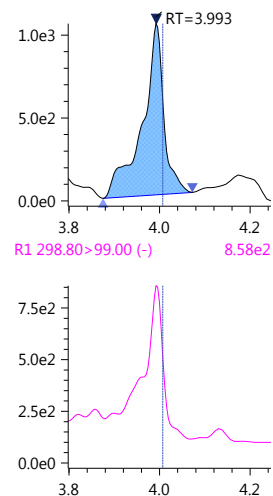
ISTD 570.00>525.00 (-) 2.08e6



PFBS_1

Conc 0.0116
Area 3413
R#1 70.70 (0.00)

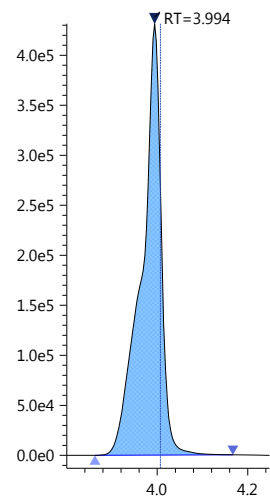
Q 299.00>80.00 (-) 1.07e3



PFBS-13C

Conc 6.6851
Area 1278866

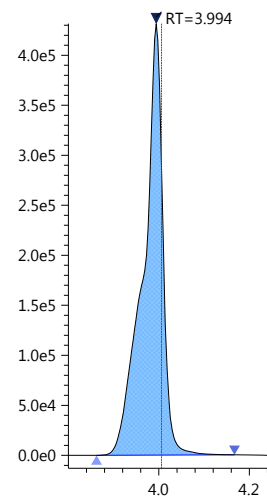
Q 301.80>80.00 (-) 4.32e5



PFBS-13C_IS

Conc 5.0000
Area 1278866

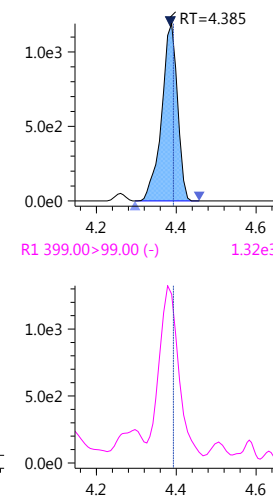
ISTD 301.80>80.00 (-) 4.32e5



PFHxS_1

Conc -0.0031
Area 3273
R#1 93.78 (0.00)

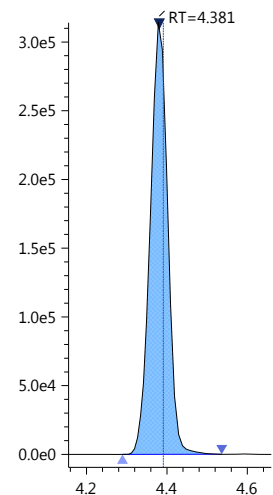
Q 399.00>80.00 (-) 1.19e3



PFHxS-180

Conc 8.8541
Area 953539

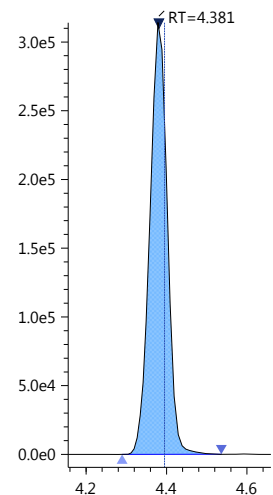
Q 402.70>84.05 (-) 3.14e5



PFHxS-180_IS

Conc 5.0000
Area 953539

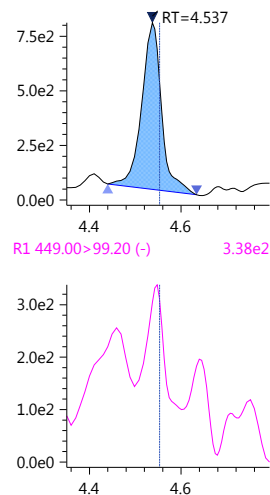
ISTD 402.70>84.05 (-) 3.14e5



PFHpS_1

Conc 0.0077
Area 2296
R#1 10.79 (0.00)

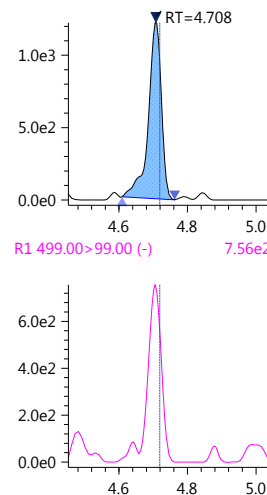
Q 449.00>80.15 (-) 8.12e2



PFOS_1

Conc 0.0153
Area 3244
R#1 58.49 (0.00)

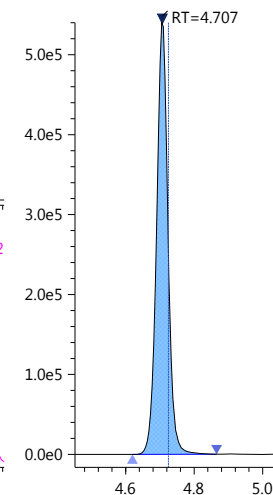
Q 499.00>80.00 (-) 1.23e3



PFOS-13C

Conc 8.2546
Area 1251279

Q 502.80>80.05 (-) 5.40e5



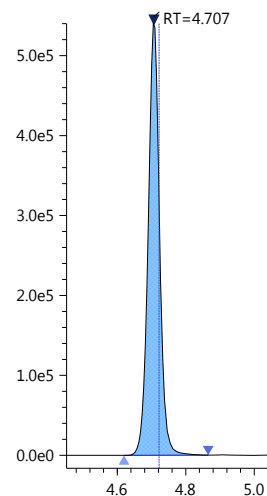
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PFOS-13C_IS

Conc 5.0000
Area 1251279

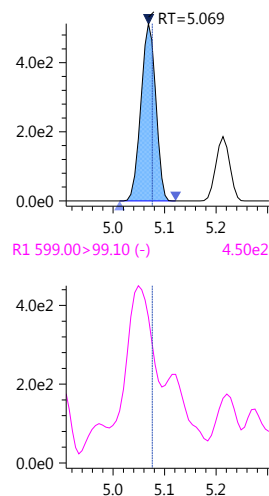
ISTD 502.80>80.05 (-)



PFDS_1

Conc 0.0052
Area 1026
R#1 36.60 (0.00)

Q 599.00>79.90 (-)

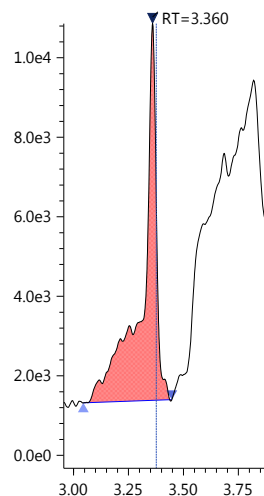


PFBA

Conc 0.0658
Area 41991

After-BLC

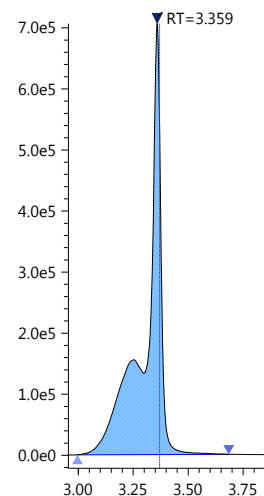
Q 213.00>169.10 (-)



PFBA-13C

Conc 6.3175
Area 3270143

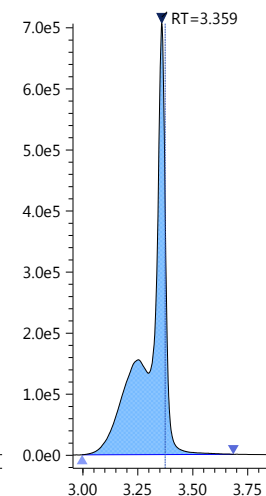
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 3270143

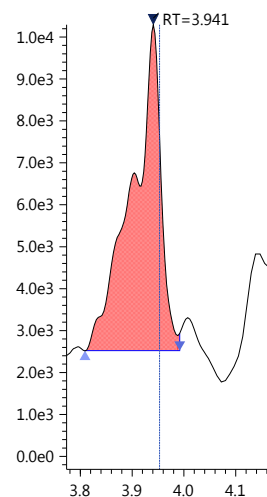
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.0118
Area 30554
After-BLC

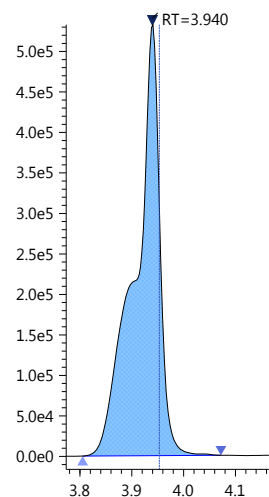
Q 263.05>219.10 (-)



PFPeA-13C

Conc 6.0376
Area 1758715

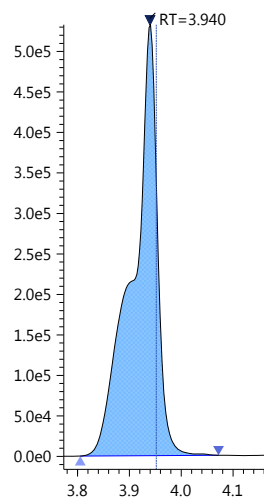
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1758715

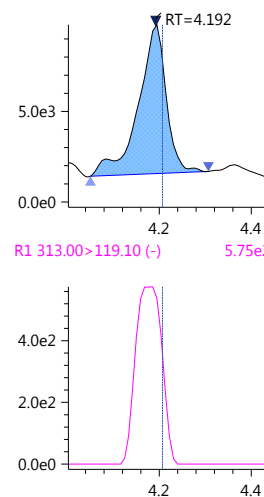
ISTD 267.90>223.00 (-)



PFHxA

Conc 0.0253
Area 34670
R#1 6.58 (0.00)

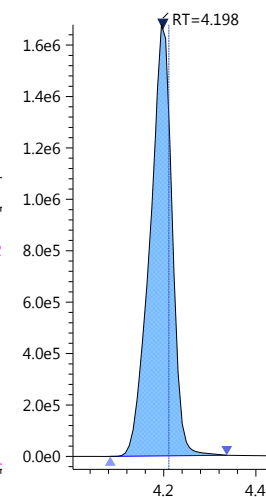
Q 313.00>269.00 (-)



PFHxA-13C

Conc 7.0352
Area 5613692

Q 314.90>270.10 (-)



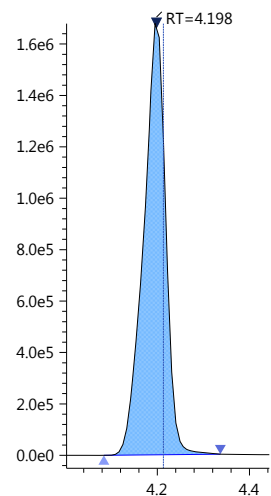
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PFHxA-13C_IS

Conc 5.0000
Area 5613692

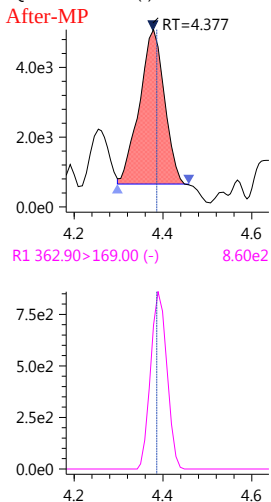
ISTD 314.90>270.10 (-) 1.68e6



PFHpA

Conc 0.0060
Area 17422
R#1 15.80 (0.00)

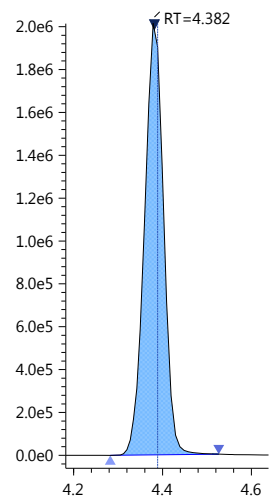
Q 362.90>319.00 (-) 5.08e3



PFHpA-13C

Conc 8.3869
Area 6054165

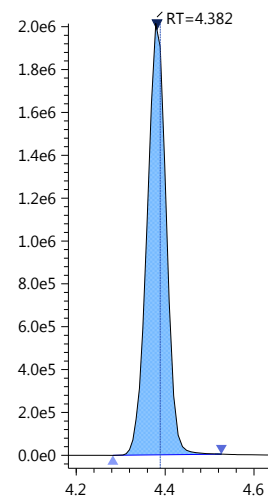
Q 366.90>322.10 (-) 2.01e6



PFHpA-13C_IS

Conc 5.0000
Area 6054165

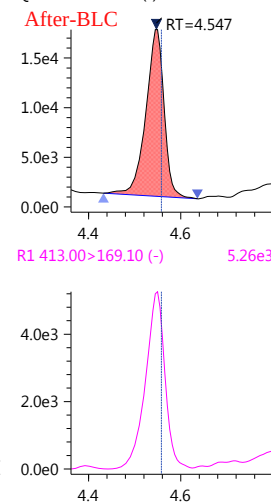
ISTD 366.90>322.10 (-) 2.01e6



PFOA

Conc 0.0164
Area 46160
R#1 30.85 (0.00)

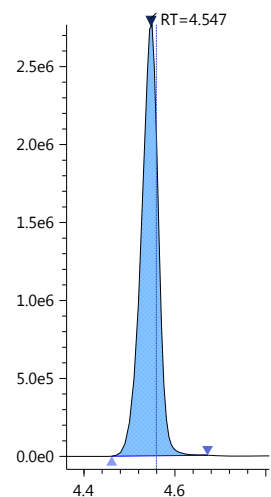
Q 413.00>369.00 (-) 1.79e4



PFOA-13C

Conc 8.3555
Area 7296517

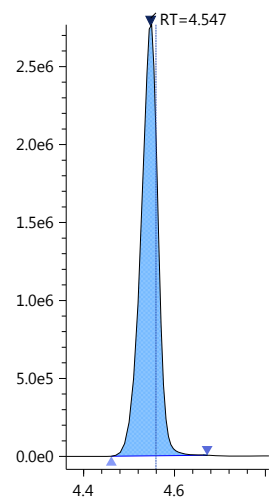
Q 416.80>372.05 (-) 2.77e6



PFOA-13C_IS

Conc 5.0000
Area 7296517

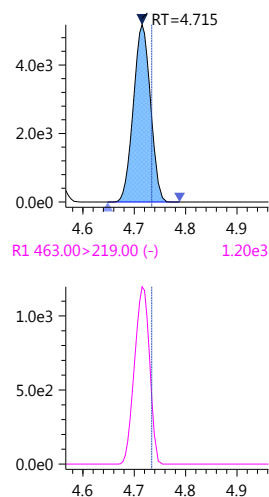
ISTD 416.80>372.05 (-) 2.77e6



PFNA

Conc 0.0071
Area 11935
R#1 23.25 (0.00)

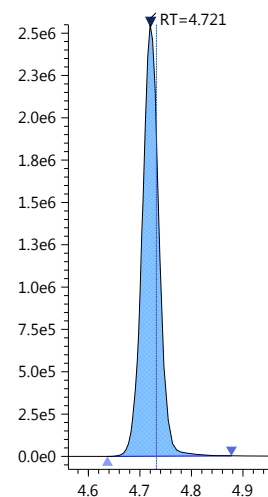
Q 463.00>418.90 (-) 5.18e3



PFNA-13C

Conc 8.8801
Area 5789481

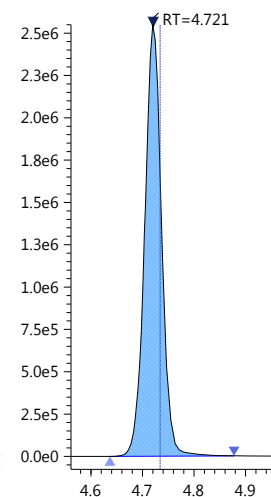
Q 467.80>423.00 (-) 2.55e6



PFNA-13C_IS

Conc 5.0000
Area 5789481

ISTD 467.80>423.00 (-) 2.55e6



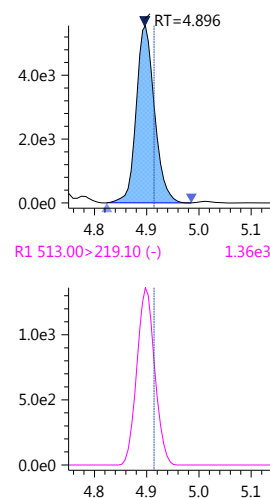
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PFDA

Conc 0.0127
Area 13514
R#1 24.72 (0.00)

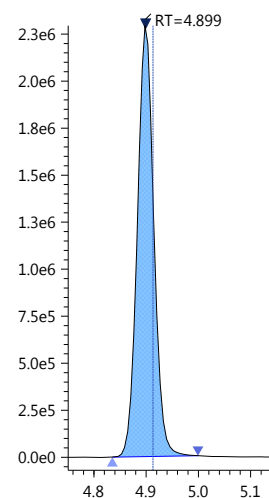
Q 513.00>468.80 (-) 5.56e3



PFDA-13C

Conc 8.4954
Area 5025422

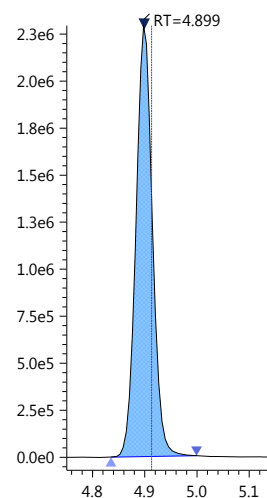
Q 514.80>469.95 (-) 2.29e6



PFDA-13C_IS

Conc 5.0000
Area 5025422

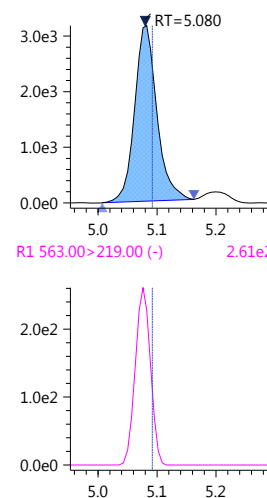
ISTD 514.80>469.95 (-) 2.29e6



PFUnA

Conc -0.0052
Area 8328
R#1 7.23 (0.00)

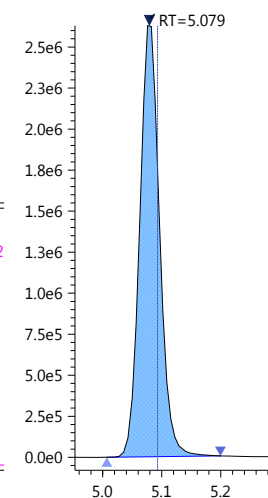
Q 563.00>518.90 (-) 3.19e3



PFUnA-13C

Conc 8.3845
Area 6186598

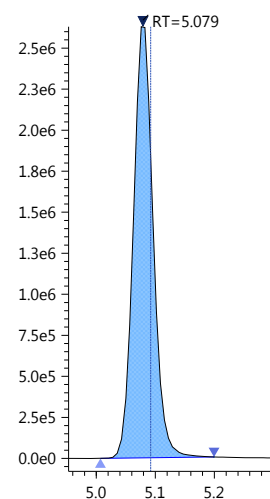
Q 564.80>519.95 (-) 2.63e6



PFUnA-13C_IS

Conc 5.0000
Area 6186598

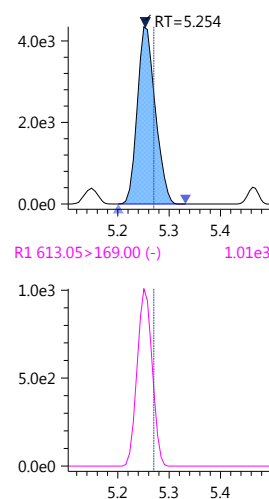
ISTD 564.80>519.95 (-) 2.63e6



PFDaA

Conc 0.0259
Area 10588
R#1 23.25 (0.00)

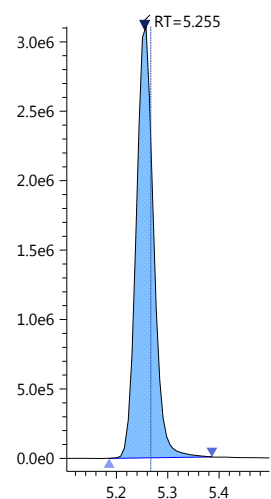
Q 613.05>569.00 (-) 4.35e3



PFDaA-13C

Conc 8.3993
Area 7301189

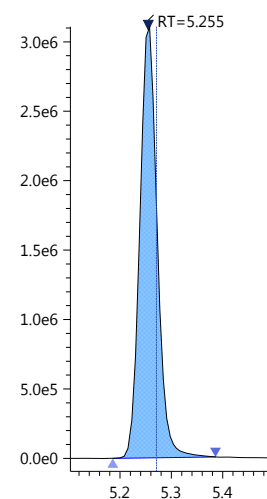
Q 614.80>569.95 (-) 3.11e6



PFDaA-13C_IS

Conc 5.0000
Area 7301189

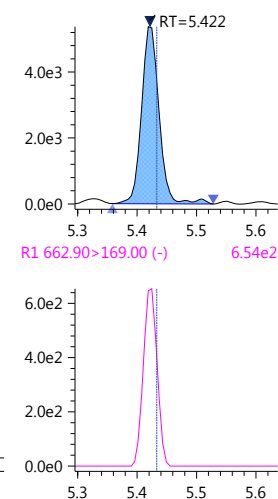
ISTD 614.80>569.95 (-) 3.11e6



PFTrDA

Conc 0.0060
Area 11067
R#1 12.60 (0.00)

Q 663.00>618.90 (-) 5.37e3

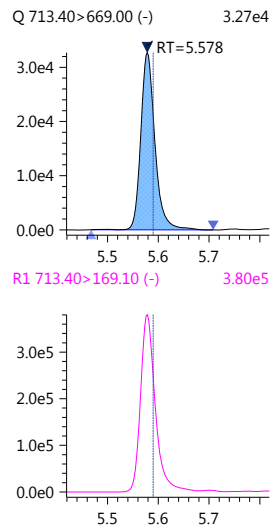


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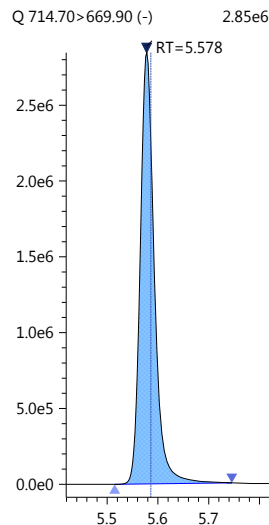
PFTeDA

Conc -0.0092
Area 63428
R#1 1134.63 (0.00)



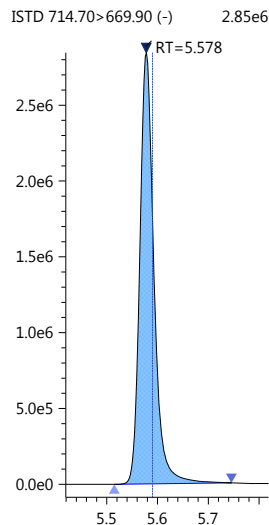
PFTeDA-13C

Conc 7.9206
Area 5493408



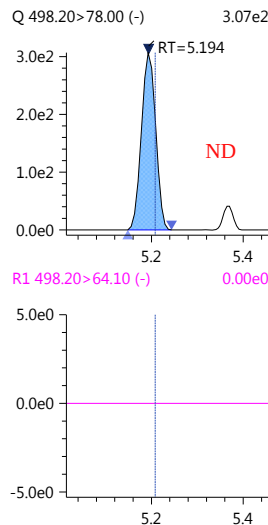
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Conc 5.0000
Area 5493408



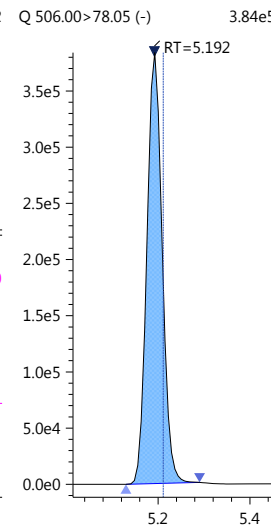
FOSA

Conc 0.0031
Area 664
R#1 0.00 (0.00)



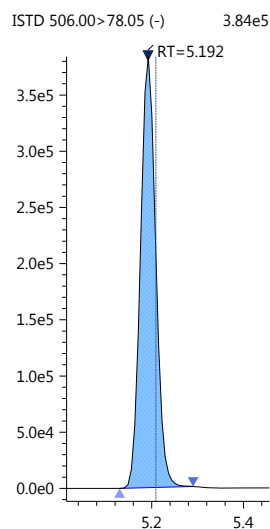
FOSA-13C

Conc 2.2438
Area 887475



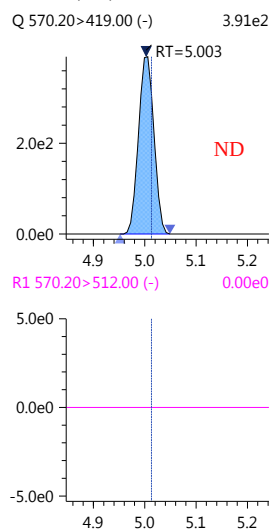
FOSA-13C_IS

Conc 5.0000
Area 887475



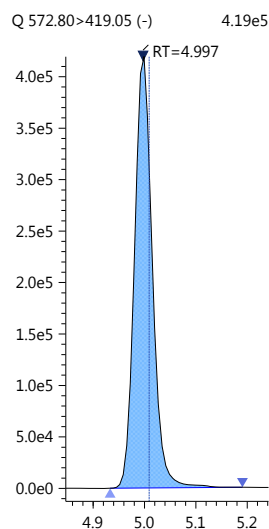
N-MeFOSAA

Conc 0.0065
Area 819
R#1 0.00 (0.00)



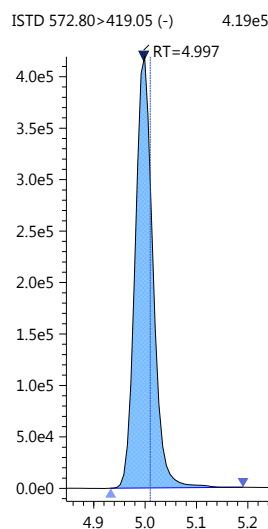
N-MeFOSAA-d3

Conc 9.0005
Area 1010704



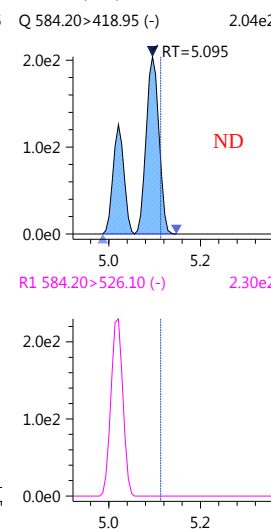
N-MeFOSAA-d3_IS

Conc 5.0000
Area 1010704



N-EtFOSAA

Conc 0.0063
Area 606
R#1 0.00 (0.00)



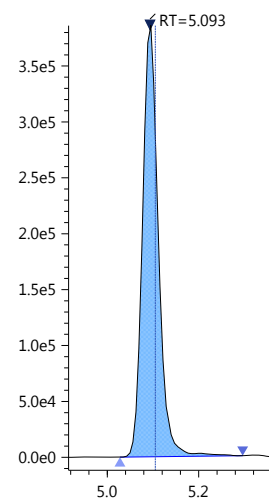
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N-EtFOSAA-d5

Conc 8.9771
Area 928902

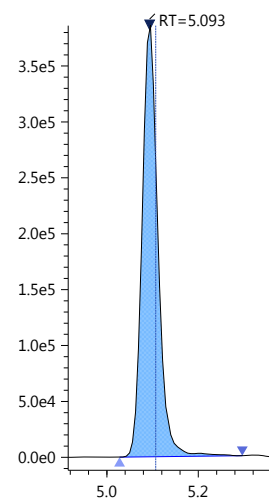
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
Area 928902

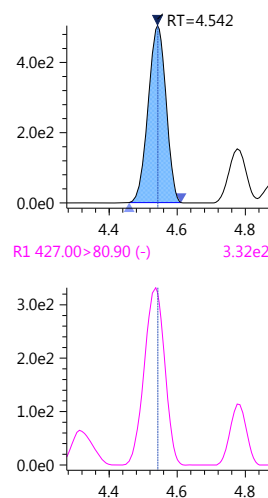
ISTD 588.80>419.00 (-)



6_2-FTS_1

Conc 0.0115
Area 1833
R#1 60.57 (0.00)

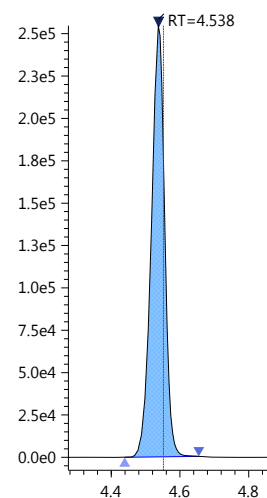
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 10.4721
Area 687655

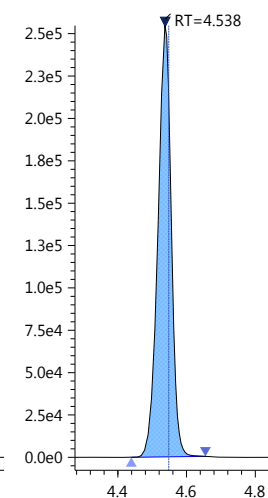
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
Area 687655

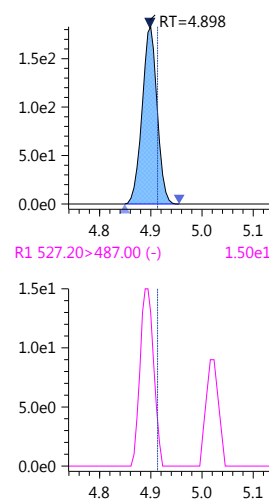
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 0.0048
Area 373
R#1 8.95 (0.00)

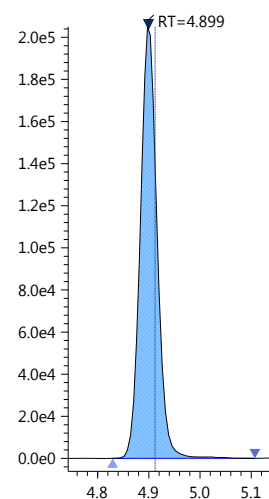
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 8.7919
Area 468055

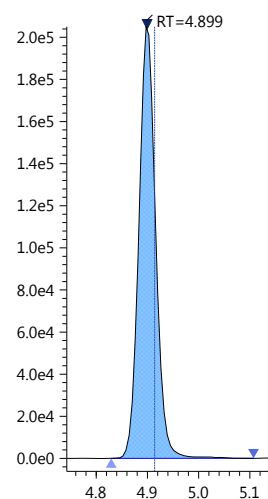
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
Area 468055

ISTD 528.80>509.00 (-)



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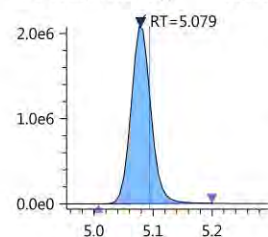
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200428_060

Sample ID: R2003266-005
Date acquired: 4/29/2020 1:10:57 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200428_b4\200428_060.lcd
Vial: 44 | Inj. Volume: 15.0000uL | Tray: 3

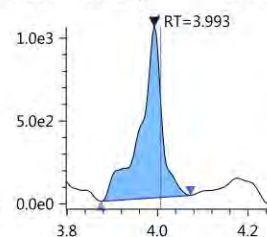
13C7-PFUnDA_IS

Conc 5.0000
Area 4893093
ISTD 570.00>525.00 (-)



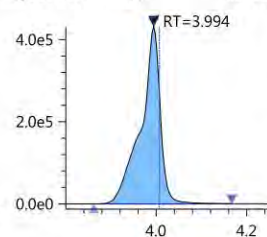
PFBS_1

Conc 0.0116
Area 3413
Q 299.00>80.00 (-)



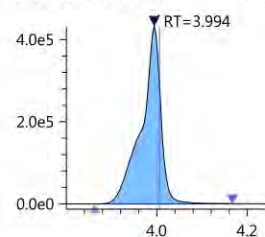
PFBS-13C

Conc 6.6851
Area 1278866
Q 301.80>80.00 (-)



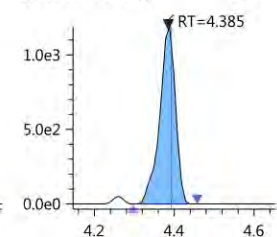
PFBS-13C_IS

Conc 5.0000
Area 1278866
ISTD 301.80>80.00 (-)



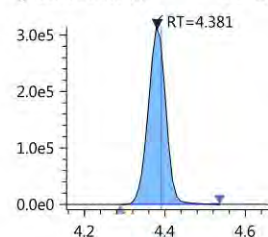
PFHxS_1

Conc -0.0031
Area 3273
Q 399.00>80.00 (-)



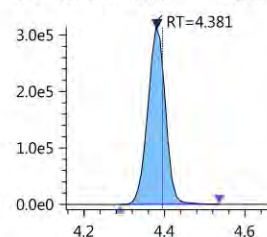
PFHxS-180

Conc 8.8541
Area 953539
Q 402.70>84.05 (-)



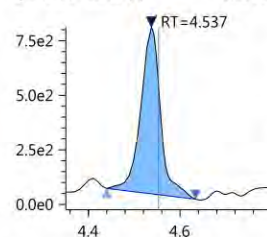
PFHxS-180_IS

Conc 5.0000
Area 953539
ISTD 402.70>84.05 (-)



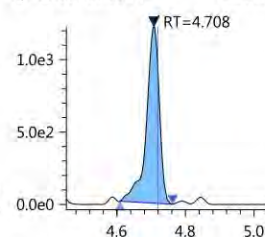
PFHpS_1

Conc 0.0077
Area 2296
Q 449.00>80.15 (-)



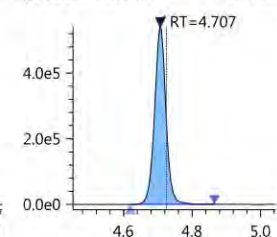
PFOS_1

Conc 0.0153
Area 3244
Q 499.00>80.00 (-)



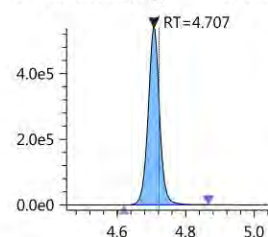
PFOS-13C

Conc 8.2546
Area 1251279
Q 502.80>80.05 (-)



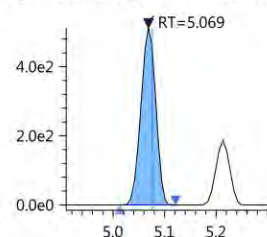
PFOS-13C_IS

Conc 5.0000
Area 1251279
ISTD 502.80>80.05 (-)



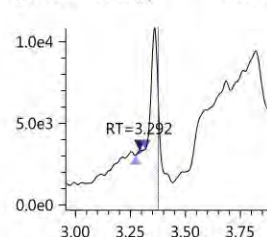
PFDS_1

Conc 0.0052
Area 1026
Q 599.00>79.90 (-)



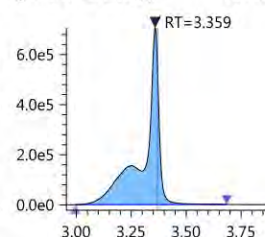
PFBA

Conc 0.0003
Area 173
Q 213.00>169.10 (-)



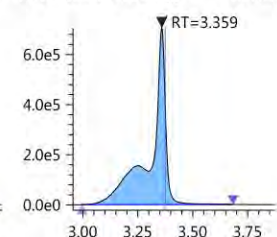
PFBA-13C

Conc 6.3175
Area 3270143
Q 216.90>172.15 (-)



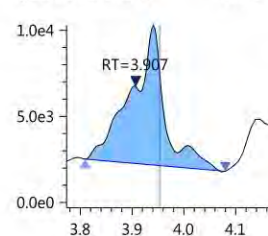
PFBA-13C_IS

Conc 5.0000
Area 3270143
ISTD 216.90>172.15 (-)



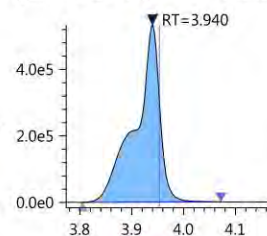
PFPeA

Conc 0.0200
Area 36587
Q 263.05>219.10 (-)



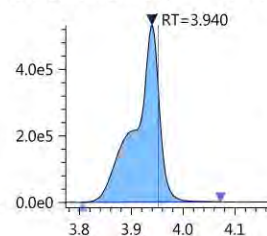
PFPeA-13C

Conc 6.0376
Area 1758715
Q 267.90>223.00 (-)



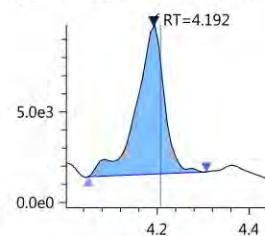
PFPeA-13C_IS

Conc 5.0000
Area 1758715
ISTD 267.90>223.00 (-)



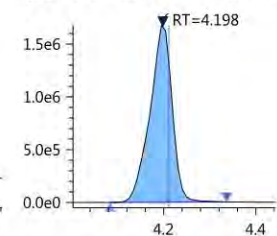
PFHxA

Conc 0.0253
Area 34670
Q 313.00>269.00 (-)



PFHxA-13C

Conc 7.0352
Area 5613692
Q 314.90>270.10 (-)

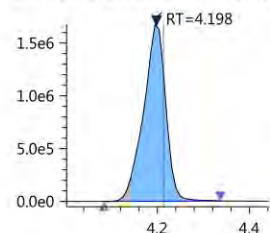


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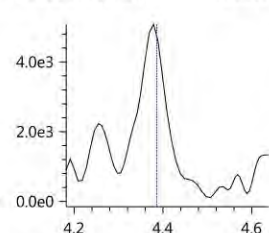
PFHxA-13C_IS

Conc 5.0000
Area 5613692
ISTD 314.90>270.10 (-)



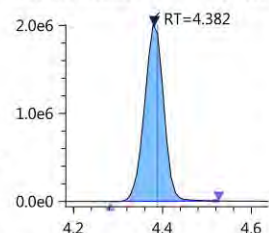
PFHpA

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



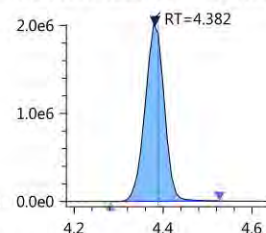
PFHpA-13C

Conc 8.3869
Area 6054165
Q 366.90>322.10 (-)



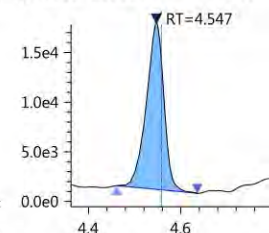
PFHpA-13C_IS

Conc 5.0000
Area 6054165
ISTD 366.90>322.10 (-)



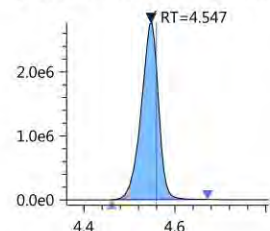
PFOA

Conc 0.0155
Area 44460
Q 413.00>369.00 (-)



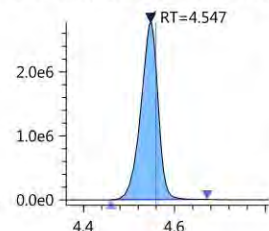
PFOA-13C

Conc 8.3555
Area 7296517
Q 416.80>372.05 (-)



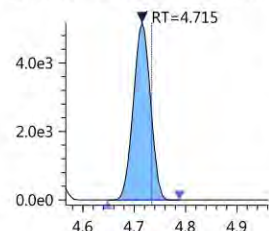
PFOA-13C_IS

Conc 5.0000
Area 7296517
ISTD 416.80>372.05 (-)



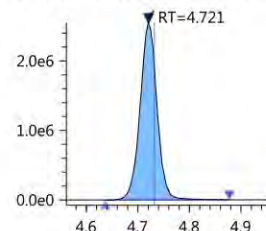
PFNA

Conc 0.0071
Area 11935
Q 463.00>418.90 (-)



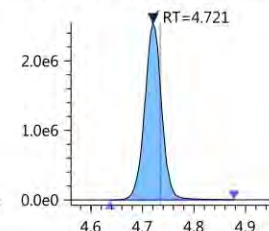
PFNA-13C

Conc 8.8801
Area 5789481
Q 467.80>423.00 (-)



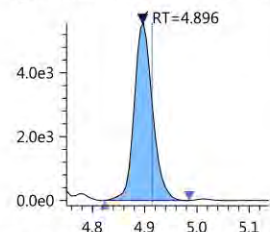
PFNA-13C_IS

Conc 5.0000
Area 5789481
ISTD 467.80>423.00 (-)



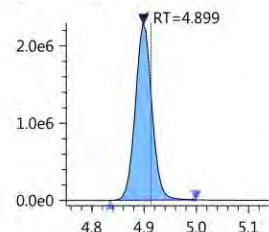
PFDA

Conc 0.0127
Area 13514
Q 513.00>468.80 (-)



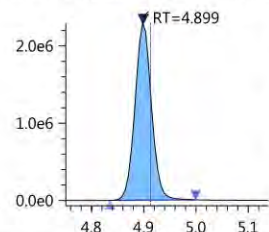
PFDA-13C

Conc 8.4954
Area 5025422
Q 514.80>469.95 (-)



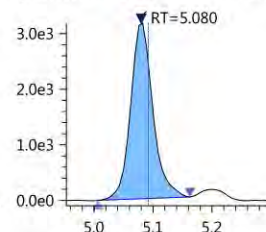
PFDA-13C_IS

Conc 5.0000
Area 5025422
ISTD 514.80>469.95 (-)



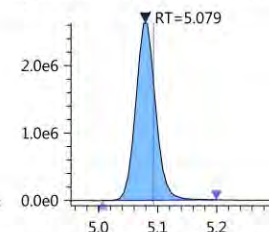
PFUnA

Conc -0.0052
Area 8328
Q 563.00>518.90 (-)



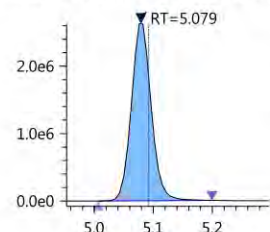
PFUnA-13C

Conc 8.3845
Area 6186598
Q 564.80>519.95 (-)



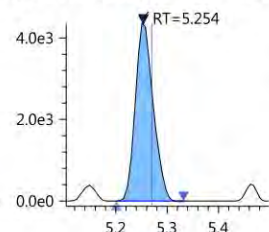
PFUnA-13C_IS

Conc 5.0000
Area 6186598
ISTD 564.80>519.95 (-)



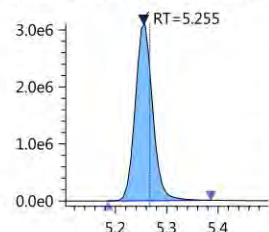
PFDaA

Conc 0.0259
Area 10588
Q 613.05>569.00 (-)



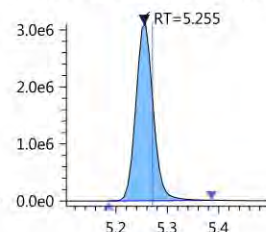
PFDaA-13C

Conc 8.3993
Area 7301189
Q 614.80>569.95 (-)



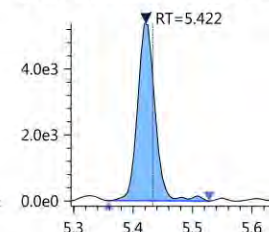
PFDaA-13C_IS

Conc 5.0000
Area 7301189
ISTD 614.80>569.95 (-)



PFTTrDA

Conc 0.0060
Area 11067
Q 663.00>618.90 (-)

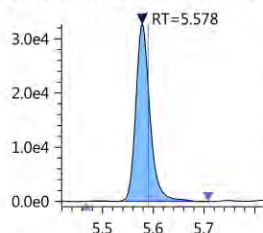


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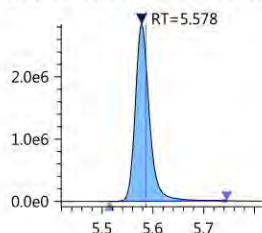
PFTeDA

Conc -0.0092
Area 63428
Q 713.40>669.00 (-)



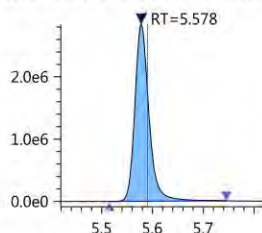
PFTeDA-13C

Conc 7.9206
Area 5493408
Q 714.70>669.90 (-)



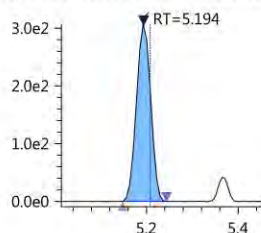
PFTeDA-13C_IS

Conc 5.0000
Area 5493408
ISTD 714.70>669.90 (-)



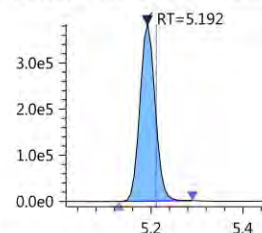
FOSA

Conc 0.0031
Area 664
Q 498.20>78.00 (-)



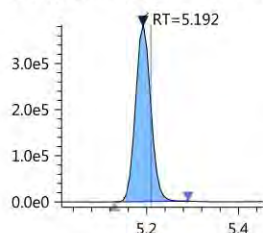
FOSA-13C

Conc 2.2438
Area 887475
Q 506.00>78.05 (-)



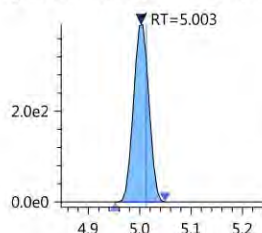
FOSA-13C_IS

Conc 5.0000
Area 887475
ISTD 506.00>78.05 (-)



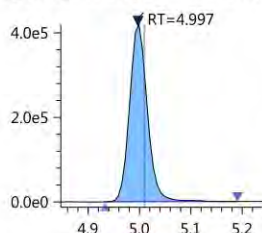
N-MeFOSAA

Conc 0.0065
Area 819
Q 570.20>419.00 (-)



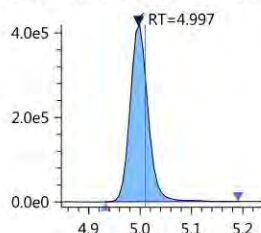
N-MeFOSAA-d3

Conc 9.0005
Area 1010704
Q 572.80>419.05 (-)



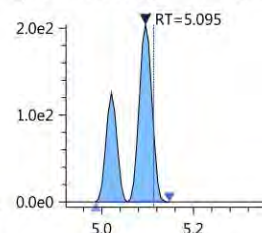
N-MeFOSAA-d3_IS

Conc 5.0000
Area 1010704
ISTD 572.80>419.05 (-)



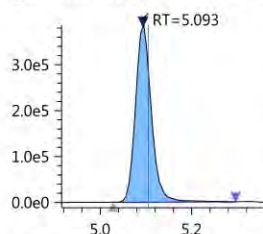
N-EtFOSAA

Conc 0.0063
Area 606
Q 584.20>418.95 (-)



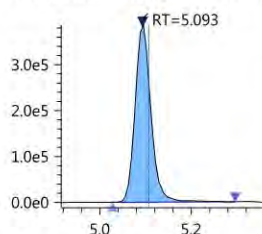
N-EtFOSAA-d5

Conc 8.9771
Area 928902
Q 588.80>419.00 (-)



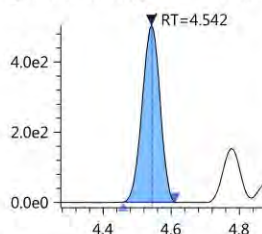
N-EtFOSAA-d5_IS

Conc 5.0000
Area 928902
ISTD 588.80>419.00 (-)



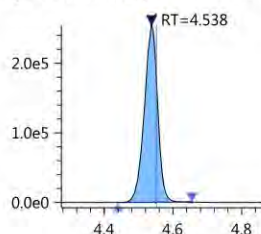
6_2-FTS_1

Conc 0.0115
Area 1833
Q 427.00>407.00 (-)



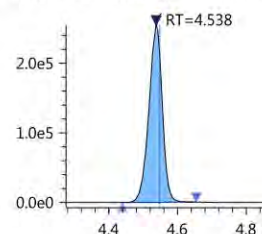
6_2-FTS-13C

Conc 10.4721
Area 687655
Q 428.90>409.00 (-)



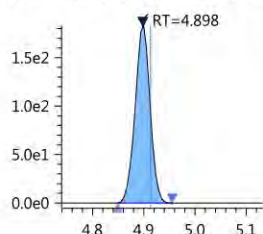
6_2-FTS-13C_IS

Conc 5.0000
Area 687655
ISTD 428.90>409.00 (-)



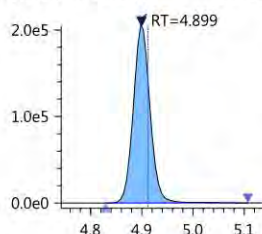
8_2-FTS_1

Conc 0.0048
Area 373
Q 527.10>506.90 (-)



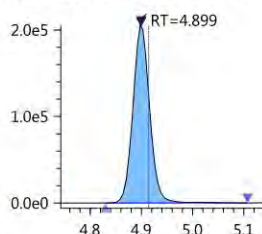
8_2-FTS-13C

Conc 8.7919
Area 468055
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
Area 468055
ISTD 528.80>509.00 (-)



Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200428_b4\200428_061
Lab ID: R2003266-006
RunType: N/A
Matrix: Water

Date Acquired: 4/29/20 01:21
Batch ID: 678319
Analysis Method: PFC/537M/PFAS

Validations

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

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	13C2-6:2 FTS	306	10	226	High bias ND
	13C2-8:2 FTS	236	10	202	High bias ND

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200428_b4\200428_061	Instrument:	K-LCMS-06
Acqu Date:	4/29/20 01:21	Vial:	10
Run Type:	N/A	Dilution:	1
Lab ID:	R2003266-006	Raw Units:	ng/mL

Bottle ID:	R2003266-006.01	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678319	Prep Lot:	357465	Report Group:	R2003266
Analysis	PFC/537M	Prep Method:	ALS SOP		
		Prep Date:	4/27/20		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.082	-0.01	5205022	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.996	-0.01	729483	3.5848	72	20 - 109	Y
18O2-PFHxS	4.385	-0.01	539600	4.7102	94	26 - 122	Y
13C4-PFOS	4.709	-0.01	648572	4.0222	80	25 - 121	Y
13C4-PFBA	3.359	-0.02	1953252	3.5473	71	27 - 124	Y
13C5-PFPeA	3.941	-0.01	802170	2.5888	52	27 - 138	Y
13C2-PFHxA	4.201	-0.01	2452382	2.8892	58	28 - 132	Y
13C4-PFHpA	4.385	-0.01	2799270	3.6455	73	19 - 139	Y
13C4-PFOA	4.550	-0.01	3488935	3.7559	75	22 - 130	Y
13C5-PFNA	4.722	-0.01	3151473	4.5442	91	20 - 127	Y
13C2-PFDA	4.901	-0.01	2774071	4.4085	88	24 - 125	Y
13C2-PFUnDA	5.082	-0.01	3553834	4.5278	91	22 - 125	Y
13C2-PFDoDA	5.259	-0.01	3767397	4.0743	81	19 - 122	Y
13C2-PFTeDA	5.580	-0.01	3085979	4.1829	84	13 - 124	Y
13C8-FOSA	5.196	0.00	1436627	3.4146	68	18 - 109	Y
D3-MeFOSAA	5.001	-0.01	622863	5.2143	104	9 - 123	Y
D5-EtFOSAA	5.096	-0.01	636409	5.7818	116	12 - 126	Y
13C2-6:2 FTS	4.541	-0.01	1069993	15.3181	306 *	10 - 226	Y
13C2-8:2 FTS	4.901	-0.01	668310	11.8011	236 *	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)	3.995	-0.01	34387	0.2049	6.2		Y
Perfluorohexane sulfonic acid (PFHxS)	4.383	-0.01	17867	0.1162	3.5	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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\\alprews001\starlims\LIMSRpts\QuantValidation.rpt

Data File: J:\LCMS06\Data\200428_b4\200428_061
Acqu Date: 4/29/20 01:21
Run Type: N/A
Lab ID: R2003266-006

Instrument: K-LCMS06
Vial: 10
Dilution: 1
Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.541	-0.01	5292	0.0314	0.95	J	Y
Perfluorooctane sulfonic acid (PFOS)	4.652	-0.07	62459	0.5685	17		Y
Perfluorodecane sulfonic acid (PFDS)	5.064	-0.01	1655	0.0161	0.49	J	Y
Perfluorobutanoic acid (PFBA)	3.360	-0.02	357865	0.9382	28		Y
Perfluoropentanoic acid (PFPeA)	3.942	-0.01	621908	1.8240	55		Y
Perfluorohexanoic acid (PFHxA)	4.201	-0.01	419721	0.8655	26		Y
Perfluoroheptanoic acid (PFHpA)	4.386	-0.01	236452	0.4629	14		Y
Perfluorooctanoic acid (PFOA)	4.549	-0.01	489781	0.5442	16		Y
Perfluorononanoic acid (PFNA)	4.724	-0.01	38174	0.0633	1.9	J	Y
Perfluorodecanoic acid (PFDA)	4.903	-0.01	9935	0.0169	0.51	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.080	-0.01	4849	-0.0051	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.265	0.00	5260	0.0255	0.77	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.424	-0.01	6554	0.0066	0.20	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.580	-0.01	39600	0.0055	0.17	U	Y
Perfluorooctane sulfonamide (FOSA)	5.197	0.00	3885	0.0113	0.34	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.003	0.00	819	0.0106	0.32	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.095	-0.01	197	0.0030	0.091	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.539	-0.01	9476	0.0383	1.2	J	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.902	-0.01	912	0.0083	0.25	J	Y

Prep Amount: 265.0000 mL
Prep Final Amount: 8.00 mL

Dilution: 1
Basis Factor: 100.00

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

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

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

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Insight Report

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200428_061

Sample ID: R2003266-006

Date acquired: 4/29/2020 1:21:23 AM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200428_b4\200428_061.lcd

Vial: 45 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.082	5205022	5205022	1	5.0000	ng/mL	----
PFBS_1	Auto	3.995	34387	729483	2	0.2049	ng/mL	----
PFBS-13C	Auto	3.996	729483	5205022	1	3.5848	ng/mL	----
PFBS-13C_IS	Auto	3.996	729483	729483	2	5.0000	ng/mL	----
PFHxS_1	M	4.383	17867	539600	3	0.1162	ng/mL	----
PFHxS-18O	Auto	4.385	539600	5205022	1	4.7102	ng/mL	----
PFHxS-18O_IS	Auto	4.385	539600	539600	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.541	5292	539600	3	0.0314	ng/mL	----
PFOS_1	Auto	4.652	62459	648572	4	0.5685	ng/mL	----
PFOS-13C	Auto	4.709	648572	5205022	1	4.0222	ng/mL	----
PFOS-13C_IS	Auto	4.709	648572	648572	4	5.0000	ng/mL	----
PFDS_1	M	5.064	1655	648572	4	0.0161	ng/mL	----
PFBA	Auto	3.360	357865	1953252	5	0.9382	ng/mL	----
PFBA-13C	Auto	3.359	1953252	5205022	1	3.5473	ng/mL	----
PFBA-13C_IS	Auto	3.359	1953252	1953252	5	5.0000	ng/mL	----
PFPeA	Auto	3.942	621908	802170	6	1.8240	ng/mL	----
PFPeA-13C	Auto	3.941	802170	5205022	1	2.5888	ng/mL	----
PFPeA-13C_IS	Auto	3.941	802170	802170	6	5.0000	ng/mL	----
PFHxA	M	4.201	419721	2452382	7	0.8655	ng/mL	----
PFHxA-13C	Auto	4.201	2452382	5205022	1	2.8892	ng/mL	----
PFHxA-13C_IS	Auto	4.201	2452382	2452382	7	5.0000	ng/mL	----
PFHpA	Auto	4.386	236452	2799270	8	0.4629	ng/mL	----
PFHpA-13C	Auto	4.385	2799270	5205022	1	3.6455	ng/mL	----
PFHpA-13C_IS	Auto	4.385	2799270	2799270	8	5.0000	ng/mL	----
PFOA	Auto	4.549	489781	3488935	9	0.5442	ng/mL	----
PFOA-13C	Auto	4.550	3488935	5205022	1	3.7559	ng/mL	----
PFOA-13C_IS	Auto	4.550	3488935	3488935	9	5.0000	ng/mL	----
PFNA	Auto	4.724	38174	3151473	10	0.0633	ng/mL	----
PFNA-13C	Auto	4.722	3151473	5205022	1	4.5442	ng/mL	----
PFNA-13C_IS	Auto	4.722	3151473	3151473	10	5.0000	ng/mL	----
PFDA	M	4.903	9935	2774071	11	0.0169	ng/mL	----
PFDA-13C	Auto	4.901	2774071	5205022	1	4.4085	ng/mL	----
PFDA-13C_IS	Auto	4.901	2774071	2774071	11	5.0000	ng/mL	----
PFUnA	M	5.080	4849	3553834	12	-0.0051	ng/mL	----
PFUnA-13C	Auto	5.082	3553834	5205022	1	4.5278	ng/mL	----
PFUnA-13C_IS	Auto	5.082	3553834	3553834	12	5.0000	ng/mL	----
PFDoA	Auto	5.265	5260	3767397	13	0.0255	ng/mL	----
PFDoA-13C	Auto	5.259	3767397	5205022	1	4.0743	ng/mL	----
PFDoA-13C_IS	Auto	5.259	3767397	3767397	13	5.0000	ng/mL	----
PFTeDA	Auto	5.424	6554	3085979	14	0.0066	ng/mL	----
PFTeDA	Auto	5.580	39600	3085979	14	0.0055	ng/mL	----
PFTeDA-13C	Auto	5.580	3085979	5205022	1	4.1829	ng/mL	----
PFTeDA-13C_IS	Auto	5.580	3085979	3085979	14	5.0000	ng/mL	----
FOSA	Auto	5.197	3885	1436627	16	0.0113	ng/mL	----
FOSA-13C	Auto	5.196	1436627	5205022	1	3.4146	ng/mL	----
FOSA-13C_IS	Auto	5.196	1436627	1436627	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.003	819	622863	21	0.0106	ng/mL	----
N-MeFOSAA-d3	Auto	5.001	622863	5205022	1	5.2143	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.001	622863	622863	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.095	197	636409	22	0.0030	ng/mL	----
N-EtFOSAA-d5	Auto	5.096	636409	5205022	1	5.7818	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.096	636409	636409	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.539	9476	1069993	24	0.0383	ng/mL	----
6_2-FTS-13C	Auto	4.541	1069993	5205022	1	15.3181	ng/mL	----
6_2-FTS-13C_IS	Auto	4.541	1069993	1069993	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.902	912	668310	25	0.0083	ng/mL	----
8_2-FTS-13C	Auto	4.901	668310	5205022	1	11.8011	ng/mL	----
8_2-FTS-13C_IS	Auto	4.901	668310	668310	25	5.0000	ng/mL	----

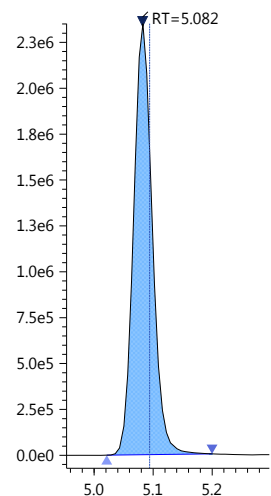
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13C7-PFUnDA_IS

Conc 5.0000
Area 5205022

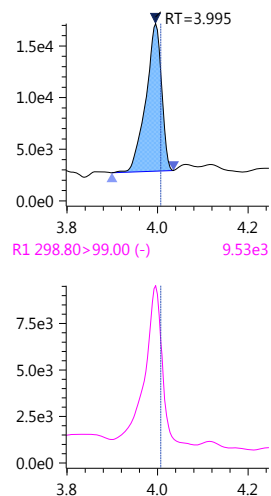
ISTD 570.00>525.00 (-) 2.35e6



PFBS_1

Conc 0.2049
Area 34387
R#1 59.58 (0.00)

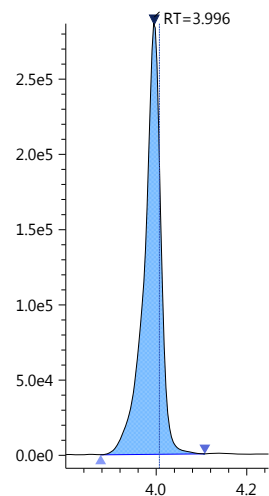
Q 299.00>80.00 (-) 1.72e4



PFBS-13C

Conc 3.5848
Area 729483

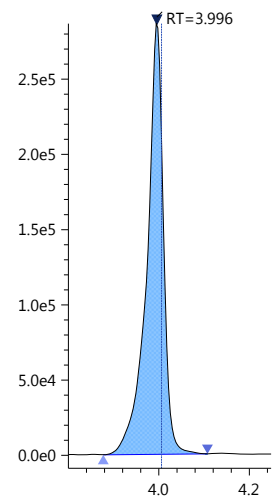
Q 301.80>80.00 (-) 2.87e5



PFBS-13C_IS

Conc 5.0000
Area 729483

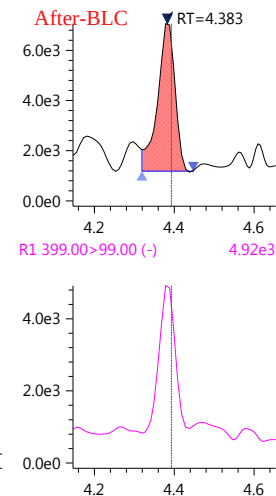
ISTD 301.80>80.00 (-) 2.87e5



PFHxS_1

Conc 0.1162
Area 17867
R#1 72.54 (0.00)

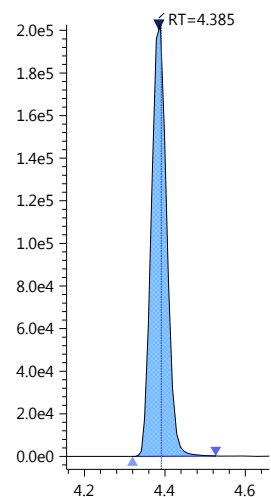
Q 399.00>80.00 (-) 7.06e3



PFHxS-180

Conc 4.7102
Area 539600

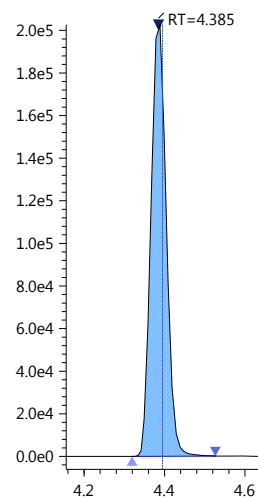
Q 402.70>84.05 (-) 2.03e5



PFHxS-180_IS

Conc 5.0000
Area 539600

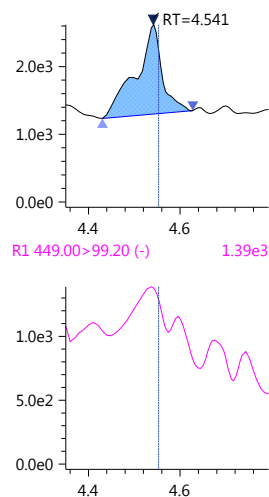
ISTD 402.70>84.05 (-) 2.03e5



PFHpS_1

Conc 0.0314
Area 5292
R#1 34.46 (0.00)

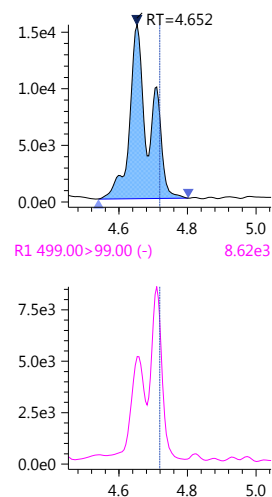
Q 449.00>80.15 (-) 2.62e3



PFOS_1

Conc 0.5685
Area 62459
R#1 31.18 (0.00)

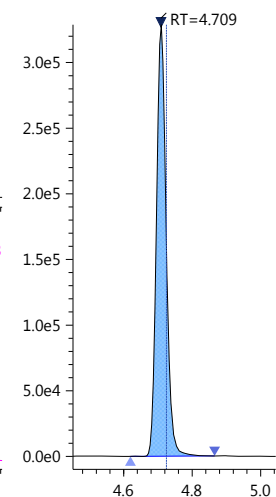
Q 499.00>80.00 (-) 1.57e4



PFOS-13C

Conc 4.0222
Area 648572

Q 502.80>80.05 (-) 3.29e5



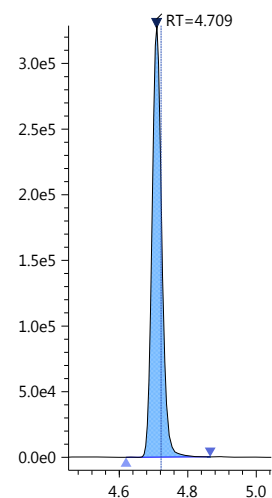
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PFOS-13C_IS

Conc 5.0000
Area 648572

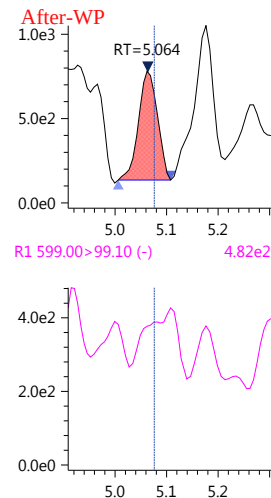
ISTD 502.80>80.05 (-) 3.29e5



PFDS_1

Conc 0.0161
Area 1655
R#1 0.00 (0.00)

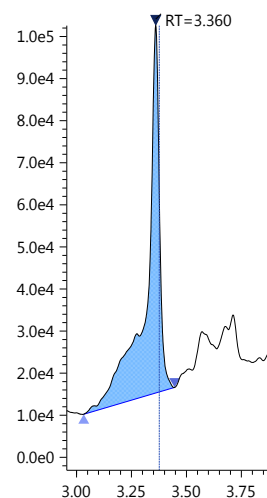
Q 599.00>79.90 (-)



PFBA

Conc 0.9382
Area 357865

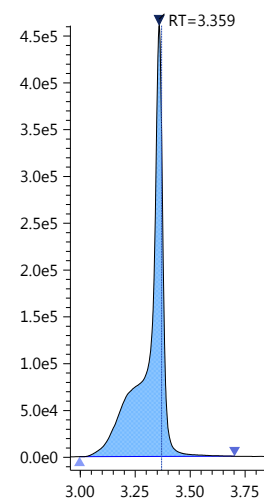
Q 213.00>169.10 (-)



PFBA-13C

Conc 3.5473
Area 1953252

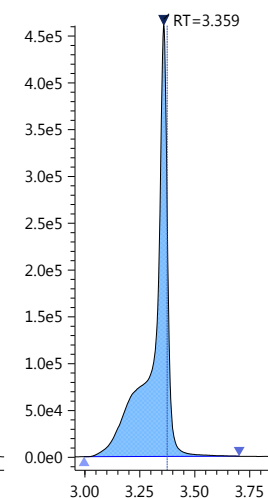
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 1953252

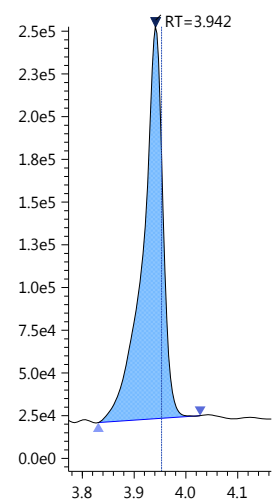
ISTD 216.90>172.15 (-)



PFPeA

Conc 1.8240
Area 621908

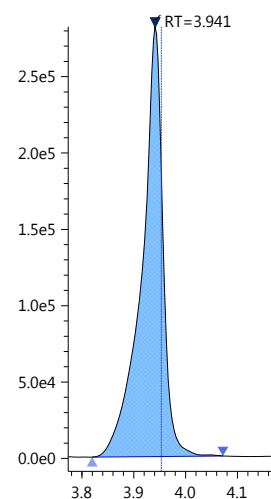
Q 263.05>219.10 (-)



PFPeA-13C

Conc 2.5888
Area 802170

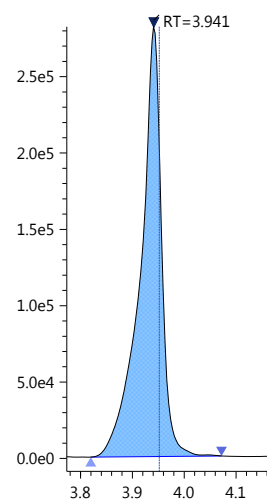
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 802170

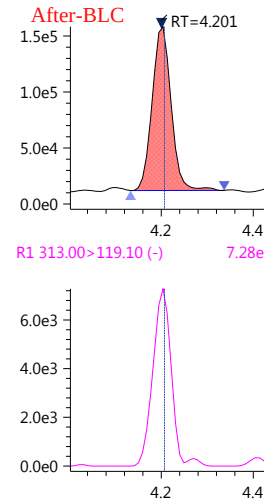
ISTD 267.90>223.00 (-)



PFHxA

Conc 0.8655
Area 419721
R#1 4.97 (0.00)

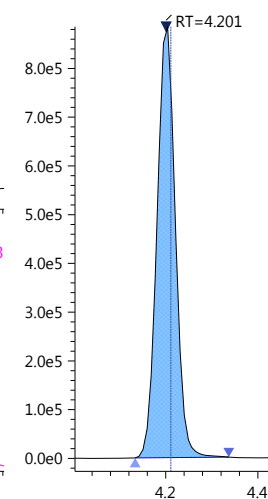
Q 313.00>269.00 (-)



PFHxA-13C

Conc 2.8892
Area 2452382

Q 314.90>270.10 (-)



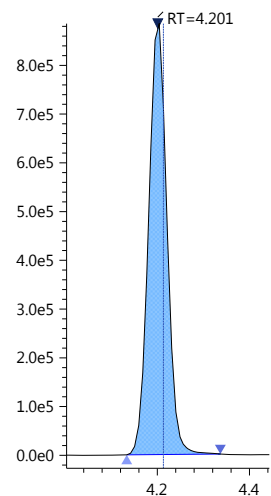
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PFHxA-13C_IS

Conc 5.0000
Area 2452382

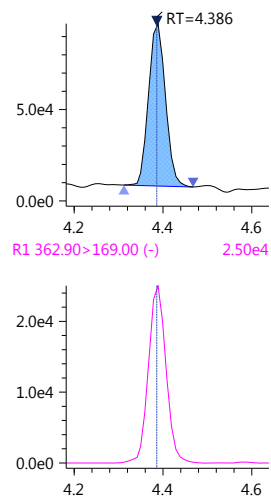
ISTD 314.90>270.10 (-) 8.86e5



PFHpA

Conc 0.4629
Area 236452
R#1 28.09 (0.00)

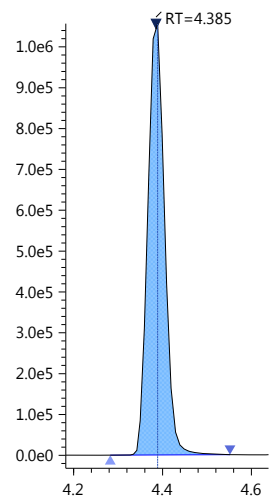
Q 362.90>319.00 (-) 9.71e4



PFHpA-13C

Conc 3.6455
Area 2799270

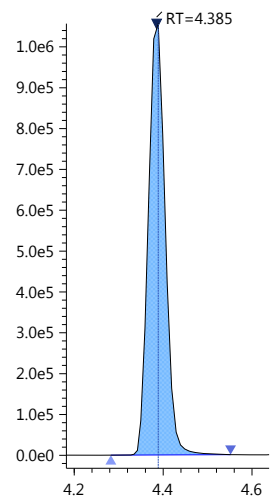
Q 366.90>322.10 (-) 1.06e6



PFHpA-13C_IS

Conc 5.0000
Area 2799270

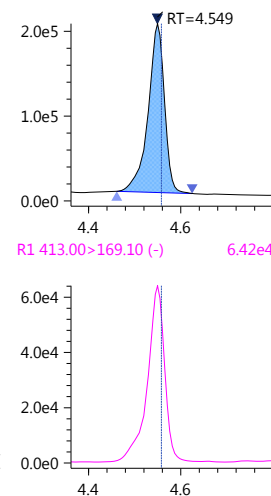
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PFOA

Conc 0.5442
Area 489781
R#1 31.86 (0.00)

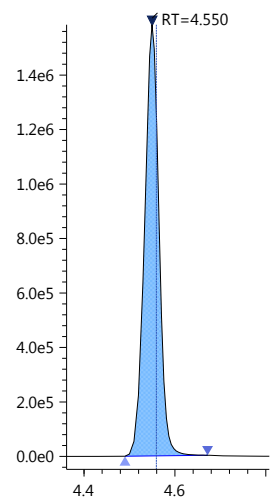
Q 413.00>369.00 (-) 2.09e5



PFOA-13C

Conc 3.7559
Area 3488935

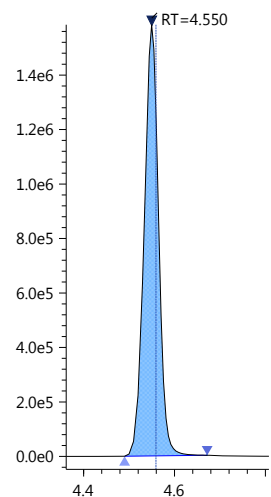
Q 416.80>372.05 (-) 1.58e6



PFOA-13C_IS

Conc 5.0000
Area 3488935

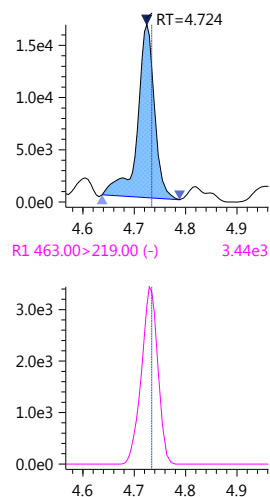
ISTD 416.80>372.05 (-) 1.58e6



PFNA

Conc 0.0633
Area 38174
R#1 17.63 (0.00)

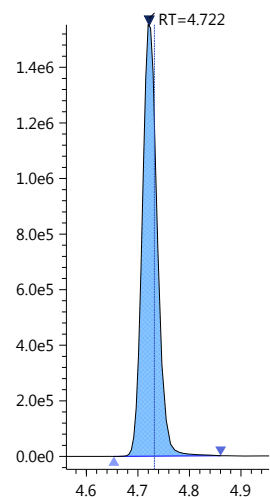
Q 463.00>418.90 (-) 1.70e4



PFNA-13C

Conc 4.5442
Area 3151473

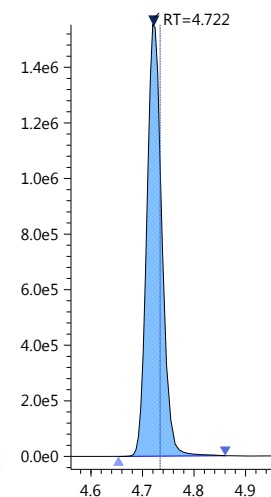
Q 467.80>423.00 (-) 1.55e6



PFNA-13C_IS

Conc 5.0000
Area 3151473

ISTD 467.80>423.00 (-) 1.55e6

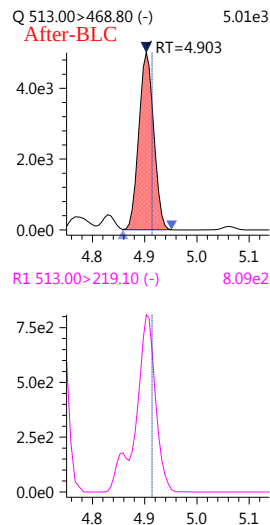


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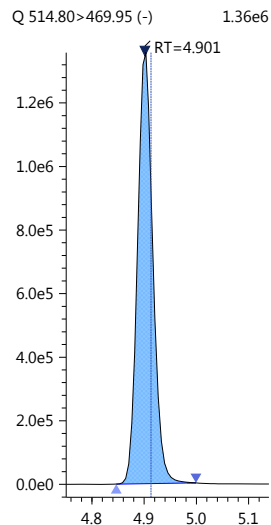
PFDA

Conc 0.0169
Area 9935
R#1 13.94 (0.00)



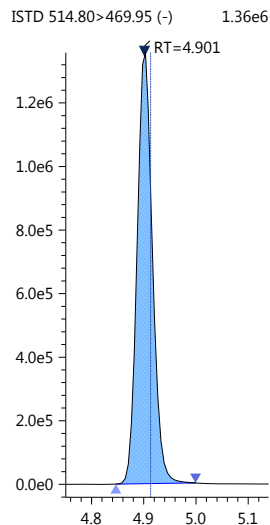
PFDA-13C

Conc 4.4085
Area 2774071



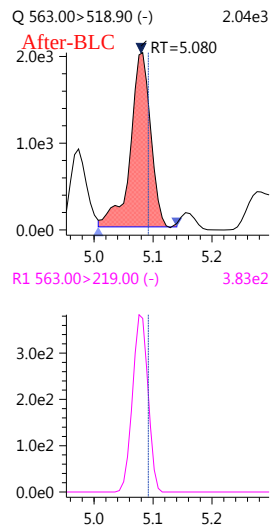
PFDA-13C_IS

Conc 5.0000
Area 2774071



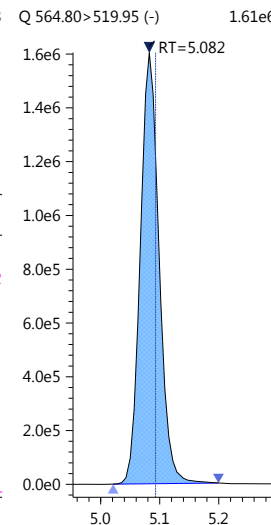
PFUnA

Conc -0.0051
Area 4849
R#1 19.06 (0.00)



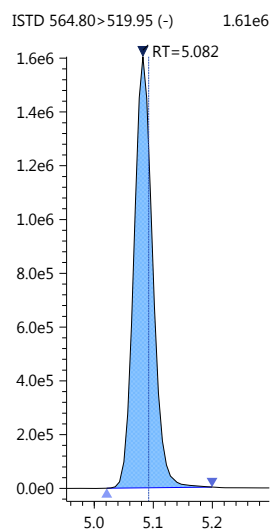
PFUnA-13C

Conc 4.5278
Area 3553834



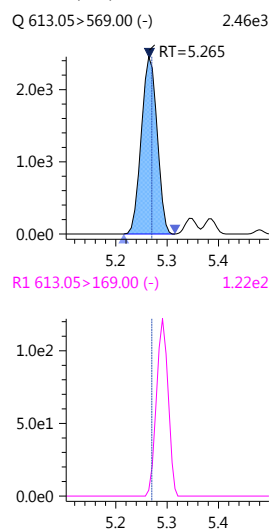
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Conc 5.0000
Area 3553834



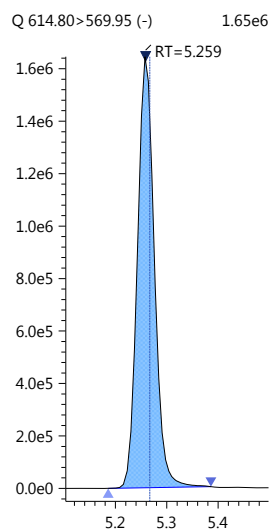
PFDaA

Conc 0.0255
Area 5260
R#1 0.00 (0.00)



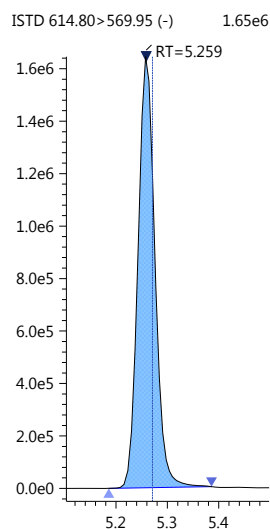
PFDaA-13C

Conc 4.0743
Area 3767397



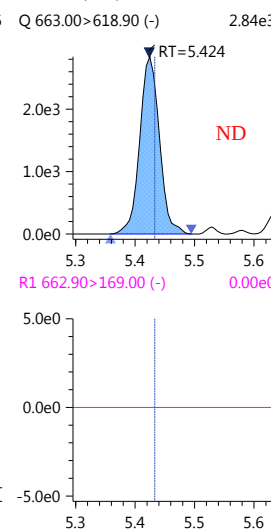
PFDaA-13C_IS

Conc 5.0000
Area 3767397



PFTrDA

Conc 0.0066
Area 6554
R#1 0.00 (0.00)



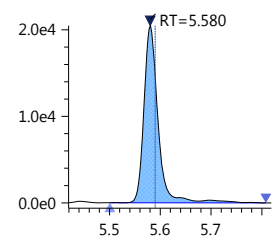
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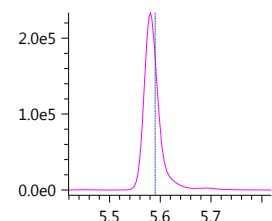
PFTeDA

Conc 0.0055
Area 39600
R#1 1119.63 (0.00)

Q 713.40>669.00 (-) 2.05e4



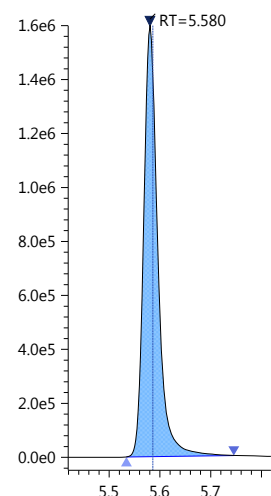
R1 713.40>669.00 (-) 2.34e5



PFTeDA-13C

Conc 4.1829
Area 3085979

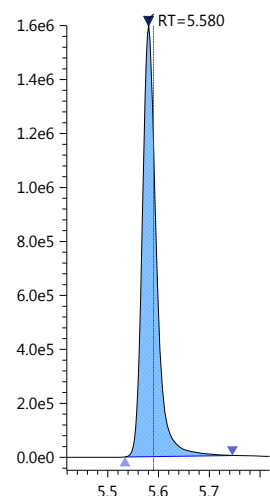
Q 714.70>669.90 (-) 1.60e6



PFTeDA-13C_IS

Conc 5.0000
Area 3085979

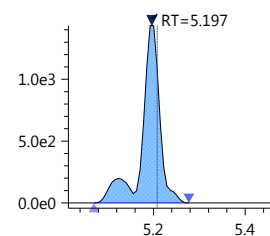
ISTD 714.70>669.90 (-) 1.60e6



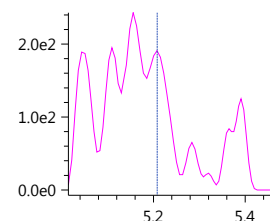
FOSA

Conc 0.0113
Area 3885
R#1 6.84 (0.00)

Q 498.20>78.00 (-) 1.43e3



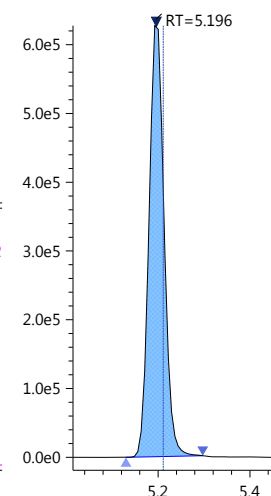
R1 498.20>64.10 (-) 2.43e2



FOSA-13C

Conc 3.4146
Area 1436627

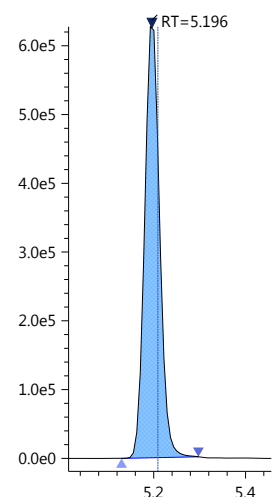
Q 506.00>78.05 (-) 6.28e5



FOSA-13C_IS

Conc 5.0000
Area 1436627

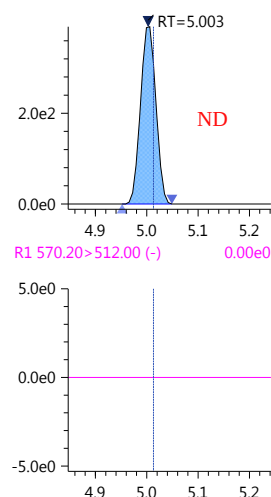
ISTD 506.00>78.05 (-) 6.28e5



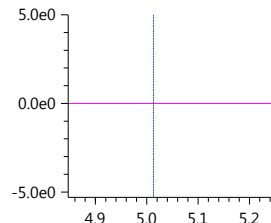
N-MeFOSAA

Conc 0.0106
Area 819
R#1 0.00 (0.00)

Q 570.20>419.00 (-) 3.91e2



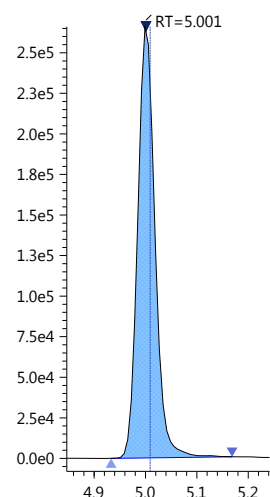
R1 570.20>512.00 (-) 0.00e0



N-MeFOSAA-d3

Conc 5.2143
Area 622863

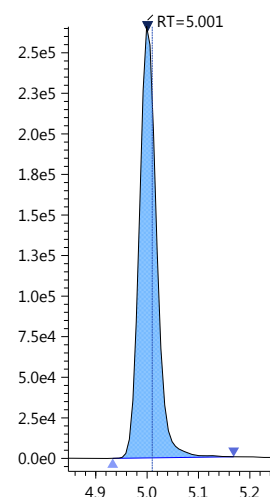
Q 572.80>419.05 (-) 2.66e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 622863

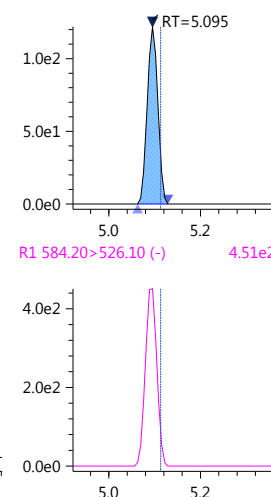
ISTD 572.80>419.05 (-) 2.66e5



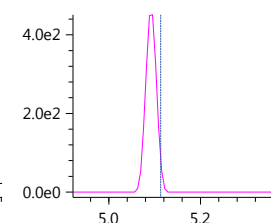
N-EtFOSAA

Conc 0.0030
Area 197
R#1 373.64 (0.00)

Q 584.20>418.95 (-) 1.22e2



R1 584.20>526.10 (-) 4.51e2

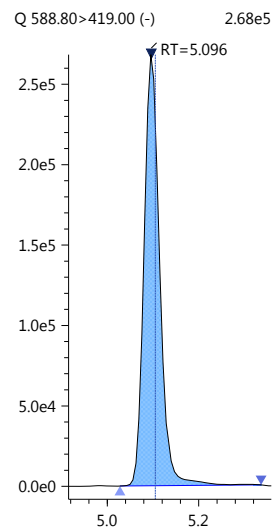


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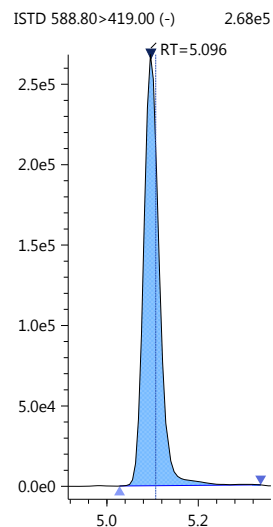
N-EtFOSAA-d5

Conc 5.7818
 Area 636409



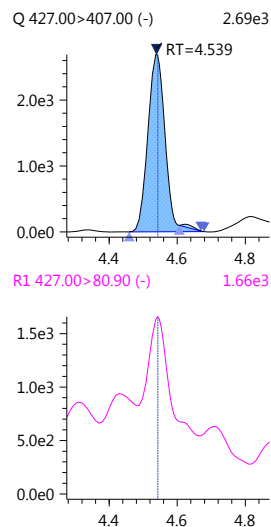
N-EtFOSAA-d5_IS

Conc 5.0000
 Area 636409



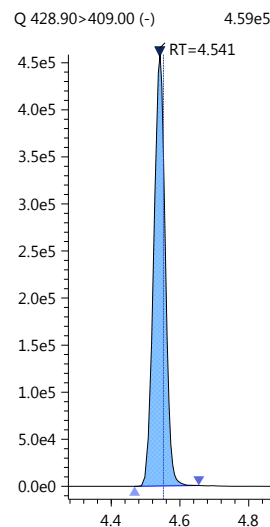
6_2-FTS_1

Conc 0.0383
 Area 9476
 R#1 28.98 (0.00)



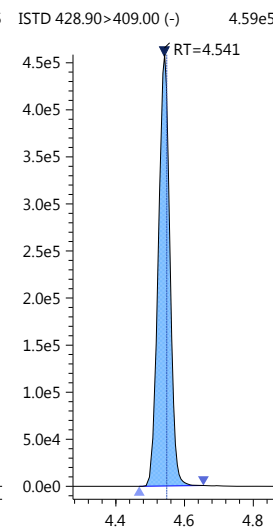
6_2-FTS-13C

Conc 15.3181
 Area 1069993



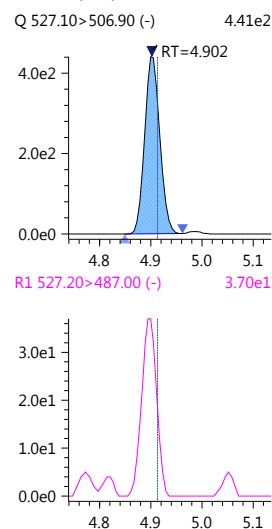
6_2-FTS-13C_IS

Conc 5.0000
 Area 1069993



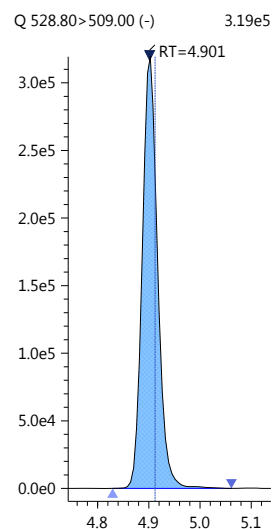
8_2-FTS_1

Conc 0.0083
 Area 912
 R#1 8.37 (0.00)



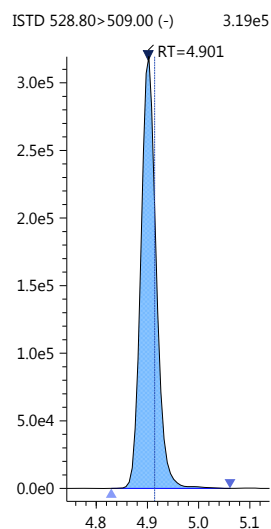
8_2-FTS-13C

Conc 11.8011
 Area 668310



8_2-FTS-13C_IS

Conc 5.0000
 Area 668310



Insight Report

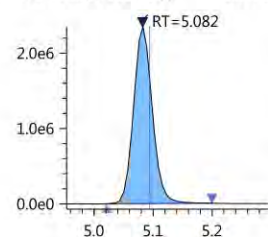
Printed at 5/5/2020 1:20:51 PM

200428_061

Sample ID: R2003266-006
Date acquired: 4/29/2020 1:21:23 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200428_b4\200428_061.lcd
Vial: 45 | Inj. Volume: 15.0000uL | Tray: 3

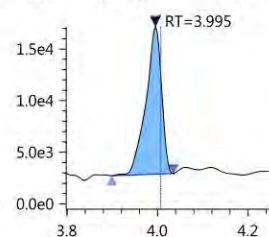
13C7-PFUnDA_IS

Conc 5.0000
Area 5205022
ISTD 570.00>525.00 (-)



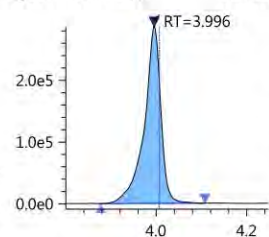
PFBS_1

Conc 0.2049
Area 34387
Q 299.00>80.00 (-)



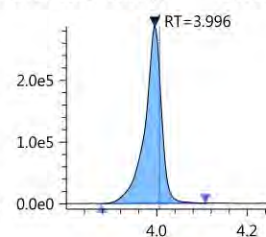
PFBS-13C

Conc 3.5848
Area 729483
Q 301.80>80.00 (-)



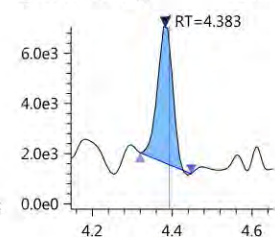
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Conc 5.0000
Area 729483
ISTD 301.80>80.00 (-)



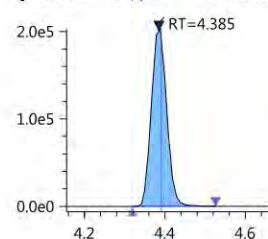
PFHxS_1

Conc 0.0910
Area 14483
Q 399.00>80.00 (-)



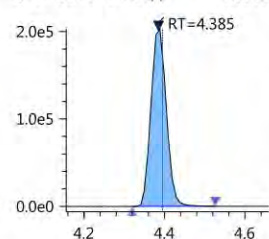
PFHxS-180

Conc 4.7102
Area 539600
Q 402.70>84.05 (-)



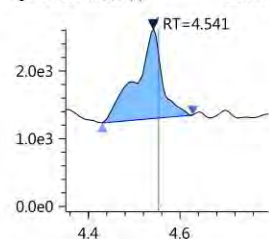
PFHxS-180_IS

Conc 5.0000
Area 539600
ISTD 402.70>84.05 (-)



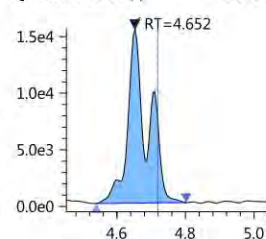
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Conc 0.0314
Area 5292
Q 449.00>80.15 (-)



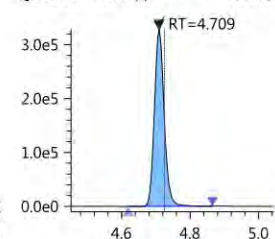
PFOS_1

Conc 0.5685
Area 62459
Q 499.00>80.00 (-)



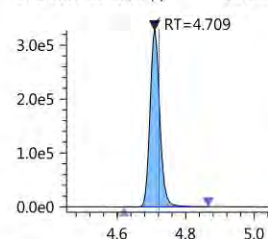
PFOS-13C

Conc 4.0222
Area 648572
Q 502.80>80.05 (-)



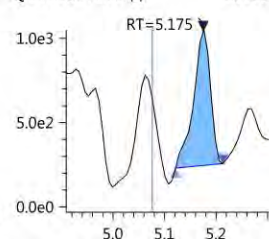
PFOS-13C_IS

Conc 5.0000
Area 648572
ISTD 502.80>80.05 (-)



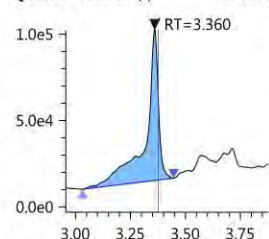
PFDS_1

Conc 0.0178
Area 1826
Q 599.00>79.90 (-)



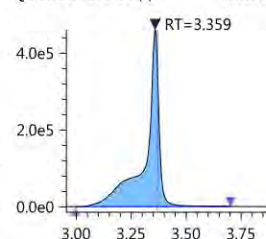
PFBA

Conc 0.9382
Area 357865
Q 213.00>169.10 (-)



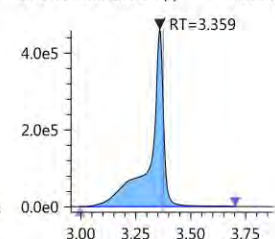
PFBA-13C

Conc 3.5473
Area 1953252
Q 216.90>172.15 (-)



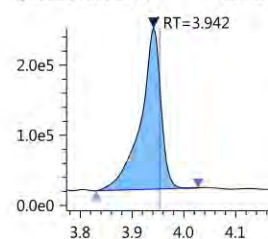
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Conc 5.0000
Area 1953252
ISTD 216.90>172.15 (-)



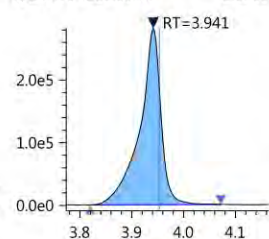
PFPeA

Conc 1.8240
Area 621908
Q 263.05>219.10 (-)



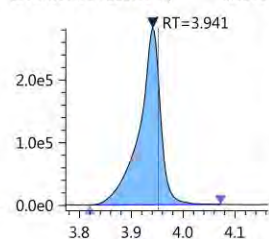
PFPeA-13C

Conc 2.5888
Area 802170
Q 267.90>223.00 (-)



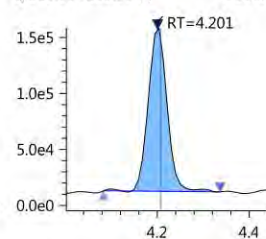
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Conc 5.0000
Area 802170
ISTD 267.90>223.00 (-)



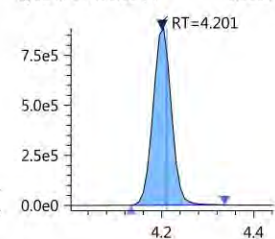
PFHxA

Conc 0.8574
Area 415838
Q 313.00>269.00 (-)



PFHxA-13C

Conc 2.8892
Area 2452382
Q 314.90>270.10 (-)

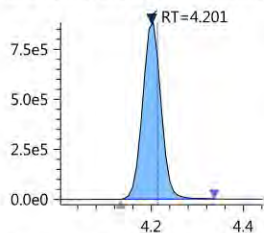


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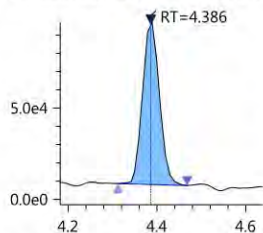
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Conc 5.0000
Area 2452382
ISTD 314.90>270.10 (-)



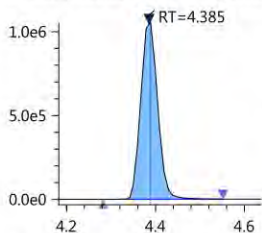
PFHpA

Conc 0.4629
Area 236452
Q 362.90>319.00 (-)



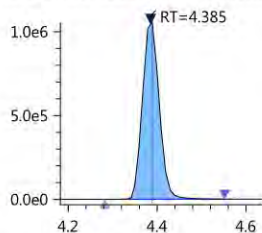
PFHpA-13C

Conc 3.6455
Area 2799270
Q 366.90>322.10 (-)



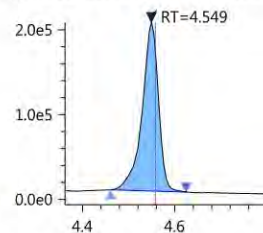
PFHpA-13C_IS

Conc 5.0000
Area 2799270
ISTD 366.90>322.10 (-)



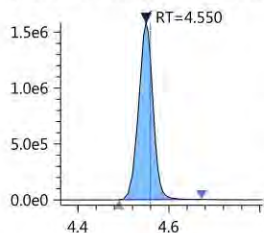
PFOA

Conc 0.5442
Area 489781
Q 413.00>369.00 (-)



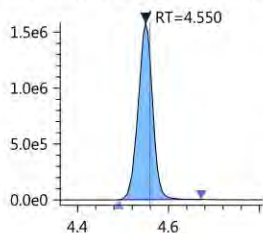
PFOA-13C

Conc 3.7559
Area 3488935
Q 416.80>372.05 (-)



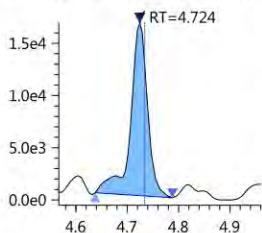
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Conc 5.0000
Area 3488935
ISTD 416.80>372.05 (-)



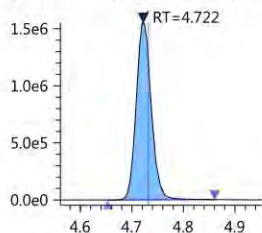
PFNA

Conc 0.0633
Area 38174
Q 463.00>418.90 (-)



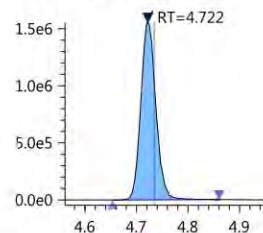
PFNA-13C

Conc 4.5442
Area 3151473
Q 467.80>423.00 (-)



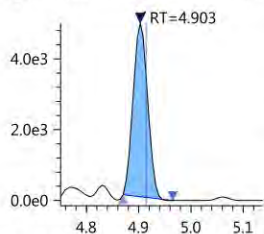
PFNA-13C_IS

Conc 5.0000
Area 3151473
ISTD 467.80>423.00 (-)



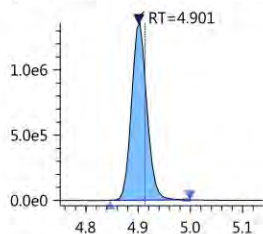
PFDA

Conc 0.0161
Area 9461
Q 513.00>468.80 (-)



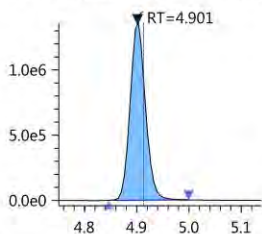
PFDA-13C

Conc 4.4085
Area 2774071
Q 514.80>469.95 (-)



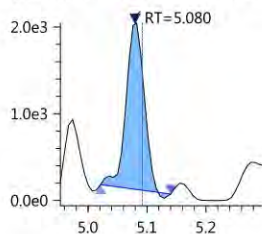
PFDA-13C_IS

Conc 5.0000
Area 2774071
ISTD 514.80>469.95 (-)



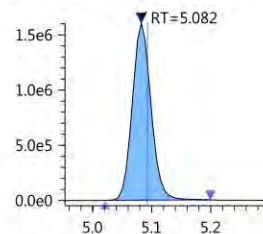
PFUnA

Conc -0.0064
Area 4098
Q 563.00>518.90 (-)



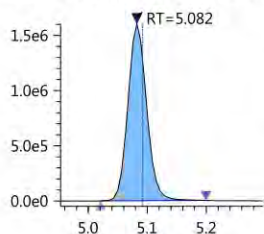
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Conc 4.5278
Area 3553834
Q 564.80>519.95 (-)



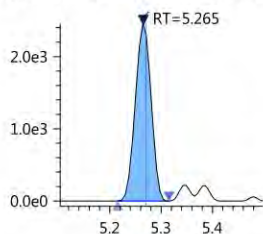
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Conc 5.0000
Area 3553834
ISTD 564.80>519.95 (-)



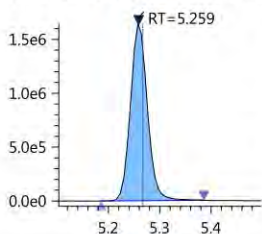
PFDaA

Conc 0.0255
Area 5260
Q 613.05>569.00 (-)



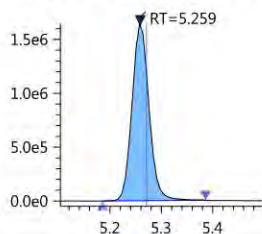
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Conc 4.0743
Area 3767397
Q 614.80>569.95 (-)



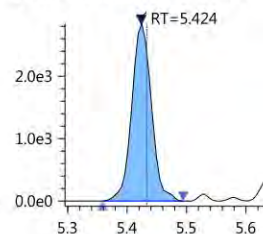
PFDaA-13C_IS

Conc 5.0000
Area 3767397
ISTD 614.80>569.95 (-)



PFTrDA

Conc 0.0066
Area 6554
Q 663.00>618.90 (-)



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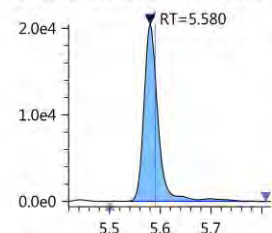
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PFTeDA

Conc 0.0055
Area 39600

Q 713.40>669.00 (-)

2.05e4

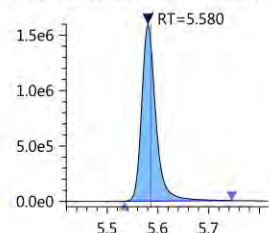


PFTeDA-13C

Conc 4.1829
Area 3085979

Q 714.70>669.90 (-)

1.60e6

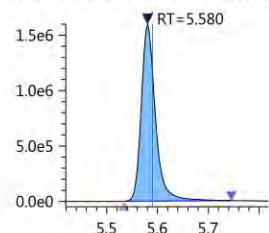


PFTeDA-13C_IS

Conc 5.0000
Area 3085979

ISTD 714.70>669.90 (-)

1.60e6

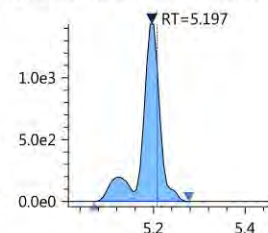


FOSA

Conc 0.0113
Area 3885

Q 498.20>78.00 (-)

1.43e3

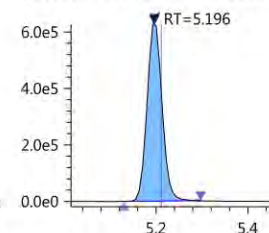


FOSA-13C

Conc 3.4146
Area 1436627

Q 506.00>78.05 (-)

6.28e5

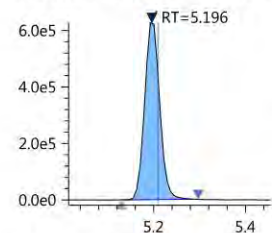


FOSA-13C_IS

Conc 5.0000
Area 1436627

ISTD 506.00>78.05 (-)

6.28e5

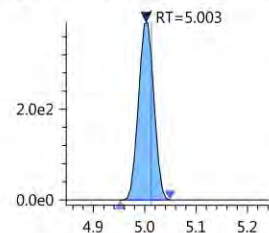


N-MeFOSAA

Conc 0.0106
Area 819

Q 570.20>419.00 (-)

3.91e2

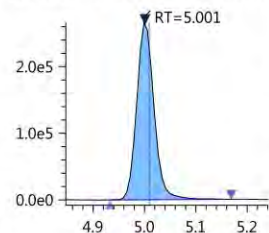


N-MeFOSAA-d3

Conc 5.2143
Area 622863

Q 572.80>419.05 (-)

2.66e5

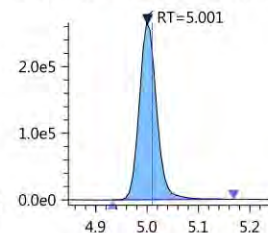


N-MeFOSAA-d3_IS

Conc 5.0000
Area 622863

ISTD 572.80>419.05 (-)

2.66e5

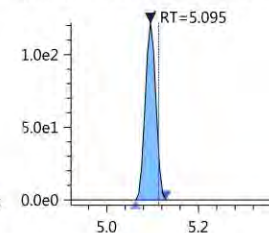


N-EtFOSAA

Conc 0.0030
Area 197

Q 584.20>418.95 (-)

1.22e2

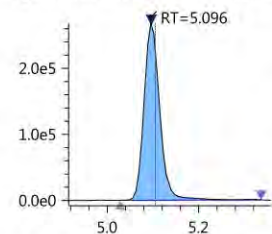


N-EtFOSAA-d5

Conc 5.7818
Area 636409

Q 588.80>419.00 (-)

2.68e5

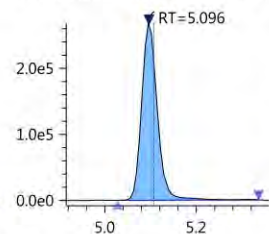


N-EtFOSAA-d5_IS

Conc 5.0000
Area 636409

ISTD 588.80>419.00 (-)

2.68e5

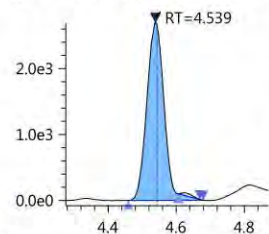


6_2-FTS_1

Conc 0.0383
Area 9476

Q 427.00>407.00 (-)

2.69e3

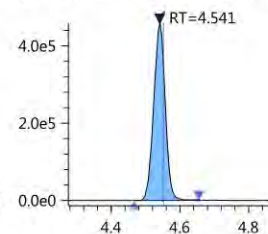


6_2-FTS-13C

Conc 15.3181
Area 1069993

Q 428.90>409.00 (-)

4.59e5

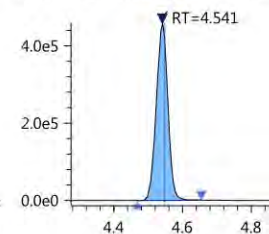


6_2-FTS-13C_IS

Conc 5.0000
Area 1069993

ISTD 428.90>409.00 (-)

4.59e5

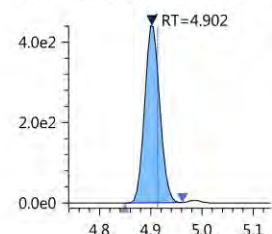


8_2-FTS_1

Conc 0.0083
Area 912

Q 527.10>506.90 (-)

4.41e2

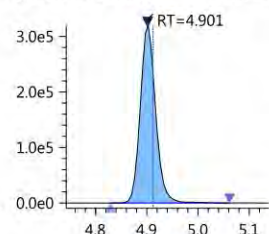


8_2-FTS-13C

Conc 11.8011
Area 668310

Q 528.80>509.00 (-)

3.19e5

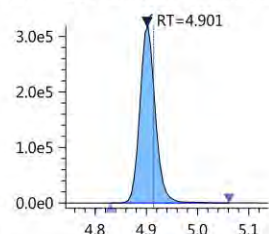


8_2-FTS-13C_IS

Conc 5.0000
Area 668310

ISTD 528.80>509.00 (-)

3.19e5



Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200428_b4\200428_064
Lab ID: R2003266-007.R01
RunType: N/A
Matrix: Water

Date Acquired: 4/29/20 01:52
Batch ID: 678319
Analysis Method: PFC/537M/PFAS

Validations

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

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	13C4-PFBA	26	27	124	RR to confirm
	13C5-PFPeA	20	27	138	RR to confirm
	13C2-PFHxA	22	28	132	RR to confirm
	13C2-6:2 FTS	322	10	226	High bias ND
	13C2-8:2 FTS	313	10	202	High bias ND

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200428_b4\200428_064	Instrument:	K-LCMS-06
Acqu Date:	4/29/20 01:52	Vial:	13
Run Type:	N/A	Dilution:	1
Lab ID:	R2003266-007.R01	Raw Units:	ng/mL

Bottle ID:	R2003266-007.01	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678319	Prep Lot:	357465	Report Group:	R2003266
Analysis	PFC/537M	Prep Method:	ALS SOP		
		Prep Date:	4/27/20		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.088	0.00	4924447	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.997	-0.01	647361	3.3625	67	20 - 109	Y
18O2-PFHxS	4.390	0.00	387201	3.5725	71	26 - 122	Y
13C4-PFOS	4.714	-0.01	656278	4.3018	86	25 - 121	Y
13C4-PFBA	3.354	-0.02	688022	1.3207	26	27 - 124	Y
13C5-PFPeA	3.942	-0.01	293406	1.0008	20	27 - 138	Y
13C2-PFHxA	4.205	-0.01	877848	1.0931	22	28 - 132	Y
13C4-PFHpA	4.390	0.00	1029050	1.4165	28	19 - 139	Y
13C4-PFOA	4.555	0.00	1809244	2.0586	41	22 - 130	Y
13C5-PFNA	4.728	0.00	2132212	3.2496	65	20 - 127	Y
13C2-PFDA	4.907	0.00	2139931	3.5945	72	24 - 125	Y
13C2-PFUnDA	5.088	0.00	3175627	4.2764	86	22 - 125	Y
13C2-PFDoDA	5.264	0.00	3575246	4.0868	82	19 - 122	Y
13C2-PFTeDA	5.585	-0.01	2746682	3.9351	79	13 - 124	Y
13C8-FOSA	5.201	+0.00	1260906	3.1677	63	18 - 109	Y
D3-MeFOSAA	5.006	0.00	537940	4.7599	95	9 - 123	Y
D5-EtFOSAA	5.102	0.00	549468	5.2764	106	12 - 126	Y
13C2-6:2 FTS	4.547	0.00	1063591	16.0940	322	10 - 226	Y
13C2-8:2 FTS	4.907	0.00	837777	15.6365	313	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)	3.993	-0.02	17988	0.1208	3.6	J	Y
Perfluorohexane sulfonic acid (PFHxS)	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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Data File: J:\LCMS06\Data\200428_b4\200428_064
Acqu Date: 4/29/20 01:52
Run Type: N/A
Lab ID: R2003266-007.R01

Instrument: K-LCMS06
Vial: 13
Dilution: 1
Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	0		0	0	0	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.355	-0.03	113520	0.8449	26		Y
Perfluoropentanoic acid (PFPeA)	0		0	0	0	U	Y
Perfluorohexanoic acid (PFHxA)	0		0	0	0	U	Y
Perfluoroheptanoic acid (PFHpA)	0		0	0	0	U	Y
Perfluorooctanoic acid (PFOA)	4.548	-0.01	42707	0.0845	2.6		Y
Perfluorononanoic acid (PFNA)	4.731		5125	0.0090	0.27	U	Y
Perfluorodecanoic acid (PFDA)	4.906	-0.01	6119	0.0135	0.41	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.088	0.00	5655	-0.0024	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.262	-0.01	7296	0.0311	0.94	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.426	-0.01	5932	0.0068	0.21	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.585	-0.01	32542	-0.0058	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.202	+0.00	1810	0.0060	0.18	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.006	0.00	102	0.0015	0.045	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.108	0.00	1055	0.0185	0.56	J	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.548	0.00	3477	0.0141	0.43	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.907	0.00	1012	0.0073	0.22	J	Y

Prep Amount: 265.0000 mL
Prep Final Amount: 8.00 mL

Dilution: 1
Basis Factor: 100.00

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

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

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

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Insight Report

Printed at 5/5/2020 1:30:49 PM

200428_064

Sample ID: R2003266-007

Date acquired: 4/29/2020 1:52:42 AM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200428_b4\200428_064.lcd

Vial: 48 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.088	4924447	4924447	1	5.0000	ng/mL	----
PFBS_1	M	3.993	17988	647361	2	0.1208	ng/mL	----
PFBS-13C	Auto	3.997	647361	4924447	1	3.3625	ng/mL	----
PFBS-13C_IS	Auto	3.997	647361	647361	2	5.0000	ng/mL	----
PFHxS_1	ND(W/B)	----	----	387201	3	----	ng/mL	----
PFHxS-18O	Auto	4.390	387201	4924447	1	3.5725	ng/mL	----
PFHxS-18O_IS	Auto	4.390	387201	387201	3	5.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	387201	3	----	ng/mL	----
PFOS_1	ND(W/B)	----	----	656278	4	----	ng/mL	----
PFOS-13C	Auto	4.714	656278	4924447	1	4.3018	ng/mL	----
PFOS-13C_IS	Auto	4.714	656278	656278	4	5.0000	ng/mL	----
PFDS_1	ND(W/B)	----	----	656278	4	----	ng/mL	----
PFBA	Auto	3.355	113520	688022	5	0.8449	ng/mL	----
PFBA-13C	Auto	3.354	688022	4924447	1	1.3207	ng/mL	----
PFBA-13C_IS	Auto	3.354	688022	688022	5	5.0000	ng/mL	----
PFPeA	ND(W/B)	----	----	293406	6	----	ng/mL	----
PFPeA-13C	Auto	3.942	293406	4924447	1	1.0008	ng/mL	----
PFPeA-13C_IS	Auto	3.942	293406	293406	6	5.0000	ng/mL	----
PFHxA	ND(W/B)	----	----	877848	7	----	ng/mL	----
PFHxA-13C	Auto	4.205	877848	4924447	1	1.0931	ng/mL	----
PFHxA-13C_IS	Auto	4.205	877848	877848	7	5.0000	ng/mL	----
PFHpA	ND(W/B)	----	----	1029050	8	----	ng/mL	----
PFHpA-13C	Auto	4.390	1029050	4924447	1	1.4165	ng/mL	----
PFHpA-13C_IS	Auto	4.390	1029050	1029050	8	5.0000	ng/mL	----
PFOA	Auto	4.548	42707	1809244	9	0.0845	ng/mL	----
PFOA-13C	Auto	4.555	1809244	4924447	1	2.0586	ng/mL	----
PFOA-13C_IS	Auto	4.555	1809244	1809244	9	5.0000	ng/mL	----
PFNA	Auto	4.731	5125	2132212	10	0.0090	ng/mL	----
PFNA-13C	Auto	4.728	2132212	4924447	1	3.2496	ng/mL	----
PFNA-13C_IS	Auto	4.728	2132212	2132212	10	5.0000	ng/mL	----
PFDA	M	4.906	6119	2139931	11	0.0135	ng/mL	----
PFDA-13C	Auto	4.907	2139931	4924447	1	3.5945	ng/mL	----
PFDA-13C_IS	Auto	4.907	2139931	2139931	11	5.0000	ng/mL	----
PFUnA	M	5.088	5655	3175627	12	-0.0024	ng/mL	----
PFUnA-13C	Auto	5.088	3175627	4924447	1	4.2764	ng/mL	----
PFUnA-13C_IS	Auto	5.088	3175627	3175627	12	5.0000	ng/mL	----
PFDoA	Auto	5.262	7296	3575246	13	0.0311	ng/mL	----
PFDoA-13C	Auto	5.264	3575246	4924447	1	4.0868	ng/mL	----
PFDoA-13C_IS	Auto	5.264	3575246	3575246	13	5.0000	ng/mL	----
PFTTrDA	Auto	5.426	5932	2746682	14	0.0068	ng/mL	----
PFTTeDA	Auto	5.585	32542	2746682	14	-0.0058	ng/mL	----
PFTTeDA-13C	Auto	5.585	2746682	4924447	1	3.9351	ng/mL	----
PFTTeDA-13C_IS	Auto	5.585	2746682	2746682	14	5.0000	ng/mL	----
FOSA	Auto	5.202	1810	1260906	16	0.0060	ng/mL	----
FOSA-13C	Auto	5.201	1260906	4924447	1	3.1677	ng/mL	----
FOSA-13C_IS	Auto	5.201	1260906	1260906	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.006	102	537940	21	0.0015	ng/mL	----
N-MeFOSAA-d3	Auto	5.006	537940	4924447	1	4.7599	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.006	537940	537940	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.108	1055	549468	22	0.0185	ng/mL	----
N-EtFOSAA-d5	Auto	5.102	549468	4924447	1	5.2764	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.102	549468	549468	22	5.0000	ng/mL	----
6_2-FTS_1	M	4.548	3477	1063591	24	0.0141	ng/mL	----
6_2-FTS-13C	Auto	4.547	1063591	4924447	1	16.0940	ng/mL	----
6_2-FTS-13C_IS	Auto	4.547	1063591	1063591	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.907	1012	837777	25	0.0073	ng/mL	----
8_2-FTS-13C	Auto	4.907	837777	4924447	1	15.6365	ng/mL	----
8_2-FTS-13C_IS	Auto	4.907	837777	837777	25	5.0000	ng/mL	----

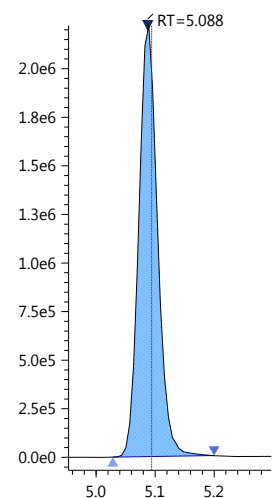
Insight Report

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13C7-PFUnDA_IS

Conc 5.0000
Area 4924447

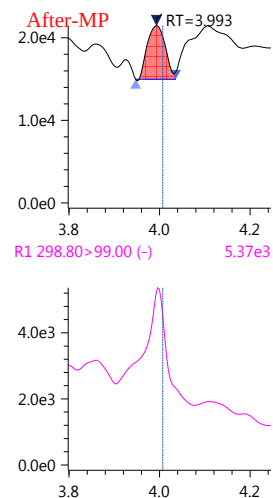
ISTD 570.00>525.00 (-) 2.22e6



PFBS_1

Conc 0.1208
Area 17988
R#1 38.70 (0.00)

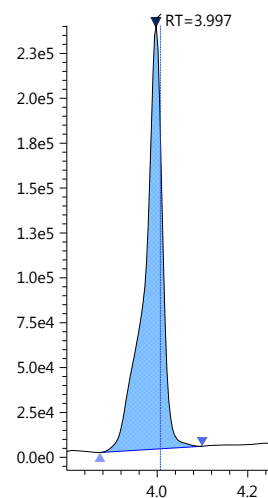
Q 299.00>80.00 (-) 2.15e4



PFBS-13C

Conc 3.3625
Area 647361

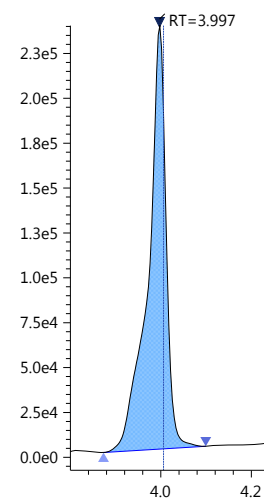
Q 301.80>80.00 (-) 2.40e5



PFBS-13C_IS

Conc 5.0000
Area 647361

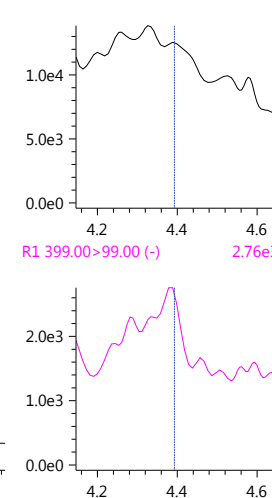
ISTD 301.80>80.00 (-) 2.40e5



PFHxS_1

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

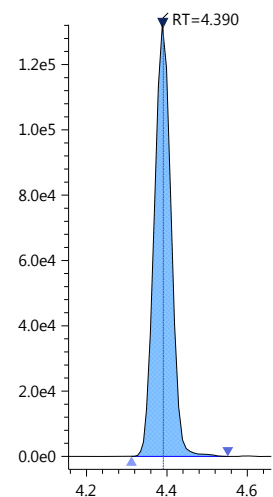
Q 399.00>80.00 (-) 1.38e4



PFHxS-180

Conc 3.5725
Area 387201

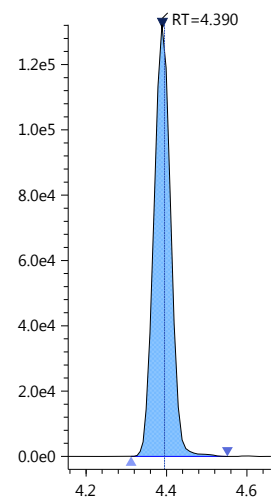
Q 402.70>84.05 (-) 1.32e5



PFHxS-180_IS

Conc 5.0000
Area 387201

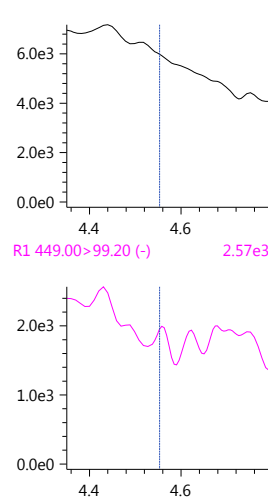
ISTD 402.70>84.05 (-) 1.32e5



PFHpS_1

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

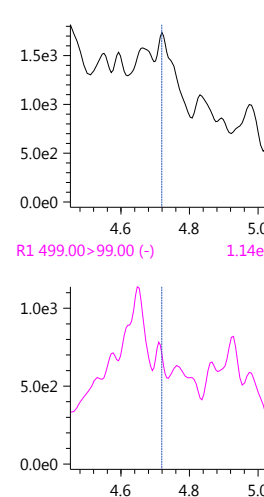
Q 449.00>80.15 (-) 7.18e3



PFOS_1

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

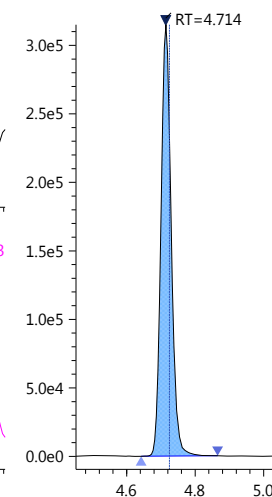
Q 499.00>80.00 (-) 1.82e3



PFOS-13C

Conc 4.3018
Area 656278

Q 502.80>80.05 (-) 3.15e5



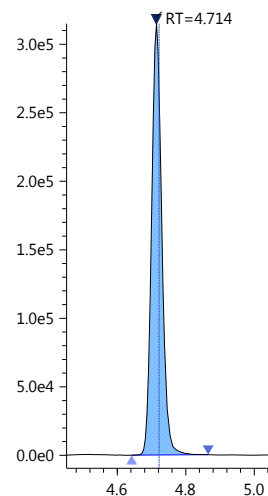
Insight Report

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PFOS-13C_IS

Conc 5.0000
Area 656278

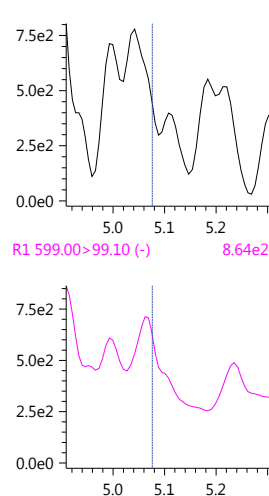
ISTD 502.80>80.05 (-)



PFDS_1

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

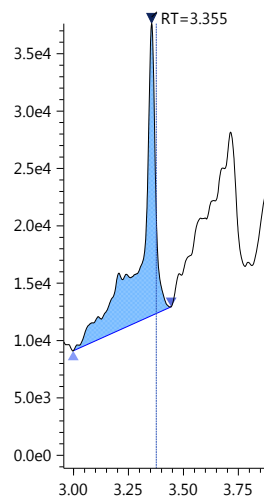
Q 599.00>79.90 (-)



PFBA

Conc 0.8449
Area 113520

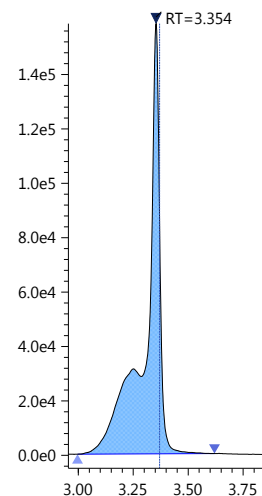
Q 213.00>169.10 (-)



PFBA-13C

Conc 1.3207
Area 688022

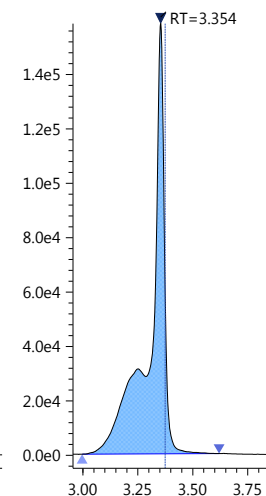
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 688022

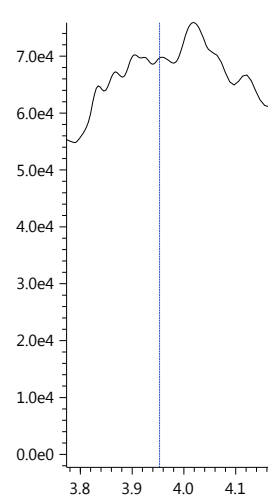
ISTD 216.90>172.15 (-)



PFPeA

Conc ----
Area ----

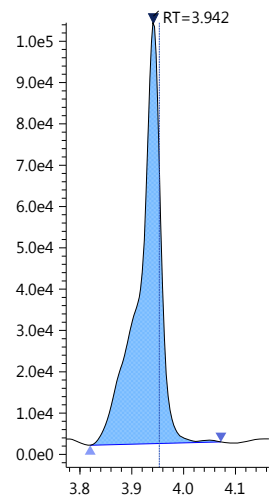
Q 263.05>219.10 (-)



PFPeA-13C

Conc 1.0008
Area 293406

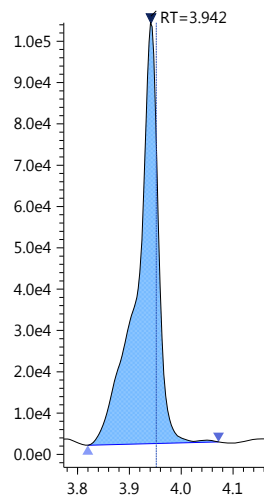
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 293406

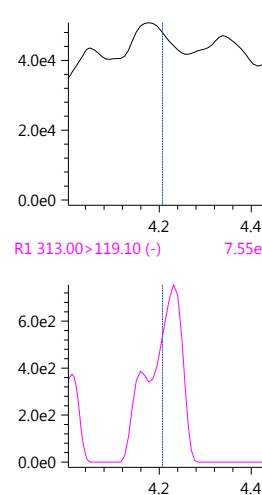
ISTD 267.90>223.00 (-)



PFHxA

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

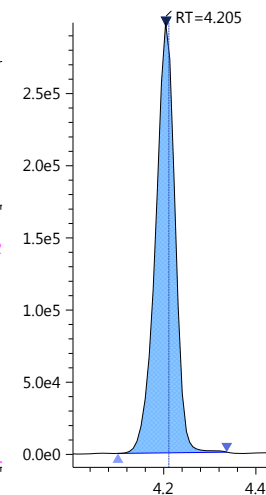
Q 313.00>269.00 (-)



PFHxA-13C

Conc 1.0931
Area 877848

Q 314.90>270.10 (-)



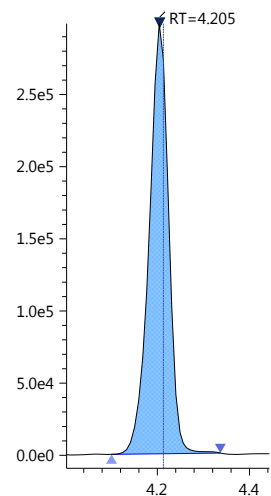
Insight Report

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PFHxA-13C_IS

Conc 5.0000
Area 877848

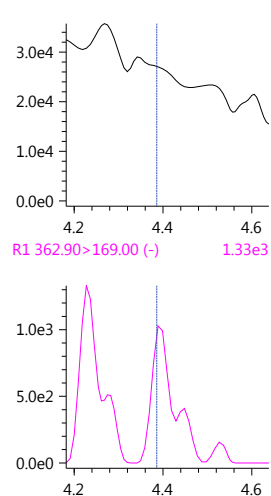
ISTD 314.90>270.10 (-) 2.99e5



PFHpA

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

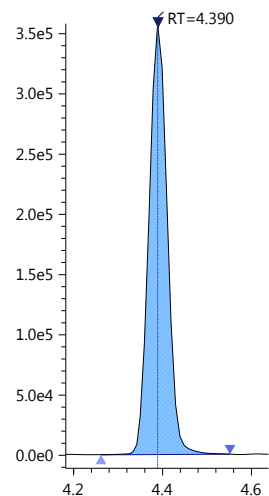
Q 362.90>319.00 (-) 3.58e4



PFHpA-13C

Conc 1.4165
Area 1029050

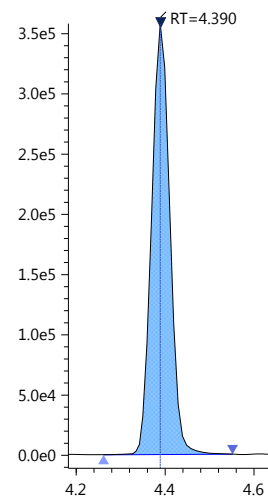
Q 366.90>322.10 (-) 3.58e5



PFHpA-13C_IS

Conc 5.0000
Area 1029050

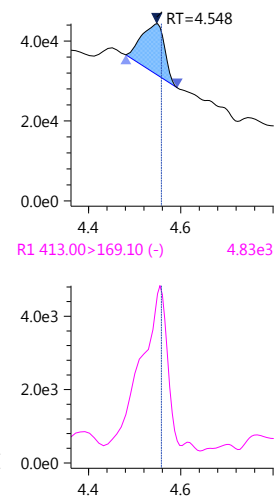
ISTD 366.90>322.10 (-) 3.58e5



PFOA

Conc 0.0845
Area 42707
R#1 28.69 (0.00)

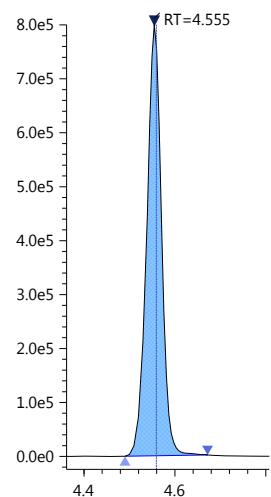
Q 413.00>369.00 (-) 4.44e4



PFOA-13C

Conc 2.0586
Area 1809244

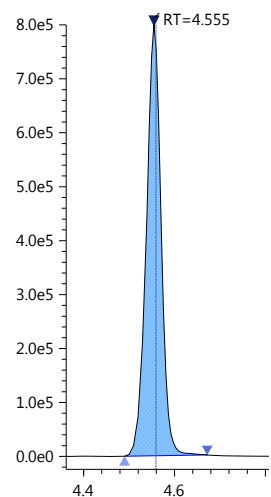
Q 416.80>372.05 (-) 8.00e5



PFOA-13C_IS

Conc 5.0000
Area 1809244

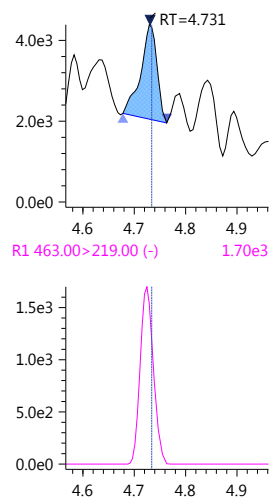
ISTD 416.80>372.05 (-) 8.00e5



PFNA

Conc 0.0090
Area 5125
R#1 36.65 (0.00)

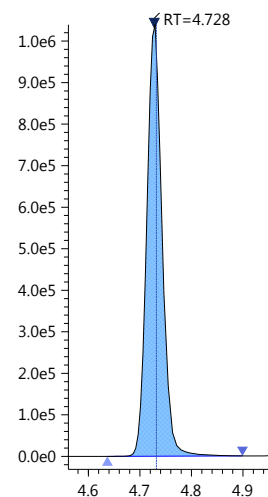
Q 463.00>418.90 (-) 4.39e3



PFNA-13C

Conc 3.2496
Area 2132212

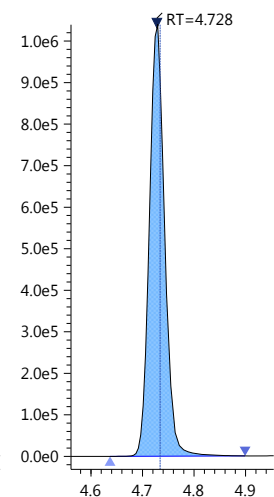
Q 467.80>423.00 (-) 1.04e6



PFNA-13C_IS

Conc 5.0000
Area 2132212

ISTD 467.80>423.00 (-) 1.04e6

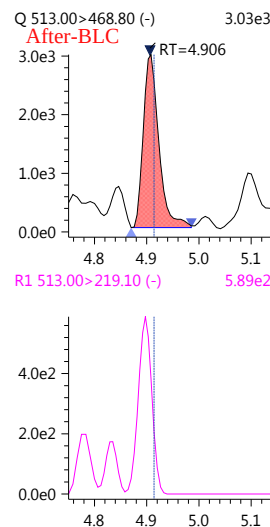


Insight Report

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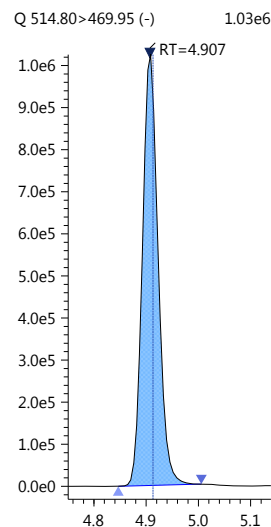
PFDA

Conc 0.0135
Area 6119
R#1 10.84 (0.00)



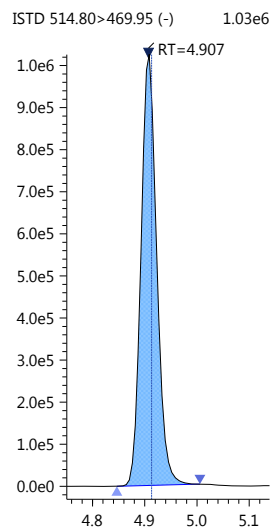
PFDA-13C

Conc 3.5945
Area 2139931



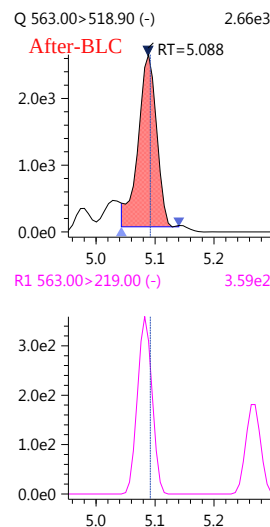
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Conc 5.0000
Area 2139931



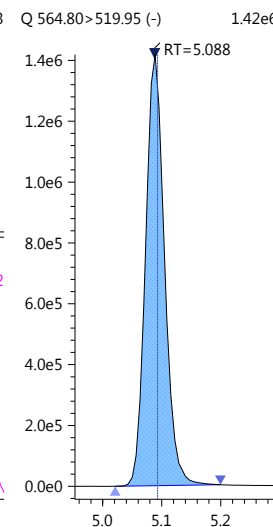
PFUnA

Conc -0.0024
Area 5655
R#1 13.01 (0.00)



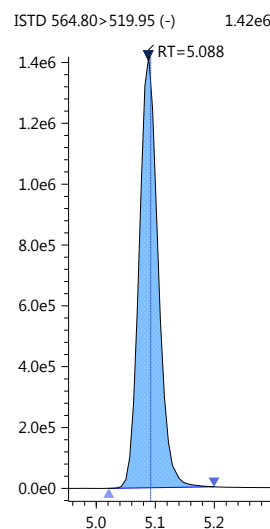
PFUnA-13C

Conc 4.2764
Area 3175627



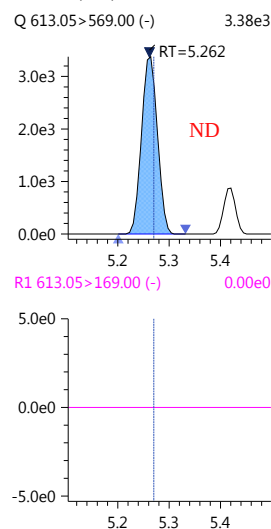
PFUnA-13C_IS

Conc 5.0000
Area 3175627



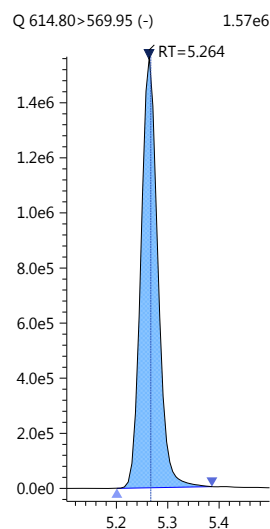
PFDaA

Conc 0.0311
Area 7296
R#1 0.00 (0.00)



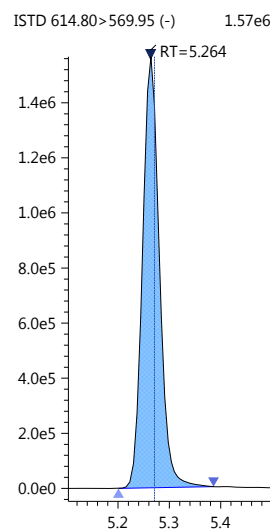
PFDaA-13C

Conc 4.0868
Area 3575246



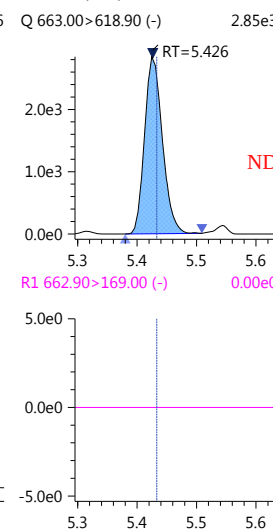
PFDaA-13C_IS

Conc 5.0000
Area 3575246



PFTrDA

Conc 0.0068
Area 5932
R#1 0.00 (0.00)

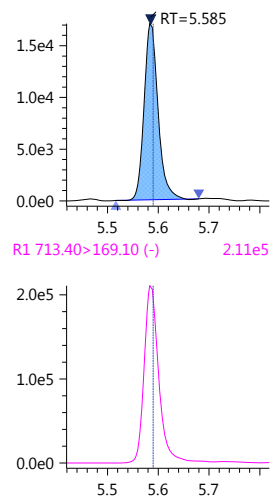


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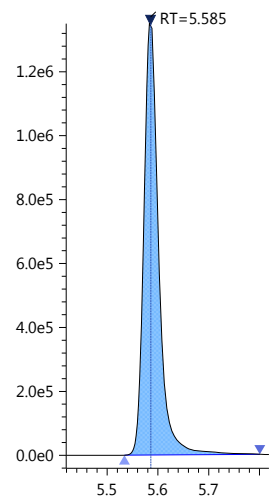
PFTeDA

Conc -0.0058
Area 32542
R#1 1221.53 (0.00)
Q 713.40>669.00 (-) 1.71e4



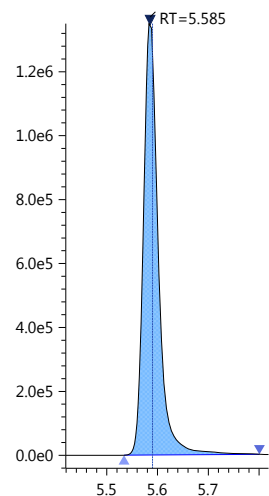
PFTeDA-13C

Conc 3.9351
Area 2746682
Q 714.70>669.90 (-) 1.35e6



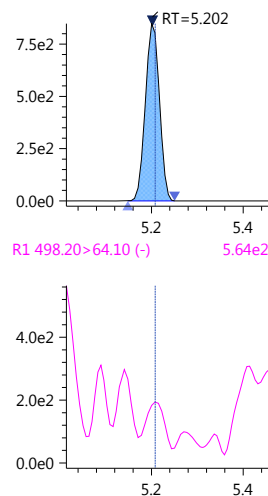
PFTeDA-13C_IS

Conc 5.0000
Area 2746682
ISTD 714.70>669.90 (-) 1.35e6



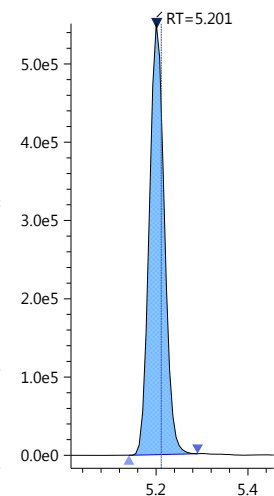
FOSA

Conc 0.0060
Area 1810
R#1 2.88 (0.00)
Q 498.20>78.00 (-) 8.48e2



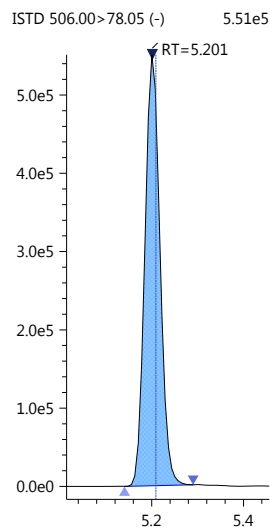
FOSA-13C

Conc 3.1677
Area 1260906
Q 506.00>78.05 (-) 5.51e5



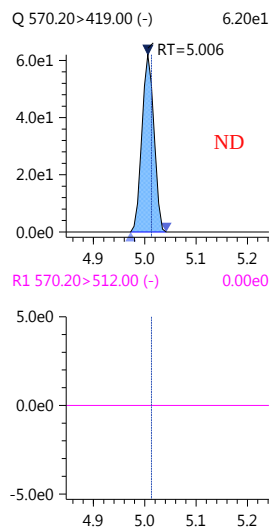
FOSA-13C_IS

Conc 5.0000
Area 1260906
ISTD 506.00>78.05 (-) 5.51e5



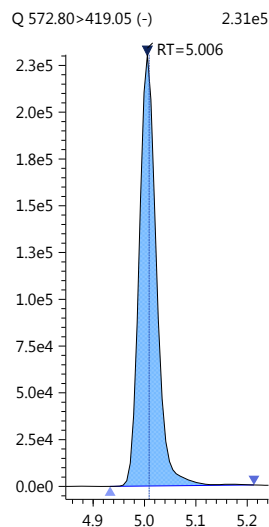
N-MeFOSAA

Conc 0.0015
Area 102
R#1 0.00 (0.00)
Q 570.20>419.00 (-) 6.20e1



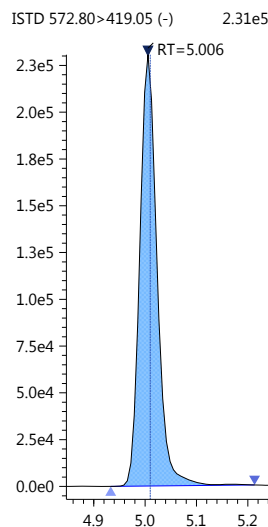
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Conc 4.7599
Area 537940
Q 572.80>419.05 (-) 2.31e5



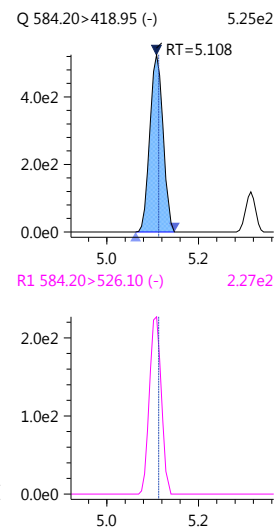
N-MeFOSAA-d3_IS

Conc 5.0000
Area 537940
ISTD 572.80>419.05 (-) 2.31e5



N-EtFOSAA

Conc 0.0185
Area 1055
R#1 43.22 (0.00)
Q 584.20>418.95 (-) 5.25e2

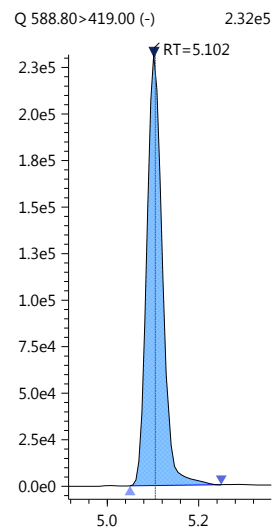


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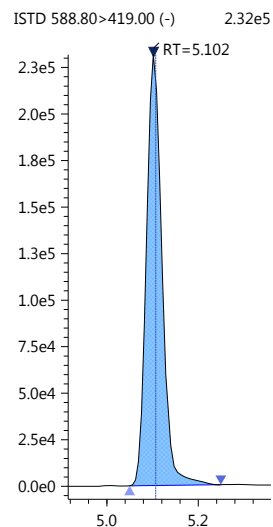
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Conc 5.2764
Area 549468



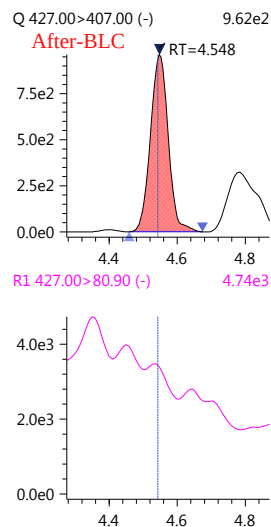
N-EtFOSAA-d5_IS

Conc 5.0000
Area 549468



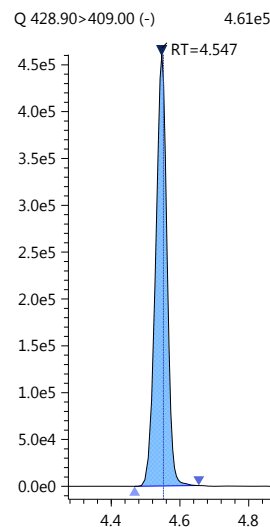
6_2-FTS_1

Conc 0.0141
Area 3477
R#1 21.34 (0.00)



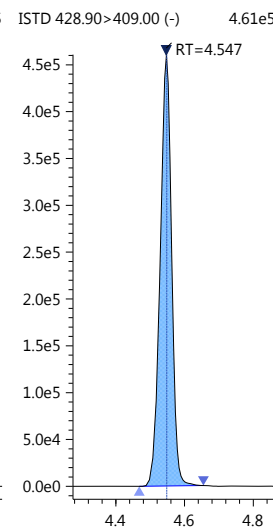
6_2-FTS-13C

Conc 16.0940
Area 1063591



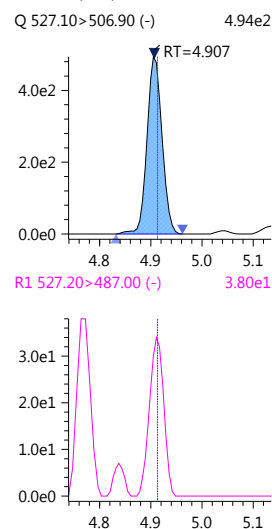
6_2-FTS-13C_IS

Conc 5.0000
Area 1063591



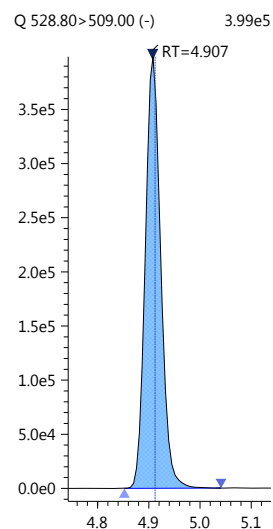
8_2-FTS_1

Conc 0.0073
Area 1012
R#1 5.22 (0.00)



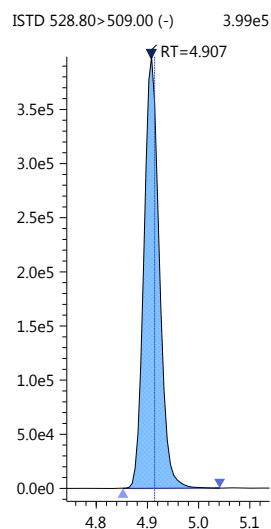
8_2-FTS-13C

Conc 15.6365
Area 837777



8_2-FTS-13C_IS

Conc 5.0000
Area 837777



Insight Report

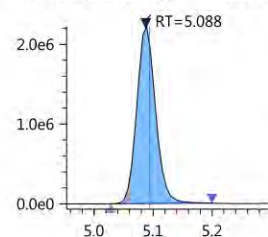
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200428_064

Sample ID: R2003266-007
Date acquired: 4/29/2020 1:52:42 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200428_b4\200428_064.lcd
Vial: 48 | Inj. Volume: 15.0000uL | Tray: 3

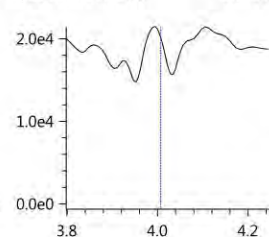
13C7-PFUnDA_IS

Conc 5.0000
Area 492447
ISTD 570.00>525.00 (-)



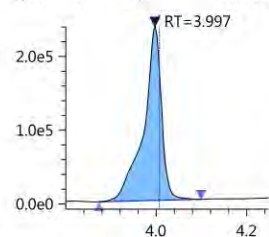
PFBS_1

Conc ----
Area ----
Q 299.00>80.00 (-)



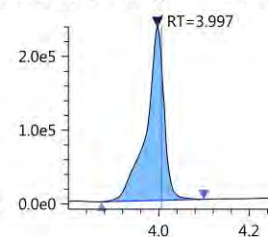
PFBS-13C

Conc 3.3625
Area 647361
Q 301.80>80.00 (-)



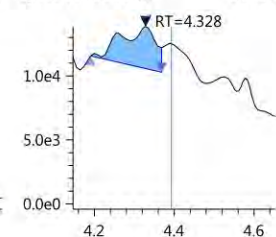
PFBS-13C_IS

Conc 5.0000
Area 647361
ISTD 301.80>80.00 (-)



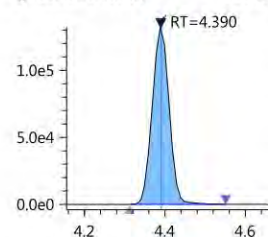
PFHxS_1

Conc 0.1802
Area 18989
Q 399.00>80.00 (-)



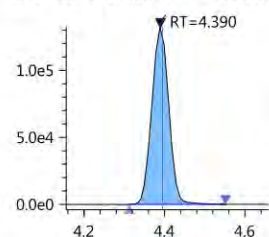
PFHxS-180

Conc 3.5725
Area 387201
Q 402.70>84.05 (-)



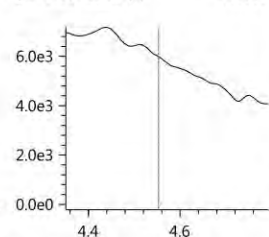
PFHxS-180_IS

Conc 5.0000
Area 387201
ISTD 402.70>84.05 (-)



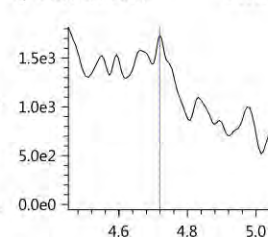
PFHpS_1

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



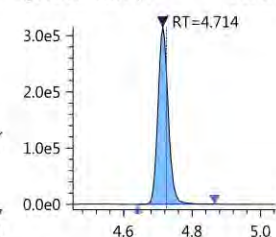
PFOS_1

Conc ----
Area ----
Q 499.00>80.00 (-)



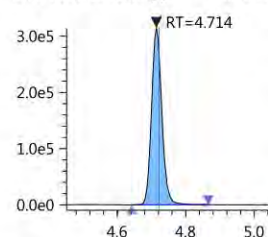
PFOS-13C

Conc 4.3018
Area 656278
Q 502.80>80.05 (-)



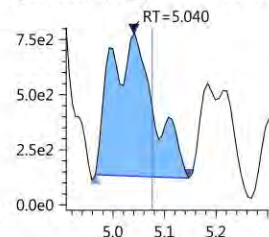
PFOS-13C_IS

Conc 5.0000
Area 656278
ISTD 502.80>80.05 (-)



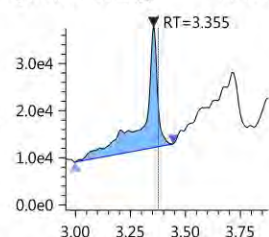
PFDS_1

Conc 0.0367
Area 3815
Q 599.00>79.90 (-)



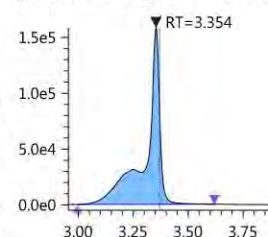
PFBA

Conc 0.8449
Area 113520
Q 213.00>169.10 (-)



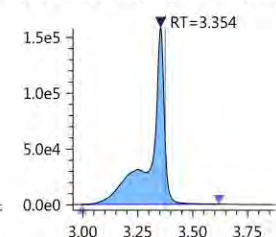
PFBA-13C

Conc 1.3207
Area 688022
Q 216.90>172.15 (-)



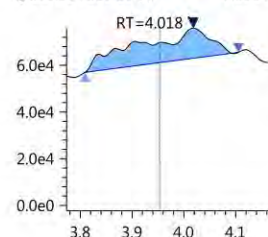
PFBA-13C_IS

Conc 5.0000
Area 688022
ISTD 216.90>172.15 (-)



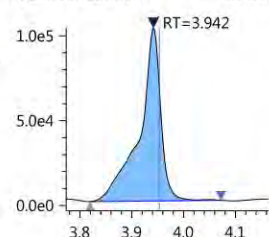
PFPeA

Conc 1.0220
Area 129053
Q 263.05>219.10 (-)



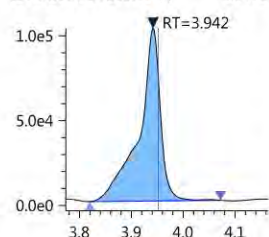
PFPeA-13C

Conc 1.0008
Area 293406
Q 267.90>223.00 (-)



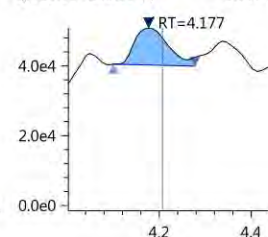
PFPeA-13C_IS

Conc 5.0000
Area 293406
ISTD 267.90>223.00 (-)



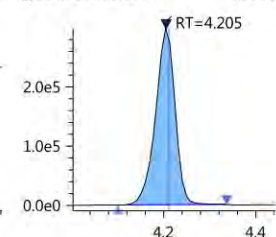
PFHxA

Conc 0.3095
Area 54408
Q 313.00>269.00 (-)



PFHxA-13C

Conc 1.0931
Area 877848
Q 314.90>270.10 (-)



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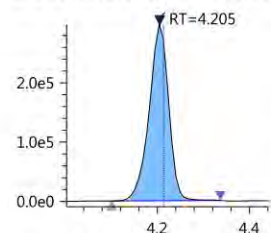
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PFHxA-13C_IS

Conc 5.0000

Area 877848

ISTD 314.90>270.10 (-) 2.99e5

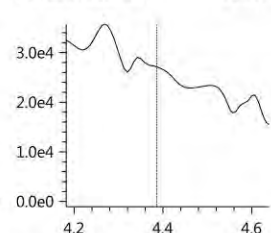


PFHpA

Conc ----

Area ----

Q 362.90>319.00 (-)

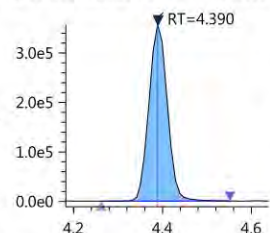


PFHpA-13C

Conc 1.4165

Area 1029050

Q 366.90>322.10 (-) 3.58e5

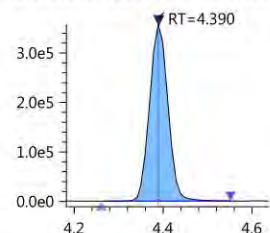


PFHpA-13C_IS

Conc 5.0000

Area 1029050

ISTD 366.90>322.10 (-) 3.58e5

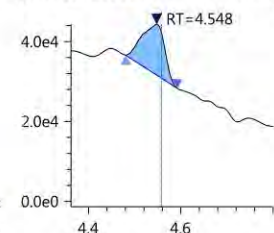


PFOA

Conc 0.0845

Area 42707

Q 413.00>369.00 (-) 4.44e4

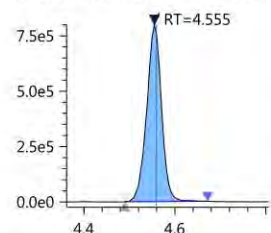


PFOA-13C

Conc 2.0586

Area 1809244

Q 416.80>372.05 (-) 8.00e5

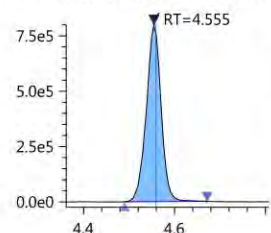


PFOA-13C_IS

Conc 5.0000

Area 1809244

ISTD 416.80>372.05 (-) 8.00e5

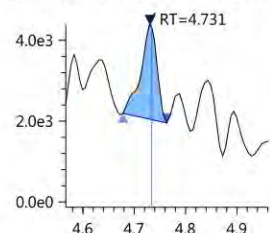


PFNA

Conc 0.0090

Area 5125

Q 463.00>418.90 (-) 4.39e3

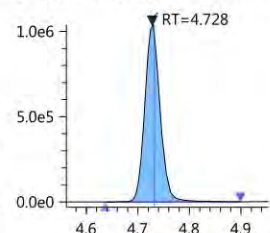


PFNA-13C

Conc 3.2496

Area 2132212

Q 467.80>423.00 (-) 1.04e6

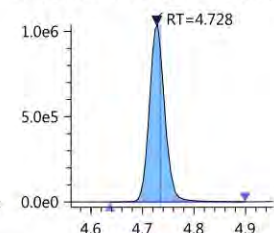


PFNA-13C_IS

Conc 5.0000

Area 2132212

ISTD 467.80>423.00 (-) 1.04e6

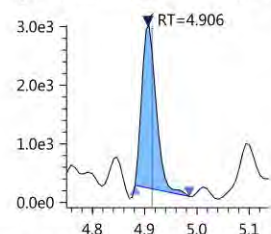


PFDA

Conc 0.0117

Area 5311

Q 513.00>468.80 (-) 3.03e3

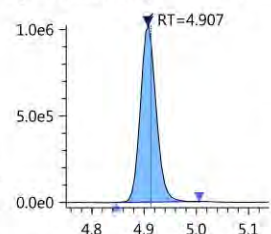


PFDA-13C

Conc 3.5945

Area 2139931

Q 514.80>469.95 (-) 1.03e6

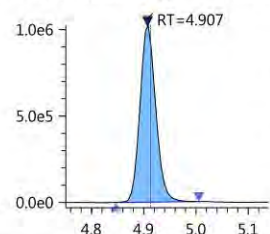


PFDA-13C_IS

Conc 5.0000

Area 2139931

ISTD 514.80>469.95 (-) 1.03e6

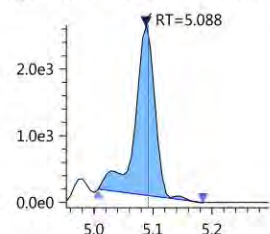


PFUnA

Conc -0.0017

Area 5994

Q 563.00>518.90 (-) 2.66e3

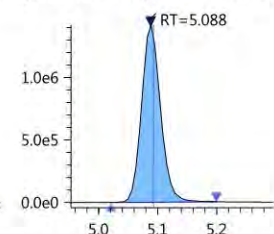


PFUnA-13C

Conc 4.2764

Area 3175627

Q 564.80>519.95 (-) 1.42e6

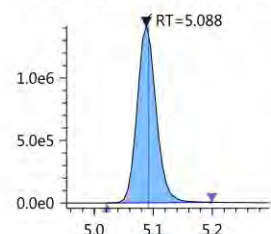


PFUnA-13C_IS

Conc 5.0000

Area 3175627

ISTD 564.80>519.95 (-) 1.42e6

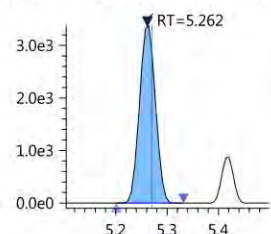


PFDaA

Conc 0.0311

Area 7296

Q 613.05>569.00 (-) 3.38e3

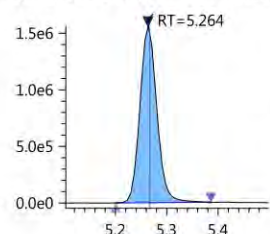


PFDaA-13C

Conc 4.0868

Area 3575246

Q 614.80>569.95 (-) 1.57e6

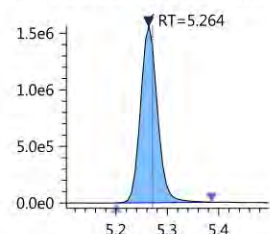


PFDaA-13C_IS

Conc 5.0000

Area 3575246

ISTD 614.80>569.95 (-) 1.57e6

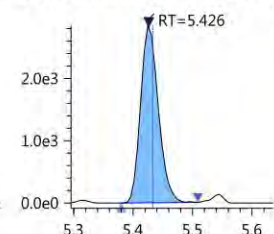


PFTrDA

Conc 0.0068

Area 5932

Q 663.00>618.90 (-) 2.85e3



Insight Report

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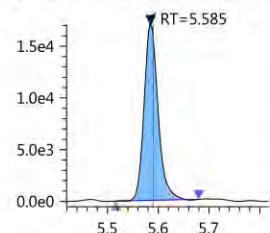
PFTeDA

Conc -0.0058

Area 32542

Q 713.40>669.00 (-)

1.71e4



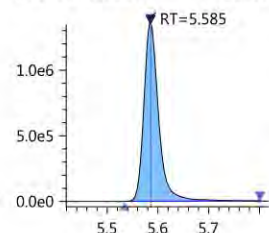
PFTeDA-13C

Conc 3.9351

Area 2746682

Q 714.70>669.90 (-)

1.35e6



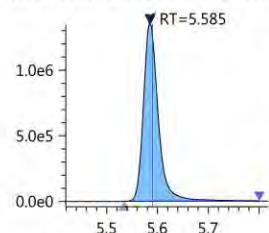
PFTeDA-13C_IS

Conc 5.0000

Area 2746682

ISTD 714.70>669.90 (-)

1.35e6



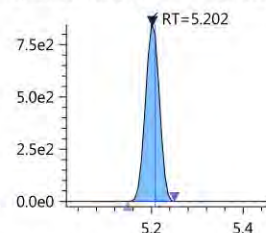
FOSA

Conc 0.0060

Area 1810

Q 498.20>78.00 (-)

8.48e2



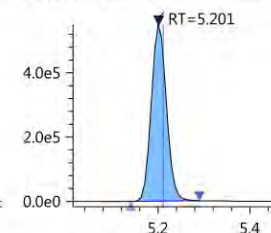
FOSA-13C

Conc 3.1677

Area 1260906

Q 506.00>78.05 (-)

5.51e5



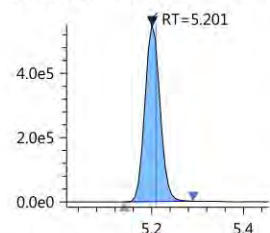
FOSA-13C_IS

Conc 5.0000

Area 1260906

ISTD 506.00>78.05 (-)

5.51e5



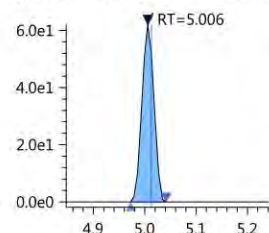
N-MeFOSAA

Conc 0.0015

Area 102

Q 570.20>419.00 (-)

6.20e1



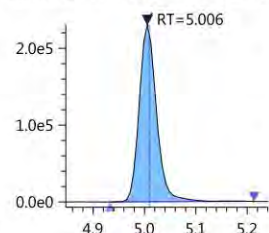
N-MeFOSAA-d3

Conc 4.7599

Area 537940

Q 572.80>419.05 (-)

2.31e5



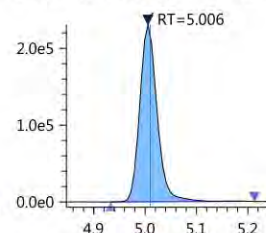
N-MeFOSAA-d3_IS

Conc 5.0000

Area 537940

ISTD 572.80>419.05 (-)

2.31e5



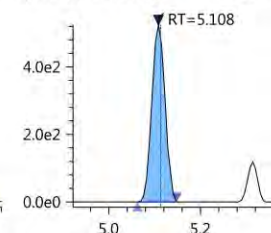
N-EtFOSAA

Conc 0.0185

Area 1055

Q 584.20>418.95 (-)

5.25e2



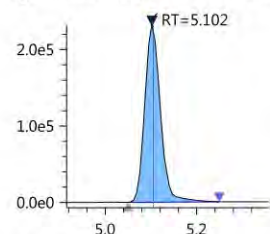
N-EtFOSAA-d5

Conc 5.2764

Area 549468

Q 588.80>419.00 (-)

2.32e5



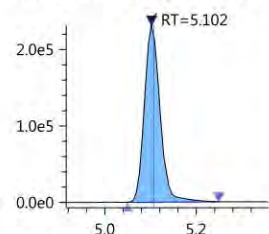
N-EtFOSAA-d5_IS

Conc 5.0000

Area 549468

ISTD 588.80>419.00 (-)

2.32e5



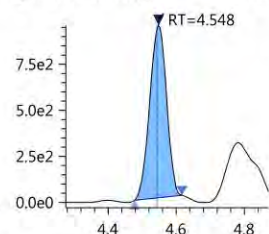
6_2-FTS_1

Conc 0.0131

Area 3216

Q 427.00>407.00 (-)

9.62e2



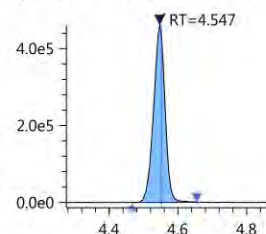
6_2-FTS-13C

Conc 16.0940

Area 1063591

Q 428.90>409.00 (-)

4.61e5



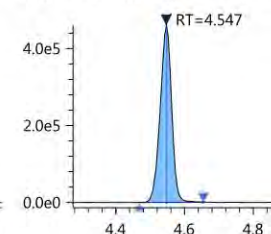
6_2-FTS-13C_IS

Conc 5.0000

Area 1063591

ISTD 428.90>409.00 (-)

4.61e5



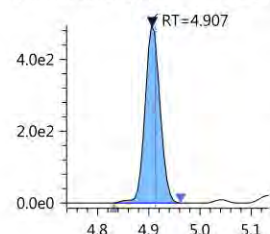
8_2-FTS_1

Conc 0.0073

Area 1012

Q 527.10>506.90 (-)

4.94e2



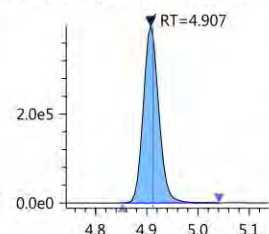
8_2-FTS-13C

Conc 15.6365

Area 837777

Q 528.80>509.00 (-)

3.99e5



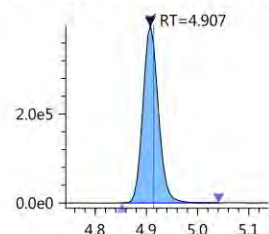
8_2-FTS-13C_IS

Conc 5.0000

Area 837777

ISTD 528.80>509.00 (-)

3.99e5



Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200430_b3\200430_023
Lab ID: R2003266-007
RunType: N/A
Matrix: Water

Date Acquired: 4/30/20 13:01
Batch ID: 678575
Analysis Method: PFC/537M/PFAS

Validations

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

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	18O2-PFHxS	136	70	130	Native ok
Surrogates	13C4-PFBA	26	27	124	Confirms low
	13C5-PFPeA	19	27	138	Confirms low
	13C2-PFHxA	23	28	132	Confirms low
	13C2-6:2 FTS	321	10	226	High bias ND
	13C2-8:2 FTS	320	10	202	High bias ND

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200430_b3\200430_023	Instrument:	K-LCMS-06
Acqu Date:	4/30/20 13:01	Vial:	8
Run Type:	N/A	Dilution:	1
Lab ID:	R2003266-007	Raw Units:	ng/mL

Bottle ID:	R2003266-007.01	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678575	Prep Lot:	357465	Report Group:	R2003266
Analysis	PFC/537M	Prep Method:	ALS SOP		
		Prep Date:	4/27/20		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.081	-0.01	5073480	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.994	-0.01	644720	3.2504	65	20 - 109	N
18O2-PFHxS	4.382	-0.01	461340	4.1315	83	26 - 122	N
13C4-PFOS	4.707	-0.01	701555	4.4635	89	25 - 121	N
13C4-PFBA	3.349	-0.03	698038	1.3006	26 *	27 - 124	N
13C5-PFPeA	3.938	-0.01	283595	0.9390	19 *	27 - 138	N
13C2-PFHxA	4.198	-0.01	935593	1.1308	23 *	28 - 132	N
13C4-PFHpA	4.383	-0.01	1161293	1.5515	31	19 - 139	N
13C4-PFOA	4.546	-0.01	2039664	2.2527	45	22 - 130	N
13C5-PFNA	4.720	-0.01	2112481	3.1250	63	20 - 127	N
13C2-PFDA	4.900	-0.01	2249836	3.6681	73	24 - 125	N
13C2-PFUnDA	5.081	-0.01	3280489	4.2879	86	22 - 125	N
13C2-PFDoDA	5.257	-0.01	3708582	4.1147	82	19 - 122	N
13C2-PFTeDA	5.580	-0.01	2983738	4.1491	83	13 - 124	N
13C8-FOSA	5.196	0.00	1373737	3.3497	67	18 - 109	N
D3-MeFOSAA	4.999	-0.01	506853	4.3531	87	9 - 123	N
D5-EtFOSAA	5.095	0.00	591519	5.5133	110	12 - 126	N
13C2-6:2 FTS	4.537	-0.01	1093642	16.0626	321 *	10 - 226	N
13C2-8:2 FTS	4.901	-0.01	884416	16.0221	320 *	10 - 202	N

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.993	-0.01	19189	0.1294	3.9	J	N
Perfluorohexane sulfonic acid (PFHxS)	0		0	0	0	U	N

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: 5/5/20 14:21

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Data File: J:\LCMS06\Data\200430_b3\200430_023
Acqu Date: 4/30/20 13:01
Run Type: N/A
Lab ID: R2003266-007

Instrument: K-LCMS06
Vial: 8
Dilution: 1
Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	0		0	0	0	U	N
Perfluorooctane sulfonic acid (PFOS)	4.706	-0.01	1715	0.0144	0.43	U	N
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	N
Perfluorobutanoic acid (PFBA)	3.350	-0.03	107923	0.7917	24		N
Perfluoropentanoic acid (PFPeA)	0		0	0	0	U	N
Perfluorohexanoic acid (PFHxA)	0		0	0	0	U	N
Perfluoroheptanoic acid (PFHpA)	0		0	0	0	U	N
Perfluorooctanoic acid (PFOA)	4.541	-0.02	39188	0.0672	2.0		N
Perfluorononanoic acid (PFNA)	0		0	0	0	U	N
Perfluorodecanoic acid (PFDA)	4.901	-0.01	6568	0.0137	0.41	U	N
Perfluoroundecanoic acid (PFUnDA)	5.083	-0.01	7166	0.0002	0.0060	U	N
Perfluorododecanoic acid (PFDoDA)	5.258	-0.01	6622	0.0289	0.87	U	N
Perfluorotridecanoic acid (PFTrDA)	5.424	-0.01	7611	0.0088	0.27	U	N
Perfluorotetradecanoic acid (PFTeDA)	5.580	-0.01	36821	-0.0001	0	U	N
Perfluorooctane sulfonamide (FOSA)	5.196	0.00	2573	0.0078	0.24	U	N
N-Methyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.110	+0.01	318	0.0052	0.16	U	N
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.535	-0.01	3488	0.0138	0.42	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.902	-0.01	1213	0.0083	0.25	J	N

Prep Amount: 265.0000 mL
Prep Final Amount: 8.00 mL

Dilution: 1
Basis Factor: 100.00

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

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

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

Printed: 5/5/20 14:21

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Insight Report

Printed at 5/5/2020 2:08:10 PM

200430_023

Sample ID: R2003266-007

Date acquired: 4/30/2020 1:01:48 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200430_b3\200430_023.lcd

Vial: 6 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.081	5073480	5073480	1	5.0000	ng/mL	----
PFBS_1	M	3.993	19189	644720	2	0.1294	ng/mL	----
PFBS-13C	Auto	3.994	644720	5073480	1	3.2504	ng/mL	----
PFBS-13C_IS	Auto	3.994	644720	644720	2	5.0000	ng/mL	----
PFHxS_1	ND(W/B)	----	----	461340	3	----	ng/mL	----
PFHxS-18O	Auto	4.382	461340	5073480	1	4.1315	ng/mL	----
PFHxS-18O_IS	Auto	4.382	461340	461340	3	5.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	461340	3	----	ng/mL	----
PFOS_1	M	4.706	1715	701555	4	0.0144	ng/mL	----
PFOS-13C	Auto	4.707	701555	5073480	1	4.4635	ng/mL	----
PFOS-13C_IS	Auto	4.707	701555	701555	4	5.0000	ng/mL	----
PFDS_1	ND(W/B)	----	----	701555	4	----	ng/mL	----
PFBA	Auto	3.350	107923	698038	5	0.7917	ng/mL	----
PFBA-13C	Auto	3.349	698038	5073480	1	1.3006	ng/mL	----
PFBA-13C_IS	Auto	3.349	698038	698038	5	5.0000	ng/mL	----
PFPeA	ND(W/B)	----	----	283595	6	----	ng/mL	----
PFPeA-13C	Auto	3.938	283595	5073480	1	0.9390	ng/mL	----
PFPeA-13C_IS	Auto	3.938	283595	283595	6	5.0000	ng/mL	----
PFHxA	ND(W/B)	----	----	935593	7	----	ng/mL	----
PFHxA-13C	Auto	4.198	935593	5073480	1	1.1308	ng/mL	----
PFHxA-13C_IS	Auto	4.198	935593	935593	7	5.0000	ng/mL	----
PFHpA	ND(W/B)	----	----	1161293	8	----	ng/mL	----
PFHpA-13C	Auto	4.383	1161293	5073480	1	1.5515	ng/mL	----
PFHpA-13C_IS	Auto	4.383	1161293	1161293	8	5.0000	ng/mL	----
PFOA	Auto	4.541	39188	2039664	9	0.0672	ng/mL	----
PFOA-13C	Auto	4.546	2039664	5073480	1	2.2527	ng/mL	----
PFOA-13C_IS	Auto	4.546	2039664	2039664	9	5.0000	ng/mL	----
PFNA	ND(W/B)	----	----	2112481	10	----	ng/mL	----
PFNA-13C	Auto	4.720	2112481	5073480	1	3.1250	ng/mL	----
PFNA-13C_IS	Auto	4.720	2112481	2112481	10	5.0000	ng/mL	----
PFDA	M	4.901	6568	2249836	11	0.0137	ng/mL	----
PFDA-13C	Auto	4.900	2249836	5073480	1	3.6681	ng/mL	----
PFDA-13C_IS	Auto	4.900	2249836	2249836	11	5.0000	ng/mL	----
PFUnA	Auto	5.083	7166	3280489	12	0.0002	ng/mL	----
PFUnA-13C	Auto	5.081	3280489	5073480	1	4.2879	ng/mL	----
PFUnA-13C_IS	Auto	5.081	3280489	3280489	12	5.0000	ng/mL	----
PFDoA	Auto	5.258	6622	3708582	13	0.0289	ng/mL	----
PFDoA-13C	Auto	5.257	3708582	5073480	1	4.1147	ng/mL	----
PFDoA-13C_IS	Auto	5.257	3708582	3708582	13	5.0000	ng/mL	----
PFTrDA	Auto	5.424	7611	2983738	14	0.0088	ng/mL	----
PFTeDA	Auto	5.580	36821	2983738	14	-0.0001	ng/mL	----
PFTeDA-13C	Auto	5.580	2983738	5073480	1	4.1491	ng/mL	----
PFTeDA-13C_IS	Auto	5.580	2983738	2983738	14	5.0000	ng/mL	----
FOSA	Auto	5.196	2573	1373737	16	0.0078	ng/mL	----
FOSA-13C	Auto	5.196	1373737	5073480	1	3.3497	ng/mL	----
FOSA-13C_IS	Auto	5.196	1373737	1373737	16	5.0000	ng/mL	----
N-MeFOSAA	ND(W/B)	----	----	506853	21	----	ng/mL	----
N-MeFOSAA-d3	Auto	4.999	506853	5073480	1	4.3531	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.999	506853	506853	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.110	318	591519	22	0.0052	ng/mL	----
N-EtFOSAA-d5	Auto	5.095	591519	5073480	1	5.5133	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.095	591519	591519	22	5.0000	ng/mL	----
6_2-FTS_1	M	4.535	3488	1093642	24	0.0138	ng/mL	----
6_2-FTS-13C	Auto	4.537	1093642	5073480	1	16.0626	ng/mL	----
6_2-FTS-13C_IS	Auto	4.537	1093642	1093642	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.902	1213	884416	25	0.0083	ng/mL	----
8_2-FTS-13C	Auto	4.901	884416	5073480	1	16.0221	ng/mL	----
8_2-FTS-13C_IS	Auto	4.901	884416	884416	25	5.0000	ng/mL	----

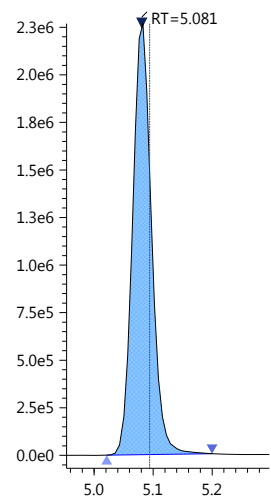
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13C7-PFUnDA_IS

Conc 5.0000
Area 5073480

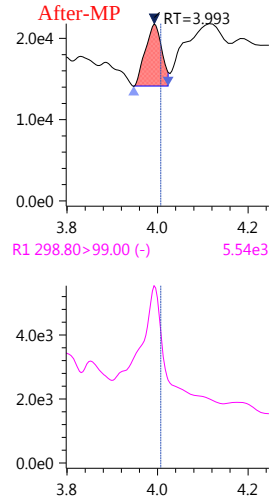
ISTD 570.00>525.00 (-) 2.27e6



PFBS_1

Conc 0.1294
Area 19189
R#1 38.76 (0.00)

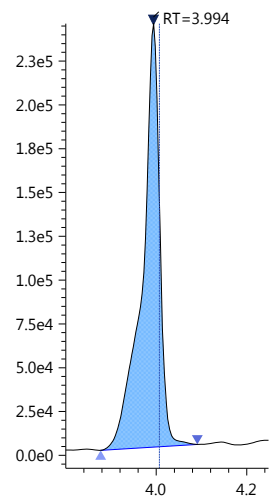
Q 299.00>80.00 (-) 2.18e4



PFBS-13C

Conc 3.2504
Area 644720

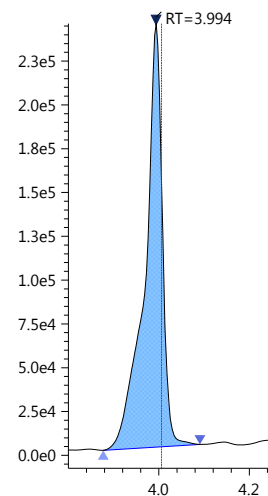
Q 301.80>80.00 (-) 2.46e5



PFBS-13C_IS

Conc 5.0000
Area 644720

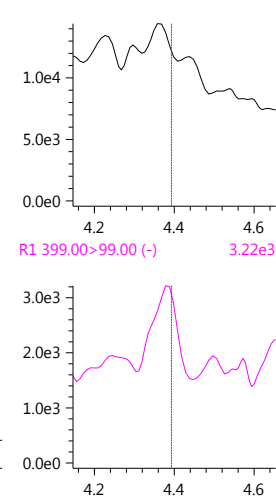
ISTD 301.80>80.00 (-) 2.46e5



PFHxS_1

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

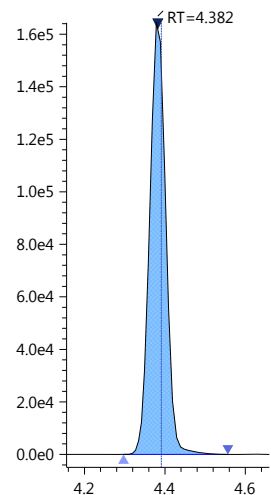
Q 399.00>80.00 (-) 1.44e4



PFHxS-180

Conc 4.1315
Area 461340

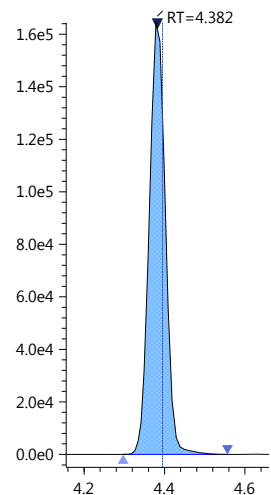
Q 402.70>84.05 (-) 1.64e5



PFHxS-180_IS

Conc 5.0000
Area 461340

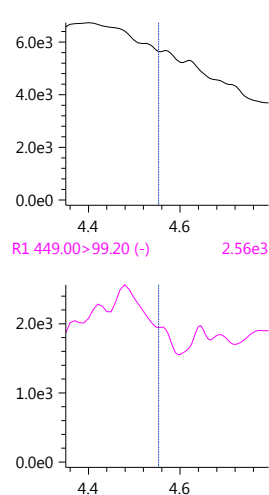
ISTD 402.70>84.05 (-) 1.64e5



PFHpS_1

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

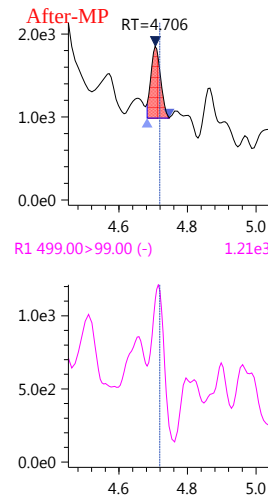
Q 449.00>80.15 (-) 6.74e3



PFOS_1

Conc 0.0144
Area 1715
R#1 70.91 (0.00)

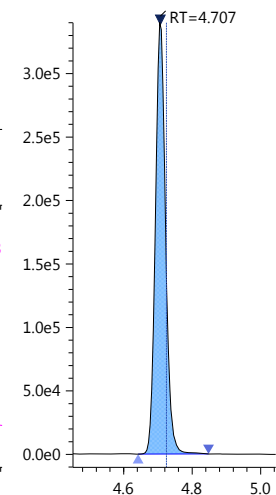
Q 499.00>80.00 (-) 2.14e3



PFOS-13C

Conc 4.4635
Area 701555

Q 502.80>80.05 (-) 3.40e5



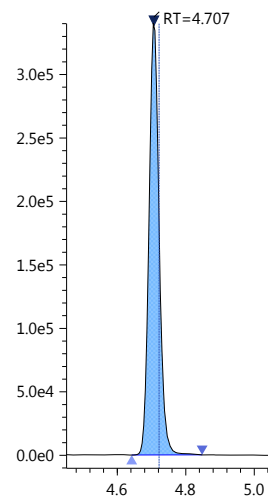
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PFOS-13C_IS

Conc 5.0000
Area 701555

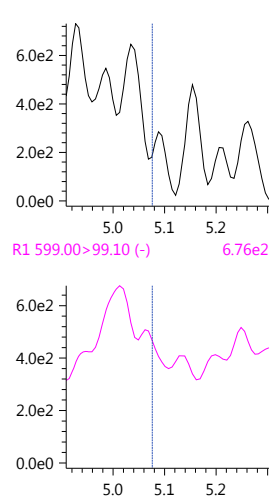
ISTD 502.80>80.05 (-)



PFDS_1

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

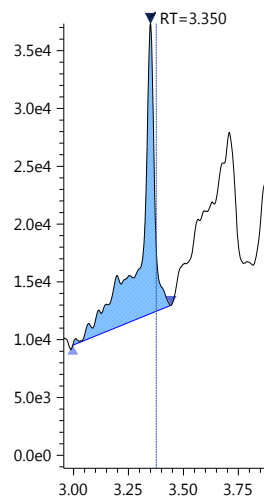
Q 599.00>79.90 (-)



PFBA

Conc 0.7917
Area 107923

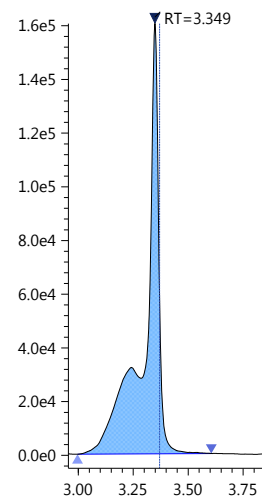
Q 213.00>169.10 (-)



PFBA-13C

Conc 1.3006
Area 698038

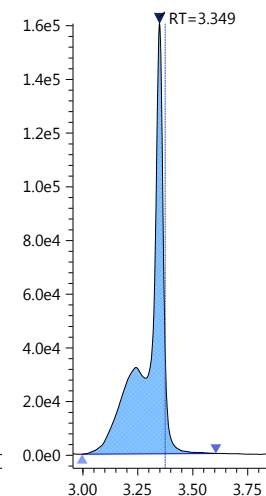
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 698038

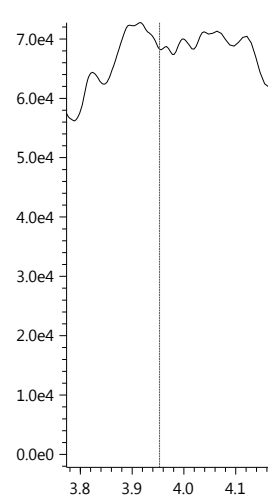
ISTD 216.90>172.15 (-)



PFPeA

Conc ----
Area ----

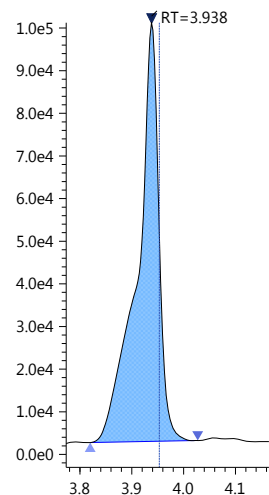
Q 263.05>219.10 (-)



PFPeA-13C

Conc 0.9390
Area 283595

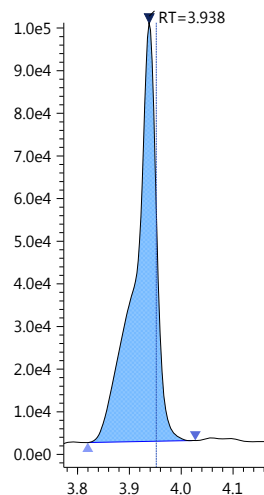
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 283595

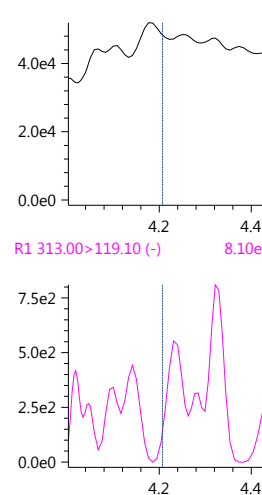
ISTD 267.90>223.00 (-)



PFHxA

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

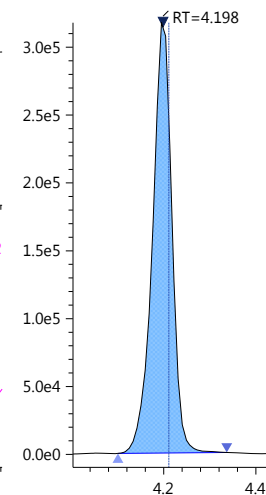
Q 313.00>269.00 (-)



PFHxA-13C

Conc 1.1308
Area 935593

Q 314.90>270.10 (-)



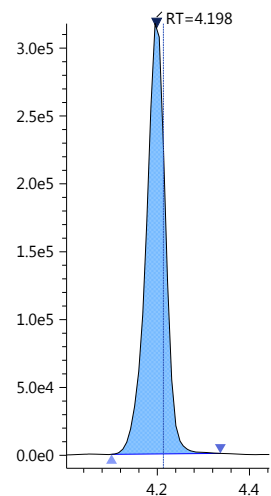
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PFHxA-13C_IS

Conc 5.0000
 Area 935593

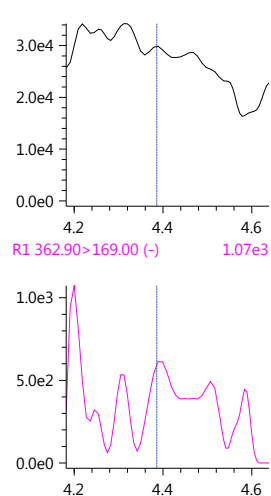
ISTD 314.90>270.10 (-) 3.18e5



PFHpA

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

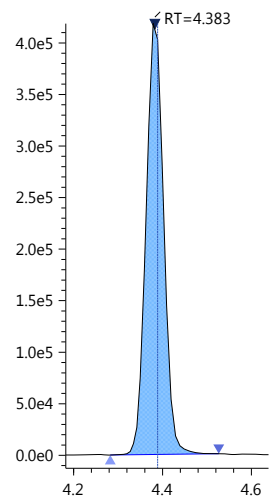
Q 362.90>319.00 (-) 3.42e4



PFHpA-13C

Conc 1.5515
 Area 1161293

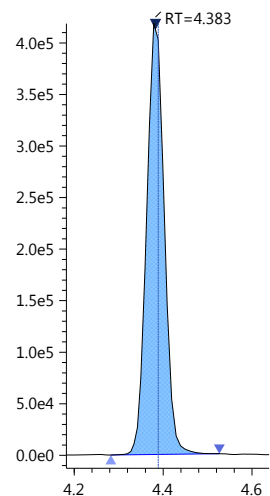
Q 366.90>322.10 (-) 4.19e5



PFHpA-13C_IS

Conc 5.0000
 Area 1161293

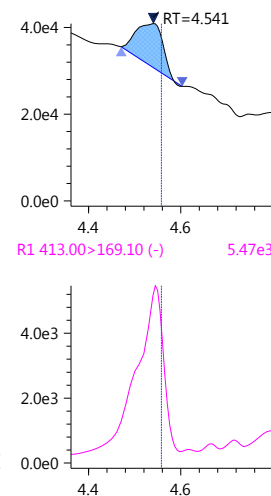
ISTD 366.90>322.10 (-) 4.19e5



PFOA

Conc 0.0672
 Area 39188
 R#1 40.71 (0.00)

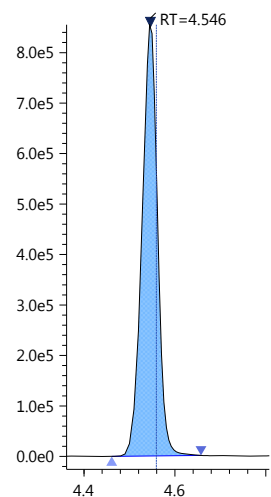
Q 413.00>369.00 (-) 4.09e4



PFOA-13C

Conc 2.2527
 Area 2039664

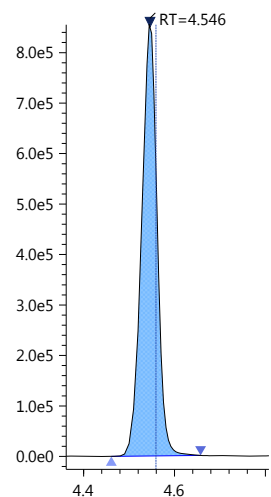
Q 416.80>372.05 (-) 8.55e5



PFOA-13C_IS

Conc 5.0000
 Area 2039664

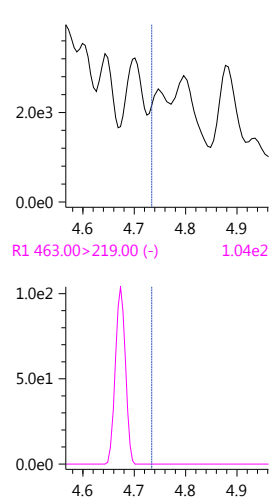
ISTD 416.80>372.05 (-) 8.55e5



PFNA

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

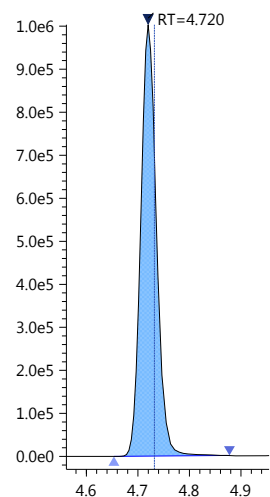
Q 463.00>418.90 (-) 3.96e3



PFNA-13C

Conc 3.1250
 Area 2112481

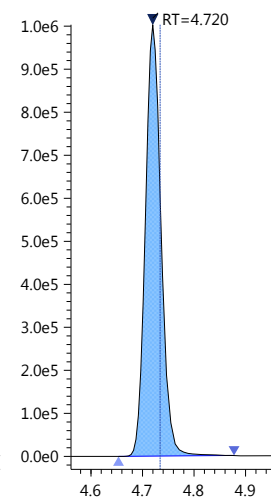
Q 467.80>423.00 (-) 1.00e6



PFNA-13C_IS

Conc 5.0000
 Area 2112481

ISTD 467.80>423.00 (-) 1.00e6



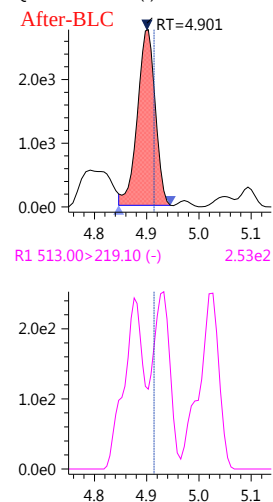
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PFDA

Conc 0.0137
Area 6568
R#1 0.00 (0.00)

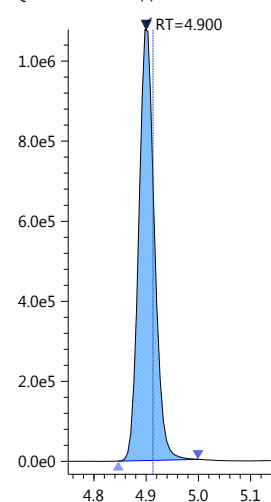
Q 513.00>468.80 (-) 2.78e3



PFDA-13C

Conc 3.6681
Area 2249836

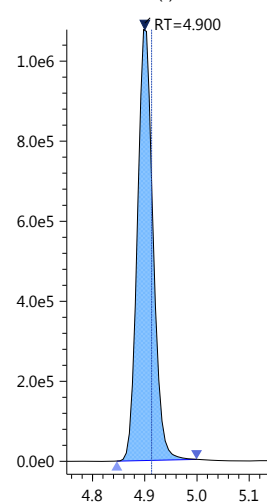
Q 514.80>469.95 (-) 1.08e6



PFDA-13C_IS

Conc 5.0000
Area 2249836

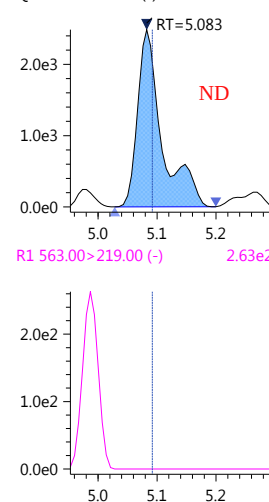
ISTD 514.80>469.95 (-) 1.08e6



PFUnA

Conc 0.0002
Area 7166
R#1 0.00 (0.00)

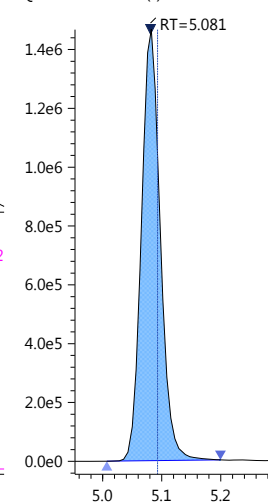
Q 563.00>518.90 (-) 2.49e3



PFUnA-13C

Conc 4.2879
Area 3280489

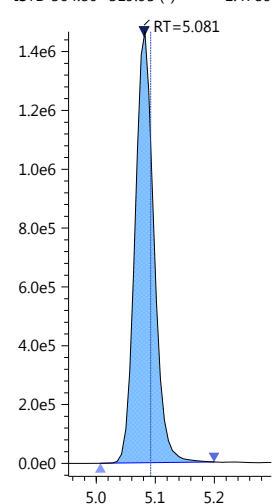
Q 564.80>519.95 (-) 1.47e6



PFUnA-13C_IS

Conc 5.0000
Area 3280489

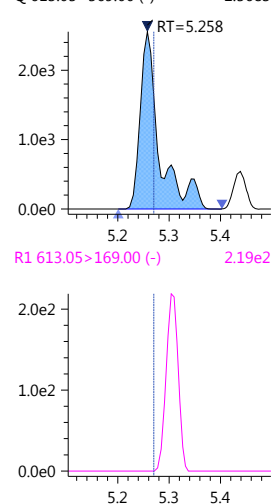
ISTD 564.80>519.95 (-) 1.47e6



PFD0A

Conc 0.0289
Area 6622
R#1 0.00 (0.00)

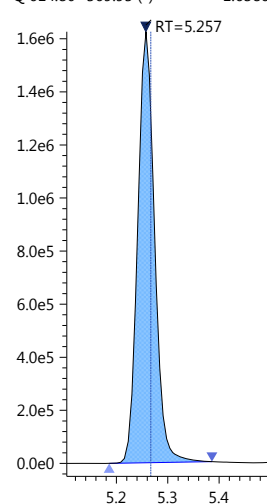
Q 613.05>569.00 (-) 2.56e3



PFD0A-13C

Conc 4.1147
Area 3708582

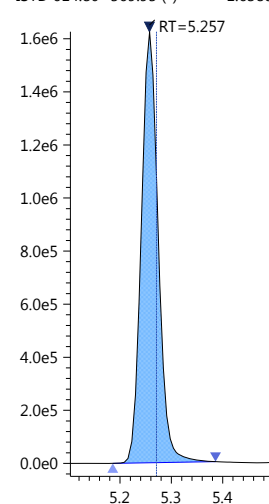
Q 614.80>569.95 (-) 1.63e6



PFD0A-13C_IS

Conc 5.0000
Area 3708582

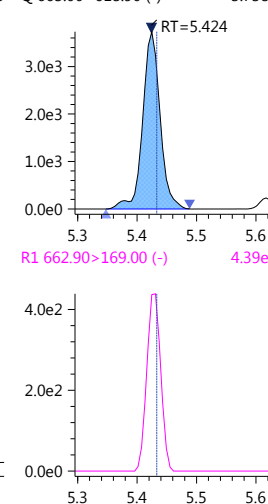
ISTD 614.80>569.95 (-) 1.63e6



PFTrDA

Conc 0.0088
Area 7611
R#1 11.92 (0.00)

Q 663.00>618.90 (-) 3.73e3



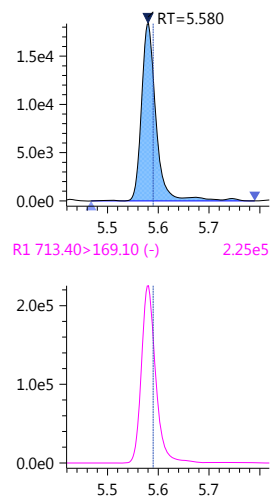
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PFTeDA

Conc -0.0001
Area 36821
R#1 1221.82 (0.00)

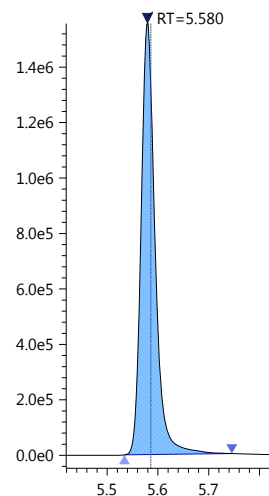
Q 713.40>669.00 (-) 1.84e4



PFTeDA-13C

Conc 4.1491
Area 2983738

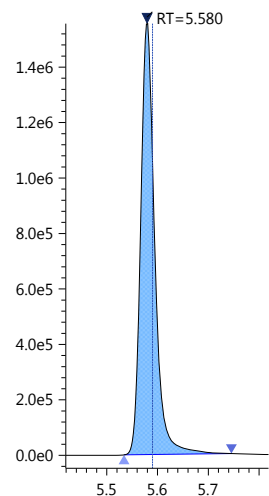
Q 714.70>669.90 (-) 1.56e6



PFTeDA-13C_IS

Conc 5.0000
Area 2983738

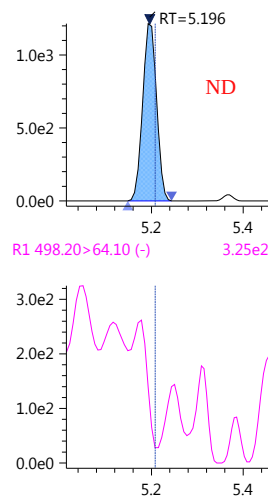
ISTD 714.70>669.90 (-) 1.56e6



FOSA

Conc 0.0078
Area 2573
R#1 0.00 (0.00)

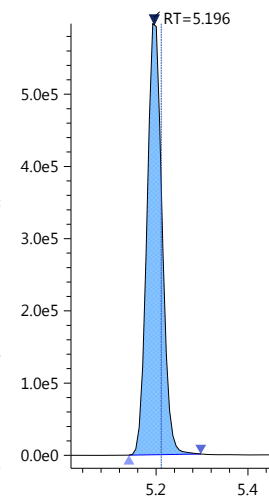
Q 498.20>78.00 (-) 1.22e3



FOSA-13C

Conc 3.3497
Area 1373737

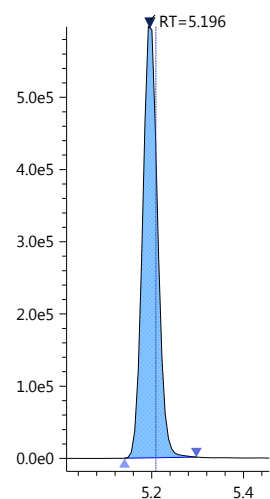
Q 506.00>78.05 (-) 5.98e5



FOSA-13C_IS

Conc 5.0000
Area 1373737

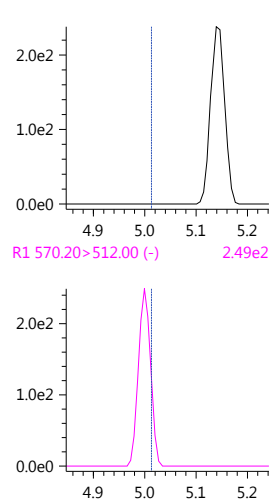
ISTD 506.00>78.05 (-) 5.98e5



N-MeFOSAA

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

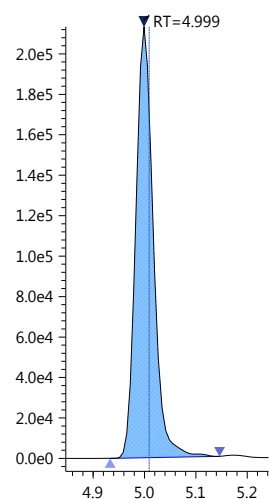
Q 570.20>419.00 (-) 2.38e2



N-MeFOSAA-d3

Conc 4.3531
Area 506853

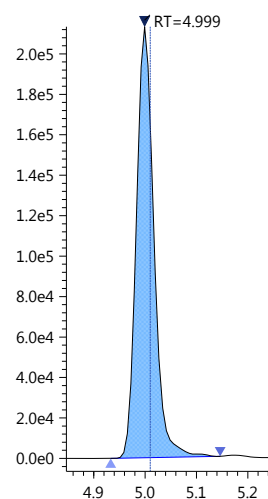
Q 572.80>419.05 (-) 2.13e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 506853

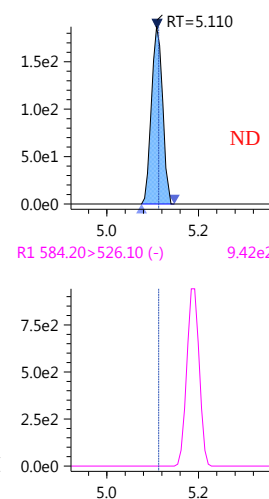
ISTD 572.80>419.05 (-) 2.13e5



N-EtFOSAA

Conc 0.0052
Area 318
R#1 0.00 (0.00)

Q 584.20>418.95 (-) 1.87e2

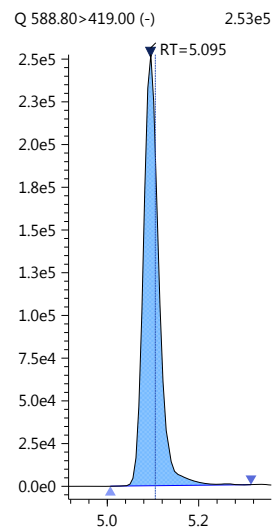


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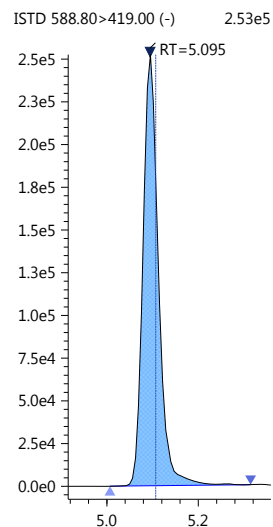
N-EtFOSAA-d5

Conc 5.5133
 Area 591519



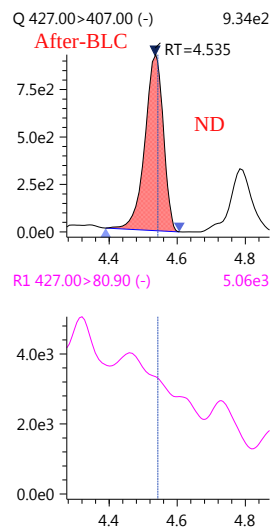
N-EtFOSAA-d5_IS

Conc 5.0000
 Area 591519



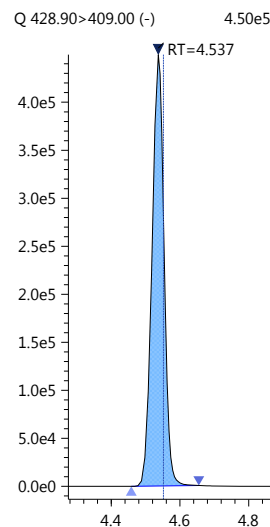
6_2-FTS_1

Conc 0.0138
 Area 3488
 R#1 35.03 (0.00)



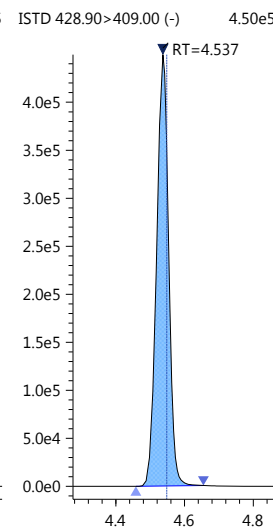
6_2-FTS-13C

Conc 16.0626
 Area 1093642



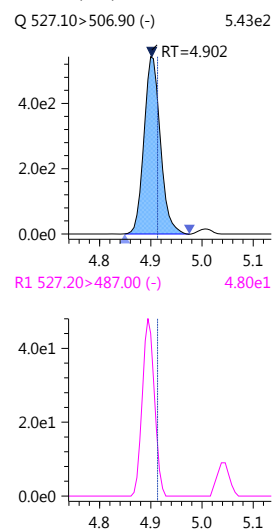
6_2-FTS-13C_IS

Conc 5.0000
 Area 1093642



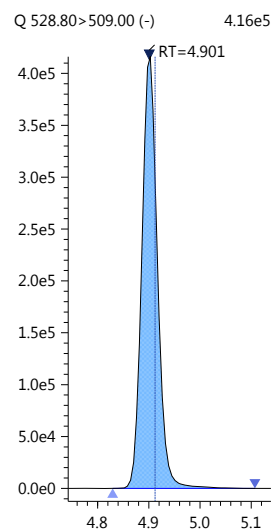
8_2-FTS_1

Conc 0.0083
 Area 1213
 R#1 8.12 (0.00)



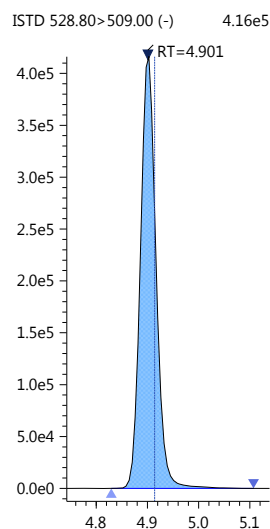
8_2-FTS-13C

Conc 16.0221
 Area 884416



8_2-FTS-13C_IS

Conc 5.0000
 Area 884416



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Printed at 5/5/2020 2:04:27 PM

200430_023

Sample ID: R2003266-007

Date acquired: 4/30/2020 1:01:48 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200430_b3\200430_023.lcd

Vial: 6 | Inj. Volume: 15.0000uL | Tray: 2

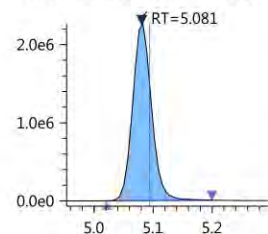
13C7-PFUnDA_IS

Conc 5.0000

Area 5073480

ISTD 570.00>525.00 (-)

2.27e6



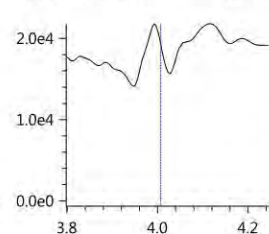
PFBS_1

Conc ----

Area ----

Q 299.00>80.00 (-)

2.18e4



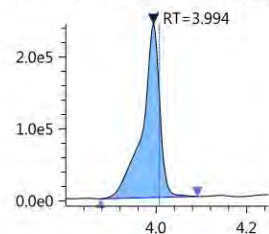
PFBS-13C

Conc 3.2504

Area 644720

Q 301.80>80.00 (-)

2.46e5



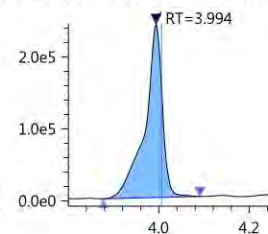
PFBS-13C_IS

Conc 5.0000

Area 644720

ISTD 301.80>80.00 (-)

2.46e5



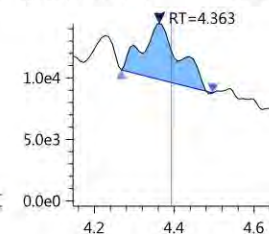
PFHxS_1

Conc 0.2394

Area 29411

Q 399.00>80.00 (-)

1.44e4



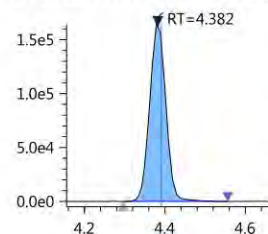
PFHxS-180

Conc 4.1315

Area 461340

Q 402.70>84.05 (-)

1.64e5



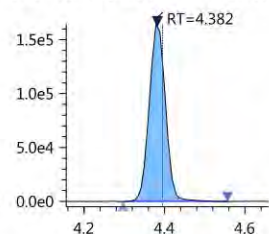
PFHxS-180_IS

Conc 5.0000

Area 461340

ISTD 402.70>84.05 (-)

1.64e5



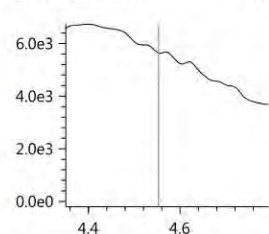
PFHpS_1

Conc ----

Area ----

Q 449.00>80.15 (-)

6.74e3



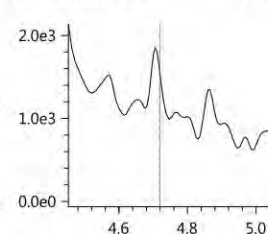
PFOS_1

Conc ----

Area ----

Q 499.00>80.00 (-)

2.14e3



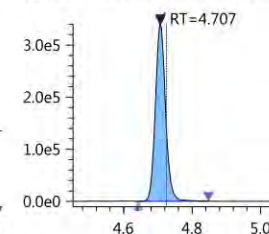
PFOS-13C

Conc 4.4635

Area 701555

Q 502.80>80.05 (-)

3.40e5



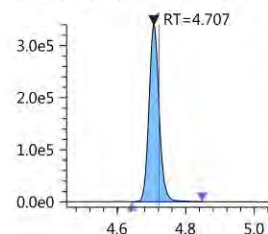
PFOS-13C_IS

Conc 5.0000

Area 701555

ISTD 502.80>80.05 (-)

3.40e5



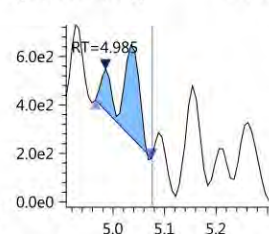
PFDS_1

Conc 0.0087

Area 970

Q 599.00>79.90 (-)

7.31e2



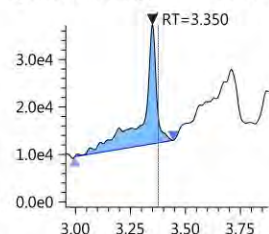
PFBA

Conc 0.7917

Area 107923

Q 213.00>169.10 (-)

3.73e4



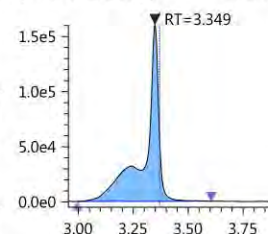
PFBA-13C

Conc 1.3006

Area 698038

Q 216.90>172.15 (-)

1.61e5



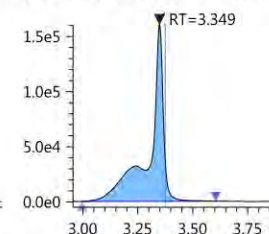
PFBA-13C_IS

Conc 5.0000

Area 698038

ISTD 216.90>172.15 (-)

1.61e5



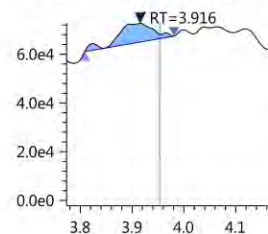
PFPeA

Conc 0.2914

Area 38092

Q 263.05>219.10 (-)

7.27e4



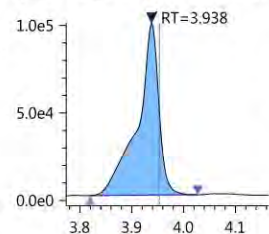
PFPeA-13C

Conc 0.9390

Area 283595

Q 267.90>223.00 (-)

1.01e5



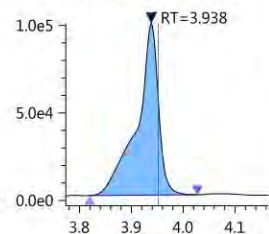
PFPeA-13C_IS

Conc 5.0000

Area 283595

ISTD 267.90>223.00 (-)

1.01e5



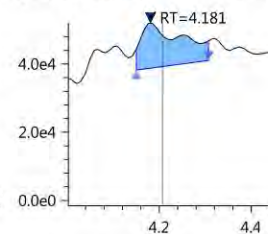
PFHxA

Conc 0.4300

Area 80132

Q 313.00>269.00 (-)

5.20e4



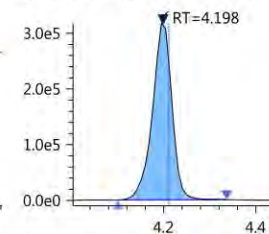
PFHxA-13C

Conc 1.1308

Area 935593

Q 314.90>270.10 (-)

3.18e5



Insight Report

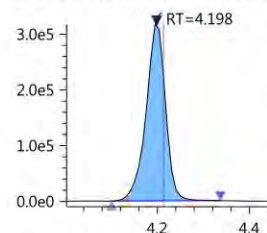
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PFHxA-13C_IS

Conc 5.0000

Area 935593

ISTD 314.90>270.10 (-) 3.18e5

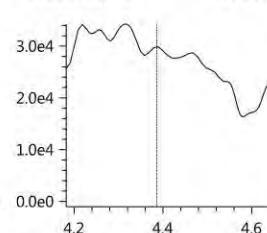


PFHpA

Conc ----

Area ----

Q 362.90>319.00 (-)

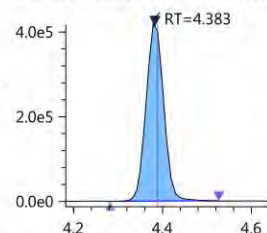


PFHpA-13C

Conc 1.5515

Area 1161293

Q 366.90>322.10 (-) 3.42e4

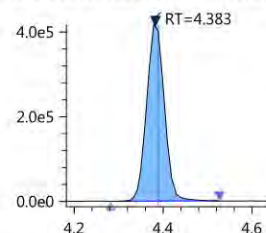


PFHpA-13C_IS

Conc 5.0000

Area 1161293

ISTD 366.90>322.10 (-) 4.19e5

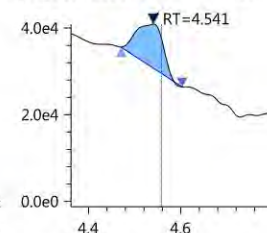


PFOA

Conc 0.0672

Area 39188

Q 413.00>369.00 (-) 4.09e4

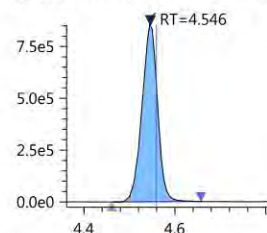


PFOA-13C

Conc 2.2527

Area 2039664

Q 416.80>372.05 (-) 8.55e5

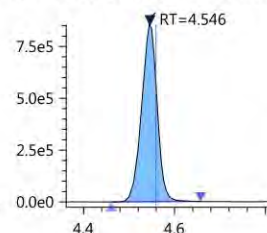


PFOA-13C_IS

Conc 5.0000

Area 2039664

ISTD 416.80>372.05 (-) 8.55e5

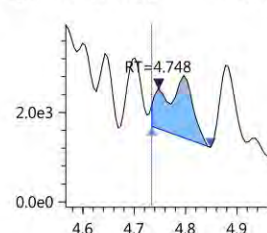


PFNA

Conc 0.0087

Area 4988

Q 463.00>418.90 (-) 3.96e3

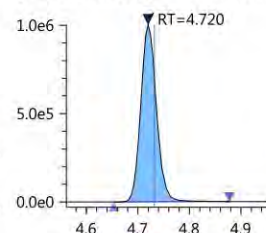


PFNA-13C

Conc 3.1250

Area 2112481

Q 467.80>423.00 (-) 1.00e6

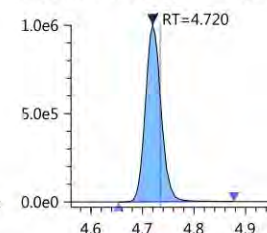


PFNA-13C_IS

Conc 5.0000

Area 2112481

ISTD 467.80>423.00 (-) 1.00e6

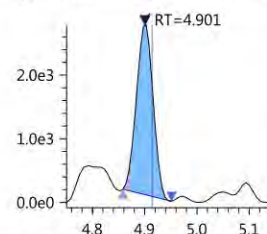


PFDA

Conc 0.0124

Area 5940

Q 513.00>468.80 (-) 2.78e3

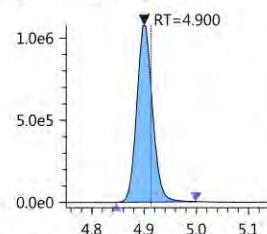


PFDA-13C

Conc 3.6681

Area 2249836

Q 514.80>469.95 (-) 1.08e6

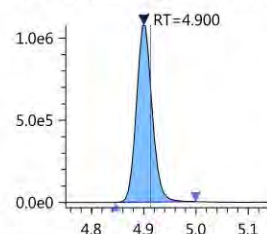


PFDA-13C_IS

Conc 5.0000

Area 2249836

ISTD 514.80>469.95 (-) 1.08e6

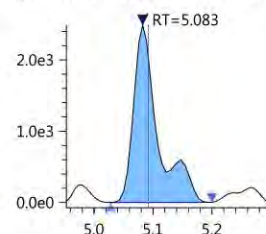


PFUnA

Conc 0.0002

Area 7166

Q 563.00>518.90 (-) 2.49e3

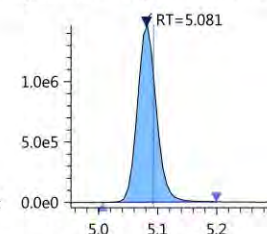


PFUnA-13C

Conc 4.2879

Area 3280489

Q 564.80>519.95 (-) 1.47e6

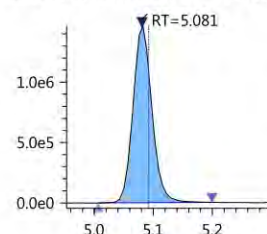


PFUnA-13C_IS

Conc 5.0000

Area 3280489

ISTD 564.80>519.95 (-) 1.47e6

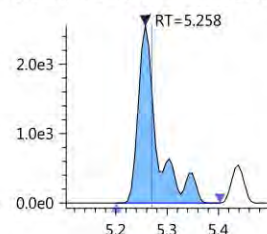


PFDaA

Conc 0.0289

Area 6622

Q 613.05>569.00 (-) 2.56e3

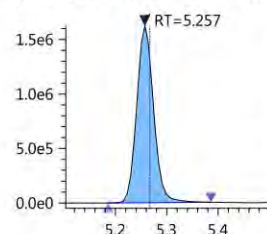


PFDaA-13C

Conc 4.1147

Area 3708582

Q 614.80>569.95 (-) 1.63e6

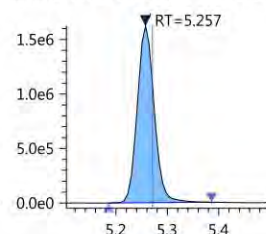


PFDaA-13C_IS

Conc 5.0000

Area 3708582

ISTD 614.80>569.95 (-) 1.63e6

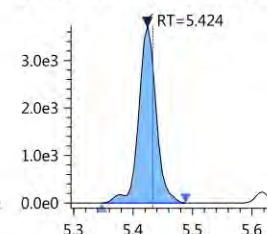


PFTrDA

Conc 0.0088

Area 7611

Q 663.00>618.90 (-) 3.73e3



Insight Report

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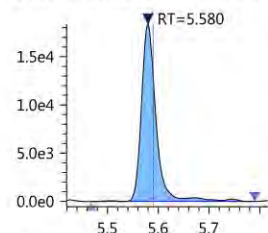
PFTeDA

Conc -0.0001

Area 36821

Q 713.40>669.00 (-)

1.84e4



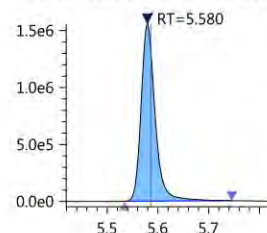
PFTeDA-13C

Conc 4.1491

Area 2983738

Q 714.70>669.90 (-)

1.56e6



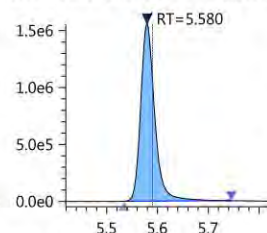
PFTeDA-13C_IS

Conc 5.0000

Area 2983738

ISTD 714.70>669.90 (-)

1.56e6



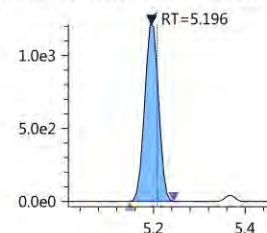
FOSA

Conc 0.0078

Area 2573

Q 498.20>78.00 (-)

1.22e3



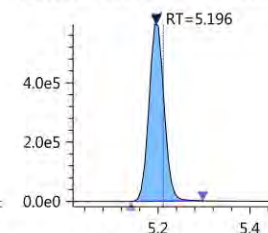
FOSA-13C

Conc 3.3497

Area 1373737

Q 506.00>78.05 (-)

5.98e5



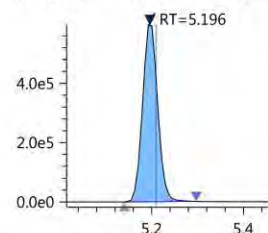
FOSA-13C_IS

Conc 5.0000

Area 1373737

ISTD 506.00>78.05 (-)

5.98e5



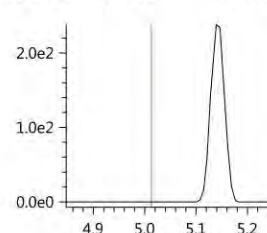
N-MeFOSAA

Conc ----

Area ----

Q 570.20>419.00 (-)

2.38e2



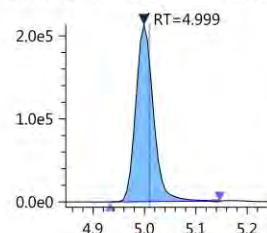
N-MeFOSAA-d3

Conc 4.3531

Area 506853

Q 572.80>419.05 (-)

2.13e5



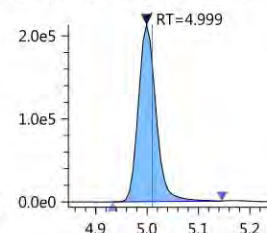
N-MeFOSAA-d3_IS

Conc 5.0000

Area 506853

ISTD 572.80>419.05 (-)

2.13e5



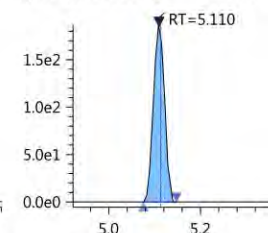
N-EtFOSAA

Conc 0.0052

Area 318

Q 584.20>418.95 (-)

1.87e2



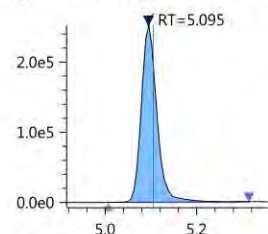
N-EtFOSAA-d5

Conc 5.5133

Area 591519

Q 588.80>419.00 (-)

2.53e5



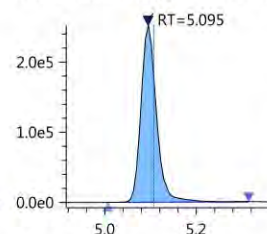
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Conc 5.0000

Area 591519

ISTD 588.80>419.00 (-)

2.53e5



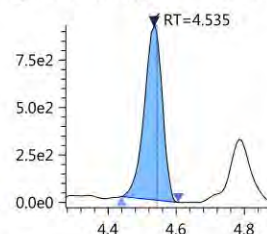
6_2-FTS_1

Conc 0.0134

Area 3388

Q 427.00>407.00 (-)

9.34e2



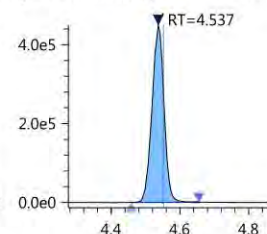
6_2-FTS-13C

Conc 16.0626

Area 1093642

Q 428.90>409.00 (-)

4.50e5



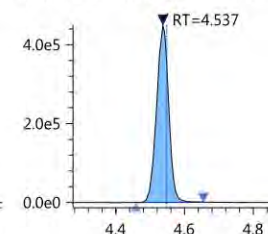
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Conc 5.0000

Area 1093642

ISTD 428.90>409.00 (-)

4.50e5



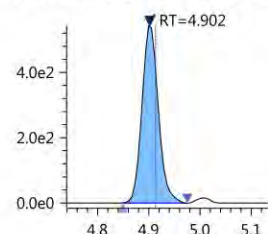
8_2-FTS_1

Conc 0.0083

Area 1213

Q 527.10>506.90 (-)

5.43e2



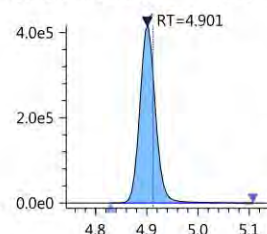
8_2-FTS-13C

Conc 16.0221

Area 884416

Q 528.80>509.00 (-)

4.16e5



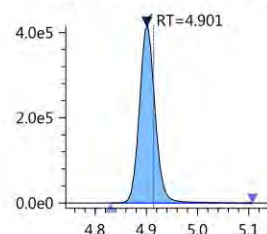
8_2-FTS-13C_IS

Conc 5.0000

Area 884416

ISTD 528.80>509.00 (-)

4.16e5



Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200428_b4\200428_055
Lab ID: KQ2005615-04
RunType: MB
Matrix: Water

Date Acquired: 4/29/20 00:18
Batch ID: 678319
Analysis Method: PFC/537M/PFAS

Validations

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

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200428_b4\200428_055	Instrument:	K-LCMS-06
Acqu Date:	4/29/20 00:18	Vial:	4
Run Type:	MB	Dilution:	1
Lab ID:	KQ2005615-04	Raw Units:	ng/mL

Bottle ID:		Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678319	Prep Lot:	357465	Report Group:	KQ2005615
Analysis	PFC/537M	Prep Method:	ALS SOP		
		Prep Date:	4/27/20		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.083	-0.01	5861185	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.002	-0.01	935852	4.0840	82	20 - 109	Y
18O2-PFHxS	4.384	-0.01	601257	4.6609	93	26 - 122	Y
13C4-PFOS	4.713	-0.01	826132	4.5498	91	25 - 121	Y
13C4-PFBA	3.366	-0.01	2442216	3.9388	79	27 - 124	Y
13C5-PFPeA	3.947	-0.01	1444715	4.1404	83	27 - 138	Y
13C2-PFHxA	4.205	-0.01	4557024	4.7677	95	28 - 132	Y
13C4-PFHpA	4.385	-0.01	4231709	4.8939	98	19 - 139	Y
13C4-PFOA	4.552	-0.01	4976700	4.7577	95	22 - 130	Y
13C5-PFNA	4.726	0.00	4255047	5.4486	109	20 - 127	Y
13C2-PFDA	4.904	-0.01	3574857	5.0451	101	24 - 125	Y
13C2-PFUnDA	5.083	-0.01	4413536	4.9936	100	22 - 125	Y
13C2-PFDoDA	5.258	-0.01	4880777	4.6874	94	19 - 122	Y
13C2-PFTeDA	5.581	-0.01	4099836	4.9350	99	13 - 124	Y
13C8-FOSA	5.195	-0.01	2099554	4.4316	89	18 - 109	Y
D3-MeFOSAA	5.001	-0.01	749846	5.5746	111	9 - 123	Y
D5-EtFOSAA	5.098	0.00	686879	5.5417	111	12 - 126	Y
13C2-6:2 FTS	4.544	-0.01	380162	4.8331	97	10 - 226	Y
13C2-8:2 FTS	4.904	-0.01	352354	5.5254	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)	4.002	-0.01	2319	0.0108	0.35	J	Y
Perfluorohexane sulfonic acid (PFHxS)	4.378	-0.01	2276	-0.0017	0	U	Y

Data File: J:\LCMS06\Data\200428_b4\200428_055
Acqu Date: 4/29/20 00:18
Run Type: MB
Lab ID: KQ2005615-04

Instrument: K-LCMS06
Vial: 4
Dilution: 1
Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.543	-0.01	1050	0.0056	0.18	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.711	-0.01	1733	0.0124	0.40	U	Y
Perfluorodecane sulfonic acid (PFDS)	5.065	0.00	1431	0.0109	0.35	J	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.946	-0.01	26666	0.0144	0.46	U	Y
Perfluorohexanoic acid (PFHxA)	4.196	-0.02	17559	0.0134	0.43	U	Y
Perfluoroheptanoic acid (PFHpA)	4.379	-0.01	12127	0.0059	0.19	U	Y
Perfluorooctanoic acid (PFOA)	4.549	-0.01	31375	0.0164	0.52	J	Y
Perfluorononanoic acid (PFNA)	4.720	-0.01	16813	0.0176	0.56	U	Y
Perfluorodecanoic acid (PFDA)	4.901	-0.01	11048	0.0146	0.47	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.088	0.00	9212	-0.0004	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.258	-0.01	8568	0.0286	0.92	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.422	-0.01	11695	0.0104	0.33	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.581	-0.01	49358	-0.0036	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.195	0.00	4440	0.0088	0.28	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.031	+0.02	957	0.0103	0.33	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.547	0.00	612	0.0070	0.22	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.910		342	0.0059	0.19	J	Y

Prep Amount: 250 mL
Prep Final Amount: 8.00 mL

Dilution: 1
Basis Factor: 100.00

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

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

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

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Insight Report

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200428_055

Sample ID: KQ2005615-04

Date acquired: 4/29/2020 12:18:40 AM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200428_b4\200428_055.lcd

Vial: 39 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.083	5861185	5861185	1	5.0000	ng/mL	----
PFBS_1	Auto	4.002	2319	935852	2	0.0108	ng/mL	----
PFBS-13C	Auto	4.002	935852	5861185	1	4.0840	ng/mL	----
PFBS-13C_IS	Auto	4.002	935852	935852	2	5.0000	ng/mL	----
PFHxS_1	Auto	4.378	2276	601257	3	-0.0017	ng/mL	----
PFHxS-18O	Auto	4.384	601257	5861185	1	4.6609	ng/mL	----
PFHxS-18O_IS	Auto	4.384	601257	601257	3	5.0000	ng/mL	----
PFHpS_1	M	4.543	1050	601257	3	0.0056	ng/mL	----
PFOS_1	Auto	4.711	1733	826132	4	0.0124	ng/mL	----
PFOS-13C	Auto	4.713	826132	5861185	1	4.5498	ng/mL	----
PFOS-13C_IS	Auto	4.713	826132	826132	4	5.0000	ng/mL	----
PFDS_1	Auto	5.065	1431	826132	4	0.0109	ng/mL	----
PFBA	ND(W/B)	----	----	2442216	5	----	ng/mL	----
PFBA-13C	Auto	3.366	2442216	5861185	1	3.9388	ng/mL	----
PFBA-13C_IS	Auto	3.366	2442216	2442216	5	5.0000	ng/mL	----
PFPeA	Auto	3.946	26666	1444715	6	0.0144	ng/mL	----
PFPeA-13C	Auto	3.947	1444715	5861185	1	4.1404	ng/mL	----
PFPeA-13C_IS	Auto	3.947	1444715	1444715	6	5.0000	ng/mL	----
PFHxA	Auto	4.196	17559	4557024	7	0.0134	ng/mL	----
PFHxA-13C	Auto	4.205	4557024	5861185	1	4.7677	ng/mL	----
PFHxA-13C_IS	Auto	4.205	4557024	4557024	7	5.0000	ng/mL	----
PFHpA	Auto	4.379	12127	4231709	8	0.0059	ng/mL	----
PFHpA-13C	Auto	4.385	4231709	5861185	1	4.8939	ng/mL	----
PFHpA-13C_IS	Auto	4.385	4231709	4231709	8	5.0000	ng/mL	----
PFOA	Auto	4.549	31375	4976700	9	0.0164	ng/mL	----
PFOA-13C	Auto	4.552	4976700	5861185	1	4.7577	ng/mL	----
PFOA-13C_IS	Auto	4.552	4976700	4976700	9	5.0000	ng/mL	----
PFNA	Auto	4.720	16813	4255047	10	0.0176	ng/mL	----
PFNA-13C	Auto	4.726	4255047	5861185	1	5.4486	ng/mL	----
PFNA-13C_IS	Auto	4.726	4255047	4255047	10	5.0000	ng/mL	----
PFDA	M	4.901	11048	3574857	11	0.0146	ng/mL	----
PFDA-13C	Auto	4.904	3574857	5861185	1	5.0451	ng/mL	----
PFDA-13C_IS	Auto	4.904	3574857	3574857	11	5.0000	ng/mL	----
PFUnA	Auto	5.088	9212	4413536	12	-0.0004	ng/mL	----
PFUnA-13C	Auto	5.083	4413536	5861185	1	4.9936	ng/mL	----
PFUnA-13C_IS	Auto	5.083	4413536	4413536	12	5.0000	ng/mL	----
PFDoA	Auto	5.258	8568	4880777	13	0.0286	ng/mL	----
PFDoA-13C	Auto	5.258	4880777	5861185	1	4.6874	ng/mL	----
PFDoA-13C_IS	Auto	5.258	4880777	4880777	13	5.0000	ng/mL	----
PFTTrDA	Auto	5.422	11695	4099836	14	0.0104	ng/mL	----
PFTTeDA	Auto	5.581	49358	4099836	14	-0.0036	ng/mL	----
PFTTeDA-13C	Auto	5.581	4099836	5861185	1	4.9350	ng/mL	----
PFTTeDA-13C_IS	Auto	5.581	4099836	4099836	14	5.0000	ng/mL	----
FOSA	Auto	5.195	4440	2099554	16	0.0088	ng/mL	----
FOSA-13C	Auto	5.195	2099554	5861185	1	4.4316	ng/mL	----
FOSA-13C_IS	Auto	5.195	2099554	2099554	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.031	957	749846	21	0.0103	ng/mL	----
N-MeFOSAA-d3	Auto	5.001	749846	5861185	1	5.5746	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.001	749846	749846	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	686879	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.098	686879	5861185	1	5.5417	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.098	686879	686879	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.547	612	380162	24	0.0070	ng/mL	----
6_2-FTS-13C	Auto	4.544	380162	5861185	1	4.8331	ng/mL	----
6_2-FTS-13C_IS	Auto	4.544	380162	380162	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.910	342	352354	25	0.0059	ng/mL	----
8_2-FTS-13C	Auto	4.904	352354	5861185	1	5.5254	ng/mL	----
8_2-FTS-13C_IS	Auto	4.904	352354	352354	25	5.0000	ng/mL	----

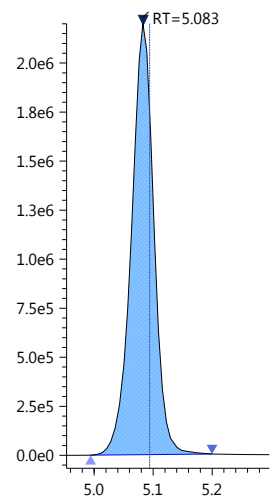
Insight Report

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13C7-PFUnDA_IS

Conc 5.0000
Area 5861185

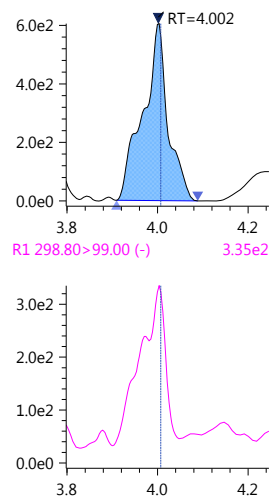
ISTD 570.00>525.00 (-) 2.20e6



PFBS_1

Conc 0.0108
Area 2319
R#1 45.18 (0.00)

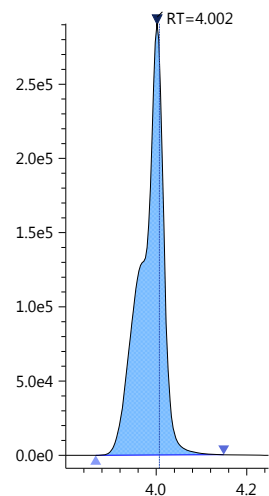
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PFBS-13C

Conc 4.0840
Area 935852

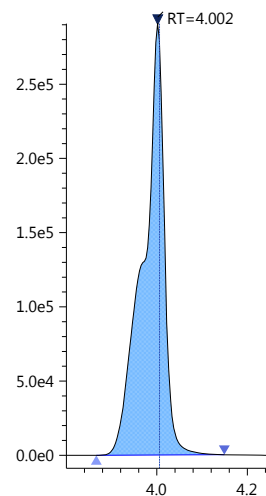
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PFBS-13C_IS

Conc 5.0000
Area 935852

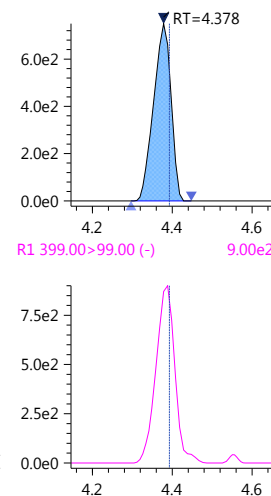
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PFHxS_1

Conc -0.0017
Area 2276
R#1 113.66 (0.00)

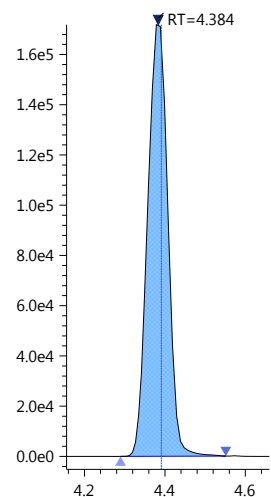
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PFHxS-180

Conc 4.6609
Area 601257

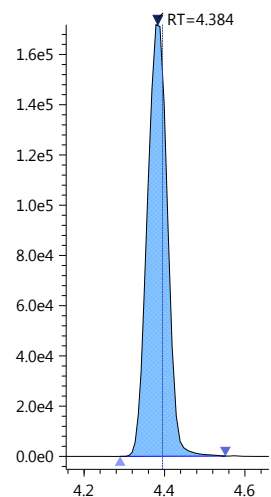
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PFHxS-180_IS

Conc 5.0000
Area 601257

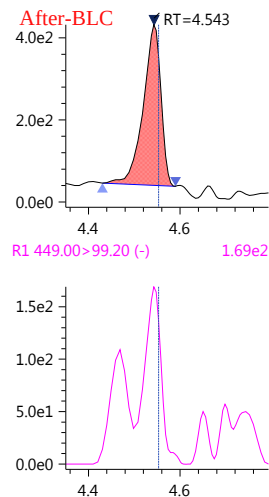
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PFHpS_1

Conc 0.0056
Area 1050
R#1 40.70 (0.00)

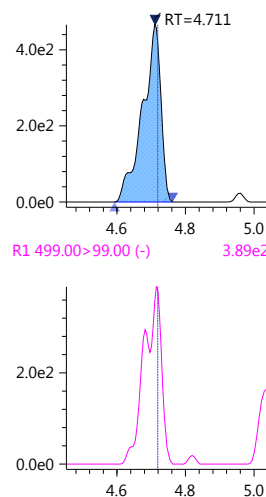
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PFOS_1

Conc 0.0124
Area 1733
R#1 88.34 (0.00)

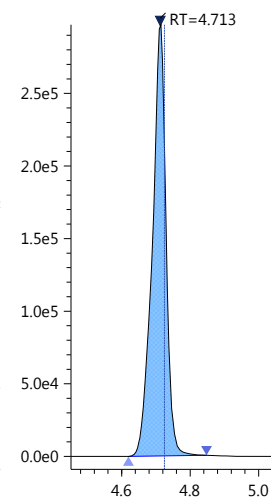
Q 499.00>80.00 (-) 4.66e2



PFOS-13C

Conc 4.5498
Area 826132

Q 502.80>80.05 (-) 2.97e5



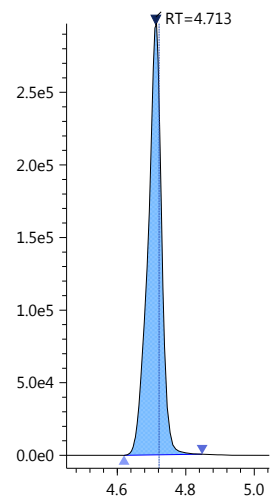
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PFOS-13C_IS

Conc 5.0000
 Area 826132

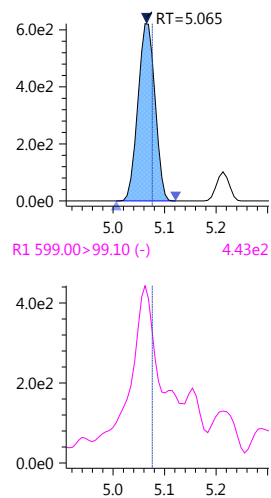
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PFDS_1

Conc 0.0109
 Area 1431
 R#1 44.19 (0.00)

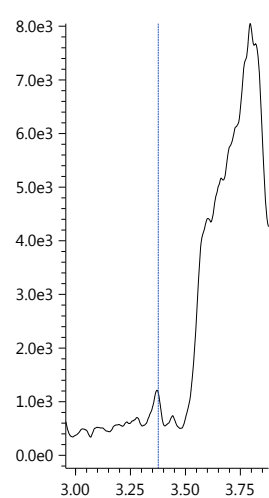
Q 599.00>79.90 (-) 6.22e2



PFBA

Conc ----
 Area ----

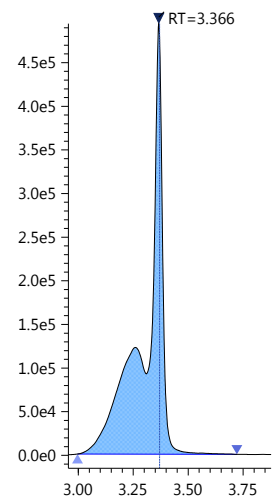
Q 213.00>169.10 (-)



PFBA-13C

Conc 3.9388
 Area 2442216

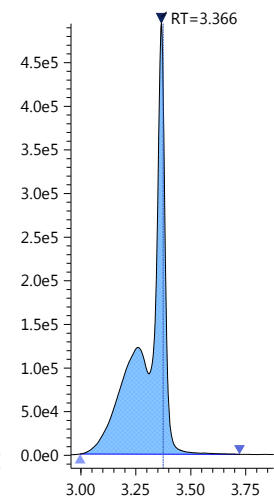
Q 216.90>172.15 (-) 4.95e5



PFBA-13C_IS

Conc 5.0000
 Area 2442216

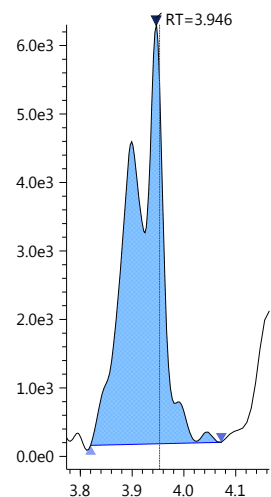
ISTD 216.90>172.15 (-) 4.95e5



PFPeA

Conc 0.0144
 Area 26666

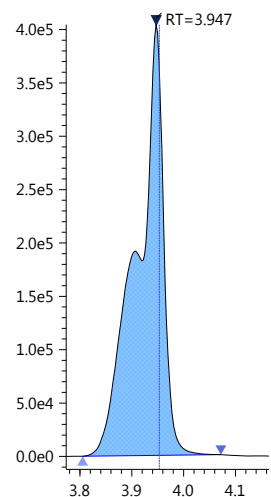
Q 263.05>219.10 (-) 6.30e3



PFPeA-13C

Conc 4.1404
 Area 1444715

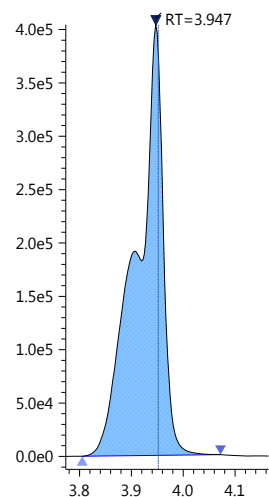
Q 267.90>223.00 (-) 4.05e5



PFPeA-13C_IS

Conc 5.0000
 Area 1444715

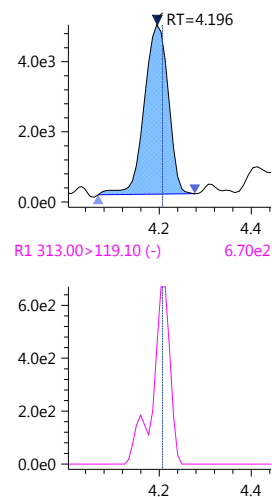
ISTD 267.90>223.00 (-) 4.05e5



PFHxA

Conc 0.0134
 Area 17559
 R#1 9.27 (0.00)

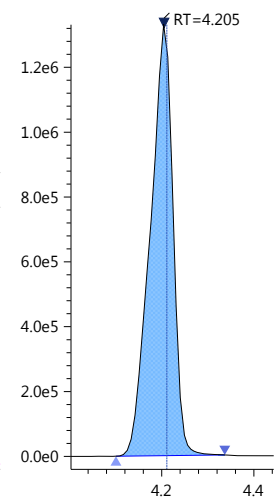
Q 313.00>269.00 (-) 5.06e3



PFHxA-13C

Conc 4.7677
 Area 4557024

Q 314.90>270.10 (-) 1.33e6



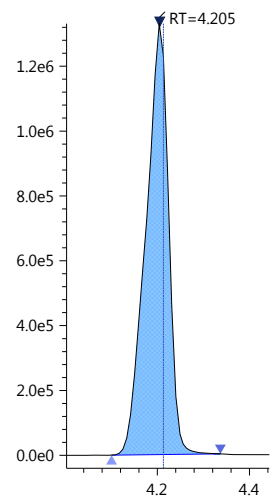
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PFHxA-13C_IS

Conc 5.0000
Area 4557024

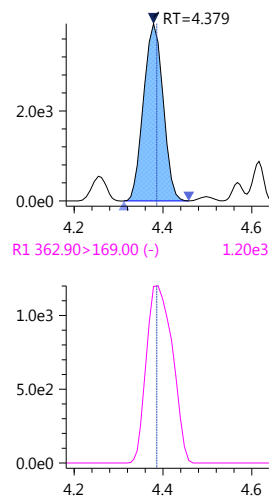
ISTD 314.90>270.10 (-) 1.33e6



PFHpA

Conc 0.0059
Area 12127
R#1 29.88 (0.00)

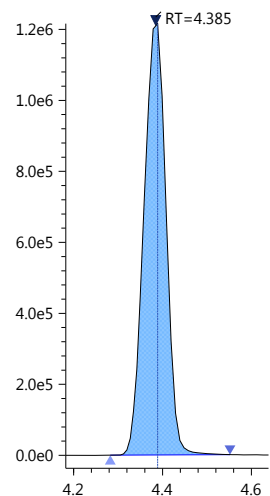
Q 362.90>319.00 (-) 3.94e3



PFHpA-13C

Conc 4.8939
Area 4231709

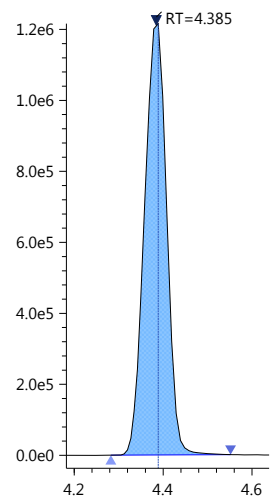
Q 366.90>322.10 (-) 1.22e6



PFHpA-13C_IS

Conc 5.0000
Area 4231709

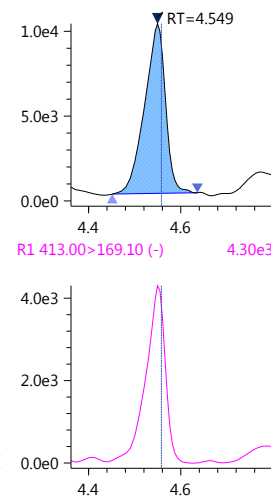
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PFOA

Conc 0.0164
Area 31375
R#1 42.96 (0.00)

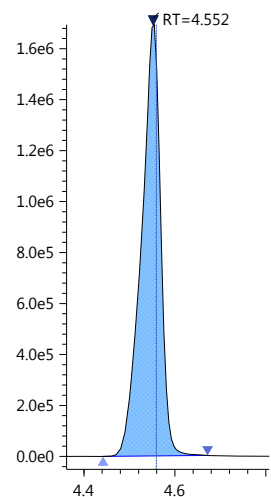
Q 413.00>369.00 (-) 1.05e4



PFOA-13C

Conc 4.7577
Area 4976700

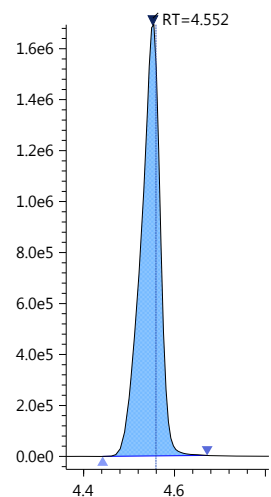
Q 416.80>372.05 (-) 1.69e6



PFOA-13C_IS

Conc 5.0000
Area 4976700

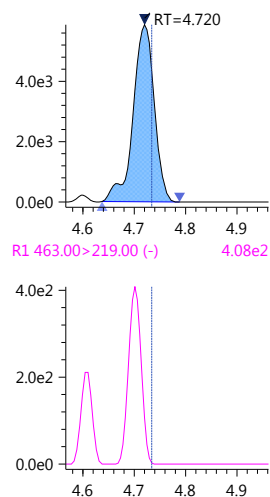
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PFNA

Conc 0.0176
Area 16813
R#1 1.21 (0.00)

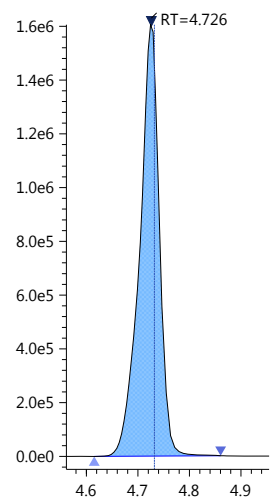
Q 463.00>418.90 (-) 5.88e3



PFNA-13C

Conc 5.4486
Area 4255047

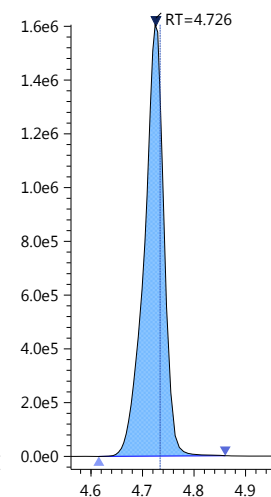
Q 467.80>423.00 (-) 1.61e6



PFNA-13C_IS

Conc 5.0000
Area 4255047

ISTD 467.80>423.00 (-) 1.61e6

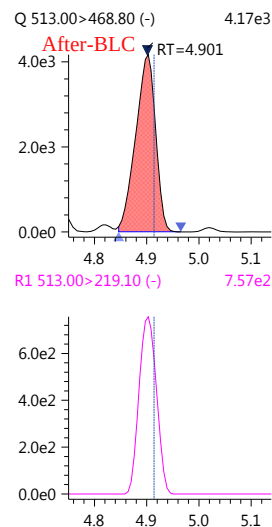


Insight Report

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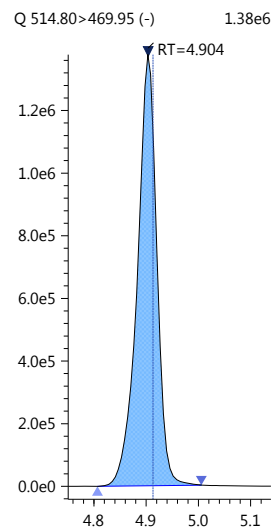
PFDA

Conc 0.0146
Area 11048
R#1 18.05 (0.00)



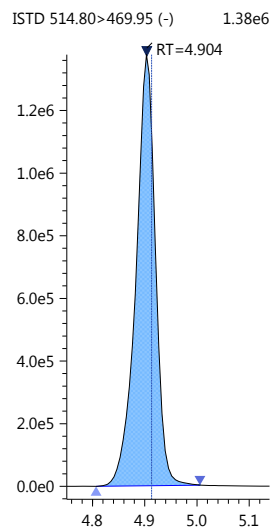
PFDA-13C

Conc 5.0451
Area 3574857



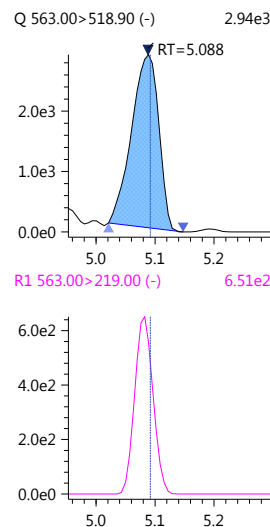
PFDA-13C_IS

Conc 5.0000
Area 3574857



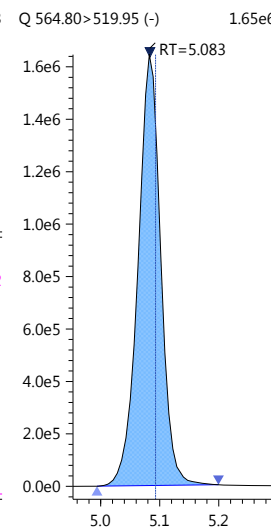
PFUnA

Conc -0.0004
Area 9212
R#1 19.40 (0.00)



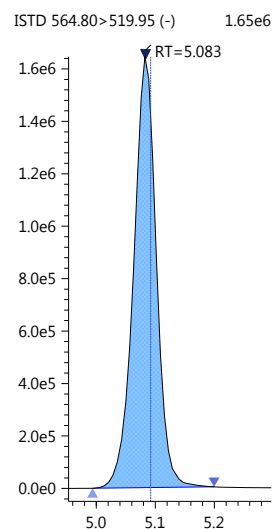
PFUnA-13C

Conc 4.9936
Area 4413536



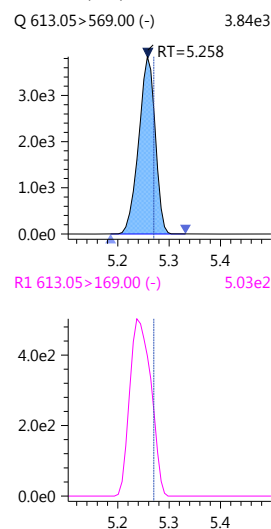
PFUnA-13C_IS

Conc 5.0000
Area 4413536



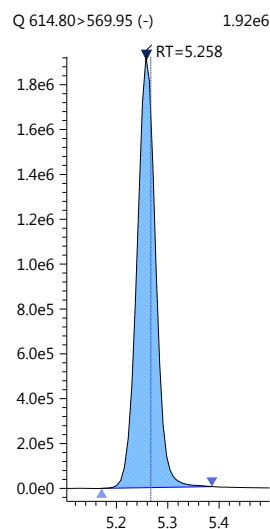
PFDaA

Conc 0.0286
Area 8568
R#1 10.18 (0.00)



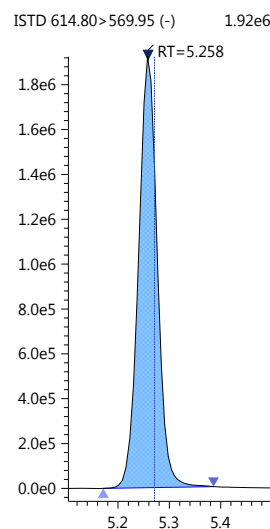
PFDaA-13C

Conc 4.6874
Area 4880777



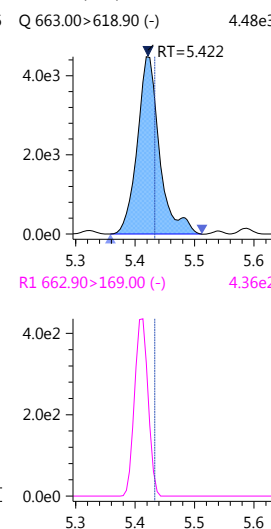
PFDaA-13C_IS

Conc 5.0000
Area 4880777



PFTrDA

Conc 0.0104
Area 11695
R#1 3.29 (0.00)



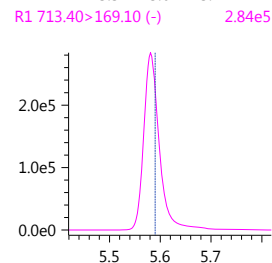
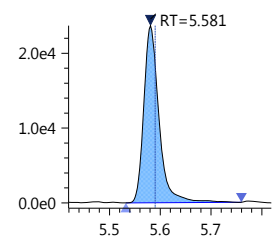
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PFTeDA

Conc -0.0036
Area 49358
R#1 1196.02 (0.00)

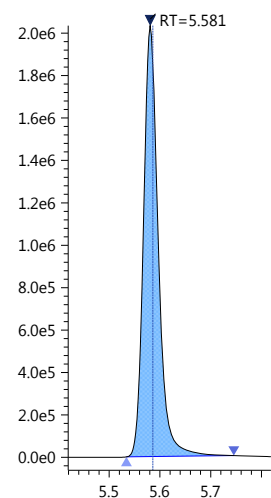
Q 713.40>669.00 (-) 2.37e4



PFTeDA-13C

Conc 4.9350
Area 4099836

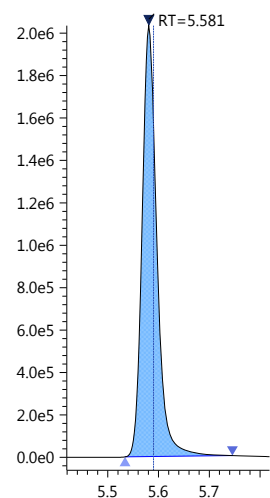
Q 714.70>669.90 (-) 2.04e6



PFTeDA-13C_IS

Conc 5.0000
Area 4099836

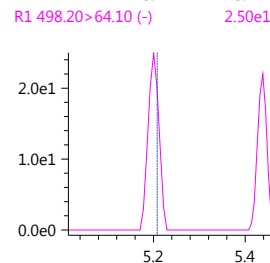
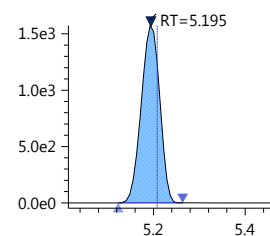
ISTD 714.70>669.90 (-) 2.04e6



FOSA

Conc 0.0088
Area 4440
R#1 1.38 (0.00)

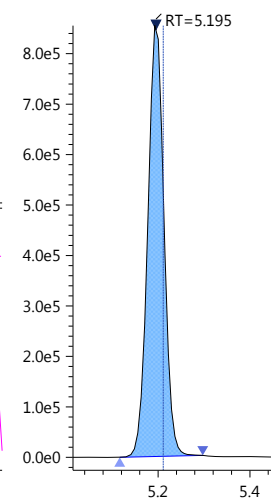
Q 498.20>78.00 (-) 1.57e3



FOSA-13C

Conc 4.4316
Area 2099554

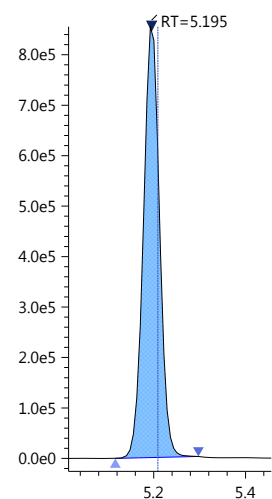
Q 506.00>78.05 (-) 8.56e5



FOSA-13C_IS

Conc 5.0000
Area 2099554

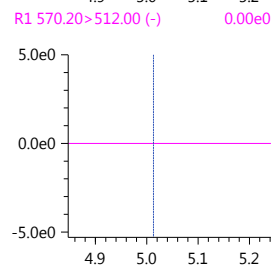
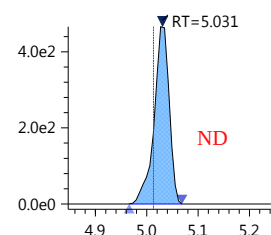
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N-MeFOSAA

Conc 0.0103
Area 957
R#1 0.00 (0.00)

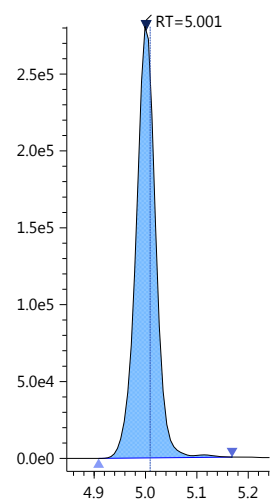
Q 570.20>419.00 (-) 4.66e2



N-MeFOSAA-d3

Conc 5.5746
Area 749846

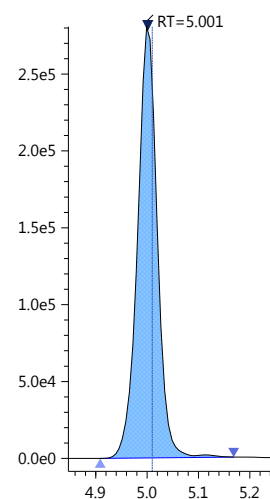
Q 572.80>419.05 (-) 2.81e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 749846

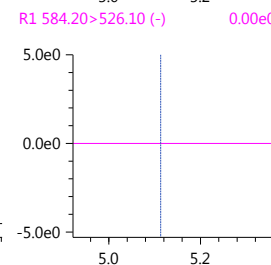
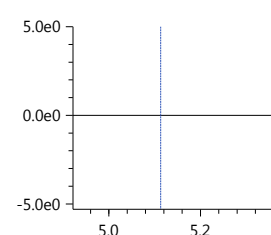
ISTD 572.80>419.05 (-) 2.81e5



N-EtFOSAA

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

Q 584.20>418.95 (-) 0.00e0

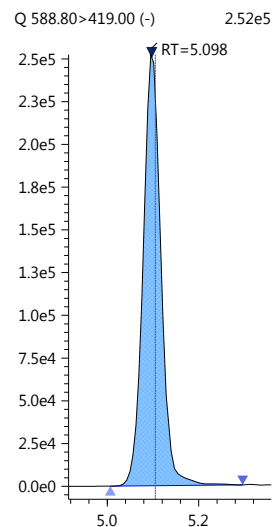


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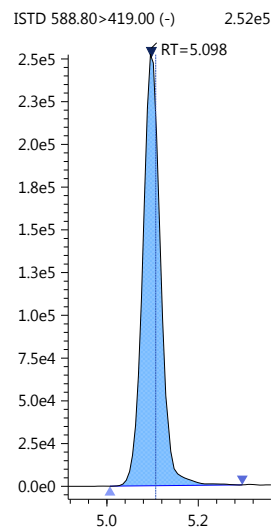
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Conc 5.5417
 Area 686879



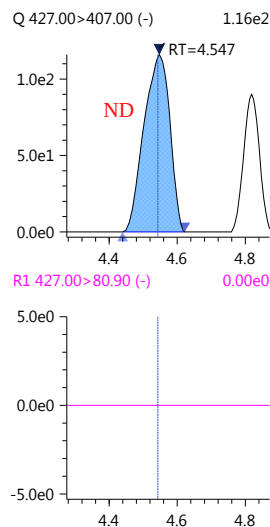
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Conc 5.0000
 Area 686879



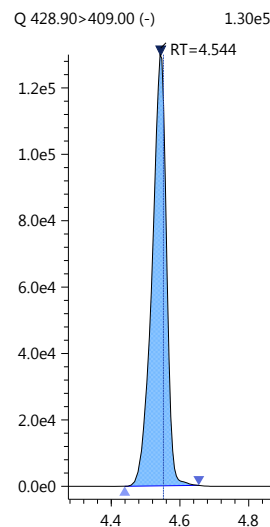
6_2-FTS_1

Conc 0.0070
 Area 612
 R#1 0.00 (0.00)



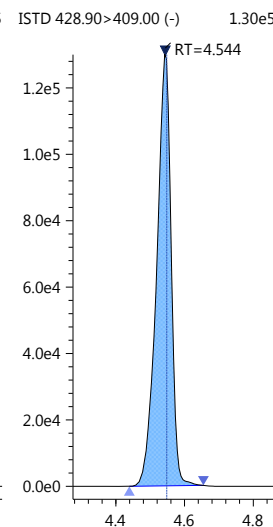
6_2-FTS-13C

Conc 4.8331
 Area 380162



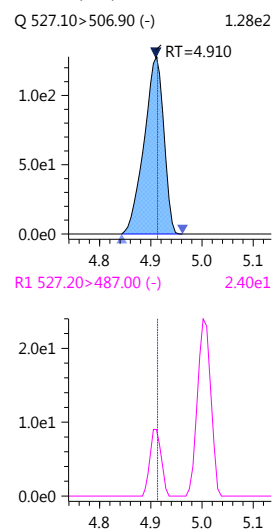
6_2-FTS-13C_IS

Conc 5.0000
 Area 380162



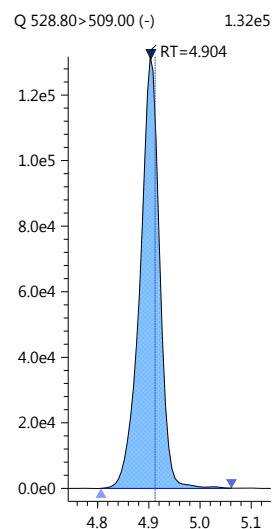
8_2-FTS_1

Conc 0.0059
 Area 342
 R#1 8.27 (0.00)



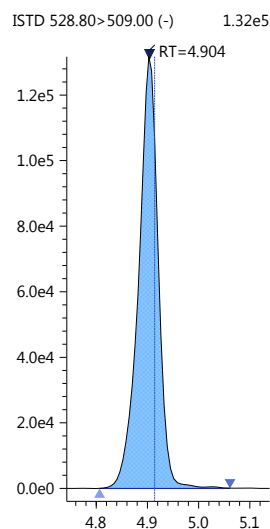
8_2-FTS-13C

Conc 5.5254
 Area 352354



8_2-FTS-13C_IS

Conc 5.0000
 Area 352354



Insight Report

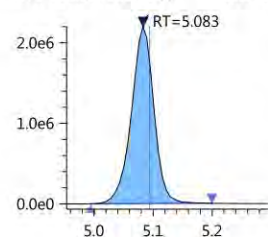
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200428_055

Sample ID: KQ2005615-04
Date acquired: 4/29/2020 12:18:40 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200428_b4\200428_055.lcd
Vial: 39 | Inj. Volume: 15.0000uL | Tray: 3

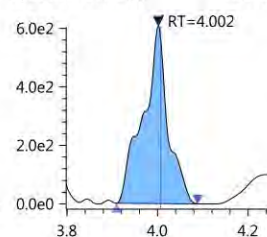
13C7-PFUnDA_IS

Conc 5.0000
Area 5861185
ISTD 570.00>525.00 (-)



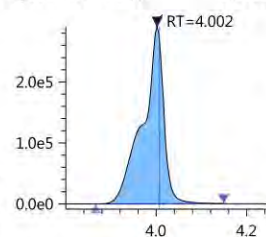
PFBS_1

Conc 0.0108
Area 2319
Q 299.00>80.00 (-)



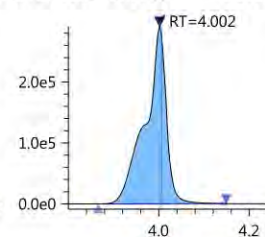
PFBS-13C

Conc 4.0840
Area 935852
Q 301.80>80.00 (-)



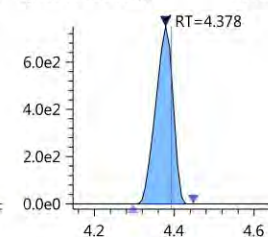
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Conc 5.0000
Area 935852
ISTD 301.80>80.00 (-)



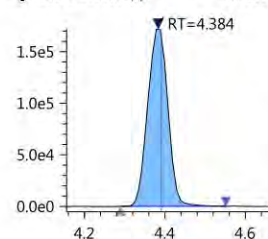
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Area 2276
Q 399.00>80.00 (-)



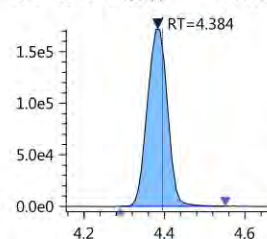
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Conc 4.6609
Area 601257
Q 402.70>84.05 (-)



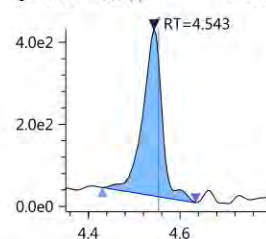
PFHxS-180_IS

Conc 5.0000
Area 601257
ISTD 402.70>84.05 (-)



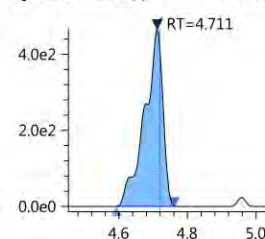
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Area 1192
Q 449.00>80.15 (-)



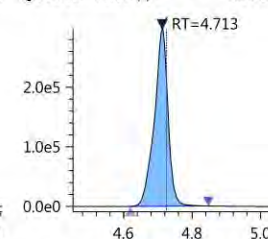
PFOS_1

Conc 0.0124
Area 1733
Q 499.00>80.00 (-)



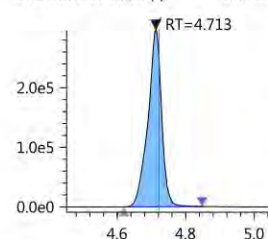
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Conc 4.5498
Area 826132
Q 502.80>80.05 (-)



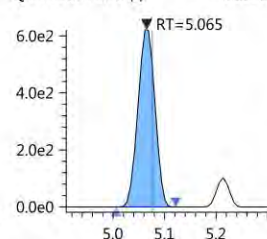
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Conc 5.0000
Area 826132
ISTD 502.80>80.05 (-)



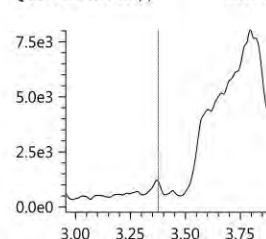
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Area 1431
Q 599.00>79.90 (-)



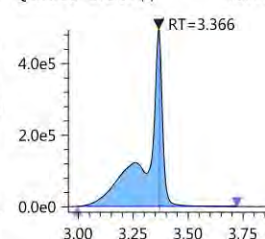
PFBA

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



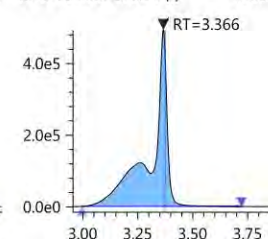
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Conc 3.9388
Area 2442216
Q 216.90>172.15 (-)



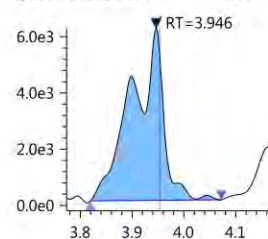
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Conc 5.0000
Area 2442216
ISTD 216.90>172.15 (-)



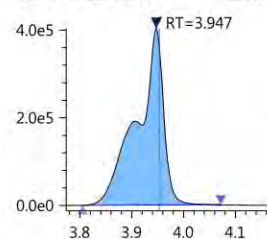
PFPeA

Conc 0.0144
Area 26666
Q 263.05>219.10 (-)



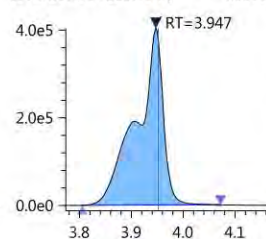
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Conc 4.1404
Area 1444715
Q 267.90>223.00 (-)



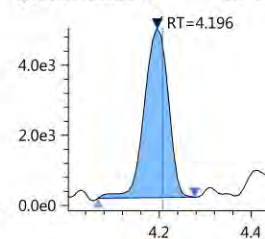
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Conc 5.0000
Area 1444715
ISTD 267.90>223.00 (-)



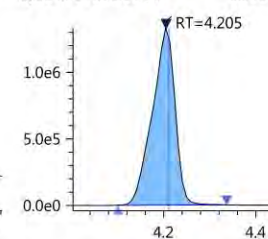
PFHxA

Conc 0.0134
Area 17559
Q 313.00>269.00 (-)



PFHxA-13C

Conc 4.7677
Area 4557024
Q 314.90>270.10 (-)

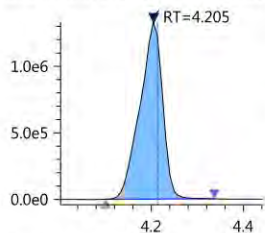


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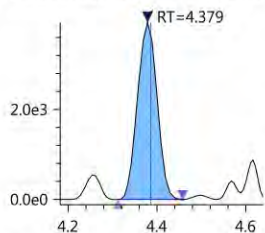
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Area 4557024
ISTD 314.90>270.10 (-) 1.33e6



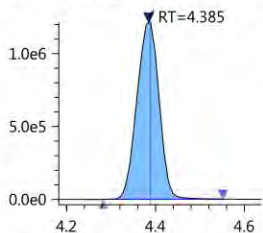
PFHpA

Conc 0.0059
Area 12127
Q 362.90>319.00 (-) 3.94e3



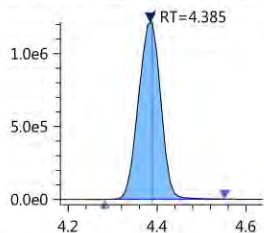
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Conc 4.8939
Area 4231709
Q 366.90>322.10 (-) 1.22e6



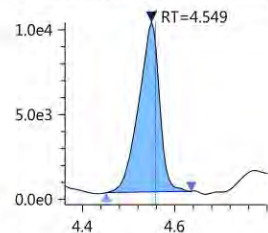
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Conc 5.0000
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ISTD 366.90>322.10 (-) 1.22e6



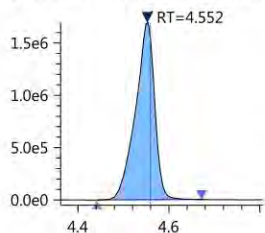
PFOA

Conc 0.0164
Area 31375
Q 413.00>369.00 (-) 1.05e4



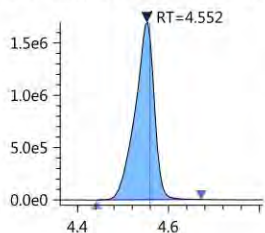
PFOA-13C

Conc 4.7577
Area 4976700
Q 416.80>372.05 (-) 1.69e6



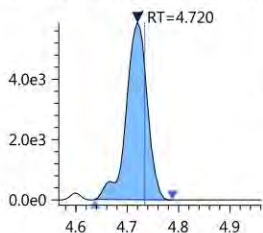
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Conc 5.0000
Area 4976700
ISTD 416.80>372.05 (-) 1.69e6



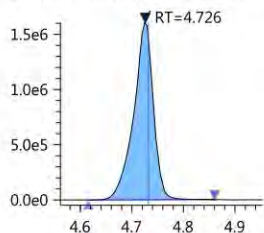
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Conc 0.0176
Area 16813
Q 463.00>418.90 (-) 5.88e3



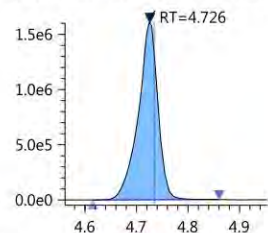
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Conc 5.4486
Area 4255047
Q 467.80>423.00 (-) 1.61e6



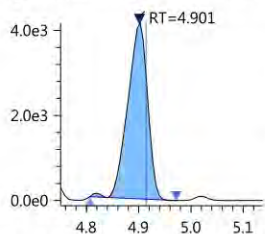
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Conc 5.0000
Area 4255047
ISTD 467.80>423.00 (-) 1.61e6



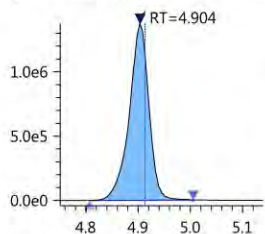
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Conc 0.0144
Area 10906
Q 513.00>468.80 (-) 4.17e3



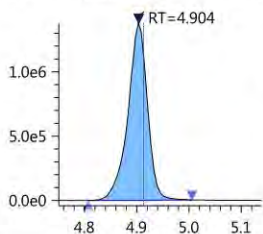
PFDA-13C

Conc 5.0451
Area 3574857
Q 514.80>469.95 (-) 1.38e6



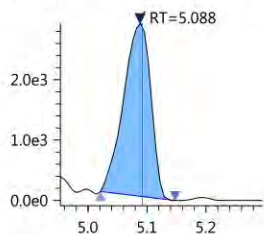
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ISTD 514.80>469.95 (-) 1.38e6



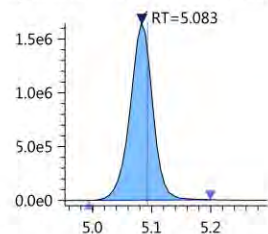
PFUnA

Conc -0.0004
Area 9212
Q 563.00>518.90 (-) 2.94e3



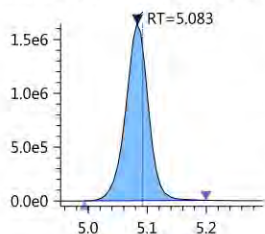
PFUnA-13C

Conc 4.9936
Area 4413536
Q 564.80>519.95 (-) 1.65e6



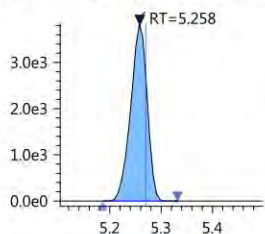
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Conc 5.0000
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ISTD 564.80>519.95 (-) 1.65e6



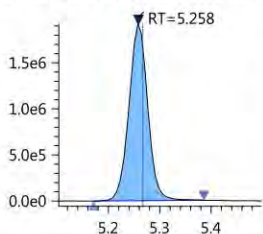
PFDaA

Conc 0.0286
Area 8568
Q 613.05>569.00 (-) 3.84e3



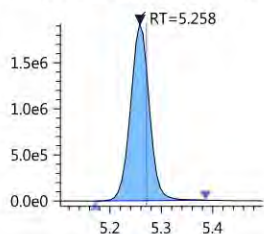
PFDaA-13C

Conc 4.6874
Area 4880777
Q 614.80>569.95 (-) 1.92e6



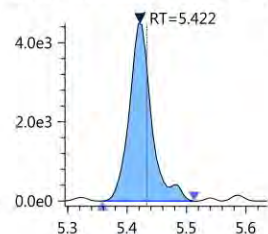
PFDaA-13C_IS

Conc 5.0000
Area 4880777
ISTD 614.80>569.95 (-) 1.92e6



PFTTrDA

Conc 0.0104
Area 11695
Q 663.00>618.90 (-) 4.48e3



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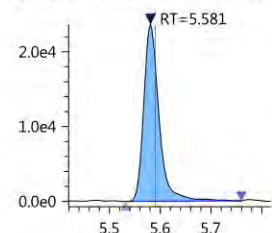
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Conc -0.0036

Area 49358

Q 713.40>669.00 (-)

2.37e4



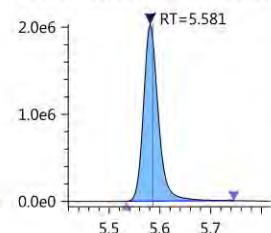
PFTeDA-13C

Conc 4.9350

Area 4099836

Q 714.70>669.90 (-)

2.04e6



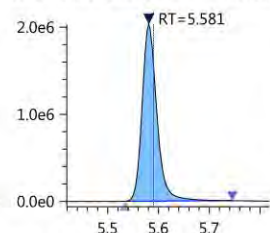
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Conc 5.0000

Area 4099836

ISTD 714.70>669.90 (-)

2.04e6



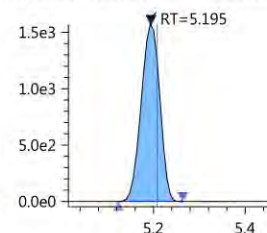
FOSA

Conc 0.0088

Area 4440

Q 498.20>78.00 (-)

1.57e3



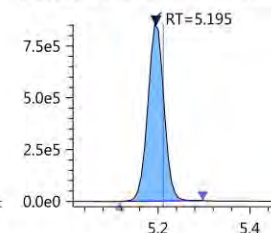
FOSA-13C

Conc 4.4316

Area 2099554

Q 506.00>78.05 (-)

8.56e5



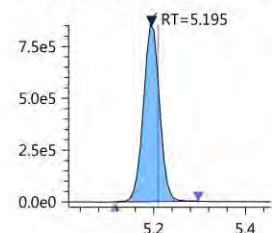
FOSA-13C_IS

Conc 5.0000

Area 2099554

ISTD 506.00>78.05 (-)

8.56e5



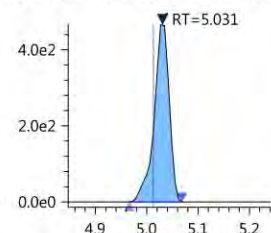
N-MeFOSAA

Conc 0.0103

Area 957

Q 570.20>419.00 (-)

4.66e2



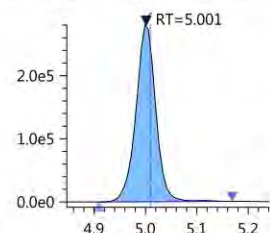
N-MeFOSAA-d3

Conc 5.5746

Area 749846

Q 572.80>419.05 (-)

2.81e5



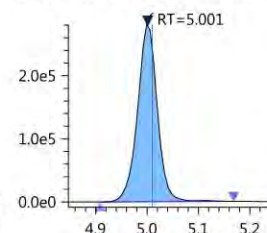
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Conc 5.0000

Area 749846

ISTD 572.80>419.05 (-)

2.81e5



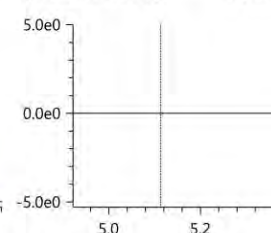
N-EtFOSAA

Conc ----

Area ----

Q 584.20>418.95 (-)

0.00e0



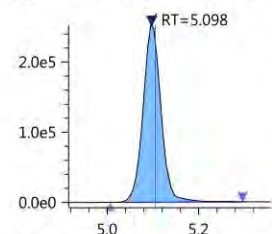
N-EtFOSAA-d5

Conc 5.5417

Area 686879

Q 588.80>419.00 (-)

2.52e5



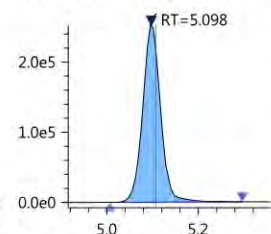
N-EtFOSAA-d5_IS

Conc 5.0000

Area 686879

ISTD 588.80>419.00 (-)

2.52e5



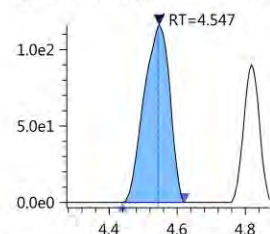
6_2-FTS_1

Conc 0.0070

Area 612

Q 427.00>407.00 (-)

1.16e2



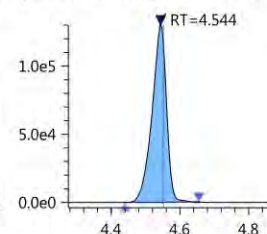
6_2-FTS-13C

Conc 4.8331

Area 380162

Q 428.90>409.00 (-)

1.30e5



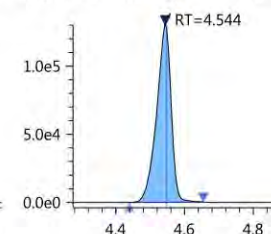
6_2-FTS-13C_IS

Conc 5.0000

Area 380162

ISTD 428.90>409.00 (-)

1.30e5



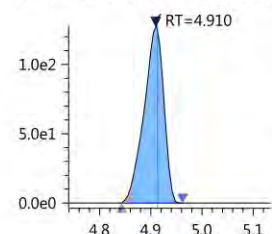
8_2-FTS_1

Conc 0.0059

Area 342

Q 527.10>506.90 (-)

1.28e2



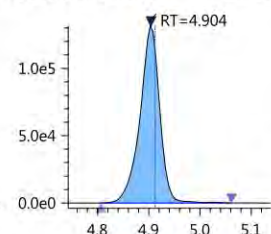
8_2-FTS-13C

Conc 5.5254

Area 352354

Q 528.80>509.00 (-)

1.32e5



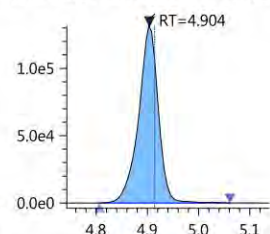
8_2-FTS-13C_IS

Conc 5.0000

Area 352354

ISTD 528.80>509.00 (-)

1.32e5



Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200428_b4\200428_054
Lab ID: KQ2005615-03
RunType: LCS
Matrix: Water

Date Acquired: 4/29/20 00:08
Batch ID: 678319
Analysis Method: PFC/537M/PFAS

Validations

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

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200428_b4\200428_054	Instrument:	K-LCMS-06
Acqu Date:	4/29/20 00:08	Vial:	3
Run Type:	LCS	Dilution:	1
Lab ID:	KQ2005615-03	Raw Units:	ng/mL

Bottle ID:		Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678319	Prep Lot:	357465	Report Group:	KQ2005615
Analysis	PFC/537M	Prep Method:	ALS SOP		
		Prep Date:	4/27/20		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.083	-0.01	5873966	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.000	-0.01	881602	3.8389	77	20 - 109	Y
18O2-PFHxS	4.383	-0.01	532013	4.1151	82	26 - 122	Y
13C4-PFOS	4.711	-0.01	782598	4.3006	86	25 - 121	Y
13C4-PFBA	3.362	-0.02	2313343	3.7228	74	27 - 124	Y
13C5-PFPeA	3.945	-0.01	1371490	3.9220	78	27 - 138	Y
13C2-PFHxA	4.204	-0.01	3973780	4.1485	83	28 - 132	Y
13C4-PFHpA	4.383	-0.01	3911671	4.5140	90	19 - 139	Y
13C4-PFOA	4.550	-0.01	5001444	4.7710	95	22 - 130	Y
13C5-PFNA	4.724	-0.01	3973697	5.0772	102	20 - 127	Y
13C2-PFDA	4.904	-0.01	3306704	4.6565	93	24 - 125	Y
13C2-PFUnDA	5.084	-0.01	4150128	4.6853	94	22 - 125	Y
13C2-PFDoDA	5.259	-0.01	4522852	4.3342	87	19 - 122	Y
13C2-PFTeDA	5.581	-0.01	3962951	4.7598	95	13 - 124	Y
13C8-FOSA	5.196	0.00	1948455	4.1037	82	18 - 109	Y
D3-MeFOSAA	5.002	-0.01	700578	5.1970	104	9 - 123	Y
D5-EtFOSAA	5.098	0.00	648972	5.2245	104	12 - 126	Y
13C2-6:2 FTS	4.541	-0.01	384024	4.8716	97	10 - 226	Y
13C2-8:2 FTS	4.904	-0.01	291994	4.5689	91	10 - 202	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	4.000	-0.01	205050	1.0112	32.4		Y
Perfluorohexane sulfonic acid (PFHxS)	4.379	-0.01	134017	0.9959	31.9		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

Printed: 5/5/20 13:35

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Data File: J:\LCMS06\Data\200428_b4\200428_054
Acqu Date: 4/29/20 00:08
Run Type: LCS
Lab ID: KQ2005615-03

Instrument: K-LCMS06
Vial: 3
Dilution: 1
Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.542	-0.01	208005	1.2538	40.1		Y
Perfluorooctane sulfonic acid (PFOS)	4.711	-0.01	143804	1.0847	34.7		Y
Perfluorodecane sulfonic acid (PFDS)	5.063	-0.01	124612	1.0057	32.2		Y
Perfluorobutanoic acid (PFBA)	3.362	-0.02	516619	1.1435	36.6		Y
Perfluoropentanoic acid (PFPeA)	3.946	-0.01	675202	1.1474	36.7		Y
Perfluorohexanoic acid (PFHxA)	4.204	-0.01	846660	1.0790	34.5		Y
Perfluoroheptanoic acid (PFHpA)	4.383	-0.01	692836	0.9817	31.4		Y
Perfluorooctanoic acid (PFOA)	4.550	-0.01	1418283	1.1079	35.5		Y
Perfluorononanoic acid (PFNA)	4.724	-0.01	774899	1.0874	34.8		Y
Perfluorodecanoic acid (PFDA)	4.904	-0.01	774789	1.1034	35.3		Y
Perfluoroundecanoic acid (PFUnDA)	5.084	-0.01	692618	1.0578	33.8		Y
Perfluorododecanoic acid (PFDoDA)	5.259	-0.01	612850	1.1993	38.4		Y
Perfluorotridecanoic acid (PFTrDA)	5.425	-0.01	748590	0.9761	31.2		Y
Perfluorotetradecanoic acid (PFTeDA)	5.581	-0.01	410387	1.0441	33.4		Y
Perfluorooctane sulfonamide (FOSA)	5.196	0.00	483619	1.0362	33.2		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.006	0.00	90156	1.0351	33.1		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.102	-0.01	77469	1.1495	36.8		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.537	-0.01	100117	1.1262	36.0		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.904	-0.01	46146	0.9588	30.7		Y

Prep Amount: 250 mL
Prep Final Amount: 8.00 mL

Dilution: 1
Basis Factor: 100.00

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

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

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

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Insight Report

Printed at 5/5/2020 1:30:49 PM

200428_054

Sample ID: KQ2005615-03

Date acquired: 4/29/2020 12:08:10 AM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200428_b4\200428_054.lcd

Vial: 38 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.083	5873966	5873966	1	5.0000	ng/mL	----
PFBS_1	Auto	4.000	205050	881602	2	1.0112	ng/mL	----
PFBS-13C	Auto	4.000	881602	5873966	1	3.8389	ng/mL	----
PFBS-13C_IS	Auto	4.000	881602	881602	2	5.0000	ng/mL	----
PFHxS_1	Auto	4.379	134017	532013	3	0.9959	ng/mL	----
PFHxS-18O	Auto	4.383	532013	5873966	1	4.1151	ng/mL	----
PFHxS-18O_IS	Auto	4.383	532013	532013	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.542	208005	532013	3	1.2538	ng/mL	----
PFOS_1	Auto	4.711	143804	782598	4	1.0847	ng/mL	----
PFOS-13C	Auto	4.711	782598	5873966	1	4.3006	ng/mL	----
PFOS-13C_IS	Auto	4.711	782598	782598	4	5.0000	ng/mL	----
PFDS_1	Auto	5.063	124612	782598	4	1.0057	ng/mL	----
PFBA	Auto	3.362	516619	2313343	5	1.1435	ng/mL	----
PFBA-13C	Auto	3.362	2313343	5873966	1	3.7228	ng/mL	----
PFBA-13C_IS	Auto	3.362	2313343	2313343	5	5.0000	ng/mL	----
PFPeA	Auto	3.946	675202	1371490	6	1.1474	ng/mL	----
PFPeA-13C	Auto	3.945	1371490	5873966	1	3.9220	ng/mL	----
PFPeA-13C_IS	Auto	3.945	1371490	1371490	6	5.0000	ng/mL	----
PFHxA	Auto	4.204	846660	3973780	7	1.0790	ng/mL	----
PFHxA-13C	Auto	4.204	3973780	5873966	1	4.1485	ng/mL	----
PFHxA-13C_IS	Auto	4.204	3973780	3973780	7	5.0000	ng/mL	----
PFHpA	Auto	4.383	692836	3911671	8	0.9817	ng/mL	----
PFHpA-13C	Auto	4.383	3911671	5873966	1	4.5140	ng/mL	----
PFHpA-13C_IS	Auto	4.383	3911671	3911671	8	5.0000	ng/mL	----
PFOA	Auto	4.550	1418283	5001444	9	1.1079	ng/mL	----
PFOA-13C	Auto	4.550	5001444	5873966	1	4.7710	ng/mL	----
PFOA-13C_IS	Auto	4.550	5001444	5001444	9	5.0000	ng/mL	----
PFNA	Auto	4.724	774899	3973697	10	1.0874	ng/mL	----
PFNA-13C	Auto	4.724	3973697	5873966	1	5.0772	ng/mL	----
PFNA-13C_IS	Auto	4.724	3973697	3973697	10	5.0000	ng/mL	----
PFDA	Auto	4.904	774789	3306704	11	1.1034	ng/mL	----
PFDA-13C	Auto	4.904	3306704	5873966	1	4.6565	ng/mL	----
PFDA-13C_IS	Auto	4.904	3306704	3306704	11	5.0000	ng/mL	----
PFUnA	Auto	5.084	692618	4150128	12	1.0578	ng/mL	----
PFUnA-13C	Auto	5.084	4150128	5873966	1	4.6853	ng/mL	----
PFUnA-13C_IS	Auto	5.084	4150128	4150128	12	5.0000	ng/mL	----
PFDoA	Auto	5.259	612850	4522852	13	1.1993	ng/mL	----
PFDoA-13C	Auto	5.259	4522852	5873966	1	4.3342	ng/mL	----
PFDoA-13C_IS	Auto	5.259	4522852	4522852	13	5.0000	ng/mL	----
PFTTrDA	Auto	5.425	748590	3962951	14	0.9761	ng/mL	----
PFTTeDA	Auto	5.581	410387	3962951	14	1.0441	ng/mL	----
PFTTeDA-13C	Auto	5.581	3962951	5873966	1	4.7598	ng/mL	----
PFTTeDA-13C_IS	Auto	5.581	3962951	3962951	14	5.0000	ng/mL	----
FOSA	Auto	5.196	483619	1948455	16	1.0362	ng/mL	----
FOSA-13C	Auto	5.196	1948455	5873966	1	4.1037	ng/mL	----
FOSA-13C_IS	Auto	5.196	1948455	1948455	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.006	90156	700578	21	1.0351	ng/mL	----
N-MeFOSAA-d3	Auto	5.002	700578	5873966	1	5.1970	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.002	700578	700578	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.102	77469	648972	22	1.1495	ng/mL	----
N-EtFOSAA-d5	Auto	5.098	648972	5873966	1	5.2245	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.098	648972	648972	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.537	100117	384024	24	1.1262	ng/mL	----
6_2-FTS-13C	Auto	4.541	384024	5873966	1	4.8716	ng/mL	----
6_2-FTS-13C_IS	Auto	4.541	384024	384024	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.904	46146	291994	25	0.9588	ng/mL	----
8_2-FTS-13C	Auto	4.904	291994	5873966	1	4.5689	ng/mL	----
8_2-FTS-13C_IS	Auto	4.904	291994	291994	25	5.0000	ng/mL	----

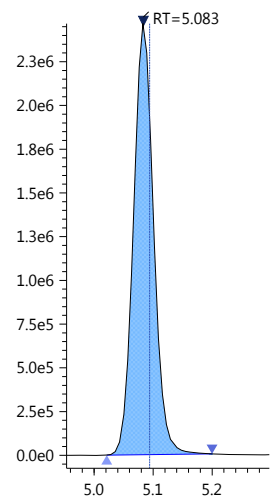
Insight Report

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13C7-PFUnDA_IS

Conc 5.0000
Area 5873966

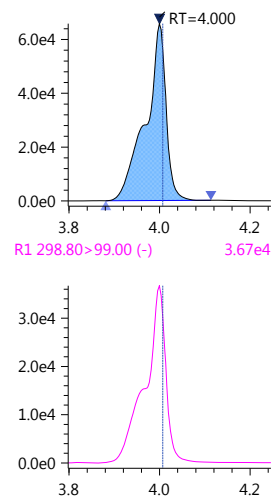
ISTD 570.00>525.00 (-) 2.47e6



PFBS_1

Conc 1.0112
Area 205050
R#1 55.06 (0.00)

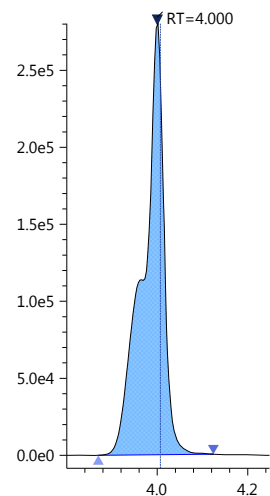
Q 299.00>80.00 (-) 6.59e4



PFBS-13C

Conc 3.8389
Area 881602

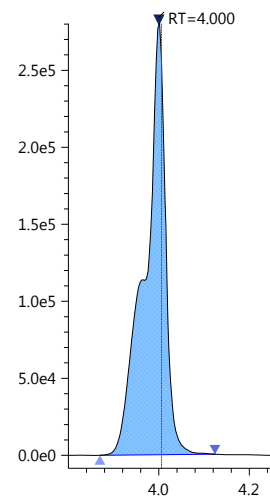
Q 301.80>80.00 (-) 2.80e5



PFBS-13C_IS

Conc 5.0000
Area 881602

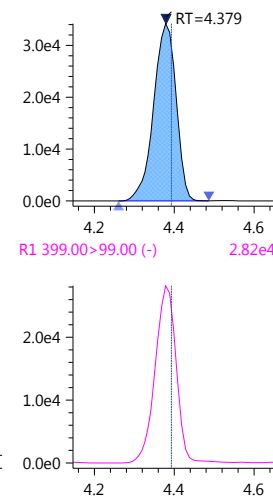
ISTD 301.80>80.00 (-) 2.80e5



PFHxS_1

Conc 0.9959
Area 134017
R#1 81.56 (0.00)

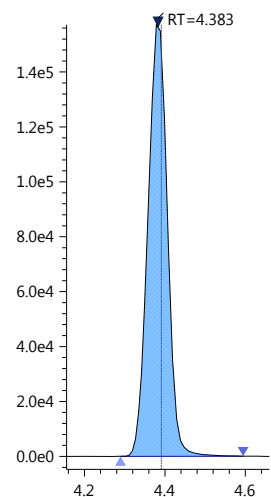
Q 399.00>80.00 (-) 3.42e4



PFHxS-180

Conc 4.1151
Area 532013

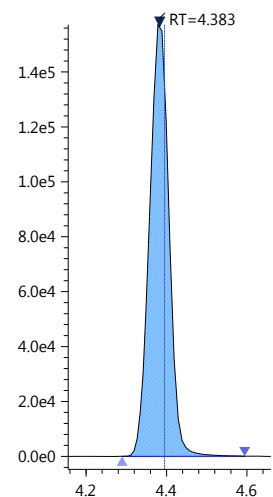
Q 402.70>84.05 (-) 1.57e5



PFHxS-180_IS

Conc 5.0000
Area 532013

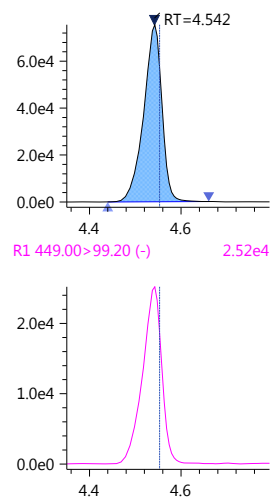
ISTD 402.70>84.05 (-) 1.57e5



PFHpS_1

Conc 1.2538
Area 208005
R#1 33.52 (0.00)

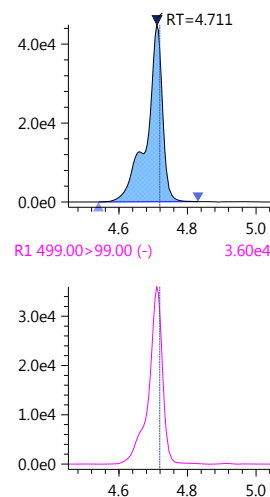
Q 449.00>80.15 (-) 7.55e4



PFOS_1

Conc 1.0847
Area 143804
R#1 79.70 (0.00)

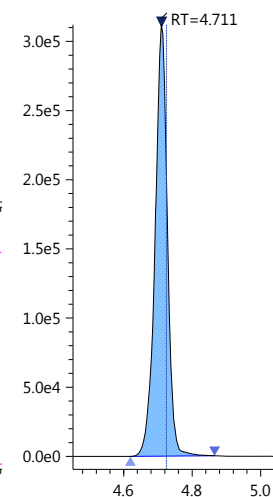
Q 499.00>80.00 (-) 4.49e4



PFOS-13C

Conc 4.3006
Area 782598

Q 502.80>80.05 (-) 3.12e5



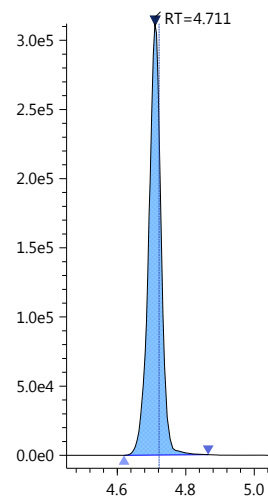
Insight Report

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PFOS-13C_IS

Conc 5.0000
Area 782598

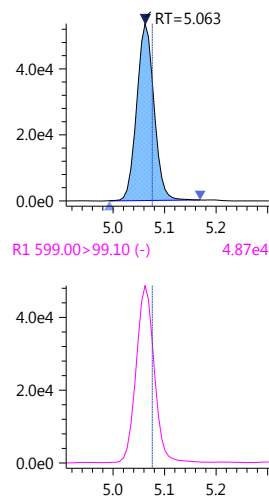
ISTD 502.80>80.05 (-)



PFDS_1

Conc 1.0057
Area 124612
R#1 90.23 (0.00)

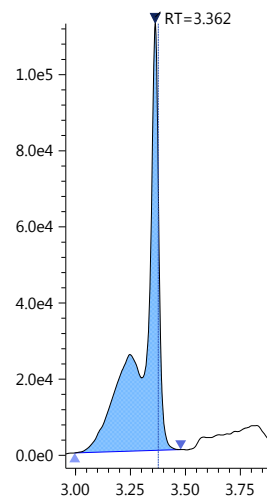
Q 599.00>79.90 (-)



PFBA

Conc 1.1435
Area 516619

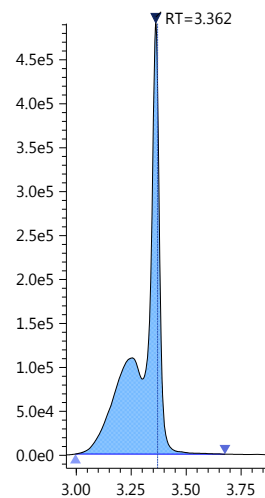
Q 213.00>169.10 (-)



PFBA-13C

Conc 3.7228
Area 2313343

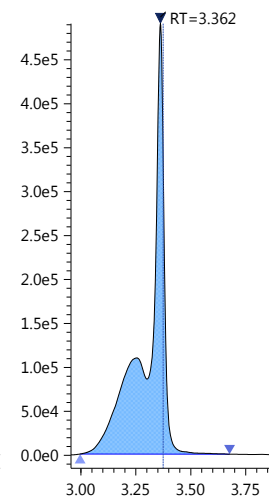
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 2313343

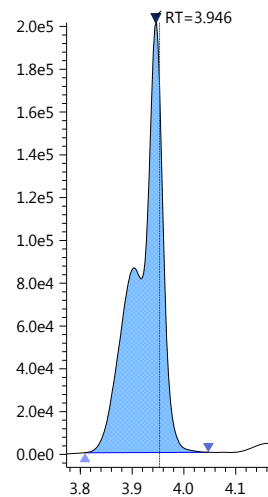
ISTD 216.90>172.15 (-)



PFPeA

Conc 1.1474
Area 675202

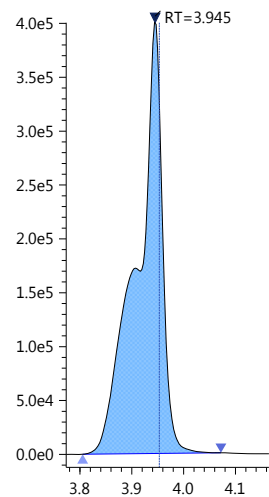
Q 263.05>219.10 (-)



PFPeA-13C

Conc 3.9220
Area 1371490

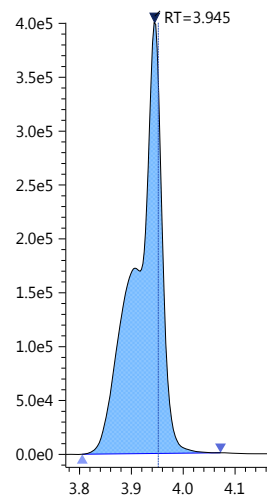
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1371490

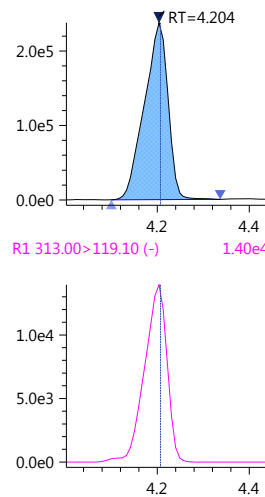
ISTD 267.90>223.00 (-)



PFHxA

Conc 1.0790
Area 846660
R#1 5.80 (0.00)

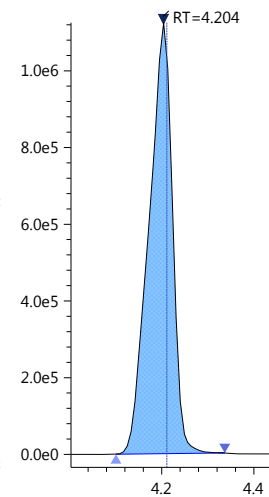
Q 313.00>269.00 (-)



PFHxA-13C

Conc 4.1485
Area 3973780

Q 314.90>270.10 (-)



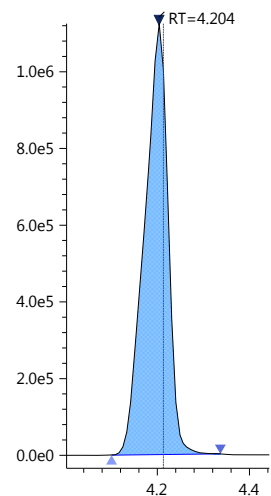
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PFHxA-13C_IS

Conc 5.0000
Area 3973780

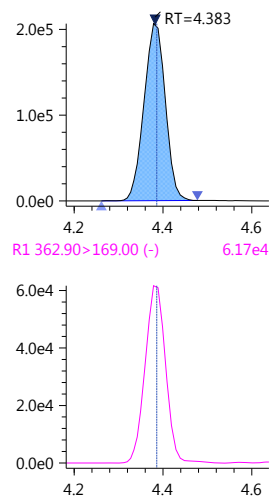
ISTD 314.90>270.10 (-) 1.13e6



PFHpA

Conc 0.9817
Area 692836
R#1 29.58 (0.00)

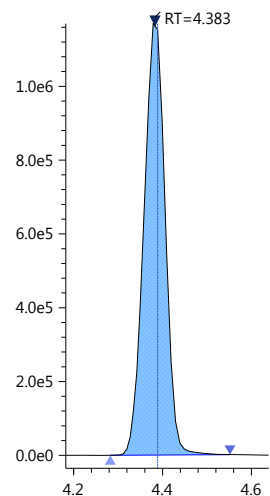
Q 362.90>319.00 (-) 2.07e5



PFHpA-13C

Conc 4.5140
Area 3911671

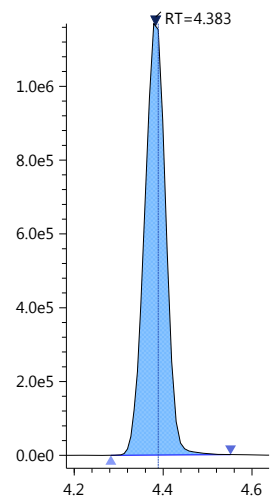
Q 366.90>322.10 (-) 1.17e6



PFHpA-13C_IS

Conc 5.0000
Area 3911671

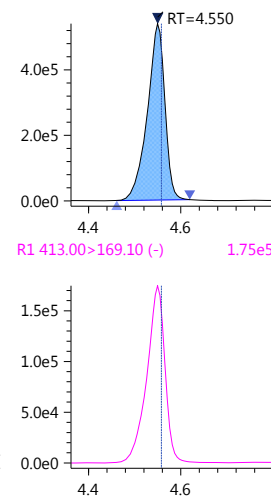
ISTD 366.90>322.10 (-) 1.17e6



PFOA

Conc 1.1079
Area 1418283
R#1 32.31 (0.00)

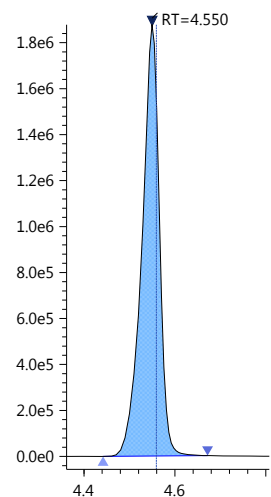
Q 413.00>369.00 (-) 5.41e5



PFOA-13C

Conc 4.7710
Area 5001444

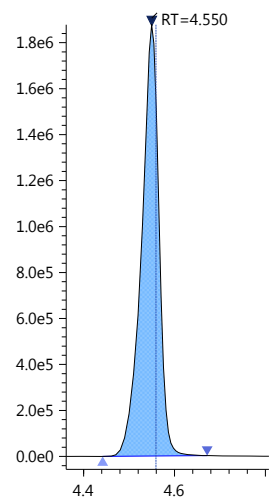
Q 416.80>372.05 (-) 1.88e6



PFOA-13C_IS

Conc 5.0000
Area 5001444

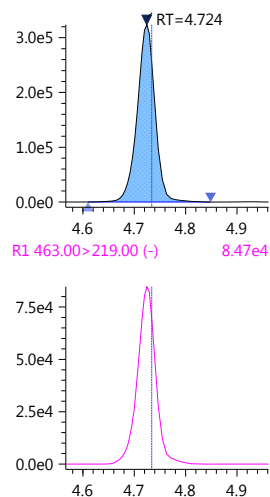
ISTD 416.80>372.05 (-) 1.88e6



PFNA

Conc 1.0874
Area 774899
R#1 26.08 (0.00)

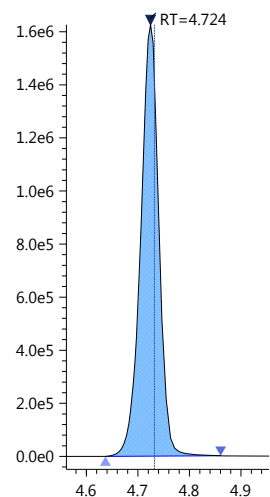
Q 463.00>418.90 (-) 3.24e5



PFNA-13C

Conc 5.0772
Area 3973697

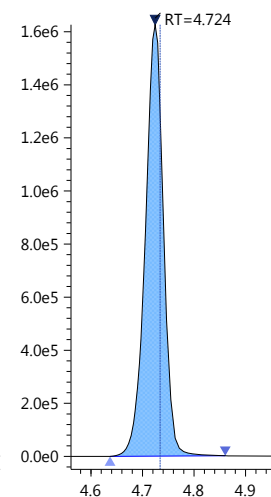
Q 467.80>423.00 (-) 1.63e6



PFNA-13C_IS

Conc 5.0000
Area 3973697

ISTD 467.80>423.00 (-) 1.63e6



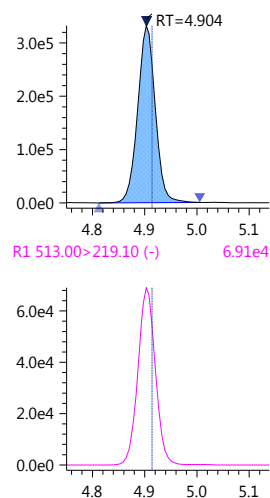
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PFDA

Conc 1.1034
 Area 774789
 R#1 20.79 (0.00)

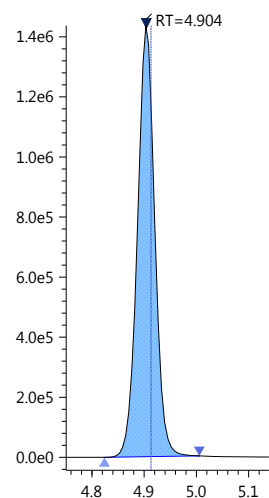
Q 513.00>468.80 (-) 3.33e5



PFDA-13C

Conc 4.6565
 Area 3306704

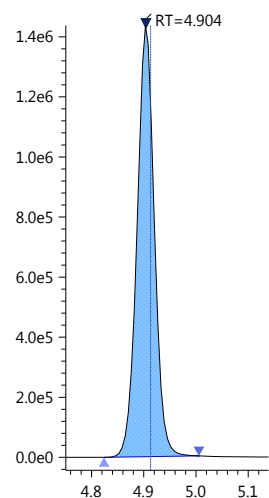
Q 514.80>469.95 (-) 1.44e6



PFDA-13C_IS

Conc 5.0000
 Area 3306704

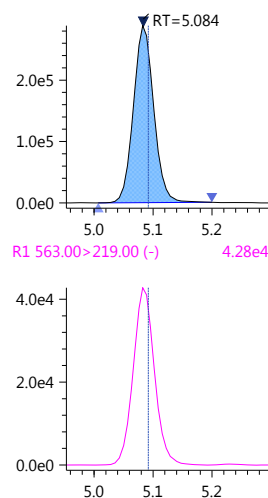
ISTD 514.80>469.95 (-) 1.44e6



PFUnA

Conc 1.0578
 Area 692618
 R#1 14.80 (0.00)

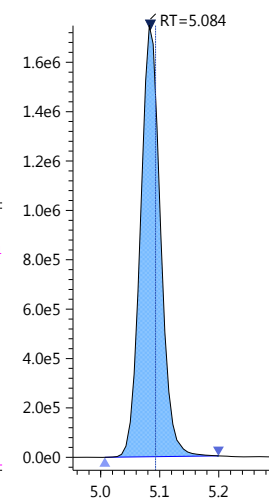
Q 563.00>518.90 (-) 2.89e5



PFUnA-13C

Conc 4.6853
 Area 4150128

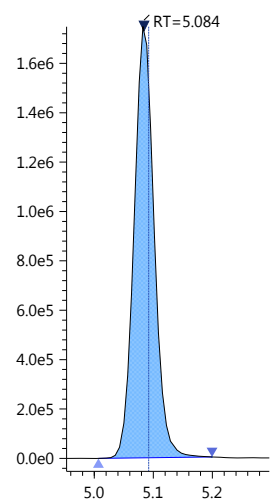
Q 564.80>519.95 (-) 1.75e6



PFUnA-13C_IS

Conc 5.0000
 Area 4150128

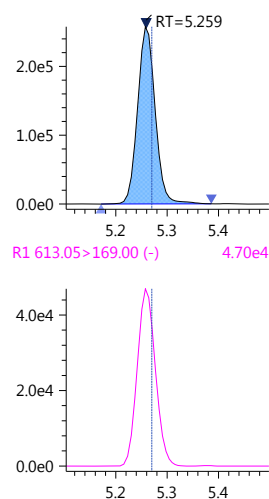
ISTD 564.80>519.95 (-) 1.75e6



PFD0A

Conc 1.1993
 Area 612850
 R#1 18.12 (0.00)

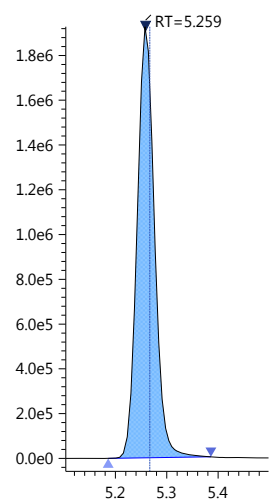
Q 613.05>569.00 (-) 2.58e5



PFD0A-13C

Conc 4.3342
 Area 4522852

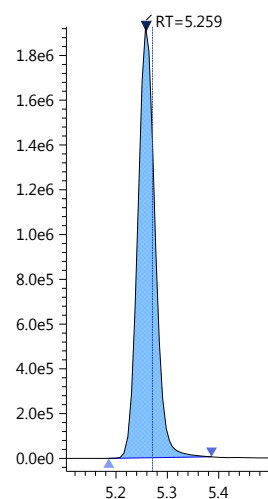
Q 614.80>569.95 (-) 1.93e6



PFD0A-13C_IS

Conc 5.0000
 Area 4522852

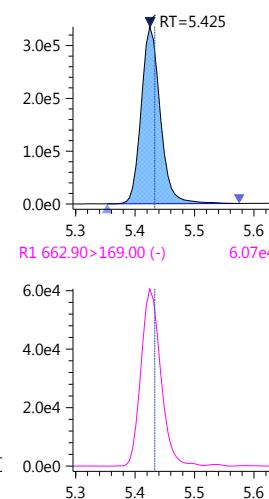
ISTD 614.80>569.95 (-) 1.93e6



PFTrDA

Conc 0.9761
 Area 748590
 R#1 17.94 (0.00)

Q 663.00>618.90 (-) 3.36e5



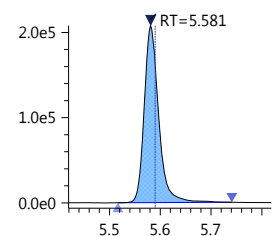
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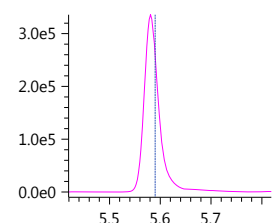
PFTeDA

Conc 1.0441
Area 410387
R#1 159.06 (0.00)

Q 713.40>669.00 (-) 2.08e5



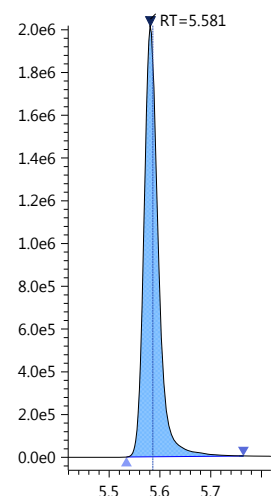
R1 713.40>169.10 (-) 3.36e5



PFTeDA-13C

Conc 4.7598
Area 3962951

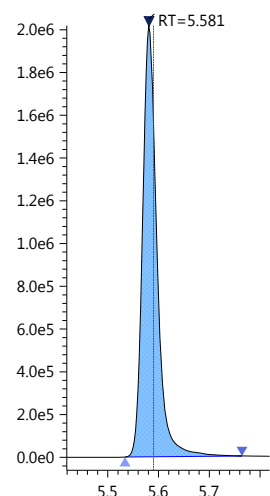
Q 714.70>669.90 (-) 2.02e6



PFTeDA-13C_IS

Conc 5.0000
Area 3962951

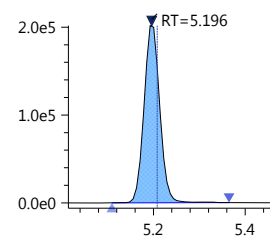
ISTD 714.70>669.90 (-) 2.02e6



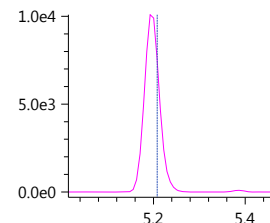
FOSA

Conc 1.0362
Area 483619
R#1 5.01 (0.00)

Q 498.20>78.00 (-) 2.02e5



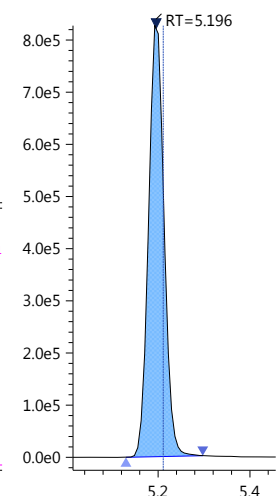
R1 498.20>64.10 (-) 1.01e4



FOSA-13C

Conc 4.1037
Area 1948455

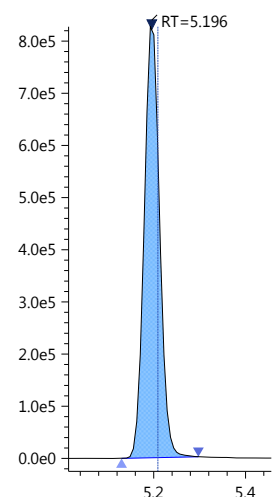
Q 506.00>78.05 (-) 8.28e5



FOSA-13C_IS

Conc 5.0000
Area 1948455

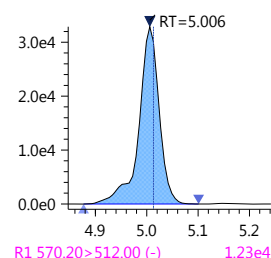
ISTD 506.00>78.05 (-) 8.28e5



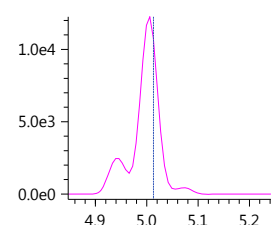
N-MeFOSAA

Conc 1.0351
Area 90156
R#1 37.33 (0.00)

Q 570.20>419.00 (-) 3.29e4



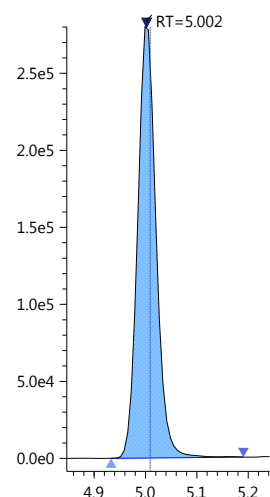
R1 570.20>512.00 (-) 1.23e4



N-MeFOSAA-d3

Conc 5.1970
Area 700578

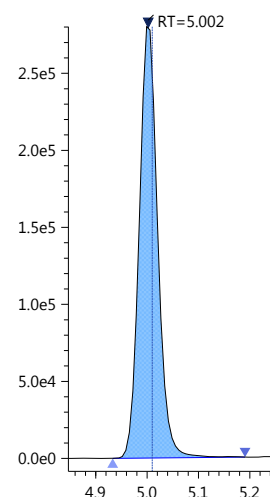
Q 572.80>419.05 (-) 2.80e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 700578

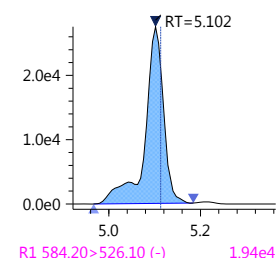
ISTD 572.80>419.05 (-) 2.80e5



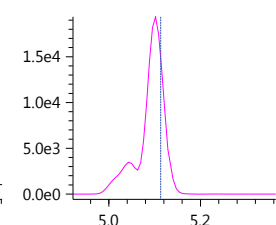
N-EtFOSAA

Conc 1.1495
Area 77469
R#1 70.13 (0.00)

Q 584.20>418.95 (-) 2.76e4



R1 584.20>526.10 (-) 1.94e4

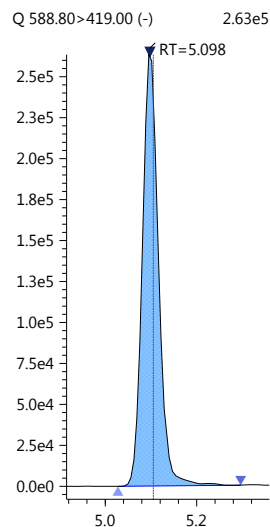


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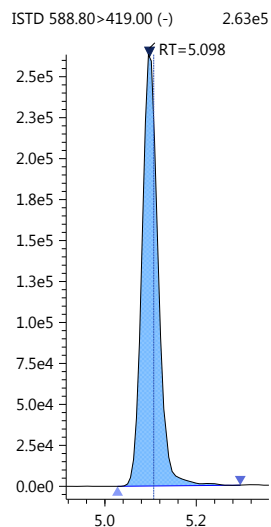
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Conc 5.2245
 Area 648972



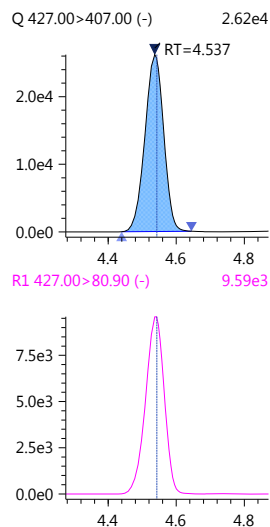
N-EtFOSAA-d5_IS

Conc 5.0000
 Area 648972



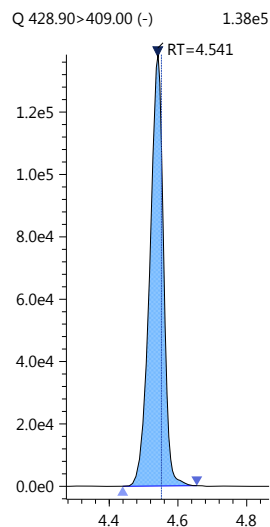
6_2-FTS_1

Conc 1.1262
 Area 100117
 R#1 35.49 (0.00)



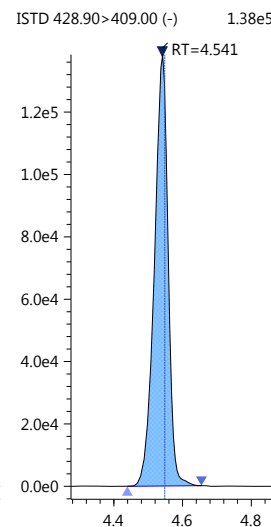
6_2-FTS-13C

Conc 4.8716
 Area 384024



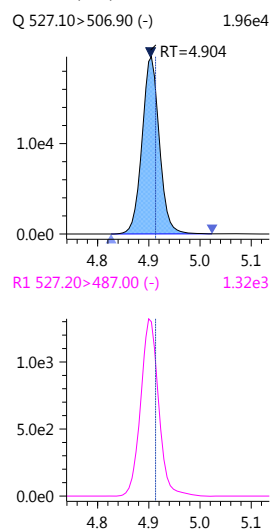
6_2-FTS-13C_IS

Conc 5.0000
 Area 384024



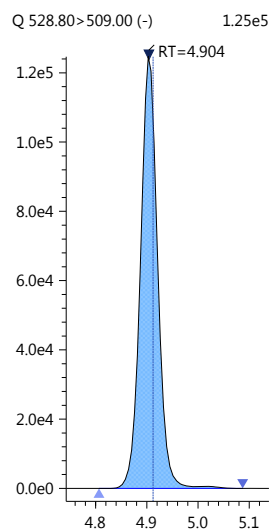
8_2-FTS_1

Conc 0.9588
 Area 46146
 R#1 6.93 (0.00)



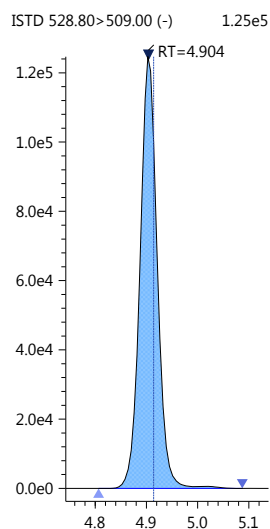
8_2-FTS-13C

Conc 4.5689
 Area 291994



8_2-FTS-13C_IS

Conc 5.0000
 Area 291994



Insight Report

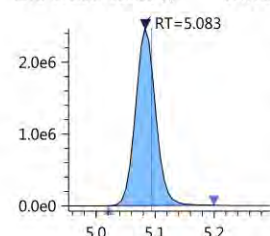
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200428_054

Sample ID: KQ2005615-03
Date acquired: 4/29/2020 12:08:10 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200428_b4\200428_054.lcd
Vial: 38 | Inj. Volume: 15.0000uL | Tray: 3

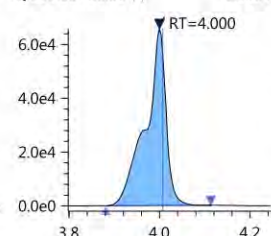
13C7-PFUnDA_IS

Conc 5.0000
Area 5873966
ISTD 570.00>525.00 (-)



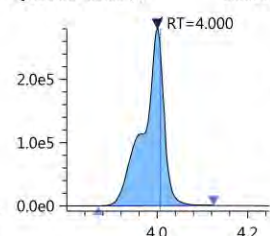
PFBS_1

Conc 1.0112
Area 205050
Q 299.00>80.00 (-)



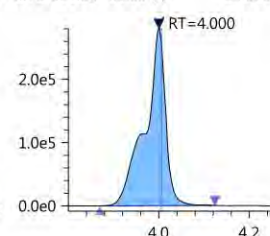
PFBS-13C

Conc 3.8389
Area 881602
Q 301.80>80.00 (-)



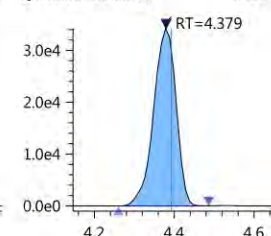
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Conc 5.0000
Area 881602
ISTD 301.80>80.00 (-)



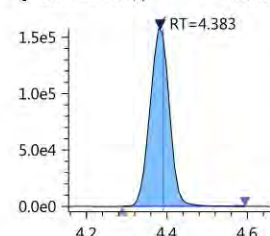
PFHxS_1

Conc 0.9959
Area 134017
Q 399.00>80.00 (-)



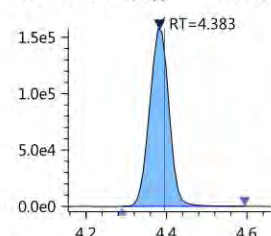
PFHxS-180

Conc 4.1151
Area 532013
Q 402.70>84.05 (-)



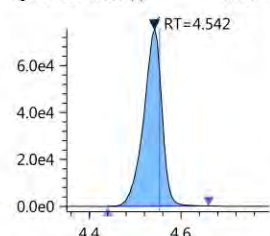
PFHxS-180_IS

Conc 5.0000
Area 532013
ISTD 402.70>84.05 (-)



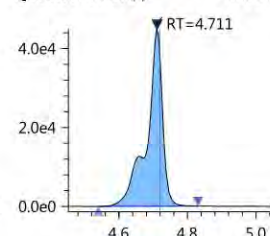
PFHpS_1

Conc 1.2538
Area 208005
Q 449.00>80.15 (-)



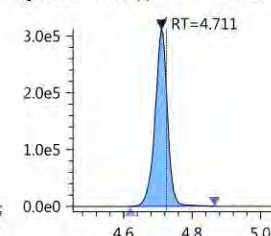
PFOS_1

Conc 1.0847
Area 143804
Q 499.00>80.00 (-)



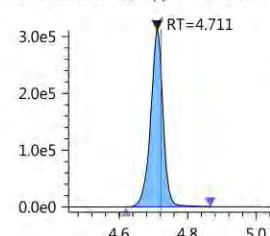
PFOS-13C

Conc 4.3006
Area 782598
Q 502.80>80.05 (-)



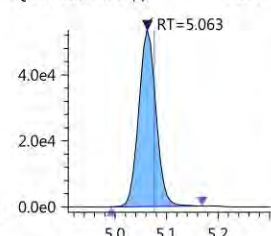
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Conc 5.0000
Area 782598
ISTD 502.80>80.05 (-)



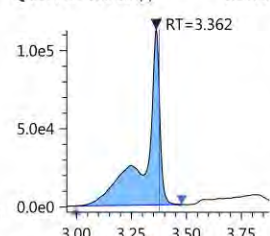
PFDS_1

Conc 1.0057
Area 124612
Q 599.00>79.90 (-)



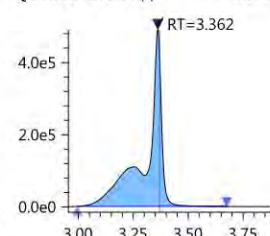
PFBA

Conc 1.1435
Area 516619
Q 213.00>169.10 (-)



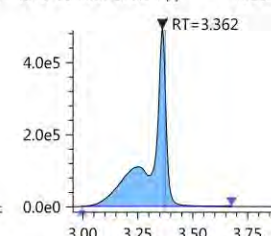
PFBA-13C

Conc 3.7228
Area 2313343
Q 216.90>172.15 (-)



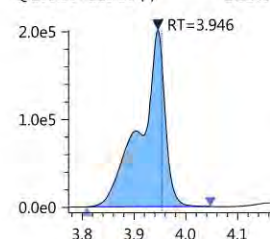
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Conc 5.0000
Area 2313343
ISTD 216.90>172.15 (-)



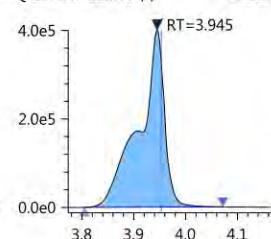
PFPeA

Conc 1.1474
Area 675202
Q 263.05>219.10 (-)



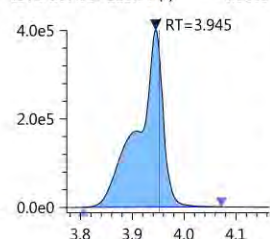
PFPeA-13C

Conc 3.9220
Area 1371490
Q 267.90>223.00 (-)



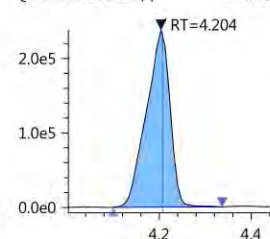
PFPeA-13C_IS

Conc 5.0000
Area 1371490
ISTD 267.90>223.00 (-)



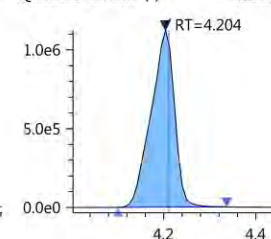
PFHxA

Conc 1.0790
Area 846660
Q 313.00>269.00 (-)



PFHxA-13C

Conc 4.1485
Area 3973780
Q 314.90>270.10 (-)

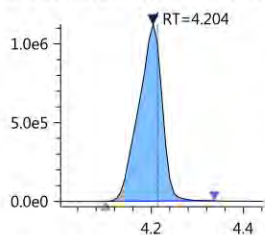


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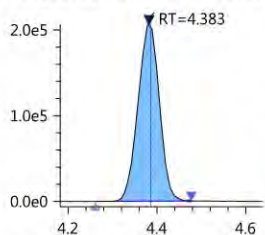
PFHxA-13C_IS

Conc 5.0000
Area 3973780
ISTD 314.90>270.10 (-) 1.13e6



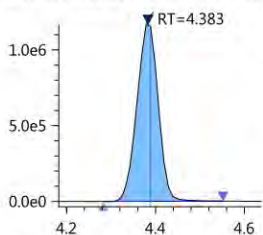
PFHpA

Conc 0.9817
Area 692836
Q 362.90>319.00 (-) 2.07e5



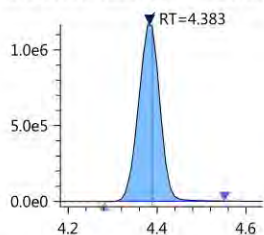
PFHpA-13C

Conc 4.5140
Area 3911671
Q 366.90>322.10 (-) 1.17e6



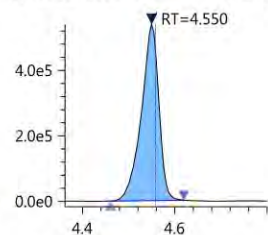
PFHpA-13C_IS

Conc 5.0000
Area 3911671
ISTD 366.90>322.10 (-) 1.17e6



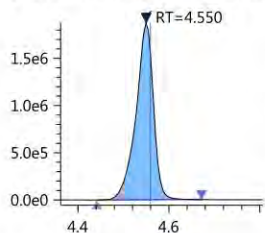
PFOA

Conc 1.1079
Area 1418283
Q 413.00>369.00 (-) 5.41e5



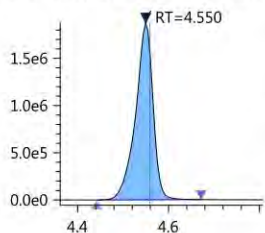
PFOA-13C

Conc 4.7710
Area 5001444
Q 416.80>372.05 (-) 1.88e6



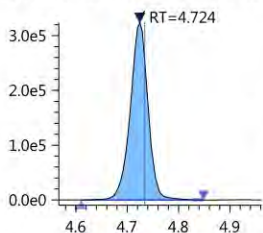
PFOA-13C_IS

Conc 5.0000
Area 5001444
ISTD 416.80>372.05 (-) 1.88e6



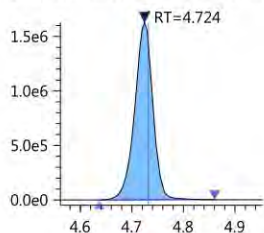
PFNA

Conc 1.0874
Area 774899
Q 463.00>418.90 (-) 3.24e5



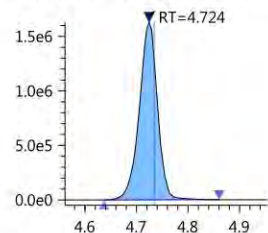
PFNA-13C

Conc 5.0772
Area 3973697
Q 467.80>423.00 (-) 1.63e6



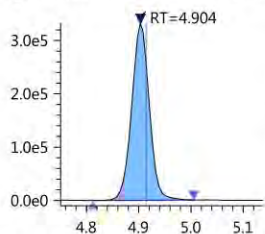
PFNA-13C_IS

Conc 5.0000
Area 3973697
ISTD 467.80>423.00 (-) 1.63e6



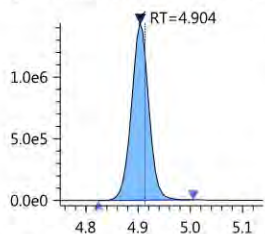
PFDA

Conc 1.1034
Area 774789
Q 513.00>468.80 (-) 3.33e5



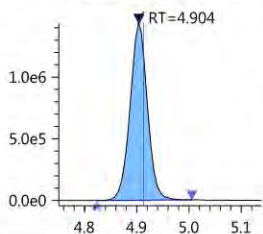
PFDA-13C

Conc 4.6565
Area 3306704
Q 514.80>469.95 (-) 1.44e6



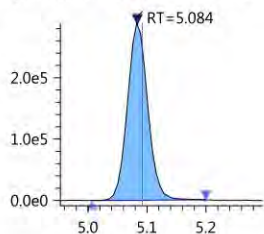
PFDA-13C_IS

Conc 5.0000
Area 3306704
ISTD 514.80>469.95 (-) 1.44e6



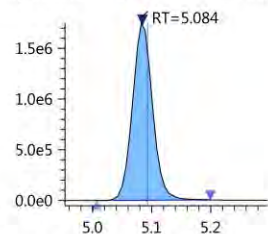
PFUnA

Conc 1.0578
Area 692618
Q 563.00>518.90 (-) 2.89e5



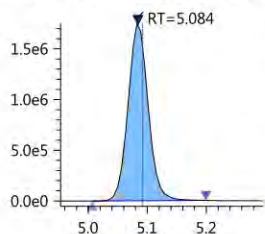
PFUnA-13C

Conc 4.6853
Area 4150128
Q 564.80>519.95 (-) 1.75e6



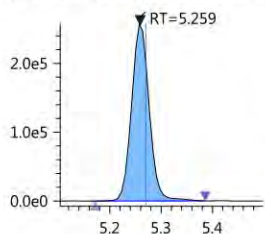
PFUnA-13C_IS

Conc 5.0000
Area 4150128
ISTD 564.80>519.95 (-) 1.75e6



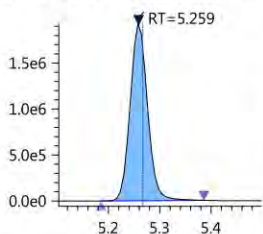
PFDaA

Conc 1.1993
Area 612850
Q 613.05>569.00 (-) 2.58e5



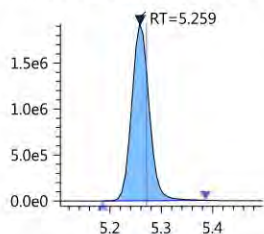
PFDaA-13C

Conc 4.3342
Area 4522852
Q 614.80>569.95 (-) 1.93e6



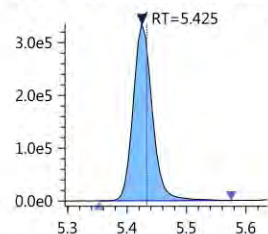
PFDaA-13C_IS

Conc 5.0000
Area 4522852
ISTD 614.80>569.95 (-) 1.93e6



PFTrDA

Conc 0.9761
Area 748590
Q 663.00>618.90 (-) 3.36e5



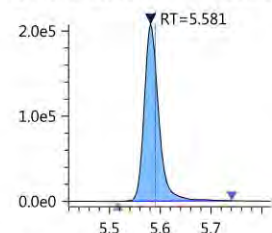
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PFTeDA

Conc 1.0441
Area 410387

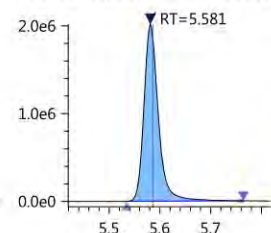
Q 713.40>669.00 (-)



PFTeDA-13C

Conc 4.7598
Area 3962951

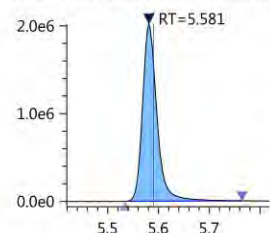
Q 714.70>669.90 (-)



PFTeDA-13C_IS

Conc 5.0000
Area 3962951

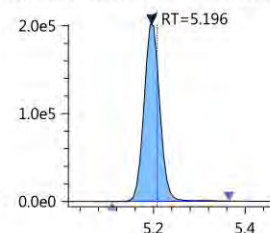
ISTD 714.70>669.90 (-)



FOSA

Conc 1.0362
Area 483619

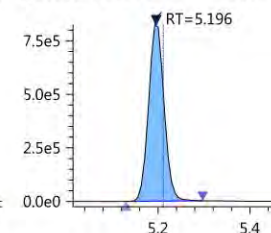
Q 498.20>78.00 (-)



FOSA-13C

Conc 4.1037
Area 1948455

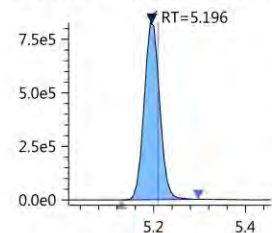
Q 506.00>78.05 (-)



FOSA-13C_IS

Conc 5.0000
Area 1948455

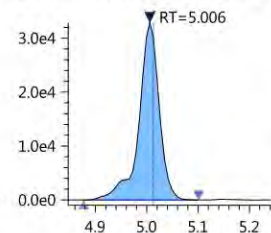
ISTD 506.00>78.05 (-)



N-MeFOSAA

Conc 1.0351
Area 90156

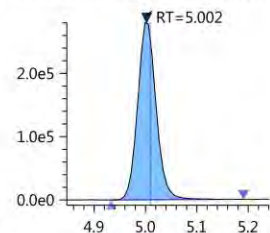
Q 570.20>419.00 (-)



N-MeFOSAA-d3

Conc 5.1970
Area 700578

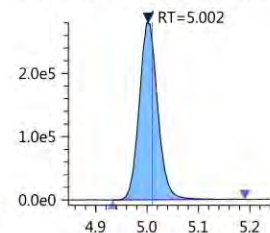
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
Area 700578

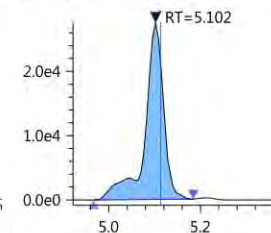
ISTD 572.80>419.05 (-)



N-EtFOSAA

Conc 1.1495
Area 77469

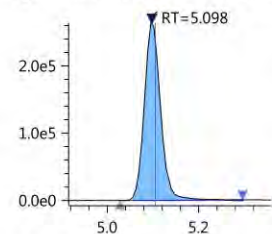
Q 584.20>418.95 (-)



N-EtFOSAA-d5

Conc 5.2245
Area 648972

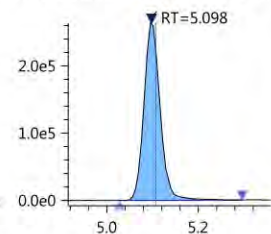
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
Area 648972

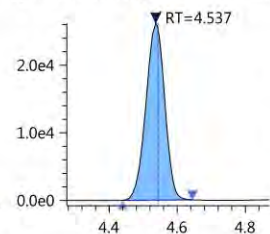
ISTD 588.80>419.00 (-)



6_2-FTS_1

Conc 1.1262
Area 100117

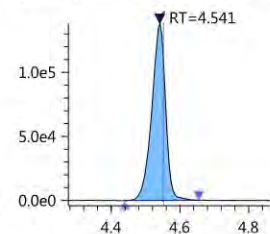
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 4.8716
Area 384024

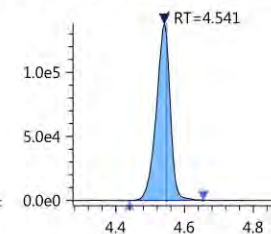
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
Area 384024

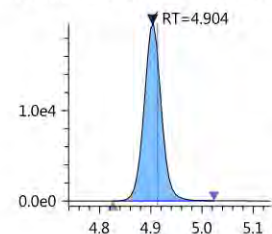
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 0.9588
Area 46146

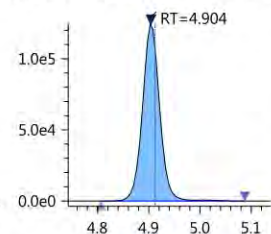
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 4.5689
Area 291994

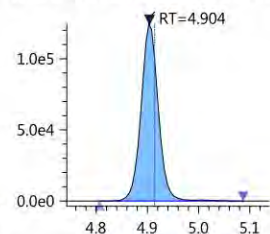
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
Area 291994

ISTD 528.80>509.00 (-)



Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200428_b4\200428_062
Lab ID: KQ2005615-01
RunType: MS
Matrix: Water

Date Acquired: 4/29/20 01:31
Batch ID: 678319
Analysis Method: PFC/537M/PFAS

Validations

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

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	13C2-6:2 FTS	312	10	226	Native ok
	13C2-8:2 FTS	231	10	202	Native ok

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200428_b4\200428_062	Instrument:	K-LCMS-06
Acqu Date:	4/29/20 01:31	Vial:	11
Run Type:	MS	Dilution:	1
Lab ID:	KQ2005615-01	Raw Units:	ng/mL

Bottle ID:	R2003266-006.05	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678319	Prep Lot:	357465	Report Group:	KQ2005615
Analysis	PFC/537M	Prep Method:	ALS SOP		
		Prep Date:	4/27/20		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.081	-0.01	5323569	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.995	-0.01	764808	3.6747	73	20 - 109	Y
18O2-PFHxS	4.385	-0.01	544304	4.6455	93	26 - 122	Y
13C4-PFOS	4.709	-0.01	647440	3.9257	79	25 - 121	Y
13C4-PFBA	3.359	-0.02	1869650	3.3198	66	27 - 124	Y
13C5-PFPeA	3.940	-0.01	782959	2.4705	49	27 - 138	Y
13C2-PFHxA	4.200	-0.01	2423694	2.7918	56	28 - 132	Y
13C4-PFHpA	4.385	-0.01	2769046	3.5258	71	19 - 139	Y
13C4-PFOA	4.549	-0.01	3310198	3.4841	70	22 - 130	Y
13C5-PFNA	4.722	-0.01	3018456	4.2554	85	20 - 127	Y
13C2-PFDA	4.901	-0.01	2628498	4.0841	82	24 - 125	Y
13C2-PFUnDA	5.081	-0.01	3482850	4.3385	87	22 - 125	Y
13C2-PFDoDA	5.256	-0.01	3732309	3.9465	79	19 - 122	Y
13C2-PFTeDA	5.577	-0.01	2988264	3.9602	79	13 - 124	Y
13C8-FOSA	5.194	-0.01	1323359	3.0753	62	18 - 109	Y
D3-MeFOSAA	5.000	-0.01	630930	5.1642	103	9 - 123	Y
D5-EtFOSAA	5.095	-0.01	650580	5.7789	116	12 - 126	Y
13C2-6:2 FTS	4.540	-0.01	1114687	15.6026	312	10 - 226	Y
13C2-8:2 FTS	4.901	-0.01	670217	11.5713	231	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)	3.995	-0.01	206445	1.1735	34.1		Y
Perfluorohexane sulfonic acid (PFHxS)	4.384	0.00	134123	0.9738	28.3		Y

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

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

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

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Data File: J:\LCMS06\Data\200428_b4\200428_062
Acqu Date: 4/29/20 01:31
Run Type: MS
Lab ID: KQ2005615-01

Instrument: K-LCMS06
Vial: 11
Dilution: 1
Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.540	-0.01	186868	1.1009	32.0		Y
Perfluorooctane sulfonic acid (PFOS)	4.709	-0.01	180193	1.6429	47.8		Y
Perfluorodecane sulfonic acid (PFDS)	5.060	-0.01	117439	1.1456	33.3		Y
Perfluorobutanoic acid (PFBA)	3.360	-0.02	739459	2.0252	58.9		Y
Perfluoropentanoic acid (PFPeA)	3.941	-0.01	980731	2.9653	86.3		Y
Perfluorohexanoic acid (PFHxA)	4.200	-0.01	918699	1.9244	56.0		Y
Perfluoroheptanoic acid (PFHpA)	4.385	-0.01	814555	1.6371	47.6		Y
Perfluorooctanoic acid (PFOA)	4.549	-0.01	1358053	1.6067	46.7		Y
Perfluorononanoic acid (PFNA)	4.722	-0.01	616170	1.1385	33.1		Y
Perfluorodecanoic acid (PFDA)	4.901	-0.01	631470	1.1314	32.9		Y
Perfluoroundecanoic acid (PFUnDA)	5.081	-0.01	644749	1.1748	34.2		Y
Perfluorododecanoic acid (PFDoDA)	5.256	-0.01	536354	1.2712	37.0		Y
Perfluorotridecanoic acid (PFTrDA)	5.423	-0.01	657581	1.1379	33.1		Y
Perfluorotetradecanoic acid (PFTeDA)	5.578	-0.01	316856	1.0725	31.2		Y
Perfluorooctane sulfonamide (FOSA)	5.194	-0.01	336964	1.0631	30.9		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.002	-0.01	77644	0.9899	28.8		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.098	-0.01	79062	1.1702	34.0		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.539	-0.01	275894	1.0691	31.1		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.901	-0.01	107426	0.9725	28.3		Y

Prep Amount: 275.0000 mL
Prep Final Amount: 8.00 mL

Dilution: 1
Basis Factor: 100.00

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

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

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

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Insight Report

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200428_062

Sample ID: KQ2005615-01

Date acquired: 4/29/2020 1:31:50 AM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200428_b4\200428_062.lcd

Vial: 46 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.081	5323569	5323569	1	5.0000	ng/mL	----
PFBS_1	Auto	3.995	206445	764808	2	1.1735	ng/mL	----
PFBS-13C	Auto	3.995	764808	5323569	1	3.6747	ng/mL	----
PFBS-13C_IS	Auto	3.995	764808	764808	2	5.0000	ng/mL	----
PFHxS_1	Auto	4.384	134123	544304	3	0.9738	ng/mL	----
PFHxS-18O	Auto	4.385	544304	5323569	1	4.6455	ng/mL	----
PFHxS-18O_IS	Auto	4.385	544304	544304	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.540	186868	544304	3	1.1009	ng/mL	----
PFOS_1	Auto	4.709	180193	647440	4	1.6429	ng/mL	----
PFOS-13C	Auto	4.709	647440	5323569	1	3.9257	ng/mL	----
PFOS-13C_IS	Auto	4.709	647440	647440	4	5.0000	ng/mL	----
PFDS_1	Auto	5.060	117439	647440	4	1.1456	ng/mL	----
PFBA	Auto	3.360	739459	1869650	5	2.0252	ng/mL	----
PFBA-13C	Auto	3.359	1869650	5323569	1	3.3198	ng/mL	----
PFBA-13C_IS	Auto	3.359	1869650	1869650	5	5.0000	ng/mL	----
PFPeA	Auto	3.941	980731	782959	6	2.9653	ng/mL	----
PFPeA-13C	Auto	3.940	782959	5323569	1	2.4705	ng/mL	----
PFPeA-13C_IS	Auto	3.940	782959	782959	6	5.0000	ng/mL	----
PFHxA	Auto	4.200	918699	2423694	7	1.9244	ng/mL	----
PFHxA-13C	Auto	4.200	2423694	5323569	1	2.7918	ng/mL	----
PFHxA-13C_IS	Auto	4.200	2423694	2423694	7	5.0000	ng/mL	----
PFHpA	Auto	4.385	814555	2769046	8	1.6371	ng/mL	----
PFHpA-13C	Auto	4.385	2769046	5323569	1	3.5258	ng/mL	----
PFHpA-13C_IS	Auto	4.385	2769046	2769046	8	5.0000	ng/mL	----
PFOA	Auto	4.549	1358053	3310198	9	1.6067	ng/mL	----
PFOA-13C	Auto	4.549	3310198	5323569	1	3.4841	ng/mL	----
PFOA-13C_IS	Auto	4.549	3310198	3310198	9	5.0000	ng/mL	----
PFNA	Auto	4.722	616170	3018456	10	1.1385	ng/mL	----
PFNA-13C	Auto	4.722	3018456	5323569	1	4.2554	ng/mL	----
PFNA-13C_IS	Auto	4.722	3018456	3018456	10	5.0000	ng/mL	----
PFDA	Auto	4.901	631470	2628498	11	1.1314	ng/mL	----
PFDA-13C	Auto	4.901	2628498	5323569	1	4.0841	ng/mL	----
PFDA-13C_IS	Auto	4.901	2628498	2628498	11	5.0000	ng/mL	----
PFUnA	Auto	5.081	644749	3482850	12	1.1748	ng/mL	----
PFUnA-13C	Auto	5.081	3482850	5323569	1	4.3385	ng/mL	----
PFUnA-13C_IS	Auto	5.081	3482850	3482850	12	5.0000	ng/mL	----
PFDoA	Auto	5.256	536354	3732309	13	1.2712	ng/mL	----
PFDoA-13C	Auto	5.256	3732309	5323569	1	3.9465	ng/mL	----
PFDoA-13C_IS	Auto	5.256	3732309	3732309	13	5.0000	ng/mL	----
PFTTrDA	Auto	5.423	657581	2988264	14	1.1379	ng/mL	----
PFTTeDA	Auto	5.578	316856	2988264	14	1.0725	ng/mL	----
PFTTeDA-13C	Auto	5.577	2988264	5323569	1	3.9602	ng/mL	----
PFTTeDA-13C_IS	Auto	5.577	2988264	2988264	14	5.0000	ng/mL	----
FOSA	Auto	5.194	336964	1323359	16	1.0631	ng/mL	----
FOSA-13C	Auto	5.194	1323359	5323569	1	3.0753	ng/mL	----
FOSA-13C_IS	Auto	5.194	1323359	1323359	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.002	77644	630930	21	0.9899	ng/mL	----
N-MeFOSAA-d3	Auto	5.000	630930	5323569	1	5.1642	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.000	630930	630930	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.098	79062	650580	22	1.1702	ng/mL	----
N-EtFOSAA-d5	Auto	5.095	650580	5323569	1	5.7789	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.095	650580	650580	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.539	275894	1114687	24	1.0691	ng/mL	----
6_2-FTS-13C	Auto	4.540	1114687	5323569	1	15.6026	ng/mL	----
6_2-FTS-13C_IS	Auto	4.540	1114687	1114687	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.901	107426	670217	25	0.9725	ng/mL	----
8_2-FTS-13C	Auto	4.901	670217	5323569	1	11.5713	ng/mL	----
8_2-FTS-13C_IS	Auto	4.901	670217	670217	25	5.0000	ng/mL	----

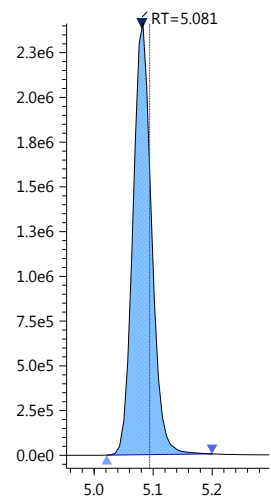
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13C7-PFUnDA_IS

Conc 5.0000
Area 5323569

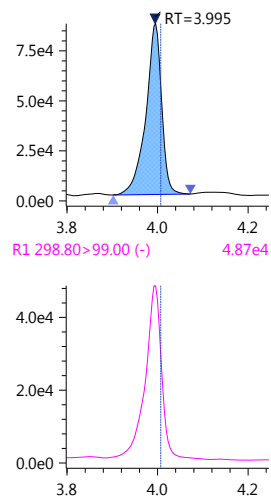
ISTD 570.00>525.00 (-) 2.41e6



PFBS_1

Conc 1.1735
Area 206445
R#1 56.94 (0.00)

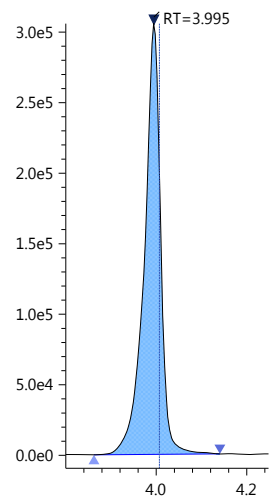
Q 299.00>80.00 (-) 8.86e4



PFBS-13C

Conc 3.6747
Area 764808

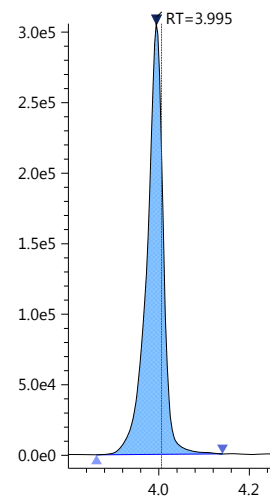
Q 301.80>80.00 (-) 3.06e5



PFBS-13C_IS

Conc 5.0000
Area 764808

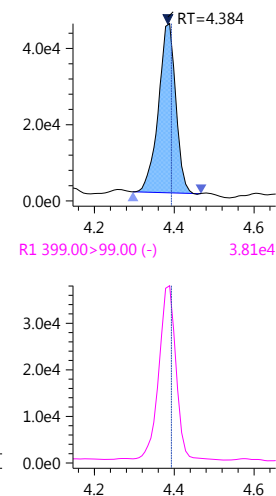
ISTD 301.80>80.00 (-) 3.06e5



PFHxS_1

Conc 0.9738
Area 134123
R#1 83.61 (0.00)

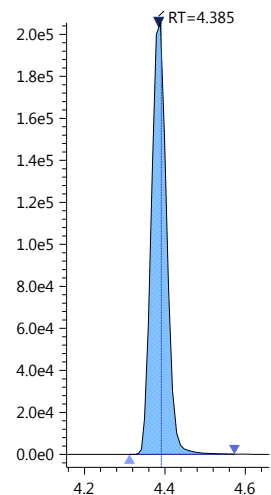
Q 399.00>80.00 (-) 4.65e4



PFHxS-180

Conc 4.6455
Area 544304

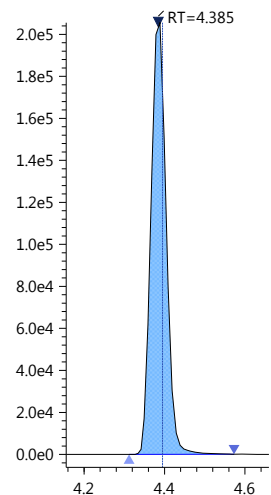
Q 402.70>84.05 (-) 2.06e5



PFHxS-180_IS

Conc 5.0000
Area 544304

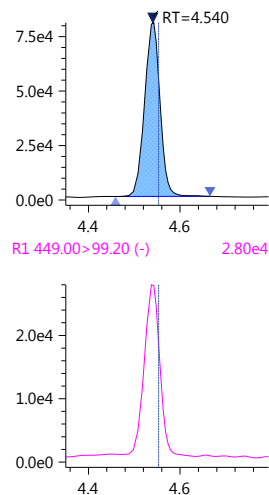
ISTD 402.70>84.05 (-) 2.06e5



PFHpS_1

Conc 1.1009
Area 186868
R#1 34.22 (0.00)

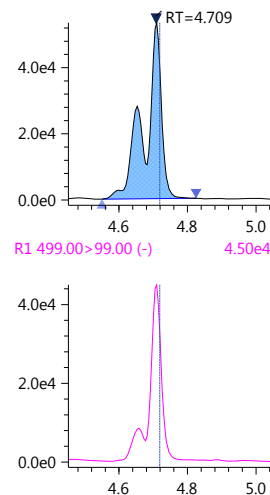
Q 449.00>80.15 (-) 8.14e4



PFOS_1

Conc 1.6429
Area 180193
R#1 83.84 (0.00)

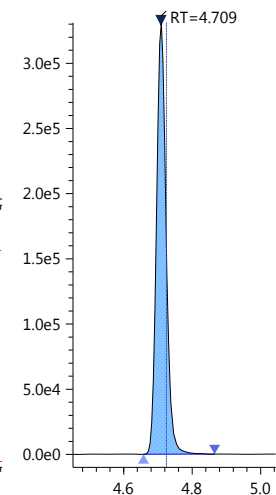
Q 499.00>80.00 (-) 5.36e4



PFOS-13C

Conc 3.9257
Area 647440

Q 502.80>80.05 (-) 3.31e5



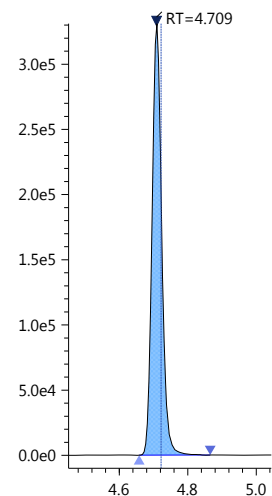
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PFOS-13C_IS

Conc 5.0000
Area 647440

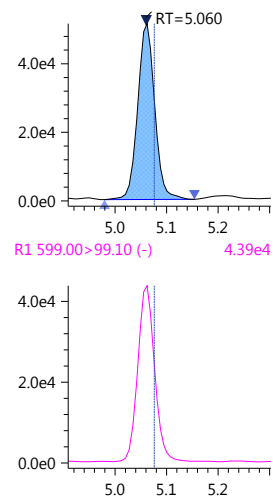
ISTD 502.80>80.05 (-) 3.31e5



PFDS_1

Conc 1.1456
Area 117439
R#1 84.54 (0.00)

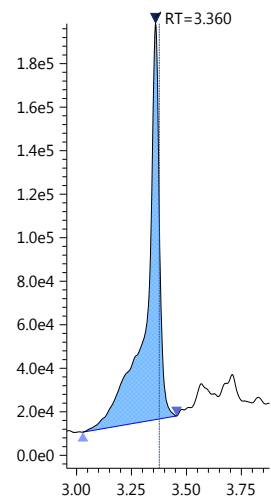
Q 599.00>79.90 (-) 5.17e4



PFBA

Conc 2.0252
Area 739459

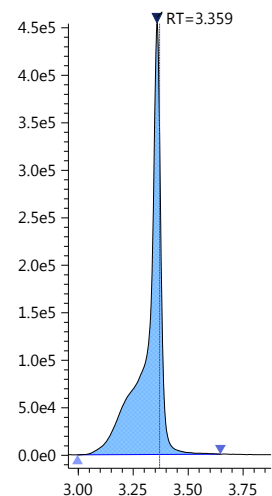
Q 213.00>169.10 (-) 1.98e5



PFBA-13C

Conc 3.3198
Area 1869650

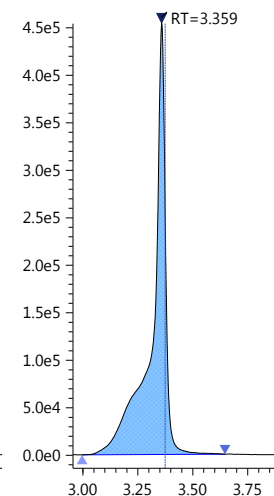
Q 216.90>172.15 (-) 4.54e5



PFBA-13C_IS

Conc 5.0000
Area 1869650

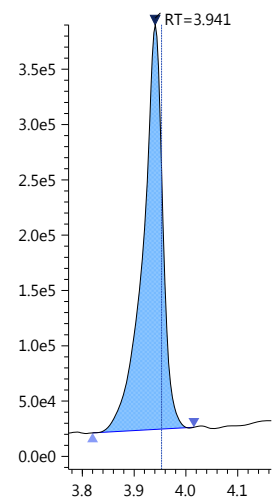
ISTD 216.90>172.15 (-) 4.54e5



PFPeA

Conc 2.9653
Area 980731

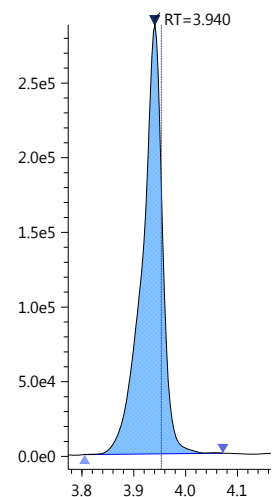
Q 263.05>219.10 (-) 3.90e5



PFPeA-13C

Conc 2.4705
Area 782959

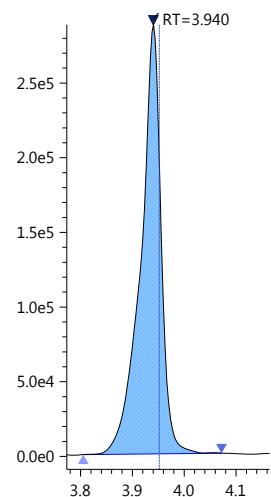
Q 267.90>223.00 (-) 2.89e5



PFPeA-13C_IS

Conc 5.0000
Area 782959

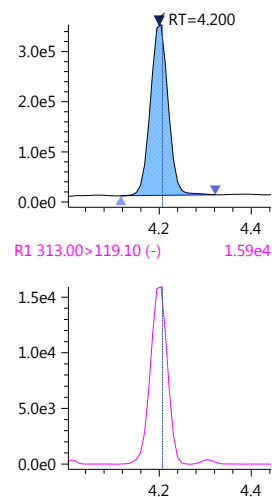
ISTD 267.90>223.00 (-) 2.89e5



PFHxA

Conc 1.9244
Area 918699
R#1 4.70 (0.00)

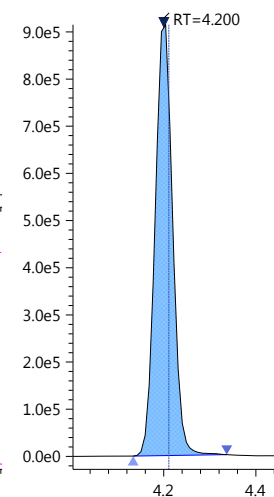
Q 313.00>269.00 (-) 3.54e5



PFHxA-13C

Conc 2.7918
Area 2423694

Q 314.90>270.10 (-) 9.15e5



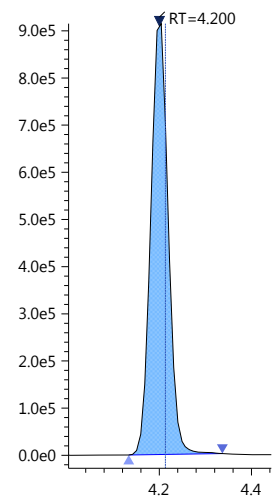
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PFHxA-13C_IS

Conc 5.0000
Area 2423694

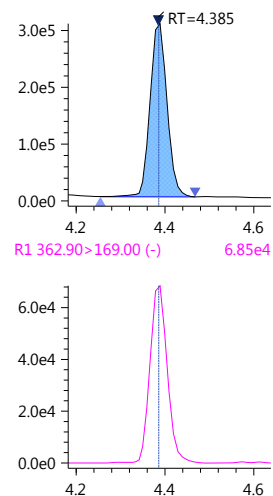
ISTD 314.90>270.10 (-) 9.15e5



PFHpA

Conc 1.6371
Area 814555
R#1 22.42 (0.00)

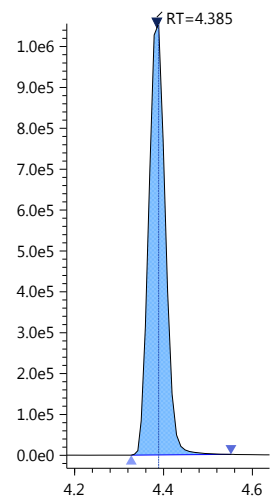
Q 362.90>319.00 (-) 3.12e5



PFHpA-13C

Conc 3.5258
Area 2769046

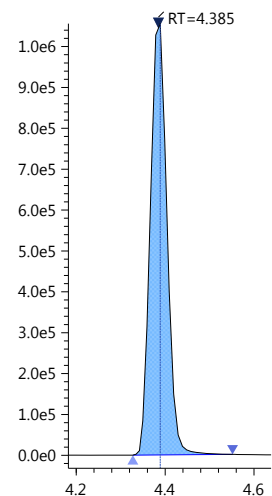
Q 366.90>322.10 (-) 1.06e6



PFHpA-13C_IS

Conc 5.0000
Area 2769046

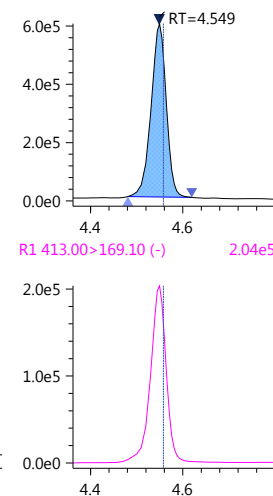
ISTD 366.90>322.10 (-) 1.06e6



PFOA

Conc 1.6067
Area 1358053
R#1 33.89 (0.00)

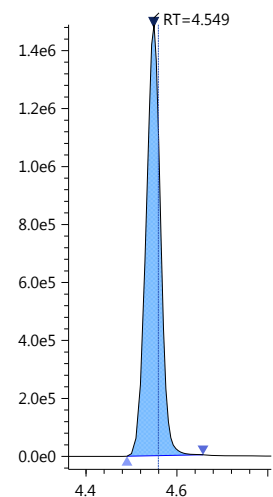
Q 413.00>369.00 (-) 6.08e5



PFOA-13C

Conc 3.4841
Area 3310198

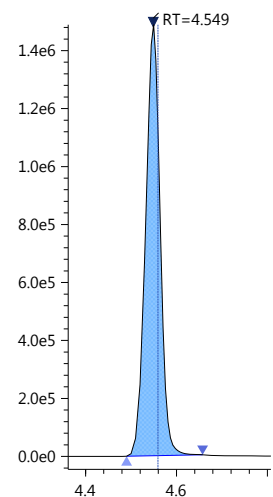
Q 416.80>372.05 (-) 1.49e6



PFOA-13C_IS

Conc 5.0000
Area 3310198

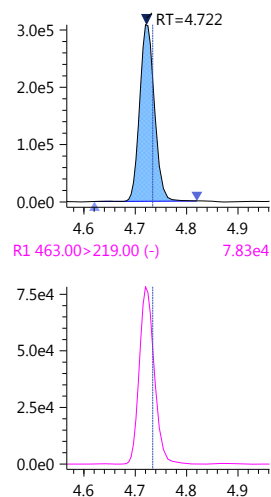
ISTD 416.80>372.05 (-) 1.49e6



PFNA

Conc 1.1385
Area 616170
R#1 24.41 (0.00)

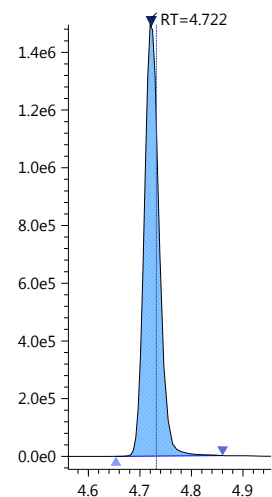
Q 463.00>418.90 (-) 3.09e5



PFNA-13C

Conc 4.2554
Area 3018456

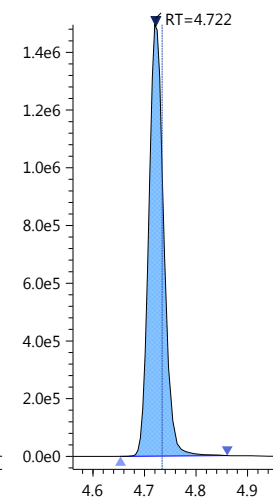
Q 467.80>423.00 (-) 1.50e6



PFNA-13C_IS

Conc 5.0000
Area 3018456

ISTD 467.80>423.00 (-) 1.50e6



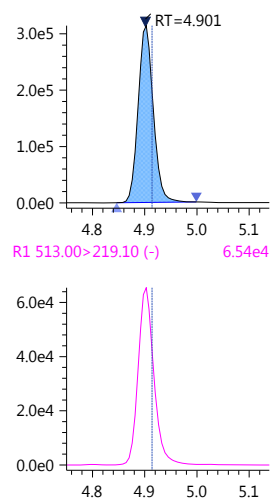
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PFDA

Conc 1.1314
Area 631470
R#1 20.76 (0.00)

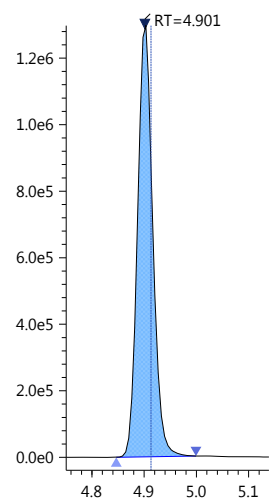
Q 513.00>468.80 (-) 3.15e5



PFDA-13C

Conc 4.0841
Area 2628498

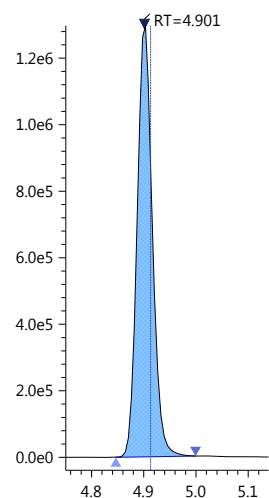
Q 514.80>469.95 (-) 1.30e6



PFDA-13C_IS

Conc 5.0000
Area 2628498

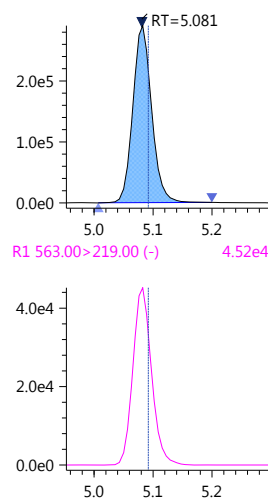
ISTD 514.80>469.95 (-) 1.30e6



PFUnA

Conc 1.1748
Area 644749
R#1 15.56 (0.00)

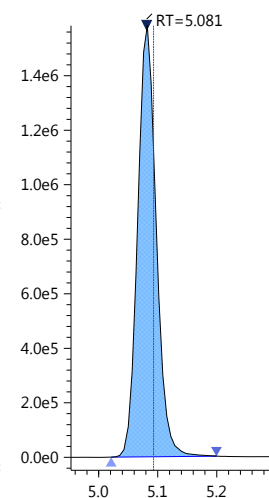
Q 563.00>518.90 (-) 2.91e5



PFUnA-13C

Conc 4.3385
Area 3482850

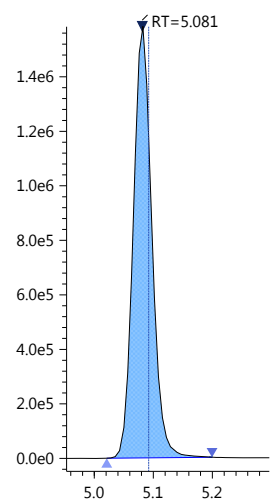
Q 564.80>519.95 (-) 1.58e6



PFUnA-13C_IS

Conc 5.0000
Area 3482850

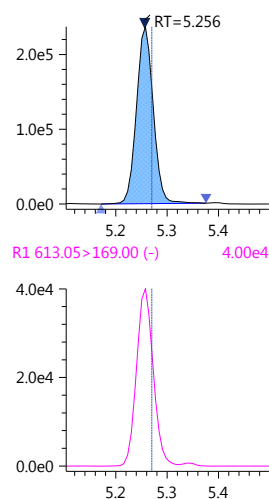
ISTD 564.80>519.95 (-) 1.58e6



PFD0A

Conc 1.2712
Area 536354
R#1 16.91 (0.00)

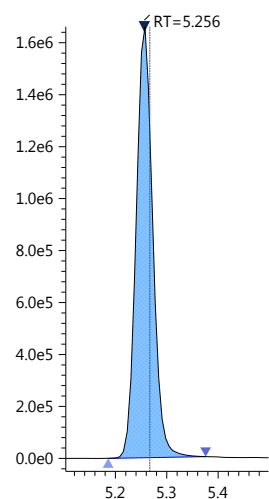
Q 613.05>569.00 (-) 2.37e5



PFD0A-13C

Conc 3.9465
Area 3732309

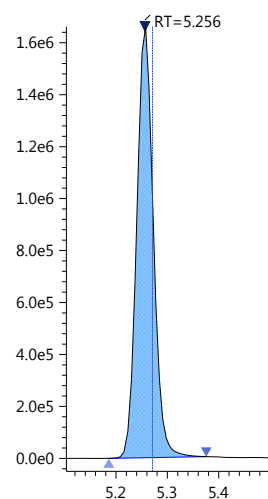
Q 614.80>569.95 (-) 1.66e6



PFD0A-13C_IS

Conc 5.0000
Area 3732309

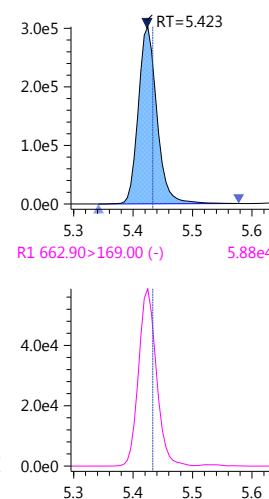
ISTD 614.80>569.95 (-) 1.66e6



PFTrDA

Conc 1.1379
Area 657581
R#1 19.52 (0.00)

Q 663.00>618.90 (-) 3.03e5



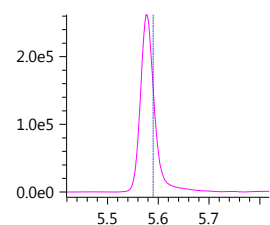
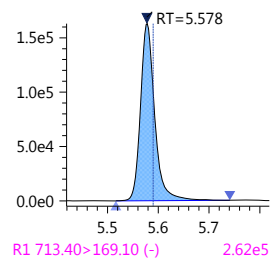
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PFTeDA

Conc 1.0725
Area 316856
R#1 161.91 (0.00)

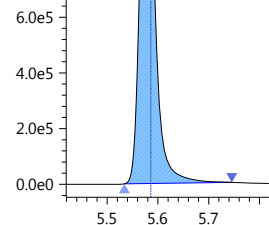
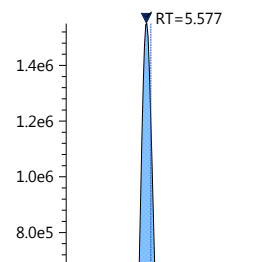
Q 713.40>669.00 (-) 1.63e5



PFTeDA-13C

Conc 3.9602
Area 2988264

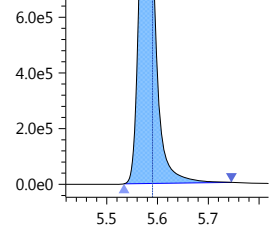
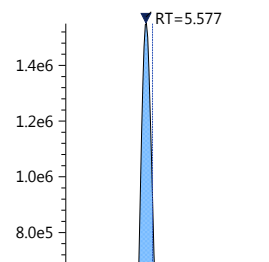
Q 714.70>669.90 (-) 1.55e6



PFTeDA-13C_IS

Conc 5.0000
Area 2988264

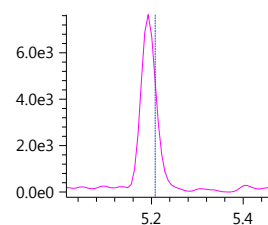
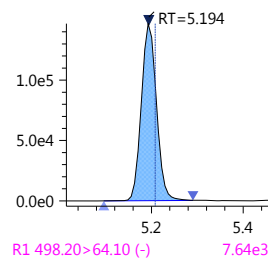
ISTD 714.70>669.90 (-) 1.55e6



FOSA

Conc 1.0631
Area 336964
R#1 5.08 (0.00)

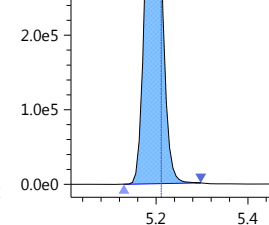
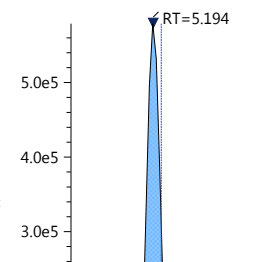
Q 498.20>78.00 (-) 1.47e5



FOSA-13C

Conc 3.0753
Area 1323359

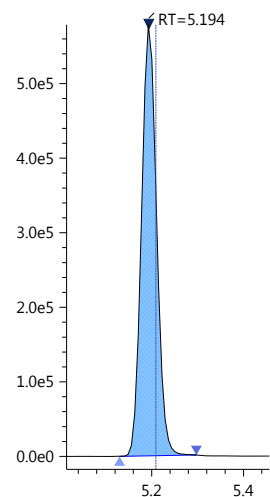
Q 506.00>78.05 (-) 5.79e5



FOSA-13C_IS

Conc 5.0000
Area 1323359

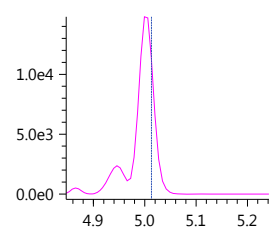
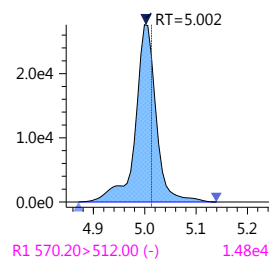
ISTD 506.00>78.05 (-) 5.79e5



N-MeFOSAA

Conc 0.9899
Area 77644
R#1 53.30 (0.00)

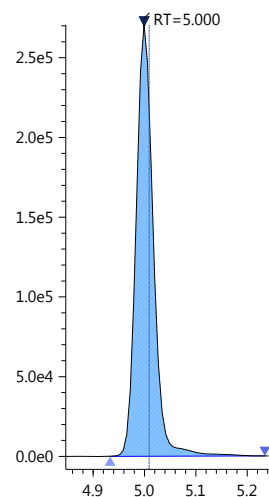
Q 570.20>419.00 (-) 2.76e4



N-MeFOSAA-d3

Conc 5.1642
Area 630930

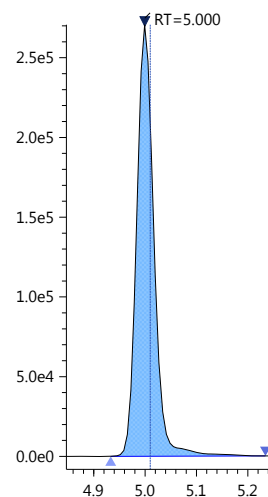
Q 572.80>419.05 (-) 2.71e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 630930

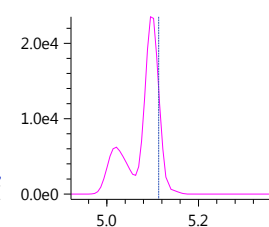
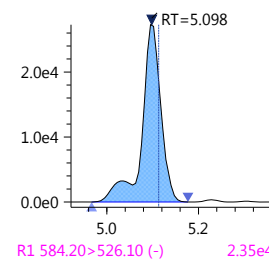
ISTD 572.80>419.05 (-) 2.71e5



N-EtFOSAA

Conc 1.1702
Area 79062
R#1 87.71 (0.00)

Q 584.20>418.95 (-) 2.73e4



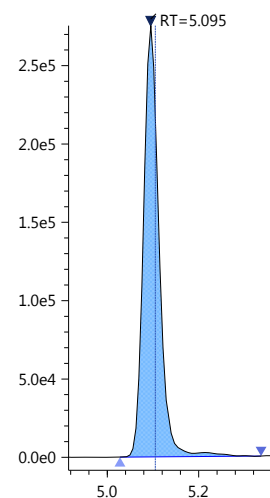
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N-EtFOSAA-d5

Conc 5.7789
 Area 650580

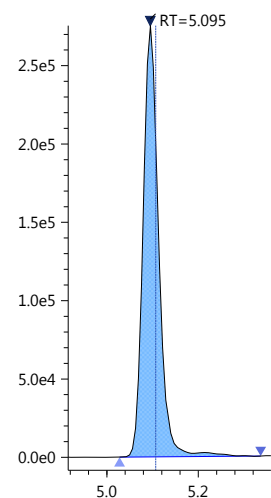
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
 Area 650580

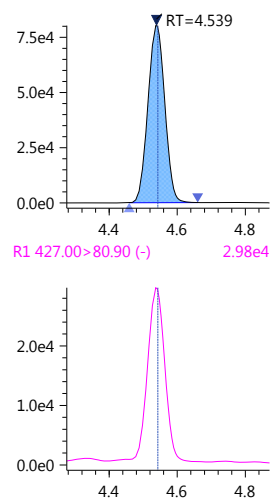
ISTD 588.80>419.00 (-)



6_2-FTS_1

Conc 1.0691
 Area 275894
 R#1 36.42 (0.00)

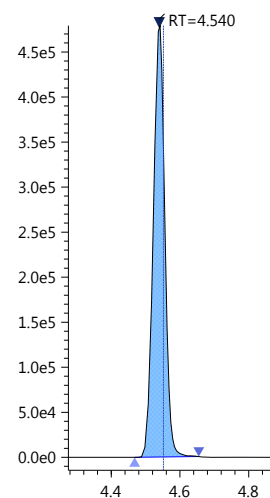
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 15.6026
 Area 1114687

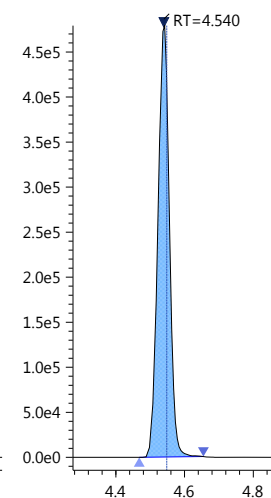
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
 Area 1114687

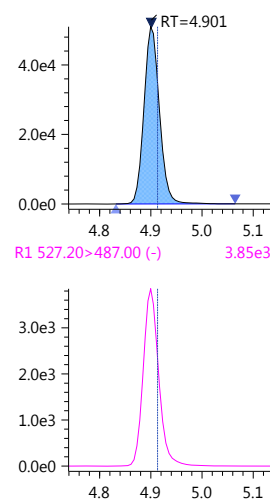
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 0.9725
 Area 107426
 R#1 7.51 (0.00)

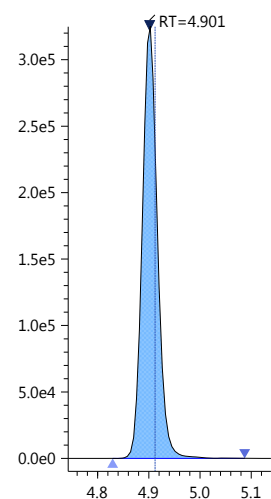
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 11.5713
 Area 670217

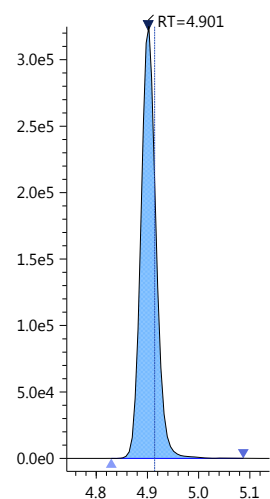
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
 Area 670217

ISTD 528.80>509.00 (-)



Insight Report

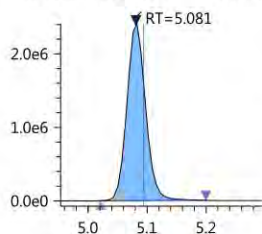
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200428_062

Sample ID: KQ2005615-01
Date acquired: 4/29/2020 1:31:50 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200428_b4\200428_062.lcd
Vial: 46 | Inj. Volume: 15.0000uL | Tray: 3

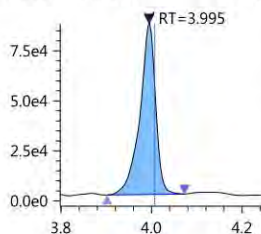
13C7-PFUnDA_IS

Conc 5.0000
Area 5323569
ISTD 570.00>525.00 (-)



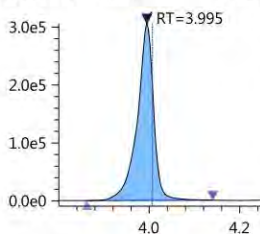
PFBS_1

Conc 1.1735
Area 206445
Q 299.00>80.00 (-)



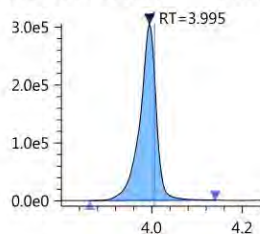
PFBS-13C

Conc 3.6747
Area 764808
Q 301.80>80.00 (-)



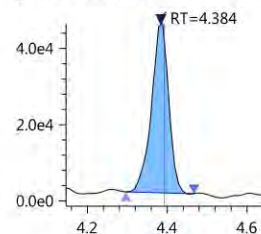
PFBS-13C_IS

Conc 5.0000
Area 764808
ISTD 301.80>80.00 (-)



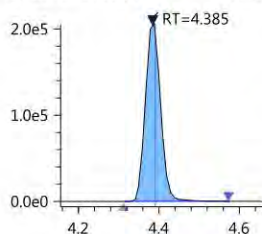
PFHxS_1

Conc 0.9738
Area 134123
Q 399.00>80.00 (-)



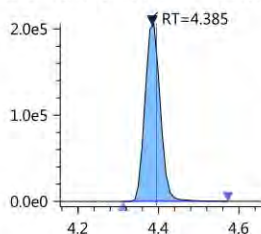
PFHxS-180

Conc 4.6455
Area 544304
Q 402.70>84.05 (-)



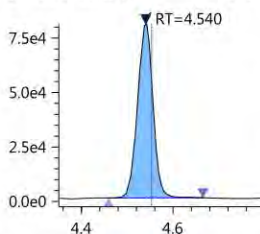
PFHxS-180_IS

Conc 5.0000
Area 544304
ISTD 402.70>84.05 (-)



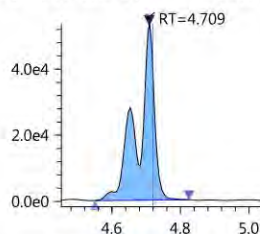
PFHpS_1

Conc 1.1009
Area 186868
Q 449.00>80.15 (-)



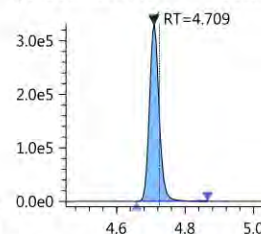
PFOS_1

Conc 1.6429
Area 180193
Q 499.00>80.00 (-)



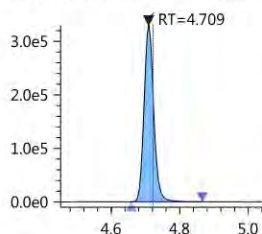
PFOS-13C

Conc 3.9257
Area 647440
Q 502.80>80.05 (-)



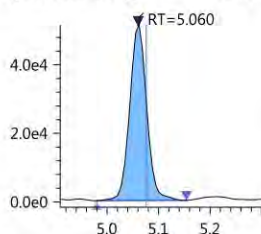
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Conc 5.0000
Area 647440
ISTD 502.80>80.05 (-)



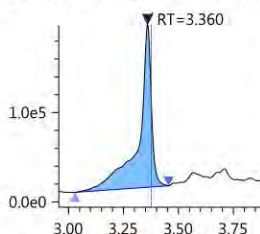
PFDS_1

Conc 1.1456
Area 117439
Q 599.00>79.90 (-)



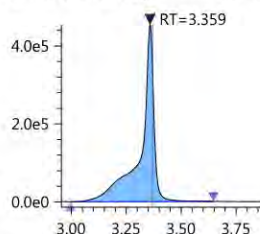
PFBA

Conc 2.0252
Area 739459
Q 213.00>169.10 (-)



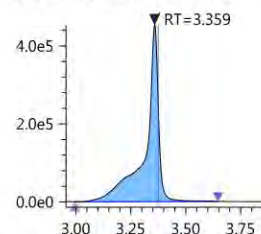
PFBA-13C

Conc 3.3198
Area 1869650
Q 216.90>172.15 (-)



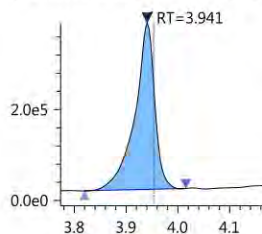
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Conc 5.0000
Area 1869650
ISTD 216.90>172.15 (-)



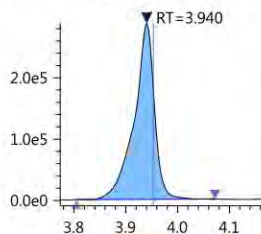
PFPeA

Conc 2.9653
Area 980731
Q 263.05>219.10 (-)



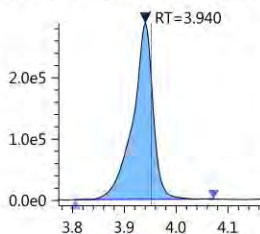
PFPeA-13C

Conc 2.4705
Area 782959
Q 267.90>223.00 (-)



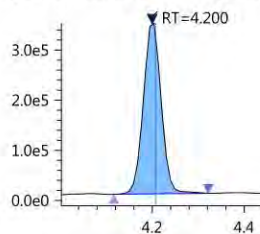
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Conc 5.0000
Area 782959
ISTD 267.90>223.00 (-)



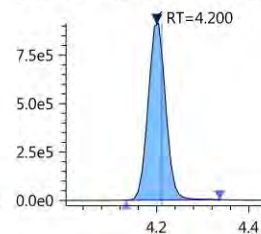
PFHxA

Conc 1.9244
Area 918699
Q 313.00>269.00 (-)



PFHxA-13C

Conc 2.7918
Area 2423694
Q 314.90>270.10 (-)

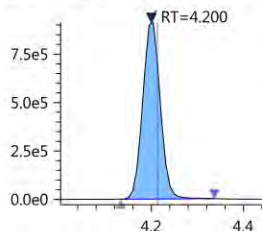


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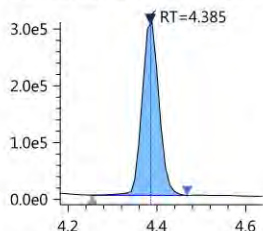
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Conc 5.0000
 Area 2423694
 ISTD 314.90>270.10 (-)



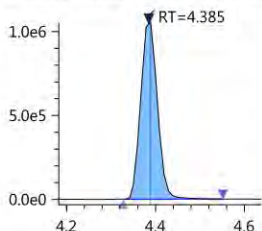
PFHpA

Conc 1.6371
 Area 814555
 Q 362.90>319.00 (-)



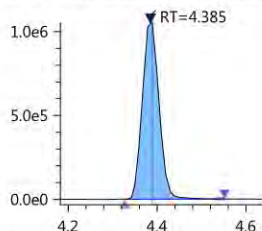
PFHpA-13C

Conc 3.5258
 Area 2769046
 Q 366.90>322.10 (-)



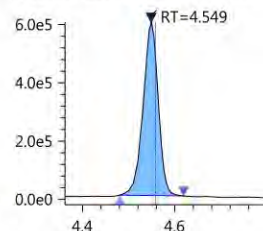
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Conc 5.0000
 Area 2769046
 ISTD 366.90>322.10 (-)



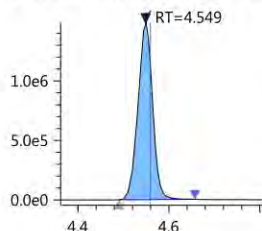
PFOA

Conc 1.6067
 Area 1358053
 Q 413.00>369.00 (-)



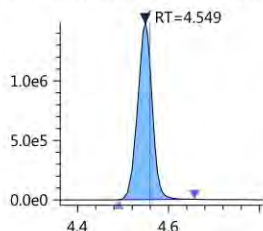
PFOA-13C

Conc 3.4841
 Area 3310198
 Q 416.80>372.05 (-)



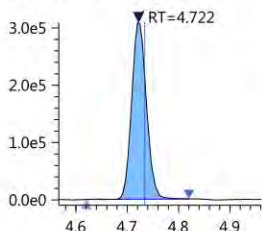
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Conc 5.0000
 Area 3310198
 ISTD 416.80>372.05 (-)



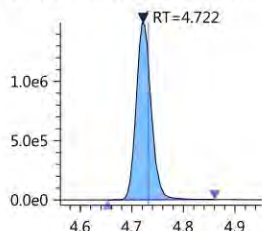
PFNA

Conc 1.1385
 Area 616170
 Q 463.00>418.90 (-)



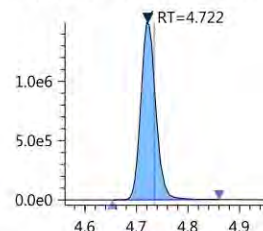
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Conc 4.2554
 Area 3018456
 Q 467.80>423.00 (-)



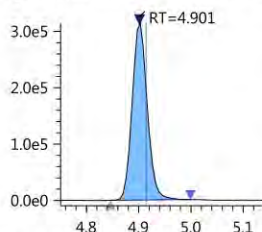
PFNA-13C_IS

Conc 5.0000
 Area 3018456
 ISTD 467.80>423.00 (-)



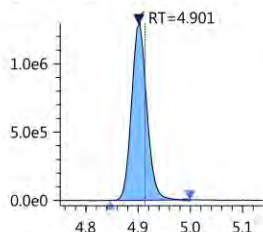
PFDA

Conc 1.1314
 Area 631470
 Q 513.00>468.80 (-)



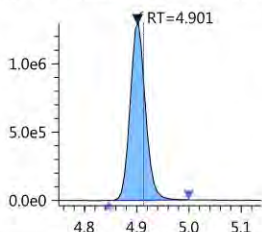
PFDA-13C

Conc 4.0841
 Area 2628498
 Q 514.80>469.95 (-)



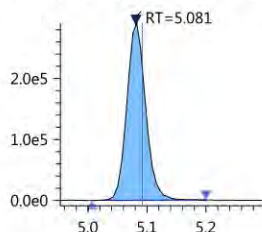
PFDA-13C_IS

Conc 5.0000
 Area 2628498
 ISTD 514.80>469.95 (-)



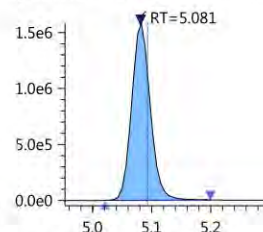
PFUnA

Conc 1.1748
 Area 644749
 Q 563.00>518.90 (-)



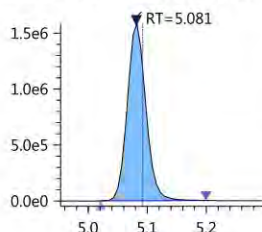
PFUnA-13C

Conc 4.3385
 Area 3482850
 Q 564.80>519.95 (-)



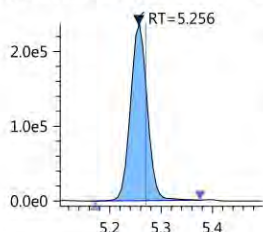
PFUnA-13C_IS

Conc 5.0000
 Area 3482850
 ISTD 564.80>519.95 (-)



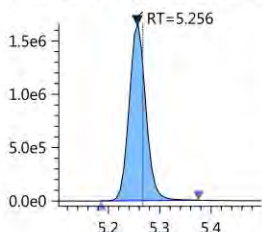
PFDaA

Conc 1.2712
 Area 536354
 Q 613.05>569.00 (-)



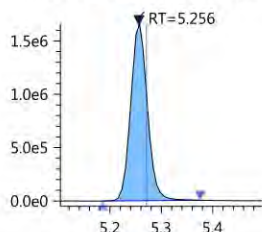
PFDaA-13C

Conc 3.9465
 Area 3732309
 Q 614.80>569.95 (-)



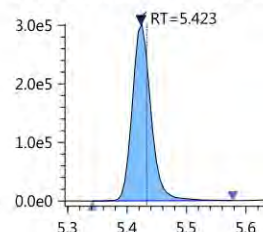
PFDaA-13C_IS

Conc 5.0000
 Area 3732309
 ISTD 614.80>569.95 (-)



PFTrDA

Conc 1.1379
 Area 657581
 Q 663.00>618.90 (-)



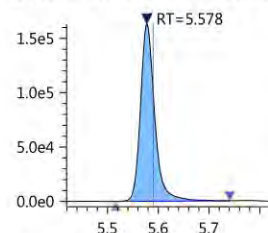
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PFTeDA

Conc 1.0725
Area 316856

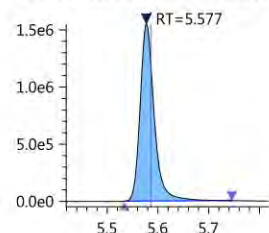
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PFTeDA-13C

Conc 3.9602
Area 2988264

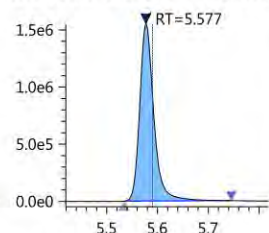
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PFTeDA-13C_IS

Conc 5.0000
Area 2988264

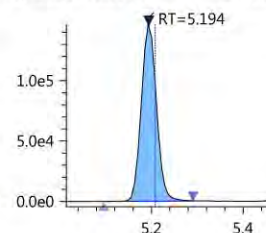
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FOSA

Conc 1.0631
Area 336964

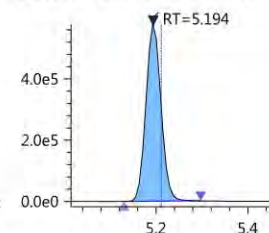
Q 498.20>78.00 (-)



FOSA-13C

Conc 3.0753
Area 1323359

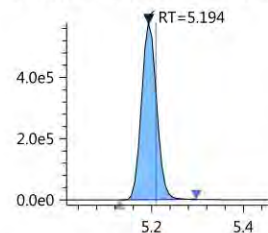
Q 506.00>78.05 (-)



FOSA-13C_IS

Conc 5.0000
Area 1323359

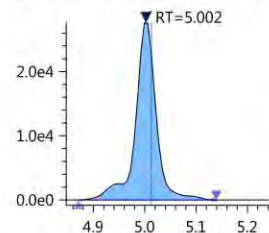
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N-MeFOSAA

Conc 0.9899
Area 77644

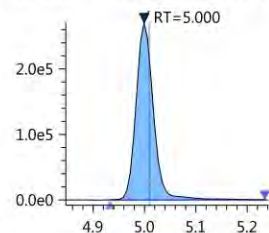
Q 570.20>419.00 (-)



N-MeFOSAA-d3

Conc 5.1642
Area 630930

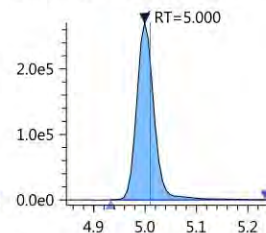
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
Area 630930

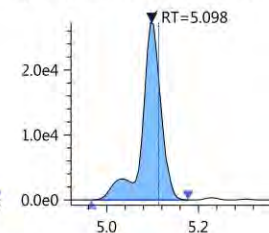
ISTD 572.80>419.05 (-)



N-EtFOSAA

Conc 1.1702
Area 79062

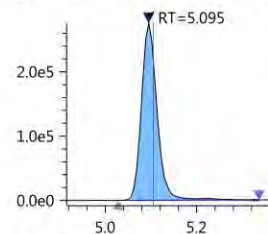
Q 584.20>418.95 (-)



N-EtFOSAA-d5

Conc 5.7789
Area 650580

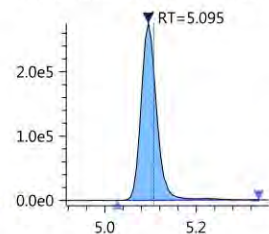
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
Area 650580

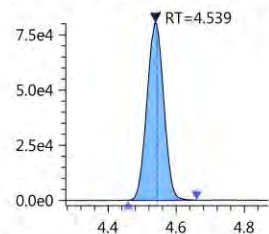
ISTD 588.80>419.00 (-)



6_2-FTS_1

Conc 1.0691
Area 275894

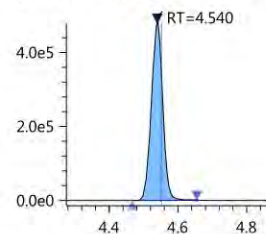
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 15.6026
Area 1114687

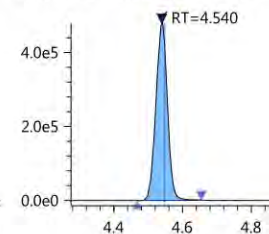
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6_2-FTS-13C_IS

Conc 5.0000
Area 1114687

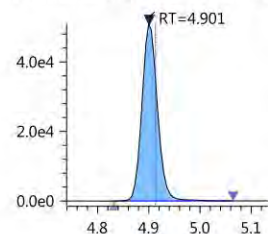
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 0.9725
Area 107426

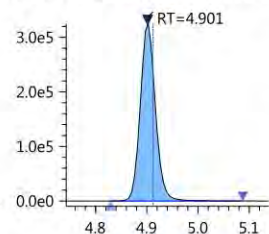
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 11.5713
Area 670217

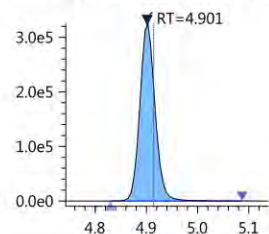
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
Area 670217

ISTD 528.80>509.00 (-)



Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200428_b4\200428_063
Lab ID: KQ2005615-02
RunType: DMS
Matrix: Water

Date Acquired: 4/29/20 01:42
Batch ID: 678319
Analysis Method: PFC/537M/PFAS

Validations

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

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	13C2-6:2 FTS	310	10	226	Native ok
	13C2-8:2 FTS	254	10	202	Native ok

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200428_b4\200428_063	Instrument:	K-LCMS-06
Acqu Date:	4/29/20 01:42	Vial:	12
Run Type:	DMS	Dilution:	1
Lab ID:	KQ2005615-02	Raw Units:	ng/mL

Bottle ID:	R2003266-006.06	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678319	Prep Lot:	357465	Report Group:	KQ2005615
Analysis	PFC/537M	Prep Method:	ALS SOP		
		Prep Date:	4/27/20		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.083	-0.01	5191568	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.996	-0.01	733470	3.6137	72	20 - 109	Y
18O2-PFHxS	4.385	-0.01	533019	4.6648	93	26 - 122	Y
13C4-PFOS	4.710	-0.01	661117	4.1106	82	25 - 121	Y
13C4-PFBA	3.362	-0.02	1838953	3.3484	67	27 - 124	Y
13C5-PFPeA	3.942	-0.01	784465	2.5382	51	27 - 138	Y
13C2-PFHxA	4.200	-0.01	2425578	2.8650	57	28 - 132	Y
13C4-PFHpA	4.385	-0.01	2582474	3.3718	67	19 - 139	Y
13C4-PFOA	4.550	-0.01	3352255	3.6181	72	22 - 130	Y
13C5-PFNA	4.723	-0.01	3069314	4.4372	89	20 - 127	Y
13C2-PFDA	4.902	-0.01	2754123	4.3881	88	24 - 125	Y
13C2-PFUnDA	5.083	-0.01	3405139	4.3496	87	22 - 125	Y
13C2-PFDoDA	5.257	-0.01	3743924	4.0594	81	19 - 122	Y
13C2-PFTeDA	5.580	-0.01	3136917	4.2629	85	13 - 124	Y
13C8-FOSA	5.196	0.00	1432530	3.4137	68	18 - 109	Y
D3-MeFOSAA	5.001	-0.01	639916	5.3709	107	9 - 123	Y
D5-EtFOSAA	5.097	-0.01	648803	5.9097	118	12 - 126	Y
13C2-6:2 FTS	4.541	-0.01	1080078	15.5025	310 *	10 - 226	Y
13C2-8:2 FTS	4.903	-0.01	716049	12.6769	254 *	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)	3.996	-0.01	195784	1.1605	33.2		Y
Perfluorohexane sulfonic acid (PFHxS)	4.383	-0.01	141247	1.0485	30.0		Y

Data File: J:\LCMS06\Data\200428_b4\200428_063
Acqu Date: 4/29/20 01:42
Run Type: DMS
Lab ID: KQ2005615-02

Instrument: K-LCMS06
Vial: 12
Dilution: 1
Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.541	-0.01	181639	1.0928	31.2		Y
Perfluorooctane sulfonic acid (PFOS)	4.710	-0.01	182023	1.6252	46.4		Y
Perfluorodecane sulfonic acid (PFDS)	5.061	-0.01	120067	1.1471	32.8		Y
Perfluorobutanoic acid (PFBA)	3.363	-0.02	754131	2.0999	60.0		Y
Perfluoropentanoic acid (PFPeA)	3.942	-0.01	1065580	3.2182	91.9		Y
Perfluorohexanoic acid (PFHxA)	4.200	-0.01	898018	1.8795	53.7		Y
Perfluoroheptanoic acid (PFHpA)	4.385	-0.01	766160	1.6512	47.2		Y
Perfluorooctanoic acid (PFOA)	4.549	-0.01	1403676	1.6400	46.9		Y
Perfluorononanoic acid (PFNA)	4.723	-0.01	622221	1.1306	32.3		Y
Perfluorodecanoic acid (PFDA)	4.903	-0.01	628522	1.0747	30.7		Y
Perfluoroundecanoic acid (PFUnDA)	5.083	-0.01	615948	1.1477	32.8		Y
Perfluorododecanoic acid (PFDoDA)	5.257	-0.01	517377	1.2229	34.9		Y
Perfluorotridecanoic acid (PFTrDA)	5.425	-0.01	654798	1.0791	30.8		Y
Perfluorotetradecanoic acid (PFTeDA)	5.580	-0.01	336801	1.0878	31.1		Y
Perfluorooctane sulfonamide (FOSA)	5.196	0.00	371464	1.0826	30.9		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.004	0.00	81612	1.0258	29.3		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.101	-0.01	85359	1.2669	36.2		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.540	-0.01	269259	1.0769	30.8		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.902	-0.01	117353	0.9944	28.4		Y

Prep Amount: 280.0000 mL
Prep Final Amount: 8.00 mL

Dilution: 1
Basis Factor: 100.00

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

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

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

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Insight Report

Printed at 5/5/2020 1:30:49 PM

200428_063

Sample ID: KQ2005615-02

Date acquired: 4/29/2020 1:42:16 AM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200428_b4\200428_063.lcd

Vial: 47 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.083	5191568	5191568	1	5.0000	ng/mL	----
PFBS_1	Auto	3.996	195784	733470	2	1.1605	ng/mL	----
PFBS-13C	Auto	3.996	733470	5191568	1	3.6137	ng/mL	----
PFBS-13C_IS	Auto	3.996	733470	733470	2	5.0000	ng/mL	----
PFHxS_1	Auto	4.383	141247	533019	3	1.0485	ng/mL	----
PFHxS-18O	Auto	4.385	533019	5191568	1	4.6648	ng/mL	----
PFHxS-18O_IS	Auto	4.385	533019	533019	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.541	181639	533019	3	1.0928	ng/mL	----
PFOS_1	Auto	4.710	182023	661117	4	1.6252	ng/mL	----
PFOS-13C	Auto	4.710	661117	5191568	1	4.1106	ng/mL	----
PFOS-13C_IS	Auto	4.710	661117	661117	4	5.0000	ng/mL	----
PFDS_1	Auto	5.061	120067	661117	4	1.1471	ng/mL	----
PFBA	Auto	3.363	754131	1838953	5	2.0999	ng/mL	----
PFBA-13C	Auto	3.362	1838953	5191568	1	3.3484	ng/mL	----
PFBA-13C_IS	Auto	3.362	1838953	1838953	5	5.0000	ng/mL	----
PFPeA	Auto	3.942	1065580	784465	6	3.2182	ng/mL	----
PFPeA-13C	Auto	3.942	784465	5191568	1	2.5382	ng/mL	----
PFPeA-13C_IS	Auto	3.942	784465	784465	6	5.0000	ng/mL	----
PFHxA	Auto	4.200	898018	2425578	7	1.8795	ng/mL	----
PFHxA-13C	Auto	4.200	2425578	5191568	1	2.8650	ng/mL	----
PFHxA-13C_IS	Auto	4.200	2425578	2425578	7	5.0000	ng/mL	----
PFHpA	Auto	4.385	766160	2582474	8	1.6512	ng/mL	----
PFHpA-13C	Auto	4.385	2582474	5191568	1	3.3718	ng/mL	----
PFHpA-13C_IS	Auto	4.385	2582474	2582474	8	5.0000	ng/mL	----
PFOA	Auto	4.549	1403676	3352255	9	1.6400	ng/mL	----
PFOA-13C	Auto	4.550	3352255	5191568	1	3.6181	ng/mL	----
PFOA-13C_IS	Auto	4.550	3352255	3352255	9	5.0000	ng/mL	----
PFNA	Auto	4.723	622221	3069314	10	1.1306	ng/mL	----
PFNA-13C	Auto	4.723	3069314	5191568	1	4.4372	ng/mL	----
PFNA-13C_IS	Auto	4.723	3069314	3069314	10	5.0000	ng/mL	----
PFDA	Auto	4.903	628522	2754123	11	1.0747	ng/mL	----
PFDA-13C	Auto	4.902	2754123	5191568	1	4.3881	ng/mL	----
PFDA-13C_IS	Auto	4.902	2754123	2754123	11	5.0000	ng/mL	----
PFUnA	Auto	5.083	615948	3405139	12	1.1477	ng/mL	----
PFUnA-13C	Auto	5.083	3405139	5191568	1	4.3496	ng/mL	----
PFUnA-13C_IS	Auto	5.083	3405139	3405139	12	5.0000	ng/mL	----
PFDoA	Auto	5.257	517377	3743924	13	1.2229	ng/mL	----
PFDoA-13C	Auto	5.257	3743924	5191568	1	4.0594	ng/mL	----
PFDoA-13C_IS	Auto	5.257	3743924	3743924	13	5.0000	ng/mL	----
PFTTrDA	Auto	5.425	654798	3136917	14	1.0791	ng/mL	----
PFTTeDA	Auto	5.580	336801	3136917	14	1.0878	ng/mL	----
PFTTeDA-13C	Auto	5.580	3136917	5191568	1	4.2629	ng/mL	----
PFTTeDA-13C_IS	Auto	5.580	3136917	3136917	14	5.0000	ng/mL	----
FOSA	Auto	5.196	371464	1432530	16	1.0826	ng/mL	----
FOSA-13C	Auto	5.196	1432530	5191568	1	3.4137	ng/mL	----
FOSA-13C_IS	Auto	5.196	1432530	1432530	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.004	81612	639916	21	1.0258	ng/mL	----
N-MeFOSAA-d3	Auto	5.001	639916	5191568	1	5.3709	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.001	639916	639916	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.101	85359	648803	22	1.2669	ng/mL	----
N-EtFOSAA-d5	Auto	5.097	648803	5191568	1	5.9097	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.097	648803	648803	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.540	269259	1080078	24	1.0769	ng/mL	----
6_2-FTS-13C	Auto	4.541	1080078	5191568	1	15.5025	ng/mL	----
6_2-FTS-13C_IS	Auto	4.541	1080078	1080078	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.902	117353	716049	25	0.9944	ng/mL	----
8_2-FTS-13C	Auto	4.903	716049	5191568	1	12.6769	ng/mL	----
8_2-FTS-13C_IS	Auto	4.903	716049	716049	25	5.0000	ng/mL	----

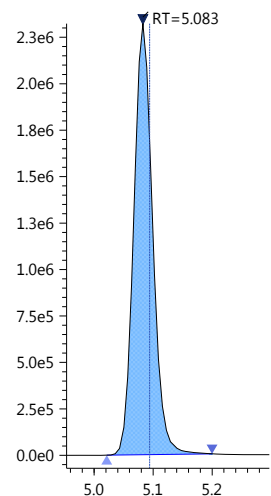
Insight Report

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13C7-PFUnDA_IS

Conc 5.0000
 Area 5191568

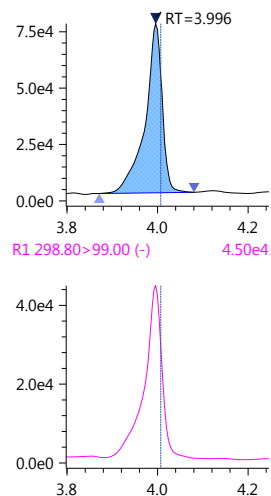
ISTD 570.00>525.00 (-) 2.32e6



PFBS_1

Conc 1.1605
 Area 195784
 R#1 58.40 (0.00)

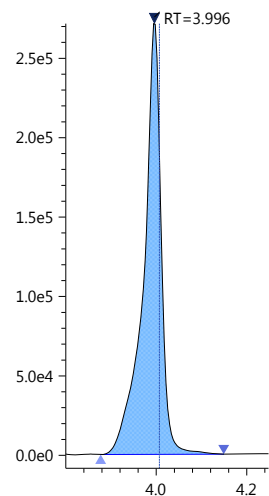
Q 299.00>80.00 (-) 7.86e4



PFBS-13C

Conc 3.6137
 Area 733470

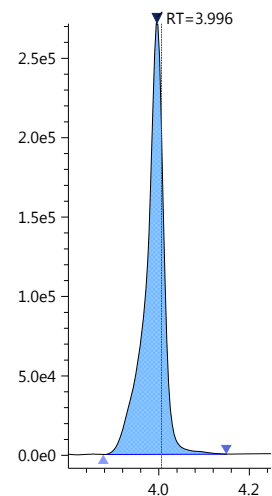
Q 301.80>80.00 (-) 2.72e5



PFBS-13C_IS

Conc 5.0000
 Area 733470

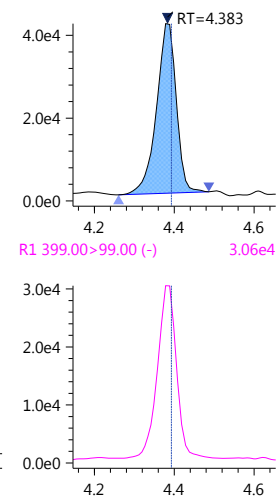
ISTD 301.80>80.00 (-) 2.72e5



PFHxS_1

Conc 1.0485
 Area 141247
 R#1 72.55 (0.00)

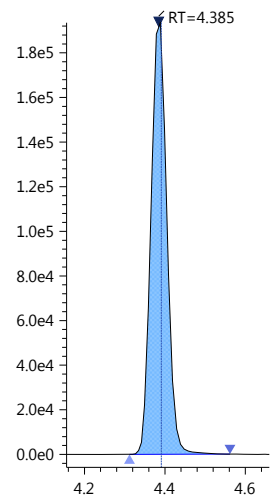
Q 399.00>80.00 (-) 4.28e4



PFHxS-180

Conc 4.6648
 Area 533019

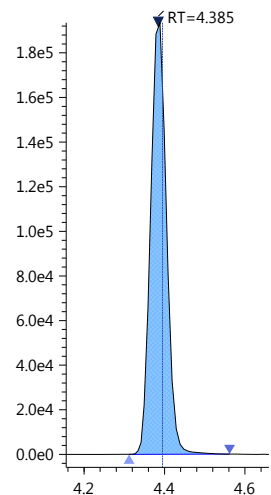
Q 402.70>84.05 (-) 1.94e5



PFHxS-180_IS

Conc 5.0000
 Area 533019

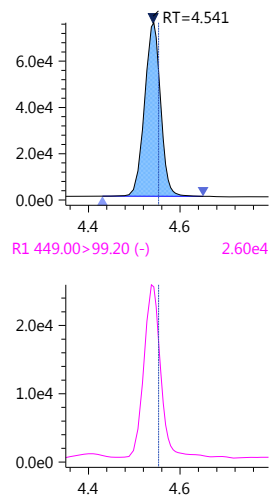
ISTD 402.70>84.05 (-) 1.94e5



PFHpS_1

Conc 1.0928
 Area 181639
 R#1 33.36 (0.00)

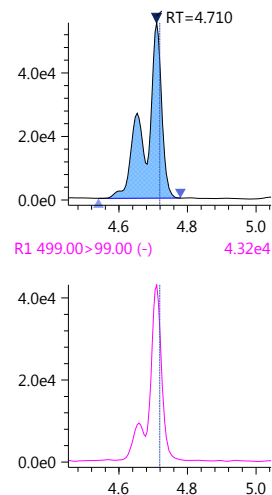
Q 449.00>80.15 (-) 7.66e4



PFOS_1

Conc 1.6252
 Area 182023
 R#1 77.16 (0.00)

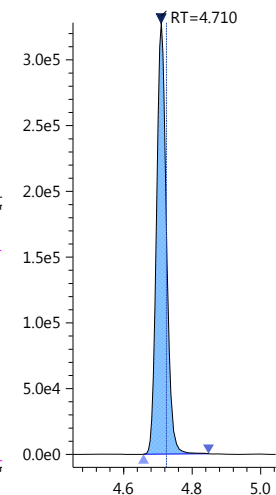
Q 499.00>80.00 (-) 5.58e4



PFOS-13C

Conc 4.1106
 Area 661117

Q 502.80>80.05 (-) 3.28e5



Insight Report

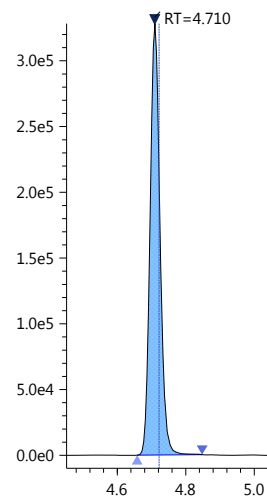
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PFOS-13C_IS

Conc 5.0000
Area 661117

ISTD 502.80>80.05 (-)

3.28e5

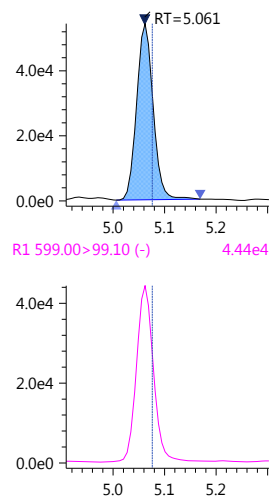


PFDS_1

Conc 1.1471
Area 120067
R#1 80.93 (0.00)

Q 599.00>79.90 (-)

5.45e4

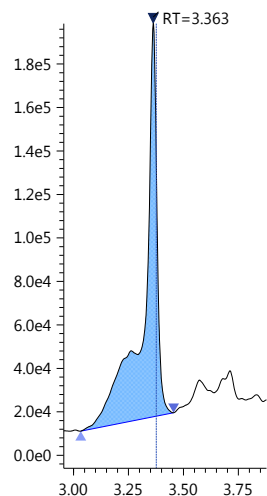


PFBA

Conc 2.0999
Area 754131

Q 213.00>169.10 (-)

1.99e5

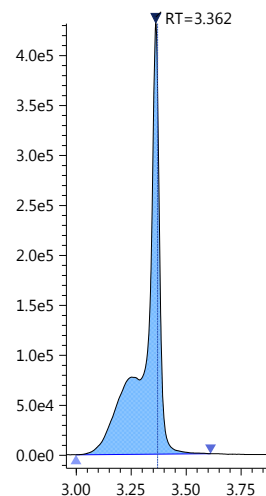


PFBA-13C

Conc 3.3484
Area 1838953

Q 216.90>172.15 (-)

4.32e5

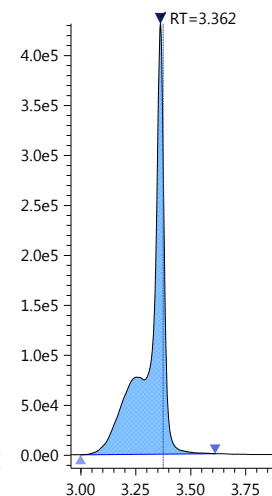


PFBA-13C_IS

Conc 5.0000
Area 1838953

ISTD 216.90>172.15 (-)

4.32e5

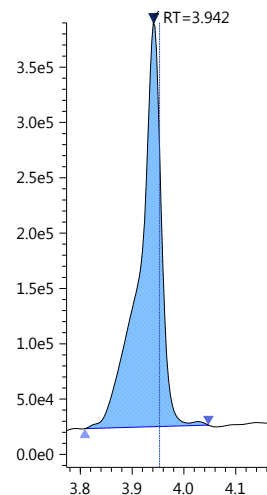


PFPeA

Conc 3.2182
Area 1065580

Q 263.05>219.10 (-)

3.90e5

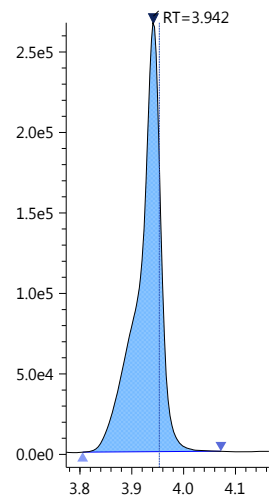


PFPeA-13C

Conc 2.5382
Area 784465

Q 267.90>223.00 (-)

2.68e5

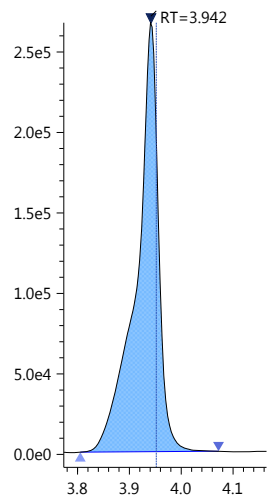


PFPeA-13C_IS

Conc 5.0000
Area 784465

ISTD 267.90>223.00 (-)

2.68e5

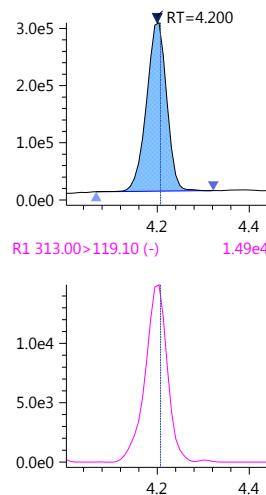


PFHxA

Conc 1.8795
Area 898018
R#1 5.09 (0.00)

Q 313.00>269.00 (-)

3.10e5

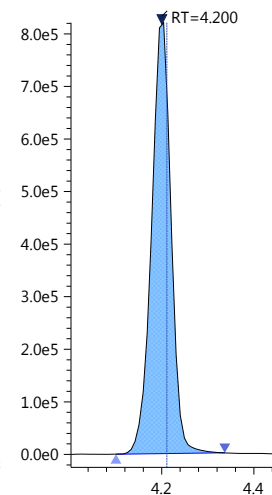


PFHxA-13C

Conc 2.8650
Area 2425578

Q 314.90>270.10 (-)

8.21e5



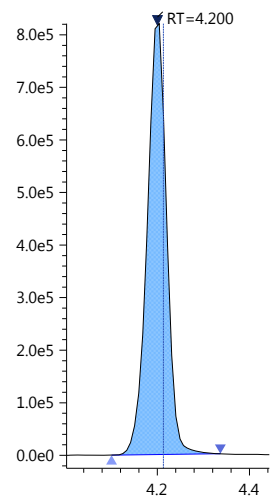
Insight Report

Printed at 5/5/2020 1:30:49 PM

PFHxA-13C_IS

Conc 5.0000
Area 2425578

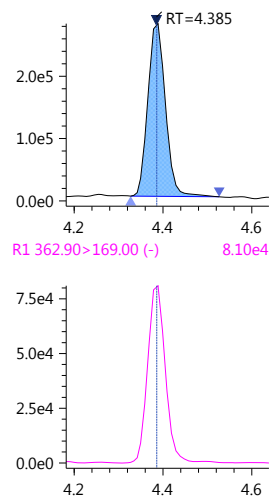
ISTD 314.90>270.10 (-) 8.21e5



PFHpA

Conc 1.6512
Area 766160
R#1 29.15 (0.00)

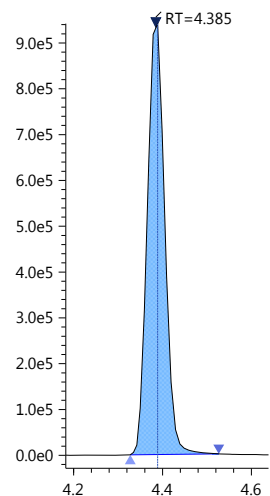
Q 362.90>319.00 (-) 2.84e5



PFHpA-13C

Conc 3.3718
Area 2582474

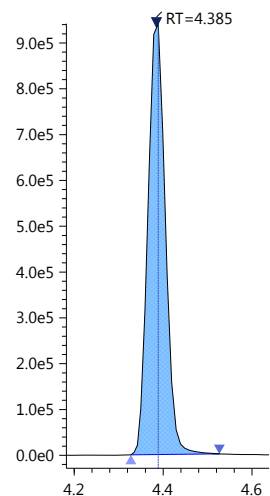
Q 366.90>322.10 (-) 9.42e5



PFHpA-13C_IS

Conc 5.0000
Area 2582474

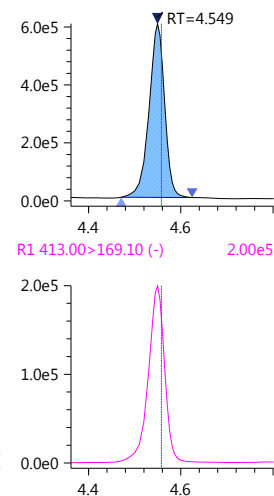
ISTD 366.90>322.10 (-) 9.42e5



PFOA

Conc 1.6400
Area 1403676
R#1 33.03 (0.00)

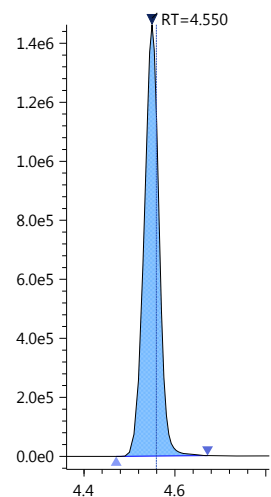
Q 413.00>369.00 (-) 6.11e5



PFOA-13C

Conc 3.6181
Area 3352255

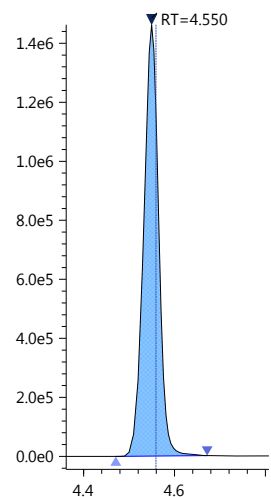
Q 416.80>372.05 (-) 1.46e6



PFOA-13C_IS

Conc 5.0000
Area 3352255

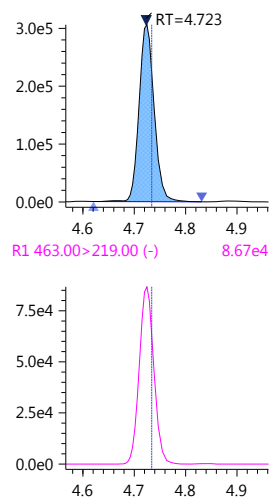
ISTD 416.80>372.05 (-) 1.46e6



PFNA

Conc 1.1306
Area 622221
R#1 28.57 (0.00)

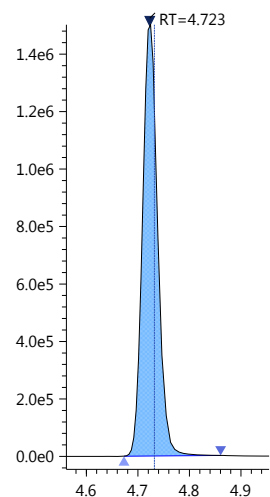
Q 463.00>418.90 (-) 3.06e5



PFNA-13C

Conc 4.4372
Area 3069314

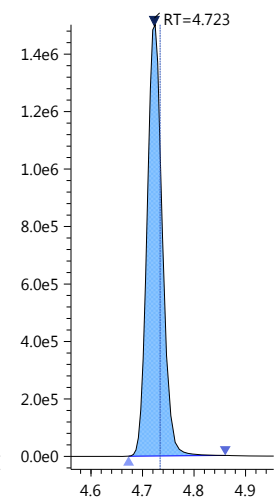
Q 467.80>423.00 (-) 1.50e6



PFNA-13C_IS

Conc 5.0000
Area 3069314

ISTD 467.80>423.00 (-) 1.50e6

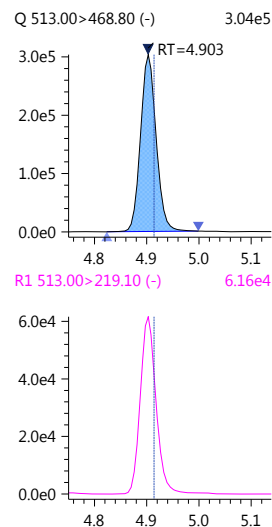


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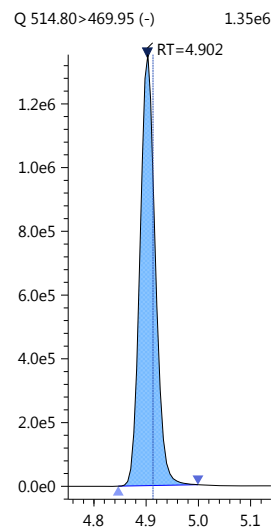
PFDA

Conc 1.0747
Area 628522
R#1 20.23 (0.00)



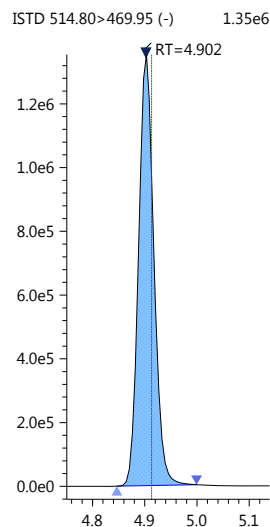
PFDA-13C

Conc 4.3881
Area 2754123



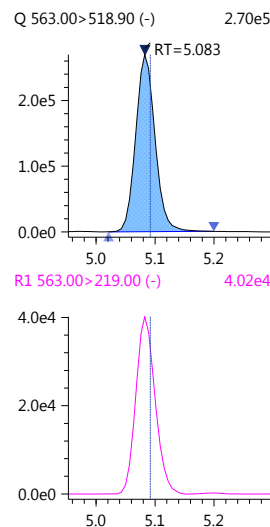
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Conc 5.0000
Area 2754123



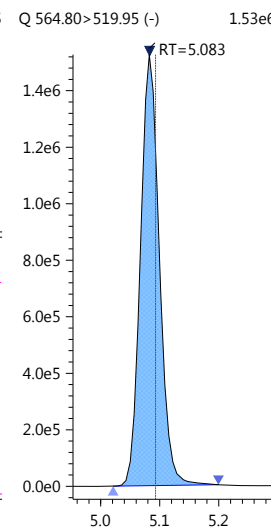
PFUnA

Conc 1.1477
Area 615948
R#1 14.84 (0.00)



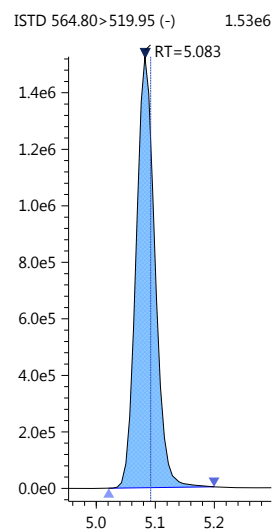
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Conc 4.3496
Area 3405139



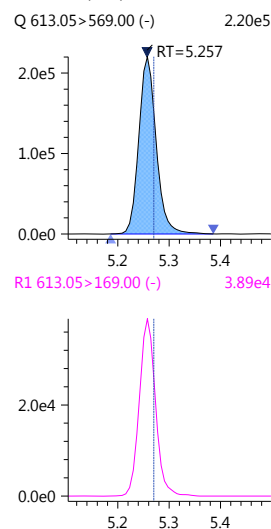
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Conc 5.0000
Area 3405139



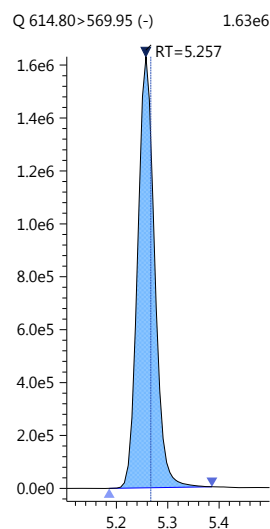
PFD0A

Conc 1.2229
Area 517377
R#1 17.82 (0.00)



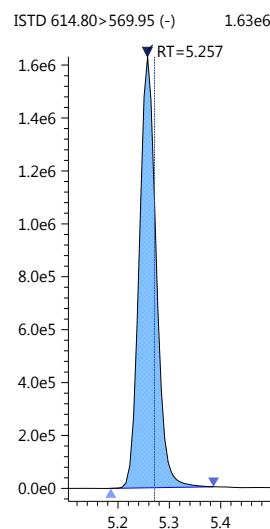
PFD0A-13C

Conc 4.0594
Area 3743924



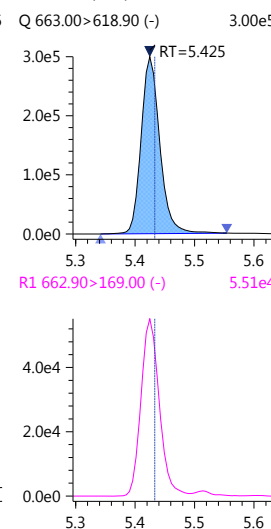
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Conc 5.0000
Area 3743924



PFTrDA

Conc 1.0791
Area 654798
R#1 18.41 (0.00)



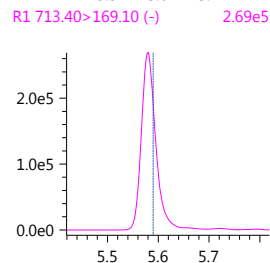
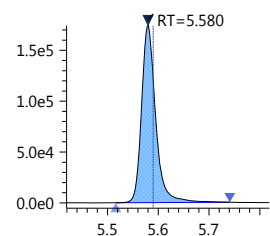
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PFTeDA

Conc 1.0878
 Area 336801
 R#1 149.97 (0.00)

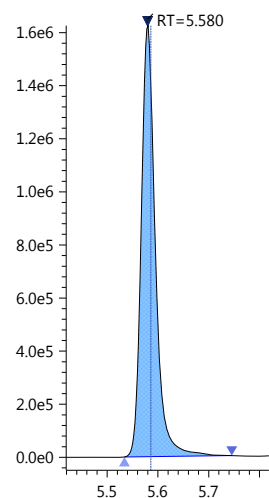
Q 713.40>669.00 (-) 1.74e5



PFTeDA-13C

Conc 4.2629
 Area 3136917

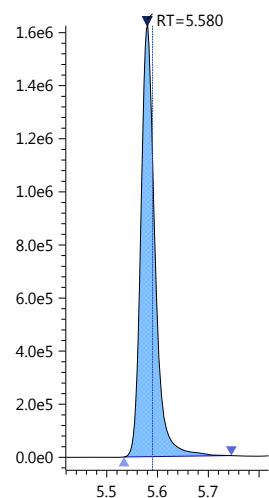
Q 714.70>669.90 (-) 1.63e6



PFTeDA-13C_IS

Conc 5.0000
 Area 3136917

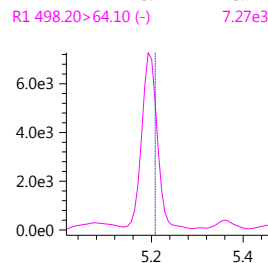
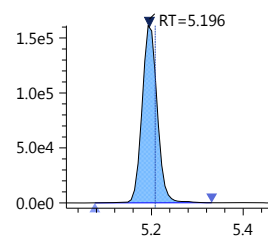
ISTD 714.70>669.90 (-) 1.63e6



FOSA

Conc 1.0826
 Area 371464
 R#1 4.37 (0.00)

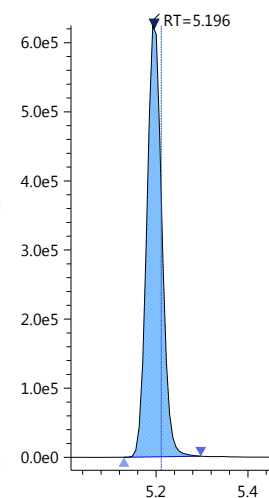
Q 498.20>78.00 (-) 1.61e5



FOSA-13C

Conc 3.4137
 Area 1432530

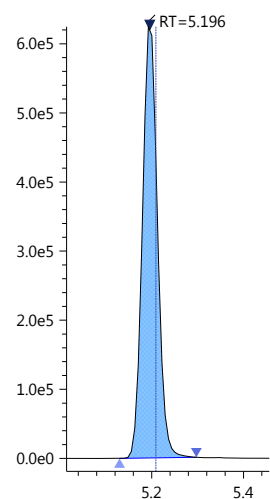
Q 506.00>78.05 (-) 6.25e5



FOSA-13C_IS

Conc 5.0000
 Area 1432530

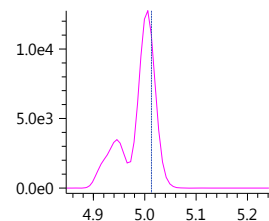
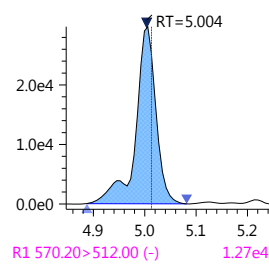
ISTD 506.00>78.05 (-) 6.25e5



N-MeFOSAA

Conc 1.0258
 Area 81612
 R#1 43.09 (0.00)

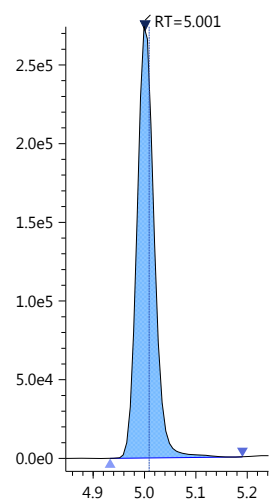
Q 570.20>419.00 (-) 2.98e4



N-MeFOSAA-d3

Conc 5.3709
 Area 639916

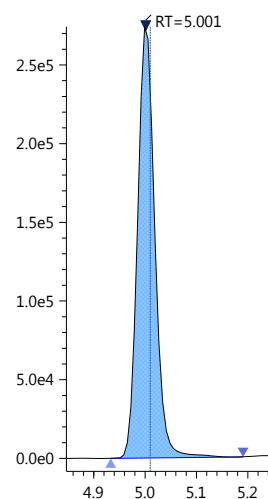
Q 572.80>419.05 (-) 2.74e5



N-MeFOSAA-d3_IS

Conc 5.0000
 Area 639916

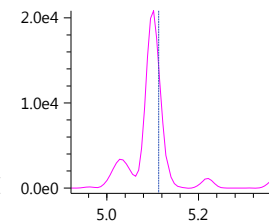
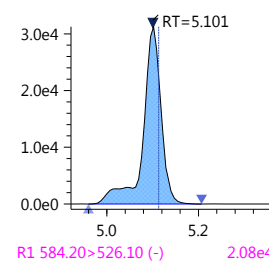
ISTD 572.80>419.05 (-) 2.74e5



N-EtFOSAA

Conc 1.2669
 Area 85359
 R#1 65.25 (0.00)

Q 584.20>418.95 (-) 3.13e4

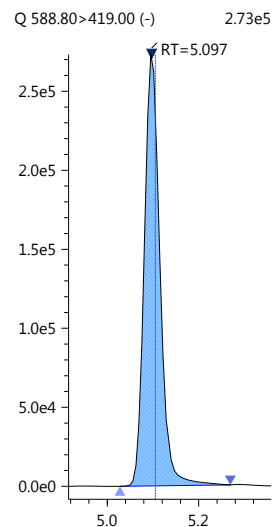


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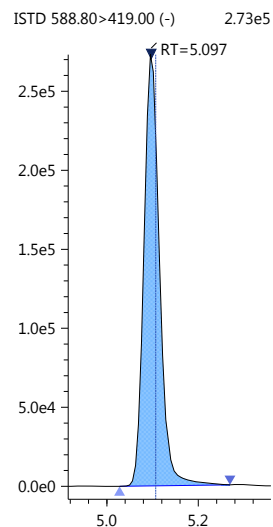
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Conc 5.9097
 Area 648803



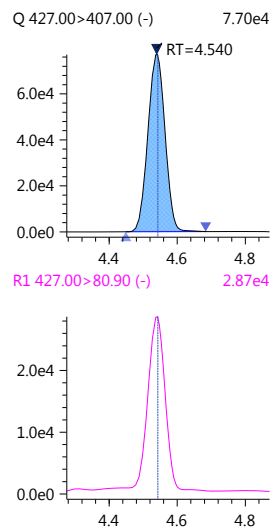
N-EtFOSAA-d5_IS

Conc 5.0000
 Area 648803



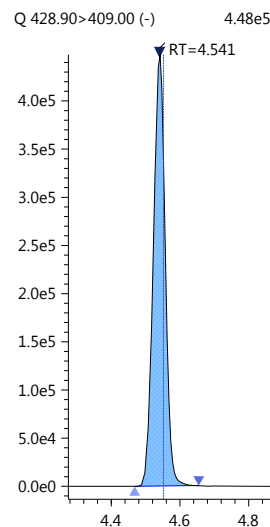
6_2-FTS_1

Conc 1.0769
 Area 269259
 R#1 36.03 (0.00)



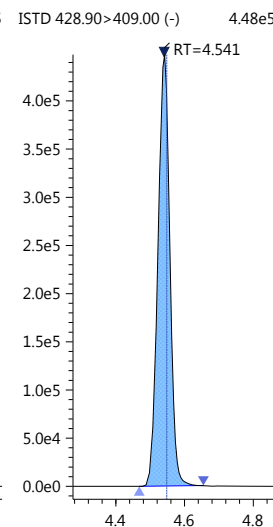
6_2-FTS-13C

Conc 15.5025
 Area 1080078



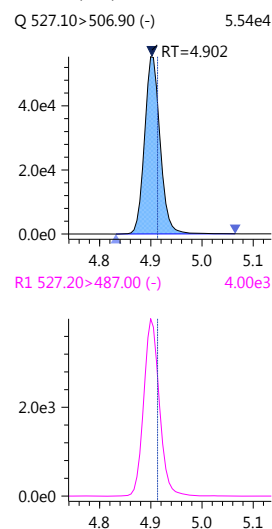
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Conc 5.0000
 Area 1080078



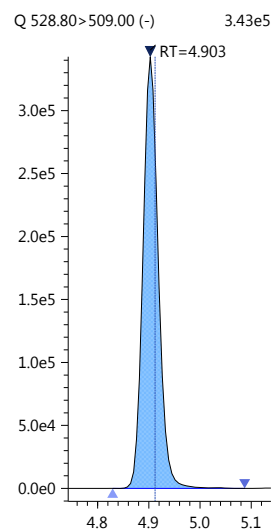
8_2-FTS_1

Conc 0.9944
 Area 117353
 R#1 7.19 (0.00)



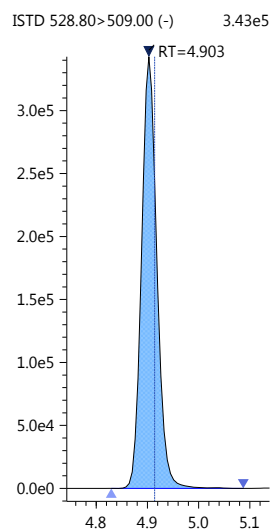
8_2-FTS-13C

Conc 12.6769
 Area 716049



8_2-FTS-13C_IS

Conc 5.0000
 Area 716049



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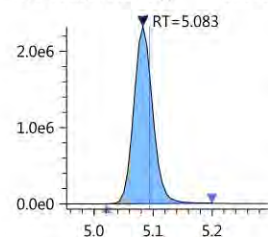
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Date acquired: 4/29/2020 1:42:16 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200428_b4\200428_063.lcd
Vial: 47 | Inj. Volume: 15.0000uL | Tray: 3

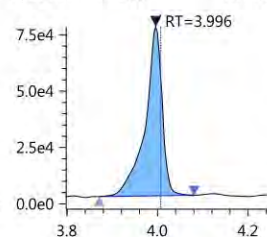
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Conc 5.0000
Area 5191568
ISTD 570.00>525.00 (-)



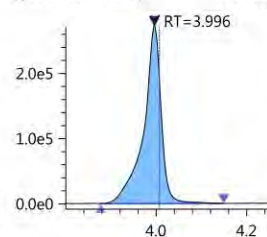
PFBS_1

Conc 1.1605
Area 195784
Q 299.00>80.00 (-)



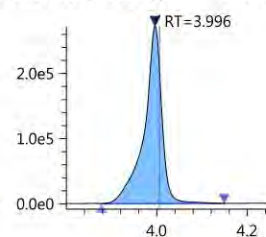
PFBS-13C

Conc 3.6137
Area 733470
Q 301.80>80.00 (-)



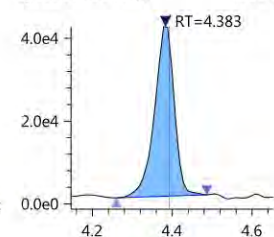
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Conc 5.0000
Area 733470
ISTD 301.80>80.00 (-)



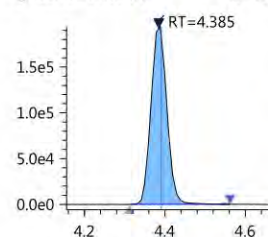
PFHxS_1

Conc 1.0485
Area 141247
Q 399.00>80.00 (-)



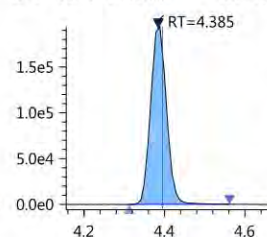
PFHxS-180

Conc 4.6648
Area 533019
Q 402.70>84.05 (-)



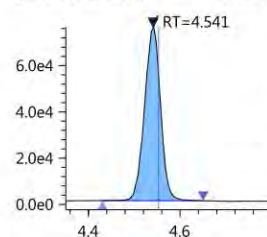
PFHxS-180_IS

Conc 5.0000
Area 533019
ISTD 402.70>84.05 (-)



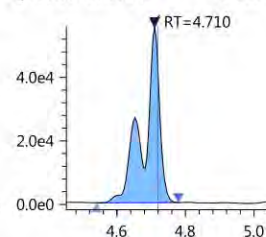
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Conc 1.0928
Area 181639
Q 449.00>80.15 (-)



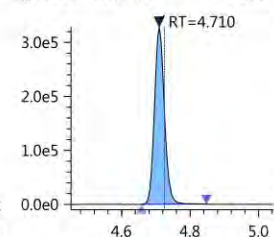
PFOS_1

Conc 1.6252
Area 182023
Q 499.00>80.00 (-)



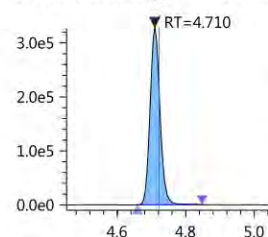
PFOS-13C

Conc 4.1106
Area 661117
Q 502.80>80.05 (-)



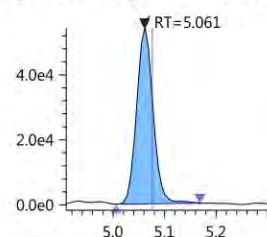
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Conc 5.0000
Area 661117
ISTD 502.80>80.05 (-)



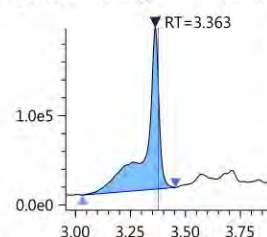
PFDS_1

Conc 1.1471
Area 120067
Q 599.00>79.90 (-)



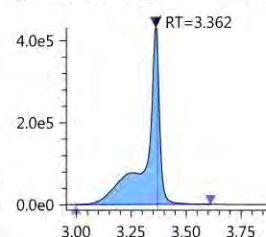
PFBA

Conc 2.0999
Area 754131
Q 213.00>169.10 (-)



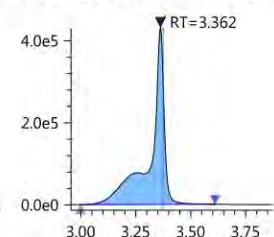
PFBA-13C

Conc 3.3484
Area 1838953
Q 216.90>172.15 (-)



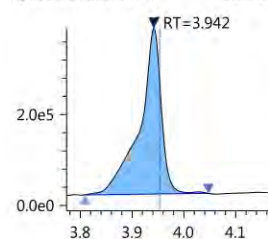
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Area 1838953
ISTD 216.90>172.15 (-)



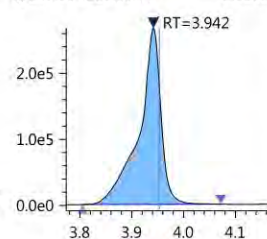
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Conc 3.2182
Area 1065580
Q 263.05>219.10 (-)



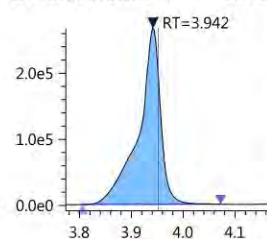
PFPeA-13C

Conc 2.5382
Area 784465
Q 267.90>223.00 (-)



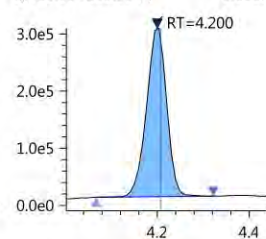
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Conc 5.0000
Area 784465
ISTD 267.90>223.00 (-)



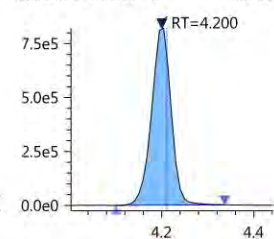
PFHxA

Conc 1.8795
Area 898018
Q 313.00>269.00 (-)



PFHxA-13C

Conc 2.8650
Area 2425578
Q 314.90>270.10 (-)

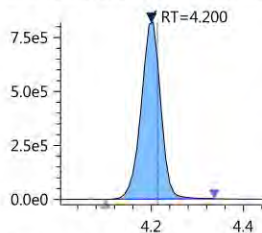


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PFHxA-13C_IS

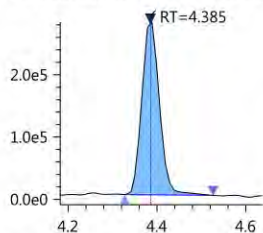
Conc 5.0000
 Area 2425578
 ISTD 314.90>270.10 (-)



PFHpA

Conc 1.6512
 Area 766160

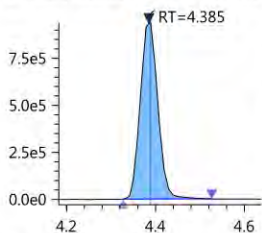
Q 362.90>319.00 (-)



PFHpA-13C

Conc 3.3718
 Area 2582474

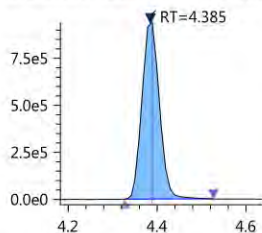
Q 366.90>322.10 (-)



PFHpA-13C_IS

Conc 5.0000
 Area 2582474

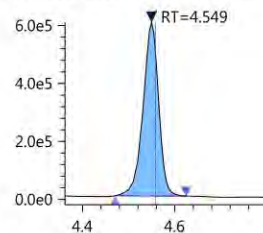
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PFOA

Conc 1.6400
 Area 1403676

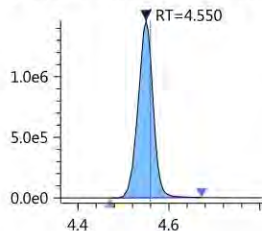
Q 413.00>369.00 (-)



PFOA-13C

Conc 3.6181
 Area 3352255

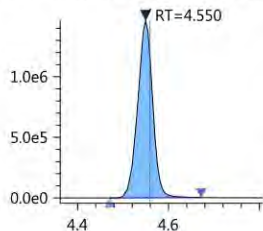
Q 416.80>372.05 (-)



PFOA-13C_IS

Conc 5.0000
 Area 3352255

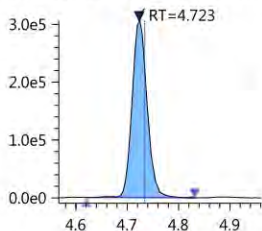
ISTD 416.80>372.05 (-)



PFNA

Conc 1.1306
 Area 622221

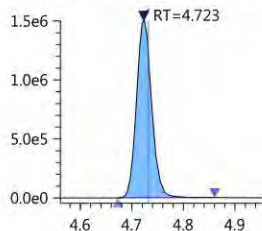
Q 463.00>418.90 (-)



PFNA-13C

Conc 4.4372
 Area 3069314

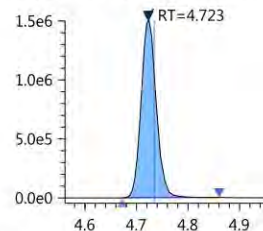
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PFNA-13C_IS

Conc 5.0000
 Area 3069314

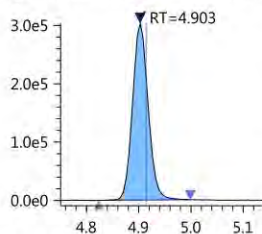
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PFDA

Conc 1.0747
 Area 628522

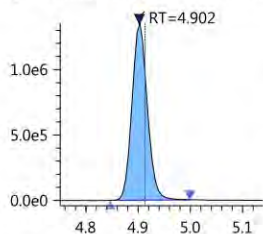
Q 513.00>468.80 (-)



PFDA-13C

Conc 4.3881
 Area 2754123

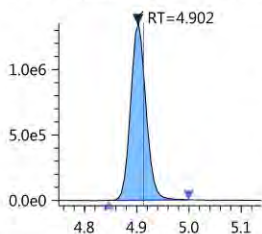
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
 Area 2754123

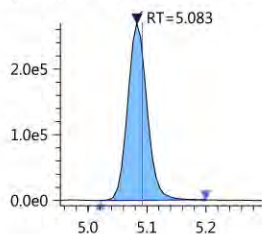
ISTD 514.80>469.95 (-)



PFUnA

Conc 1.1477
 Area 615948

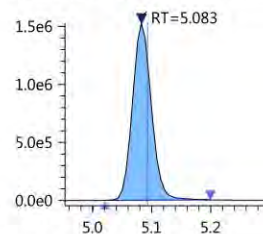
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.3496
 Area 3405139

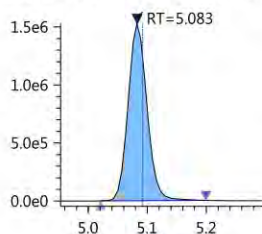
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
 Area 3405139

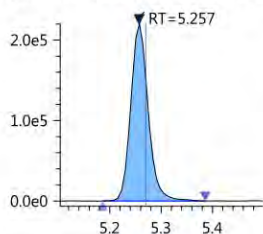
ISTD 564.80>519.95 (-)



PFDaA

Conc 1.2229
 Area 517377

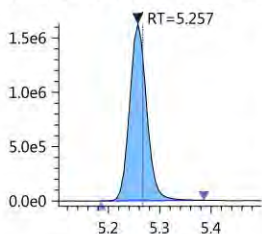
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.0594
 Area 3743924

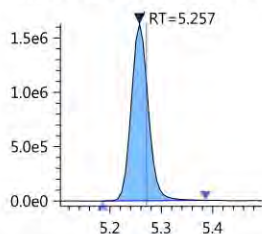
Q 614.80>569.95 (-)



PFDaA-13C_IS

Conc 5.0000
 Area 3743924

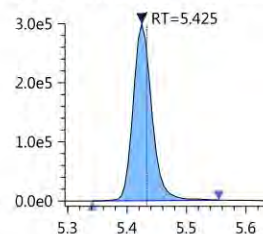
ISTD 614.80>569.95 (-)



PFTrDA

Conc 1.0791
 Area 654798

Q 663.00>618.90 (-)



Insight Report

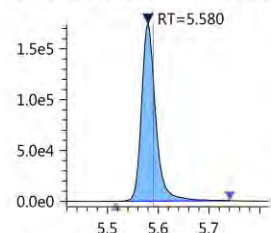
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PFTeDA

Conc 1.0878
Area 336801

Q 713.40>669.00 (-)

1.74e5

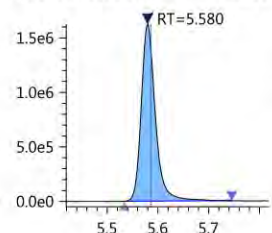


PFTeDA-13C

Conc 4.2629
Area 3136917

Q 714.70>669.90 (-)

1.63e6

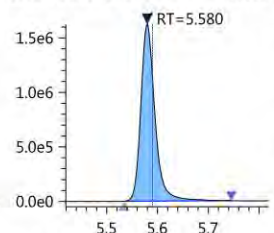


PFTeDA-13C_IS

Conc 5.0000
Area 3136917

ISTD 714.70>669.90 (-)

1.63e6

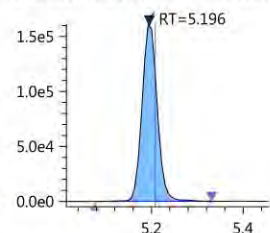


FOSA

Conc 1.0826
Area 371464

Q 498.20>78.00 (-)

1.61e5

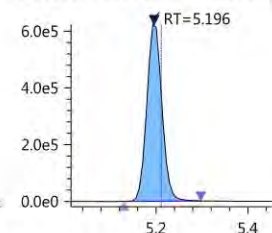


FOSA-13C

Conc 3.4137
Area 1432530

Q 506.00>78.05 (-)

6.25e5

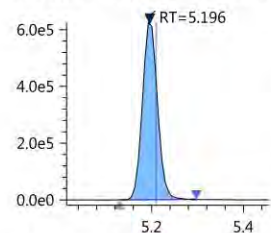


FOSA-13C_IS

Conc 5.0000
Area 1432530

ISTD 506.00>78.05 (-)

6.25e5

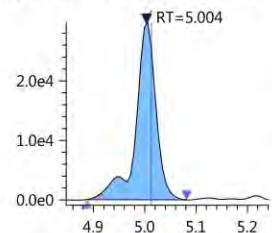


N-MeFOSAA

Conc 1.0258
Area 81612

Q 570.20>419.00 (-)

2.98e4

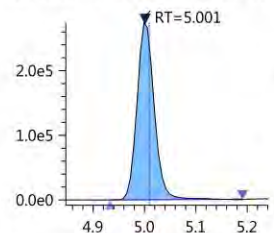


N-MeFOSAA-d3

Conc 5.3709
Area 639916

Q 572.80>419.05 (-)

2.74e5

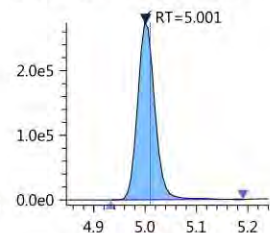


N-MeFOSAA-d3_IS

Conc 5.0000
Area 639916

ISTD 572.80>419.05 (-)

2.74e5

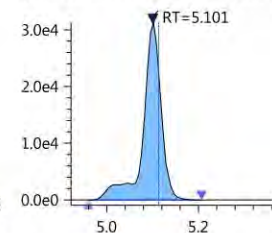


N-EtFOSAA

Conc 1.2669
Area 85359

Q 584.20>418.95 (-)

3.13e4

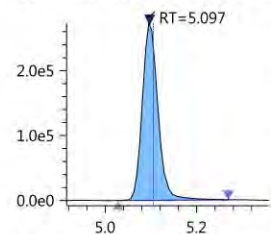


N-EtFOSAA-d5

Conc 5.9097
Area 648803

Q 588.80>419.00 (-)

2.73e5

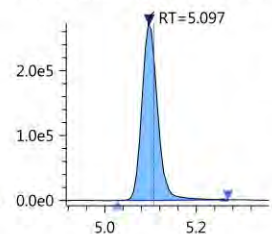


N-EtFOSAA-d5_IS

Conc 5.0000
Area 648803

ISTD 588.80>419.00 (-)

2.73e5

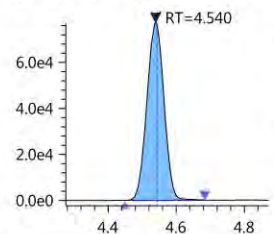


6_2-FTS_1

Conc 1.0769
Area 269259

Q 427.00>407.00 (-)

7.70e4

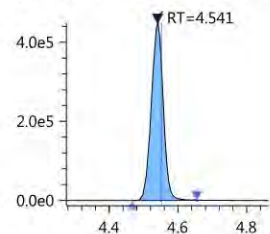


6_2-FTS-13C

Conc 15.5025
Area 1080078

Q 428.90>409.00 (-)

4.48e5

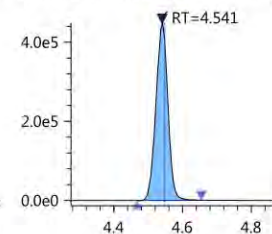


6_2-FTS-13C_IS

Conc 5.0000
Area 1080078

ISTD 428.90>409.00 (-)

4.48e5

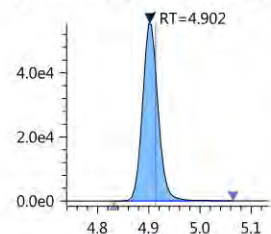


8_2-FTS_1

Conc 0.9944
Area 117353

Q 527.10>506.90 (-)

5.54e4

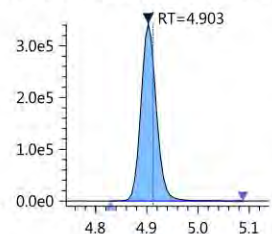


8_2-FTS-13C

Conc 12.6769
Area 716049

Q 528.80>509.00 (-)

3.43e5

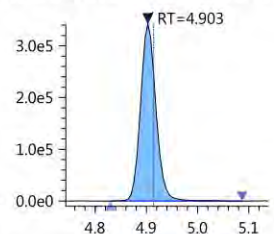


8_2-FTS-13C_IS

Conc 5.0000
Area 716049

ISTD 528.80>509.00 (-)

3.43e5



Validation Report

1st  05/05/20
2nd  05/06/20

Data File: J:\LCMS06\Data\200428_b4\200428_053
Lab ID: KQ2005707-02
RunType: CCB
Matrix: Water

Date Acquired: 4/28/20 23:57
Batch ID: 678319
Analysis Method: PFC/537M/PFAS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200428_b4\200428_053	Instrument:	K-LCMS-06
Acqu Date:	4/28/20 23:57	Vial:	2
Run Type:	CCB	Dilution:	1
Lab ID:	KQ2005707-02	Raw Units:	ng/mL

Bottle ID:		Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678319	Prep Lot:		Report Group:	KQ2005707
Analysis	PFC/537M	Prep Method:			
		Prep Date:			

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.088	0.00	3675988	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.003	-0.01	726680	5.0564		20 - 109	Y
18O2-PFHxS	4.391	0.00	448579	5.5444		26 - 122	Y
13C4-PFOS	4.717	0.00	601221	5.2794		25 - 121	Y
13C4-PFBA	3.374	0.00	1869339	4.8070		27 - 124	Y
13C5-PFPeA	3.950	0.00	1029456	4.7042		27 - 138	Y
13C2-PFHxA	4.207	-0.01	3163034	5.2765		28 - 132	Y
13C4-PFHpA	4.389	0.00	2819097	5.1983		19 - 139	Y
13C4-PFOA	4.555	0.00	3414556	5.2048		22 - 130	Y
13C5-PFNA	4.729	0.00	2934170	5.9906		20 - 127	Y
13C2-PFDA	4.908	0.00	2418149	5.4413		24 - 125	Y
13C2-PFUnDA	5.089	0.00	3019949	5.4480		22 - 125	Y
13C2-PFDoDA	5.263	0.00	3524793	5.3975		19 - 122	Y
13C2-PFTeDA	5.585	-0.01	2756276	5.2899		13 - 124	Y
13C8-FOSA	5.197	0.00	1596831	5.3740		18 - 109	Y
D3-MeFOSAA	5.005	0.00	484242	5.7400		9 - 123	Y
D5-EtFOSAA	5.100	0.00	495720	6.3769		12 - 126	Y
13C2-6:2 FTS	4.547	0.00	248971	5.0468		10 - 226	Y
13C2-8:2 FTS	4.909	0.00	209160	5.2297		10 - 202	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	4.000	-0.01	458	0.0027	0.086	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.395	+0.01	1178	-0.0064	0	U	Y

Data File: J:\LCMS06\Data\200428_b4\200428_053
 Acqu Date: 4/28/20 23:57
 Run Type: CCB
 Lab ID: KQ2005707-02

Instrument: K-LCMS06 *2nd* 05/06/20
 Vial: 2
 Dilution: 1
 Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.557	+0.01	73	0.0005	0.016	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.719		385	0.0038	0.12	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.948	-0.01	18640	0.0136	0.44	U	Y
Perfluorohexanoic acid (PFHxA)	4.197	-0.02	8695	0.0078	0.25	U	Y
Perfluoroheptanoic acid (PFHpA)	4.377	-0.02	11998	0.0137	0.44	U	Y
Perfluorooctanoic acid (PFOA)	4.551	-0.01	16821	0.0109	0.35	U	Y
Perfluorononanoic acid (PFNA)	4.725	-0.01	3197	0.0016	0.051	U	Y
Perfluorodecanoic acid (PFDA)	4.904	-0.01	3660	0.0071	0.23	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.081	-0.01	10960	0.0095	0.30	U	Y
Perfluorododecanoic acid (PFDoDA)	5.260	-0.01	5763	0.0275	0.88	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.421	-0.01	3194	0.0016	0.051	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.586	0.00	31448	-0.0108	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.198	0.00	617	0.0016	0.051	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.099	-0.01	396	0.0077	0.25	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.512	-0.04	148	0.0026	0.083	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.910		71	0.0021	0.067	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: 5/5/20 13:35

\\alprews001\starlims\LIMSReps\QuantValidation.rpt

Insight Report

Printed at 5/5/2020 1:30:49 PM

200428_053

Sample ID: IB

Date acquired: 4/28/2020 11:57:46 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200428_b4\200428_053.lcd

Vial: 15 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA-IS	Auto	5.088	3675988	3675988	1	5.0000	ng/mL	----
PFBS_1	M	4.000	458	726680	2	0.0027	ng/mL	----
PFBS-13C	Auto	4.003	726680	3675988	1	5.0564	ng/mL	----
PFBS-13C-IS	Auto	4.003	726680	726680	2	5.0000	ng/mL	----
PFHxS_1	Auto	4.395	1178	448579	3	-0.0064	ng/mL	----
PFHxS-18O	Auto	4.391	448579	3675988	1	5.5444	ng/mL	----
PFHxS-18O-IS	Auto	4.391	448579	448579	3	5.0000	ng/mL	----
PFHpS_1	M	4.557	73	448579	3	0.0005	ng/mL	----
PFOS_1	Auto	4.719	385	601221	4	0.0038	ng/mL	----
PFOS-13C	Auto	4.717	601221	3675988	1	5.2794	ng/mL	----
PFOS-13C-IS	Auto	4.717	601221	601221	4	5.0000	ng/mL	----
PFDS_1	ND(W/B)	----	----	601221	4	----	ng/mL	----
PFBA	ND(W/B)	----	----	1869339	5	----	ng/mL	----
PFBA-13C	Auto	3.374	1869339	3675988	1	4.8070	ng/mL	----
PFBA-13C-IS	Auto	3.374	1869339	1869339	5	5.0000	ng/mL	----
PFPeA	M	3.948	18640	1029456	6	0.0136	ng/mL	----
PFPeA-13C	Auto	3.950	1029456	3675988	1	4.7042	ng/mL	----
PFPeA-13C-IS	Auto	3.950	1029456	1029456	6	5.0000	ng/mL	----
PFHxA	M	4.197	8695	3163034	7	0.0078	ng/mL	----
PFHxA-13C	Auto	4.207	3163034	3675988	1	5.2765	ng/mL	----
PFHxA-13C-IS	Auto	4.207	3163034	3163034	7	5.0000	ng/mL	----
PFHpA	Auto	4.377	11998	2819097	8	0.0137	ng/mL	----
PFHpA-13C	Auto	4.389	2819097	3675988	1	5.1983	ng/mL	----
PFHpA-13C-IS	Auto	4.389	2819097	2819097	8	5.0000	ng/mL	----
PFOA	M	4.551	16821	3414556	9	0.0109	ng/mL	----
PFOA-13C	Auto	4.555	3414556	3675988	1	5.2048	ng/mL	----
PFOA-13C-IS	Auto	4.555	3414556	3414556	9	5.0000	ng/mL	----
PFNA	Auto	4.725	3197	2934170	10	0.0016	ng/mL	----
PFNA-13C	Auto	4.729	2934170	3675988	1	5.9906	ng/mL	----
PFNA-13C-IS	Auto	4.729	2934170	2934170	10	5.0000	ng/mL	----
PFDA	M	4.904	3660	2418149	11	0.0071	ng/mL	----
PFDA-13C	Auto	4.908	2418149	3675988	1	5.4413	ng/mL	----
PFDA-13C-IS	Auto	4.908	2418149	2418149	11	5.0000	ng/mL	----
PFUnA	M	5.081	10960	3019949	12	0.0095	ng/mL	----
PFUnA-13C	Auto	5.089	3019949	3675988	1	5.4480	ng/mL	----
PFUnA-13C-IS	Auto	5.089	3019949	3019949	12	5.0000	ng/mL	----
PFDoA	Auto	5.260	5763	3524793	13	0.0275	ng/mL	----
PFDoA-13C	Auto	5.263	3524793	3675988	1	5.3975	ng/mL	----
PFDoA-13C-IS	Auto	5.263	3524793	3524793	13	5.0000	ng/mL	----
PFTeDA	M	5.421	3194	2756276	14	0.0016	ng/mL	----
PFTeDA	Auto	5.586	31448	2756276	14	-0.0108	ng/mL	----
PFTeDA-13C	Auto	5.585	2756276	3675988	1	5.2899	ng/mL	----
PFTeDA-13C-IS	Auto	5.585	2756276	2756276	14	5.0000	ng/mL	----
FOSA	Auto	5.198	617	1596831	16	0.0016	ng/mL	----
FOSA-13C	Auto	5.197	1596831	3675988	1	5.3740	ng/mL	----
FOSA-13C-IS	Auto	5.197	1596831	1596831	16	5.0000	ng/mL	----
N-MeFOSAA	ND(W/B)	----	----	484242	21	----	ng/mL	----
N-MeFOSAA-d3	Auto	5.005	484242	3675988	1	5.7400	ng/mL	----
N-MeFOSAA-d3-IS	Auto	5.005	484242	484242	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.099	396	495720	22	0.0077	ng/mL	----
N-EtFOSAA-d5	Auto	5.100	495720	3675988	1	6.3769	ng/mL	----
N-EtFOSAA-d5-IS	Auto	5.100	495720	495720	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.512	148	248971	24	0.0026	ng/mL	----
6_2-FTS-13C	Auto	4.547	248971	3675988	1	5.0468	ng/mL	----
6_2-FTS-13C-IS	Auto	4.547	248971	248971	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.910	71	209160	25	0.0021	ng/mL	----
8_2-FTS-13C	Auto	4.909	209160	3675988	1	5.2297	ng/mL	----
8_2-FTS-13C-IS	Auto	4.909	209160	209160	25	5.0000	ng/mL	----

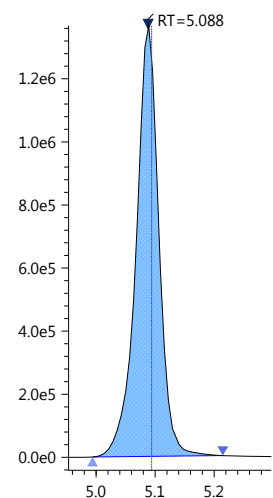
Insight Report

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13C7-PFUnDA_IS

Conc 5.0000
Area 3675988

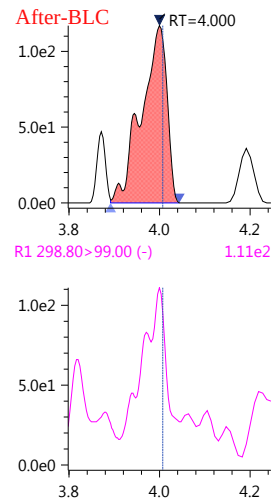
ISTD 570.00>525.00 (-) 1.37e6



PFBS_1

Conc 0.0027
Area 458
R#1 87.20 (0.00)

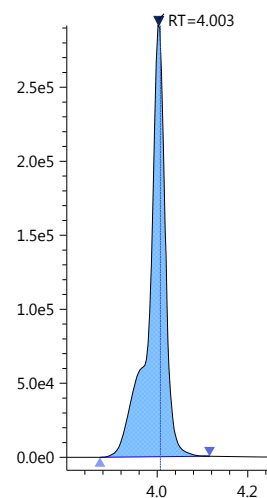
Q 299.00>80.00 (-) 1.17e2



PFBS-13C

Conc 5.0564
Area 726680

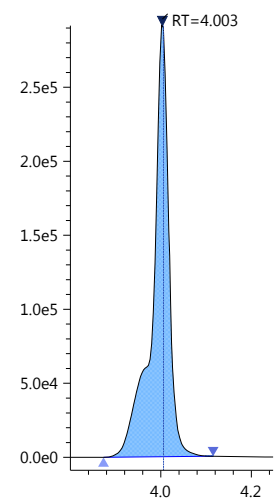
Q 301.80>80.00 (-) 2.92e5



PFBS-13C_IS

Conc 5.0000
Area 726680

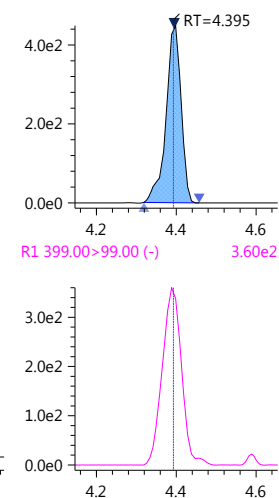
ISTD 301.80>80.00 (-) 2.92e5



PFHxS_1

Conc -0.0064
Area 1178
R#1 74.42 (0.00)

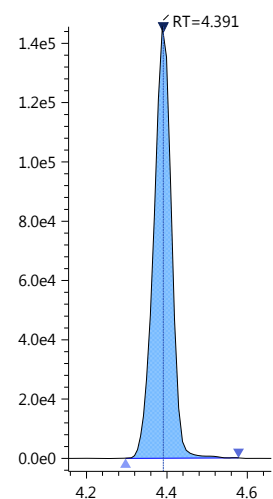
Q 399.00>80.00 (-) 4.49e2



PFHxS-180

Conc 5.5444
Area 448579

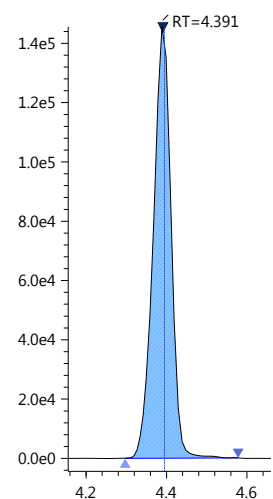
Q 402.70>84.05 (-) 1.46e5



PFHxS-180_IS

Conc 5.0000
Area 448579

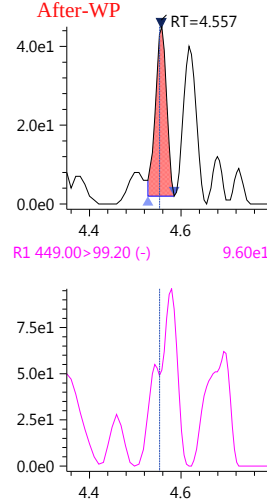
ISTD 402.70>84.05 (-) 1.46e5



PFHpS_1

Conc 0.0005
Area 73
R#1 0.00 (0.00)

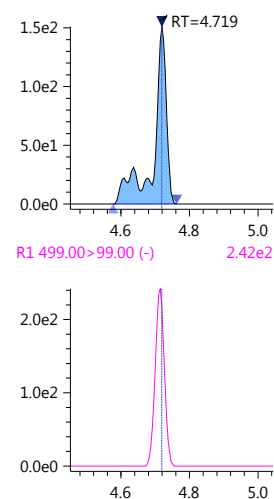
Q 449.00>80.15 (-) 4.50e1



PFOS_1

Conc 0.0038
Area 385
R#1 135.06 (0.00)

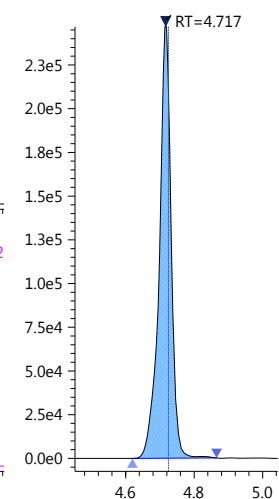
Q 499.00>80.00 (-) 1.51e2



PFOS-13C

Conc 5.2794
Area 601221

Q 502.80>80.05 (-) 2.47e5



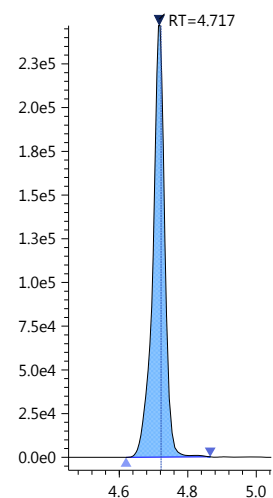
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PFOS-13C_IS

Conc 5.0000
Area 601221

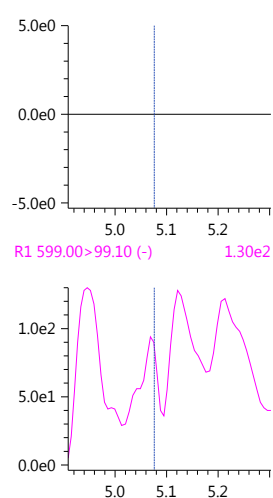
ISTD 502.80>80.05 (-) 2.47e5



PFDS_1

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

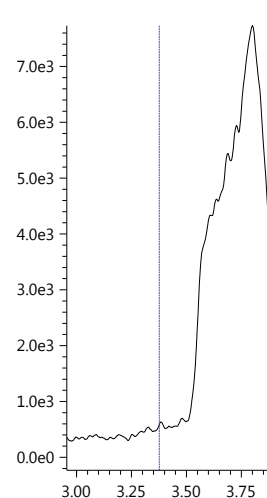
Q 599.00>79.90 (-)



PFBA

Conc ----
Area ----

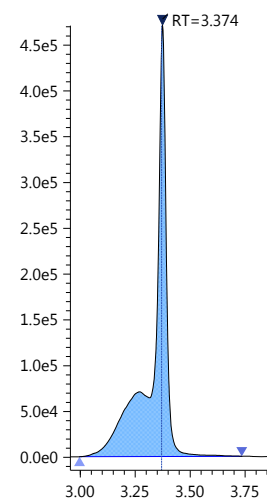
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.8070
Area 1869339

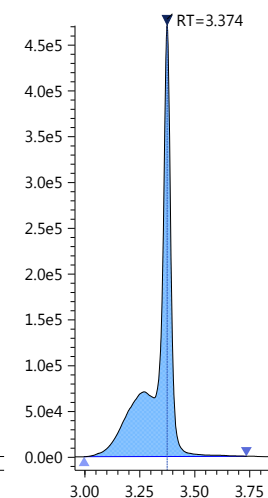
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 1869339

ISTD 216.90>172.15 (-)

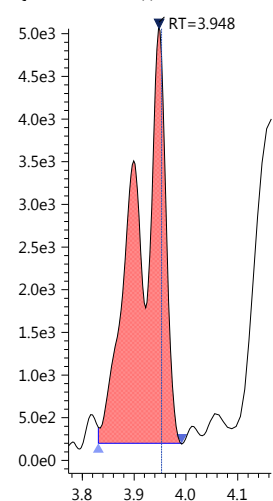


PFPeA

Conc 0.0136
Area 18640

After-BLC

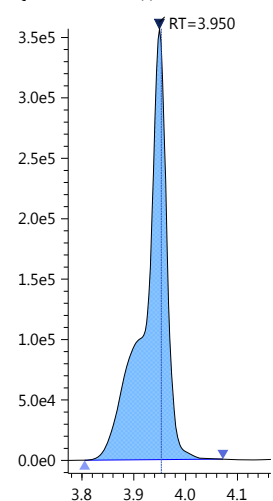
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.7042
Area 1029456

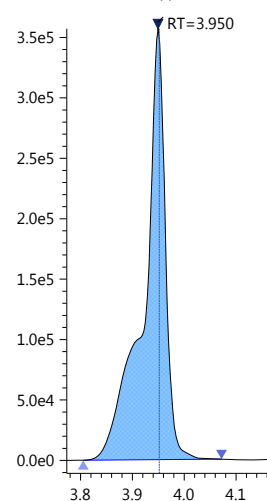
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1029456

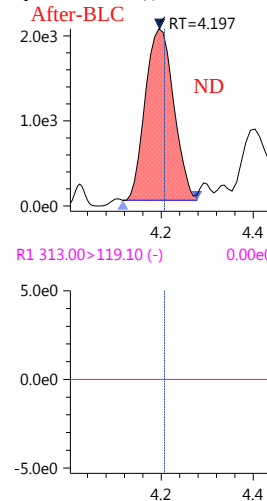
ISTD 267.90>223.00 (-)



PFHxA

Conc 0.0078
Area 8695
R#1 0.00 (0.00)

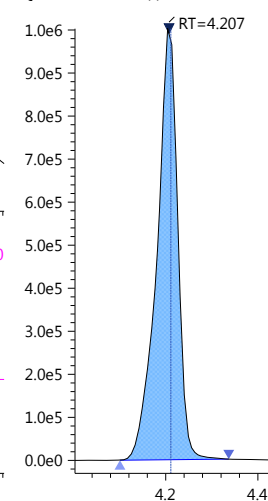
Q 313.00>269.00 (-)



PFHxA-13C

Conc 5.2765
Area 3163034

Q 314.90>270.10 (-)



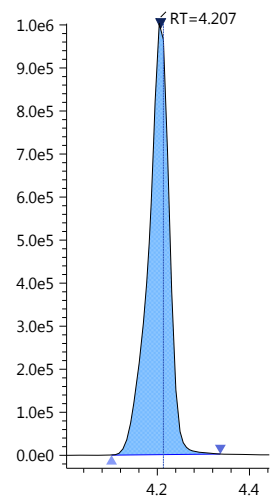
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PFHxA-13C_IS

Conc 5.0000
 Area 3163034

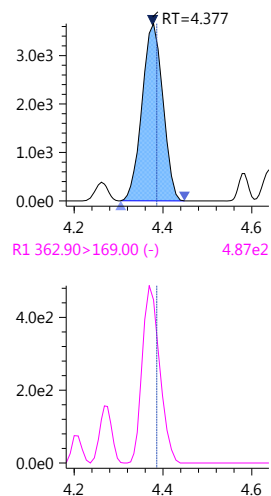
ISTD 314.90>270.10 (-) 1.00e6



PFHpA

Conc 0.0137
 Area 11998
 R#1 12.10 (0.00)

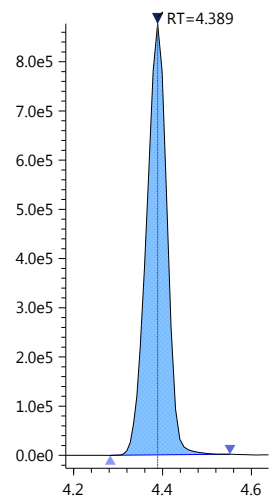
Q 362.90>319.00 (-) 3.66e3



PFHpA-13C

Conc 5.1983
 Area 2819097

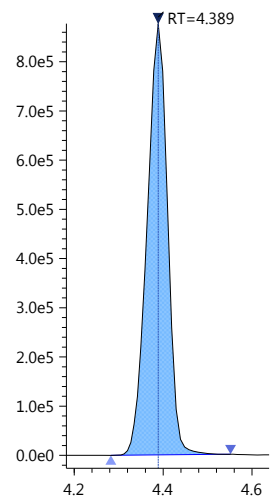
Q 366.90>322.10 (-) 8.78e5



PFHpA-13C_IS

Conc 5.0000
 Area 2819097

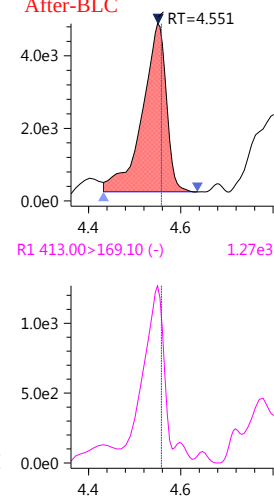
ISTD 366.90>322.10 (-) 8.78e5



PFOA

Conc 0.0109
 Area 16821
 R#1 25.55 (0.00)

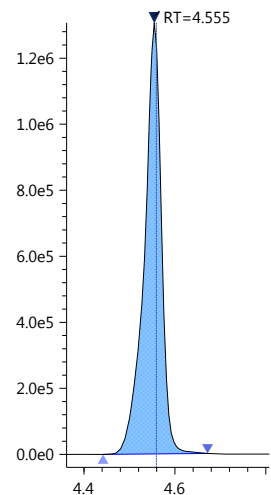
Q 413.00>369.00 (-) 4.89e3



PFOA-13C

Conc 5.2048
 Area 3414556

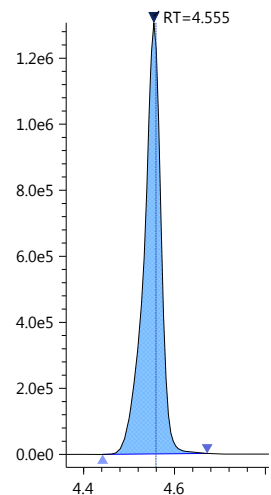
Q 416.80>372.05 (-) 1.31e6



PFOA-13C_IS

Conc 5.0000
 Area 3414556

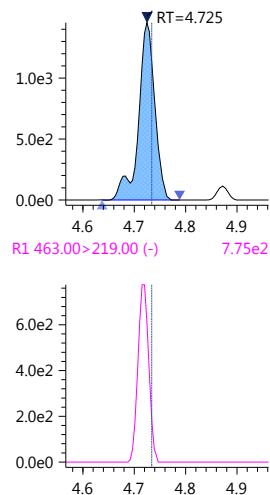
ISTD 416.80>372.05 (-) 1.31e6



PFNA

Conc 0.0016
 Area 3197
 R#1 40.47 (0.00)

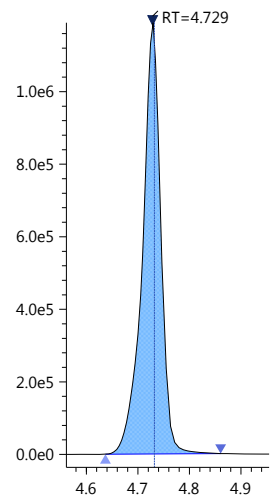
Q 463.00>418.90 (-) 1.45e3



PFNA-13C

Conc 5.9906
 Area 2934170

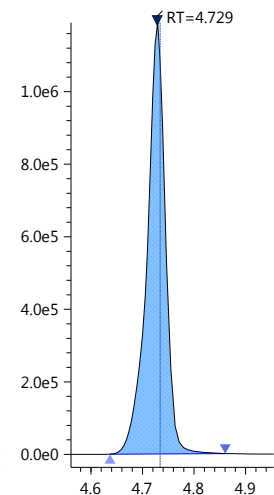
Q 467.80>423.00 (-) 1.19e6



PFNA-13C_IS

Conc 5.0000
 Area 2934170

ISTD 467.80>423.00 (-) 1.19e6

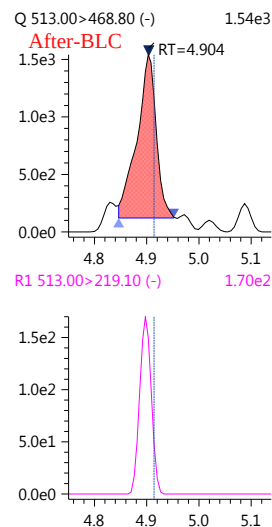


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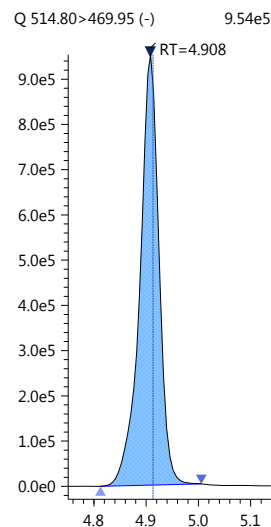
PFDA

Conc 0.0071
 Area 3660
 R#1 6.78 (0.00)



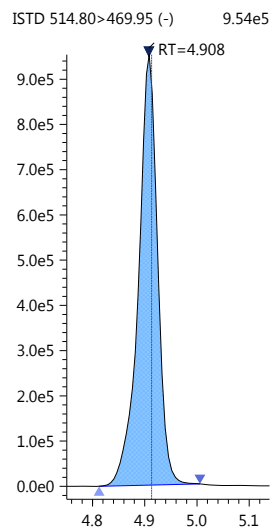
PFDA-13C

Conc 5.4413
 Area 2418149



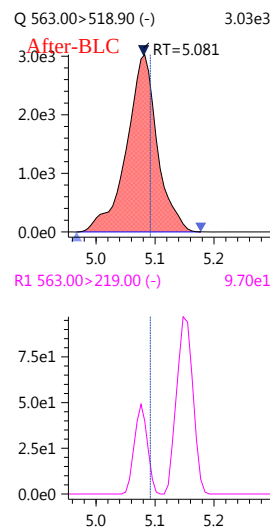
PFDA-13C_IS

Conc 5.0000
 Area 2418149



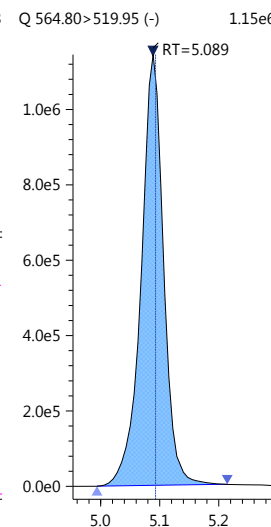
PFUnA

Conc 0.0095
 Area 10960
 R#1 1.41 (0.00)



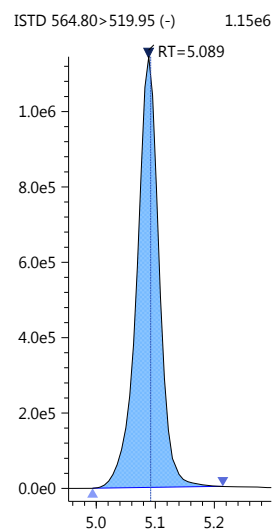
PFUnA-13C

Conc 5.4480
 Area 3019949



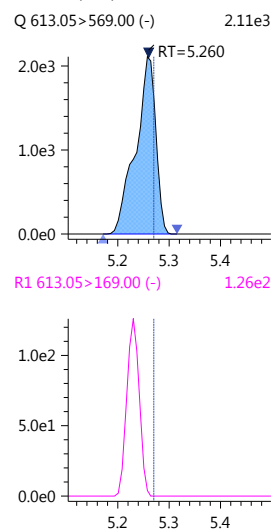
PFUnA-13C_IS

Conc 5.0000
 Area 3019949



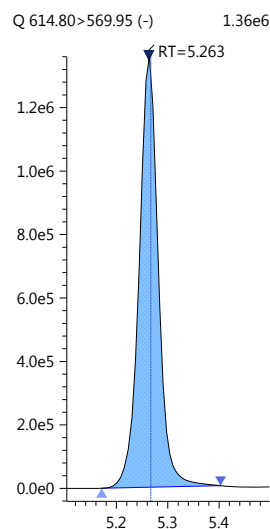
PFDaA

Conc 0.0275
 Area 5763
 R#1 0.00 (0.00)



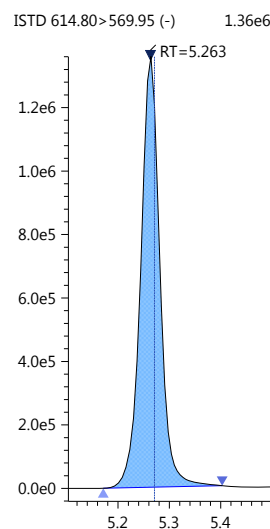
PFDaA-13C

Conc 5.3975
 Area 3524793



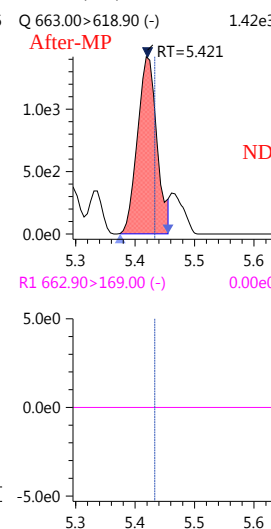
PFDaA-13C_IS

Conc 5.0000
 Area 3524793



PFTrDA

Conc 0.0016
 Area 3194
 R#1 0.00 (0.00)

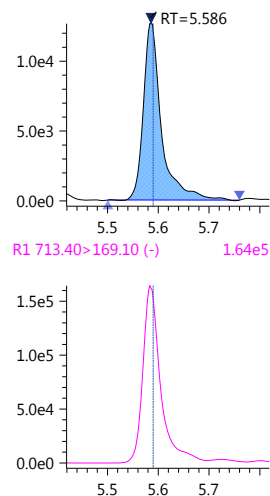


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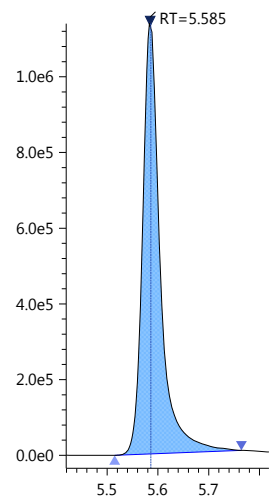
PFTeDA

Conc -0.0108
Area 31448
R#1 1282.27 (0.00)
Q 713.40>669.00 (-) 1.27e4



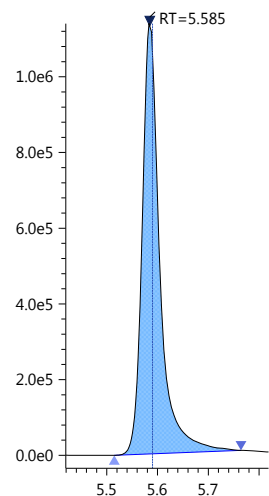
PFTeDA-13C

Conc 5.2899
Area 2756276
Q 714.70>669.90 (-) 1.14e6



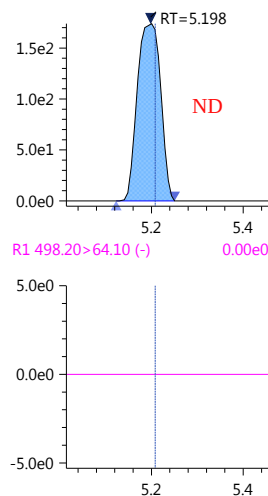
PFTeDA-13C_IS

Conc 5.0000
Area 2756276
ISTD 714.70>669.90 (-) 1.14e6



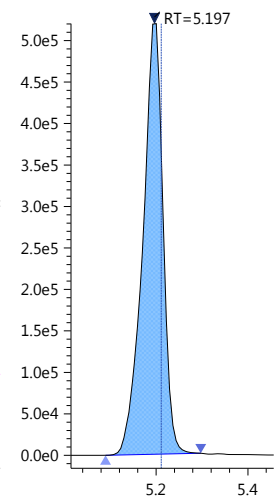
FOSA

Conc 0.0016
Area 617
R#1 0.00 (0.00)
Q 498.20>78.00 (-) 1.74e2



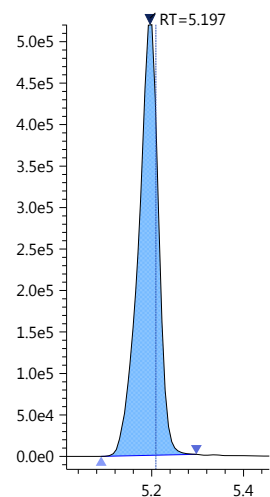
FOSA-13C

Conc 5.3740
Area 1596831
Q 506.00>78.05 (-) 5.20e5



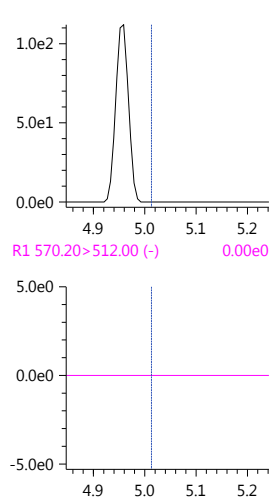
FOSA-13C_IS

Conc 5.0000
Area 1596831
ISTD 506.00>78.05 (-) 5.20e5



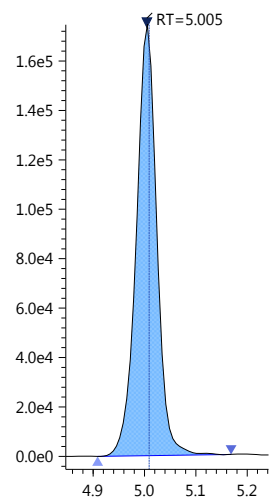
N-MeFOSAA

Conc ----
Area ----
R#1 ---- (0.00)
Q 570.20>419.00 (-) 1.12e2



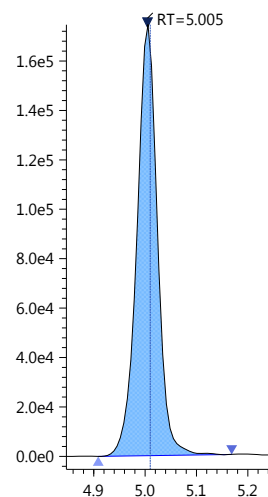
N-MeFOSAA-d3

Conc 5.7400
Area 484242
Q 572.80>419.05 (-) 1.75e5



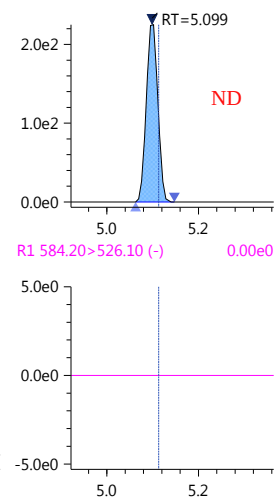
N-MeFOSAA-d3_IS

Conc 5.0000
Area 484242
ISTD 572.80>419.05 (-) 1.75e5



N-EtFOSAA

Conc 0.0077
Area 396
R#1 0.00 (0.00)
Q 584.20>418.95 (-) 2.25e2

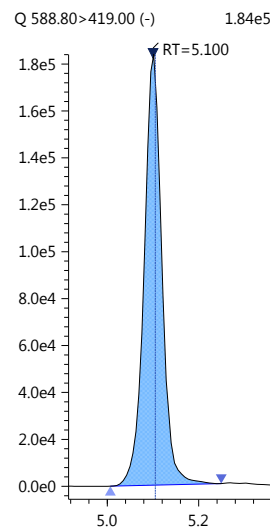


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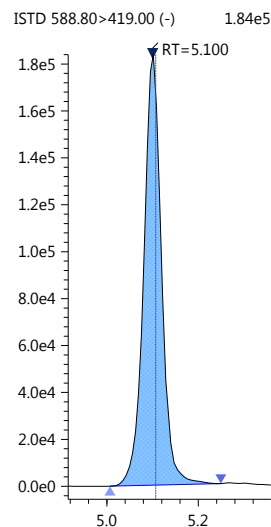
N-EtFOSAA-d5

Conc 6.3769
 Area 495720



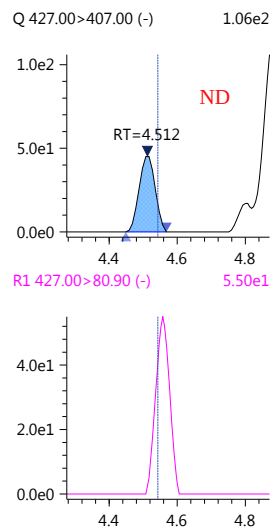
N-EtFOSAA-d5_IS

Conc 5.0000
 Area 495720



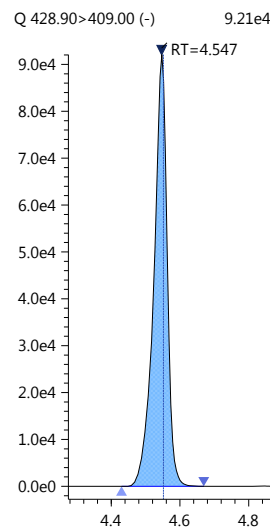
6_2-FTS_1

Conc 0.0026
 Area 148
 R#1 0.00 (0.00)



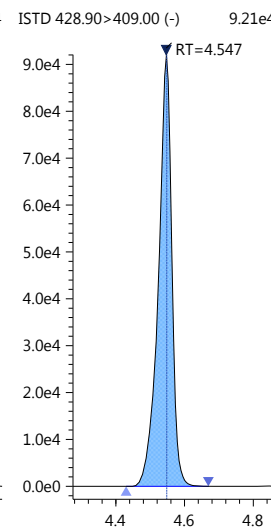
6_2-FTS-13C

Conc 5.0468
 Area 248971



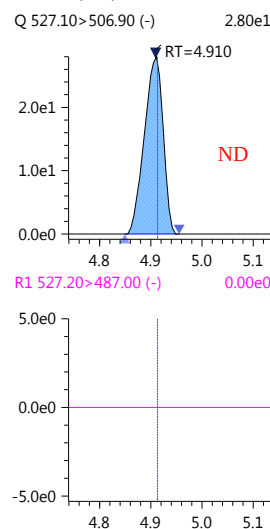
6_2-FTS-13C_IS

Conc 5.0000
 Area 248971



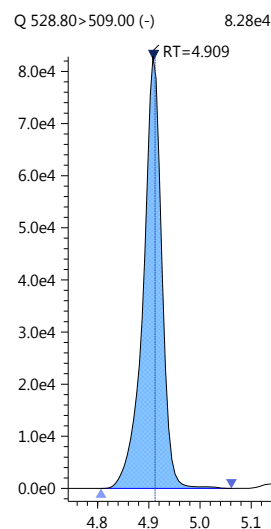
8_2-FTS_1

Conc 0.0021
 Area 71
 R#1 0.00 (0.00)



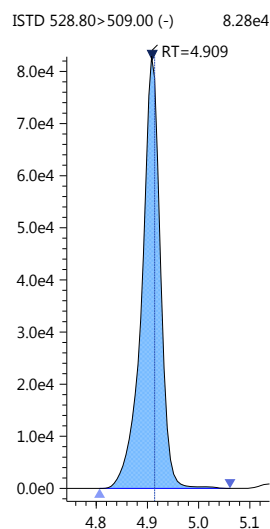
8_2-FTS-13C

Conc 5.2297
 Area 209160



8_2-FTS-13C_IS

Conc 5.0000
 Area 209160



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200428_053

Sample ID: IB

Date acquired: 4/28/2020 11:57:46 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200428_b4\200428_053.lcd

Vial: 15 | Inj. Volume: 15.0000uL | Tray: 1

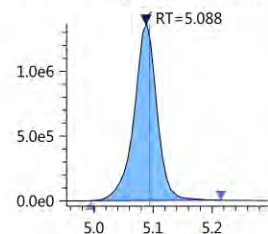
13C7-PFUnDA_IS

Conc 5.0000

Area 3675988

ISTD 570.00>525.00 (-)

1.37e6



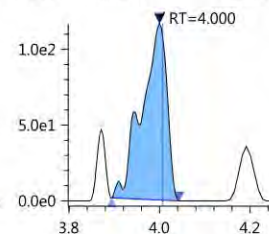
PFBS_1

Conc 0.0027

Area 449

Q 299.00>80.00 (-)

1.17e2



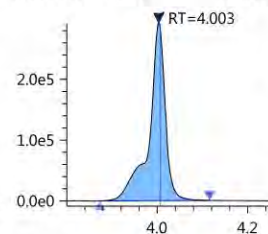
PFBS-13C

Conc 5.0564

Area 726680

Q 301.80>80.00 (-)

2.92e5



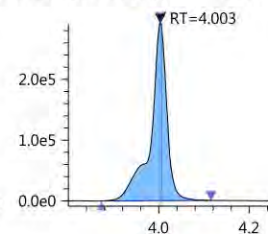
PFBS-13C_IS

Conc 5.0000

Area 726680

ISTD 301.80>80.00 (-)

2.92e5



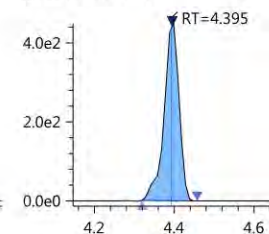
PFHxS_1

Conc -0.0064

Area 1178

Q 399.00>80.00 (-)

4.49e2



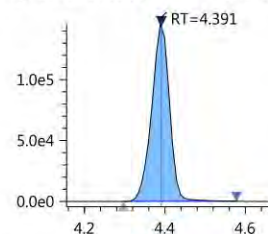
PFHxS-180

Conc 5.5444

Area 448579

Q 402.70>84.05 (-)

1.46e5



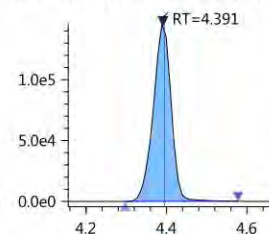
PFHxS-180_IS

Conc 5.0000

Area 448579

ISTD 402.70>84.05 (-)

1.46e5



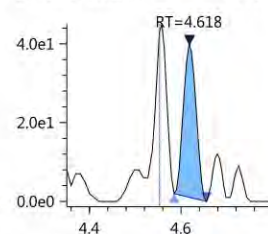
PFHpS_1

Conc 0.0005

Area 75

Q 449.00>80.15 (-)

4.50e1



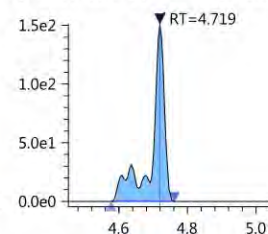
PFOS_1

Conc 0.0038

Area 385

Q 499.00>80.00 (-)

1.51e2



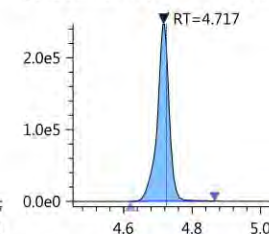
PFOS-13C

Conc 5.2794

Area 601221

Q 502.80>80.05 (-)

2.47e5



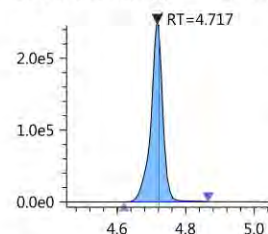
PFOS-13C_IS

Conc 5.0000

Area 601221

ISTD 502.80>80.05 (-)

2.47e5



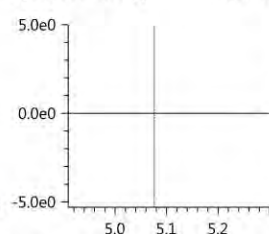
PFDS_1

Conc ----

Area ----

Q 599.00>79.90 (-)

0.00e0



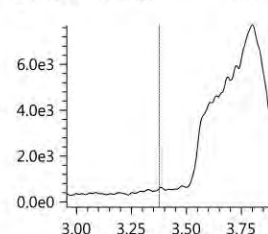
PFBA

Conc ----

Area ----

Q 213.00>169.10 (-)

7.73e3



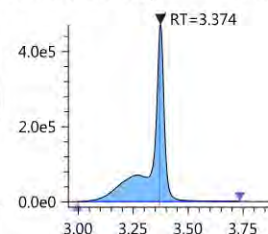
PFBA-13C

Conc 4.8070

Area 1869339

Q 216.90>172.15 (-)

4.71e5



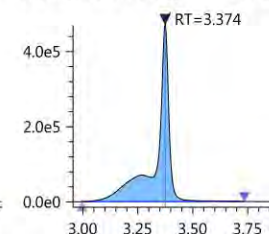
PFBA-13C_IS

Conc 5.0000

Area 1869339

ISTD 216.90>172.15 (-)

4.71e5



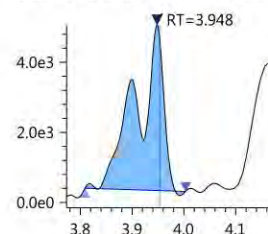
PFPeA

Conc 0.0102

Area 17174

Q 263.05>219.10 (-)

5.06e3



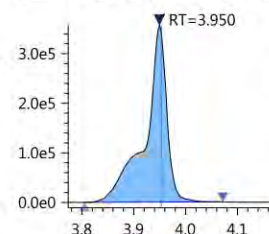
PFPeA-13C

Conc 4.7042

Area 1029456

Q 267.90>223.00 (-)

3.57e5



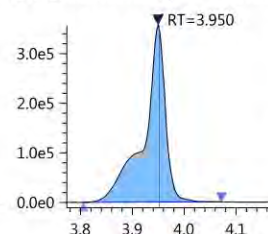
PFPeA-13C_IS

Conc 5.0000

Area 1029456

ISTD 267.90>223.00 (-)

3.57e5



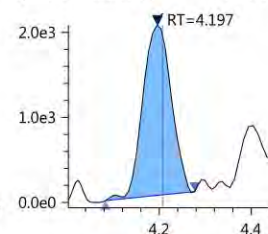
PFHxA

Conc 0.0076

Area 8595

Q 313.00>269.00 (-)

2.08e3



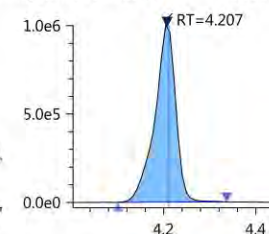
PFHxA-13C

Conc 5.2765

Area 3163034

Q 314.90>270.10 (-)

1.00e6



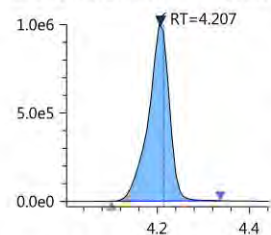
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PFHxA-13C_IS

Conc 5.0000
Area 3163034

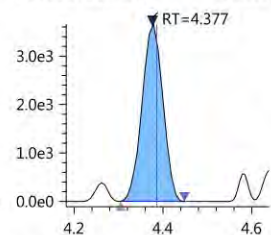
ISTD 314.90>270.10 (-) 1.00e6



PFHpA

Conc 0.0137
Area 11998

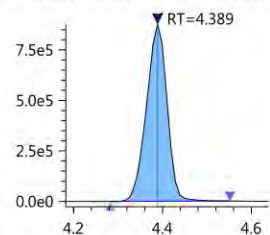
Q 362.90>319.00 (-) 3.66e3



PFHpA-13C

Conc 5.1983
Area 2819097

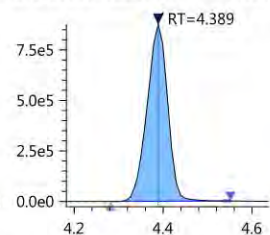
Q 366.90>322.10 (-) 8.78e5



PFHpA-13C_IS

Conc 5.0000
Area 2819097

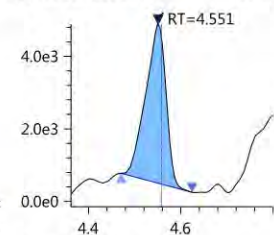
ISTD 366.90>322.10 (-) 8.78e5



PFOA

Conc 0.0071
Area 13477

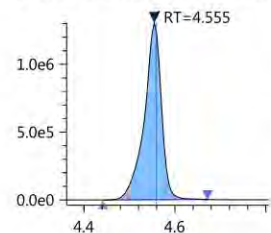
Q 413.00>369.00 (-) 4.89e3



PFOA-13C

Conc 5.2048
Area 3414556

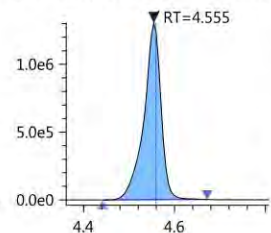
Q 416.80>372.05 (-) 1.31e6



PFOA-13C_IS

Conc 5.0000
Area 3414556

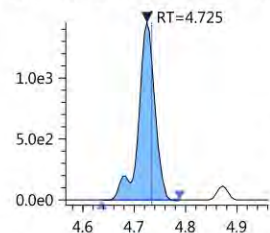
ISTD 416.80>372.05 (-) 1.31e6



PFNA

Conc 0.0016
Area 3197

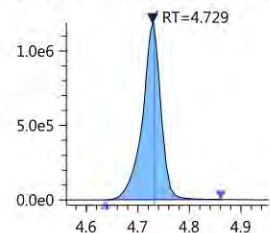
Q 463.00>418.90 (-) 1.45e3



PFNA-13C

Conc 5.9906
Area 2934170

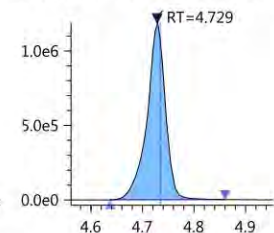
Q 467.80>423.00 (-) 1.19e6



PFNA-13C_IS

Conc 5.0000
Area 2934170

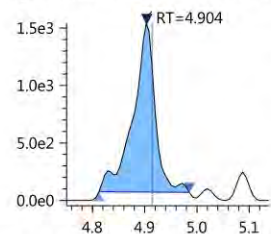
ISTD 467.80>423.00 (-) 1.19e6



PFDA

Conc 0.0085
Area 4344

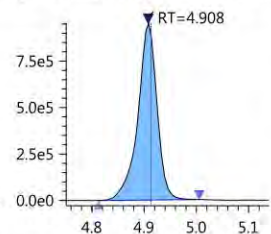
Q 513.00>468.80 (-) 1.54e3



PFDA-13C

Conc 5.4413
Area 2418149

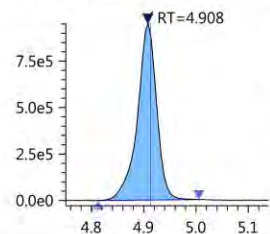
Q 514.80>469.95 (-) 9.54e5



PFDA-13C_IS

Conc 5.0000
Area 2418149

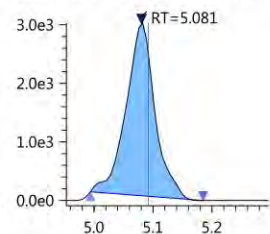
ISTD 514.80>469.95 (-) 9.54e5



PFUnA

Conc 0.0075
Area 10046

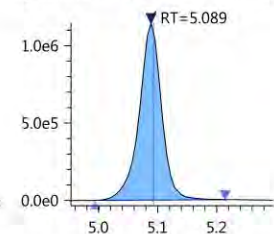
Q 563.00>518.90 (-) 3.03e3



PFUnA-13C

Conc 5.4480
Area 3019949

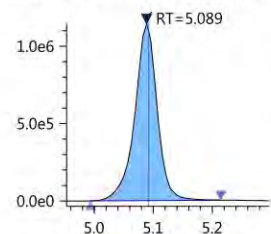
Q 564.80>519.95 (-) 1.15e6



PFUnA-13C_IS

Conc 5.0000
Area 3019949

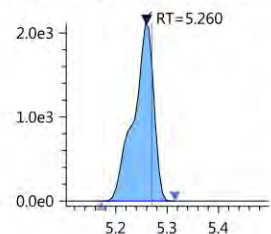
ISTD 564.80>519.95 (-) 1.15e6



PFDaA

Conc 0.0275
Area 5763

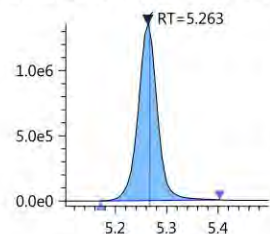
Q 613.05>569.00 (-) 2.11e3



PFDaA-13C

Conc 5.3975
Area 3524793

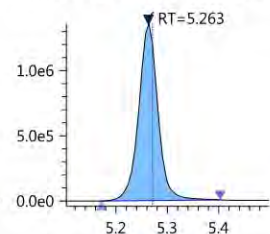
Q 614.80>569.95 (-) 1.36e6



PFDaA-13C_IS

Conc 5.0000
Area 3524793

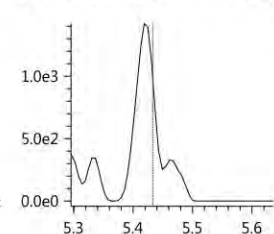
ISTD 614.80>569.95 (-) 1.36e6



PFTrDA

Conc ----
Area ----

Q 663.00>618.90 (-) 1.42e3



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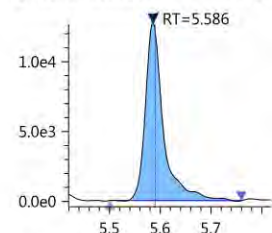
PFTeDA

Conc -0.0108

Area 31448

Q 713.40>669.00 (-)

1.27e4



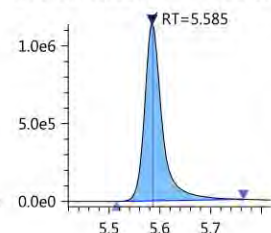
PFTeDA-13C

Conc 5.2899

Area 2756276

Q 714.70>669.90 (-)

1.14e6



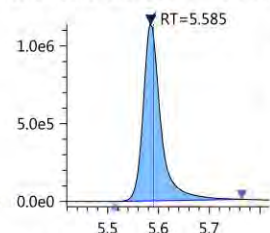
PFTeDA-13C_IS

Conc 5.0000

Area 2756276

ISTD 714.70>669.90 (-)

1.14e6



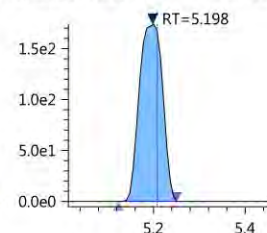
FOSA

Conc 0.0016

Area 617

Q 498.20>78.00 (-)

1.74e2



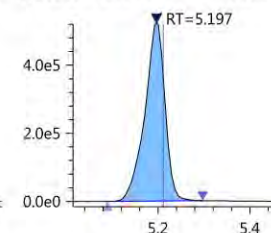
FOSA-13C

Conc 5.3740

Area 1596831

Q 506.00>78.05 (-)

5.20e5



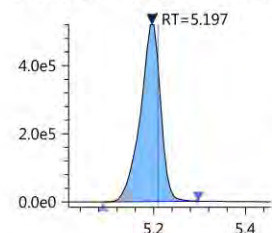
FOSA-13C_IS

Conc 5.0000

Area 1596831

ISTD 506.00>78.05 (-)

5.20e5



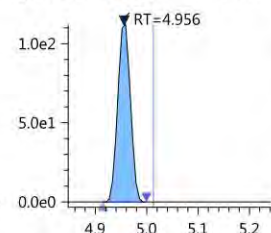
N-MeFOSAA

Conc 0.0032

Area 194

Q 570.20>419.00 (-)

1.12e2



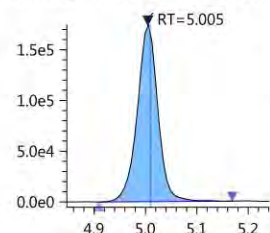
N-MeFOSAA-d3

Conc 5.7400

Area 484242

Q 572.80>419.05 (-)

1.75e5



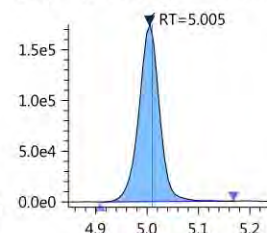
N-MeFOSAA-d3_IS

Conc 5.0000

Area 484242

ISTD 572.80>419.05 (-)

1.75e5



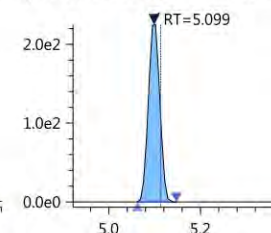
N-EtFOSAA

Conc 0.0077

Area 396

Q 584.20>418.95 (-)

2.25e2



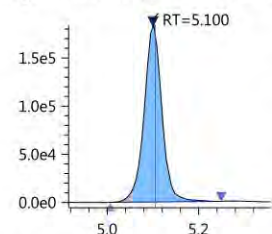
N-EtFOSAA-d5

Conc 6.3769

Area 495720

Q 588.80>419.00 (-)

1.84e5



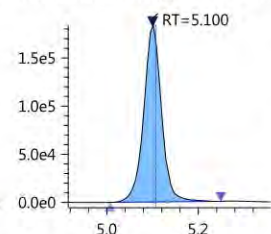
N-EtFOSAA-d5_IS

Conc 5.0000

Area 495720

ISTD 588.80>419.00 (-)

1.84e5



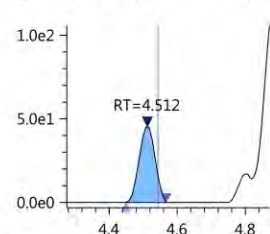
6_2-FTS_1

Conc 0.0026

Area 148

Q 427.00>407.00 (-)

1.06e2



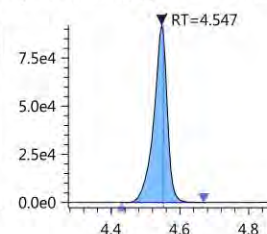
6_2-FTS-13C

Conc 5.0468

Area 248971

Q 428.90>409.00 (-)

9.21e4



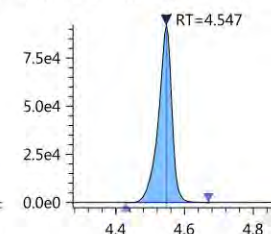
6_2-FTS-13C_IS

Conc 5.0000

Area 248971

ISTD 428.90>409.00 (-)

9.21e4



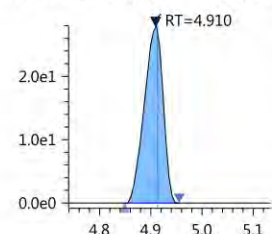
8_2-FTS_1

Conc 0.0021

Area 71

Q 527.10>506.90 (-)

2.80e1



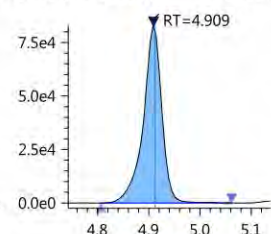
8_2-FTS-13C

Conc 5.2297

Area 209160

Q 528.80>509.00 (-)

8.28e4



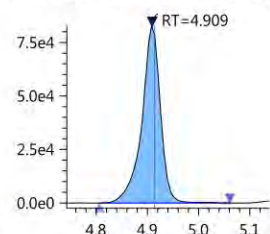
8_2-FTS-13C_IS

Conc 5.0000

Area 209160

ISTD 528.80>509.00 (-)

8.28e4



Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200430_b3\200430_017
Lab ID: KQ2005836-02
RunType: CCB
Matrix: Water

Date Acquired: 4/30/20 11:58
Batch ID: 678575
Analysis Method: PFC/537M/PFAS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery		X
Internal Standards	X	
Surrogates	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	18O2-PFHxS	136	70	130	

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200430_b3\200430_017	Instrument:	K-LCMS-06
Acqu Date:	4/30/20 11:58	Vial:	2
Run Type:	CCB	Dilution:	1
Lab ID:	KQ2005836-02	Raw Units:	ng/mL

Bottle ID:		Tier:	V	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/14/20	Receive Date:	4/16/20

Analysis Lot:	678575	Prep Lot:		Report Group:	KQ2005836
Analysis	PFC/537M	Prep Method:			
		Prep Date:			

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19837

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.077	-0.01	5862149	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.998	-0.01	1069866	4.6681	93	20 - 109	Y
18O2-PFHxS	4.383	-0.01	652572	5.0578	101	26 - 122	Y
13C4-PFOS	4.708	-0.01	892702	4.9156	98	25 - 121	Y
13C4-PFBA	3.367	-0.01	2621744	4.2276	85	27 - 124	Y
13C5-PFPeA	3.944	-0.01	1498365	4.2935	86	27 - 138	Y
13C2-PFHxA	4.200	-0.01	4022002	4.2073	84	28 - 132	Y
13C4-PFHpA	4.382	-0.01	4284410	4.9541	99	19 - 139	Y
13C4-PFOA	4.547	-0.01	5223870	4.9932	100	22 - 130	Y
13C5-PFNA	4.720	-0.01	4432888	5.6753	114	20 - 127	Y
13C2-PFDA	4.898	-0.01	3689974	5.2067	104	24 - 125	Y
13C2-PFUnDA	5.078	-0.01	4497077	5.0872	102	22 - 125	Y
13C2-PFDoDA	5.253	-0.01	5311768	5.1005	102	19 - 122	Y
13C2-PFTeDA	5.577	-0.01	4532318	5.4546	109	13 - 124	Y
13C8-FOSA	5.187	-0.01	2239856	4.7269	95	18 - 109	Y
13C2-6:2 FTS	4.538	-0.01	379807	4.8278	97	10 - 226	Y
13C2-8:2 FTS	4.899	-0.01	285966	4.4836	90	10 - 202	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.998	-0.01	871	0.0035	0.11	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.375	-0.01	4814	0.0127	0.41	U	Y
Perfluoroheptane sulfonic acid (PFHpS)	4.536	-0.01	159	0.0008	0.026	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.714	0.00	775	0.0051	0.16	U	Y

Data File: J:\LCMS06\Data\200430_b3\200430_017
 Acqu Date: 4/30/20 11:58
 Run Type: CCB
 Lab ID: KQ2005836-02

Instrument: K-LCMS06
 Vial: 2
 Dilution: 1
 Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.945	-0.01	19964	0.0021	0.067	U	Y
Perfluorohexanoic acid (PFHxA)	4.204	-0.01	11589	0.0085	0.27	U	Y
Perfluoroheptanoic acid (PFHpA)	4.369	-0.02	2730	-0.0066	0	U	Y
Perfluorooctanoic acid (PFOA)	4.545	-0.01	18488	0.0055	0.18	U	Y
Perfluorononanoic acid (PFNA)	4.697	-0.03	1982	-0.0020	0	U	Y
Perfluorodecanoic acid (PFDA)	4.895	-0.01	3458	0.0044	0.14	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.073	-0.01	11677	0.0028	0.090	U	Y
Perfluorododecanoic acid (PFDoDA)	5.223	-0.04	845	0.0146	0.47	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.415	-0.02	3480	-0.0005	0	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.577	-0.01	53461	-0.0064	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.181	-0.02	2334	0.0044	0.14	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.517	-0.03	128	0.0015	0.048	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.903	-0.01	47	0.0010	0.032	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 5/5/2020 2:08:10 PM

200430_017

Sample ID: IB

Date acquired: 4/30/2020 11:58:57 AM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200430_b3\200430_017.lcd

Vial: 51 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.077	5862149	5862149	1	5.0000	ng/mL	----
PFBS_1	Auto	3.998	871	1069866	2	0.0035	ng/mL	----
PFBS-13C	Auto	3.998	1069866	5862149	1	4.6681	ng/mL	----
PFBS-13C_IS	Auto	3.998	1069866	1069866	2	5.0000	ng/mL	----
PFHxS_1	Auto	4.375	4814	652572	3	0.0127	ng/mL	----
PFHxS-18O	Auto	4.383	652572	5862149	1	5.0578	ng/mL	----
PFHxS-18O_IS	Auto	4.383	652572	652572	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.536	159	652572	3	0.0008	ng/mL	----
PFOS_1	Auto	4.714	775	892702	4	0.0051	ng/mL	----
PFOS-13C	Auto	4.708	892702	5862149	1	4.9156	ng/mL	----
PFOS-13C_IS	Auto	4.708	892702	892702	4	5.0000	ng/mL	----
PFDS_1	ND(W/B)	----	----	892702	4	----	ng/mL	----
PFBA	ND(W/B)	----	----	2621744	5	----	ng/mL	----
PFBA-13C	Auto	3.367	2621744	5862149	1	4.2276	ng/mL	----
PFBA-13C_IS	Auto	3.367	2621744	2621744	5	5.0000	ng/mL	----
PFPeA	Auto	3.945	19964	1498365	6	0.0021	ng/mL	----
PFPeA-13C	Auto	3.944	1498365	5862149	1	4.2935	ng/mL	----
PFPeA-13C_IS	Auto	3.944	1498365	1498365	6	5.0000	ng/mL	----
PFHxA	M	4.204	11589	4022002	7	0.0085	ng/mL	----
PFHxA-13C	Auto	4.200	4022002	5862149	1	4.2073	ng/mL	----
PFHxA-13C_IS	Auto	4.200	4022002	4022002	7	5.0000	ng/mL	----
PFHpA	M	4.369	2730	4284410	8	-0.0066	ng/mL	----
PFHpA-13C	Auto	4.382	4284410	5862149	1	4.9541	ng/mL	----
PFHpA-13C_IS	Auto	4.382	4284410	4284410	8	5.0000	ng/mL	----
PFOA	M	4.545	18488	5223870	9	0.0055	ng/mL	----
PFOA-13C	Auto	4.547	5223870	5862149	1	4.9932	ng/mL	----
PFOA-13C_IS	Auto	4.547	5223870	5223870	9	5.0000	ng/mL	----
PFNA	Auto	4.697	1982	4432888	10	-0.0020	ng/mL	----
PFNA-13C	Auto	4.720	4432888	5862149	1	5.6753	ng/mL	----
PFNA-13C_IS	Auto	4.720	4432888	4432888	10	5.0000	ng/mL	----
PFDA	M	4.895	3458	3689974	11	0.0044	ng/mL	----
PFDA-13C	Auto	4.898	3689974	5862149	1	5.2067	ng/mL	----
PFDA-13C_IS	Auto	4.898	3689974	3689974	11	5.0000	ng/mL	----
PFUnA	M	5.073	11677	4497077	12	0.0028	ng/mL	----
PFUnA-13C	Auto	5.078	4497077	5862149	1	5.0872	ng/mL	----
PFUnA-13C_IS	Auto	5.078	4497077	4497077	12	5.0000	ng/mL	----
PFDoA	Auto	5.223	845	5311768	13	0.0146	ng/mL	----
PFDoA-13C	Auto	5.253	5311768	5862149	1	5.1005	ng/mL	----
PFDoA-13C_IS	Auto	5.253	5311768	5311768	13	5.0000	ng/mL	----
PFTeDA	M	5.415	3480	4532318	14	-0.0005	ng/mL	----
PFTeDA	Auto	5.577	53461	4532318	14	-0.0064	ng/mL	----
PFTeDA-13C	Auto	5.577	4532318	5862149	1	5.4546	ng/mL	----
PFTeDA-13C_IS	Auto	5.577	4532318	4532318	14	5.0000	ng/mL	----
FOSA	Auto	5.181	2334	2239856	16	0.0044	ng/mL	----
FOSA-13C	Auto	5.187	2239856	5862149	1	4.7269	ng/mL	----
FOSA-13C_IS	Auto	5.187	2239856	2239856	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	4.994	1848	735545	21	0.0202	ng/mL	----
N-MeFOSAA-d3	Auto	4.994	735545	5862149	1	5.4673	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.994	735545	735545	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	711151	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.090	711151	5862149	1	5.7366	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.090	711151	711151	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.517	128	379807	24	0.0015	ng/mL	----
6_2-FTS-13C	Auto	4.538	379807	5862149	1	4.8278	ng/mL	----
6_2-FTS-13C_IS	Auto	4.538	379807	379807	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.903	47	285966	25	0.0010	ng/mL	----
8_2-FTS-13C	Auto	4.899	285966	5862149	1	4.4836	ng/mL	----
8_2-FTS-13C_IS	Auto	4.899	285966	285966	25	5.0000	ng/mL	----

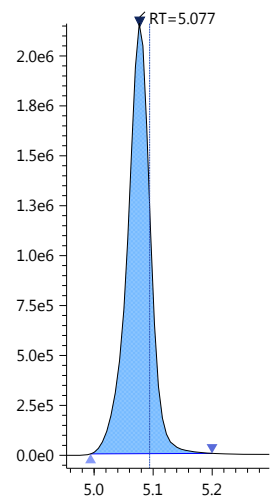
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13C7-PFUnDA_IS

Conc 5.0000
Area 5862149

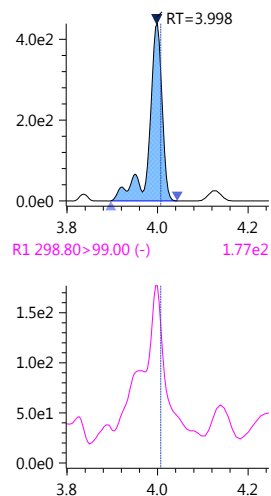
ISTD 570.00>525.00 (-) 2.16e6



PFBS_1

Conc 0.0035
Area 871
R#1 32.12 (0.00)

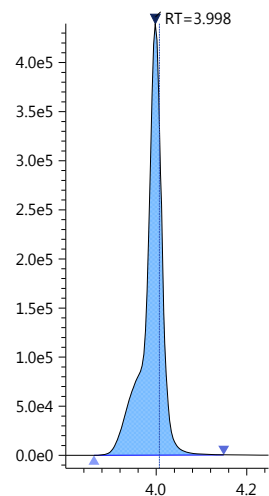
Q 299.00>80.00 (-) 4.39e2



PFBS-13C

Conc 4.6681
Area 1069866

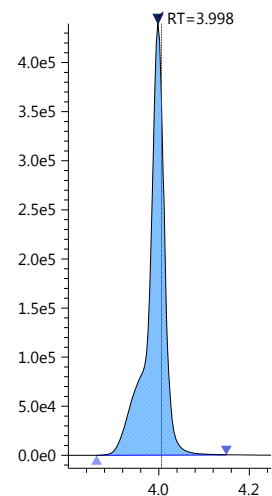
Q 301.80>80.00 (-) 4.40e5



PFBS-13C_IS

Conc 5.0000
Area 1069866

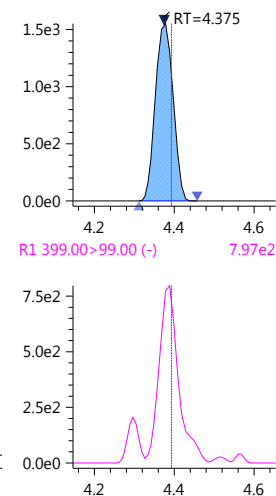
ISTD 301.80>80.00 (-) 4.40e5



PFHxS_1

Conc 0.0127
Area 4814
R#1 43.51 (0.00)

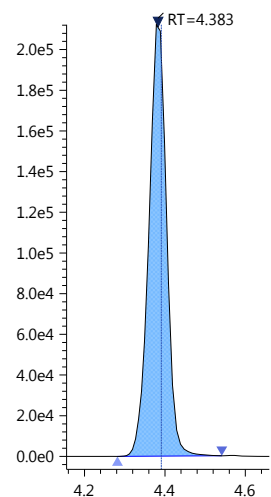
Q 399.00>80.00 (-) 1.55e3



PFHxS-180

Conc 5.0578
Area 652572

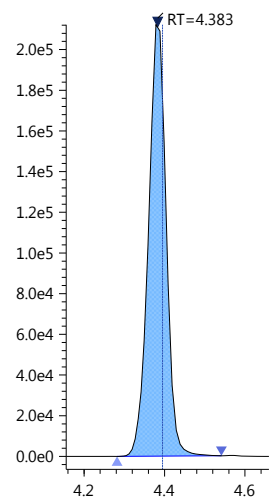
Q 402.70>84.05 (-) 2.12e5



PFHxS-180_IS

Conc 5.0000
Area 652572

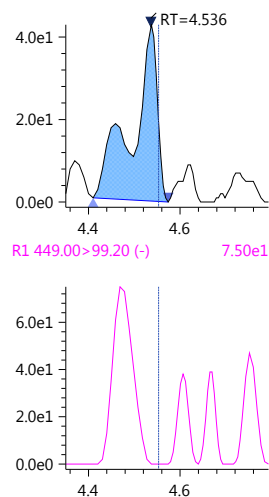
ISTD 402.70>84.05 (-) 2.12e5



PFHpS_1

Conc 0.0008
Area 159
R#1 0.00 (0.00)

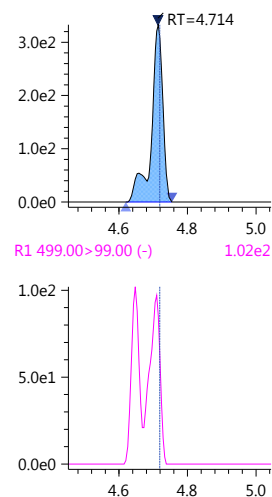
Q 449.00>80.15 (-) 4.30e1



PFOS_1

Conc 0.0051
Area 775
R#1 26.83 (0.00)

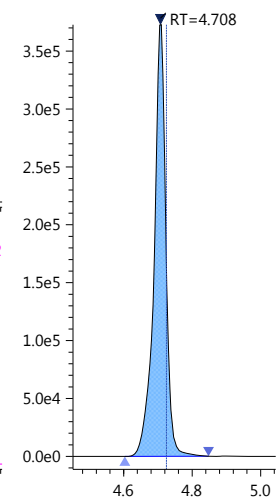
Q 499.00>80.00 (-) 3.33e2



PFOS-13C

Conc 4.9156
Area 892702

Q 502.80>80.05 (-) 3.73e5



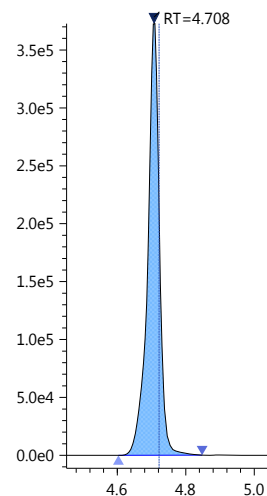
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PFOS-13C_IS

Conc 5.0000
Area 892702

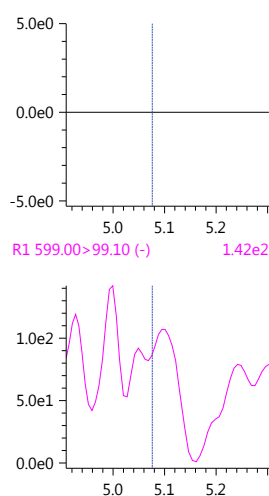
ISTD 502.80>80.05 (-)



PFDS_1

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

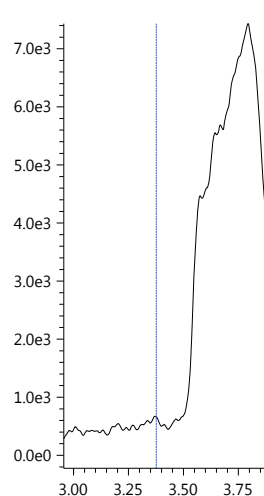
Q 599.00>79.90 (-)



PFBA

Conc ----
Area ----

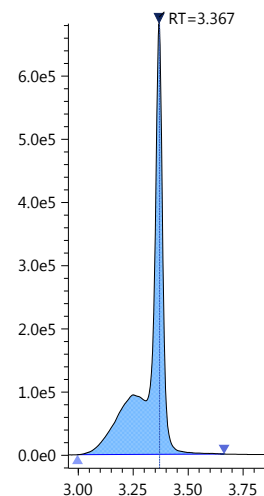
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.2276
Area 2621744

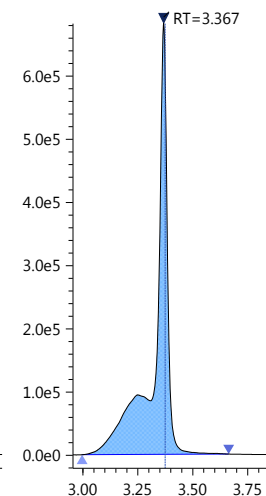
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 2621744

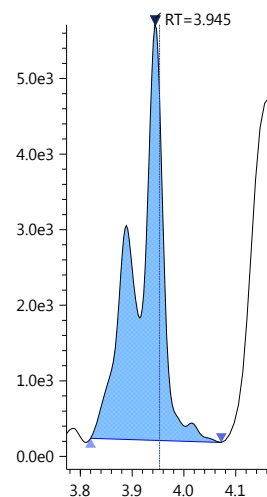
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.0021
Area 19964

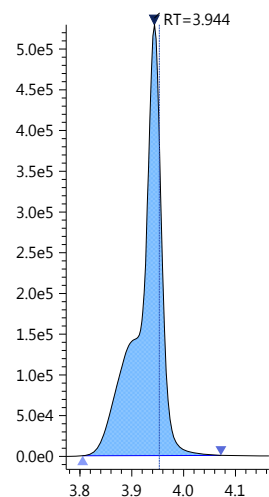
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.2935
Area 1498365

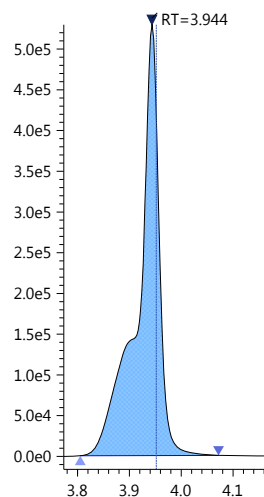
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1498365

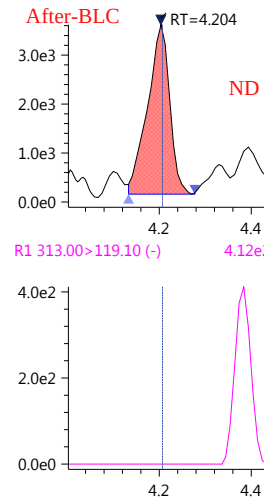
ISTD 267.90>223.00 (-)



PFHxA

Conc 0.0085
Area 11589
R#1 0.00 (0.00)

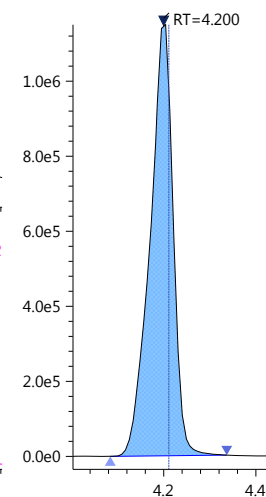
Q 313.00>269.00 (-)



PFHxA-13C

Conc 4.2073
Area 4022002

Q 314.90>270.10 (-)



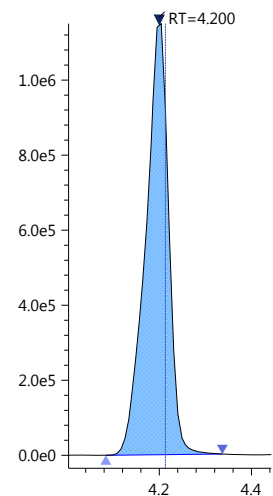
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PFHxA-13C_IS

Conc 5.0000
Area 4022002

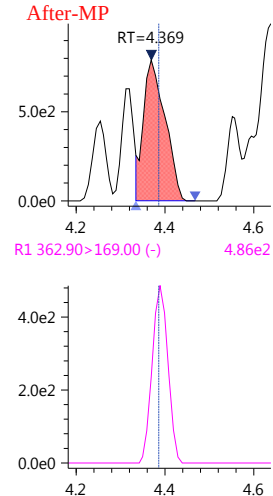
ISTD 314.90>270.10 (-) 1.15e6



PFHpA

Conc -0.0066
Area 2730
R#1 37.67 (0.00)

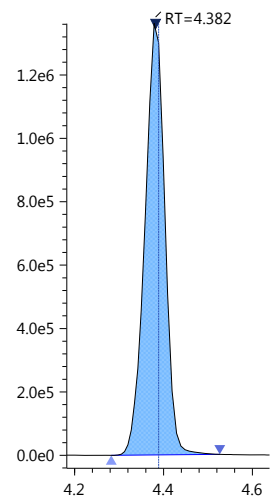
Q 362.90>319.00 (-) 9.95e2



PFHpA-13C

Conc 4.9541
Area 4284410

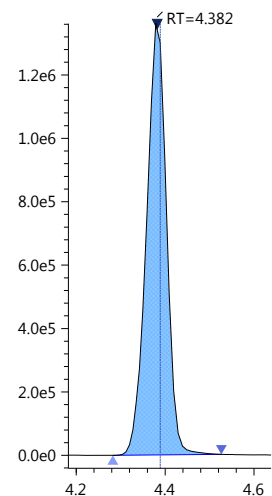
Q 366.90>322.10 (-) 1.36e6



PFHpA-13C_IS

Conc 5.0000
Area 4284410

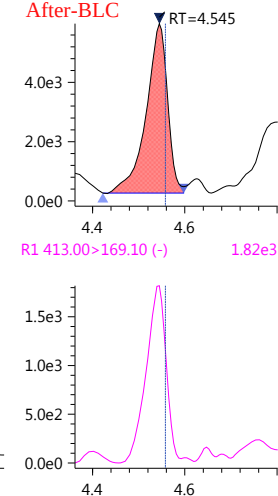
ISTD 366.90>322.10 (-) 1.36e6



PFOA

Conc 0.0055
Area 18488
R#1 32.32 (0.00)

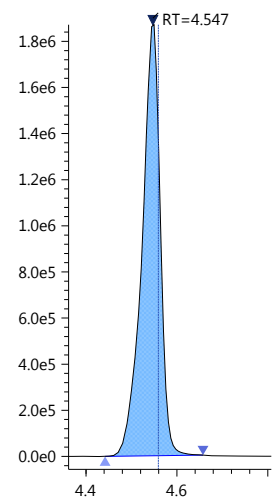
Q 413.00>369.00 (-) 5.99e3



PFOA-13C

Conc 4.9932
Area 5223870

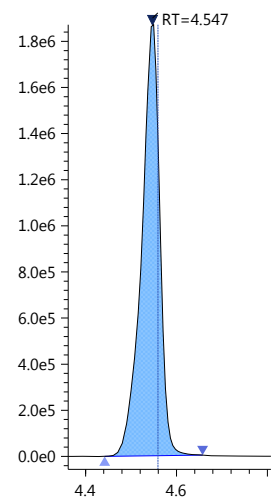
Q 416.80>372.05 (-) 1.87e6



PFOA-13C_IS

Conc 5.0000
Area 5223870

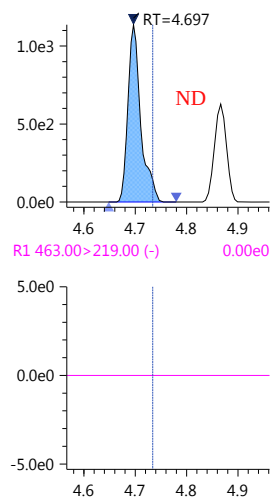
ISTD 416.80>372.05 (-) 1.87e6



PFNA

Conc -0.0020
Area 1982
R#1 0.00 (0.00)

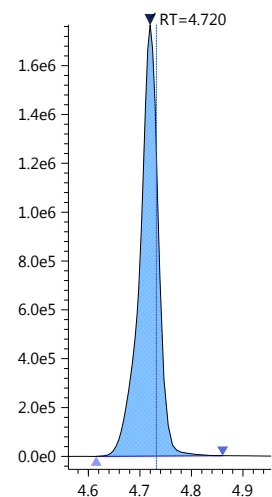
Q 463.00>418.90 (-) 1.14e3



PFNA-13C

Conc 5.6753
Area 4432888

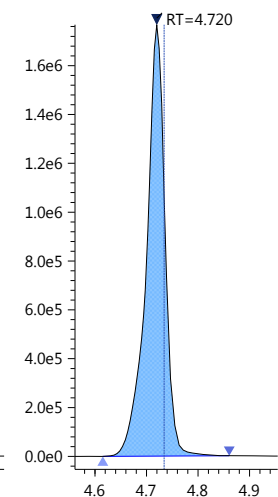
Q 467.80>423.00 (-) 1.77e6



PFNA-13C_IS

Conc 5.0000
Area 4432888

ISTD 467.80>423.00 (-) 1.77e6

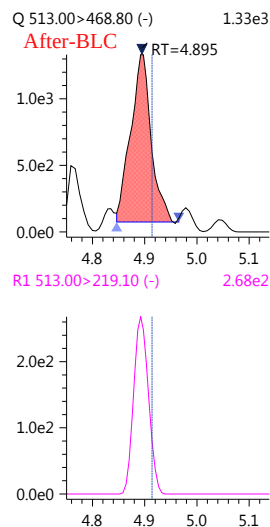


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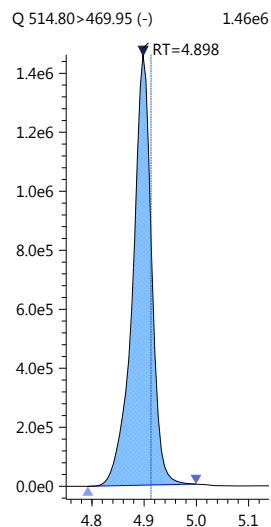
PFDA

Conc 0.0044
Area 3458
R#1 19.24 (0.00)



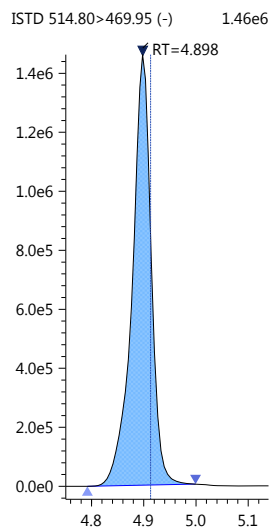
PFDA-13C

Conc 5.2067
Area 3689974



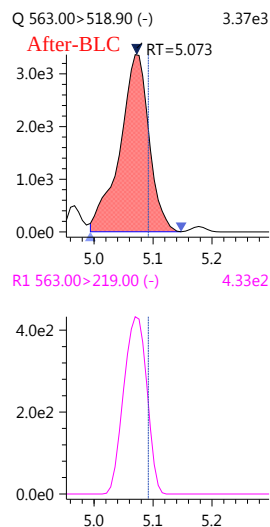
PFDA-13C_IS

Conc 5.0000
Area 3689974



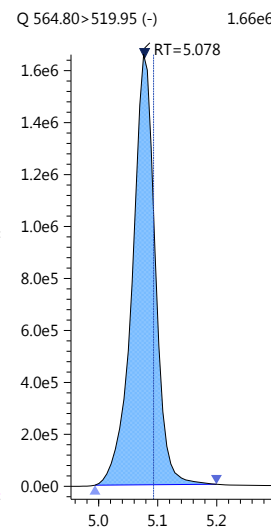
PFUnA

Conc 0.0028
Area 11677
R#1 12.87 (0.00)



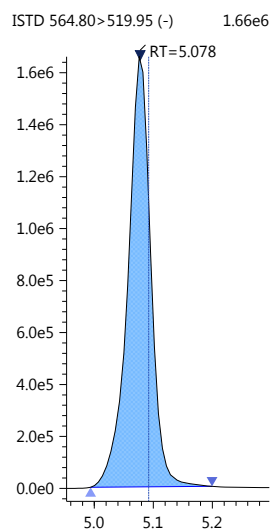
PFUnA-13C

Conc 5.0872
Area 4497077



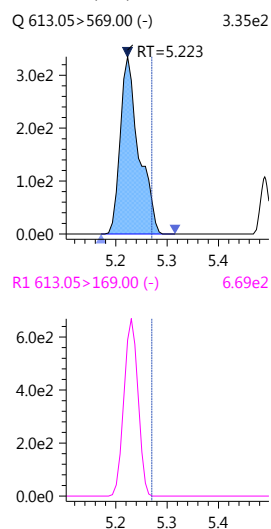
PFUnA-13C_IS

Conc 5.0000
Area 4497077



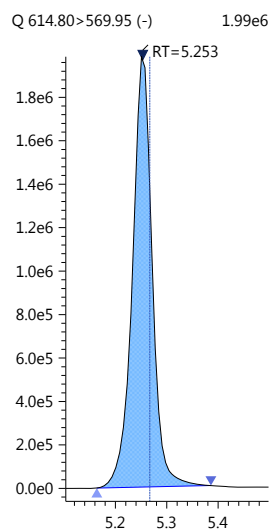
PFDaA

Conc 0.0146
Area 845
R#1 168.86 (0.00)



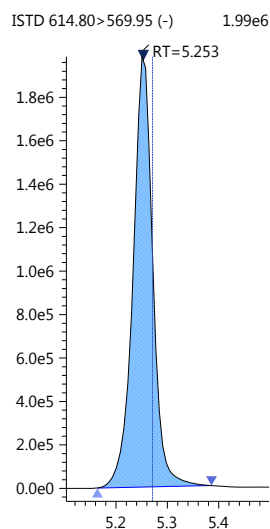
PFDaA-13C

Conc 5.1005
Area 5311768



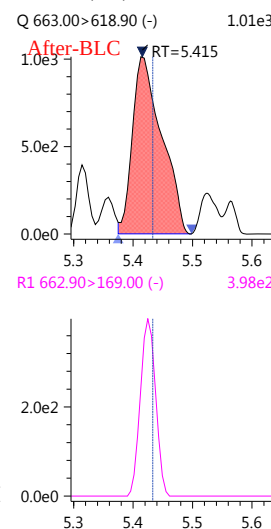
PFDaA-13C_IS

Conc 5.0000
Area 5311768



PFTrDA

Conc -0.0005
Area 3480
R#1 36.49 (0.00)

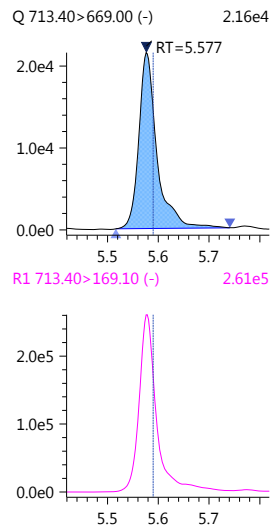


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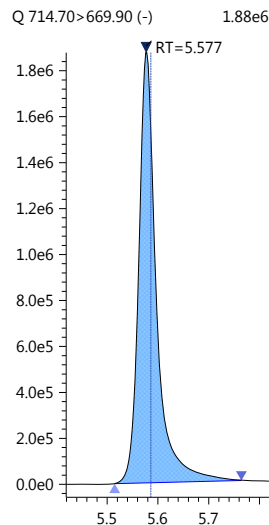
PFTeDA

Conc -0.0064
Area 53461
R#1 1260.49 (0.00)



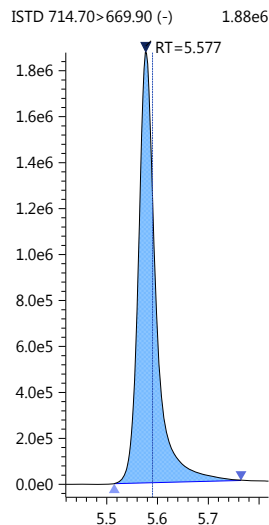
PFTeDA-13C

Conc 5.4546
Area 4532318



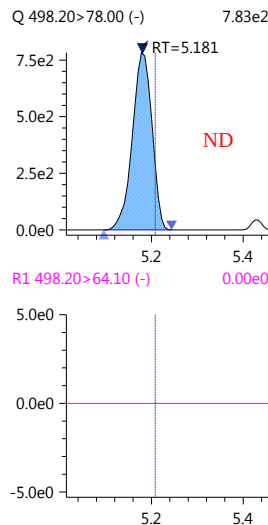
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Conc 5.0000
Area 4532318



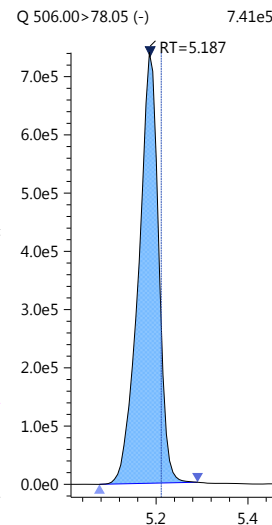
FOSA

Conc 0.0044
Area 2334
R#1 0.00 (0.00)



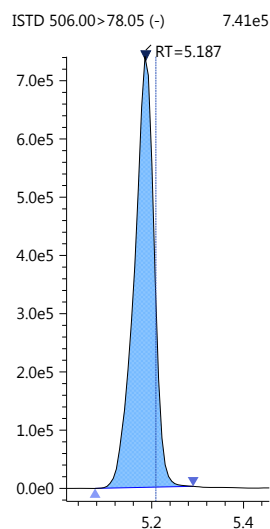
FOSA-13C

Conc 4.7269
Area 2239856



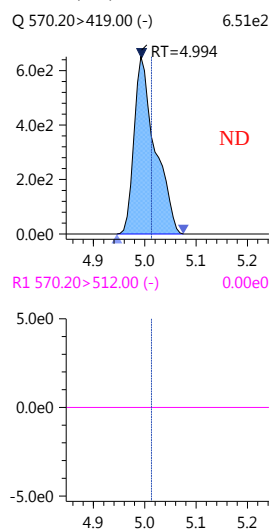
FOSA-13C_IS

Conc 5.0000
Area 2239856



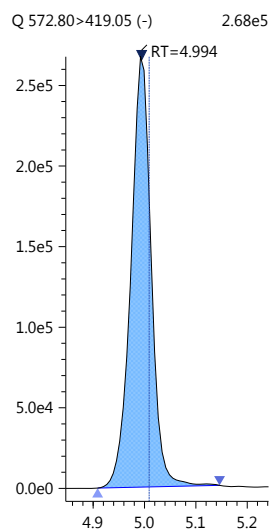
N-MeFOSAA

Conc 0.0202
Area 1848
R#1 0.00 (0.00)



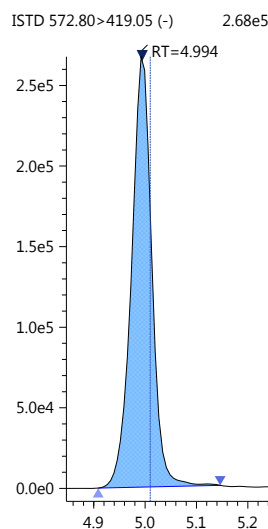
N-MeFOSAA-d3

Conc 5.4673
Area 735545



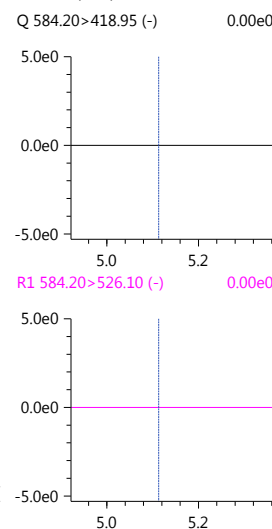
N-MeFOSAA-d3_IS

Conc 5.0000
Area 735545



N-EtFOSAA

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

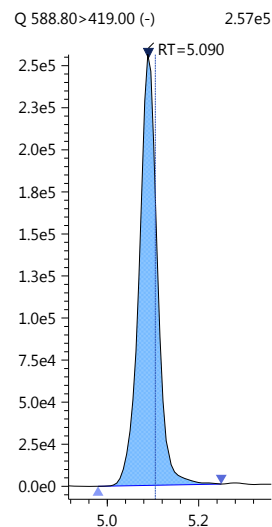


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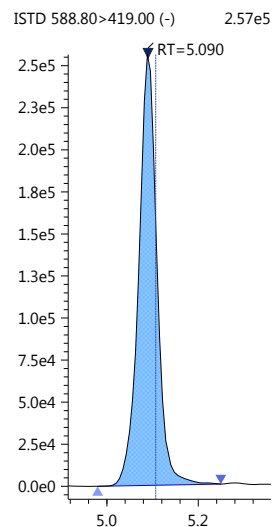
N-EtFOSAA-d5

Conc 5.7366
Area 711151



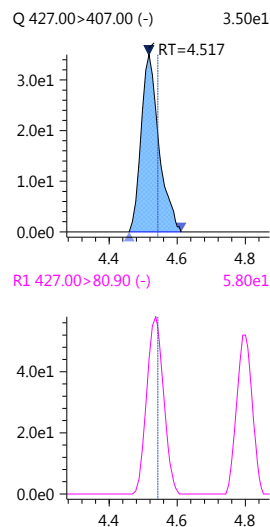
N-EtFOSAA-d5_IS

Conc 5.0000
Area 711151



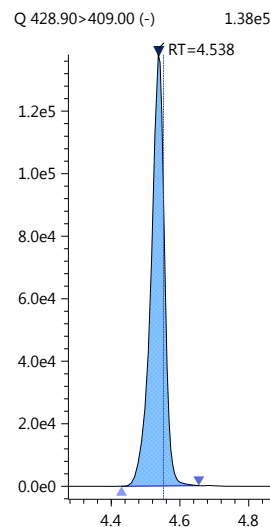
6_2-FTS_1

Conc 0.0015
Area 128
R#1 94.12 (0.00)



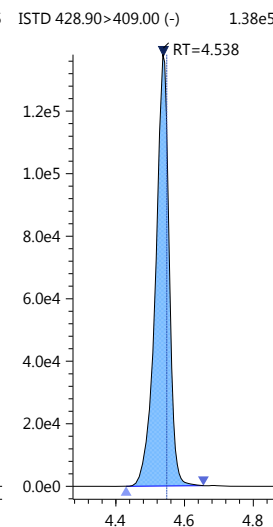
6_2-FTS-13C

Conc 4.8278
Area 379807



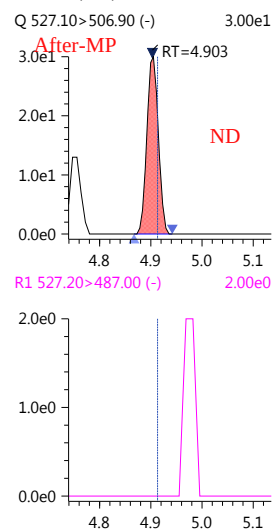
6_2-FTS-13C_IS

Conc 5.0000
Area 379807



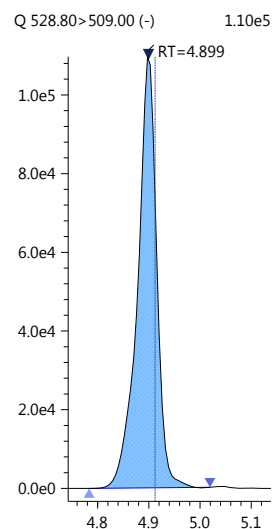
8_2-FTS_1

Conc 0.0010
Area 47
R#1 0.00 (0.00)



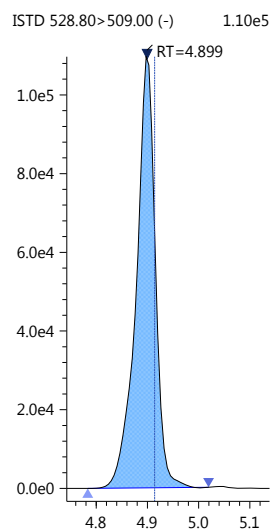
8_2-FTS-13C

Conc 4.4836
Area 285966



8_2-FTS-13C_IS

Conc 5.0000
Area 285966



Insight Report

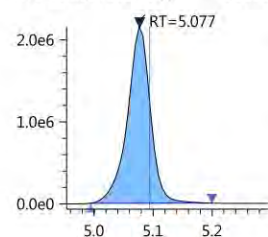
Printed at 5/5/2020 2:04:27 PM

200430_017

Sample ID: IB
Date acquired: 4/30/2020 11:58:57 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200430_b3\200430_017.lcd
Vial: 51 | Inj. Volume: 15.0000uL | Tray: 1

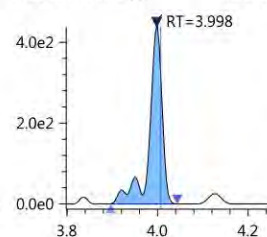
13C7-PFUnDA_IS

Conc 5.0000
Area 5862149
ISTD 570.00>525.00 (-)



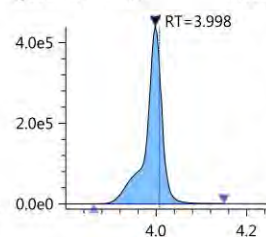
PFBS_1

Conc 0.0035
Area 871
Q 299.00>80.00 (-)



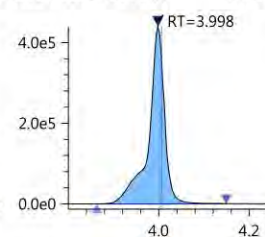
PFBS-13C

Conc 4.6681
Area 1069866
Q 301.80>80.00 (-)



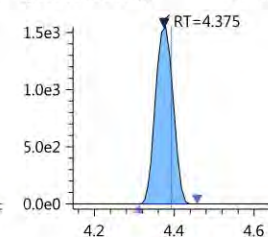
PFBS-13C_IS

Conc 5.0000
Area 1069866
ISTD 301.80>80.00 (-)



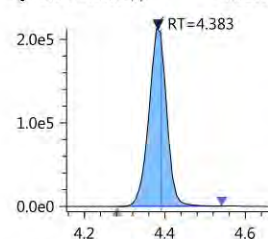
PFHxS_1

Conc 0.0127
Area 4814
Q 399.00>80.00 (-)



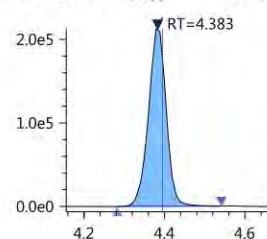
PFHxS-180

Conc 5.0578
Area 652572
Q 402.70>84.05 (-)



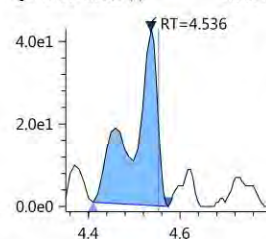
PFHxS-180_IS

Conc 5.0000
Area 652572
ISTD 402.70>84.05 (-)



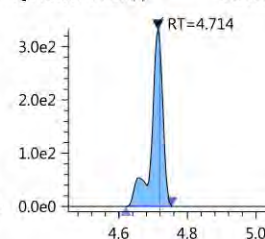
PFHpS_1

Conc 0.0008
Area 159
Q 449.00>80.15 (-)



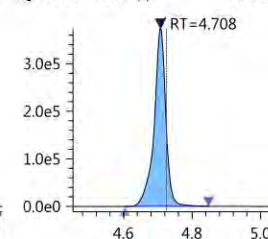
PFOS_1

Conc 0.0051
Area 775
Q 499.00>80.00 (-)



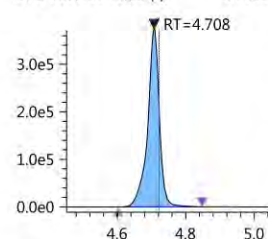
PFOS-13C

Conc 4.9156
Area 892702
Q 502.80>80.05 (-)



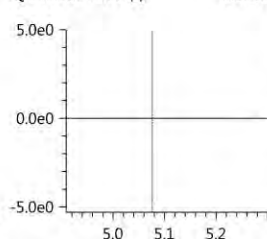
PFOS-13C_IS

Conc 5.0000
Area 892702
ISTD 502.80>80.05 (-)



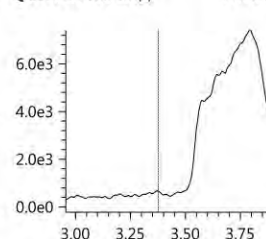
PFDS_1

Conc ----
Area ----
Q 599.00>79.90 (-)



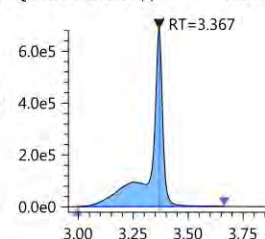
PFBA

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



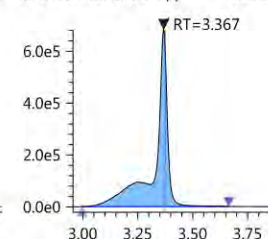
PFBA-13C

Conc 4.2276
Area 2621744
Q 216.90>172.15 (-)



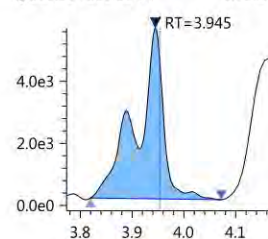
PFBA-13C_IS

Conc 5.0000
Area 2621744
ISTD 216.90>172.15 (-)



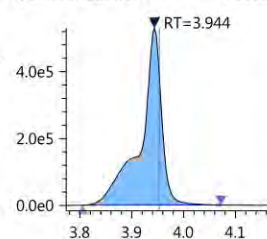
PFPeA

Conc 0.0021
Area 19964
Q 263.05>219.10 (-)



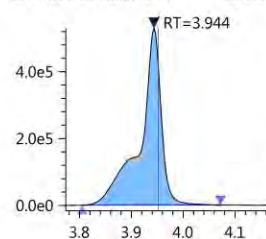
PFPeA-13C

Conc 4.2935
Area 1498365
Q 267.90>223.00 (-)



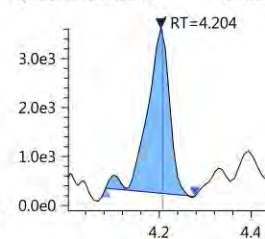
PFPeA-13C_IS

Conc 5.0000
Area 1498365
ISTD 267.90>223.00 (-)



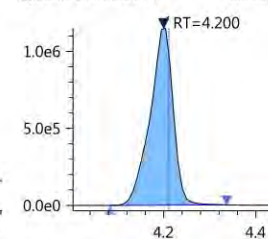
PFHxA

Conc 0.0081
Area 11287
Q 313.00>269.00 (-)



PFHxA-13C

Conc 4.2073
Area 4022002
Q 314.90>270.10 (-)



Insight Report

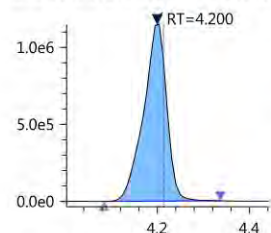
Printed at 5/5/2020 2:04:27 PM

PFHxA-13C_IS

Conc 5.0000

Area 4022002

ISTD 314.90>270.10 (-) 1.15e6

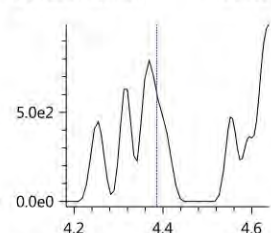


PFHpA

Conc ----

Area ----

Q 362.90>319.00 (-) 9.95e2

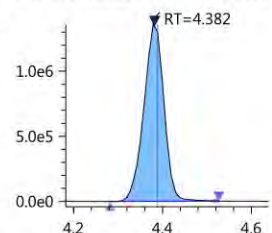


PFHpA-13C

Conc 4.9541

Area 4284410

Q 366.90>322.10 (-) 1.36e6

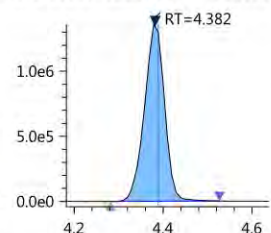


PFHpA-13C_IS

Conc 5.0000

Area 4284410

ISTD 366.90>322.10 (-) 1.36e6

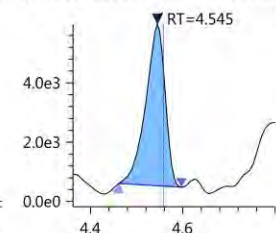


PFOA

Conc 0.0036

Area 15936

Q 413.00>369.00 (-) 5.99e3

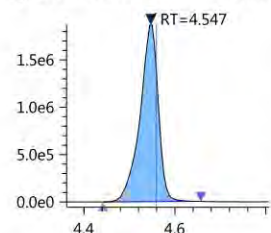


PFOA-13C

Conc 4.9932

Area 5223870

Q 416.80>372.05 (-) 1.87e6

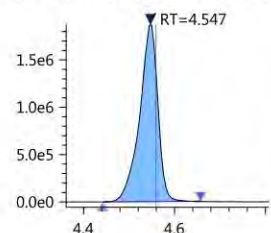


PFOA-13C_IS

Conc 5.0000

Area 5223870

ISTD 416.80>372.05 (-) 1.87e6

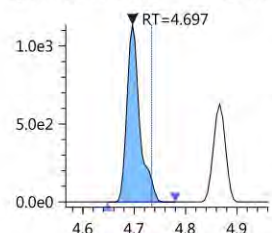


PFNA

Conc -0.0020

Area 1982

Q 463.00>418.90 (-) 1.14e3

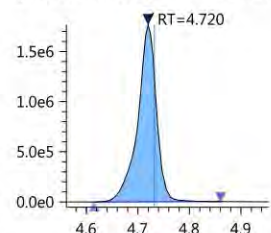


PFNA-13C

Conc 5.6753

Area 4432888

Q 467.80>423.00 (-) 1.77e6

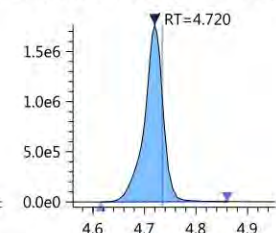


PFNA-13C_IS

Conc 5.0000

Area 4432888

ISTD 467.80>423.00 (-) 1.77e6

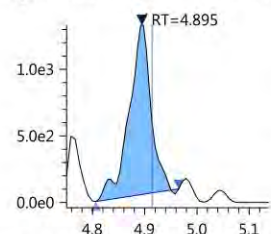


PFDA

Conc 0.0048

Area 3734

Q 513.00>468.80 (-) 1.33e3

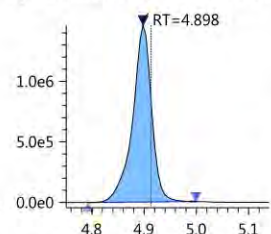


PFDA-13C

Conc 5.2067

Area 3689974

Q 514.80>469.95 (-) 1.46e6

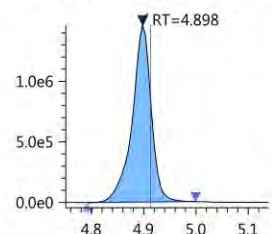


PFDA-13C_IS

Conc 5.0000

Area 3689974

ISTD 514.80>469.95 (-) 1.46e6

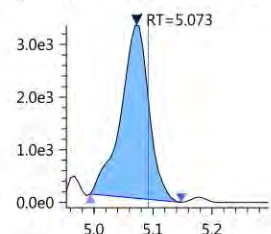


PFUnA

Conc 0.0018

Area 10962

Q 563.00>518.90 (-) 3.37e3

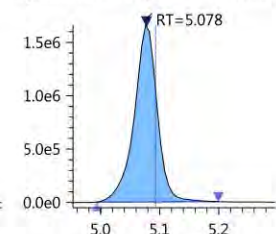


PFUnA-13C

Conc 5.0872

Area 4497077

Q 564.80>519.95 (-) 1.66e6

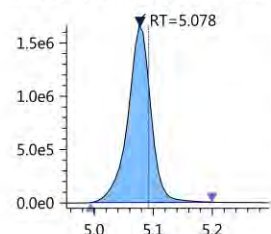


PFUnA-13C_IS

Conc 5.0000

Area 4497077

ISTD 564.80>519.95 (-) 1.66e6

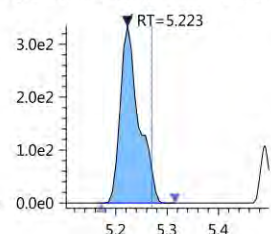


PFDaA

Conc 0.0146

Area 845

Q 613.05>569.00 (-) 3.35e2

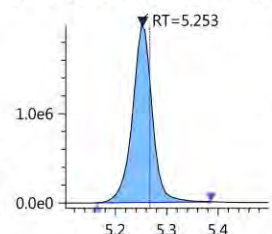


PFDaA-13C

Conc 5.1005

Area 5311768

Q 614.80>569.95 (-) 1.99e6

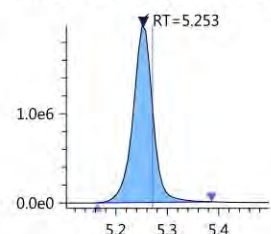


PFDaA-13C_IS

Conc 5.0000

Area 5311768

ISTD 614.80>569.95 (-) 1.99e6

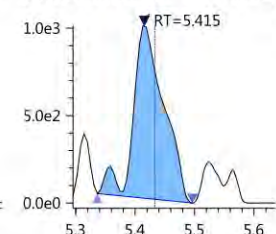


PFTrDA

Conc -0.0004

Area 3546

Q 663.00>618.90 (-) 1.01e3



Insight Report

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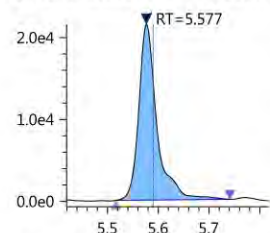
PFTeDA

Conc -0.0064

Area 53461

Q 713.40>669.00 (-)

2.16e4



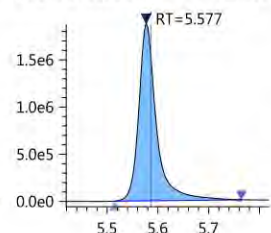
PFTeDA-13C

Conc 5.4546

Area 4532318

Q 714.70>669.90 (-)

1.88e6



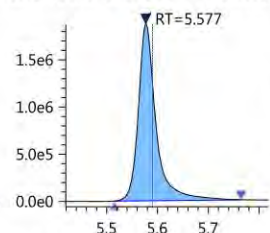
PFTeDA-13C_IS

Conc 5.0000

Area 4532318

ISTD 714.70>669.90 (-)

1.88e6



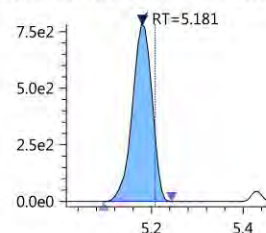
FOSA

Conc 0.0044

Area 2334

Q 498.20>78.00 (-)

7.83e2



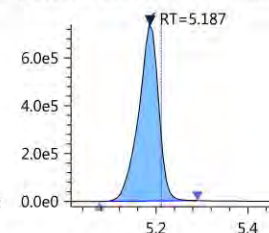
FOSA-13C

Conc 4.7269

Area 2239856

Q 506.00>78.05 (-)

7.41e5



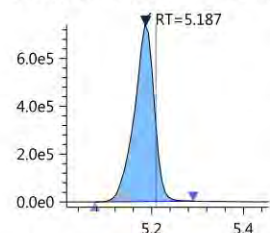
FOSA-13C_IS

Conc 5.0000

Area 2239856

ISTD 506.00>78.05 (-)

7.41e5



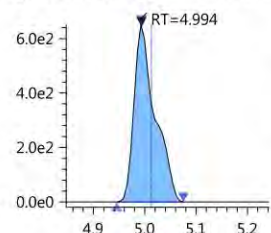
N-MeFOSAA

Conc 0.0202

Area 1848

Q 570.20>419.00 (-)

6.51e2



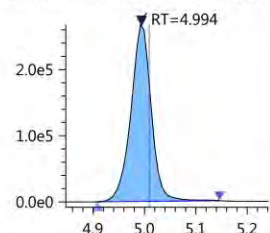
N-MeFOSAA-d3

Conc 5.4673

Area 735545

Q 572.80>419.05 (-)

2.68e5



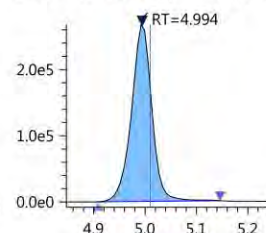
N-MeFOSAA-d3_IS

Conc 5.0000

Area 735545

ISTD 572.80>419.05 (-)

2.68e5



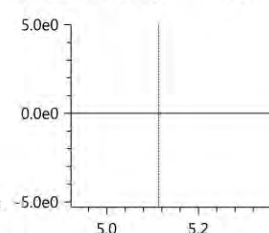
N-EtFOSAA

Conc ----

Area ----

Q 584.20>418.95 (-)

0.00e0



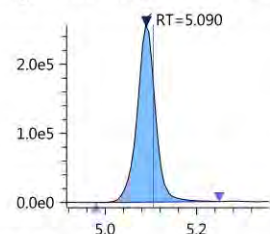
N-EtFOSAA-d5

Conc 5.7366

Area 711151

Q 588.80>419.00 (-)

2.57e5



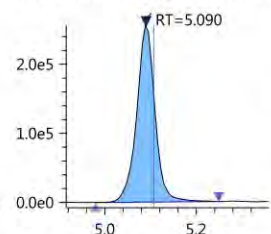
N-EtFOSAA-d5_IS

Conc 5.0000

Area 711151

ISTD 588.80>419.00 (-)

2.57e5



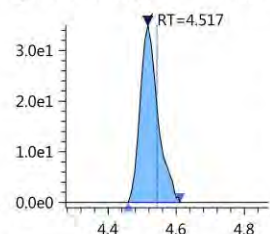
6_2-FTS_1

Conc 0.0015

Area 128

Q 427.00>407.00 (-)

3.50e1



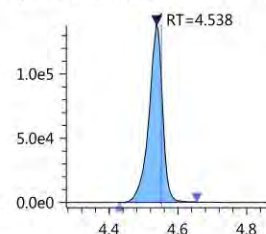
6_2-FTS-13C

Conc 4.8278

Area 379807

Q 428.90>409.00 (-)

1.38e5



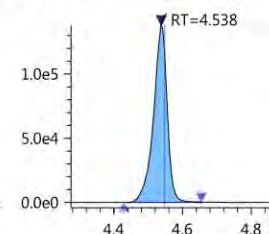
6_2-FTS-13C_IS

Conc 5.0000

Area 379807

ISTD 428.90>409.00 (-)

1.38e5



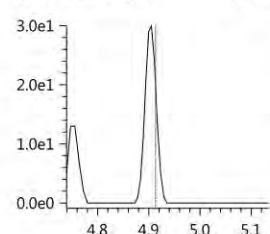
8_2-FTS_1

Conc ----

Area ----

Q 527.10>506.90 (-)

3.00e1



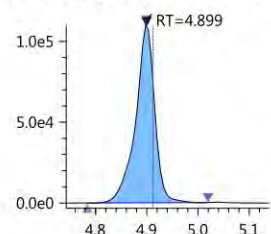
8_2-FTS-13C

Conc 4.4836

Area 285966

Q 528.80>509.00 (-)

1.10e5



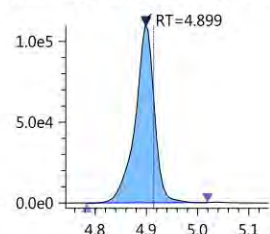
8_2-FTS-13C_IS

Conc 5.0000

Area 285966

ISTD 528.80>509.00 (-)

1.10e5



Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200428_b4\200428_052
Lab ID: KQ2005707-01
RunType: CCV
Matrix: Water

Date Acquired: 4/28/20 23:47
Batch ID: 678319
Analysis Method: PFC/537M/PFAS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200428_b4\200428_052	Instrument:	K-LCMS-06
Acqu Date:	4/28/20 23:47	Vial:	1
Run Type:	CCV	Dilution:	1
Lab ID:	KQ2005707-01	Raw Units:	ng/mL

Bottle ID:		Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/21/20	Receive Date:	4/21/20

Analysis Lot:	678319	Prep Lot:		Report Group:	KQ2005707
Analysis	PFC/537M	Prep Method:			
		Prep Date:			

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.090		3558616	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
13C3-PFBS	4.009		686372	4.9334	Y
18O2-PFHxS	4.394		387887	4.9524	Y
13C4-PFOS	4.720		549753	4.9867	Y
13C4-PFBA	3.379		1723227	4.5774	Y
13C5-PFPeA	3.954		963956	4.5502	Y
13C2-PFHxA	4.213		2584217	4.4531	Y
13C4-PFHpA	4.393		2710434	5.1628	Y
13C4-PFOA	4.559		3058373	4.8156	Y
13C5-PFNA	4.730		2660108	5.6102	Y
13C2-PFDA	4.911		2251010	5.2323	Y
13C2-PFUnDA	5.091		2807081	5.2310	Y
13C2-PFDoDA	5.267		3350723	5.3002	Y
13C2-PFTeDA	5.590		2646270	5.2463	Y
13C8-FOSA	5.200		1444719	5.0225	Y
D3-MeFOSAA	5.007		448513	5.4918	Y
D5-EtFOSAA	5.103		459003	6.0994	Y
13C2-6:2 FTS	4.551		226671	4.7464	Y
13C2-8:2 FTS	4.911		187341	4.8386	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluorobutane sulfonic acid (PFBS)	4.009		151712	0.9610	Y
Perfluorohexane sulfonic acid (PFHxS)	4.388		77042	0.7817	Y

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

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

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

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Data File: J:\LCMS06\Data\200428_b4\200428_052
Acqu Date: 4/28/20 23:47
Run Type: CCV
Lab ID: KQ2005707-01

Instrument: K-LCMS06
Vial: 1
Dilution: 1
Raw Units: ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.552		128520	1.0625	Y
Perfluorooctane sulfonic acid (PFOS)	4.719		95608	1.0266	Y
Perfluorodecane sulfonic acid (PFDS)	5.070		90694	1.0420	Y
Perfluorobutanoic acid (PFBA)	3.380		353166	1.0494	Y
Perfluoropentanoic acid (PFPeA)	3.954		461029	1.1138	Y
Perfluorohexanoic acid (PFHxA)	4.212		517190	1.0131	Y
Perfluoroheptanoic acid (PFHpA)	4.392		490969	1.0042	Y
Perfluorooctanoic acid (PFOA)	4.559		823995	1.0522	Y
Perfluorononanoic acid (PFNA)	4.731		485129	1.0167	Y
Perfluorodecanoic acid (PFDA)	4.911		495877	1.0374	Y
Perfluoroundecanoic acid (PFUnDA)	5.091		477421	1.0782	Y
Perfluorododecanoic acid (PFDoDA)	5.267		385062	1.0192	Y
Perfluorotridecanoic acid (PFTTrDA)	5.434		617038	1.2060	Y
Perfluorotetradecanoic acid (PFTeDA)	5.590		258286	0.9760	Y
Perfluorooctane sulfonamide (FOSA)	5.199		351896	1.0169	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.007		60986	1.0937	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.109		53640	1.1253	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.549		51226	0.9762	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.910		29408	0.9524	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

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Method File: J:\LCMS06\Data\200428_b4\200428_b4.lcm
Project File: J:\LCMS06\Data\200428_b4\200428_b4.damlp
Flags File: J:\LCMS06\Data\200428_b4\200428_b4.damlp

200428_052

Sample ID: 1.0 PPB CCV
Date acquired: 4/28/2020 11:47:17 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200428_b4\200428_052.lcd
Vial: 16 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.090	3558616	3558616	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.009	151712	686372	2	0.9610	ng/mL	0.8874
PFBS-13C	Auto	4.009	686372	3558616	1	4.9334	ng/mL	5.0000
PFBS-13C_IS	Auto	4.009	686372	686372	2	5.0000	ng/mL	5.0000
PFHxS_1	Auto	4.388	77042	387887	3	0.7817	ng/mL	0.9131
PFHxS-18O	Auto	4.394	387887	3558616	1	4.9524	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.394	387887	387887	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.552	128520	387887	3	1.0625	ng/mL	0.9534
PFOS_1	Auto	4.719	95608	549753	4	1.0266	ng/mL	0.9292
PFOS-13C	Auto	4.720	549753	3558616	1	4.9867	ng/mL	5.0000
PFOS-13C_IS	Auto	4.720	549753	549753	4	5.0000	ng/mL	5.0000
PFDS_1	Auto	5.070	90694	549753	4	1.0420	ng/mL	0.9647
PFBA	Auto	3.380	353166	1723227	5	1.0494	ng/mL	1.0000
PFBA-13C	Auto	3.379	1723227	3558616	1	4.5774	ng/mL	5.0000
PFBA-13C_IS	Auto	3.379	1723227	1723227	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.954	461029	963956	6	1.1138	ng/mL	1.0000
PFPeA-13C	Auto	3.954	963956	3558616	1	4.5502	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.954	963956	963956	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.212	517190	2584217	7	1.0131	ng/mL	1.0000
PFHxA-13C	Auto	4.213	2584217	3558616	1	4.4531	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.213	2584217	2584217	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.392	490969	2710434	8	1.0042	ng/mL	1.0000
PFHpA-13C	Auto	4.393	2710434	3558616	1	5.1628	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.393	2710434	2710434	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.559	823995	3058373	9	1.0522	ng/mL	1.0000
PFOA-13C	Auto	4.559	3058373	3558616	1	4.8156	ng/mL	5.0000
PFOA-13C_IS	Auto	4.559	3058373	3058373	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.731	485129	2660108	10	1.0167	ng/mL	1.0000
PFNA-13C	Auto	4.730	2660108	3558616	1	5.6102	ng/mL	5.0000
PFNA-13C_IS	Auto	4.730	2660108	2660108	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.911	495877	2251010	11	1.0374	ng/mL	1.0000
PFDA-13C	Auto	4.911	2251010	3558616	1	5.2323	ng/mL	5.0000
PFDA-13C_IS	Auto	4.911	2251010	2251010	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.091	477421	2807081	12	1.0782	ng/mL	1.0000
PFUnA-13C	Auto	5.091	2807081	3558616	1	5.2310	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.091	2807081	2807081	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.267	385062	3350723	13	1.0192	ng/mL	1.0000
PFDoA-13C	Auto	5.267	3350723	3558616	1	5.3002	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.267	3350723	3350723	13	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.434	617038	2646270	14	1.2060	ng/mL	1.0000
PFTeDA	Auto	5.590	258286	2646270	14	0.9760	ng/mL	1.0000
PFTeDA-13C	Auto	5.590	2646270	3558616	1	5.2463	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.590	2646270	2646270	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.199	351896	1444719	16	1.0169	ng/mL	1.0000
FOSA-13C	Auto	5.200	1444719	3558616	1	5.0225	ng/mL	5.0000
FOSA-13C_IS	Auto	5.200	1444719	1444719	16	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.007	60986	448513	21	1.0937	ng/mL	1.0000
N-MeFOSAA-d3	Auto	5.007	448513	3558616	1	5.4918	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.007	448513	448513	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.109	53640	459003	22	1.1253	ng/mL	1.0000
N-EtFOSAA-d5	Auto	5.103	459003	3558616	1	6.0994	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.103	459003	459003	22	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.549	51226	226671	24	0.9762	ng/mL	0.9512
6_2-FTS-13C	Auto	4.551	226671	3558616	1	4.7464	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.551	226671	226671	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.910	29408	187341	25	0.9524	ng/mL	0.9600
8_2-FTS-13C	Auto	4.911	187341	3558616	1	4.8386	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.911	187341	187341	25	5.0000	ng/mL	5.0000

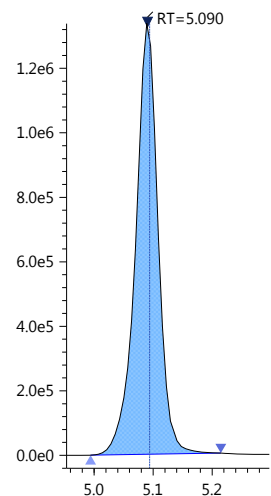
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13C7-PFUnDA_IS

Conc 5.0000
Area 3558616

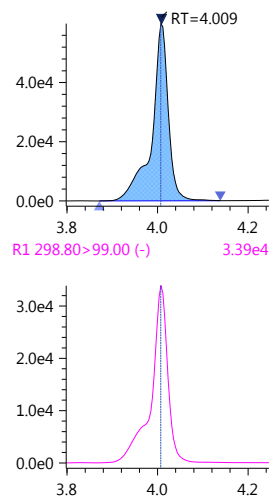
ISTD 570.00>525.00 (-) 1.34e6



PFBS_1

Conc 0.9610
Area 151712
R#1 56.60 (0.00)

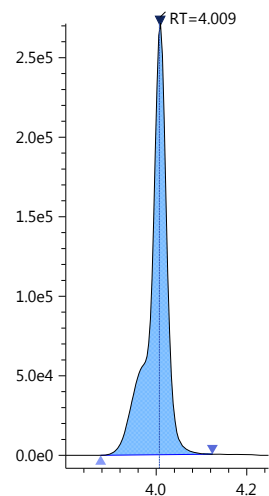
Q 299.00>80.00 (-) 5.99e4



PFBS-13C

Conc 4.9334
Area 686372

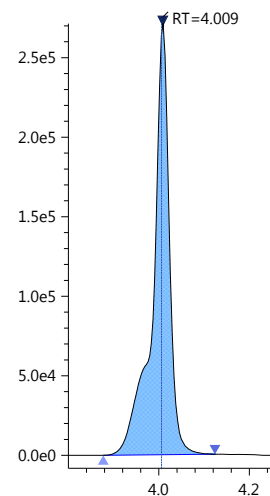
Q 301.80>80.00 (-) 2.71e5



PFBS-13C_IS

Conc 5.0000
Area 686372

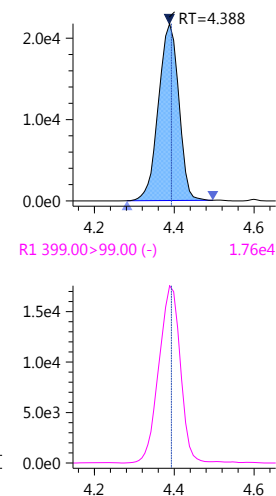
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PFHxS_1

Conc 0.7817
Area 77042
R#1 80.34 (0.00)

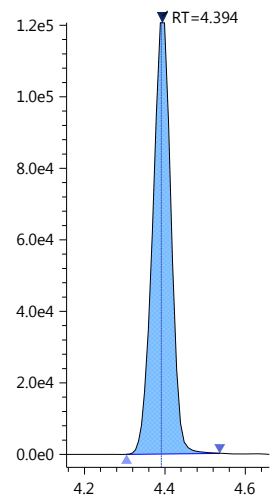
Q 399.00>80.00 (-) 2.18e4



PFHxS-180

Conc 4.9524
Area 387887

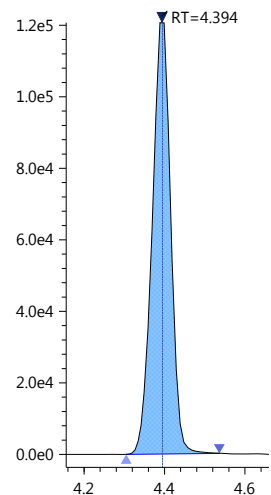
Q 402.70>84.05 (-) 1.21e5



PFHxS-180_IS

Conc 5.0000
Area 387887

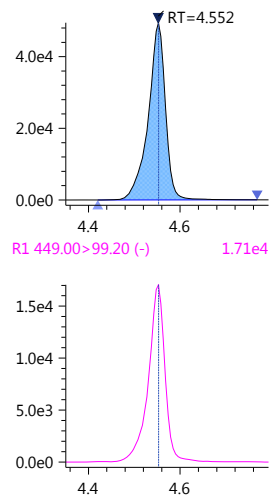
ISTD 402.70>84.05 (-) 1.21e5



PFHpS_1

Conc 1.0625
Area 128520
R#1 34.64 (0.00)

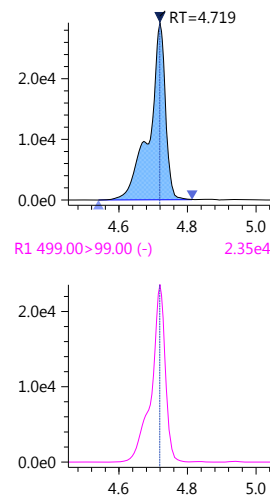
Q 449.00>80.15 (-) 4.95e4



PFOS_1

Conc 1.0266
Area 95608
R#1 81.08 (0.00)

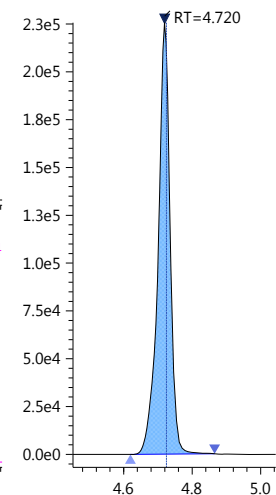
Q 499.00>80.00 (-) 2.92e4



PFOS-13C

Conc 4.9867
Area 549753

Q 502.80>80.05 (-) 2.26e5



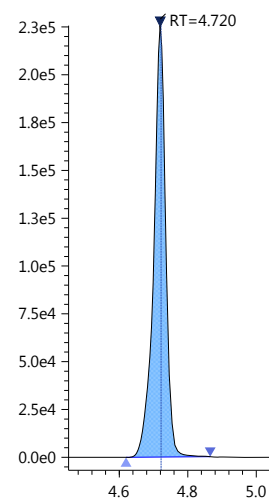
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PFOS-13C_IS

Conc 5.0000
Area 549753

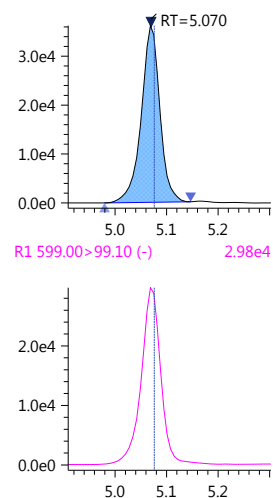
ISTD 502.80>80.05 (-) 2.26e5



PFDS_1

Conc 1.0420
Area 90694
R#1 81.14 (0.00)

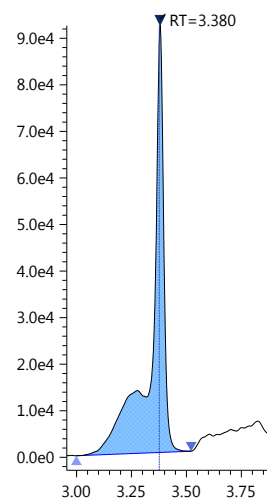
Q 599.00>79.90 (-) 3.63e4



PFBA

Conc 1.0494
Area 353166

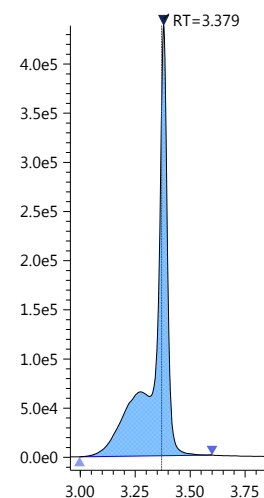
Q 213.00>169.10 (-) 9.27e4



PFBA-13C

Conc 4.5774
Area 1723227

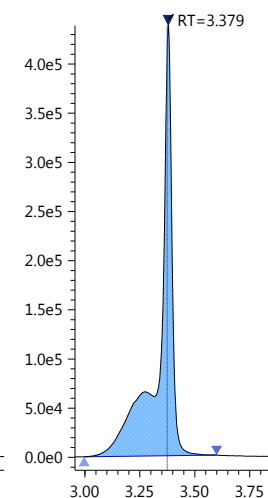
Q 216.90>172.15 (-) 4.39e5



PFBA-13C_IS

Conc 5.0000
Area 1723227

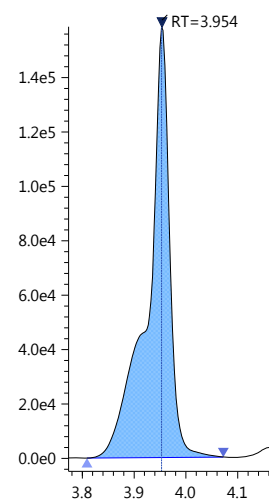
ISTD 216.90>172.15 (-) 4.39e5



PFPeA

Conc 1.1138
Area 461029

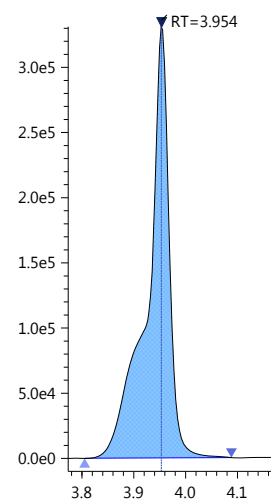
Q 263.05>219.10 (-) 1.59e5



PFPeA-13C

Conc 4.5502
Area 963956

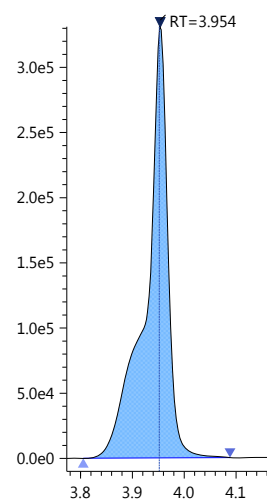
Q 267.90>223.00 (-) 3.31e5



PFPeA-13C_IS

Conc 5.0000
Area 963956

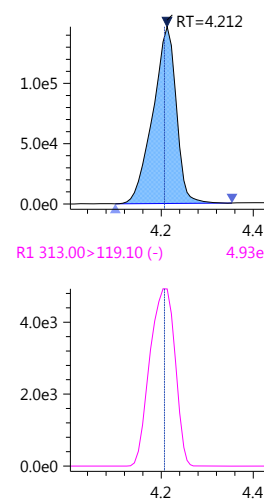
ISTD 267.90>223.00 (-) 3.31e5



PFHxA

Conc 1.0131
Area 517190
R#1 3.38 (0.00)

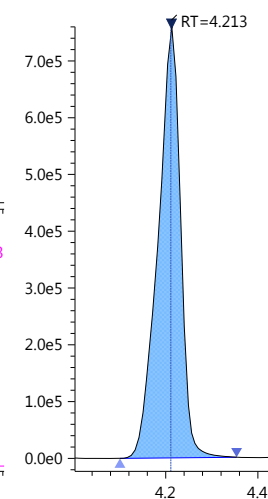
Q 313.00>269.00 (-) 1.47e5



PFHxA-13C

Conc 4.4531
Area 2584217

Q 314.90>270.10 (-) 7.60e5



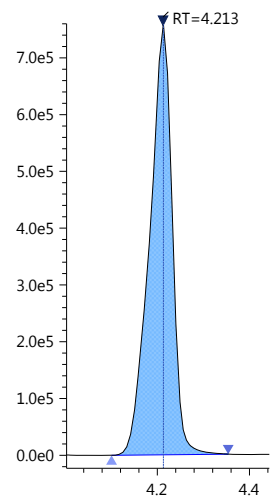
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PFHxA-13C_IS

Conc 5.0000
Area 2584217

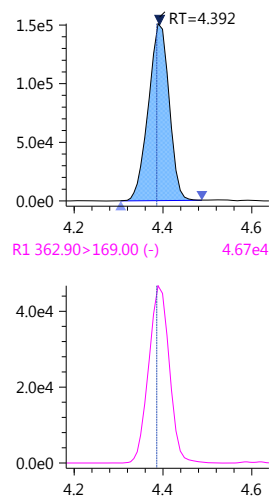
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PFHpA

Conc 1.0042
Area 490969
R#1 30.92 (0.00)

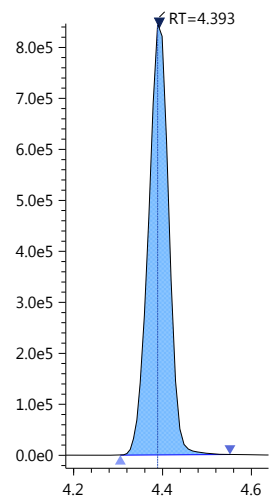
Q 362.90>319.00 (-) 1.51e5



PFHpA-13C

Conc 5.1628
Area 2710434

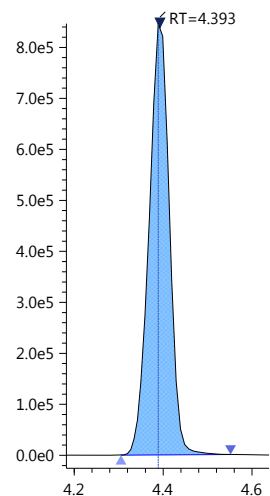
Q 366.90>322.10 (-) 8.47e5



PFHpA-13C_IS

Conc 5.0000
Area 2710434

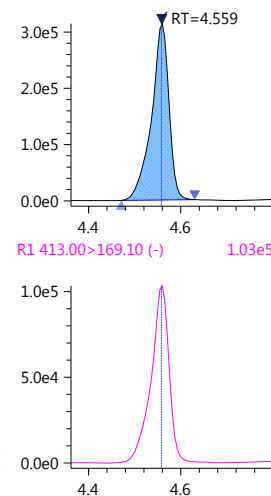
ISTD 366.90>322.10 (-) 8.47e5



PFOA

Conc 1.0522
Area 823995
R#1 32.78 (0.00)

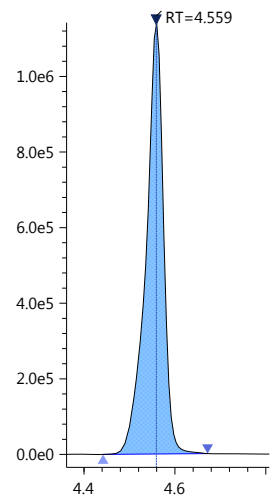
Q 413.00>369.00 (-) 3.15e5



PFOA-13C

Conc 4.8156
Area 3058373

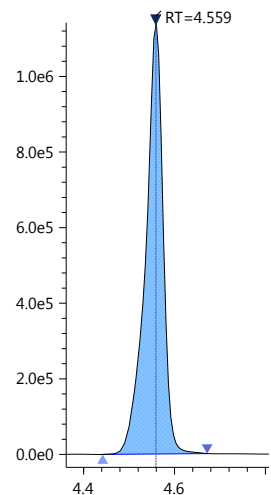
Q 416.80>372.05 (-) 1.14e6



PFOA-13C_IS

Conc 5.0000
Area 3058373

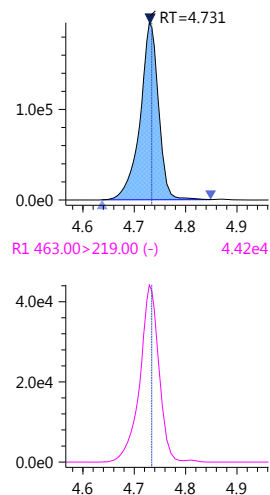
ISTD 416.80>372.05 (-) 1.14e6



PFNA

Conc 1.0167
Area 485129
R#1 22.14 (0.00)

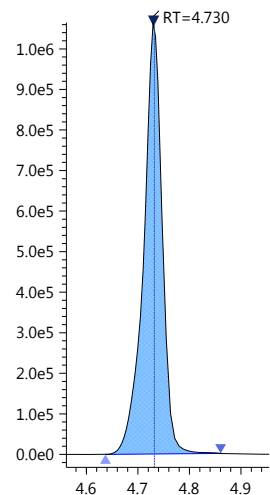
Q 463.00>418.90 (-) 1.96e5



PFNA-13C

Conc 5.6102
Area 2660108

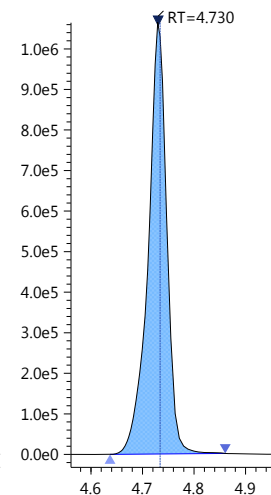
Q 467.80>423.00 (-) 1.06e6



PFNA-13C_IS

Conc 5.0000
Area 2660108

ISTD 467.80>423.00 (-) 1.06e6



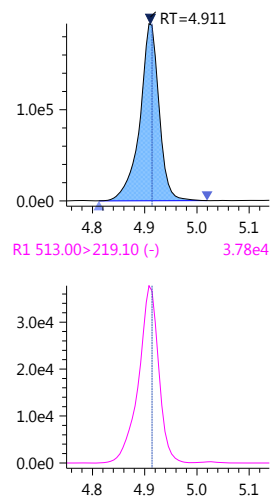
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PFDA

Conc 1.0374
Area 495877
R#1 18.93 (0.00)

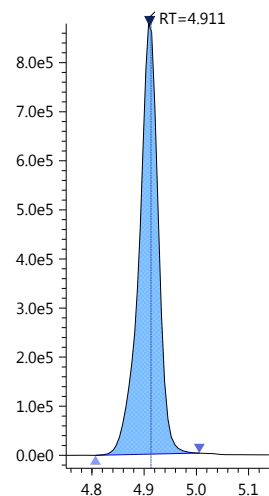
Q 513.00>468.80 (-) 1.94e5



PFDA-13C

Conc 5.2323
Area 2251010

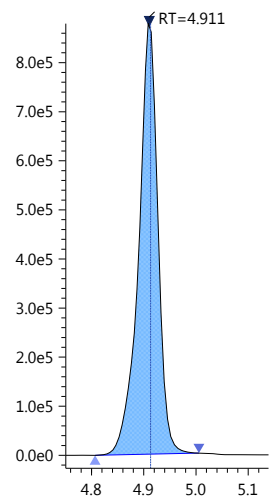
Q 514.80>469.95 (-) 8.79e5



PFDA-13C_IS

Conc 5.0000
Area 2251010

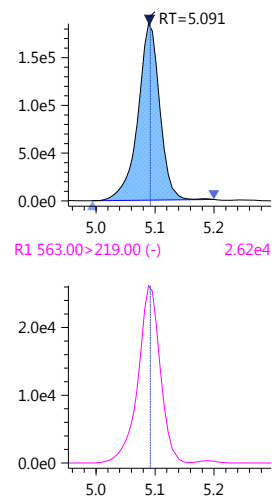
ISTD 514.80>469.95 (-) 8.79e5



PFUnA

Conc 1.0782
Area 477421
R#1 14.18 (0.00)

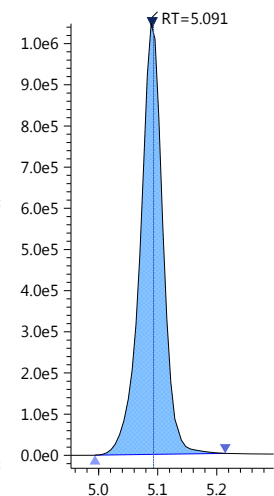
Q 563.00>518.90 (-) 1.86e5



PFUnA-13C

Conc 5.2310
Area 2807081

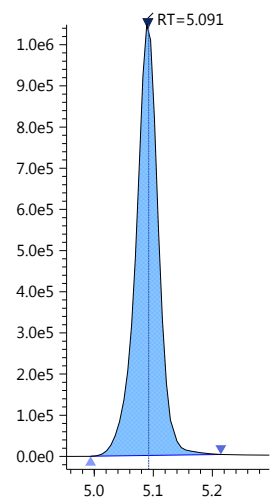
Q 564.80>519.95 (-) 1.05e6



PFUnA-13C_IS

Conc 5.0000
Area 2807081

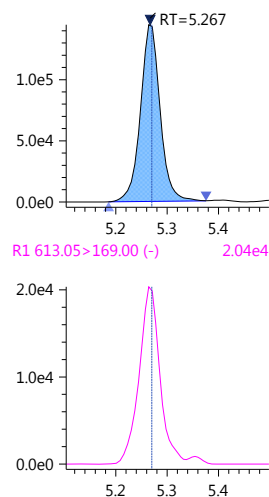
ISTD 564.80>519.95 (-) 1.05e6



PFDaA

Conc 1.0192
Area 385062
R#1 14.04 (0.00)

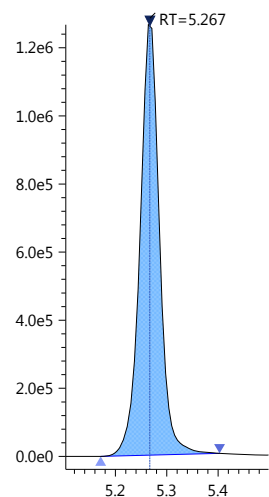
Q 613.05>569.00 (-) 1.45e5



PFDaA-13C

Conc 5.3002
Area 3350723

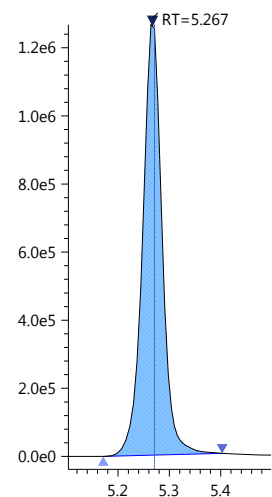
Q 614.80>569.95 (-) 1.27e6



PFDaA-13C_IS

Conc 5.0000
Area 3350723

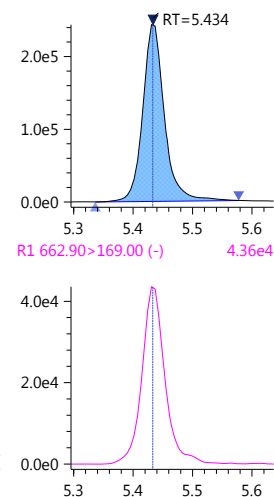
ISTD 614.80>569.95 (-) 1.27e6



PFTrDA

Conc 1.2060
Area 617038
R#1 17.77 (0.00)

Q 663.00>618.90 (-) 2.44e5



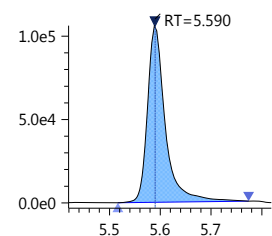
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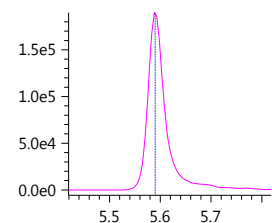
PFTeDA

Conc 0.9760
Area 258286
R#1 181.14 (0.00)

Q 713.40>669.00 (-) 1.06e5



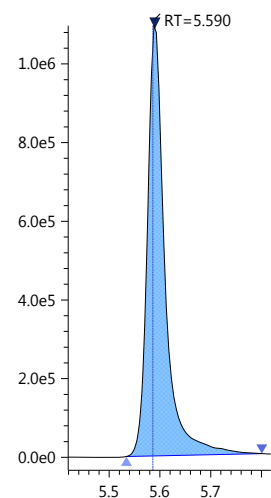
R1 713.40>169.10 (-) 1.90e5



PFTeDA-13C

Conc 5.2463
Area 2646270

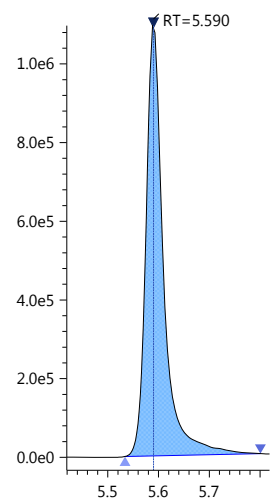
Q 714.70>669.90 (-) 1.10e6



PFTeDA-13C_IS

Conc 5.0000
Area 2646270

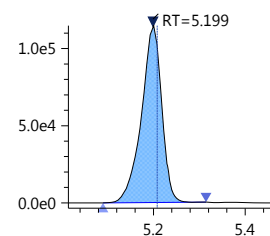
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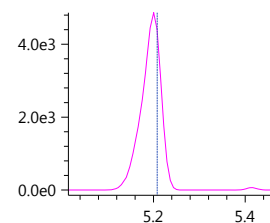
FOSA

Conc 1.0169
Area 351896
R#1 4.25 (0.00)

Q 498.20>78.00 (-) 1.15e5



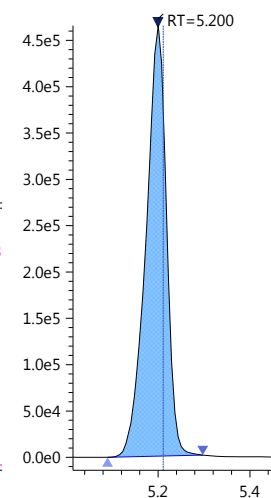
R1 498.20>64.10 (-) 4.87e3



FOSA-13C

Conc 5.0225
Area 1444719

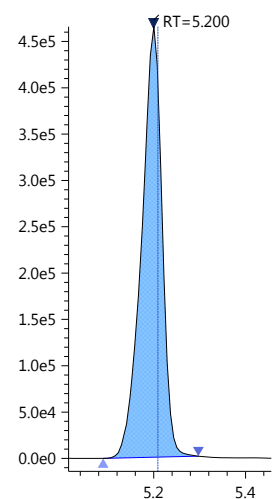
Q 506.00>78.05 (-) 4.66e5



FOSA-13C_IS

Conc 5.0000
Area 1444719

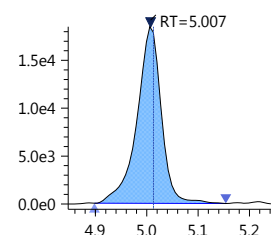
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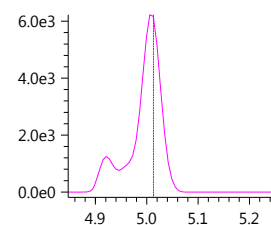
N-MeFOSAA

Conc 1.0937
Area 60986
R#1 33.64 (0.00)

Q 570.20>419.00 (-) 1.85e4



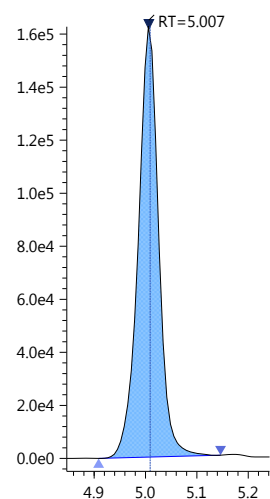
R1 570.20>512.00 (-) 6.23e3



N-MeFOSAA-d3

Conc 5.4918
Area 448513

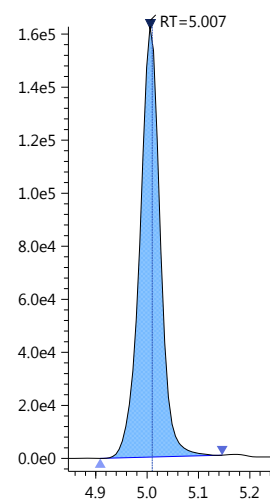
Q 572.80>419.05 (-) 1.63e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 448513

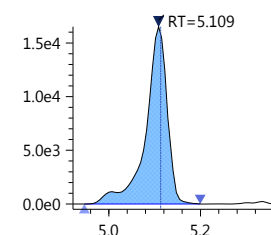
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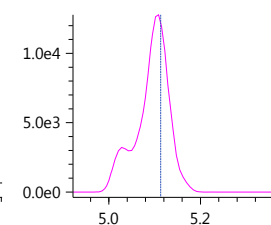
N-EtFOSAA

Conc 1.1253
Area 53640
R#1 76.48 (0.00)

Q 584.20>418.95 (-) 1.65e4



R1 584.20>526.10 (-) 1.28e4



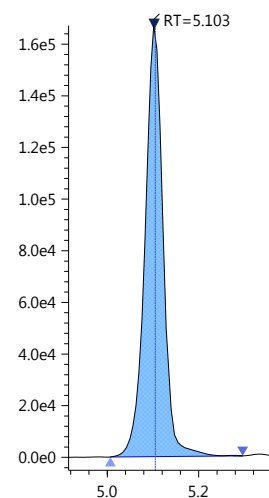
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N-EtFOSAA-d5

Conc 6.0994
Area 459003

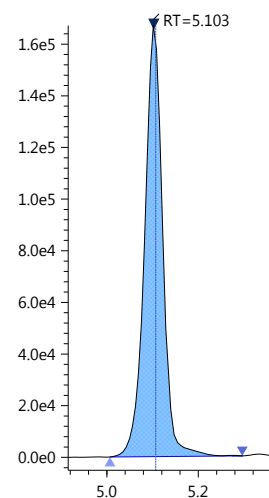
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
Area 459003

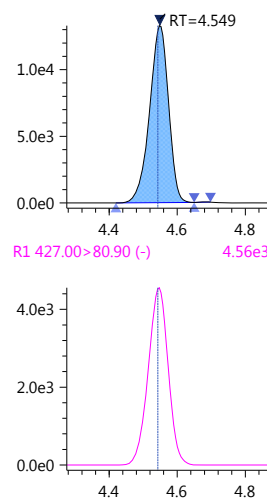
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6_2-FTS_1

Conc 0.9762
Area 51226
R#1 33.08 (0.00)

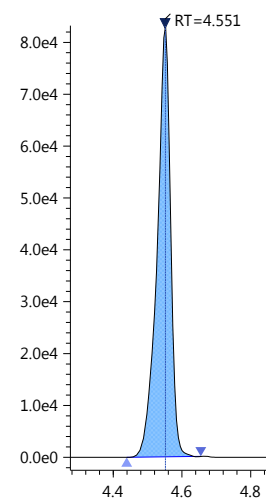
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 4.7464
Area 226671

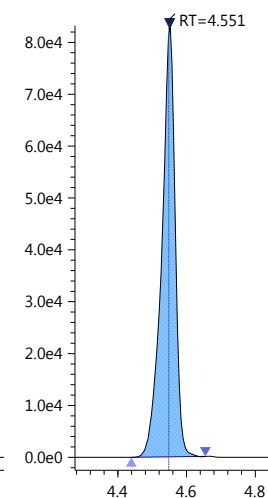
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
Area 226671

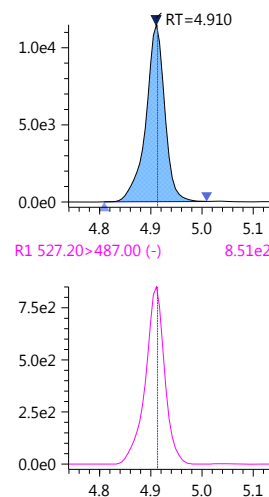
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 0.9524
Area 29408
R#1 7.45 (0.00)

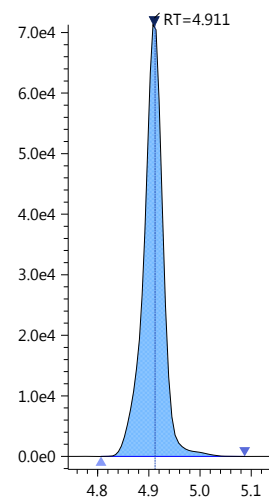
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 4.8386
Area 187341

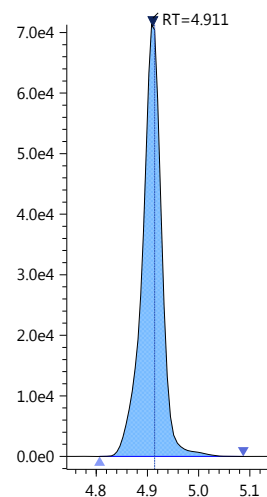
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
Area 187341

ISTD 528.80>509.00 (-)



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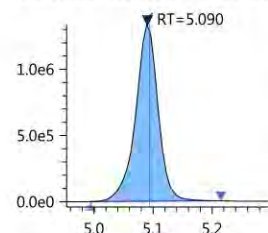
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 Project File: J:\LCMS06\Data\200428_b4\200428_b4.damlp
 Flags File: J:\LCMS06\Data\200428_b4\200428_b4.damlp

200428_052

Sample ID: 1.0 PPB CCV
 Date acquired: 4/28/2020 11:47:17 PM
 Acquired by: System Administrator
 Data File: J:\LCMS06\Data\200428_b4\200428_052.lcd
 Vial: 16 | Inj. Volume: 15.0000uL | Tray: 1

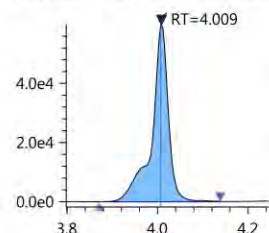
13C7-PFUnDA_IS

Conc 5.0000
 Area 3558616
 ISTD 570.00>525.00 (-) 1.34e6



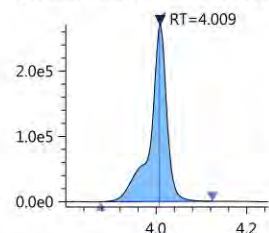
PFBS_1

Conc 0.9610
 Area 151712
 Q 299.00>80.00 (-) 5.99e4



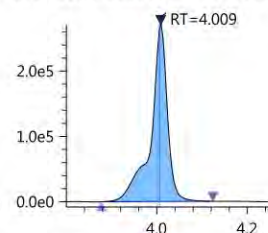
PFBS-13C

Conc 4.9334
 Area 686372
 Q 301.80>80.00 (-) 2.71e5



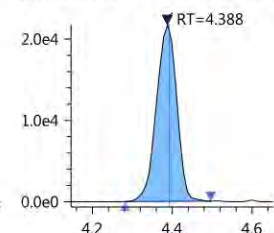
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Conc 5.0000
 Area 686372
 ISTD 301.80>80.00 (-) 2.71e5



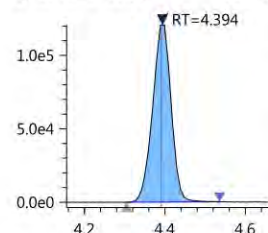
PFHxS_1

Conc 0.7817
 Area 77042
 Q 399.00>80.00 (-) 2.18e4



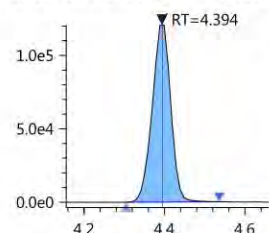
PFHxS-180

Conc 4.9524
 Area 387887
 Q 402.70>84.05 (-) 1.21e5



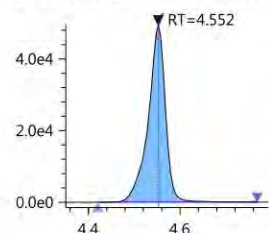
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Conc 5.0000
 Area 387887
 ISTD 402.70>84.05 (-) 1.21e5



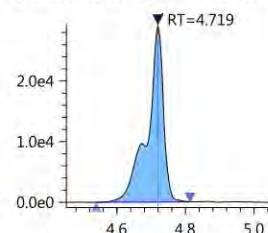
PFHpS_1

Conc 1.0625
 Area 128520
 Q 449.00>80.15 (-) 4.95e4



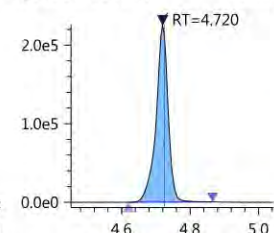
PFOS_1

Conc 1.0266
 Area 95608
 Q 499.00>80.00 (-) 2.92e4



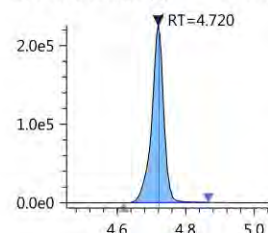
PFOS-13C

Conc 4.9867
 Area 549753
 Q 502.80>80.05 (-) 2.26e5



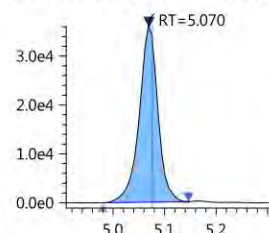
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Conc 5.0000
 Area 549753
 ISTD 502.80>80.05 (-) 2.26e5



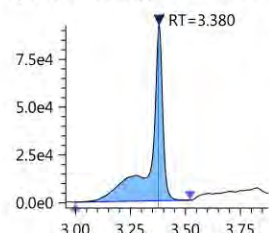
PFDS_1

Conc 1.0420
 Area 90694
 Q 599.00>79.90 (-) 3.63e4



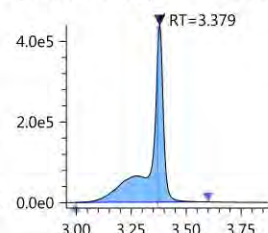
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Conc 1.0494
 Area 353166
 Q 213.00>169.10 (-) 9.27e4



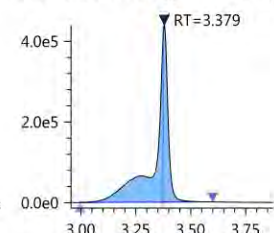
PFBA-13C

Conc 4.5774
 Area 1723227
 Q 216.90>172.15 (-) 4.39e5



PFBA-13C_IS

Conc 5.0000
 Area 1723227
 ISTD 216.90>172.15 (-) 4.39e5



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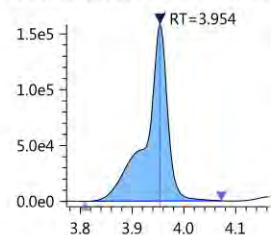
PFPeA

Conc 1.1138

Area 461029

Q 263.05>219.10 (-)

1.59e5



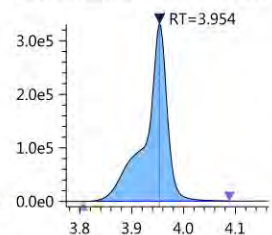
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Conc 4.5502

Area 963956

Q 267.90>223.00 (-)

3.31e5



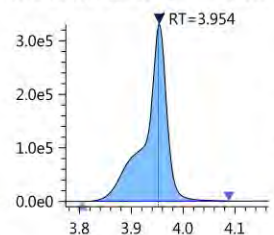
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Conc 5.0000

Area 963956

ISTD 267.90>223.00 (-)

3.31e5



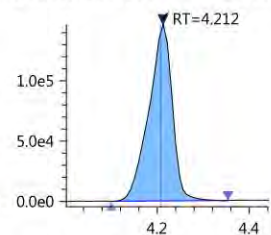
PFHxA

Conc 1.0131

Area 517190

Q 313.00>269.00 (-)

1.47e5



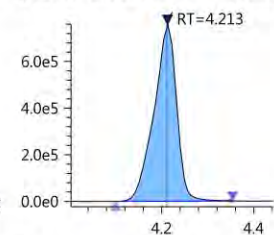
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Conc 4.4531

Area 2584217

Q 314.90>270.10 (-)

7.60e5



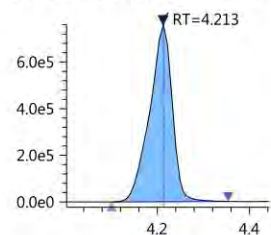
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Conc 5.0000

Area 2584217

ISTD 314.90>270.10 (-)

7.60e5



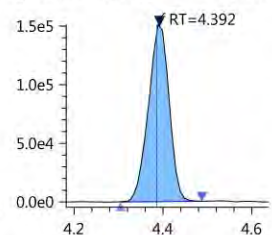
PFHpA

Conc 1.0042

Area 490969

Q 362.90>319.00 (-)

1.51e5



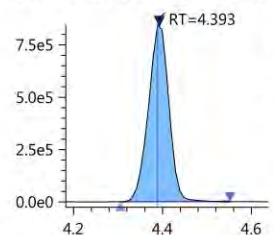
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Conc 5.1628

Area 2710434

Q 366.90>322.10 (-)

8.47e5



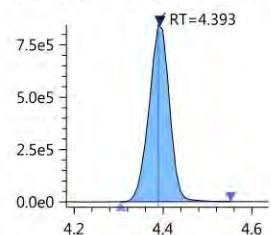
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Conc 5.0000

Area 2710434

ISTD 366.90>322.10 (-)

8.47e5



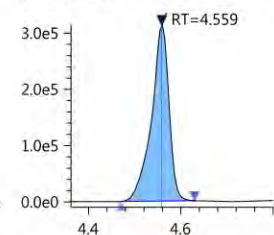
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Conc 1.0522

Area 823995

Q 413.00>369.00 (-)

3.15e5



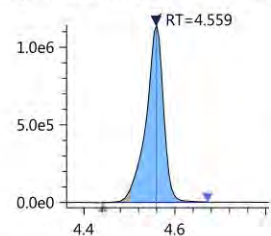
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Conc 4.8156

Area 3058373

Q 416.80>372.05 (-)

1.14e6



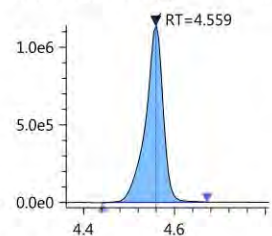
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Conc 5.0000

Area 3058373

ISTD 416.80>372.05 (-)

1.14e6



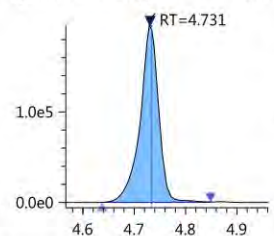
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Conc 1.0167

Area 485129

Q 463.00>418.90 (-)

1.96e5



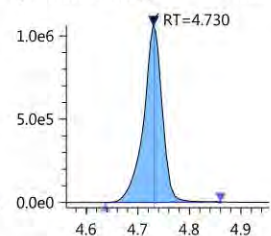
PFNA-13C

Conc 5.6102

Area 2660108

Q 467.80>423.00 (-)

1.06e6



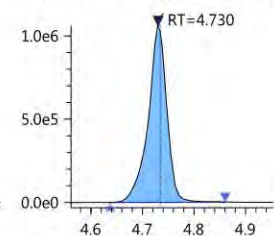
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Conc 5.0000

Area 2660108

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1.06e6



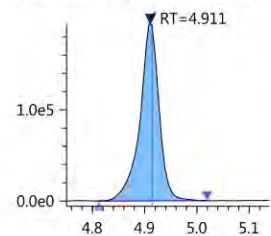
PFDA

Conc 1.0374

Area 495877

Q 513.00>468.80 (-)

1.94e5



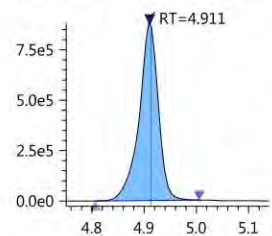
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Conc 5.2323

Area 2251010

Q 514.80>469.95 (-)

8.79e5



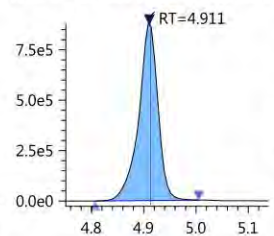
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Conc 5.0000

Area 2251010

ISTD 514.80>469.95 (-)

8.79e5



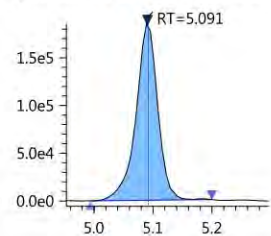
PFUnA

Conc 1.0782

Area 477421

Q 563.00>518.90 (-)

1.86e5



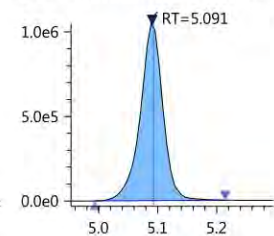
PFUnA-13C

Conc 5.2310

Area 2807081

Q 564.80>519.95 (-)

1.05e6

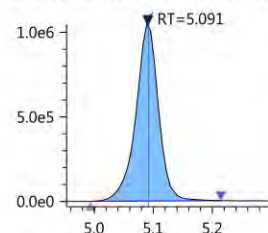


Insight Report

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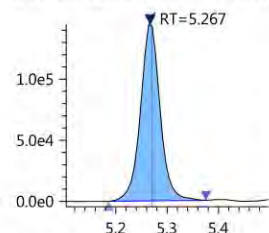
PFUnA-13C_IS

Conc 5.0000
Area 2807081
ISTD 564.80>519.95 (-)



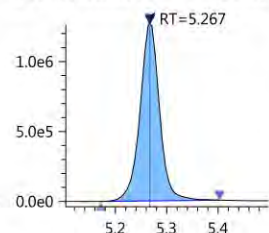
PFDaA

Conc 1.0192
Area 385062
Q 613.05>569.00 (-)



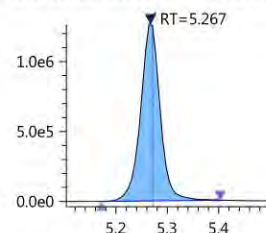
PFDaA-13C

Conc 5.3002
Area 3350723
Q 614.80>569.95 (-)



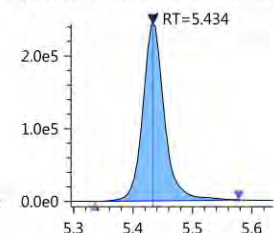
PFDaA-13C_IS

Conc 5.0000
Area 3350723
ISTD 614.80>569.95 (-)



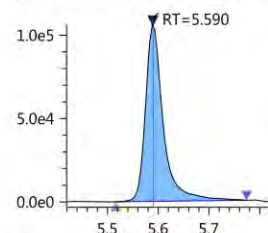
PFTrDA

Conc 1.2060
Area 617038
Q 663.00>618.90 (-)



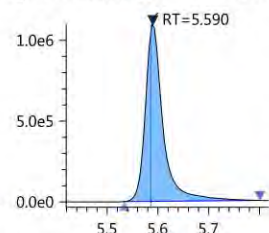
PFTeDA

Conc 0.9760
Area 258286
Q 713.40>669.00 (-)



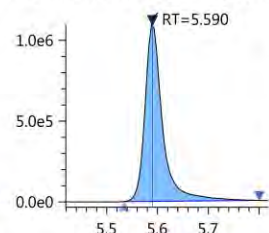
PFTeDA-13C

Conc 5.2463
Area 2646270
Q 714.70>669.90 (-)



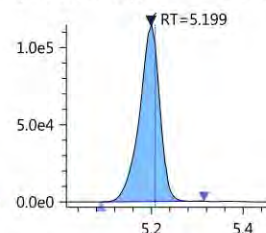
PFTeDA-13C_IS

Conc 5.0000
Area 2646270
ISTD 714.70>669.90 (-)



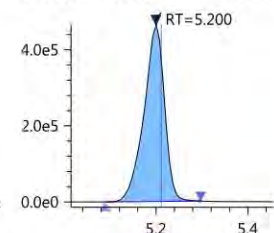
FOSA

Conc 1.0169
Area 351896
Q 498.20>78.00 (-)



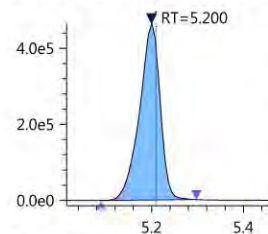
FOSA-13C

Conc 5.0225
Area 1444719
Q 506.00>78.05 (-)



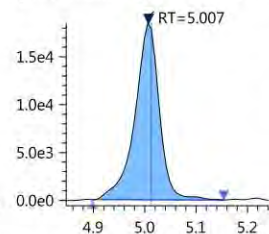
FOSA-13C_IS

Conc 5.0000
Area 1444719
ISTD 506.00>78.05 (-)



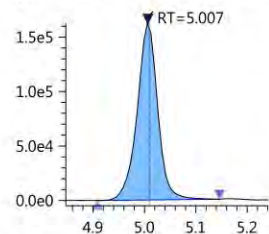
N-MeFOSAA

Conc 1.0937
Area 60986
Q 570.20>419.00 (-)



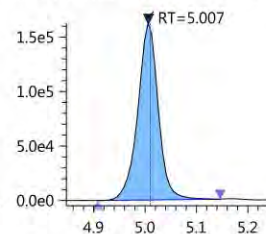
N-MeFOSAA-d3

Conc 5.4918
Area 448513
Q 572.80>419.05 (-)



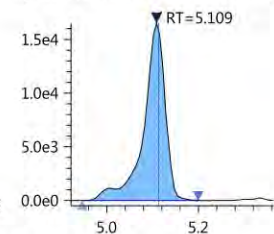
N-MeFOSAA-d3_IS

Conc 5.0000
Area 448513
ISTD 572.80>419.05 (-)



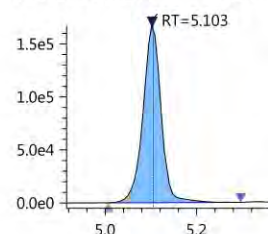
N-EtFOSAA

Conc 1.1253
Area 53640
Q 584.20>418.95 (-)



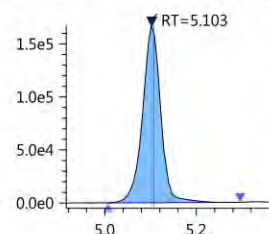
N-EtFOSAA-d5

Conc 6.0994
Area 459003
Q 588.80>419.00 (-)



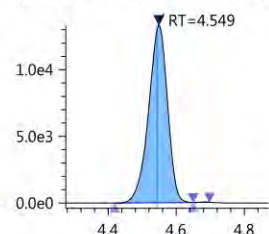
N-EtFOSAA-d5_IS

Conc 5.0000
Area 459003
ISTD 588.80>419.00 (-)



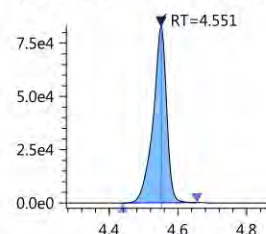
6,2-FTS_1

Conc 0.9762
Area 51226
Q 427.00>407.00 (-)



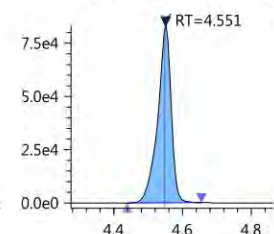
6,2-FTS-13C

Conc 4.7464
Area 226671
Q 428.90>409.00 (-)



6,2-FTS-13C_IS

Conc 5.0000
Area 226671
ISTD 428.90>409.00 (-)



Insight Report

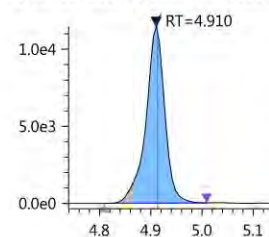
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8_2-FTS_1

Conc 0.9524

Area 29408

Q 527.10>506.90 (-)

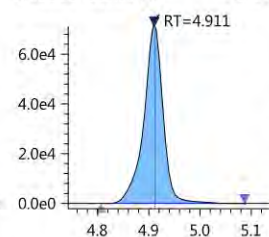


8_2-FTS-13C

Conc 4.8386

Area 187341

Q 528.80>509.00 (-)

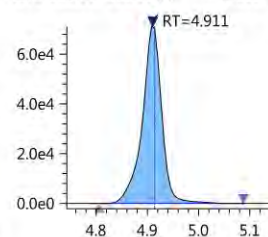


8_2-FTS-13C_IS

Conc 5.0000

Area 187341

ISTD 528.80>509.00 (-)



Validation Report

1st *CM* 05/05/20
2nd *HL* 05/06/20

Data File: J:\LCMS06\Data\200430_b3\200430_016
Lab ID: KQ2005836-01
RunType: CCV
Matrix: Water

Date Acquired: 4/30/20 11:48
Batch ID: 678575
Analysis Method: PFC/537M/PFAS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st *CM* 05/05/20
2nd *JS* 05/06/20

Data File:	J:\LCMS06\Data\200430_b3\200430_016	Instrument:	K-LCMS-06
Acqu Date:	4/30/20 11:48	Vial:	1
Run Type:	CCV	Dilution:	1
Lab ID:	KQ2005836-01	Raw Units:	ng/mL

Bottle ID:		Tier:	V	Matrix:	Water
Prod Code:	PFAS	Collect Date:	4/14/20	Receive Date:	4/16/20

Analysis Lot:	678575	Prep Lot:		Report Group:	KQ2005836
Analysis	PFC/537M	Prep Method:			
		Prep Date:			

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC2000203
		Report List ID:	19837

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.088		5073948	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
13C3-PFBS	4.006		1089641	5.4930	Y
18O2-PFHxS	4.391		758454	6.7916	Y
13C4-PFOS	4.716		879831	5.5973	Y
13C4-PFBA	3.375		2722113	5.0713	Y
13C5-PFPeA	3.952		1484970	4.9161	Y
13C2-PFHxA	4.208		4030951	4.8716	Y
13C4-PFHpA	4.391		4447130	5.9410	Y
13C4-PFOA	4.556		4823334	5.3265	Y
13C5-PFNA	4.729		3993235	5.9067	Y
13C2-PFDA	4.908		3254043	5.3048	Y
13C2-PFUnDA	5.088		3922989	5.1272	Y
13C2-PFDoDA	5.263		4713975	5.2297	Y
13C2-PFTeDA	5.586		4039868	5.6172	Y
13C8-FOSA	5.197		1969365	4.8017	Y
13C2-6:2 FTS	4.548		343409	5.0433	Y
13C2-8:2 FTS	4.908		251079	4.5481	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluorobutane sulfonic acid (PFBS)	4.006		233076	0.9300	Y
Perfluorohexane sulfonic acid (PFHxS)	4.390		164693	0.8561	Y
Perfluoroheptane sulfonic acid (PFHpS)	4.548		202781	0.8574	Y
Perfluorooctane sulfonic acid (PFOS)	4.717		141077	0.9465	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: 5/5/20 14:21

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Data File: J:\LCMS06\Data\200430_b3\200430_016

Instrument: K-LCMS06 05/06/20

Acqu Date: 4/30/20 11:48

Vial: 1

Run Type: CCV

Dilution: 1

Lab ID: KQ2005836-01

Raw Units: ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluorodecane sulfonic acid (PFDS)	5.068		141455	1.0154	Y
Perfluorobutanoic acid (PFBA)	3.376		541254	1.0181	Y
Perfluoropentanoic acid (PFPeA)	3.952		689846	1.0810	Y
Perfluorohexanoic acid (PFHxA)	4.209		774897	0.9729	Y
Perfluoroheptanoic acid (PFHpA)	4.391		819471	1.0217	Y
Perfluorooctanoic acid (PFOA)	4.556		1227623	0.9935	Y
Perfluorononanoic acid (PFNA)	4.729		699994	0.9770	Y
Perfluorodecanoic acid (PFDA)	4.907		667323	0.9658	Y
Perfluoroundecanoic acid (PFUnDA)	5.088		580161	0.9358	Y
Perfluorododecanoic acid (PFDoDA)	5.264		523232	0.9848	Y
Perfluorotridecanoic acid (PFTrDA)	5.430		798450	1.0215	Y
Perfluorotetradecanoic acid (PFTeDA)	5.586		383224	0.9446	Y
Perfluorooctane sulfonamide (FOSA)	5.197		456721	0.9682	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.545		77751	0.9780	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.908		39779	0.9612	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: 5/5/20 14:21

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Insight Report

Printed at 5/5/2020 2:08:10 PM

Method File: J:\LCMS06\Data\200430_b3\200430_b3.lcm
Project File: J:\LCMS06\Data\200430_b3\200430_b3.damlp
Flags File: J:\LCMS06\Data\200430_b3\200430_b3.damlp

200430_016

Sample ID: 1.0 PPB CCV
Date acquired: 4/30/2020 11:48:28 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200430_b3\200430_016.lcd
Vial: 50 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc. Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.088	5073948	5073948	1	5.0000 ng/mL	5.0000
PFBS_1	Auto	4.006	233076	1089641	2	0.9300 ng/mL	0.8874
PFBS-13C	Auto	4.006	1089641	5073948	1	5.4930 ng/mL	5.0000
PFBS-13C_IS	Auto	4.006	1089641	1089641	2	5.0000 ng/mL	5.0000
PFHxS_1	Auto	4.390	164693	758454	3	0.8561 ng/mL	0.9131
PFHxS-18O	Auto	4.391	758454	5073948	1	6.7916 ng/mL	5.0000
PFHxS-18O_IS	Auto	4.391	758454	758454	3	5.0000 ng/mL	5.0000
PFHpS_1	Auto	4.548	202781	758454	3	0.8574 ng/mL	0.9534
PFOS_1	Auto	4.717	141077	879831	4	0.9465 ng/mL	0.9292
PFOS-13C	Auto	4.716	879831	5073948	1	5.5973 ng/mL	5.0000
PFOS-13C_IS	Auto	4.716	879831	879831	4	5.0000 ng/mL	5.0000
PFDS_1	Auto	5.068	141455	879831	4	1.0154 ng/mL	0.9647
PFBA	Auto	3.376	541254	2722113	5	1.0181 ng/mL	1.0000
PFBA-13C	Auto	3.375	2722113	5073948	1	5.0713 ng/mL	5.0000
PFBA-13C_IS	Auto	3.375	2722113	2722113	5	5.0000 ng/mL	5.0000
PFPeA	Auto	3.952	689846	1484970	6	1.0810 ng/mL	1.0000
PFPeA-13C	Auto	3.952	1484970	5073948	1	4.9161 ng/mL	5.0000
PFPeA-13C_IS	Auto	3.952	1484970	1484970	6	5.0000 ng/mL	5.0000
PFHxA	Auto	4.209	774897	4030951	7	0.9729 ng/mL	1.0000
PFHxA-13C	Auto	4.208	4030951	5073948	1	4.8716 ng/mL	5.0000
PFHxA-13C_IS	Auto	4.208	4030951	4030951	7	5.0000 ng/mL	5.0000
PFHpA	Auto	4.391	819471	4447130	8	1.0217 ng/mL	1.0000
PFHpA-13C	Auto	4.391	4447130	5073948	1	5.9410 ng/mL	5.0000
PFHpA-13C_IS	Auto	4.391	4447130	4447130	8	5.0000 ng/mL	5.0000
PFOA	Auto	4.556	1227623	4823334	9	0.9935 ng/mL	1.0000
PFOA-13C	Auto	4.556	4823334	5073948	1	5.3265 ng/mL	5.0000
PFOA-13C_IS	Auto	4.556	4823334	4823334	9	5.0000 ng/mL	5.0000
PFNA	Auto	4.729	699994	3993235	10	0.9770 ng/mL	1.0000
PFNA-13C	Auto	4.729	3993235	5073948	1	5.9067 ng/mL	5.0000
PFNA-13C_IS	Auto	4.729	3993235	3993235	10	5.0000 ng/mL	5.0000
PFDA	Auto	4.907	667323	3254043	11	0.9658 ng/mL	1.0000
PFDA-13C	Auto	4.908	3254043	5073948	1	5.3048 ng/mL	5.0000
PFDA-13C_IS	Auto	4.908	3254043	3254043	11	5.0000 ng/mL	5.0000
PFUnA	Auto	5.088	580161	3922989	12	0.9358 ng/mL	1.0000
PFUnA-13C	Auto	5.088	3922989	5073948	1	5.1272 ng/mL	5.0000
PFUnA-13C_IS	Auto	5.088	3922989	3922989	12	5.0000 ng/mL	5.0000
PFDoA	Auto	5.264	523232	4713975	13	0.9848 ng/mL	1.0000
PFDoA-13C	Auto	5.263	4713975	5073948	1	5.2297 ng/mL	5.0000
PFDoA-13C_IS	Auto	5.263	4713975	4713975	13	5.0000 ng/mL	5.0000
PFTTrDA	Auto	5.430	798450	4039868	14	1.0215 ng/mL	1.0000
PFTTeDA	Auto	5.586	383224	4039868	14	0.9446 ng/mL	1.0000
PFTTeDA-13C	Auto	5.586	4039868	5073948	1	5.6172 ng/mL	5.0000
PFTTeDA-13C_IS	Auto	5.586	4039868	4039868	14	5.0000 ng/mL	5.0000
FOSA	Auto	5.197	456721	1969365	16	0.9682 ng/mL	1.0000
FOSA-13C	Auto	5.197	1969365	5073948	1	4.8017 ng/mL	5.0000
FOSA-13C_IS	Auto	5.197	1969365	1969365	16	5.0000 ng/mL	5.0000
N-MeFOSAA	Auto	5.008	86913	661359	21	1.0570 ng/mL	1.0000
N-MeFOSAA-d3	Auto	5.006	661359	5073948	1	5.6796 ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.006	661359	661359	21	5.0000 ng/mL	5.0000
N-EtFOSAA	Auto	5.104	74663	635461	22	1.1314 ng/mL	1.0000
N-EtFOSAA-d5	Auto	5.100	635461	5073948	1	5.9223 ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.100	635461	635461	22	5.0000 ng/mL	5.0000
6_2-FTS_1	Auto	4.545	77751	343409	24	0.9780 ng/mL	0.9512
6_2-FTS-13C	Auto	4.548	343409	5073948	1	5.0433 ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.548	343409	343409	24	5.0000 ng/mL	5.0000
8_2-FTS_1	Auto	4.908	39779	251079	25	0.9612 ng/mL	0.9600
8_2-FTS-13C	Auto	4.908	251079	5073948	1	4.5481 ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.908	251079	251079	25	5.0000 ng/mL	5.0000

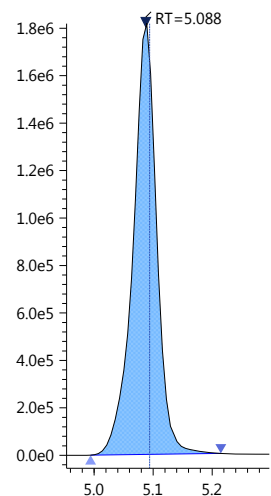
Insight Report

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13C7-PFUnDA_IS

Conc 5.0000
Area 5073948

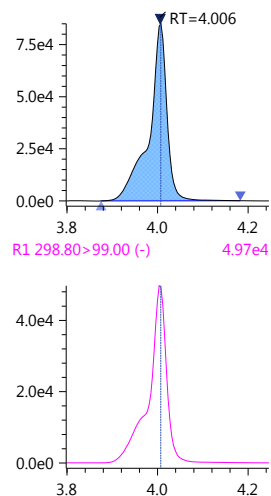
ISTD 570.00>525.00 (-) 1.82e6



PFBS_1

Conc 0.9300
Area 233076
R#1 59.87 (0.00)

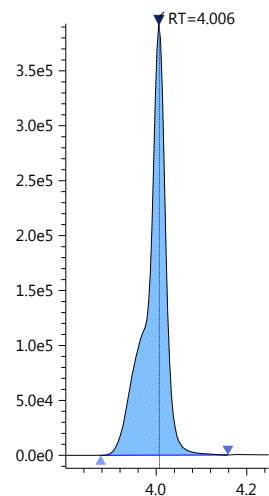
Q 299.00>80.00 (-) 8.51e4



PFBS-13C

Conc 5.4930
Area 1089641

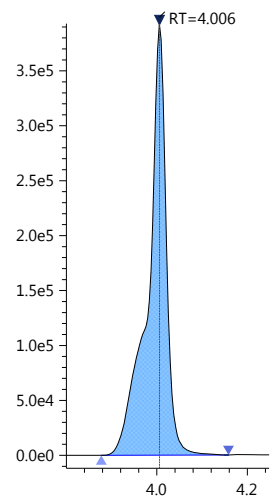
Q 301.80>80.00 (-) 3.93e5



PFBS-13C_IS

Conc 5.0000
Area 1089641

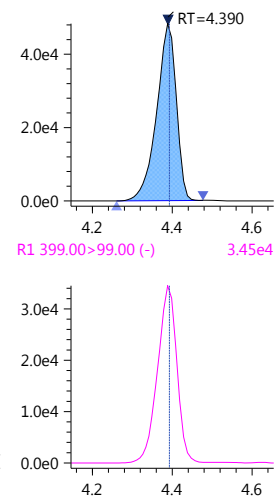
ISTD 301.80>80.00 (-) 3.93e5



PFHxS_1

Conc 0.8561
Area 164693
R#1 71.37 (0.00)

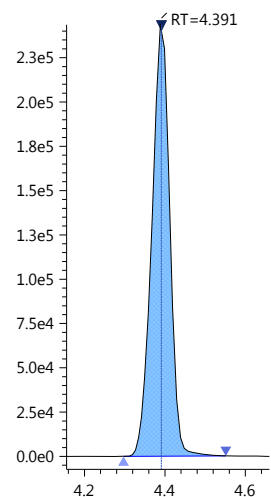
Q 399.00>80.00 (-) 4.84e4



PFHxS-180

Conc 6.7916
Area 758454

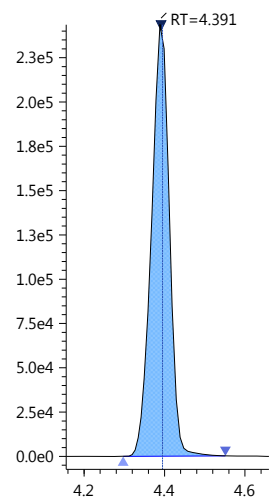
Q 402.70>84.05 (-) 2.44e5



PFHxS-180_IS

Conc 5.0000
Area 758454

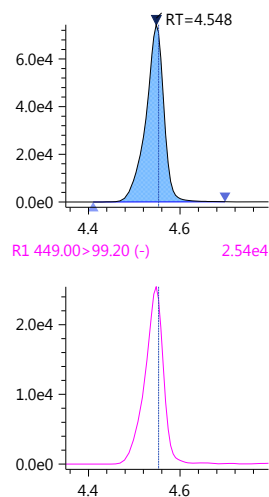
ISTD 402.70>84.05 (-) 2.44e5



PFHpS_1

Conc 0.8574
Area 202781
R#1 34.29 (0.00)

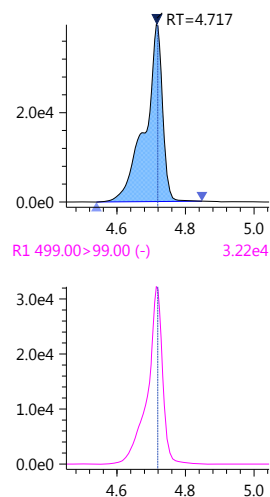
Q 449.00>80.15 (-) 7.44e4



PFOS_1

Conc 0.9465
Area 141077
R#1 80.98 (0.00)

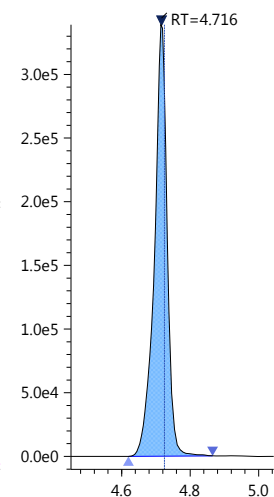
Q 499.00>80.00 (-) 3.97e4



PFOS-13C

Conc 5.5973
Area 879831

Q 502.80>80.05 (-) 3.39e5



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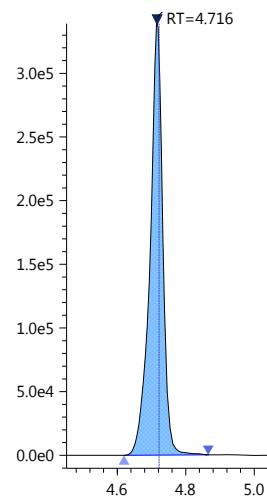
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PFOS-13C_IS

Conc 5.0000
 Area 879831

ISTD 502.80>80.05 (-)

3.39e5

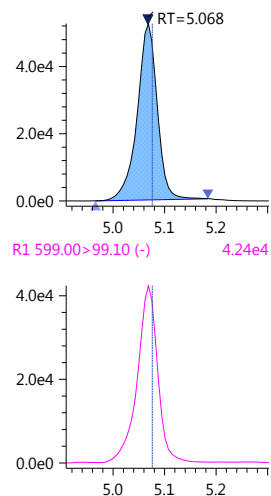


PFDS_1

Conc 1.0154
 Area 141455
 R#1 80.75 (0.00)

Q 599.00>79.90 (-)

5.27e4

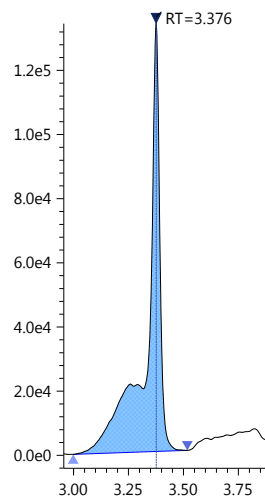


PFBA

Conc 1.0181
 Area 541254

Q 213.00>169.10 (-)

1.35e5

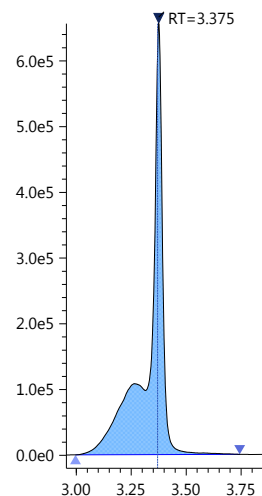


PFBA-13C

Conc 5.0713
 Area 2722113

Q 216.90>172.15 (-)

6.57e5

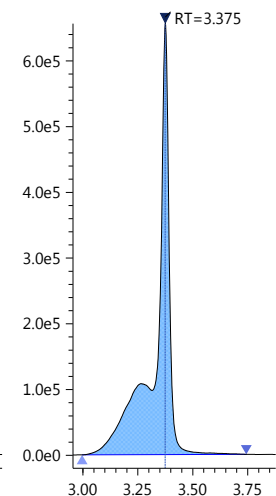


PFBA-13C_IS

Conc 5.0000
 Area 2722113

ISTD 216.90>172.15 (-)

6.57e5

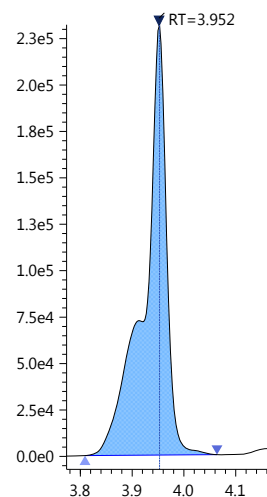


PFPeA

Conc 1.0810
 Area 689846

Q 263.05>219.10 (-)

2.32e5

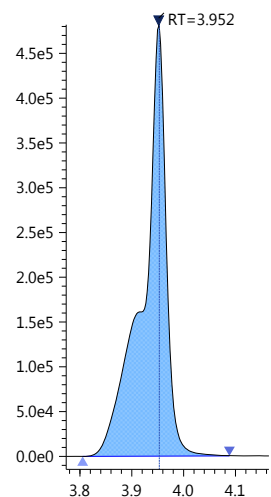


PFPeA-13C

Conc 4.9161
 Area 1484970

Q 267.90>223.00 (-)

4.82e5

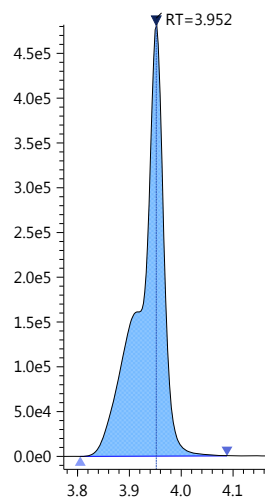


PFPeA-13C_IS

Conc 5.0000
 Area 1484970

ISTD 267.90>223.00 (-)

4.82e5

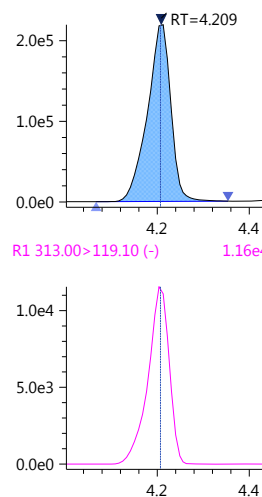


PFHxA

Conc 0.9729
 Area 774897
 R#1 5.29 (0.00)

Q 313.00>269.00 (-)

2.20e5

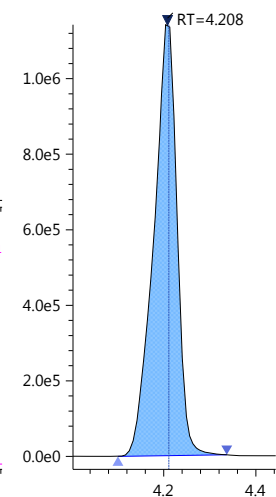


PFHxA-13C

Conc 4.8716
 Area 4030951

Q 314.90>270.10 (-)

1.14e6



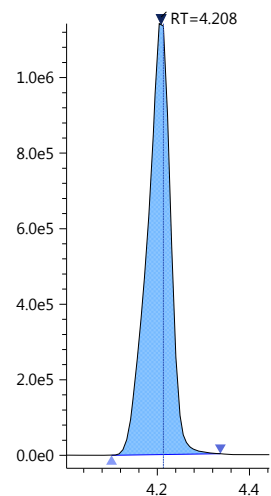
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PFHxA-13C_IS

Conc 5.0000
Area 4030951

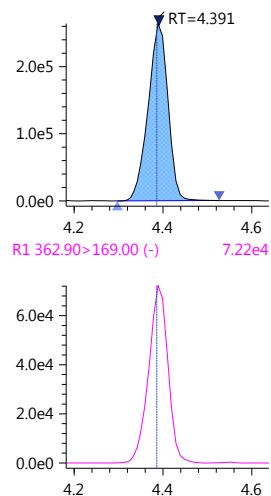
ISTD 314.90>270.10 (-) 1.14e6



PFHpa

Conc 1.0217
Area 819471
R#1 27.33 (0.00)

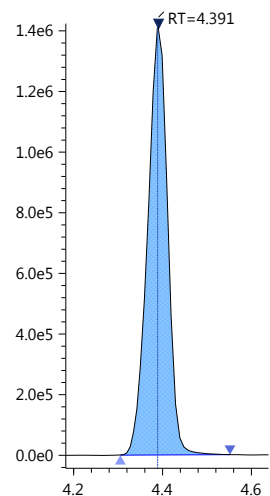
Q 362.90>319.00 (-) 2.64e5



PFHpa-13C

Conc 5.9410
Area 4447130

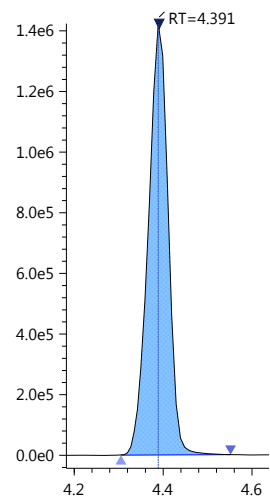
Q 366.90>322.10 (-) 1.42e6



PFHpa-13C_IS

Conc 5.0000
Area 4447130

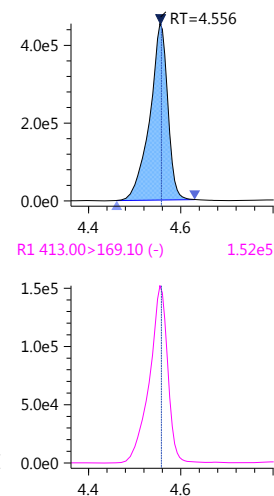
ISTD 366.90>322.10 (-) 1.42e6



PFOA

Conc 0.9935
Area 1227623
R#1 33.42 (0.00)

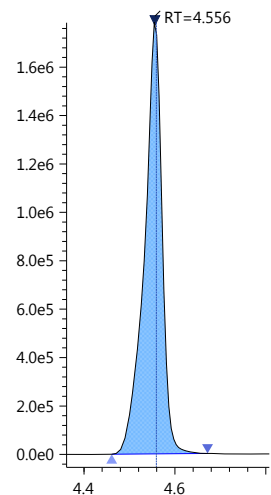
Q 413.00>369.00 (-) 4.56e5



PFOA-13C

Conc 5.3265
Area 4823334

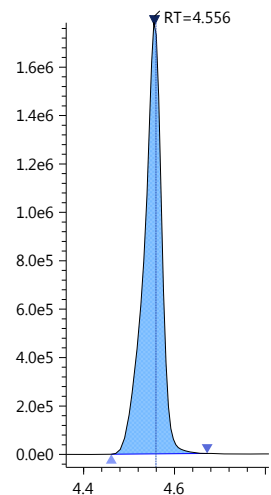
Q 416.80>372.05 (-) 1.78e6



PFOA-13C_IS

Conc 5.0000
Area 4823334

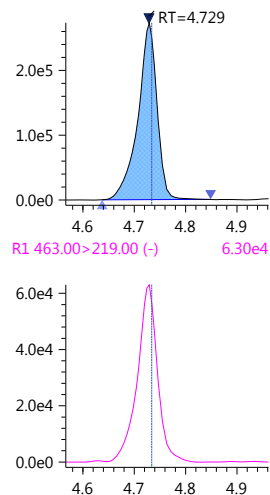
ISTD 416.80>372.05 (-) 1.78e6



PFNA

Conc 0.9770
Area 699994
R#1 22.64 (0.00)

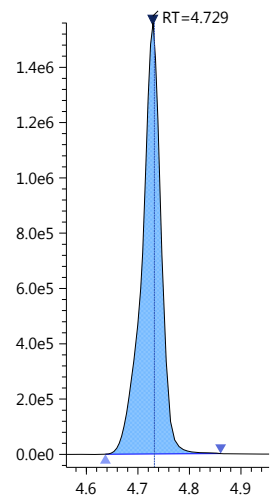
Q 463.00>418.90 (-) 2.74e5



PFNA-13C

Conc 5.9067
Area 3993235

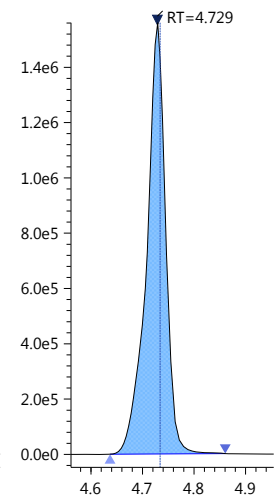
Q 467.80>423.00 (-) 1.56e6



PFNA-13C_IS

Conc 5.0000
Area 3993235

ISTD 467.80>423.00 (-) 1.56e6



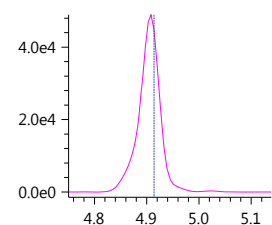
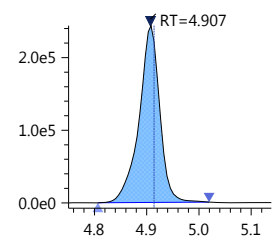
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PFDA

Conc 0.9658
Area 667323
R#1 20.03 (0.00)

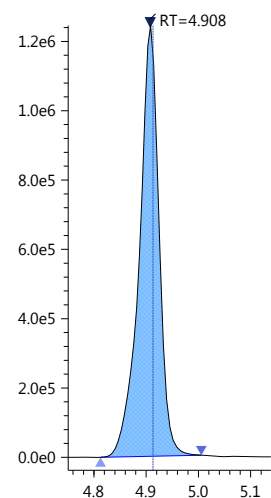
Q 513.00>468.80 (-) 2.44e5



PFDA-13C

Conc 5.3048
Area 3254043

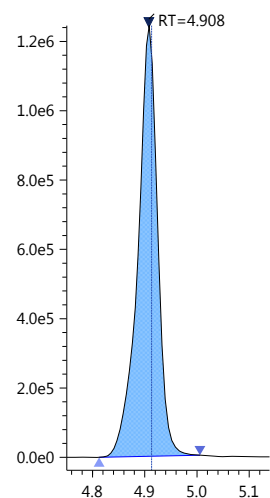
Q 514.80>469.95 (-) 1.25e6



PFDA-13C_IS

Conc 5.0000
Area 3254043

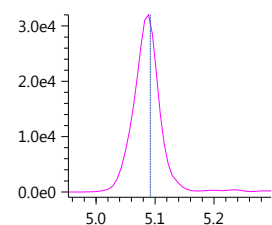
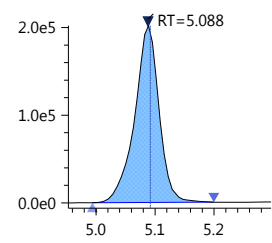
ISTD 514.80>469.95 (-) 1.25e6



PFAUnA

Conc 0.9358
Area 580161
R#1 15.77 (0.00)

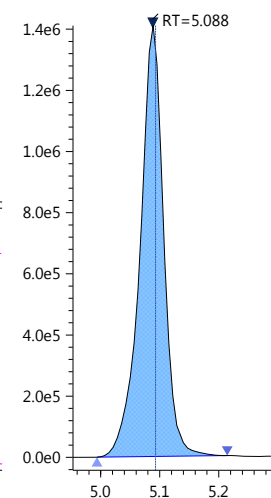
Q 563.00>518.90 (-) 2.02e5



PFAUnA-13C

Conc 5.1272
Area 3922989

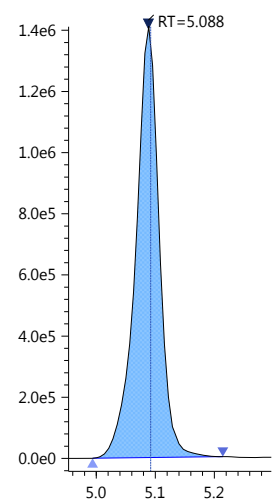
Q 564.80>519.95 (-) 1.41e6



PFAUnA-13C_IS

Conc 5.0000
Area 3922989

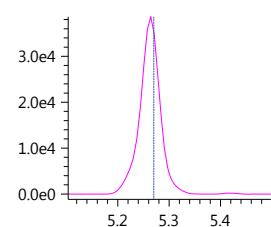
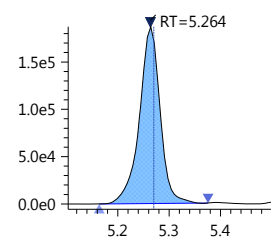
ISTD 564.80>519.95 (-) 1.41e6



PFDaA

Conc 0.9848
Area 523232
R#1 20.76 (0.00)

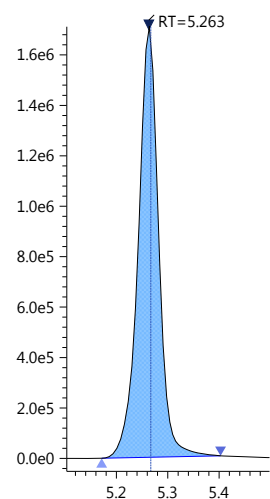
Q 613.05>569.00 (-) 1.87e5



PFDaA-13C

Conc 5.2297
Area 4713975

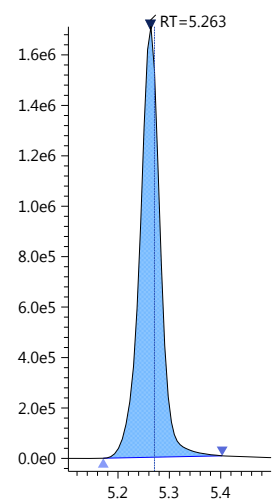
Q 614.80>569.95 (-) 1.71e6



PFDaA-13C_IS

Conc 5.0000
Area 4713975

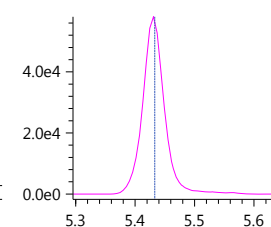
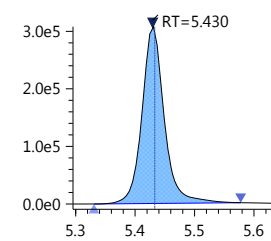
ISTD 614.80>569.95 (-) 1.71e6



PFTrDA

Conc 1.0215
Area 798450
R#1 18.98 (0.00)

Q 663.00>618.90 (-) 3.08e5



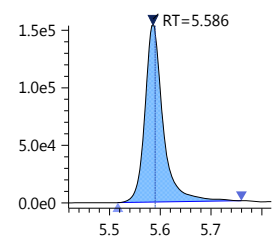
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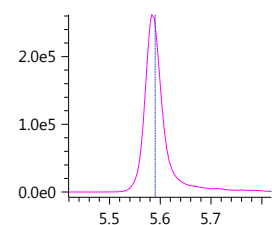
PFTeDA

Conc 0.9446
Area 383224
R#1 168.73 (0.00)

Q 713.40>669.00 (-) 1.54e5



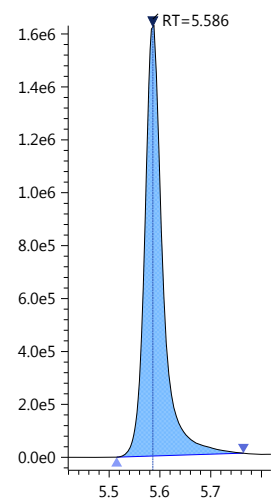
R1 713.40>169.10 (-) 2.62e5



PFTeDA-13C

Conc 5.6172
Area 4039868

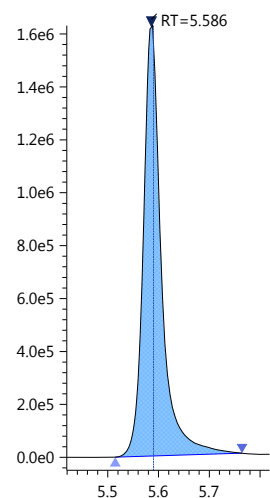
Q 714.70>669.90 (-) 1.63e6



PFTeDA-13C_IS

Conc 5.0000
Area 4039868

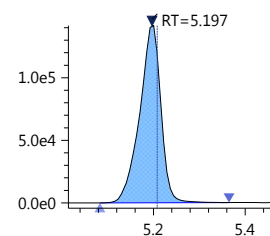
ISTD 714.70>669.90 (-) 1.63e6



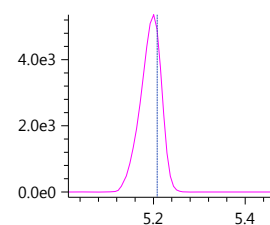
FOSA

Conc 0.9682
Area 456721
R#1 3.63 (0.00)

Q 498.20>78.00 (-) 1.42e5



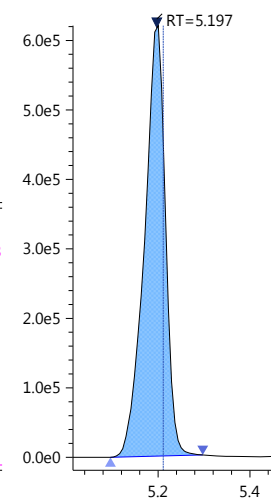
R1 498.20>64.10 (-) 5.36e3



FOSA-13C

Conc 4.8017
Area 1969365

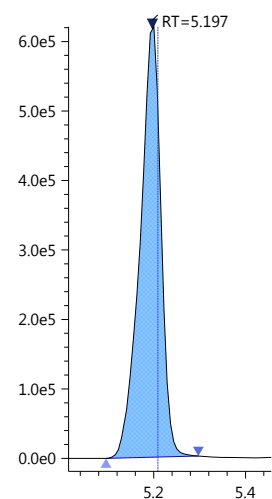
Q 506.00>78.05 (-) 6.21e5



FOSA-13C_IS

Conc 5.0000
Area 1969365

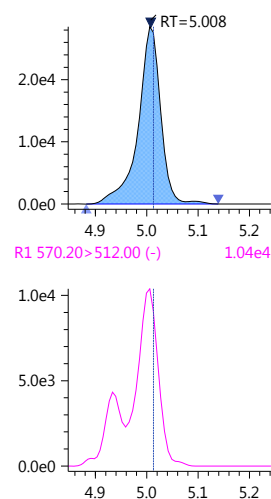
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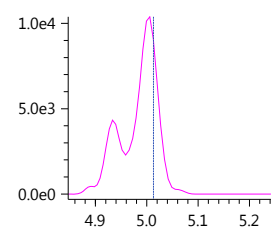
N-MeFOSAA

Conc 1.0570
Area 86913
R#1 31.85 (0.00)

Q 570.20>419.00 (-) 2.85e4



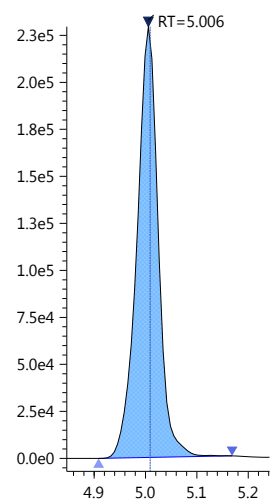
R1 570.20>512.00 (-) 1.04e4



N-MeFOSAA-d3

Conc 5.6796
Area 661359

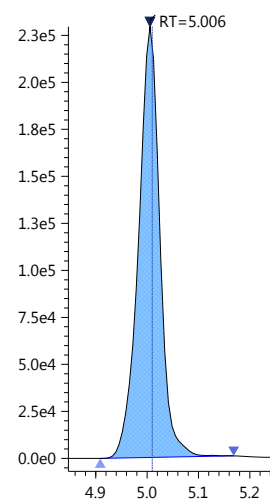
Q 572.80>419.05 (-) 2.30e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 661359

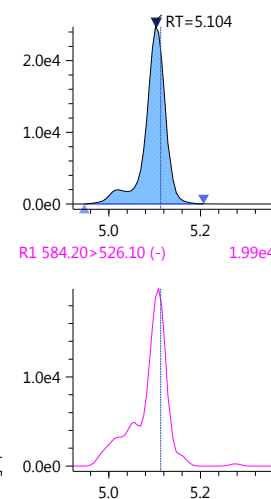
ISTD 572.80>419.05 (-) 2.30e5



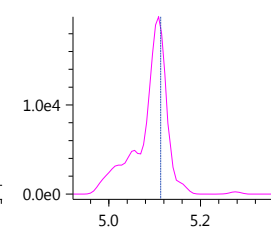
N-EtFOSAA

Conc 1.1314
Area 74663
R#1 83.67 (0.00)

Q 584.20>418.95 (-) 2.47e4



R1 584.20>526.10 (-) 1.99e4



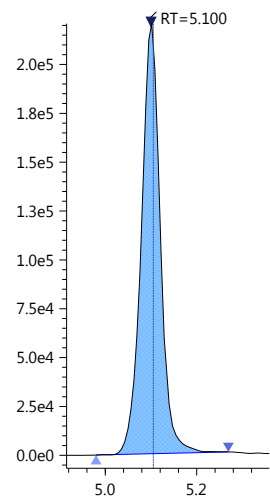
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N-EtFOSAA-d5

Conc 5.9223
 Area 635461

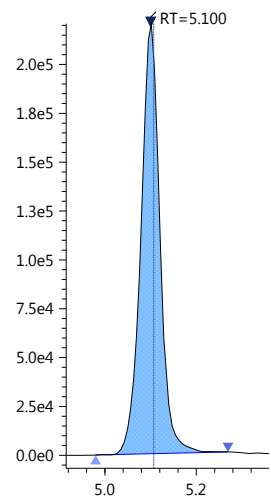
Q 588.80>419.00 (-) 2.21e5



N-EtFOSAA-d5_IS

Conc 5.0000
 Area 635461

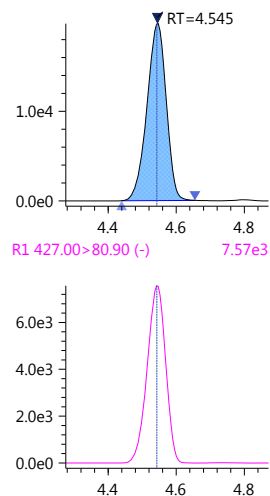
ISTD 588.80>419.00 (-) 2.21e5



6_2-FTS_1

Conc 0.9780
 Area 77751
 R#1 40.30 (0.00)

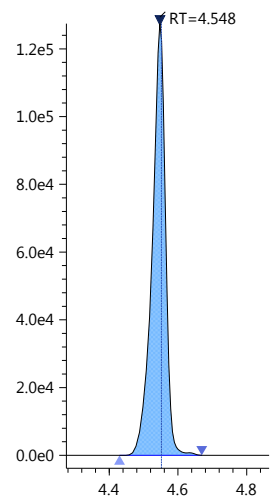
Q 427.00>407.00 (-) 1.98e4



6_2-FTS-13C

Conc 5.0433
 Area 343409

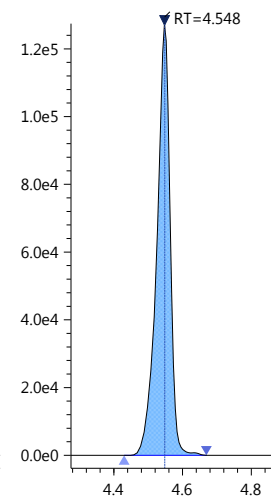
Q 428.90>409.00 (-) 1.27e5



6_2-FTS-13C_IS

Conc 5.0000
 Area 343409

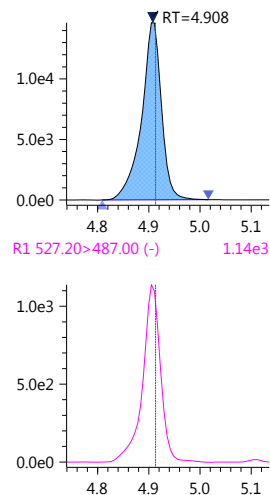
ISTD 428.90>409.00 (-) 1.27e5



8_2-FTS_1

Conc 0.9612
 Area 39779
 R#1 7.86 (0.00)

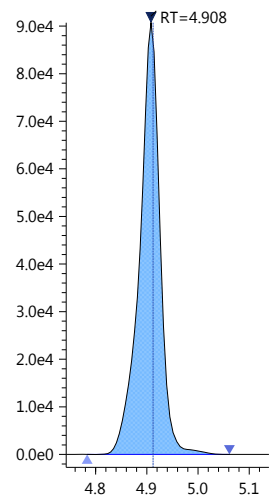
Q 527.10>506.90 (-) 1.46e4



8_2-FTS-13C

Conc 4.5481
 Area 251079

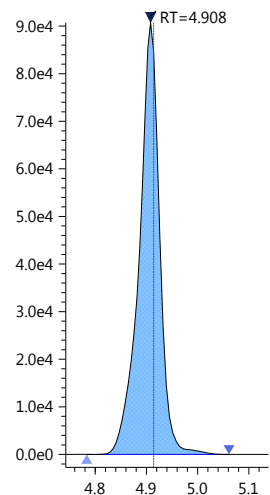
Q 528.80>509.00 (-) 9.07e4



8_2-FTS-13C_IS

Conc 5.0000
 Area 251079

ISTD 528.80>509.00 (-) 9.07e4



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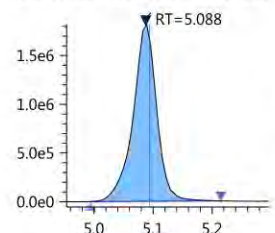
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Project File: J:\LCMS06\Data\200430_b3\200430_b3.damlp
Flags File: J:\LCMS06\Data\200430_b3\200430_b3.damlp

200430_016

Sample ID: 1.0 PPB CCV
Date acquired: 4/30/2020 11:48:28 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200430_b3\200430_016.lcd
Vial: 50 | Inj. Volume: 15.0000uL | Tray: 1

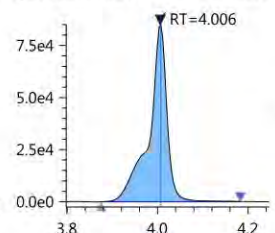
13C7-PFUnDA_IS

Conc 5.0000
Area 5073948
ISTD 570.00>525.00 (-) 1.82e6



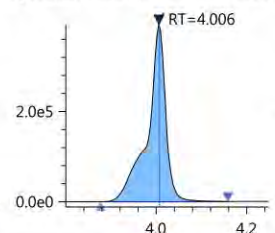
PFBS_1

Conc 0.9300
Area 233076
Q 299.00>80.00 (-) 8.51e4



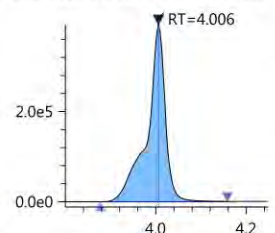
PFBS-13C

Conc 5.4930
Area 1089641
Q 301.80>80.00 (-) 3.93e5



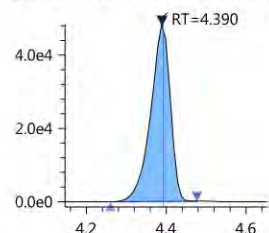
PFBS-13C_IS

Conc 5.0000
Area 1089641
ISTD 301.80>80.00 (-) 3.93e5



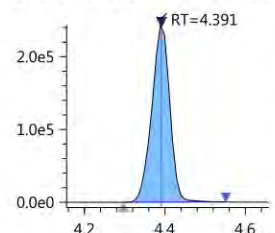
PFHxS_1

Conc 0.8561
Area 164693
Q 399.00>80.00 (-) 4.84e4



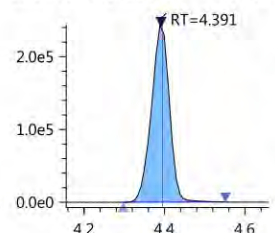
PFHxS-180

Conc 6.7916
Area 758454
Q 402.70>84.05 (-) 2.44e5



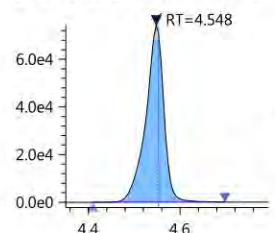
PFHxS-180_IS

Conc 5.0000
Area 758454
ISTD 402.70>84.05 (-) 2.44e5



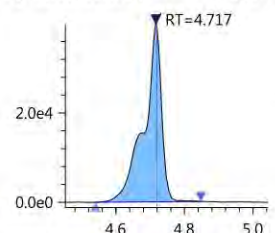
PFHpS_1

Conc 0.8574
Area 202781
Q 449.00>80.15 (-) 7.44e4



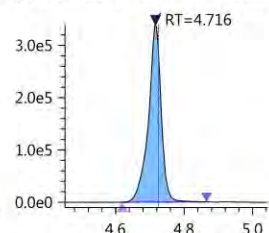
PFOS_1

Conc 0.9465
Area 141077
Q 499.00>80.00 (-) 3.97e4



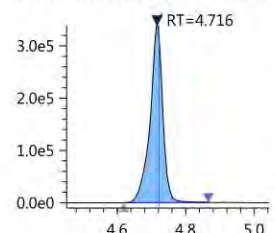
PFOS-13C

Conc 5.5973
Area 879831
Q 502.80>80.05 (-) 3.39e5



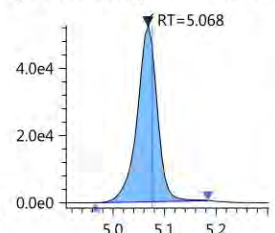
PFOS-13C_IS

Conc 5.0000
Area 879831
ISTD 502.80>80.05 (-) 3.39e5



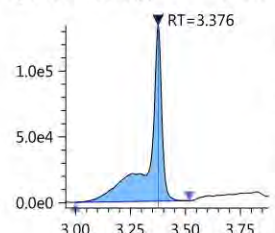
PFDS_1

Conc 1.0154
Area 141455
Q 599.00>79.90 (-) 5.27e4



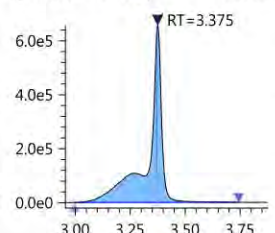
PFBA

Conc 1.0181
Area 541254
Q 213.00>169.10 (-) 1.35e5



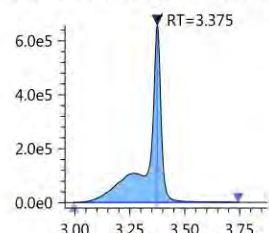
PFBA-13C

Conc 5.0713
Area 2722113
Q 216.90>172.15 (-) 6.57e5



PFBA-13C_IS

Conc 5.0000
Area 2722113
ISTD 216.90>172.15 (-) 6.57e5

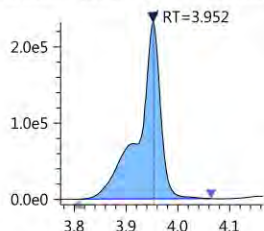


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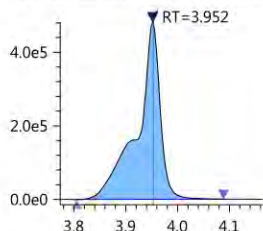
PFPeA

Conc 1.0810
 Area 689846
 Q 263.05>219.10 (-)



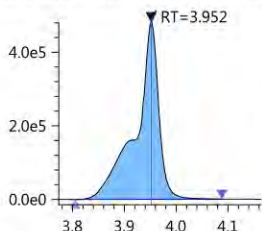
PFPeA-13C

Conc 4.9161
 Area 1484970
 Q 267.90>223.00 (-)



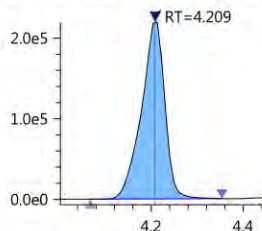
PFPeA-13C_IS

Conc 5.0000
 Area 1484970
 ISTD 267.90>223.00 (-)



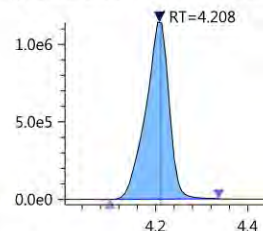
PFHxA

Conc 0.9729
 Area 774897
 Q 313.00>269.00 (-)



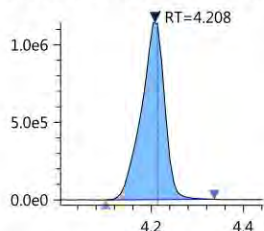
PFHxA-13C

Conc 4.8716
 Area 4030951
 Q 314.90>270.10 (-)



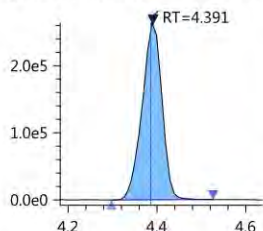
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 ISTD 314.90>270.10 (-)



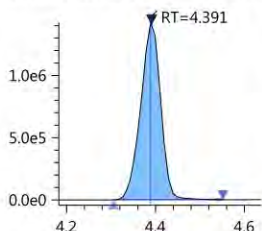
PFHpA

Conc 1.0217
 Area 819471
 Q 362.90>319.00 (-)



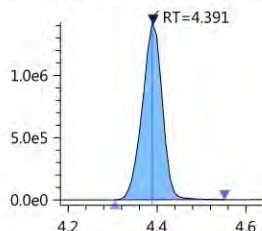
PFHpA-13C

Conc 5.9410
 Area 4447130
 Q 366.90>322.10 (-)



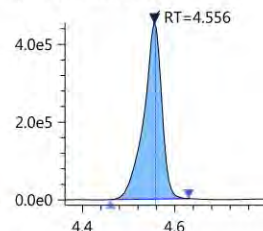
PFHpA-13C_IS

Conc 5.0000
 Area 4447130
 ISTD 366.90>322.10 (-)



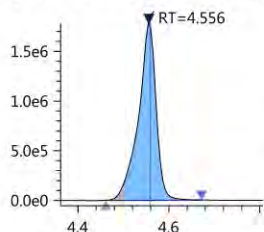
PFOA

Conc 0.9935
 Area 1227623
 Q 413.00>369.00 (-)



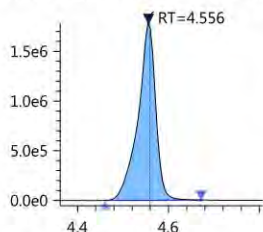
PFOA-13C

Conc 5.3265
 Area 4823334
 Q 416.80>372.05 (-)



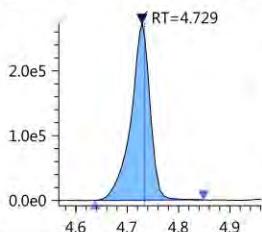
PFOA-13C_IS

Conc 5.0000
 Area 4823334
 ISTD 416.80>372.05 (-)



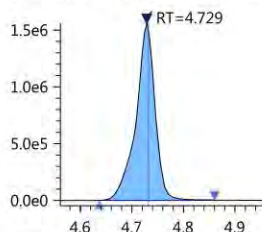
PFNA

Conc 0.9770
 Area 699994
 Q 463.00>418.90 (-)



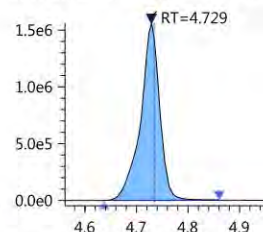
PFNA-13C

Conc 5.9067
 Area 3993235
 Q 467.80>423.00 (-)



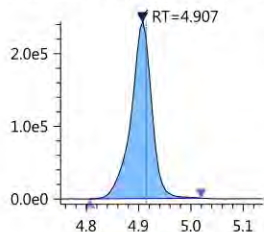
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Conc 5.0000
 Area 3993235
 ISTD 467.80>423.00 (-)



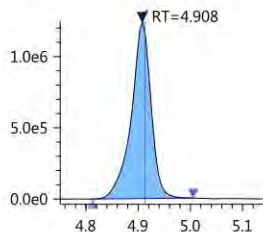
PFDA

Conc 0.9658
 Area 667323
 Q 513.00>468.80 (-)



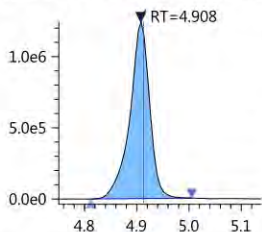
PFDA-13C

Conc 5.3048
 Area 3254043
 Q 514.80>469.95 (-)



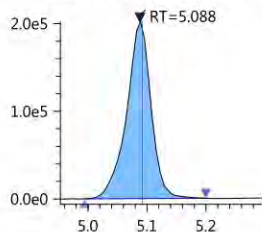
PFDA-13C_IS

Conc 5.0000
 Area 3254043
 ISTD 514.80>469.95 (-)



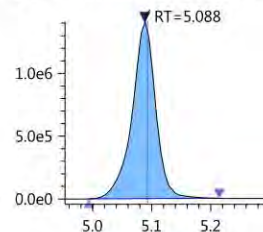
PFUnA

Conc 0.9358
 Area 580161
 Q 563.00>518.90 (-)



PFUnA-13C

Conc 5.1272
 Area 3922989
 Q 564.80>519.95 (-)

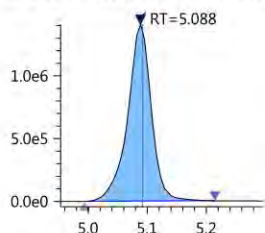


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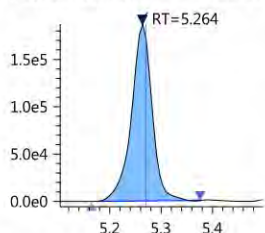
PFUnA-13C_IS

Conc 5.0000
Area 3922989
ISTD 564.80>519.95 (-) 1.41e6



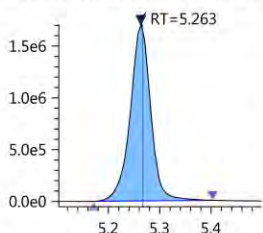
PFDaA

Conc 0.9848
Area 523232
Q 613.05>569.00 (-) 1.87e5



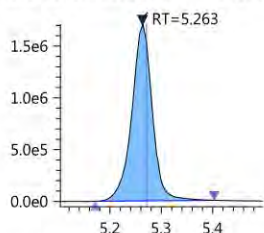
PFDaA-13C

Conc 5.2297
Area 4713975
Q 614.80>569.95 (-) 1.71e6



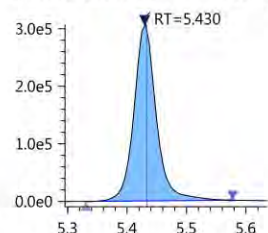
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Conc 5.0000
Area 4713975
ISTD 614.80>569.95 (-) 1.71e6



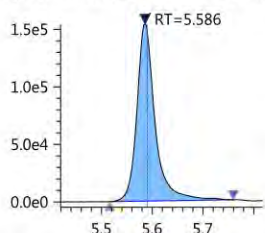
PFTrDA

Conc 1.0215
Area 798450
Q 663.00>618.90 (-) 3.08e5



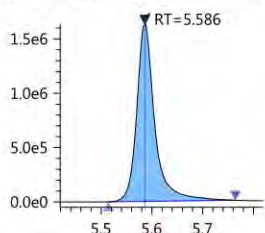
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Conc 0.9446
Area 383224
Q 713.40>669.00 (-) 1.54e5



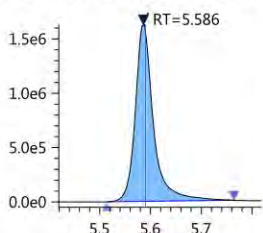
PFTeDA-13C

Conc 5.6172
Area 4039868
Q 714.70>669.90 (-) 1.63e6



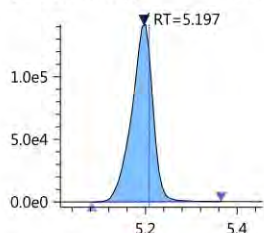
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Conc 5.0000
Area 4039868
ISTD 714.70>669.90 (-) 1.63e6



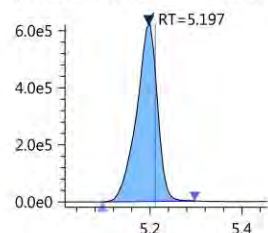
FOSA

Conc 0.9682
Area 456721
Q 498.20>78.00 (-) 1.42e5



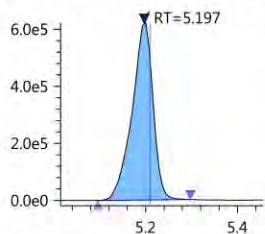
FOSA-13C

Conc 4.8017
Area 1969365
Q 506.00>78.05 (-) 6.21e5



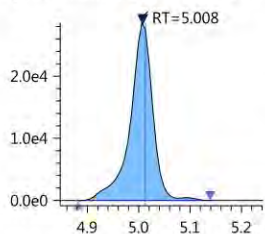
FOSA-13C_IS

Conc 5.0000
Area 1969365
ISTD 506.00>78.05 (-) 6.21e5



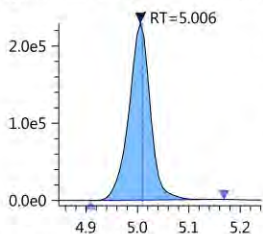
N-MeFOSAA

Conc 1.0570
Area 86913
Q 570.20>419.00 (-) 2.85e4



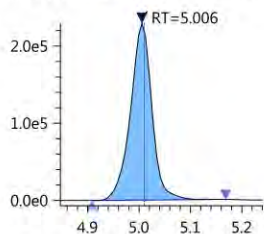
N-MeFOSAA-d3

Conc 5.6796
Area 661359
Q 572.80>419.05 (-) 2.30e5



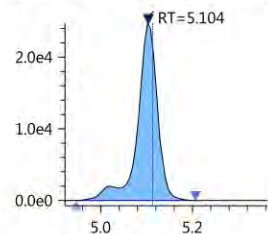
N-MeFOSAA-d3_IS

Conc 5.0000
Area 661359
ISTD 572.80>419.05 (-) 2.30e5



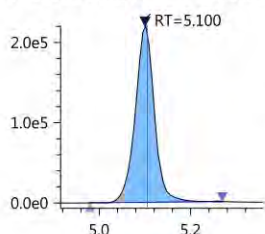
N-EtFOSAA

Conc 1.1314
Area 74663
Q 584.20>418.95 (-) 2.47e4



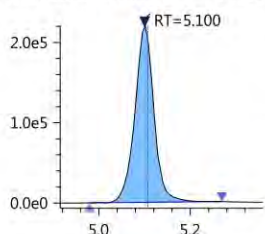
N-EtFOSAA-d5

Conc 5.9223
Area 635461
Q 588.80>419.00 (-) 2.21e5



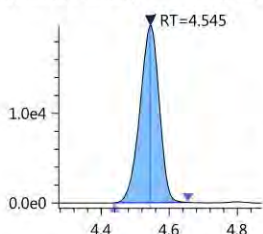
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Conc 5.0000
Area 635461
ISTD 588.80>419.00 (-) 2.21e5



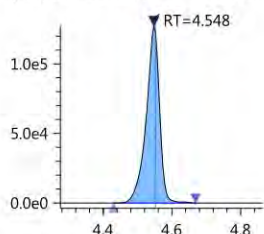
6,2-FTS_1

Conc 0.9780
Area 77751
Q 427.00>407.00 (-) 1.98e4



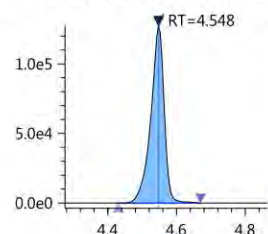
6,2-FTS-13C

Conc 5.0433
Area 343409
Q 428.90>409.00 (-) 1.27e5



6,2-FTS-13C_IS

Conc 5.0000
Area 343409
ISTD 428.90>409.00 (-) 1.27e5



Insight Report

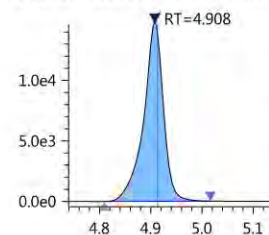
Printed at 5/5/2020 2:04:27 PM

8_2-FTS_1

Conc 0.9612

Area 39779

Q 527.10>506.90 (-)

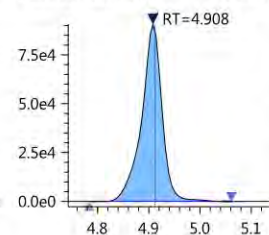


8_2-FTS-13C

Conc 4.5481

Area 251079

Q 528.80>509.00 (-)

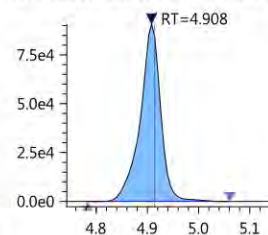


8_2-FTS-13C_IS

Conc 5.0000

Area 251079

ISTD 528.80>509.00 (-)



200417_curve

1st Review:
2nd Review:
Column:
Mobile Phases

Cmuller

4

Phenomenex EVO-C18 100X4.6 mm S/N: H20-069918

A: 5mM Ammonium Acetate in H2O 19-OLC-01-80E

B: 5mM Ammonium Acetate In MeOH 19-OLC-01-80F



LCMS06 - Shimadzu 8050

ICAL Date: 4/17/2020

Std. xp: 6/9/2020

ICAL ID: KC2000203

LIMS ID:

	Sample Name	File Name	Acquisition Method	Dilution	R	
1	IB	19-OLC-02-88L	200417_022 PFAS 191226 30 LCMS06.lcm	1x	☒	
2	0.05 PPB ICAL	19-OLC-01-69A	200417_023 PFAS 191226 30 LCMS06.lcm	1x	☒	
3	0.10 PPB ICAL	19-OLC-01-69B	200417_024 PFAS 191226 30 LCMS06.lcm	1x	☒	High HpA surr, native ok
4	0.50 PPB ICAL	19-OLC-01-69C	200417_025 PFAS 191226 30 LCMS06.lcm	1x	☒	
5	1.0 PPB ICAL	19-OLC-01-69D	200417_026 PFAS 191226 30 LCMS06.lcm	1x	☒	
6	5.0 PPB ICAL	19-OLC-01-69E	200417_027 PFAS 191226 30 LCMS06.lcm	1x	☒	
7	10.0 PPB ICAL	19-OLC-01-69F	200417_028 PFAS 191226 30 LCMS06.lcm	1x	☒	
8	IB	19-OLC-02-88L	200417_029 PFAS 191226 30 LCMS06.lcm	1x	☒	
9	15.0 PPB ICAL	19-OLC-01-69G	200417_030 PFAS 191226 30 LCMS06.lcm	1x	☒	
10	IB	19-OLC-02-88L	200417_031 PFAS 191226 30 LCMS06.lcm	1x	☒	
11	1.0 PPB ICV	19-OLC-01-69H	200417_032 PFAS 191226 30 LCMS06.lcm	1x	☒	
12	IB	19-OLC-02-88L	200417_033 PFAS 191226 30 LCMS06.lcm	1x	☒	
13	T-PFOA	19-OLC-02-80Q	200417_034 PFAS 191226 30 LCMS06.lcm	1x	☒	

Sample Information ###
Sample Type: PEG+PPG+Raffinose

Tuning Condition

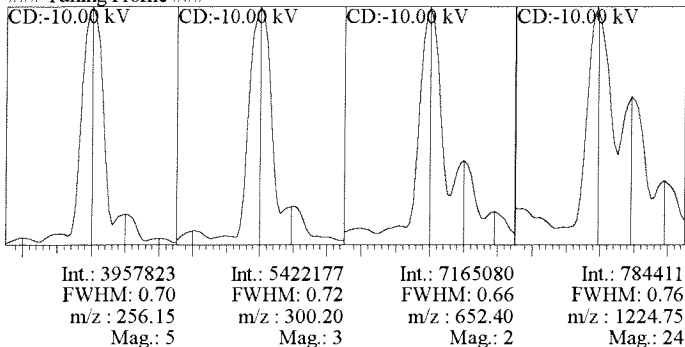
Detector Adjustment: On
Resolution Adjustment: On
FWHM of Spectrum: 0.70
Sensitivity Adjustment: On
Mass Calibration: On

Tuning Result

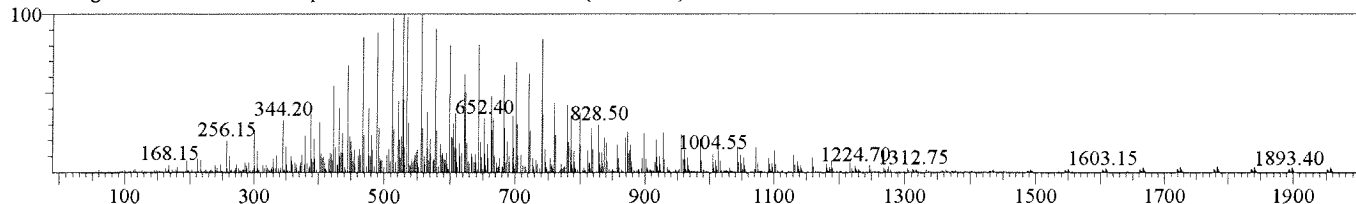
Model: LCMS-8050
Interface: ESI
Polarity: Pos
Tuning Mode: Auto
Tuning Date: 4/17/2020 1:07:32 PM
Acquisition Mode: Q1 Scan(Use CID Gas)

Nebulizing Gas Flow: 1.50(settings : 1.50) L/min
Drying Gas Flow: 0.00(settings : 10.00) L/min
CID Gas Flow: 270(settings : 270) kPa
Interface Bias: +4.00 kV
Interface Current: 0.63 uA
DL Temp.: 249(settings : 250) C
Heat Block Temp.: 399(settings : 400) C
Q1 RF Gain: 4998
Q1 RF Offset: 5000
Q3 RF Gain: ---
Q3 RF Offset: ---
Q1 Post-rod Bias: -5.0 V
CID CELL Exit Lens: -4.0 V
Conversion Dynode: -10.00 kV
Detector: -2.10(-2.10) kV
PG Vacuum: 1.4e+002 Pa
IG Vacuum: 2.1e-003 Pa

Tuning Profile



Scan Range: 2.00 - 2000.00 Scan Speed: 30 u/s Base Peak: 527.15 (20000000)



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
45.05	45.05	0.00	---	---
168.10	168.15	0.05	---	---
256.15	256.15	0.00	0.70	3957823
300.20	300.20	0.00	0.72	5422177
344.20	344.20	0.00	---	---
652.40	652.40	0.00	0.66	7165080
828.50	828.50	0.00	---	---
1004.60	1004.55	-0.05	---	---
1224.75	1224.70	-0.05	0.76	784411
1312.80	1312.75	-0.05	---	---
1603.15	1603.15	0.00	---	---
1893.40	1893.40	0.00	---	---

020.5
cm
4/20/2020

		Const	65.05	168.10	256.15	344.20	652.40	1004.60	1893.40
DL Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray RF	Scan	+50.0	+34.8	+90.0	+110.0	+130.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+20.0	+90.0	+120.0	+190.0	+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	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Multipole2 Lens	Const	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4
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	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				

A
4/21/20

Tuning Condition

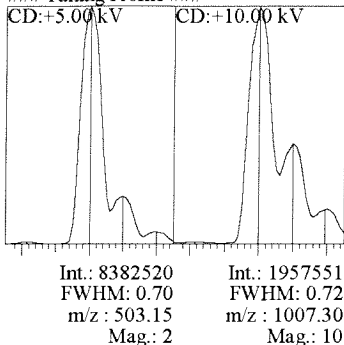
Detector Adjustment: On
Resolution Adjustment: On
FWHM of Spectrum: 0.70
Sensitivity Adjustment: On
Mass Calibration: On

Tuning Result

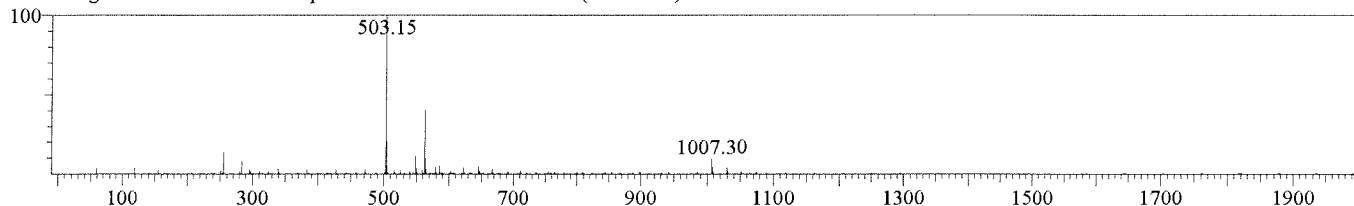
Model: LCMS-8050
Interface: ESI
Polarity: Neg
Tuning Mode: Auto
Tuning Date: 4/17/2020 1:11:52 PM
Acquisition Mode: Q1 Scan(Use CID Gas)

CID Gas Flow: 2.00(settings : 2.00) L/min
Interface Bias: -3.00 kV
Interface Current: 0.42 uA
DL Temp.: 249(settings : 250) C
Heat Block Temp.: 399(settings : 400) C
Q1 RF Gain: 5001
Q1 RF Offset: 5000
Q3 RF Gain: ---
Q3 RF Offset: ---
Q1 Post-rod Bias: 5.0 V
CID CELL Exit Lens: 3.5 V
Conversion Dynode: +10.00 kV
Detector: -2.10(-2.10) kV
PG Vacuum: 1.4e+002 Pa
IG Vacuum: 2.1e-003 Pa

Tuning Profile



Scan Range: 2.00 - 2000.00 Scan Speed: 30 u/s Base Peak: 503.15 (19905433)



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
503.15	503.15	0.00	0.70	8382520
1007.30	1007.30	0.00	0.72	1957551

*D < 0.5
cm
4/20/2020*

		Const	65.05	168.10	256.15	344.20	652.40	1004.60	1893.40
DL Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray RF	Scan	+50.0	+34.8	+90.0	+110.0	+130.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+20.0	+90.0	+120.0	+190.0	+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	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Multipole2 Lens	Const	+1.4	+1.4	+1.4	+1.4	+1.4	+1.4	+1.4	+1.4
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				

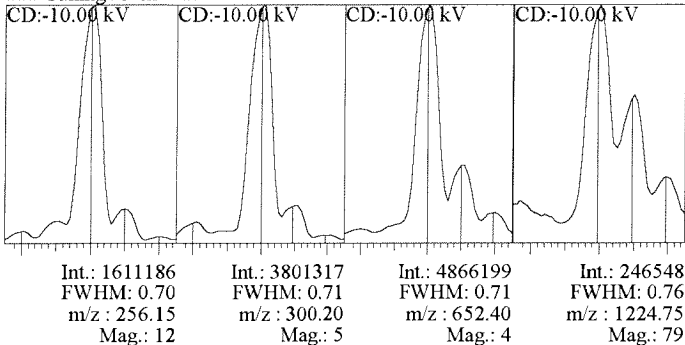
4/21/20

Tuning Condition ###
 Detector Adjustment: On
 Resolution Adjustment: On
 FWHM of Spectrum: 0.70
 Sensitivity Adjustment: On
 Mass Calibration: On

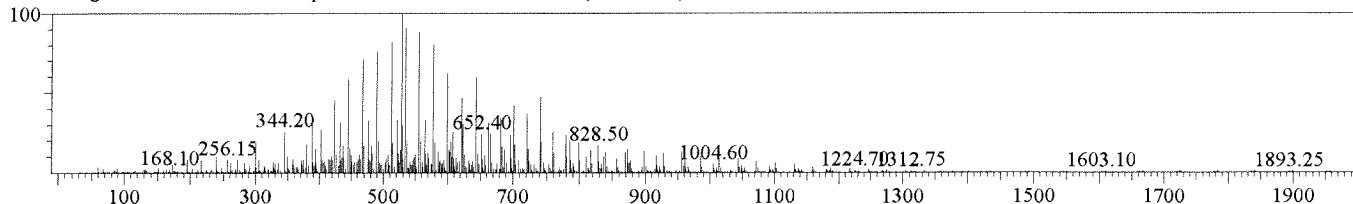
Tuning Result ###
 Model: LCMS-8050
 Interface: ESI
 Polarity: Pos
 Tuning Mode: Auto
 Tuning Date: 4/17/2020 1:15:12 PM
 Acquisition Mode: Q3 Scan(Use CID Gas)

CID Gas Flow: 2.0 (settings : 2.0) mL/min
 Interface Bias: +4.00 kV
 Interface Current: 0.60 uA
 DL Temp.: 249(settings : 250) C
 Heat Block Temp.: 399(settings : 400) C
 Q1 RF Gain: ---
 Q1 RF Offset: ---
 Q3 RF Gain: 4998
 Q3 RF Offset: 4990
 Q1 Post-rod Bias: -5.0 V
 CID CELL Exit Lens: -4.0 V
 Conversion Dynode: -10.00 kV
 Detector: -2.10(-2.10) kV
 PG Vacuum: 1.4e+002 Pa
 IG Vacuum: 2.1e-003 Pa

Tuning Profile



Scan Range: 2.00 - 2000.00 Scan Speed: 30 u/s Base Peak: 527.15 (20000000)



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
45.05	45.05	0.00	---	---
168.10	168.10	0.00	---	---
256.15	256.15	0.00	0.70	1611186
300.20	300.20	0.00	0.71	3801317
344.20	344.20	0.00	---	---
652.40	652.40	0.00	0.71	4866199
828.50	828.50	0.00	---	---
1004.60	1004.60	0.00	---	---
1224.75	1224.70	-0.05	0.76	246548
1312.80	1312.75	-0.05	---	---
1603.15	1603.10	-0.05	---	---
1893.40	1893.25	-0.15	---	---

D20.5
 cm
 4/20/2020

		Const	65.05	168.10	256.15	344.20	652.40	1004.60	1893.40
DL Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray RF	Scan	+50.0	+34.8	+90.0	+110.0	+130.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+20.0	+90.0	+120.0	+190.0	+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	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Multipole2 Lens	Const	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4
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	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				

*
 4/20/20

Tuning Condition

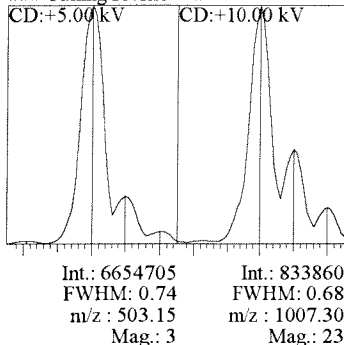
Detector Adjustment: On
Resolution Adjustment: On
FWHM of Spectrum: 0.70
Sensitivity Adjustment: On
Mass Calibration: On

Tuning Result

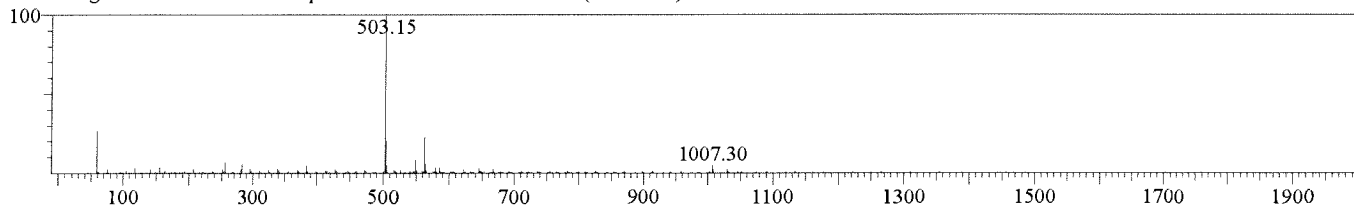
Model: LCMS-8050
Interface: ESI
Polarity: Neg
Tuning Mode: Auto
Tuning Date: 4/17/2020 1:18:24 PM
Acquisition Mode: Q3 Scan(Use CID Gas)

CID Gas Flow: 2.00 (settings : 2.00) mL/min
Interface Bias: -3.00 kV
Interface Current: 0.43 uA
DL Temp.: 249(settings : 250) C
Heat Block Temp.: 399(settings : 400) C
Q1 RF Gain: ---
Q1 RF Offset: ---
Q3 RF Gain: 4999
Q3 RF Offset: 5000
Q1 Post-rod Bias: 5.0 V
CID CELL Exit Lens: 3.5 V
Conversion Dynode: +10.00 kV
Detector: -2.10(-2.10) kV
PG Vacuum: 1.4e+002 Pa
IG Vacuum: 2.1e-003 Pa

Tuning Profile



Scan Range: 2.00 - 2000.00 Scan Speed: 30 u/s Base Peak: 503.15 (16911732)



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
503.15	503.15	0.00	0.74	6654705
1007.30	1007.30	0.00	0.68	833860

D 20.5
cm
4/20/2020

		Const	65.05	168.10	256.15	344.20	652.40	1004.60	1893.40
DL Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray RF	Scan	+50.0	+34.8	+90.0	+110.0	+130.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+20.0	+90.0	+120.0	+190.0	+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	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Multipole2 Lens	Const	+1.4	+1.4	+1.4	+1.4	+1.4	+1.4	+1.4	+1.4
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				

#
4/21/20

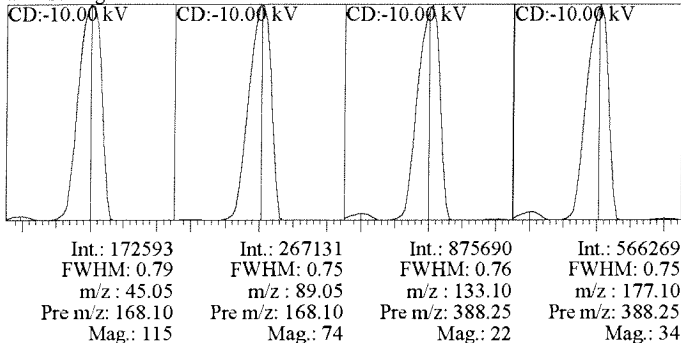
Tuning Condition ###
 Detector Adjustment: On
 Resolution Adjustment: On
 FWHM of Spectrum: 0.70
 Sensitivity Adjustment: On
 Mass Calibration: On

Tuning Result

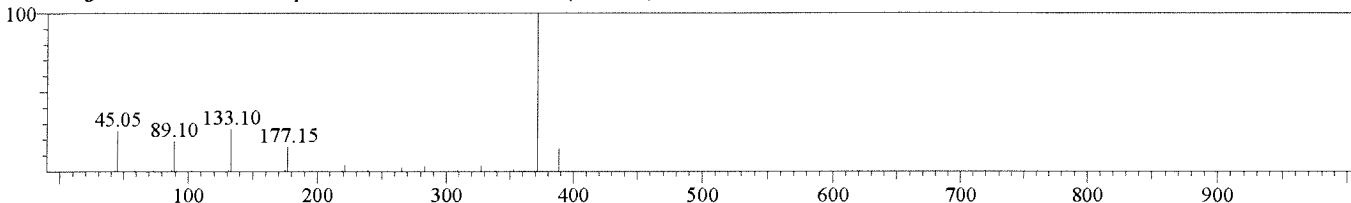
Model: LCMS-8050
 Interface: ESI
 Polarity: Pos
 Tuning Mode: Auto
 Tuning Date: 4/17/2020 1:22:02 PM
 Acquisition Mode: Product Scan

Interface Bias: +4.00 kV
 Interface Current: 0.62 uA
 DL Temp.: 250(settings : 250) C
 Heat Block Temp.: 399(settings : 400) C
 Q1 RF Gain: 4998
 Q1 RF Offset: 5000
 Q3 RF Gain: 4998
 Q3 RF Offset: 4982
 Q1 Post-rod Bias: -5.0 V
 CID CELL Exit Lens: -1.9 V
 Conversion Dynode: -10.00 kV
 Detector: -2.10(-2.10) kV
 PG Vacuum: 1.4e+002 Pa
 IG Vacuum: 2.1e-003 Pa

Tuning Profile



Scan Range: 2.00 - 438.25 Scan Speed: 30 u/s Base Peak: 371.30 (3571781) Pre m/z: 388.25



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
168.10 > 45.05	45.05	---	0.79	172593
168.10 > 89.05	89.10	---	0.75	267131
388.25 > 45.05	45.05	0.00	---	---
388.25 > 89.05	89.10	0.05	---	---
388.25 > 133.10	133.10	0.00	0.76	875690
388.25 > 177.10	177.15	0.05	0.75	566269

0.5
cm

4/20/2020

		Const	65.05	168.10	256.15	344.20	652.40	1004.60	1893.40
DL Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray RF	Scan	+50.0	+34.8	+90.0	+110.0	+130.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+20.0	+90.0	+120.0	+190.0	+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	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Multipole2 Lens	Const	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4
Q1 Bias	Const	-3.5	-3.5	-3.5	-3.5	-3.5	-3.5	-3.5	-3.5
CC Lens1	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
CC Lens2	Const	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
CC Lens3	Const	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
		Const	45.05	89.05	133.10	168.10	1893.40		
CC RF	Scan	+100.0	+100.0	+120.0	+300.0	+300.0	+300.0		
CE	Scan	-20.0	-25.0	-15.0	-15.0	-15.0	-15.0		
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				

4/20/2020

Tuning Condition

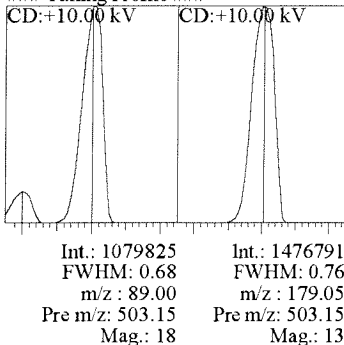
Detector Adjustment: On
Resolution Adjustment: On
FWHM of Spectrum: 0.70
Sensitivity Adjustment: On
Mass Calibration: On

Tuning Result

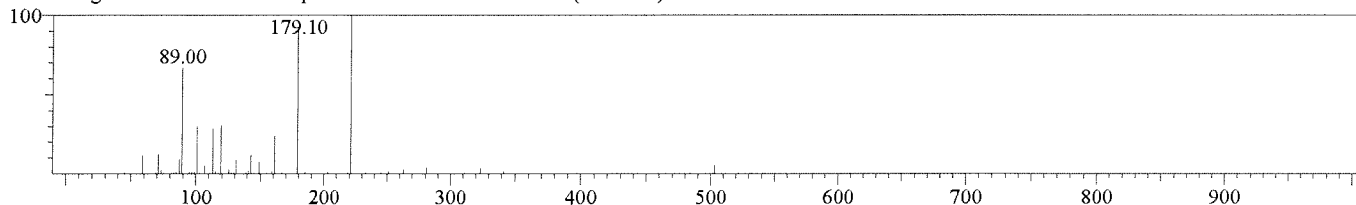
Model: LCMS-8050
Interface: ESI
Polarity: Neg
Tuning Mode: Auto
Tuning Date: 4/17/2020 1:22:02 PM
Acquisition Mode: Product Scan

Interface Bias: -3.00 kV
Interface Current: 0.42 uA
DL Temp.: 249(settings : 250) C
Heat Block Temp.: 399(settings : 400) C
Q1 RF Gain: 5001
Q1 RF Offset: 5000
Q3 RF Gain: 4999
Q3 RF Offset: 5010
Q1 Post-rod Bias: 5.0 V
CID CELL Exit Lens: -0.5 V
Conversion Dynode: +10.00 kV
Detector: -2.10(-2.10) kV
PG Vacuum: 1.4e+002 Pa
IG Vacuum: 2.1e-003 Pa

Tuning Profile



Scan Range: 2.00 - 553.15 Scan Speed: 30 u/s Base Peak: 221.10 (1610679) Pre m/z: 503.15



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
503.15 > 89.00	89.00	0.00	0.68	1079825
503.15 > 179.05	179.10	0.05	0.76	1476791

0.40.5
cm
4/20/2020

		Const	65.05	168.10	256.15	344.20	652.40	1004.60	1893.40
DL Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray RF	Scan	+50.0	+34.8	+90.0	+110.0	+130.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+20.0	+90.0	+120.0	+190.0	+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	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Multipole2 Lens	Const	+1.4	+1.4	+1.4	+1.4	+1.4	+1.4	+1.4	+1.4
Q1 Bias	Const	+3.5	+3.5	+3.5	+3.5	+3.5	+3.5	+3.5	+3.5
CC Lens1	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
CC Lens2	Const	+100.0	+100.0	+100.0	+100.0	+100.0	+100.0	+100.0	+100.0
CC Lens3	Const	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0
		Const	45.05	89.05	133.10	168.10	1893.40		
CC RF	Scan	+100.0	+100.0	+120.0	+300.0	+300.0	+300.0		
CE	Scan	+30.0	+30.0	+30.0	+30.0	+30.0	+30.0		
Q3 Bias	Scan	+7.0	+7.0	+7.0	+7.0	+7.0	+9.0		
		Const	107.15	1071.50	1893.40				
Q1 Pre Bias	Scan	+15.0	+5.0	+50.0	+50.0				
Q3 Pre Bias	Scan	+15.0	+5.0	+50.0	+50.0				

4/24/20

Insight Report

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Method File: J:\LCMS06\Data\200417_cuvre\200417_curve.lcm
Project File: J:\LCMS06\Data\200417_cuvre\200417_curve.damlp
Flags File: J:\LCMS06\Data\200417_cuvre\200417_curve.damlp

200417_022

Sample ID: IB

Date acquired: 4/17/2020 5:24:46 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_cuvre\200417_022.lcd

Vial: 47 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.092	5580181	5580181	1	5.0000	ng/mL	----
PFBS_1	M	4.008	921	1009878	2	0.0040	ng/mL	----
PFBS-13C	Auto	4.006	1009878	5580181	1	4.6290	ng/mL	----
PFBS-13C_IS	Auto	4.006	1009878	1009878	2	5.0000	ng/mL	----
PFPeS	ND(W/B)	----	----	1009878	2	----	ng/mL	----
PFHxS_1	Auto	4.393	1925	676055	3	-0.0055	ng/mL	----
PFHxS-18O	Auto	4.392	676055	5580181	1	5.5046	ng/mL	----
PFHxS-18O_IS	Auto	4.392	676055	676055	3	5.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	676055	3	----	ng/mL	----
PFOS_1	Auto	4.722	724	881012	4	0.0049	ng/mL	----
PFOS-13C	Auto	4.719	881012	5580181	1	5.0963	ng/mL	----
PFOS-13C_IS	Auto	4.719	881012	881012	4	5.0000	ng/mL	----
PFNS	M	4.908	235	881012	4	0.0080	ng/mL	----
PFDS_1	ND(W/B)	----	----	881012	4	----	ng/mL	----
PFBA	ND(W/B)	----	----	2802476	5	----	ng/mL	----
PFBA-13C	Auto	3.374	2802476	5580181	1	4.7474	ng/mL	----
PFBA-13C_IS	Auto	3.374	2802476	2802476	5	5.0000	ng/mL	----
PFPeA	Auto	3.950	21972	1625729	6	0.0026	ng/mL	----
PFPeA-13C	Auto	3.951	1625729	5580181	1	4.8938	ng/mL	----
PFPeA-13C_IS	Auto	3.951	1625729	1625729	6	5.0000	ng/mL	----
PFHxA	M	4.200	7356	4296150	7	0.0025	ng/mL	----
PFHxA-13C	Auto	4.208	4296150	5580181	1	4.7211	ng/mL	----
PFHxA-13C_IS	Auto	4.208	4296150	4296150	7	5.0000	ng/mL	----
PFHpA	Auto	4.358	5921	4899118	8	-0.0034	ng/mL	----
PFHpA-13C	Auto	4.391	4899118	5580181	1	5.9511	ng/mL	----
PFHpA-13C_IS	Auto	4.391	4899118	4899118	8	5.0000	ng/mL	----
PFOA	Auto	4.554	18715	5479241	9	0.0050	ng/mL	----
PFOA-13C	Auto	4.557	5479241	5580181	1	5.5019	ng/mL	----
PFOA-13C_IS	Auto	4.557	5479241	5479241	9	5.0000	ng/mL	----
PFNA	Auto	4.704	2751	4413409	10	-0.0010	ng/mL	----
PFNA-13C	Auto	4.730	4413409	5580181	1	5.9359	ng/mL	----
PFNA-13C_IS	Auto	4.730	4413409	4413409	10	5.0000	ng/mL	----
PFDA	Auto	4.924	3079	3565868	11	0.0041	ng/mL	----
PFDA-13C	Auto	4.912	3565868	5580181	1	5.2858	ng/mL	----
PFDA-13C_IS	Auto	4.912	3565868	3565868	11	5.0000	ng/mL	----
PFUnA	Auto	5.094	12513	4368493	12	0.0046	ng/mL	----
PFUnA-13C	Auto	5.093	4368493	5580181	1	5.1915	ng/mL	----
PFUnA-13C_IS	Auto	5.093	4368493	4368493	12	5.0000	ng/mL	----
PFDoA	Auto	5.264	2448	4789323	13	0.0177	ng/mL	----
PFDoA-13C	Auto	5.266	4789323	5580181	1	4.8312	ng/mL	----
PFDoA-13C_IS	Auto	5.266	4789323	4789323	13	5.0000	ng/mL	----
PFTrDA	Auto	5.423	3976	3898736	14	0.0008	ng/mL	----
PFTeDA	Auto	5.586	48409	3898736	14	0.0007	ng/mL	----
PFTeDA-13C	Auto	5.586	3898736	5580181	1	4.9292	ng/mL	----
PFTeDA-13C_IS	Auto	5.586	3898736	3898736	14	5.0000	ng/mL	----
FOSA	Auto	5.184	718	1969761	16	0.0015	ng/mL	----
FOSA-13C	Auto	5.204	1969761	5580181	1	4.3670	ng/mL	----
FOSA-13C_IS	Auto	5.204	1969761	1969761	16	5.0000	ng/mL	----
N-MeFOSA	M	5.588	622	327617	17	0.0059	ng/mL	----
N-MeFOSA-d3	Auto	5.586	327617	5580181	1	3.4656	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.586	327617	327617	17	5.0000	ng/mL	----
N-EtFOSA	M	5.720	299	470654	18	0.0160	ng/mL	----
N-EtFOSA-d9	Auto	5.715	470654	5580181	1	3.2942	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.715	470654	470654	18	5.0000	ng/mL	----
N-MeFOSE	ND(W/B)	----	----	555897	19	----	ng/mL	----
N-MeFOSE-d7	Auto	5.558	555897	5580181	1	3.6600	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.558	555897	555897	19	5.0000	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	558052	20	----	ng/mL	----
N-EtFOSE-d9	Auto	5.682	558052	5580181	1	3.9522	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.682	558052	558052	20	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.013	623	588876	21	0.0085	ng/mL	----
N-MeFOSAA-d3	Auto	5.009	588876	5580181	1	4.5983	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.009	588876	588876	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	566760	22	----	ng/mL	----

Insight Report

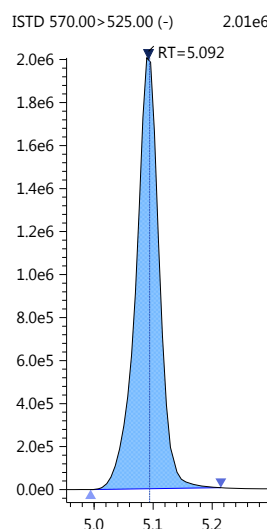
Printed at 4/18/2020 11:14:21 AM

(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA-d5	Auto	5.105	566760	5580181	1	4.8029	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.105	566760	566760	22	5.0000	ng/mL	----
4_2-FTS_1	ND(W/B)	----	----	344837	23	----	ng/mL	----
4_2-FTS-13C	Auto	4.185	344837	5580181	1	4.5931	ng/mL	----
4_2-FTS-13C_IS	Auto	4.185	344837	344837	23	5.0000	ng/mL	----
6_2-FTS_1	M	4.546	1392	431583	24	0.0139	ng/mL	----
6_2-FTS-13C	Auto	4.549	431583	5580181	1	5.7632	ng/mL	----
6_2-FTS-13C_IS	Auto	4.549	431583	431583	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.915	84	328010	25	0.0016	ng/mL	----
8_2-FTS-13C	Auto	4.912	328010	5580181	1	5.4027	ng/mL	----
8_2-FTS-13C_IS	Auto	4.912	328010	328010	25	5.0000	ng/mL	----
10_2-Fts_1	Auto	5.234	44	328010	25	0.0008	ng/mL	----
HPFO_DA	Auto	4.177	471	1374269	26	0.0026	ng/mL	----
HPFO_DA-13C	Auto	4.277	1374269	5580181	1	4.6899	ng/mL	----
HPFO_DA-13C_IS	Auto	4.277	1374269	1374269	26	5.0000	ng/mL	----

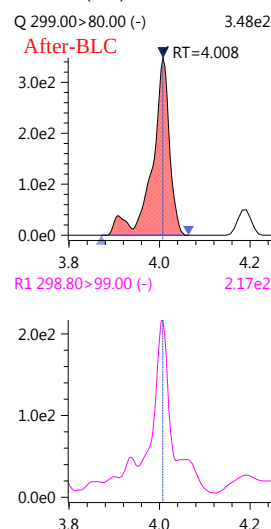
13C7-PFUnDA_IS

Conc 5.0000
Area 5580181



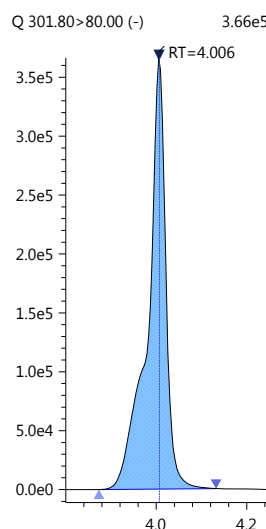
PFBS_1

Conc 0.0040
Area 921
R#1 50.96 (0.00)



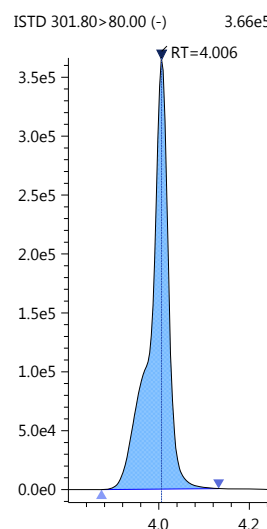
PFBS-13C

Conc 4.6290
Area 1009878



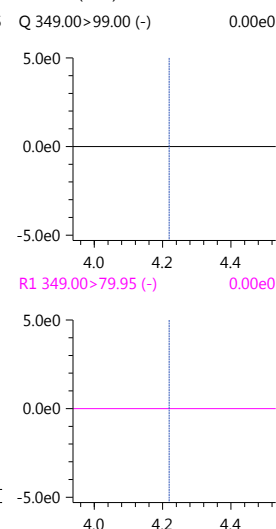
PFBS-13C_IS

Conc 5.0000
Area 1009878



PFPeS

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

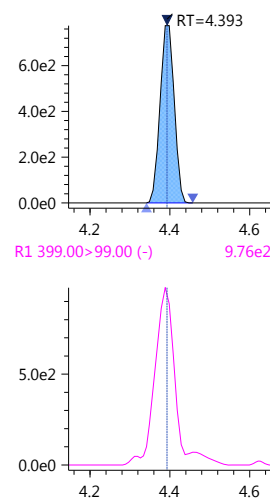


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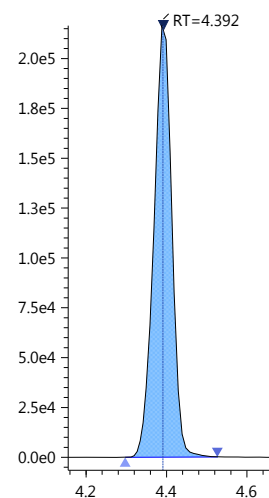
PFHxS_1

Conc -0.0055
 Area 1925
 R#1 105.54 (0.00)
 Q 399.00>80.00 (-)



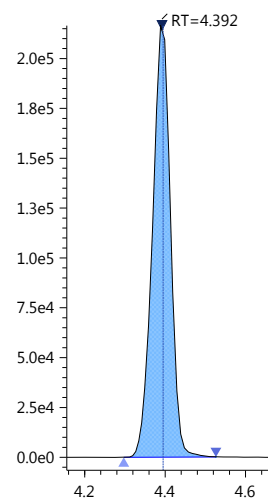
PFHxS-180

Conc 5.5046
 Area 676055
 Q 402.70>84.05 (-)



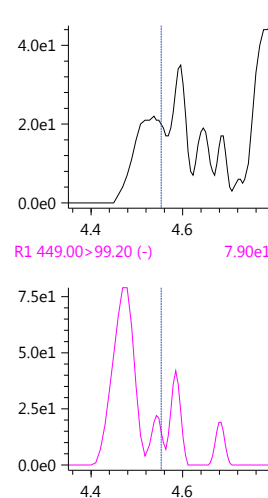
PFHxS-180_IS

Conc 5.0000
 Area 676055
 ISTD 402.70>84.05 (-)



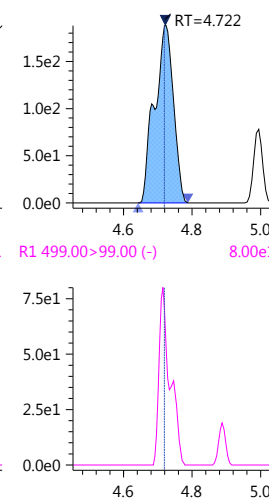
PFHpS_1

Conc ----
 Area ----
 R#1 ---- (0.00)
 Q 449.00>80.15 (-)



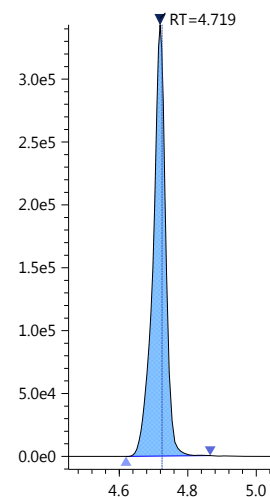
PFOS_1

Conc 0.0049
 Area 724
 R#1 23.98 (0.00)
 Q 499.00>80.00 (-)



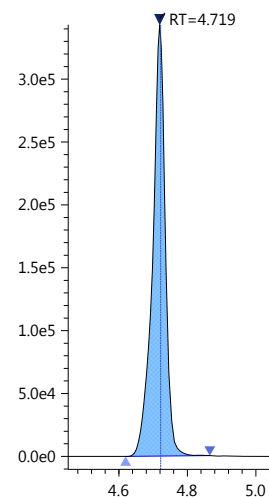
PFOS-13C

Conc 5.0963
 Area 881012
 Q 502.80>80.05 (-)



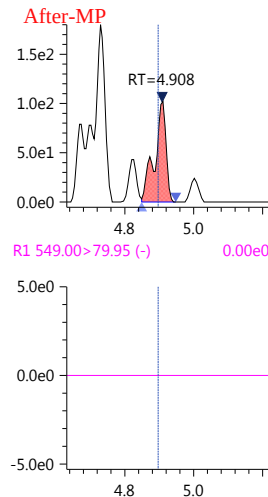
PFOS-13C_IS

Conc 5.0000
 Area 881012
 ISTD 502.80>80.05 (-)



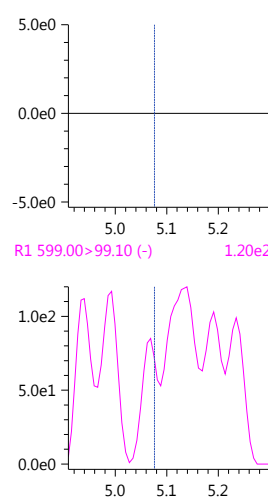
PFNS

Conc 0.0080
 Area 235
 R#1 0.00 (0.00)
 Q 549.00>99.00 (-)



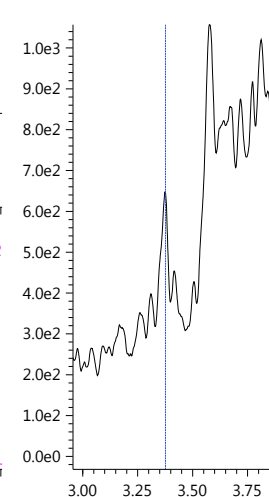
PFDS_1

Conc ----
 Area ----
 R#1 ---- (0.00)
 Q 599.00>79.90 (-)



PFBA

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



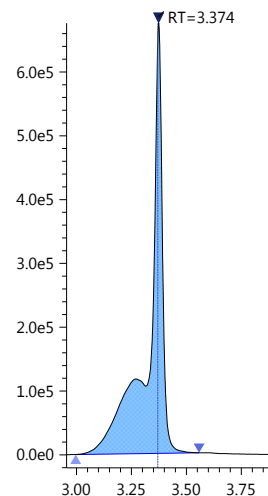
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PFBA-13C

Conc 4.7474
Area 2802476

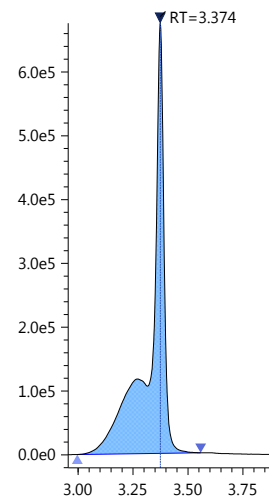
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 2802476

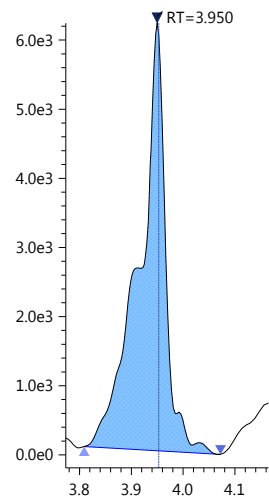
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.0026
Area 21972

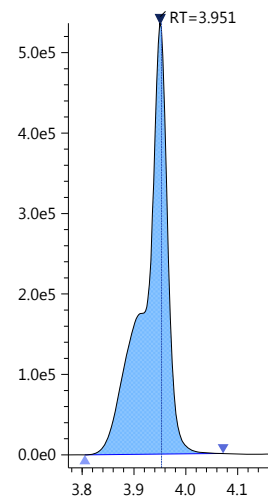
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.8938
Area 1625729

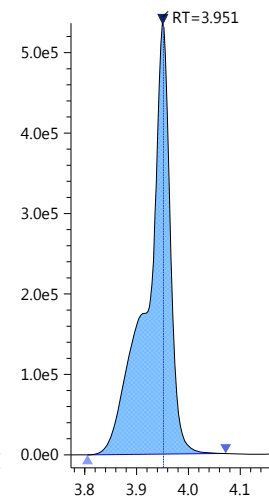
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1625729

ISTD 267.90>223.00 (-)

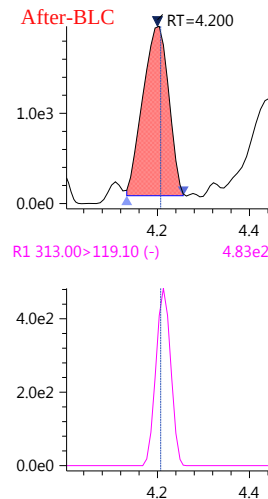


PFHxA

Conc 0.0025
Area 7356

R#1 13.49 (0.00)

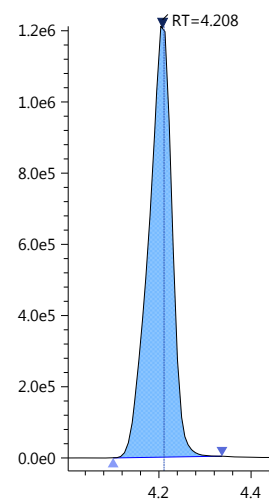
Q 313.00>269.00 (-)



PFHxA-13C

Conc 4.7211
Area 4296150

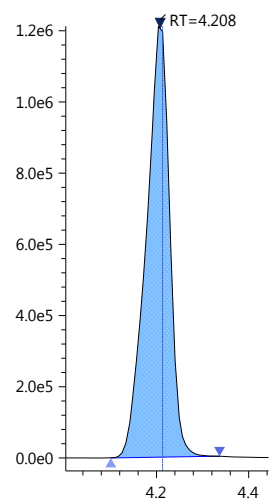
Q 314.90>270.10 (-)



PFHxA-13C_IS

Conc 5.0000
Area 4296150

ISTD 314.90>270.10 (-)

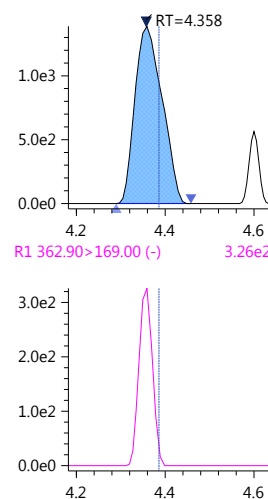


PFHpA

Conc -0.0034
Area 5921

R#1 22.57 (0.00)

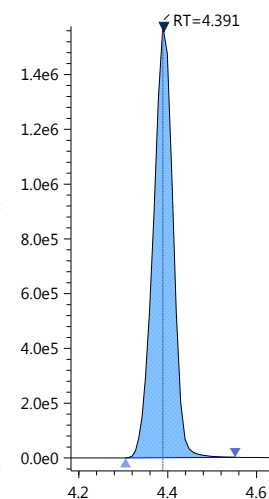
Q 362.90>319.00 (-)



PFHpA-13C

Conc 5.9511
Area 4899118

Q 366.90>322.10 (-)



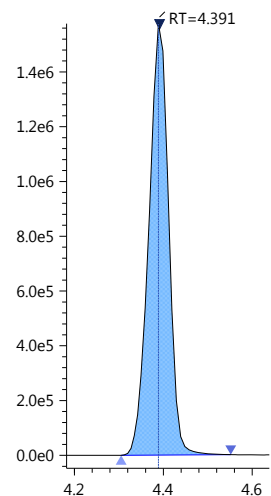
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PFHpA-13C_IS

Conc 5.0000
Area 4899118

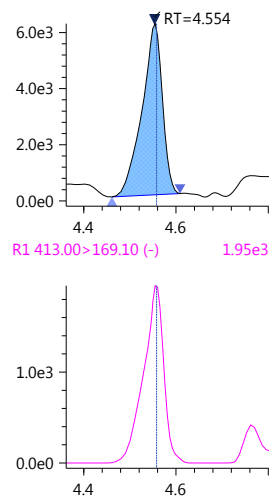
ISTD 366.90>322.10 (-) 1.58e6



PFOA

Conc 0.0050
Area 18715
R#1 31.30 (0.00)

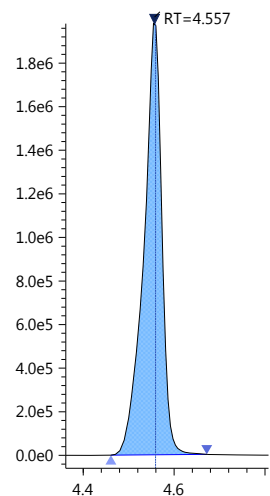
Q 413.00>369.00 (-) 6.32e3



PFOA-13C

Conc 5.5019
Area 5479241

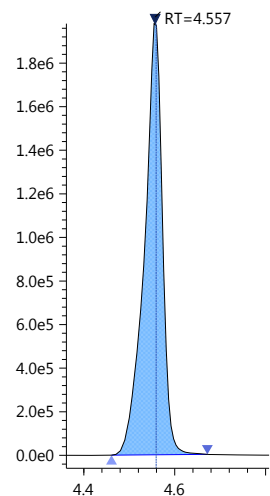
Q 416.80>372.05 (-) 1.98e6



PFOA-13C_IS

Conc 5.0000
Area 5479241

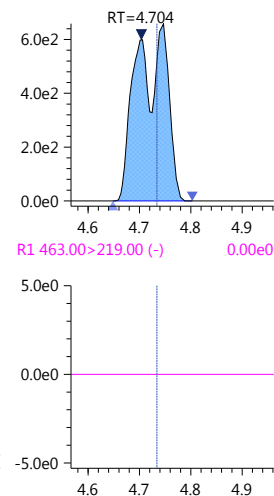
ISTD 416.80>372.05 (-) 1.98e6



PFNA

Conc -0.0010
Area 2751
R#1 0.00 (0.00)

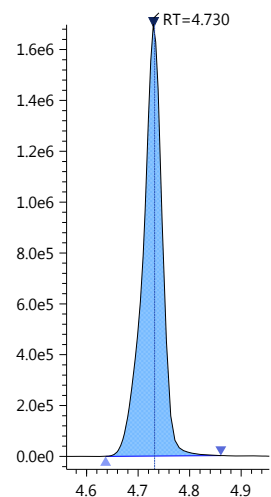
Q 463.00>418.90 (-) 6.59e2



PFNA-13C

Conc 5.9359
Area 4413409

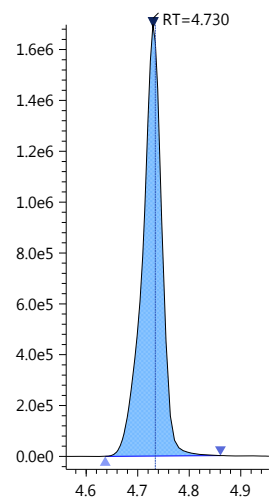
Q 467.80>423.00 (-) 1.70e6



PFNA-13C_IS

Conc 5.0000
Area 4413409

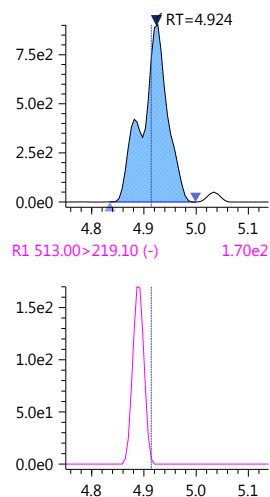
ISTD 467.80>423.00 (-) 1.70e6



PFDA

Conc 0.0041
Area 3079
R#1 0.00 (0.00)

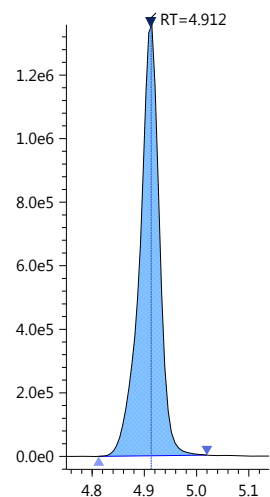
Q 513.00>468.80 (-) 9.03e2



PFDA-13C

Conc 5.2858
Area 3565868

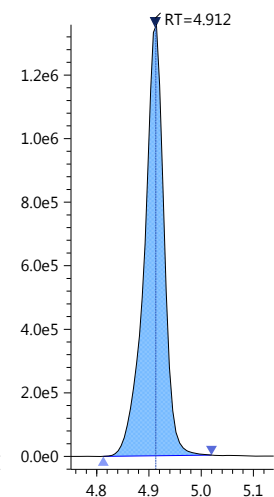
Q 514.80>469.95 (-) 1.36e6



PFDA-13C_IS

Conc 5.0000
Area 3565868

ISTD 514.80>469.95 (-) 1.36e6



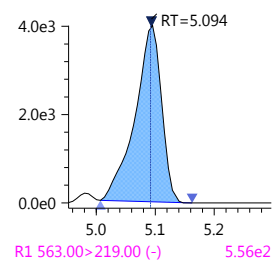
Insight Report

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PFUnA

Conc 0.0046
Area 12513
R#1 14.25 (0.00)

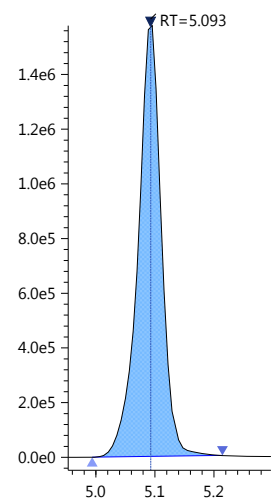
Q 563.00>518.90 (-) 4.02e3



PFUnA-13C

Conc 5.1915
Area 4368493

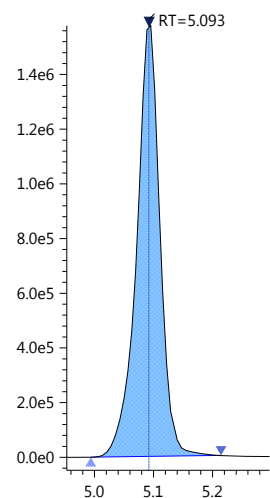
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PFUnA-13C_IS

Conc 5.0000
Area 4368493

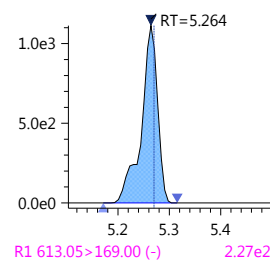
ISTD 564.80>519.95 (-) 1.58e6



PFDaA

Conc 0.0177
Area 2448
R#1 0.00 (0.00)

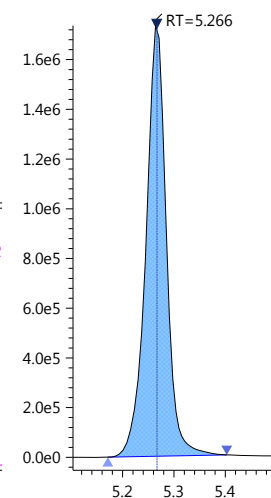
Q 613.05>569.00 (-) 1.11e3



PFDaA-13C

Conc 4.8312
Area 4789323

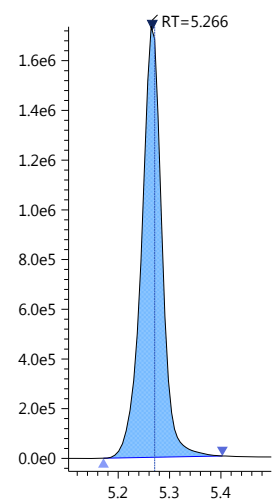
Q 614.80>569.95 (-) 1.74e6



PFDaA-13C_IS

Conc 5.0000
Area 4789323

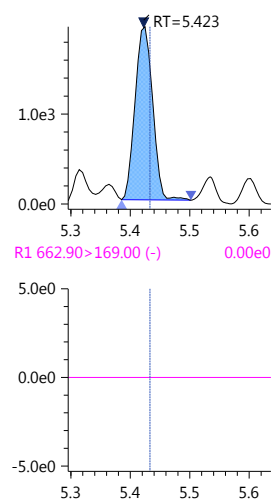
ISTD 614.80>569.95 (-) 1.74e6



PFTrDA

Conc 0.0008
Area 3976
R#1 0.00 (0.00)

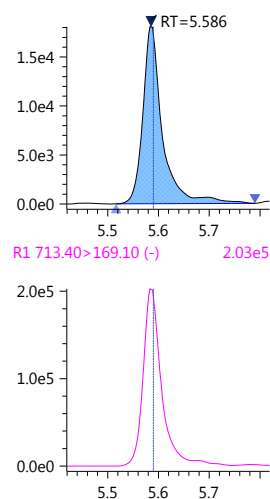
Q 663.00>618.90 (-) 1.97e3



PFTeDA

Conc 0.0007
Area 48409
R#1 1099.17 (0.00)

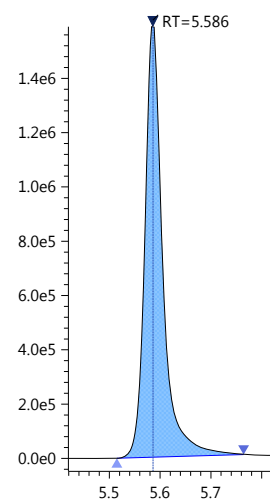
Q 713.40>669.00 (-) 1.81e4



PFTeDA-13C

Conc 4.9292
Area 3898736

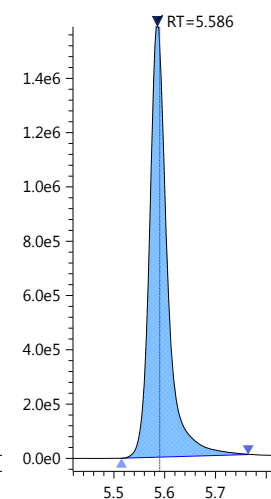
Q 714.70>669.90 (-) 1.59e6



PFTeDA-13C_IS

Conc 5.0000
Area 3898736

ISTD 714.70>669.90 (-) 1.59e6

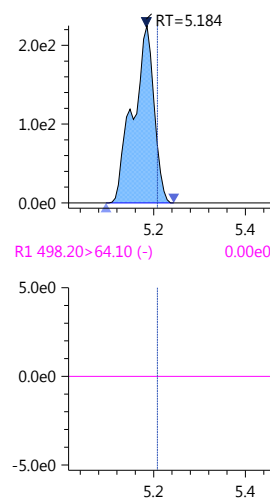


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FOSA

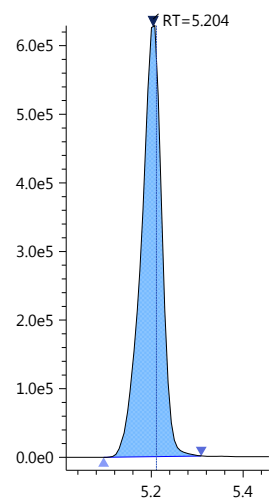
Conc 0.0015
Area 718
R#1 0.00 (0.00)
Q 498.20>78.00 (-) 2.25e2



FOSA-13C

Conc 4.3670
Area 1969761

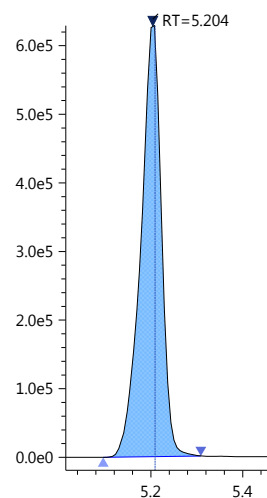
Q 506.00>78.05 (-) 6.29e5



FOSA-13C_IS

Conc 5.0000
Area 1969761

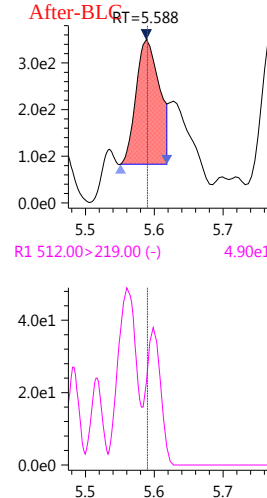
ISTD 506.00>78.05 (-) 6.29e5



N-MeFOSA

Conc 0.0059
Area 622
R#1 1.38 (0.00)

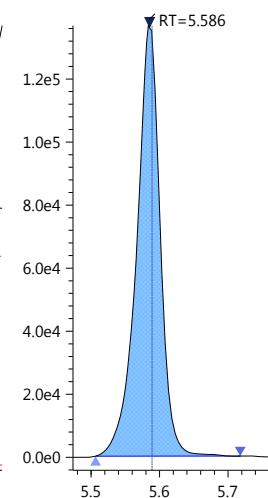
Q 512.00>169.10 (-) 3.80e2



N-MeFOSA-d3

Conc 3.4656
Area 327617

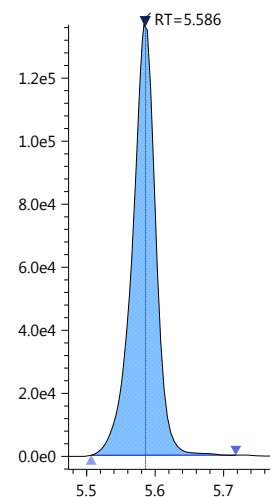
Q 514.90>168.90 (-) 1.37e5



N-MeFOSA-d3_IS

Conc 5.0000
Area 327617

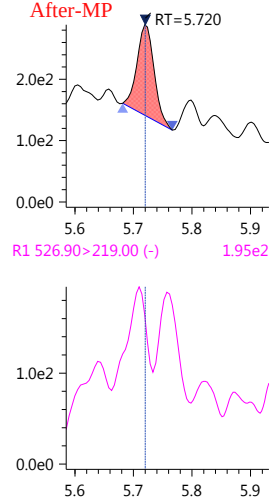
ISTD 514.90>168.90 (-) 1.37e5



N-EtFOSA

Conc 0.0160
Area 299
R#1 11.98 (0.00)

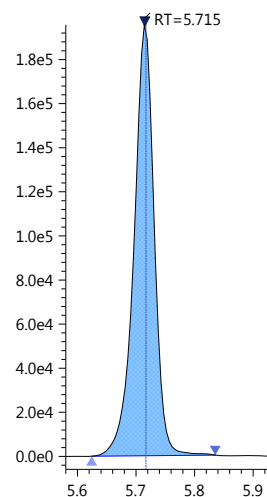
Q 526.90>169.10 (-) 2.89e2



N-EtFOSA-d9

Conc 3.2942
Area 470654

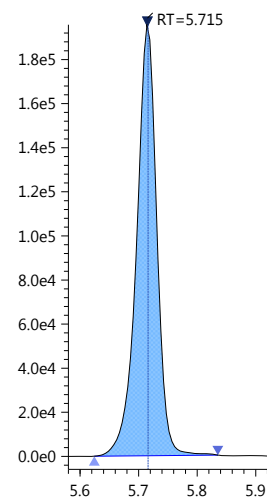
Q 530.90>169.15 (-) 1.96e5



N-EtFOSA-d9_IS

Conc 5.0000
Area 470654

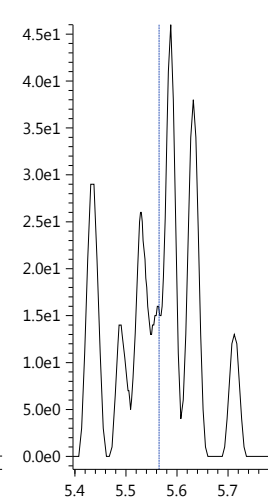
ISTD 530.90>169.15 (-) 1.96e5



N-MeFOSE

Conc ----
Area ----

Q 616.00>59.00 (-) 4.60e1



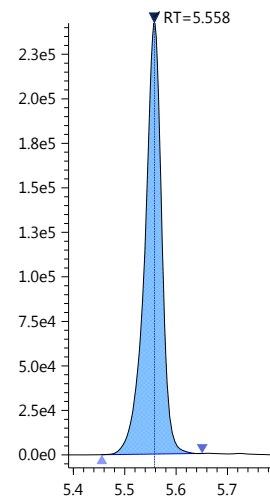
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N-MeFOSE-d7

Conc 3.6600
 Area 555897

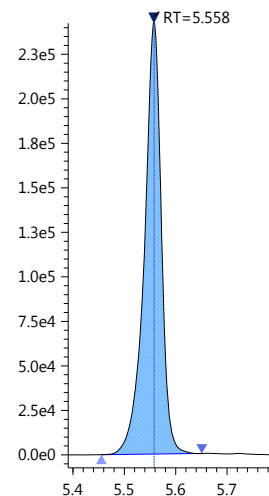
Q 622.70>59.10 (-)



N-MeFOSE-d7_IS

Conc 5.0000
 Area 555897

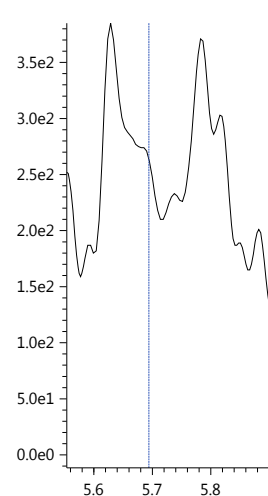
ISTD 622.70>59.10 (-)



N-EtFOSE

Conc ----
 Area ----

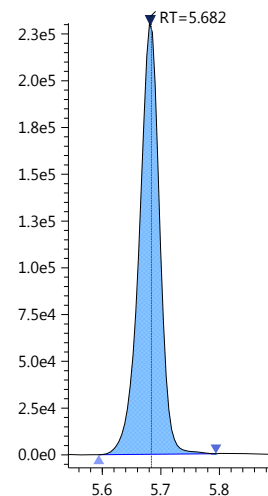
Q 630.00>58.90 (-)



N-EtFOSE-d9

Conc 3.9522
 Area 558052

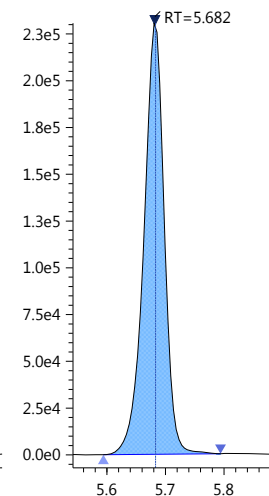
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
 Area 558052

ISTD 638.70>59.10 (-)

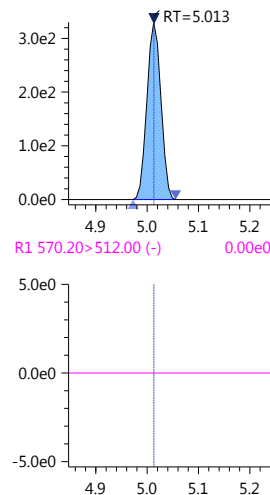


N-MeFOSAA

Conc 0.0085
 Area 623

R#1 0.00 (0.00)

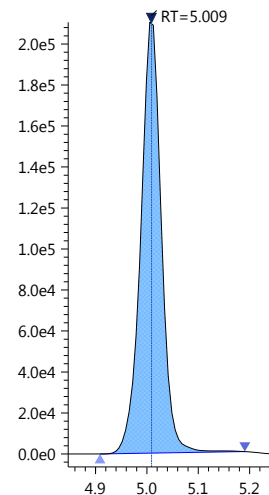
Q 570.20>419.00 (-)



N-MeFOSAA-d3

Conc 4.5983
 Area 588876

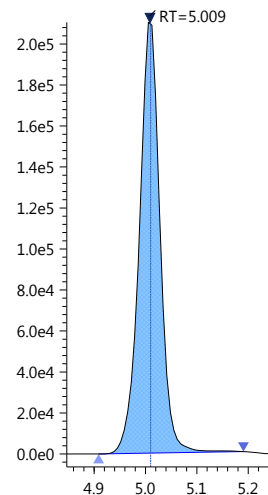
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
 Area 588876

ISTD 572.80>419.05 (-)

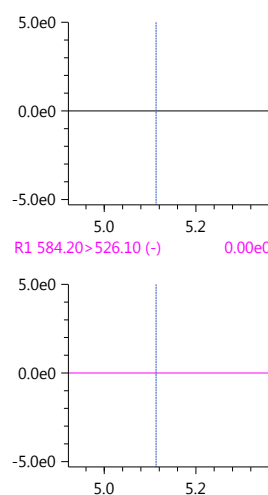


N-EtFOSAA

Conc ----
 Area ----

R#1 ---- (0.00)

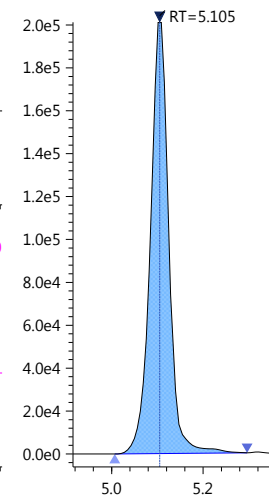
Q 584.20>418.95 (-)



N-EtFOSAA-d5

Conc 4.8029
 Area 566760

Q 588.80>419.00 (-)



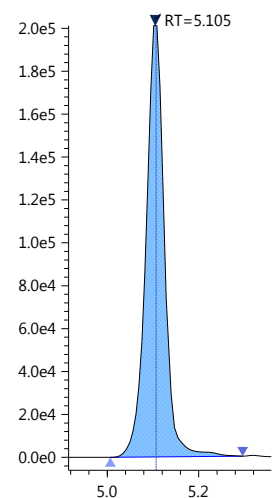
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N-EtFOSAA-d5_IS

Conc 5.0000
Area 566760

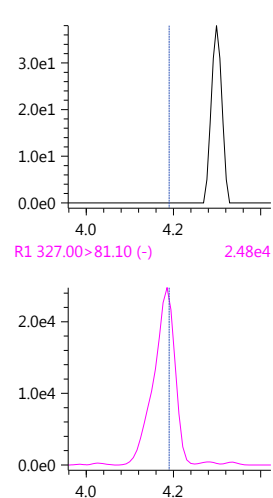
ISTD 588.80>419.00 (-) 2.01e5



4_2-FTS_1

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

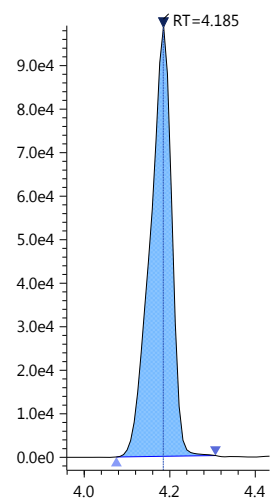
Q 327.00>307.05 (-) 3.80e1



4_2-FTS-13C

Conc 4.5931
Area 344837

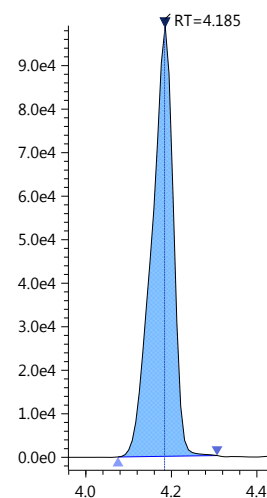
Q 328.80>309.05 (-) 9.92e4



4_2-FTS-13C_IS

Conc 5.0000
Area 344837

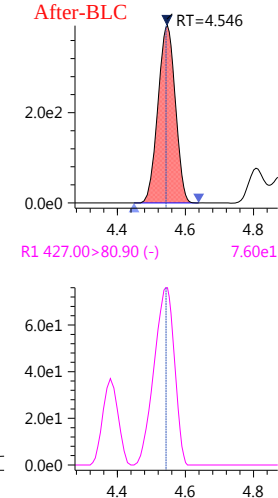
ISTD 328.80>309.05 (-) 9.92e4



6_2-FTS_1

Conc 0.0139
Area 1392
R#1 20.52 (0.00)

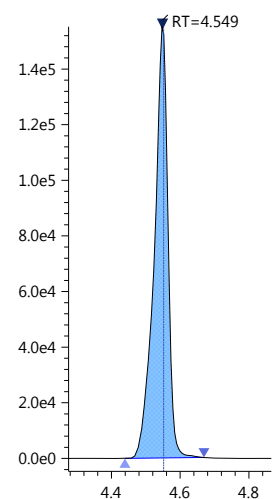
Q 427.00>407.00 (-) 3.93e2



6_2-FTS-13C

Conc 5.7632
Area 431583

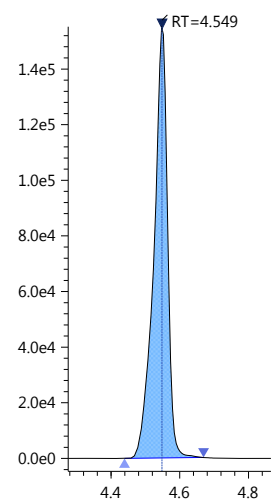
Q 428.90>409.00 (-) 1.55e5



6_2-FTS-13C_IS

Conc 5.0000
Area 431583

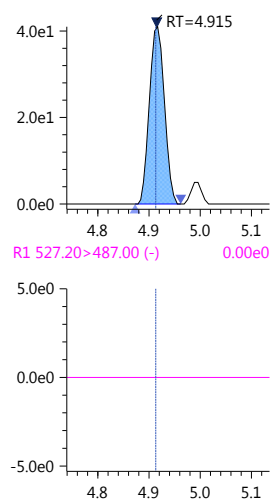
ISTD 428.90>409.00 (-) 1.55e5



8_2-FTS_1

Conc 0.0016
Area 84
R#1 0.00 (0.00)

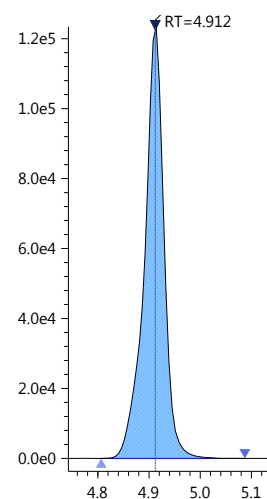
Q 527.10>506.90 (-) 4.10e1



8_2-FTS-13C

Conc 5.4027
Area 328010

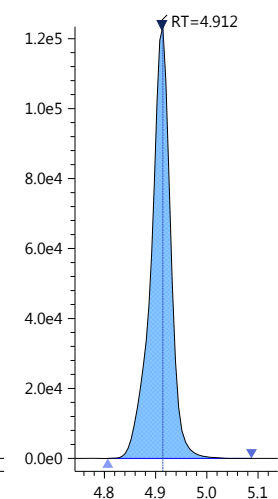
Q 528.80>509.00 (-) 1.23e5



8_2-FTS-13C_IS

Conc 5.0000
Area 328010

ISTD 528.80>509.00 (-) 1.23e5



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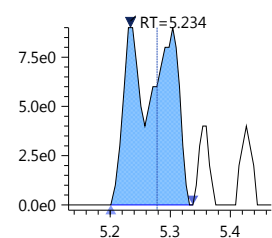
10_2-FtS_1

Conc 0.0008

Area 44

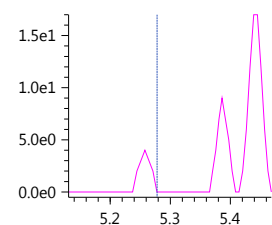
R#1 0.00 (0.00)

Q 627.00>606.95 (-)



R1 627.00>81.25 (-)

1.70e1



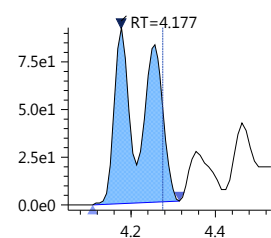
HPFO_DA

Conc 0.0026

Area 471

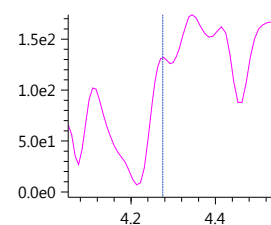
R#1 0.00 (0.00)

Q 329.00>169.00 (-)



R1 329.00>285.10 (-)

1.74e2

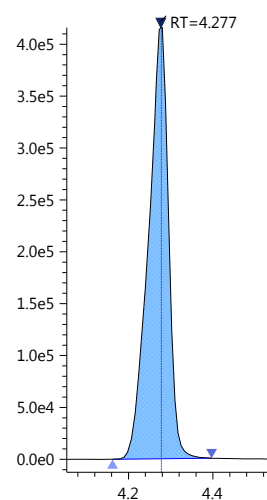


HFPO_DA-13C

Conc 4.6899

Area 1374269

Q 332.00>286.80 (-)

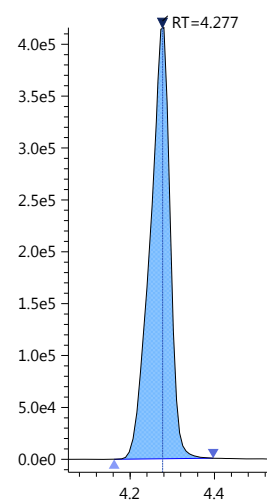


HFPO_DA-13C_IS

Conc 5.0000

Area 1374269

ISTD 332.00>286.80 (-)



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Method File: J:\LCMS06\Data\200417_cuvre\200417_curve.lcm
Project File: J:\LCMS06\Data\200417_cuvre\200417_curve.damlp
Flags File: J:\LCMS06\Data\200417_cuvre\200417_curve.damlp

200417_022

Sample ID: IB

Date acquired: 4/17/2020 5:24:46 PM

Acquired by: System Administrator

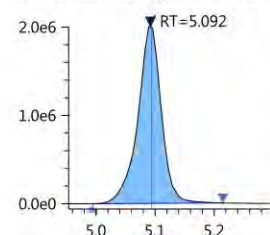
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Vial: 47 | Inj. Volume: 15.0000uL | Tray: 1

13C7-PFUnDA_IS

Conc 5.0000
Area 5580181

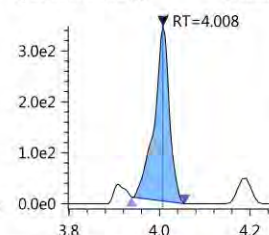
ISTD 570.00>525.00 (-) 2.01e6



PFBS_1

Conc 0.0034
Area 800

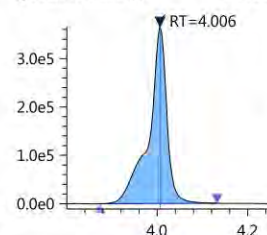
Q 299.00>80.00 (-)



PFBS-13C

Conc 4.6290
Area 1009878

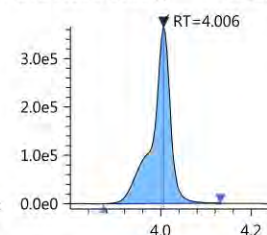
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
Area 1009878

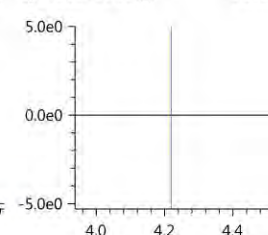
ISTD 301.80>80.00 (-)



PFPeS

Conc ----
Area ----

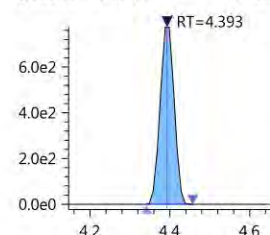
Q 349.00>99.00 (-)



PFHxS_1

Conc -0.0055
Area 1925

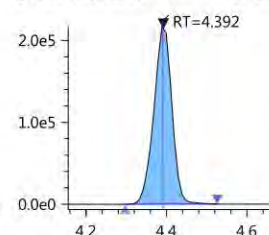
Q 399.00>80.00 (-)



PFHxS-180

Conc 5.5046
Area 676055

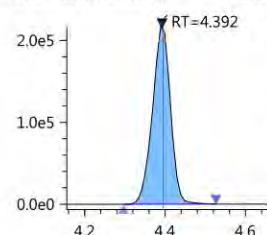
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
Area 676055

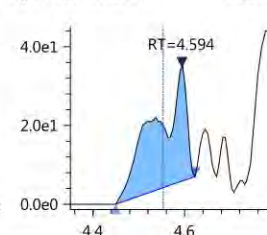
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 0.0007
Area 139

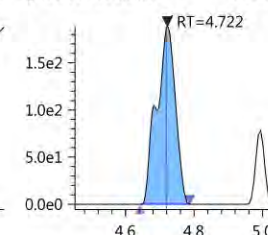
Q 449.00>80.15 (-)



PFOS_1

Conc 0.0049
Area 724

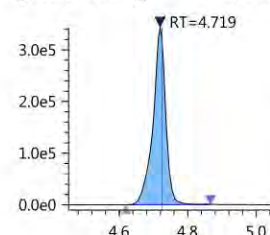
Q 499.00>80.00 (-)



PFOS-13C

Conc 5.0963
Area 881012

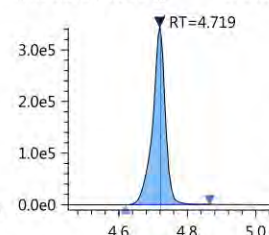
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
Area 881012

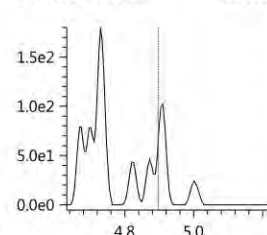
ISTD 502.80>80.05 (-)



PFNS

Conc ----
Area ----

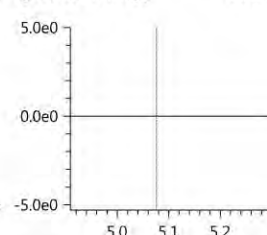
Q 549.00>99.00 (-)



PFDS_1

Conc ----
Area ----

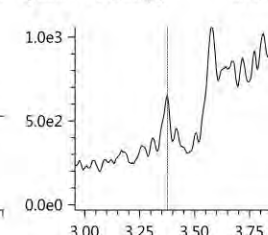
Q 599.00>79.90 (-)



PFBA

Conc ----
Area ----

Q 213.00>169.10 (-)

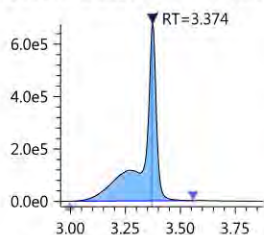


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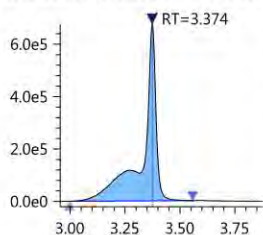
PFBA-13C

Conc 4.7474
Area 2802476
Q 216.90>172.15 (-)



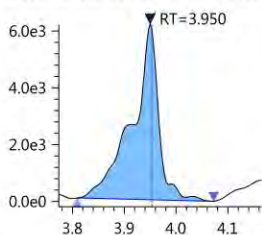
PFBA-13C_IS

Conc 5.0000
Area 2802476
ISTD 216.90>172.15 (-)



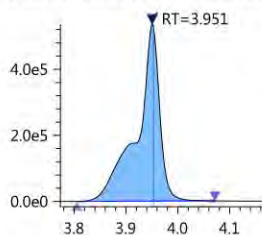
PFPeA

Conc 0.0026
Area 21972
Q 263.05>219.10 (-)



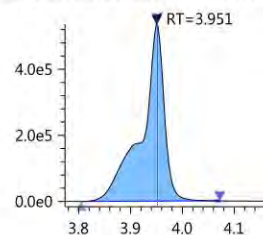
PFPeA-13C

Conc 4.8938
Area 1625729
Q 267.90>223.00 (-)



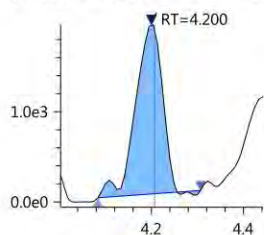
PFPeA-13C_IS

Conc 5.0000
Area 1625729
ISTD 267.90>223.00 (-)



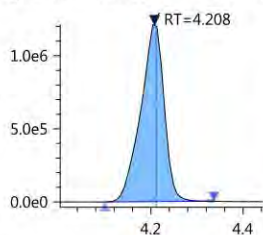
PFHxA

Conc 0.0028
Area 7610
Q 313.00>269.00 (-)



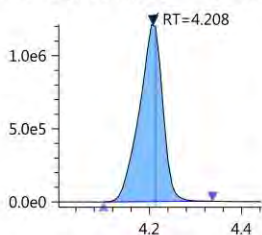
PFHxA-13C

Conc 4.7211
Area 4296150
Q 314.90>270.10 (-)



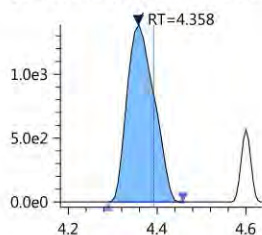
PFHxA-13C_IS

Conc 5.0000
Area 4296150
ISTD 314.90>270.10 (-)



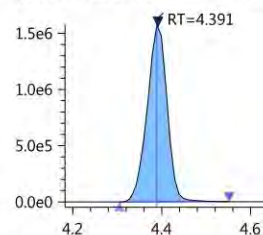
PFHpA

Conc -0.0031
Area 5921
Q 362.90>319.00 (-)



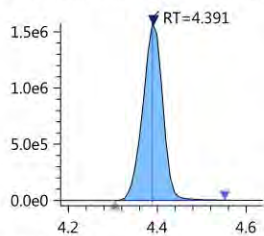
PFHpA-13C

Conc 5.9511
Area 4899118
Q 366.90>322.10 (-)



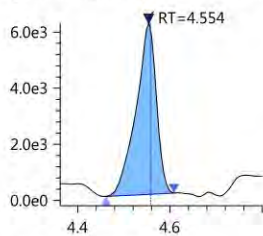
PFHpA-13C_IS

Conc 5.0000
Area 4899118
ISTD 366.90>322.10 (-)



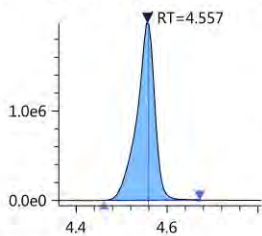
PFOA

Conc 0.0059
Area 18715
Q 413.00>369.00 (-)



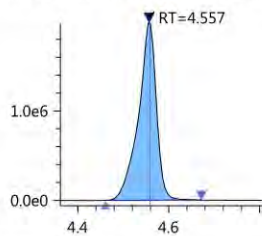
PFOA-13C

Conc 5.5019
Area 5479241
Q 416.80>372.05 (-)



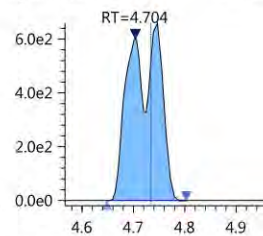
PFOA-13C_IS

Conc 5.0000
Area 5479241
ISTD 416.80>372.05 (-)



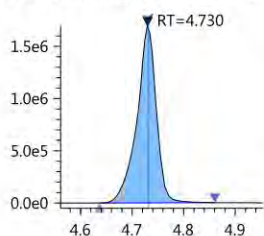
PFNA

Conc -0.0010
Area 2751
Q 463.00>418.90 (-)



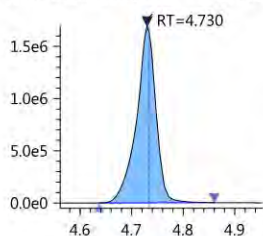
PFNA-13C

Conc 5.9359
Area 4413409
Q 467.80>423.00 (-)



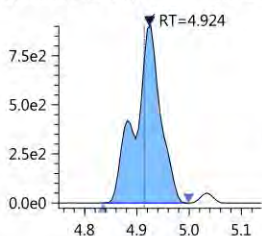
PFNA-13C_IS

Conc 5.0000
Area 4413409
ISTD 467.80>423.00 (-)



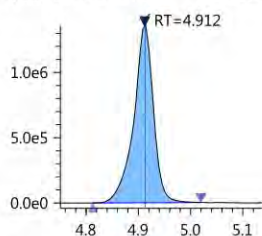
PFDA

Conc 0.0041
Area 3079
Q 513.00>468.80 (-)



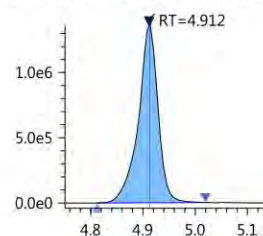
PFDA-13C

Conc 5.2858
Area 3565868
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
Area 3565868
ISTD 514.80>469.95 (-)



Insight Report

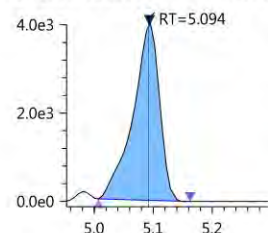
Printed at 4/18/2020 10:35:59 AM

PFUnA

Conc 0.0046

Area 12513

Q 563.00>518.90 (-)

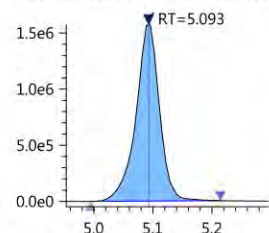


PFUnA-13C

Conc 5.1915

Area 4368493

Q 564.80>519.95 (-)

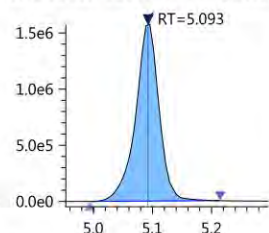


PFUnA-13C_IS

Conc 5.0000

Area 4368493

ISTD 564.80>519.95 (-)

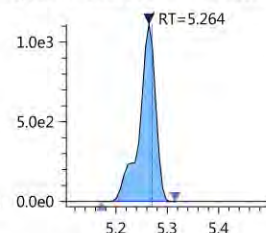


PFDaA

Conc 0.0177

Area 2448

Q 613.05>569.00 (-)

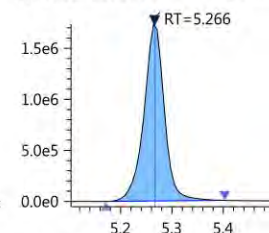


PFDaA-13C

Conc 4.8312

Area 4789323

Q 614.80>569.95 (-)

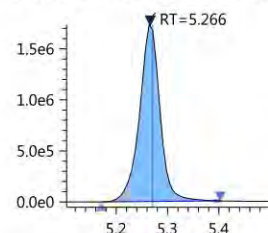


PFDaA-13C_IS

Conc 5.0000

Area 4789323

ISTD 614.80>569.95 (-)

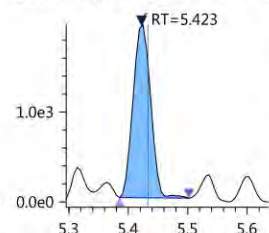


PFTeDA

Conc 0.0008

Area 3976

Q 663.00>618.90 (-)

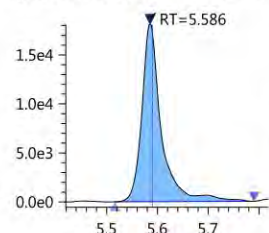


PFTeDA

Conc 0.0051

Area 48409

Q 713.40>669.00 (-)

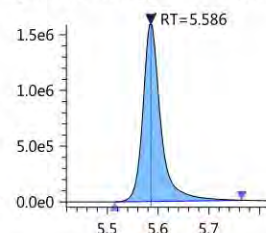


PFTeDA-13C

Conc 4.9292

Area 3898736

Q 714.70>669.90 (-)

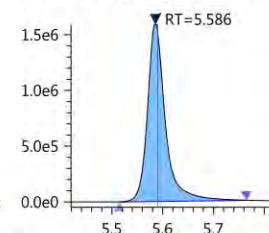


PFTeDA-13C_IS

Conc 5.0000

Area 3898736

ISTD 714.70>669.90 (-)

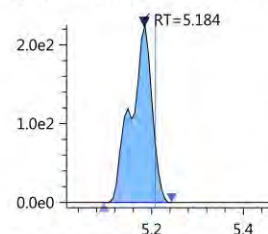


FOSA

Conc 0.0015

Area 718

Q 498.20>78.00 (-)

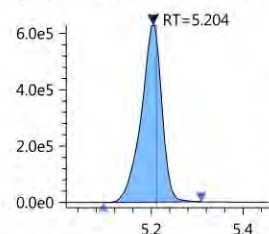


FOSA-13C

Conc 4.3670

Area 1969761

Q 506.00>78.05 (-)

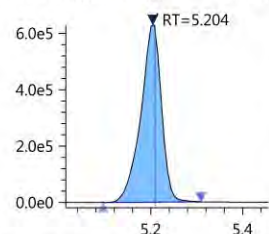


FOSA-13C_IS

Conc 5.0000

Area 1969761

ISTD 506.00>78.05 (-)

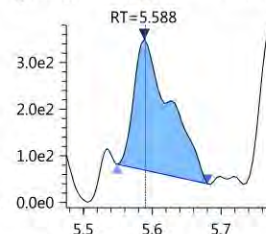


N-MeFOSA

Conc 0.0100

Area 1036

Q 512.00>169.10 (-)

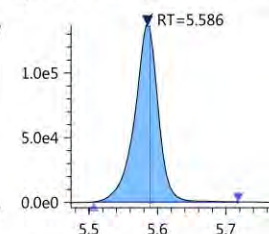


N-MeFOSA-d3

Conc 3.4656

Area 327617

Q 514.90>168.90 (-)

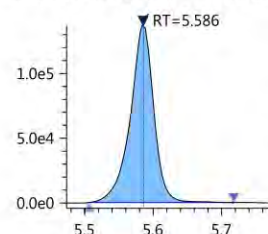


N-MeFOSA-d3_IS

Conc 5.0000

Area 327617

ISTD 514.90>168.90 (-)

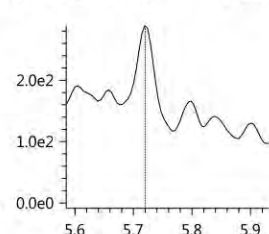


N-EtFOSA

Conc ----

Area ----

Q 526.90>169.10 (-)

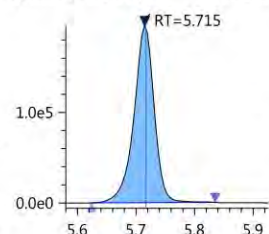


N-EtFOSA-d9

Conc 3.2942

Area 470654

Q 530.90>169.15 (-)

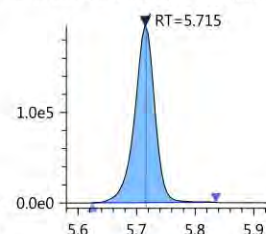


N-EtFOSA-d9_IS

Conc 5.0000

Area 470654

ISTD 530.90>169.15 (-)

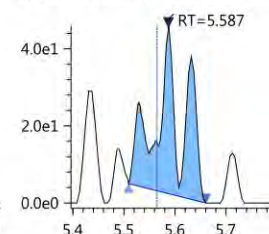


N-MeFOSE

Conc 0.0009

Area 155

Q 616.00>59.00 (-)



Insight Report

Printed at 4/18/2020 10:35:59 AM

N-MeFOSE-d7

Conc 3.6600

Area 555897

Q 622.70>59.10 (-)

2.42e5

N-MeFOSE-d7_IS

Conc 5.0000

Area 555897

ISTD 622.70>59.10 (-)

2.42e5

N-EtFOSE

Conc ----

Area ----

Q 630.00>58.90 (-)

3.85e2

N-EtFOSE-d9

Conc 3.9522

Area 558052

Q 638.70>59.10 (-)

2.31e5

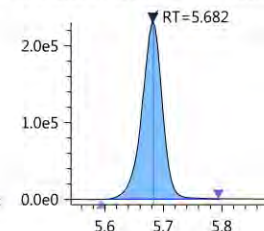
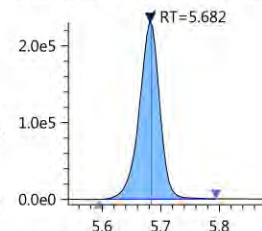
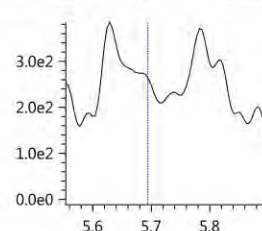
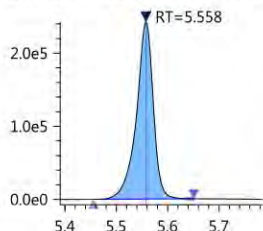
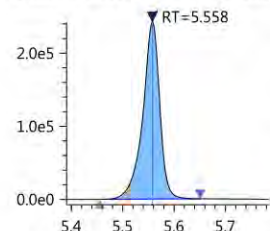
N-EtFOSE-d9_IS

Conc 5.0000

Area 558052

ISTD 638.70>59.10 (-)

2.31e5



N-MeFOSAA

Conc 0.0084

Area 623

Q 570.20>419.00 (-)

3.30e2

N-MeFOSAA-d3

Conc 4.5983

Area 588876

Q 572.80>419.05 (-)

2.11e5

N-MeFOSAA-d3_IS

Conc 5.0000

Area 588876

ISTD 572.80>419.05 (-)

2.11e5

N-EtFOSAA

Conc ----

Area ----

Q 584.20>418.95 (-)

0.00e0

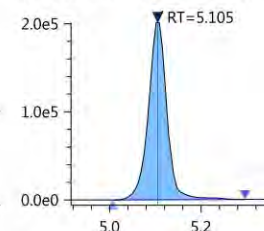
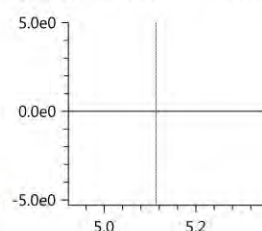
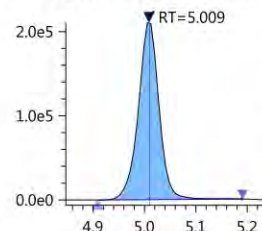
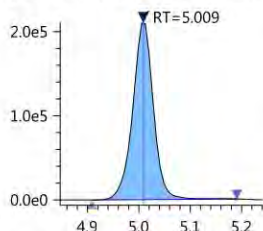
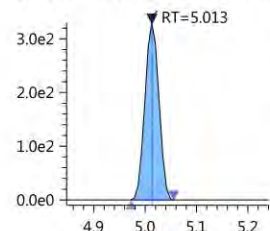
N-EtFOSAA-d5

Conc 4.8029

Area 566760

Q 588.80>419.00 (-)

2.01e5



N-EtFOSAA-d5_IS

Conc 5.0000

Area 566760

ISTD 588.80>419.00 (-)

2.01e5

4_2-FTS_1

Conc ----

Area ----

Q 327.00>307.05 (-)

3.80e1

4_2-FTS-13C

Conc 4.5931

Area 344837

Q 328.80>309.05 (-)

9.92e4

4_2-FTS-13C_IS

Conc 5.0000

Area 344837

ISTD 328.80>309.05 (-)

9.92e4

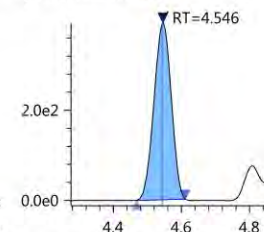
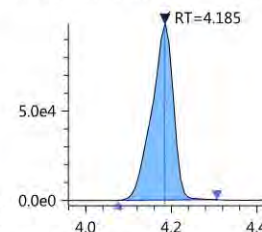
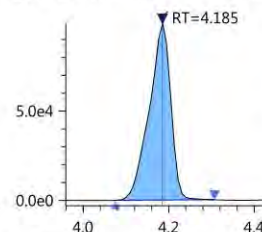
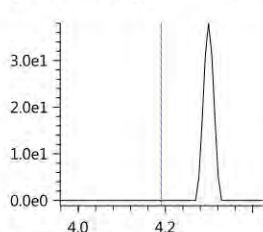
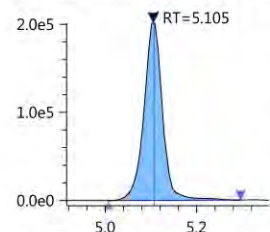
6_2-FTS_1

Conc 0.0138

Area 1379

Q 427.00>407.00 (-)

3.93e2



6_2-FTS-13C

Conc 5.7632

Area 431583

Q 428.90>409.00 (-)

1.55e5

6_2-FTS-13C_IS

Conc 5.0000

Area 431583

ISTD 428.90>409.00 (-)

1.55e5

8_2-FTS_1

Conc 0.0016

Area 84

Q 527.10>506.90 (-)

4.10e1

8_2-FTS-13C

Conc 5.4027

Area 328010

Q 528.80>509.00 (-)

1.23e5

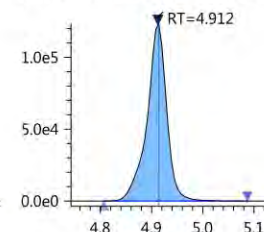
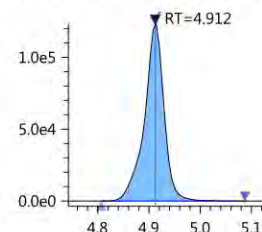
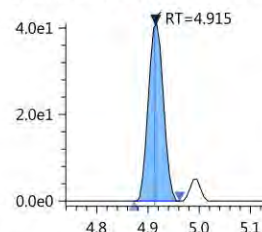
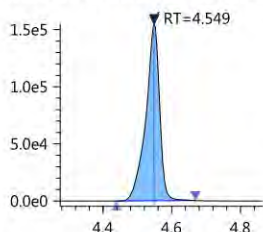
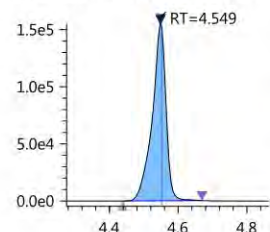
8_2-FTS-13C_IS

Conc 5.0000

Area 328010

ISTD 528.80>509.00 (-)

1.23e5



Insight Report

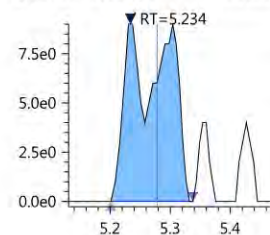
Printed at 4/18/2020 10:35:59 AM

10_2-FtS_1

Conc 0.0008

Area 44

Q 627.00>606.95 (-)

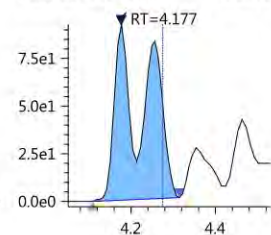


HPFO_DA

Conc 0.0026

Area 471

Q 329.00>169.00 (-)

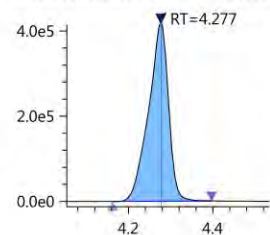


HFPO_DA-13C

Conc 4.6899

Area 1374269

Q 332.00>286.80 (-)

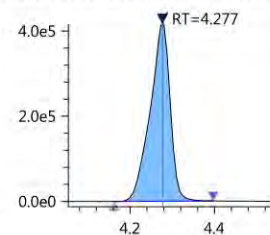


HFPO_DA-13C_IS

Conc 5.0000

Area 1374269

ISTD 332.00>286.80 (-)



Insight Report

Printed at 4/18/2020 11:14:21 AM

200417_023

Sample ID: 0.05 PPB ICAL

Date acquired: 4/17/2020 5:35:13 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_cuvre\200417_023.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	5.098	6742861	6742861	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.013	13541	1179443	2	0.0499	ng/mL	0.0444
PFBS-13C	Auto	4.013	1179443	6742861	1	4.4741	ng/mL	5.0000
PFBS-13C_IS	Auto	4.013	1179443	1179443	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.234	4780	1179443	2	0.0411	ng/mL	0.0470
PFHxS_1	Auto	4.397	12921	730538	3	0.0542	ng/mL	0.0457
PFHxS-18O	Auto	4.400	730538	6742861	1	4.9225	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.400	730538	730538	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.559	10229	730538	3	0.0449	ng/mL	0.0477
PFOS_1	Auto	4.728	7540	946232	4	0.0470	ng/mL	0.0465
PFOS-13C	Auto	4.728	946232	6742861	1	4.5298	ng/mL	5.0000
PFOS-13C_IS	Auto	4.728	946232	946232	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.905	6180	946232	4	0.0608	ng/mL	0.0481
PFDS_1	Auto	5.075	7507	946232	4	0.0501	ng/mL	0.0482
PFBA	Auto	3.377	32427	3179363	5	0.0522	ng/mL	0.0500
PFBA-13C	Auto	3.377	3179363	6742861	1	4.4571	ng/mL	5.0000
PFBA-13C_IS	Auto	3.377	3179363	3179363	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.958	63643	1822578	6	0.0538	ng/mL	0.0500
PFPeA-13C	Auto	3.958	1822578	6742861	1	4.5404	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.958	1822578	1822578	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.217	61001	5163965	7	0.0540	ng/mL	0.0500
PFHxA-13C	Auto	4.216	5163965	6742861	1	4.6963	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.216	5163965	5163965	7	5.0000	ng/mL	5.0000
PFHpA	M	4.398	49943	4785164	8	0.0483	ng/mL	0.0500
PFHpA-13C	Auto	4.398	4785164	6742861	1	4.8104	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.398	4785164	4785164	8	5.0000	ng/mL	5.0000
PFOA	M	4.565	86354	5858403	9	0.0496	ng/mL	0.0500
PFOA-13C	Auto	4.565	5858403	6742861	1	4.8683	ng/mL	5.0000
PFOA-13C_IS	Auto	4.565	5858403	5858403	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.736	46106	4188066	10	0.0572	ng/mL	0.0500
PFNA-13C	Auto	4.739	4188066	6742861	1	4.6616	ng/mL	5.0000
PFNA-13C_IS	Auto	4.739	4188066	4188066	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.921	47897	3928274	11	0.0574	ng/mL	0.0500
PFDA-13C	Auto	4.920	3928274	6742861	1	4.8189	ng/mL	5.0000
PFDA-13C_IS	Auto	4.920	3928274	3928274	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.097	49657	4964256	12	0.0504	ng/mL	0.0500
PFUnA-13C	Auto	5.099	4964256	6742861	1	4.8822	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.099	4964256	4964256	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.274	24248	5697520	13	0.0505	ng/mL	0.0500
PFDoA-13C	Auto	5.273	5697520	6742861	1	4.7564	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.273	5697520	5697520	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.439	45766	4420163	14	0.0493	ng/mL	0.0500
PFTeDA	M	5.593	76673	4420163	14	0.0572	ng/mL	0.0500
PFTeDA-13C	Auto	5.593	4420163	6742861	1	4.6248	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.593	4420163	4420163	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.213	29652	2457942	16	0.0504	ng/mL	0.0500
FOSA-13C	Auto	5.211	2457942	6742861	1	4.5096	ng/mL	5.0000
FOSA-13C_IS	Auto	5.211	2457942	2457942	16	5.0000	ng/mL	5.0000
N-MeFOSA	M	5.594	8670	525573	17	0.0513	ng/mL	0.0500
N-MeFOSA-d3	Auto	5.592	525573	6742861	1	4.6009	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.592	525573	525573	17	5.0000	ng/mL	5.0000
N-EtFOSA	M	5.728	1263	788787	18	0.0403	ng/mL	0.0500
N-EtFOSA-d9	Auto	5.723	788787	6742861	1	4.5689	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.723	788787	788787	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.573	11939	832545	19	0.0476	ng/mL	0.0500
N-MeFOSE-d7	Auto	5.566	832545	6742861	1	4.5363	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.566	832545	832545	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.699	11351	790359	20	0.0494	ng/mL	0.0500
N-EtFOSE-d9	Auto	5.690	790359	6742861	1	4.6323	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.690	790359	790359	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.012	4056	701495	21	0.0465	ng/mL	0.0500
N-MeFOSAA-d3	Auto	5.016	701495	6742861	1	4.5332	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.016	701495	701495	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.113	2776	664364	22	0.0402	ng/mL	0.0500
N-EtFOSAA-d5	Auto	5.111	664364	6742861	1	4.6592	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.111	664364	664364	22	5.0000	ng/mL	5.0000
4_2-FTS_1	M	4.180	3449	404355	23	0.0453	ng/mL	0.0469
4_2-FTS-13C	Auto	4.191	404355	6742861	1	4.4571	ng/mL	5.0000

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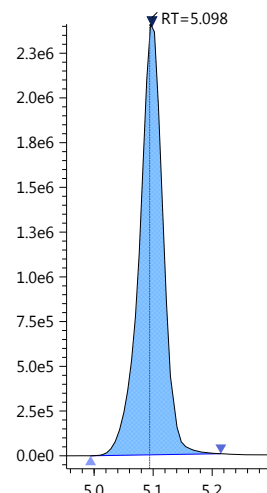
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.191	404355	404355	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.553	5131	448733	24	0.0494	ng/mL	0.0476
6_2-FTS-13C	Auto	4.557	448733	6742861	1	4.9590	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.557	448733	448733	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.919	3073	349824	25	0.0533	ng/mL	0.0480
8_2-FTS-13C	Auto	4.920	349824	6742861	1	4.7684	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.920	349824	349824	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.282	2809	349824	25	0.0499	ng/mL	0.0483
HPFO_DA	Auto	4.281	9916	1581926	26	0.0485	ng/mL	0.0500
HPFO_DA-13C	Auto	4.283	1581926	6742861	1	4.4676	ng/mL	5.0000
HPFO_DA-13C_IS	Auto	4.283	1581926	1581926	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS

Conc 5.0000
Area 6742861

ISTD 570.00>525.00 (-)

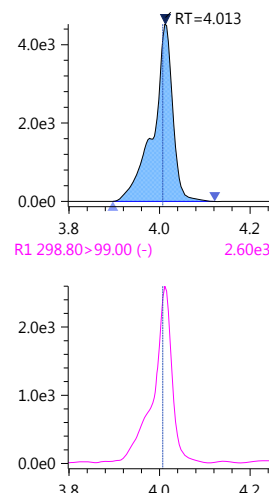


PFBS_1

Conc 0.0499
Area 13541

R#1 57.27 (0.00)

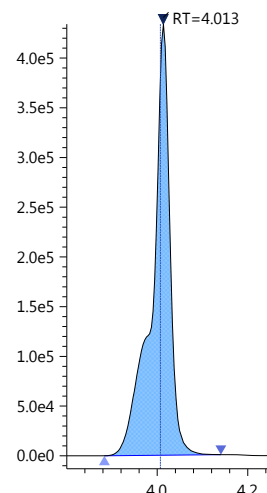
Q 299.00>80.00 (-)



PFBS-13C

Conc 4.4741
Area 1179443

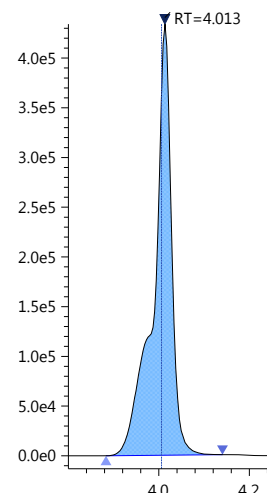
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
Area 1179443

ISTD 301.80>80.00 (-)

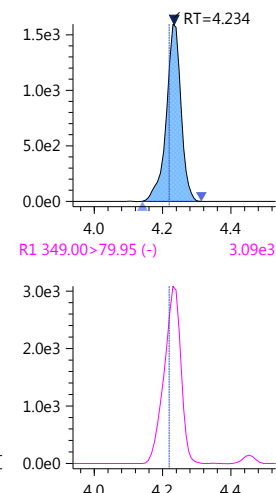


PFPoS

Conc 0.0411
Area 4780

R#1 194.47 (0.00)

Q 349.00>99.00 (-)

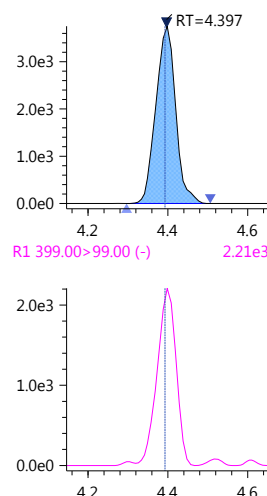


PFHxS_1

Conc 0.0542
Area 12921

R#1 57.13 (0.00)

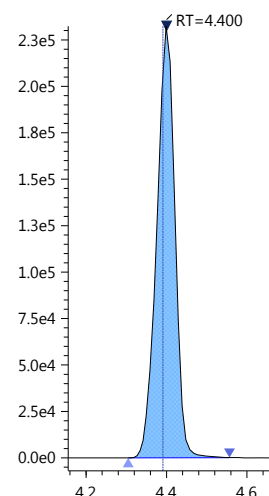
Q 399.00>80.00 (-)



PFHxS-180

Conc 4.9225
Area 730538

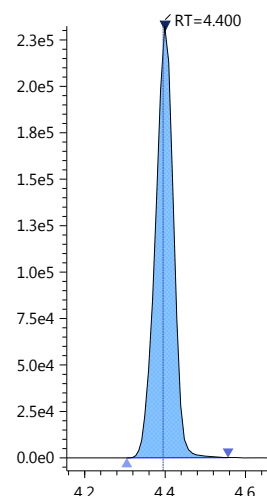
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
Area 730538

ISTD 402.70>84.05 (-)

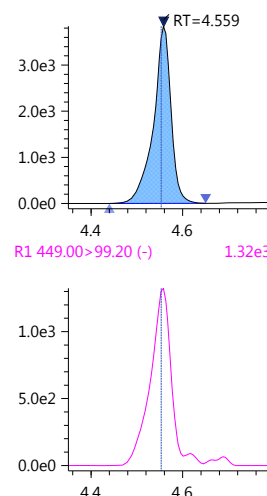


PFHpS_1

Conc 0.0449
Area 10229

R#1 33.60 (0.00)

Q 449.00>80.15 (-)

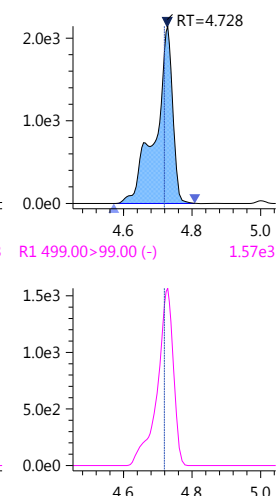


PFOS_1

Conc 0.0470
Area 7540

R#1 71.34 (0.00)

Q 499.00>80.00 (-)



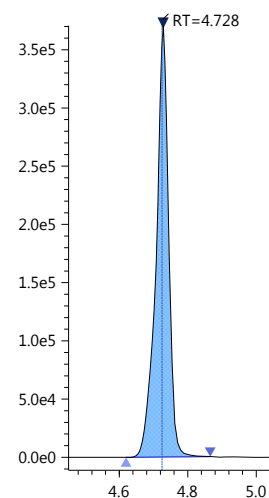
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PFOS-13C

Conc 4.5298
Area 946232

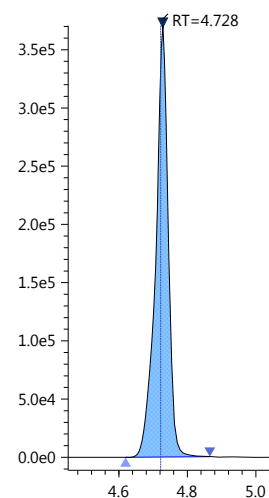
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
Area 946232

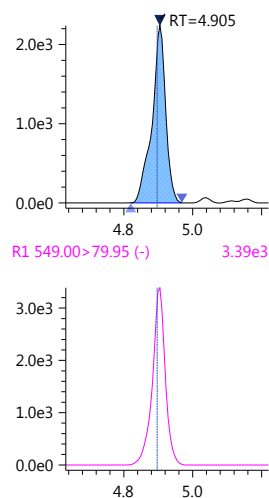
ISTD 502.80>80.05 (-)



PFNS

Conc 0.0608
Area 6180
R#1 150.38 (0.00)

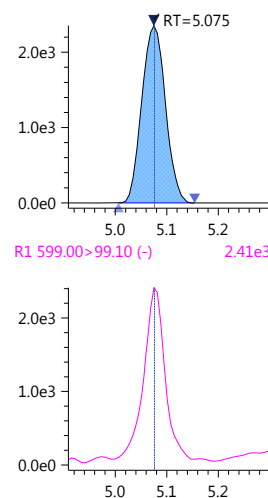
Q 549.00>99.00 (-)



PFDS_1

Conc 0.0501
Area 7507
R#1 100.84 (0.00)

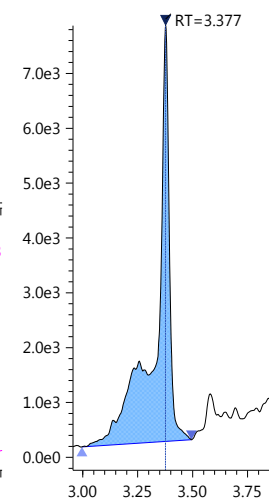
Q 599.00>79.90 (-)



PFBA

Conc 0.0522
Area 32427

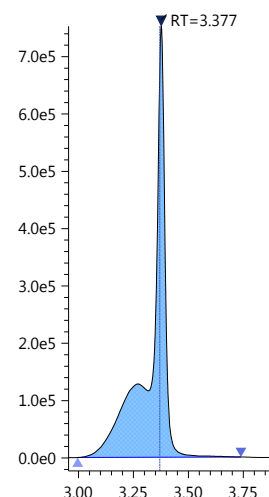
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.4571
Area 3179363

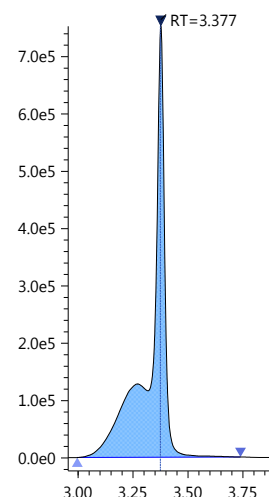
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 3179363

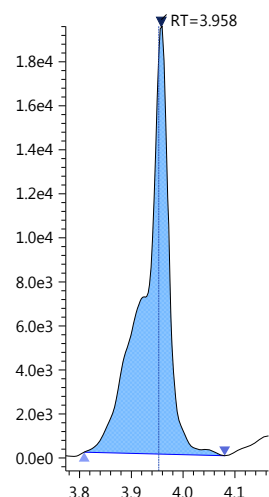
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.0538
Area 63643

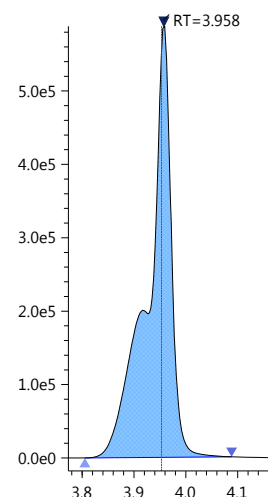
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.5404
Area 1822578

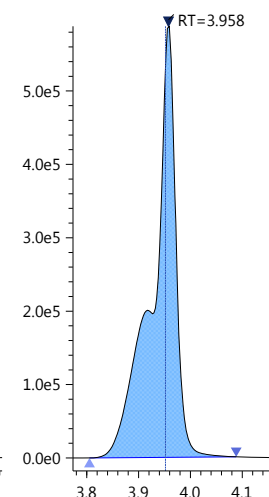
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1822578

ISTD 267.90>223.00 (-)



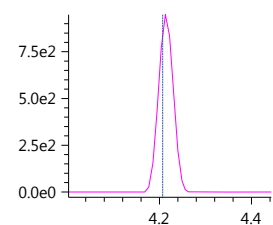
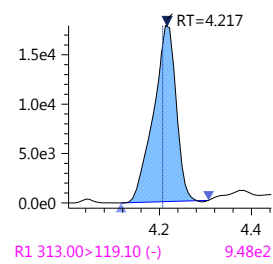
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PFHxA

Conc 0.0540
Area 61001
R#1 5.24 (0.00)

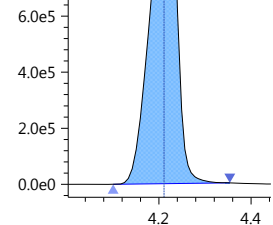
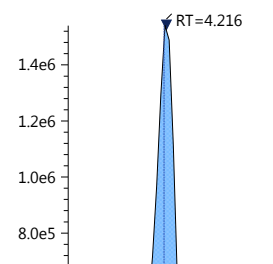
Q 313.00>269.00 (-) 1.80e4



PFHxA-13C

Conc 4.6963
Area 5163965

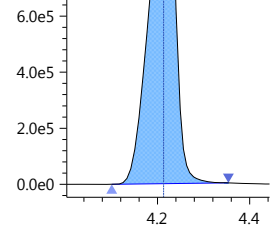
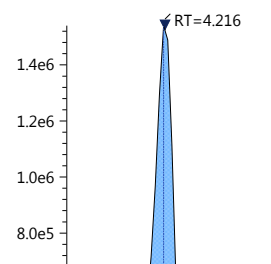
Q 314.90>270.10 (-) 1.54e6



PFHxA-13C_IS

Conc 5.0000
Area 5163965

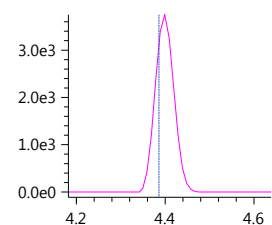
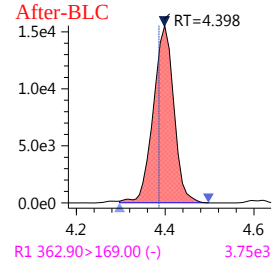
ISTD 314.90>270.10 (-) 1.54e6



PFHpA

Conc 0.0483
Area 49943
R#1 24.18 (0.00)

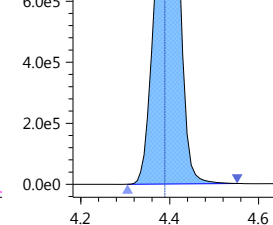
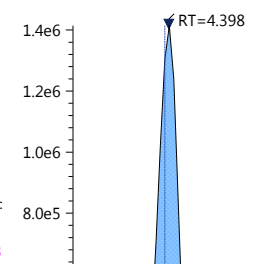
Q 362.90>319.00 (-) 1.55e4



PFHpA-13C

Conc 4.8104
Area 4785164

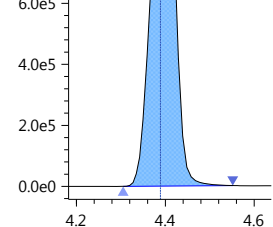
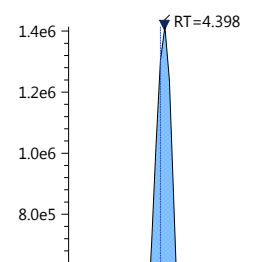
Q 366.90>322.10 (-) 1.41e6



PFHpA-13C_IS

Conc 5.0000
Area 4785164

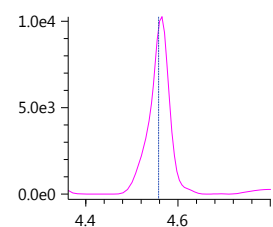
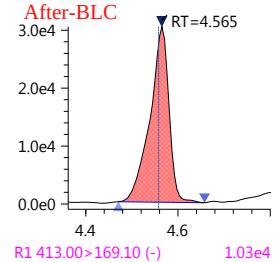
ISTD 366.90>322.10 (-) 1.41e6



PFOA

Conc 0.0496
Area 86354
R#1 33.52 (0.00)

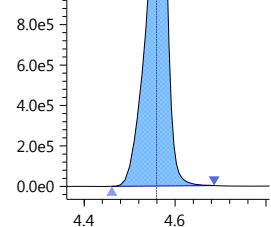
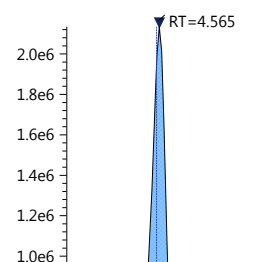
Q 413.00>369.00 (-) 3.06e4



PFOA-13C

Conc 4.8683
Area 5858403

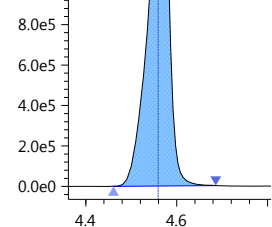
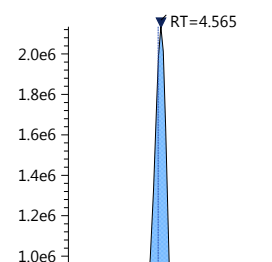
Q 416.80>372.05 (-) 2.13e6



PFOA-13C_IS

Conc 5.0000
Area 5858403

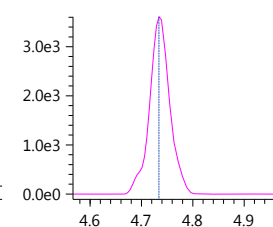
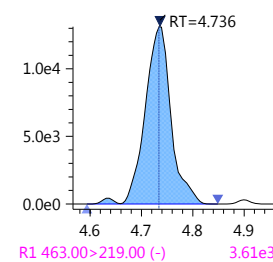
ISTD 416.80>372.05 (-) 2.13e6



PFNA

Conc 0.0572
Area 46106
R#1 26.56 (0.00)

Q 463.00>418.90 (-) 1.31e4



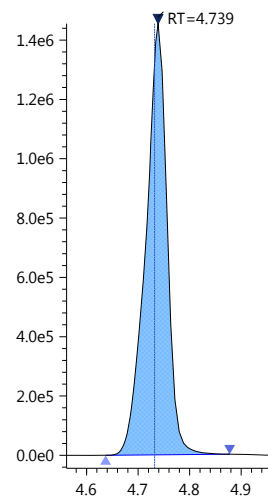
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PFNA-13C

Conc 4.6616
Area 4188066

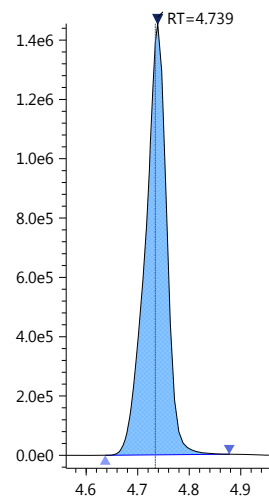
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
Area 4188066

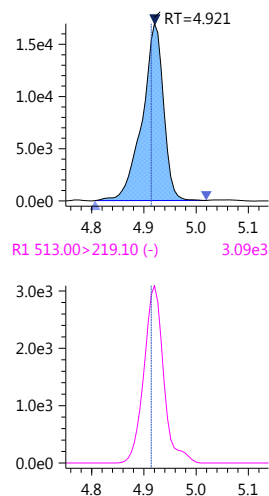
ISTD 467.80>423.00 (-)



PFDA

Conc 0.0574
Area 47897
R#1 18.15 (0.00)

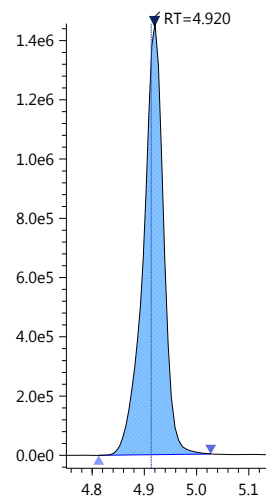
Q 513.00>468.80 (-)



PFDA-13C

Conc 4.8189
Area 3928274

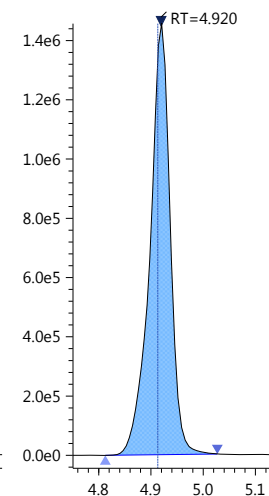
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
Area 3928274

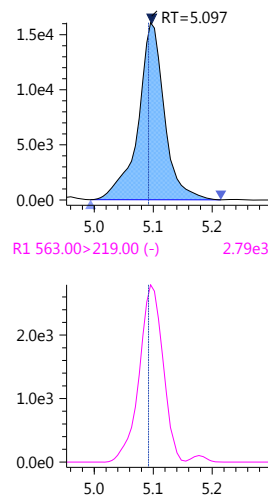
ISTD 514.80>469.95 (-)



PFUnA

Conc 0.0504
Area 49657
R#1 17.30 (0.00)

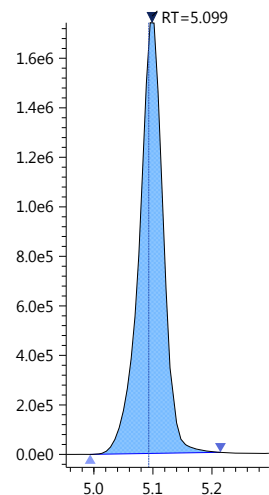
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.8822
Area 4964256

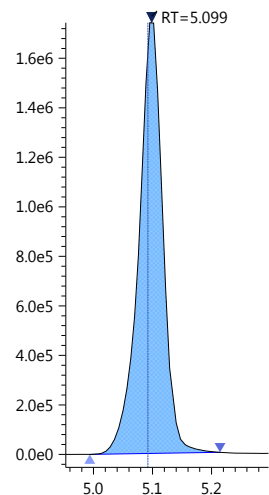
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
Area 4964256

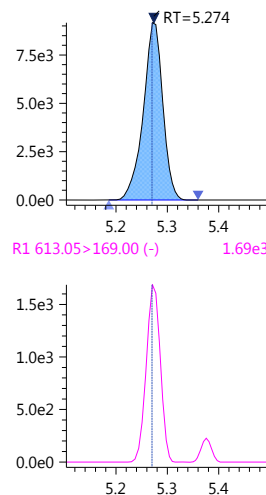
ISTD 564.80>519.95 (-)



PFDaA

Conc 0.0505
Area 24248
R#1 18.82 (0.00)

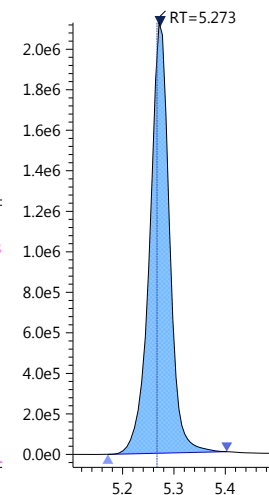
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.7564
Area 5697520

Q 614.80>569.95 (-)



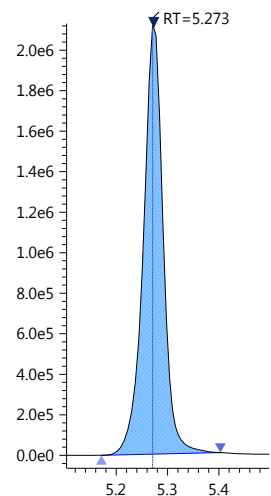
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PFDaA-13C_IS

Conc 5.0000
Area 5697520

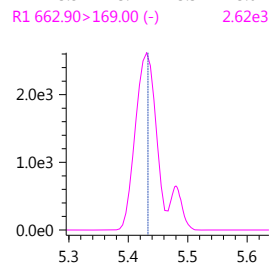
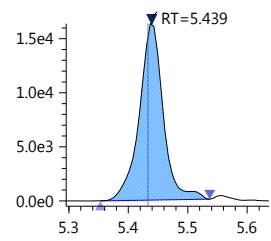
ISTD 614.80>569.95 (-) 2.13e6



PFTrDA

Conc 0.0493
Area 45766
R#1 11.75 (0.00)

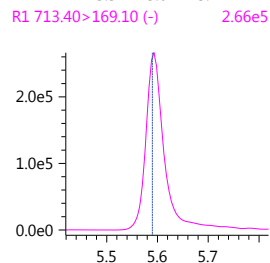
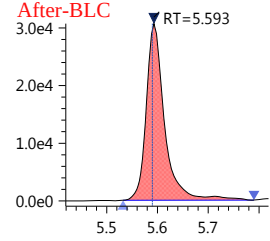
Q 663.00>618.90 (-) 1.64e4



PFTeDA

Conc 0.0572
Area 76673
R#1 872.42 (0.00)

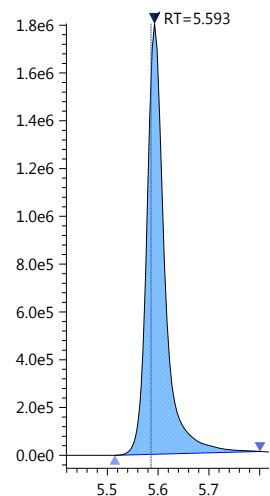
Q 713.40>669.00 (-) 3.08e4



PFTeDA-13C

Conc 4.6248
Area 4420163

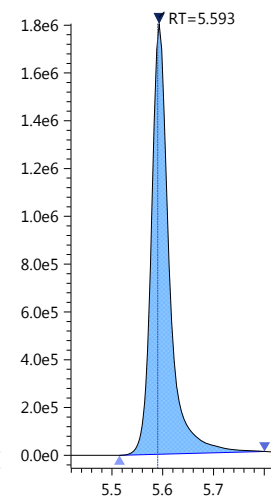
Q 714.70>669.90 (-) 1.81e6



PFTeDA-13C_IS

Conc 5.0000
Area 4420163

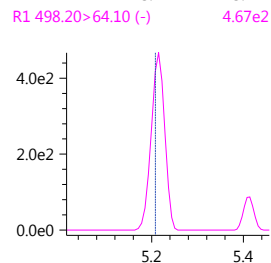
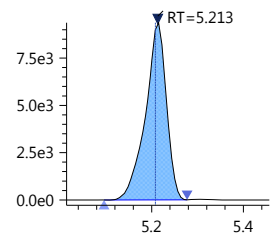
ISTD 714.70>669.90 (-) 1.81e6



FOSA

Conc 0.0504
Area 29652
R#1 5.05 (0.00)

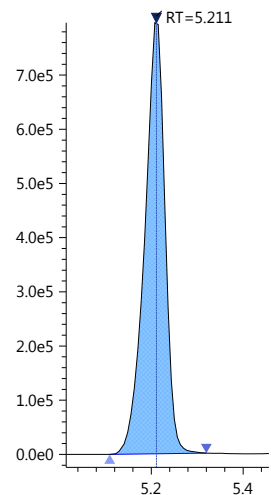
Q 498.20>78.00 (-) 9.37e3



FOSA-13C

Conc 4.5096
Area 2457942

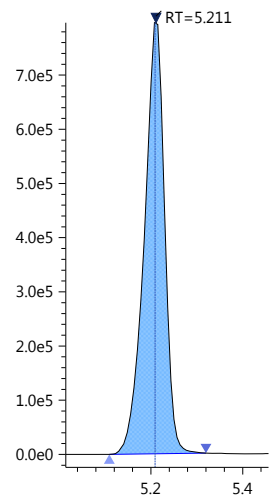
Q 506.00>78.05 (-) 7.97e5



FOSA-13C_IS

Conc 5.0000
Area 2457942

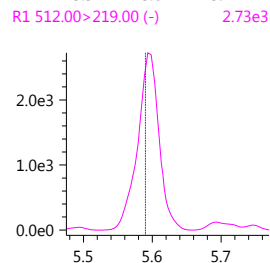
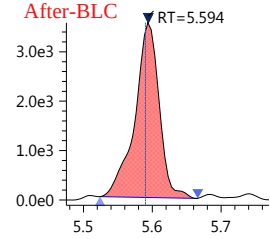
ISTD 506.00>78.05 (-) 7.97e5



N-MeFOSA

Conc 0.0513
Area 8670
R#1 78.61 (0.00)

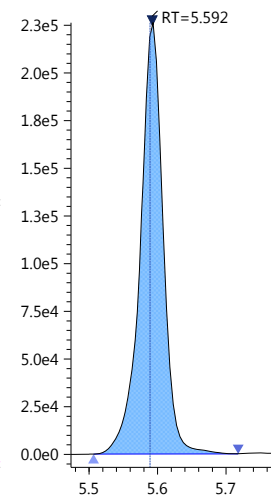
Q 512.00>169.10 (-) 3.59e3



N-MeFOSA-d3

Conc 4.6009
Area 525573

Q 514.90>168.90 (-) 2.26e5



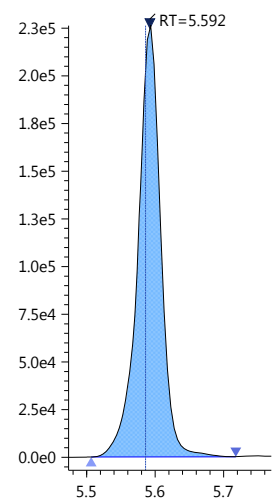
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N-MeFOSA-d3_IS

Conc 5.0000
Area 525573

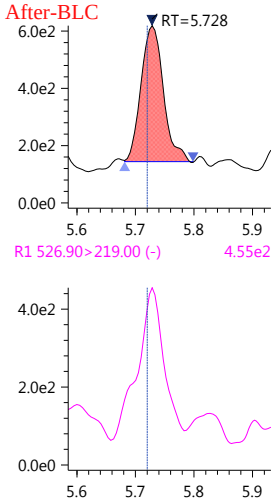
ISTD 514.90>168.90 (-) 2.26e5



N-EtFOSA

Conc 0.0403
Area 1263
R#1 64.65 (0.00)

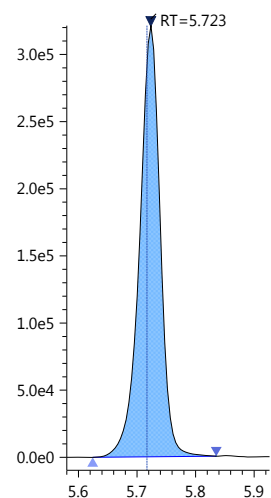
Q 526.90>169.10 (-) 6.19e2



N-EtFOSA-d9

Conc 4.5689
Area 788787

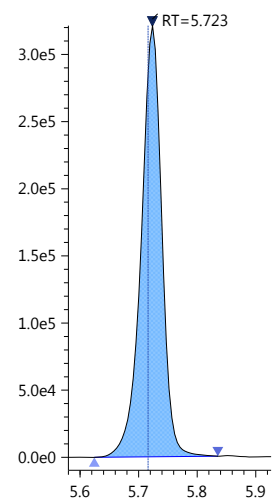
Q 530.90>169.15 (-) 3.21e5



N-EtFOSA-d9_IS

Conc 5.0000
Area 788787

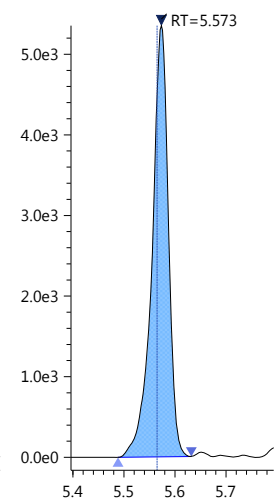
ISTD 530.90>169.15 (-) 3.21e5



N-MeFOSE

Conc 0.0476
Area 11939

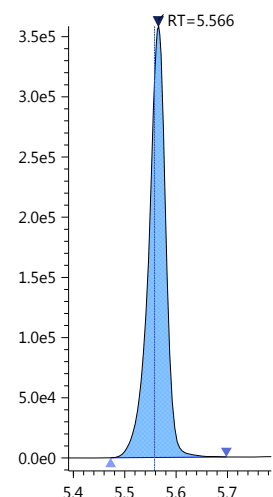
Q 616.00>59.00 (-) 5.36e3



N-MeFOSE-d7

Conc 4.5363
Area 832545

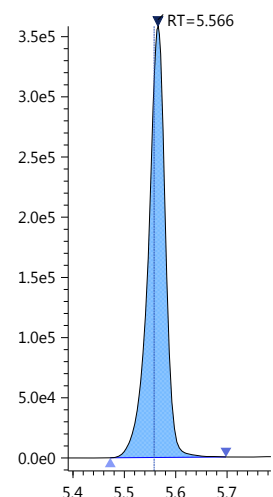
Q 622.70>59.10 (-) 3.59e5



N-MeFOSE-d7_IS

Conc 5.0000
Area 832545

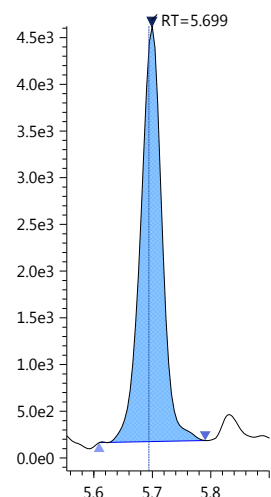
ISTD 622.70>59.10 (-) 3.59e5



N-EtFOSE

Conc 0.0494
Area 11351

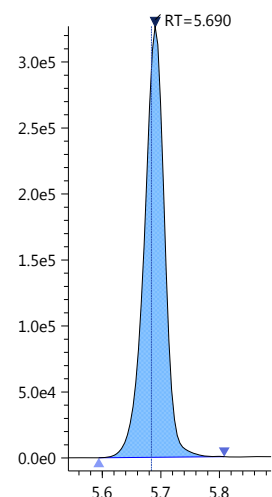
Q 630.00>58.90 (-) 4.62e3



N-EtFOSE-d9

Conc 4.6323
Area 790359

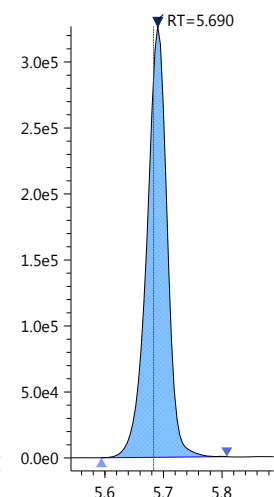
Q 638.70>59.10 (-) 3.27e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 790359

ISTD 638.70>59.10 (-) 3.27e5



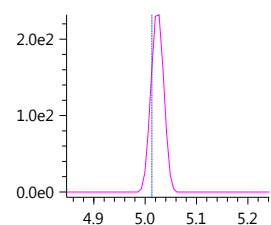
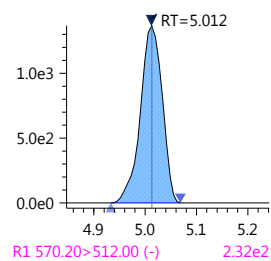
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N-MeFOSAA

Conc 0.0465
Area 4056
R#1 11.95 (0.00)

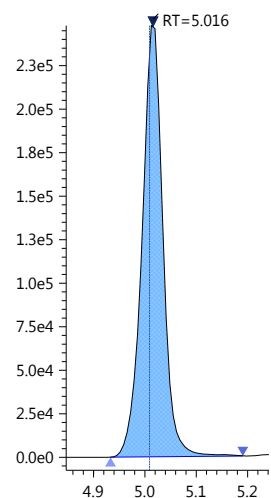
Q 570.20>419.00 (-) 1.37e3



N-MeFOSAA-d3

Conc 4.5332
Area 701495

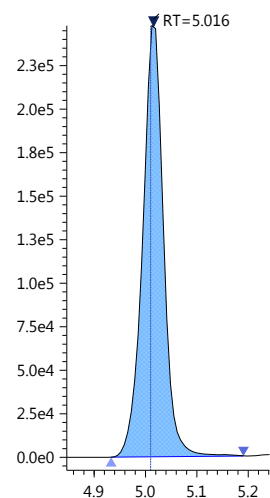
Q 572.80>419.05 (-) 2.48e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 701495

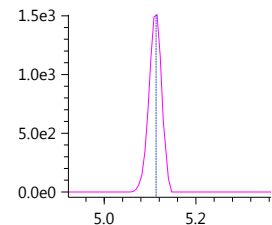
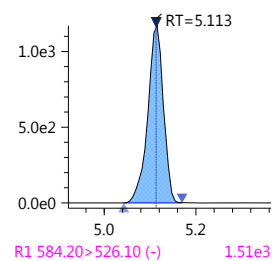
ISTD 572.80>419.05 (-) 2.48e5



N-EtFOSAA

Conc 0.0402
Area 2776
R#1 129.24 (0.00)

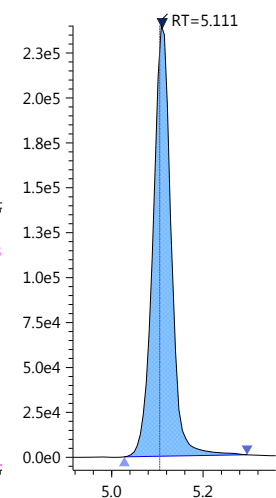
Q 584.20>418.95 (-) 1.17e3



N-EtFOSAA-d5

Conc 4.6592
Area 664364

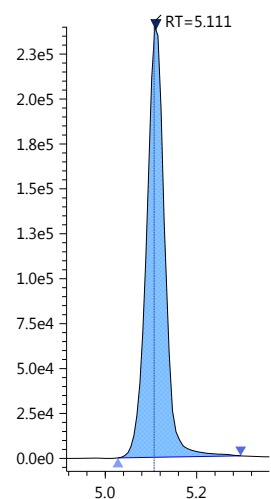
Q 588.80>419.00 (-) 2.40e5



N-EtFOSAA-d5_IS

Conc 5.0000
Area 664364

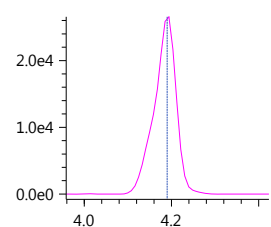
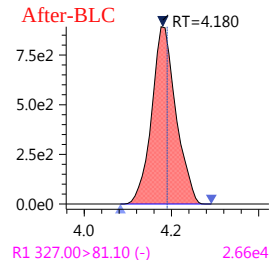
ISTD 588.80>419.00 (-) 2.40e5



4_2-FTS_1

Conc 0.0453
Area 3449
R#1 2391.17 (0.00)

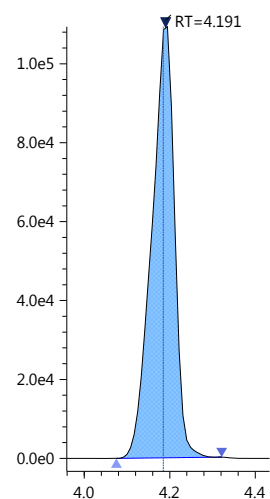
Q 327.00>307.05 (-) 8.93e2



4_2-FTS-13C

Conc 4.4571
Area 404355

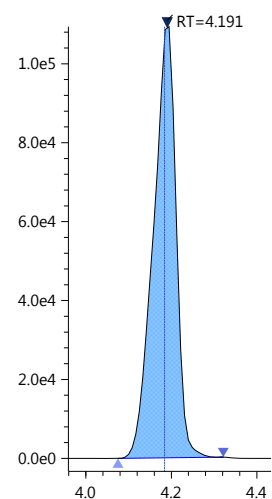
Q 328.80>309.05 (-) 1.09e5



4_2-FTS-13C_IS

Conc 5.0000
Area 404355

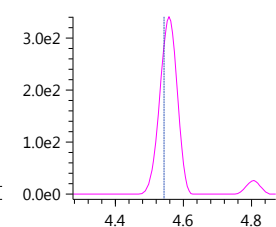
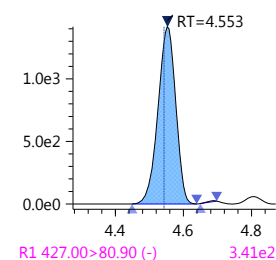
ISTD 328.80>309.05 (-) 1.09e5



6_2-FTS_1

Conc 0.0494
Area 5131
R#1 20.30 (0.00)

Q 427.00>407.00 (-) 1.42e3

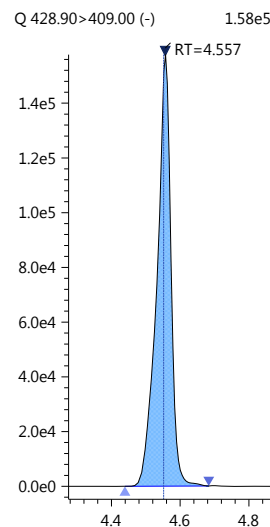


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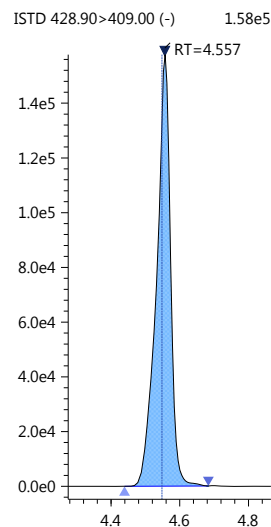
6_2-FTS-13C

Conc 4.9590
 Area 448733



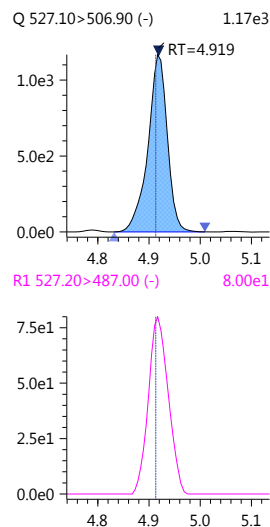
6_2-FTS-13C_IS

Conc 5.0000
 Area 448733



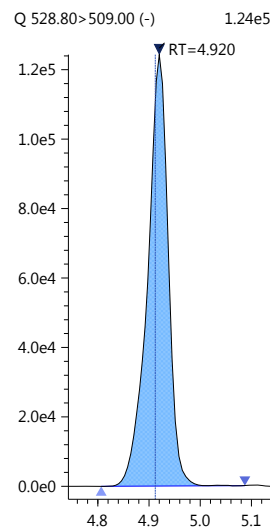
8_2-FTS_1

Conc 0.0533
 Area 3073
 R#1 6.80 (0.00)



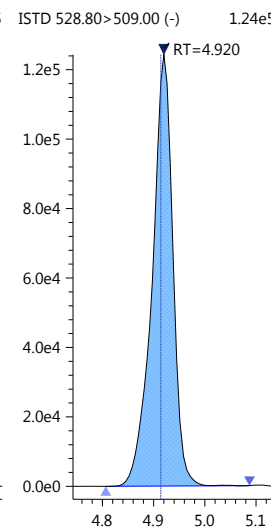
8_2-FTS-13C

Conc 4.7684
 Area 349824



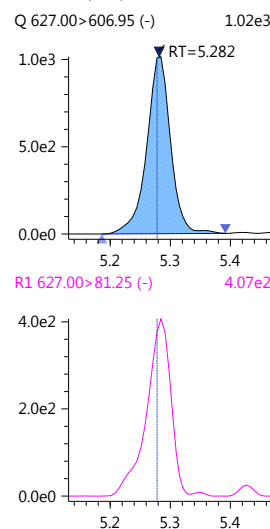
8_2-FTS-13C_IS

Conc 5.0000
 Area 349824



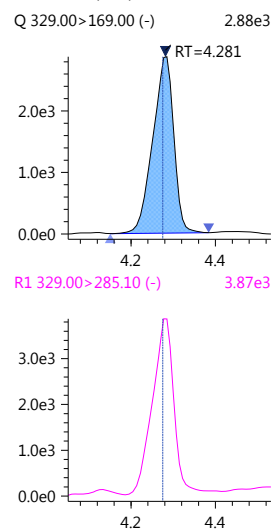
10_2-FtS_1

Conc 0.0499
 Area 2809
 R#1 37.03 (0.00)



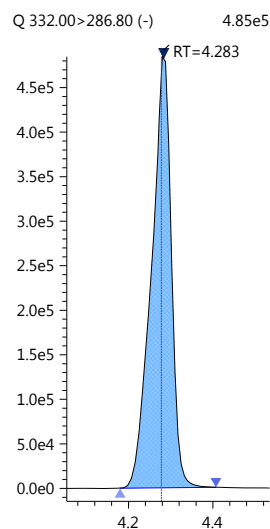
HPFO_DA

Conc 0.0485
 Area 9916
 R#1 131.73 (0.00)



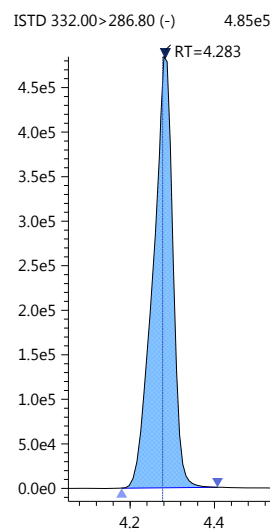
HPFO_DA-13C

Conc 4.4676
 Area 1581926



HPFO_DA-13C_IS

Conc 5.0000
 Area 1581926



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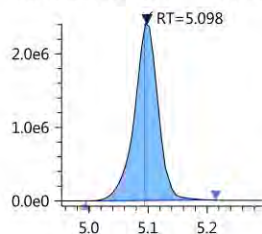
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200417_023

Sample ID: 0.05 PPB ICAL
Date acquired: 4/17/2020 5:35:13 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200417_curve\200417_023.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 0

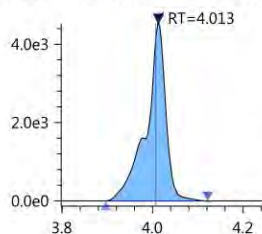
13C7-PFUnDA_IS

Conc 5.0000
Area 6742861
ISTD 570.00>525.00 (-)



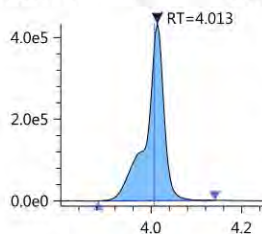
PFBS_1

Conc 0.0499
Area 13541
Q 299.00>80.00 (-)



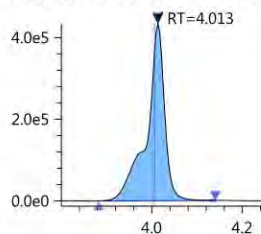
PFBS-13C

Conc 4.4741
Area 1179443
Q 301.80>80.00 (-)



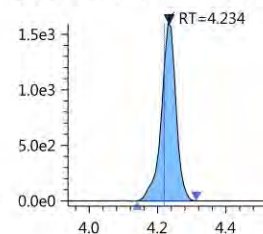
PFBS-13C_IS

Conc 5.0000
Area 1179443
ISTD 301.80>80.00 (-)



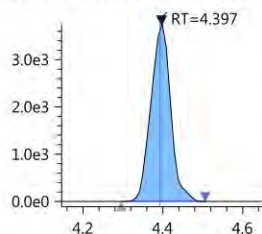
PFPeS

Conc 0.0411
Area 4780
Q 349.00>99.00 (-)



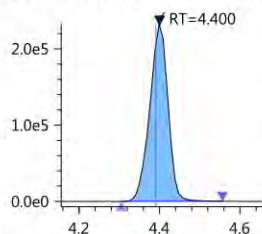
PFHxS_1

Conc 0.0542
Area 12921
Q 399.00>80.00 (-)



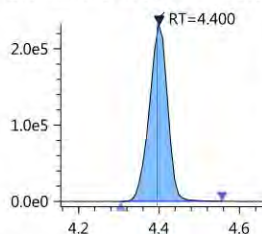
PFHxS-180

Conc 4.9225
Area 730538
Q 402.70>84.05 (-)



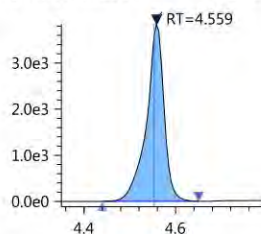
PFHxS-180_IS

Conc 5.0000
Area 730538
ISTD 402.70>84.05 (-)



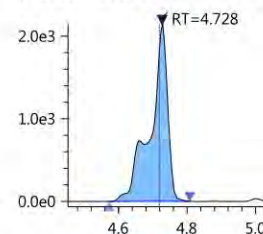
PFHpS_1

Conc 0.0449
Area 10229
Q 449.00>80.15 (-)



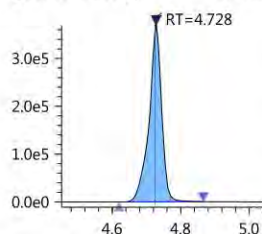
PFOS_1

Conc 0.0470
Area 7540
Q 499.00>80.00 (-)



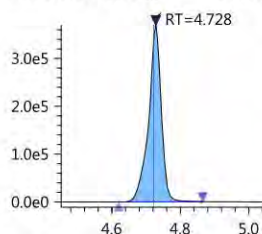
PFOS-13C

Conc 4.5298
Area 946232
Q 502.80>80.05 (-)



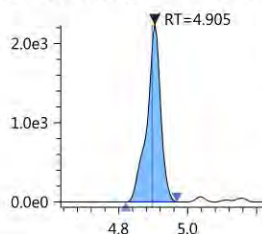
PFOS-13C_IS

Conc 5.0000
Area 946232
ISTD 502.80>80.05 (-)



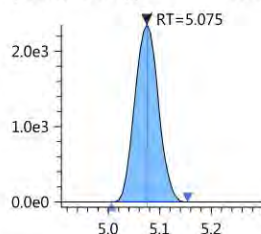
PFNS

Conc 0.0608
Area 6180
Q 549.00>99.00 (-)



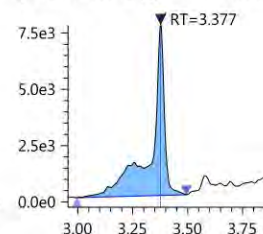
PFDS_1

Conc 0.0501
Area 7507
Q 599.00>79.90 (-)



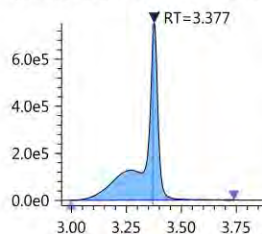
PFBA

Conc 0.0522
Area 32427
Q 213.00>169.10 (-)



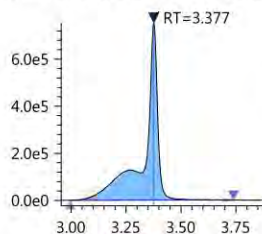
PFBA-13C

Conc 4.4571
Area 3179363
Q 216.90>172.15 (-)



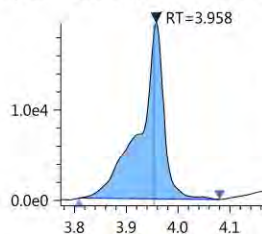
PFBA-13C_IS

Conc 5.0000
Area 3179363
ISTD 216.90>172.15 (-)



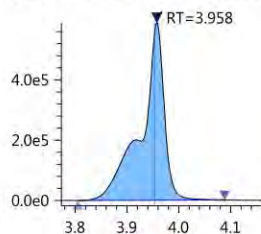
PFPeA

Conc 0.0538
Area 63643
Q 263.05>219.10 (-)



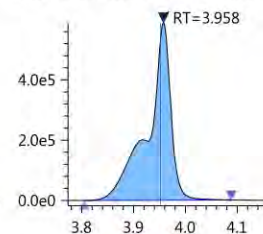
PFPeA-13C

Conc 4.5404
Area 1822578
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1822578
ISTD 267.90>223.00 (-)



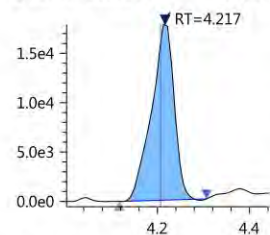
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PFHxA

Conc 0.0540
Area 61001

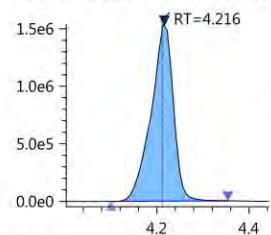
Q 313.00>269.00 (-)



PFHxA-13C

Conc 4.6963
Area 5163965

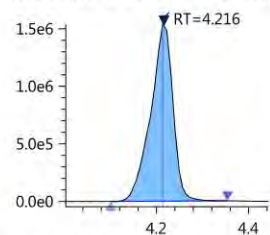
Q 314.90>270.10 (-)



PFHxA-13C_IS

Conc 5.0000
Area 5163965

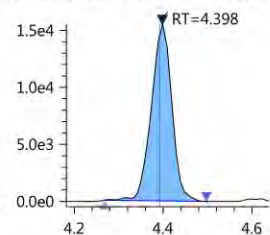
ISTD 314.90>270.10 (-)



PFHpA

Conc 0.0482
Area 49619

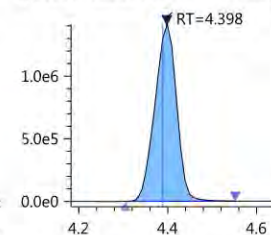
Q 362.90>319.00 (-)



PFHpA-13C

Conc 4.8104
Area 4785164

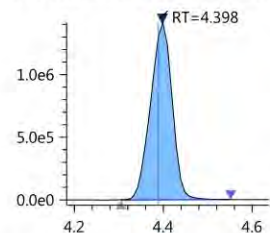
Q 366.90>322.10 (-)



PFHpA-13C_IS

Conc 5.0000
Area 4785164

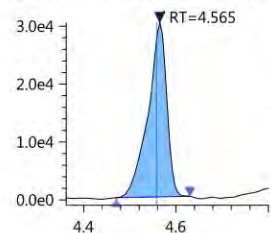
ISTD 366.90>322.10 (-)



PFOA

Conc 0.0493
Area 84398

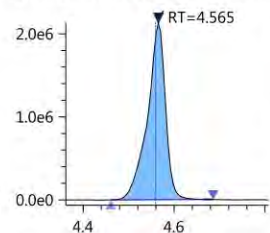
Q 413.00>369.00 (-)



PFOA-13C

Conc 4.8683
Area 5858403

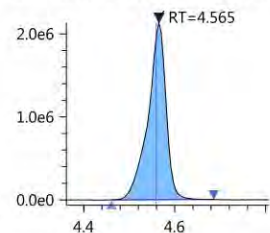
Q 416.80>372.05 (-)



PFOA-13C_IS

Conc 5.0000
Area 5858403

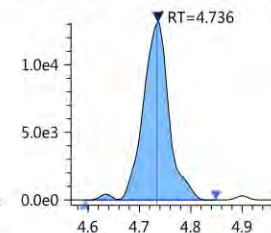
ISTD 416.80>372.05 (-)



PFNA

Conc 0.0572
Area 46106

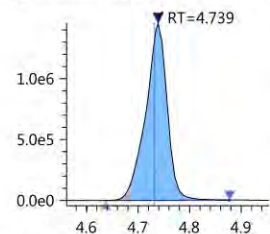
Q 463.00>418.90 (-)



PFNA-13C

Conc 4.6616
Area 4188066

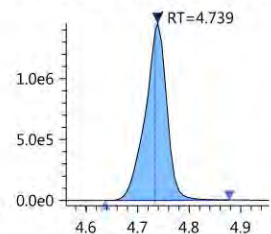
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
Area 4188066

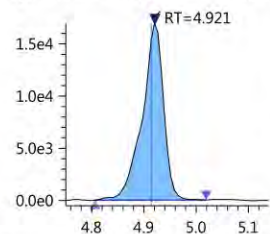
ISTD 467.80>423.00 (-)



PFDA

Conc 0.0574
Area 47897

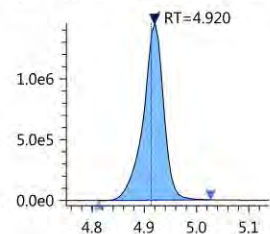
Q 513.00>468.80 (-)



PFDA-13C

Conc 4.8189
Area 3928274

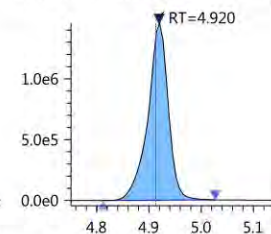
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
Area 3928274

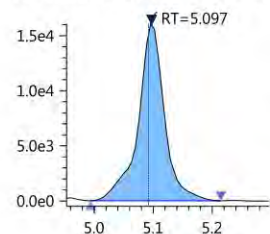
ISTD 514.80>469.95 (-)



PFUnA

Conc 0.0504
Area 49657

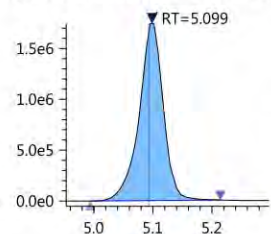
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.8822
Area 4964256

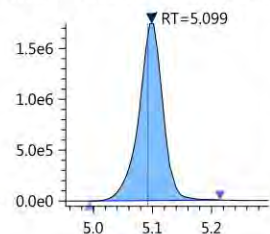
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
Area 4964256

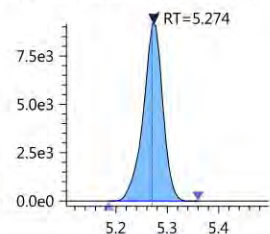
ISTD 564.80>519.95 (-)



PFDoA

Conc 0.0505
Area 24248

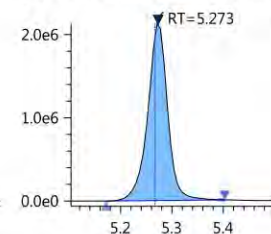
Q 613.05>569.00 (-)



PFDoA-13C

Conc 4.7564
Area 5697520

Q 614.80>569.95 (-)

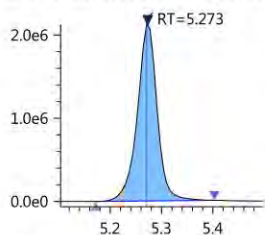


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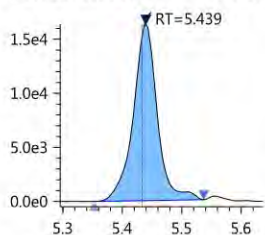
PFDaA-13C_IS

Conc 5.0000
 Area 5697520
 ISTD 614.80>569.95 (-) 2.13e6



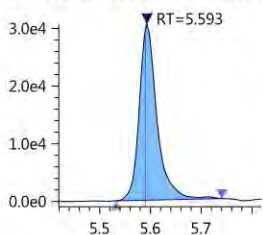
PFTrDA

Conc 0.0493
 Area 45766
 Q 663.00>618.90 (-) 1.64e4



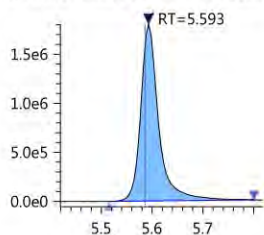
PFTeDA

Conc 0.0544
 Area 73943
 Q 713.40>669.00 (-) 3.08e4



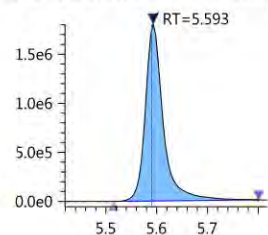
PFTeDA-13C

Conc 4.6248
 Area 4420163
 Q 714.70>669.90 (-) 1.81e6



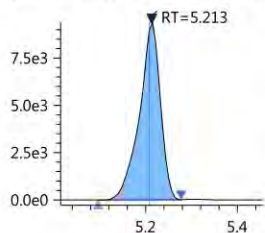
PFTeDA-13C_IS

Conc 5.0000
 Area 4420163
 ISTD 714.70>669.90 (-) 1.81e6



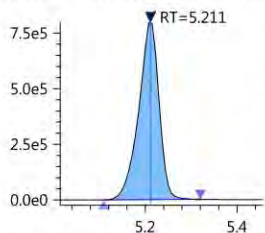
FOSA

Conc 0.0504
 Area 29652
 Q 498.20>78.00 (-) 9.37e3



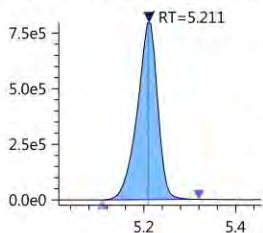
FOSA-13C

Conc 4.5096
 Area 2457942
 Q 506.00>78.05 (-) 7.97e5



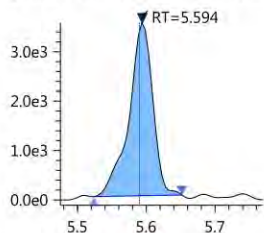
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Conc 5.0000
 Area 2457942
 ISTD 506.00>78.05 (-) 7.97e5



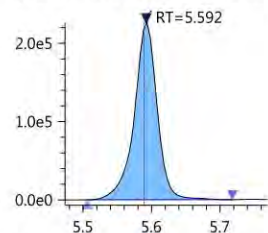
N-MeFOSA

Conc 0.0508
 Area 8399
 Q 512.00>169.10 (-) 3.59e3



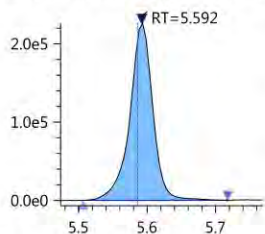
N-MeFOSA-d3

Conc 4.6009
 Area 525573
 Q 514.90>168.90 (-) 2.26e5



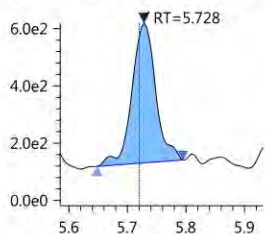
N-MeFOSA-d3_IS

Conc 5.0000
 Area 525573
 ISTD 514.90>168.90 (-) 2.26e5



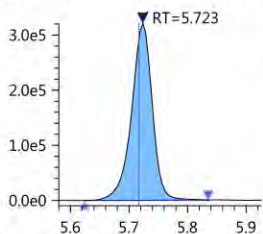
N-EtFOSA

Conc 0.0436
 Area 1381
 Q 526.90>169.10 (-) 6.19e2



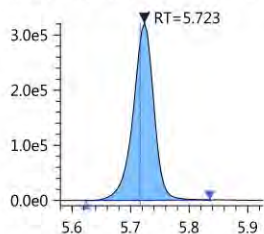
N-EtFOSA-d9

Conc 4.5689
 Area 788787
 Q 530.90>169.15 (-) 3.21e5



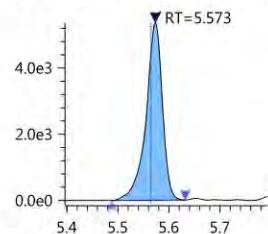
N-EtFOSA-d9_IS

Conc 5.0000
 Area 788787
 ISTD 530.90>169.15 (-) 3.21e5



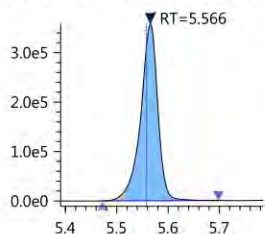
N-MeFOSE

Conc 0.0476
 Area 11939
 Q 616.00>59.00 (-) 5.36e3



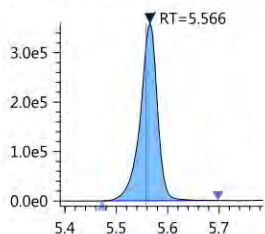
N-MeFOSE-d7

Conc 4.5363
 Area 832545
 Q 622.70>59.10 (-) 3.59e5



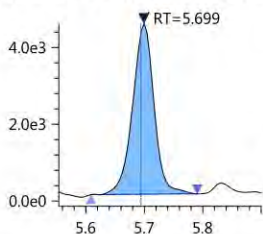
N-MeFOSE-d7_IS

Conc 5.0000
 Area 832545
 ISTD 622.70>59.10 (-) 3.59e5



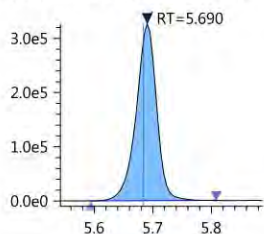
N-EtFOSE

Conc 0.0494
 Area 11351
 Q 630.00>58.90 (-) 4.62e3



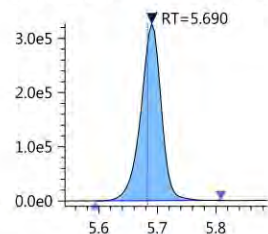
N-EtFOSE-d9

Conc 4.6323
 Area 790359
 Q 638.70>59.10 (-) 3.27e5



N-EtFOSE-d9_IS

Conc 5.0000
 Area 790359
 ISTD 638.70>59.10 (-) 3.27e5



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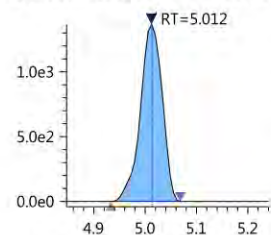
N-MeFOSAA

Conc 0.0461

Area 4056

Q 570.20>419.00 (-)

1.37e3



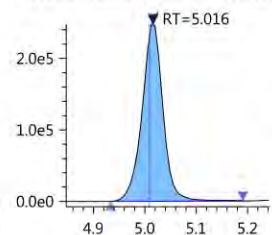
N-MeFOSAA-d3

Conc 4.5332

Area 701495

Q 572.80>419.05 (-)

2.48e5



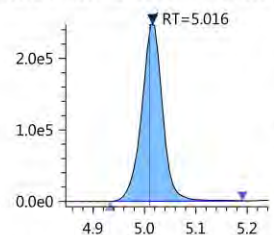
N-MeFOSAA-d3_IS

Conc 5.0000

Area 701495

ISTD 572.80>419.05 (-)

2.48e5



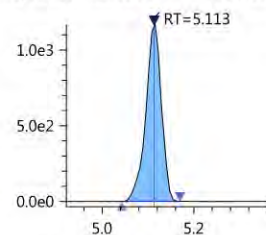
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Conc 0.0524

Area 2776

Q 584.20>418.95 (-)

1.17e3



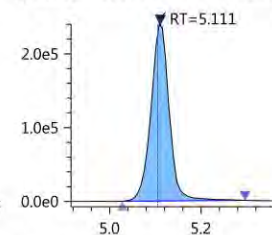
N-EtFOSAA-d5

Conc 4.6592

Area 664364

Q 588.80>419.00 (-)

2.40e5



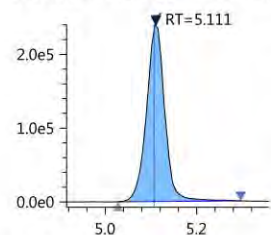
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Conc 5.0000

Area 664364

ISTD 588.80>419.00 (-)

2.40e5



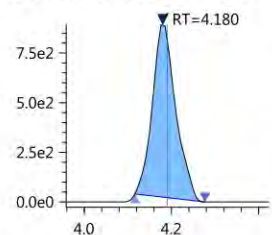
4_2-FTS_1

Conc 0.0430

Area 3239

Q 327.00>307.05 (-)

8.93e2



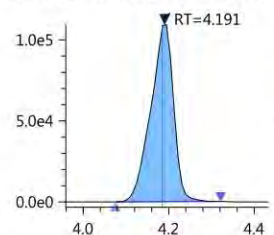
4_2-FTS-13C

Conc 4.4571

Area 404355

Q 328.80>309.05 (-)

1.09e5



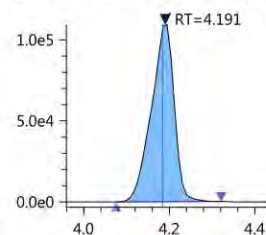
4_2-FTS-13C_IS

Conc 5.0000

Area 404355

ISTD 328.80>309.05 (-)

1.09e5



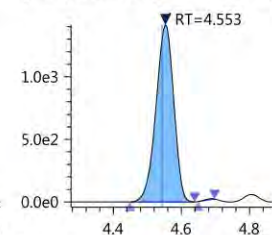
6_2-FTS_1

Conc 0.0494

Area 5131

Q 427.00>407.00 (-)

1.42e3



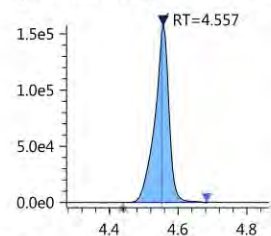
6_2-FTS-13C

Conc 4.9590

Area 448733

Q 428.90>409.00 (-)

1.58e5



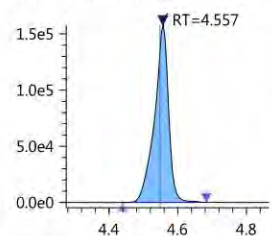
6_2-FTS-13C_IS

Conc 5.0000

Area 448733

ISTD 428.90>409.00 (-)

1.58e5



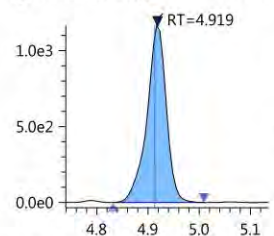
8_2-FTS_1

Conc 0.0533

Area 3073

Q 527.10>506.90 (-)

1.17e3



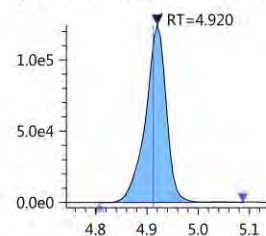
8_2-FTS-13C

Conc 4.7684

Area 349824

Q 528.80>509.00 (-)

1.24e5



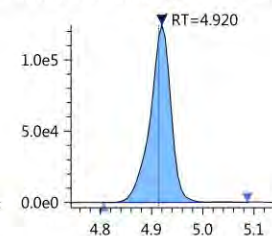
8_2-FTS-13C_IS

Conc 5.0000

Area 349824

ISTD 528.80>509.00 (-)

1.24e5



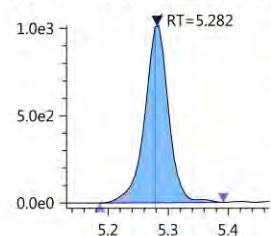
10_2-FTS_1

Conc 0.0499

Area 2809

Q 627.00>606.95 (-)

1.02e3



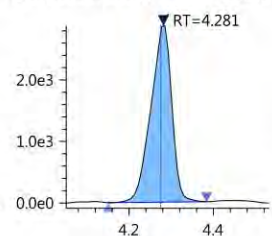
HPFO_DA

Conc 0.0485

Area 9916

Q 329.00>169.00 (-)

2.88e3



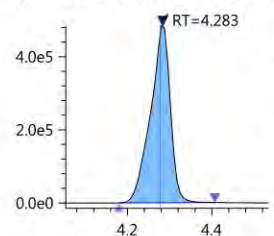
HPFO_DA-13C

Conc 4.4676

Area 1581926

Q 332.00>286.80 (-)

4.85e5



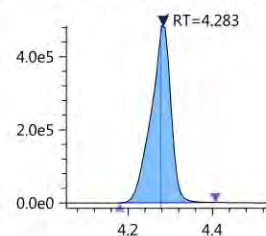
HPFO_DA-13C_IS

Conc 5.0000

Area 1581926

ISTD 332.00>286.80 (-)

4.85e5



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200417_024

Sample ID: 0.10 PPB ICAL

Date acquired: 4/17/2020 5:45:41 PM High HpA surr, native ok

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_curve\200417_024.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	5.093	5517994	5517994	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.008	25603	1269824	2	0.0877	ng/mL	0.0887
PFBS-13C	Auto	4.008	1269824	5517994	1	5.8861	ng/mL	5.0000
PFBS-13C_IS	Auto	4.008	1269824	1269824	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.219	9425	1269824	2	0.0752	ng/mL	0.0941
PFHxS_1	Auto	4.391	19960	740044	3	0.0915	ng/mL	0.0913
PFHxS-18O	Auto	4.393	740044	5517994	1	6.0935	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.393	740044	740044	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.553	20824	740044	3	0.0902	ng/mL	0.0953
PFOS_1	Auto	4.721	15622	1016726	4	0.0907	ng/mL	0.0929
PFOS-13C	Auto	4.722	1016726	5517994	1	5.9477	ng/mL	5.0000
PFOS-13C_IS	Auto	4.722	1016726	1016726	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.899	7647	1016726	4	0.0692	ng/mL	0.0962
PFDS_1	Auto	5.074	12834	1016726	4	0.0797	ng/mL	0.0965
PFBA	Auto	3.373	64584	3377175	5	0.0979	ng/mL	0.1000
PFBA-13C	Auto	3.373	3377175	5517994	1	5.7854	ng/mL	5.0000
PFBA-13C_IS	Auto	3.373	3377175	3377175	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.952	98784	1922304	6	0.0931	ng/mL	0.1000
PFPeA-13C	Auto	3.952	1922304	5517994	1	5.8518	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.952	1922304	1922304	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.208	100000	4981808	7	0.0960	ng/mL	0.1000
PFHxA-13C	Auto	4.210	4981808	5517994	1	5.5363	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.210	4981808	4981808	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.393	114855	5507149	8	0.1066	ng/mL	0.1000
PFHpA-13C	Auto	4.392	5507149	5517994	1	6.7651	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.392	5507149	5507149	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.560	172246	6141668	9	0.1020	ng/mL	0.1000
PFOA-13C	Auto	4.559	6141668	5517994	1	6.2366	ng/mL	5.0000
PFOA-13C_IS	Auto	4.559	6141668	6141668	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.733	87796	4710332	10	0.0999	ng/mL	0.1000
PFNA-13C	Auto	4.732	4710332	5517994	1	6.4067	ng/mL	5.0000
PFNA-13C_IS	Auto	4.732	4710332	4710332	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.913	94690	4085023	11	0.1092	ng/mL	0.1000
PFDA-13C	Auto	4.913	4085023	5517994	1	6.1236	ng/mL	5.0000
PFDA-13C_IS	Auto	4.913	4085023	4085023	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.094	88366	5081945	12	0.0978	ng/mL	0.1000
PFUnA-13C	Auto	5.094	5081945	5517994	1	6.1074	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.094	5081945	5081945	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.269	57024	5949897	13	0.0971	ng/mL	0.1000
PFDoA-13C	Auto	5.269	5949897	5517994	1	6.0696	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.269	5949897	5949897	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.434	91375	4620925	14	0.0982	ng/mL	0.1000
PFTeDA	Auto	5.587	93958	4620925	14	0.0914	ng/mL	0.1000
PFTeDA-13C	Auto	5.588	4620925	5517994	1	5.9081	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.588	4620925	4620925	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.206	67466	2589352	16	0.1088	ng/mL	0.1000
FOSA-13C	Auto	5.206	2589352	5517994	1	5.8053	ng/mL	5.0000
FOSA-13C_IS	Auto	5.206	2589352	2589352	16	5.0000	ng/mL	5.0000
N-MeFOSA	M	5.589	18083	548167	17	0.1026	ng/mL	0.1000
N-MeFOSA-d3	Auto	5.587	548167	5517994	1	5.8639	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.587	548167	548167	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.722	2994	833272	18	0.0905	ng/mL	0.1000
N-EtFOSA-d9	Auto	5.717	833272	5517994	1	5.8979	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.717	833272	833272	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.566	25412	873774	19	0.0965	ng/mL	0.1000
N-MeFOSE-d7	Auto	5.559	873774	5517994	1	5.8177	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.559	873774	873774	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.695	24684	805461	20	0.1055	ng/mL	0.1000
N-EtFOSE-d9	Auto	5.684	805461	5517994	1	5.7687	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.684	805461	805461	20	5.0000	ng/mL	5.0000
N-MeFOSAA	M	5.013	8835	741693	21	0.0958	ng/mL	0.1000
N-MeFOSAA-d3	Auto	5.010	741693	5517994	1	5.8569	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.010	741693	741693	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.114	5615	713608	22	0.0758	ng/mL	0.1000
N-EtFOSAA-d5	Auto	5.106	713608	5517994	1	6.1154	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.106	713608	713608	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.187	7835	420503	23	0.0990	ng/mL	0.0937
4_2-FTS-13C	Auto	4.186	420503	5517994	1	5.6640	ng/mL	5.0000

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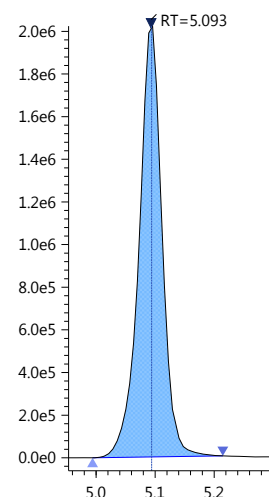
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.186	420503	420503	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.543	10088	453019	24	0.0962	ng/mL	0.0951
6_2-FTS-13C	Auto	4.550	453019	5517994	1	6.1176	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.550	453019	453019	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.913	6097	375644	25	0.0985	ng/mL	0.0960
8_2-FTS-13C	Auto	4.913	375644	5517994	1	6.2570	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.913	375644	375644	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.276	5660	375644	25	0.0937	ng/mL	0.0966
HPFO_DA	Auto	4.277	21665	1632795	26	0.1026	ng/mL	0.1000
HPFO_DA-13C	Auto	4.277	1632795	5517994	1	5.6349	ng/mL	5.0000
HPFO_DA-13C_IS	Auto	4.277	1632795	1632795	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS

Conc 5.0000
Area 5517994

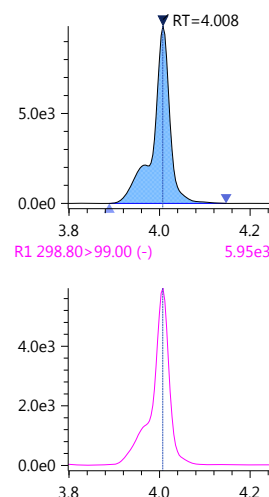
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.0877
Area 25603
R#1 60.23 (0.00)

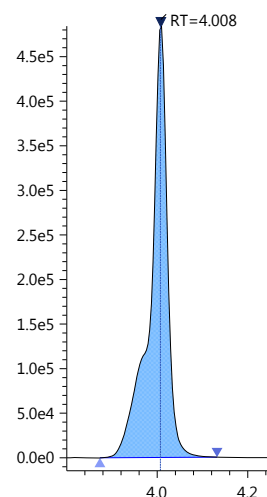
Q 299.00>80.00 (-)



PFBS-13C

Conc 5.8861
Area 1269824

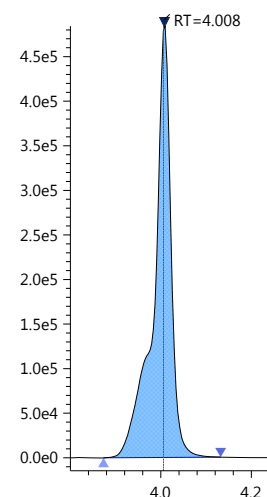
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
Area 1269824

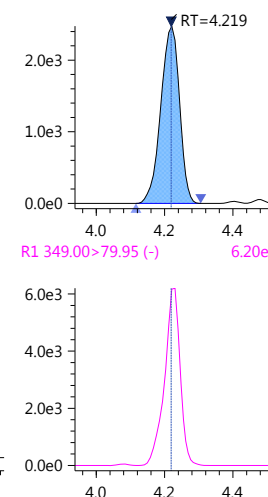
ISTD 301.80>80.00 (-)



PFPeS

Conc 0.0752
Area 9425
R#1 245.51 (0.00)

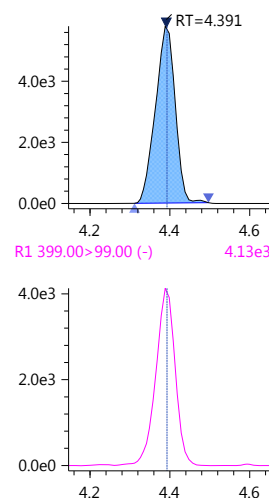
Q 349.00>99.00 (-)



PFHxS_1

Conc 0.0915
Area 19960
R#1 70.52 (0.00)

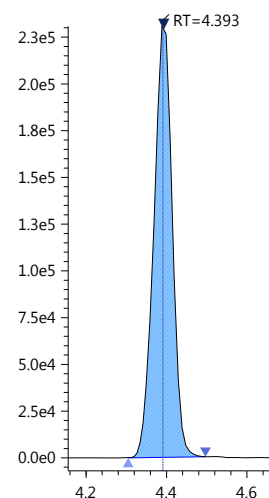
Q 399.00>80.00 (-)



PFHxS-180

Conc 6.0935
Area 740044

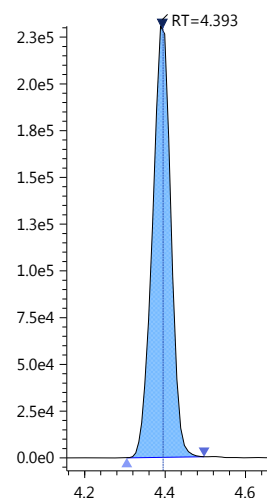
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
Area 740044

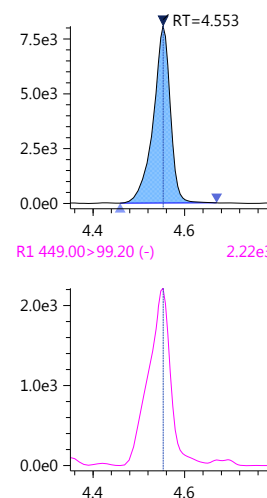
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 0.0902
Area 20824
R#1 26.78 (0.00)

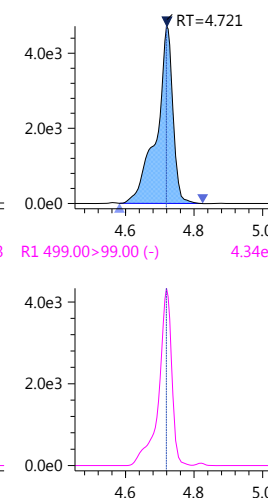
Q 449.00>80.15 (-)



PFOS_1

Conc 0.0907
Area 15622
R#1 89.79 (0.00)

Q 499.00>80.00 (-)

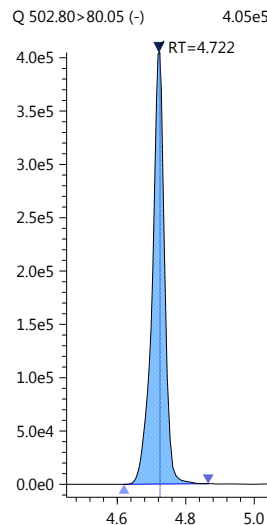


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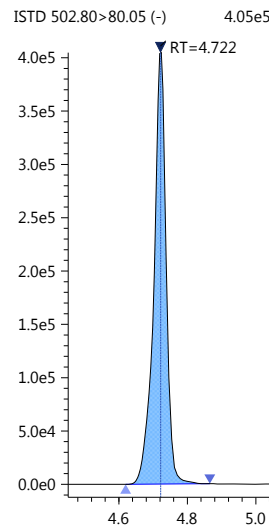
PFOS-13C

Conc 5.9477
 Area 1016726



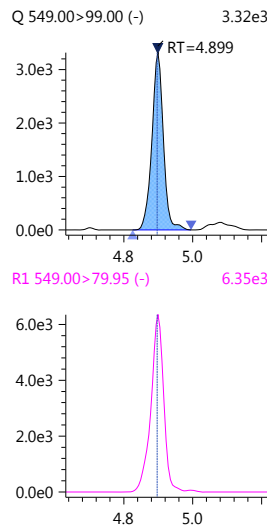
PFOS-13C_IS

Conc 5.0000
 Area 1016726



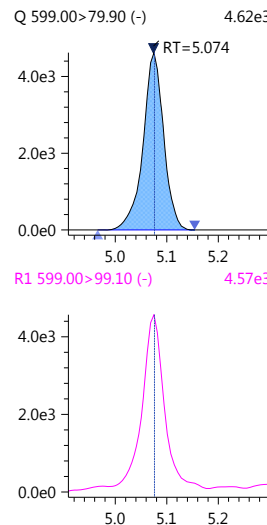
PFNS

Conc 0.0692
 Area 7647
 R#1 187.83 (0.00)



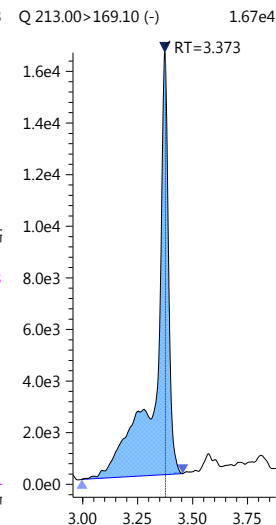
PFDS_1

Conc 0.0797
 Area 12834
 R#1 94.27 (0.00)



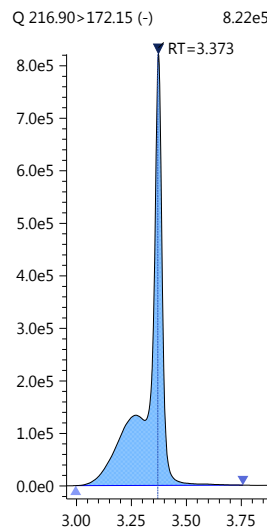
PFBA

Conc 0.0979
 Area 64584



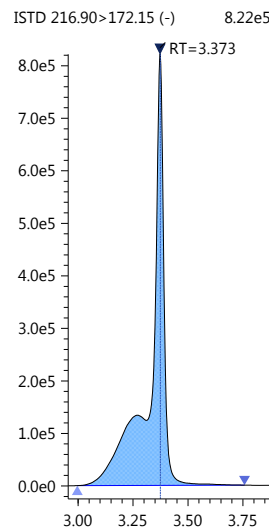
PFBA-13C

Conc 5.7854
 Area 3377175



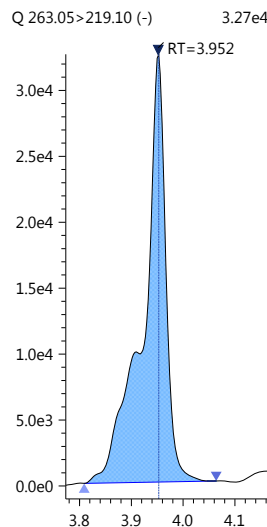
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Conc 5.0000
 Area 3377175



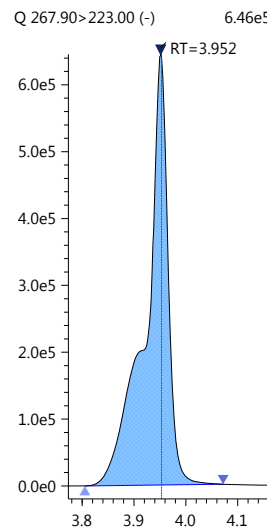
PFPeA

Conc 0.0931
 Area 98784



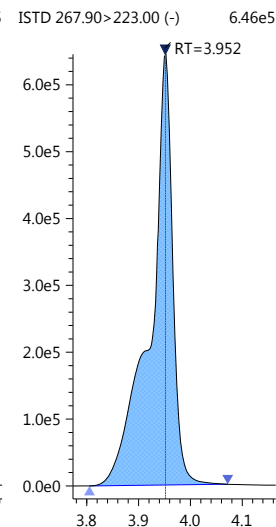
PFPeA-13C

Conc 5.8518
 Area 1922304



PFPeA-13C_IS

Conc 5.0000
 Area 1922304



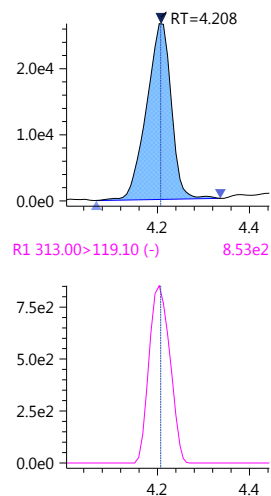
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PFHxA

Conc 0.0960
Area 100000
R#1 3.21 (0.00)

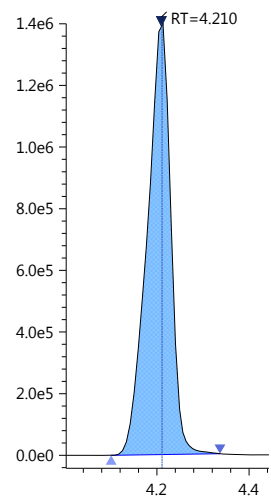
Q 313.00>269.00 (-) 2.68e4



PFHxA-13C

Conc 5.5363
Area 4981808

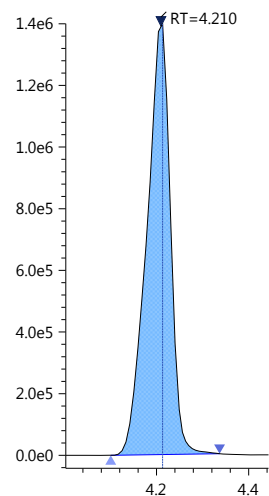
Q 314.90>270.10 (-) 1.40e6



PFHxA-13C_IS

Conc 5.0000
Area 4981808

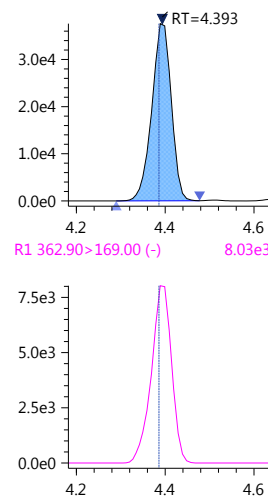
ISTD 314.90>270.10 (-) 1.40e6



PFHpA

Conc 0.1066
Area 114855
R#1 21.49 (0.00)

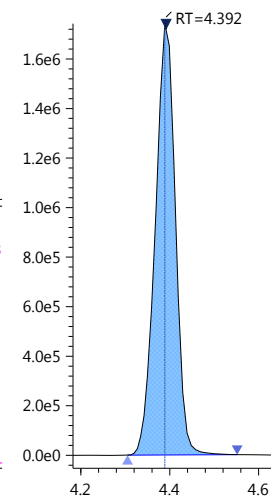
Q 362.90>319.00 (-) 3.76e4



PFHpA-13C

Conc 6.7651
Area 5507149

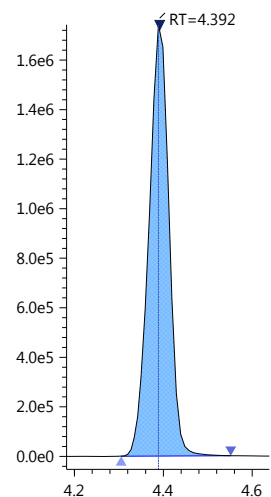
Q 366.90>322.10 (-) 1.74e6



PFHpA-13C_IS

Conc 5.0000
Area 5507149

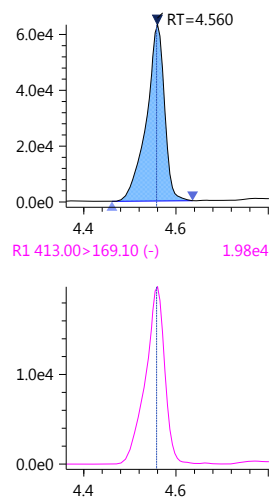
ISTD 366.90>322.10 (-) 1.74e6



PFOA

Conc 0.1020
Area 172246
R#1 31.07 (0.00)

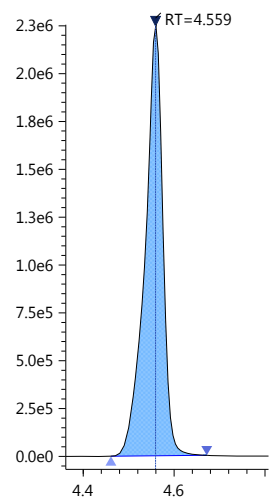
Q 413.00>369.00 (-) 6.35e4



PFOA-13C

Conc 6.2366
Area 6141668

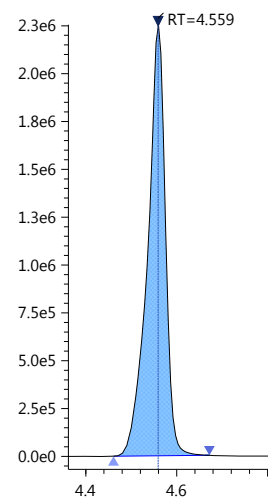
Q 416.80>372.05 (-) 2.26e6



PFOA-13C_IS

Conc 5.0000
Area 6141668

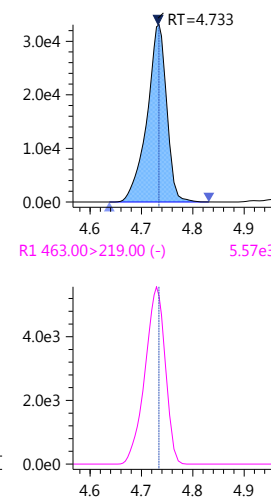
ISTD 416.80>372.05 (-) 2.26e6



PFNA

Conc 0.0999
Area 87796
R#1 15.26 (0.00)

Q 463.00>418.90 (-) 3.31e4



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PFNA-13C

Conc 6.4067
Area 4710332

Q 467.80>423.00 (-)

1.77e6

PFNA-13C_IS

Conc 5.0000
Area 4710332

ISTD 467.80>423.00 (-)

1.77e6

PFDA

Conc 0.1092
Area 94690
R#1 13.57 (0.00)

Q 513.00>468.80 (-)

3.58e4

PFDA-13C

Conc 6.1236
Area 4085023

Q 514.80>469.95 (-)

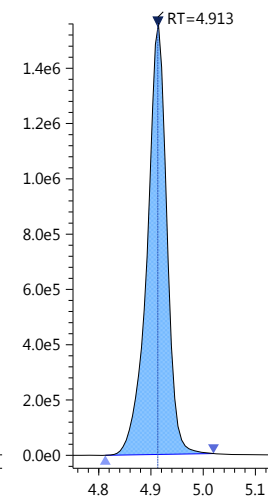
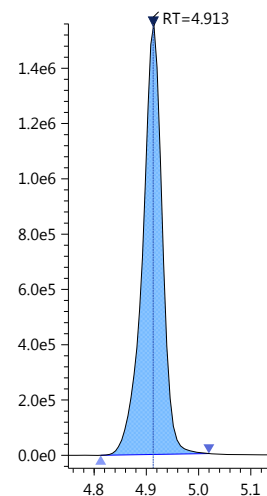
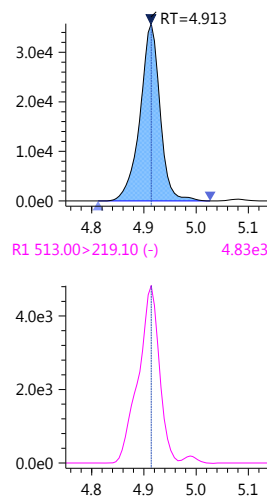
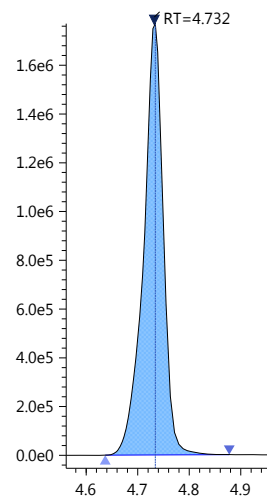
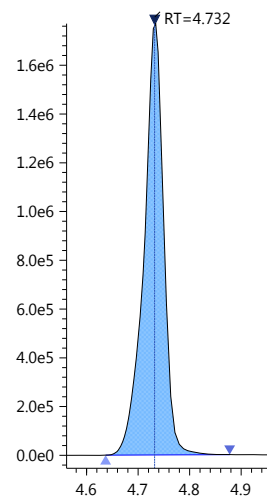
1.56e6

PFDA-13C_IS

Conc 5.0000
Area 4085023

ISTD 514.80>469.95 (-)

1.56e6



PFUnA

Conc 0.0978
Area 88366
R#1 17.79 (0.00)

Q 563.00>518.90 (-)

3.34e4

PFUnA-13C

Conc 6.1074
Area 5081945

Q 564.80>519.95 (-)

1.88e6

PFUnA-13C_IS

Conc 5.0000
Area 5081945

ISTD 564.80>519.95 (-)

1.88e6

PFDaA

Conc 0.0971
Area 57024
R#1 10.74 (0.00)

Q 613.05>569.00 (-)

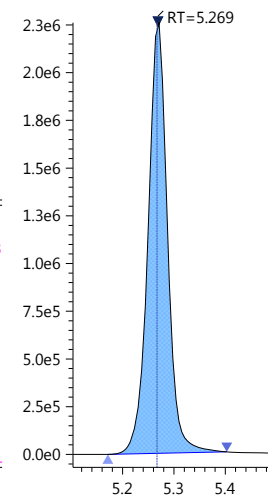
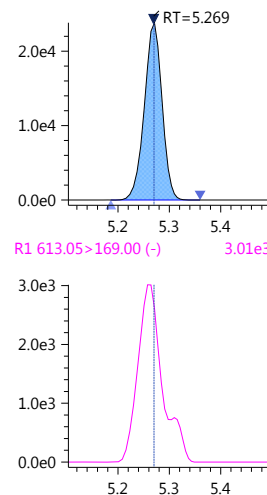
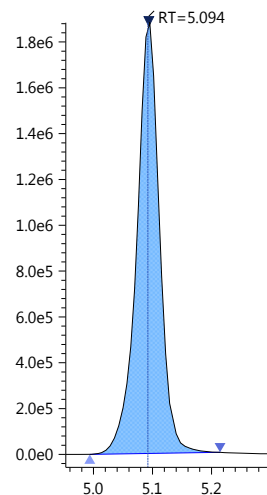
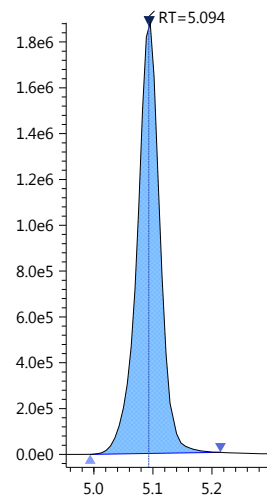
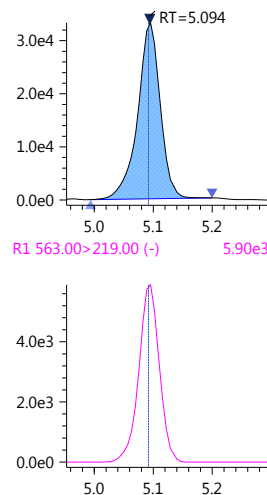
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PFDaA-13C

Conc 6.0696
Area 5949897

Q 614.80>569.95 (-)

2.26e6



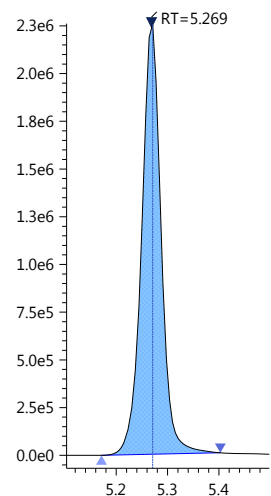
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PFDaA-13C_IS

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Area 5949897

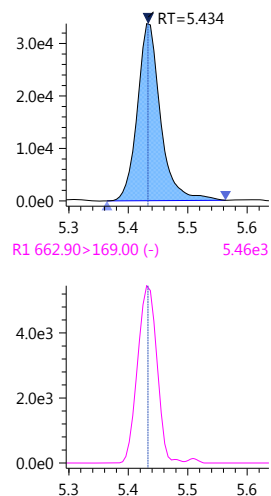
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PFTrDA

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Area 91375
R#1 15.84 (0.00)

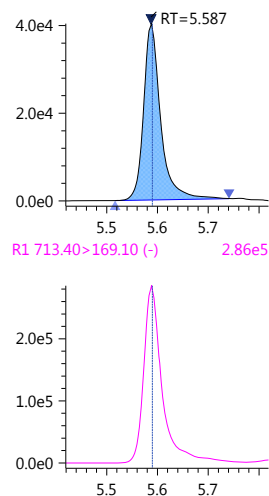
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PFTeDA

Conc 0.0914
Area 93958
R#1 692.14 (0.00)

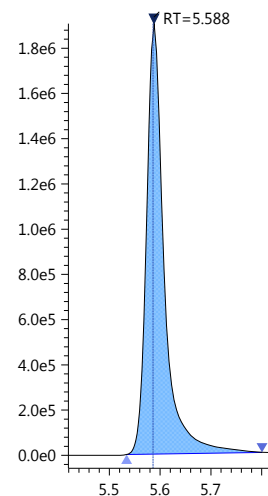
Q 713.40>669.00 (-) 4.04e4



PFTeDA-13C

Conc 5.9081
Area 4620925

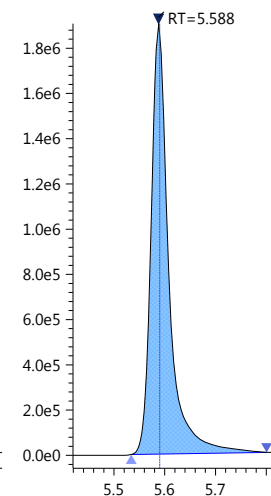
Q 714.70>669.90 (-) 1.91e6



PFTeDA-13C_IS

Conc 5.0000
Area 4620925

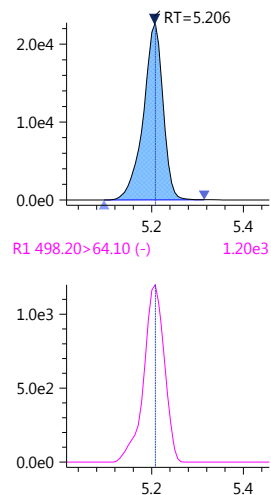
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FOSA

Conc 0.1088
Area 67466
R#1 5.24 (0.00)

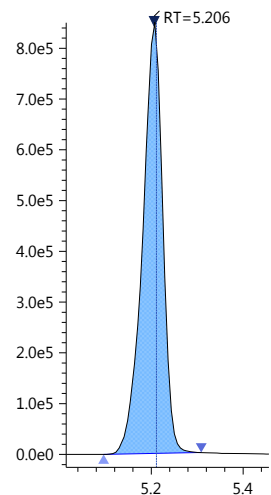
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FOSA-13C

Conc 5.8053
Area 2589352

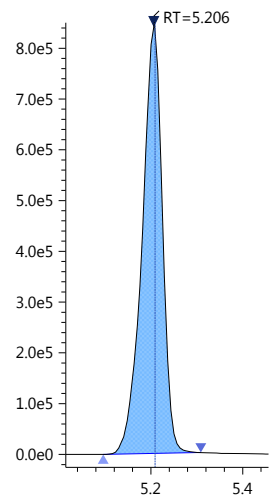
Q 506.00>78.05 (-) 8.50e5



FOSA-13C_IS

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Area 2589352

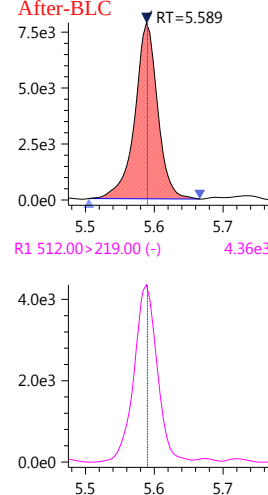
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N-MeFOSA

Conc 0.1026
Area 18083
R#1 53.72 (0.00)

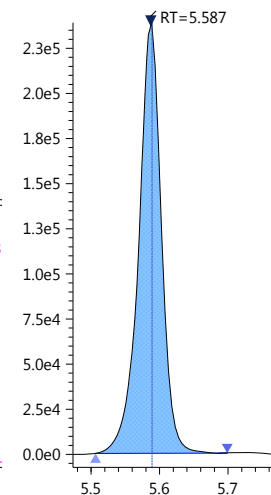
Q 512.00>169.10 (-) 7.92e3



N-MeFOSA-d3

Conc 5.8639
Area 548167

Q 514.90>168.90 (-) 2.39e5



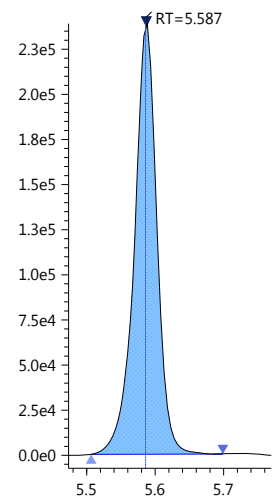
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Area 548167

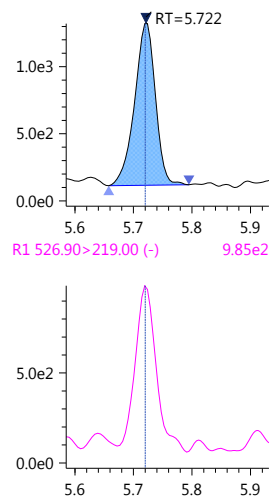
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N-EtFOSA

Conc 0.0905
Area 2994
R#1 76.31 (0.00)

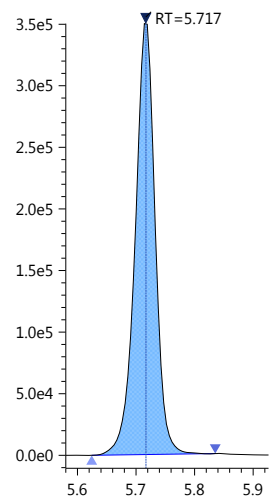
Q 526.90>169.10 (-) 1.32e3



N-EtFOSA-d9

Conc 5.8979
Area 833272

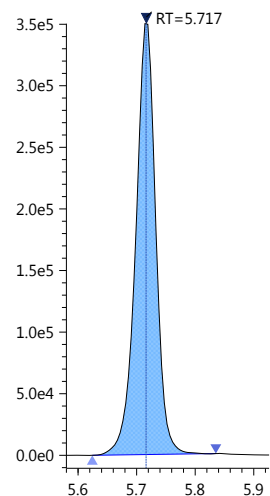
Q 530.90>169.15 (-) 3.50e5



N-EtFOSA-d9_IS

Conc 5.0000
Area 833272

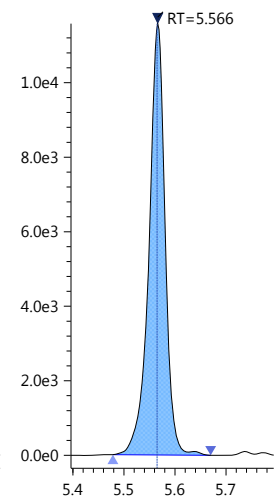
ISTD 530.90>169.15 (-) 3.50e5



N-MeFOSE

Conc 0.0965
Area 25412

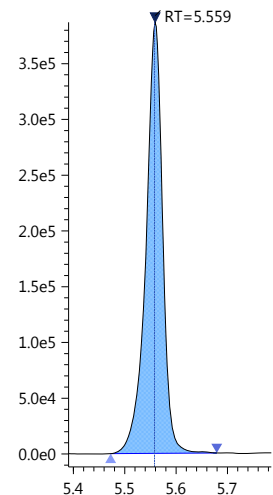
Q 616.00>59.00 (-) 1.16e4



N-MeFOSE-d7

Conc 5.8177
Area 873774

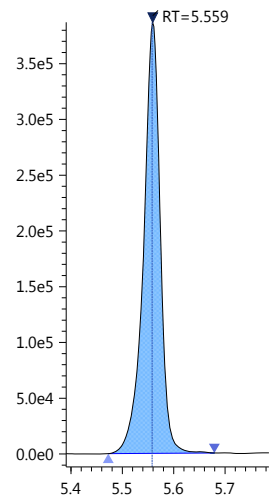
Q 622.70>59.10 (-) 3.87e5



N-MeFOSE-d7_IS

Conc 5.0000
Area 873774

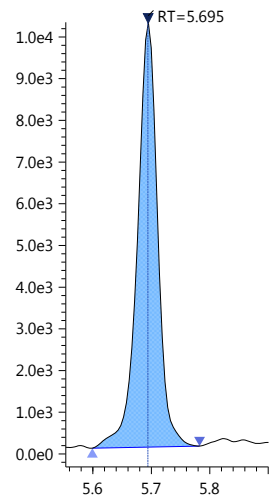
ISTD 622.70>59.10 (-) 3.87e5



N-EtFOSE

Conc 0.1055
Area 24684

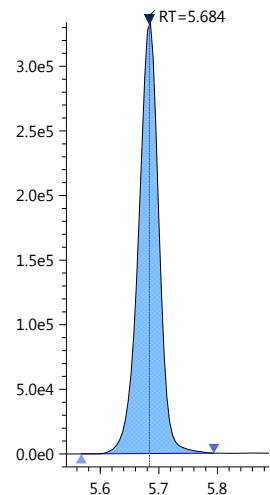
Q 630.00>58.90 (-) 1.04e4



N-EtFOSE-d9

Conc 5.7687
Area 805461

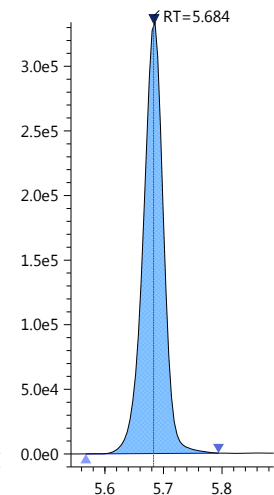
Q 638.70>59.10 (-) 3.34e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 805461

ISTD 638.70>59.10 (-) 3.34e5



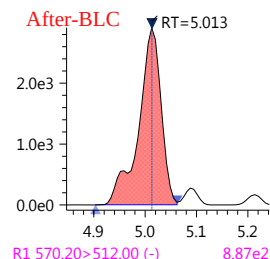
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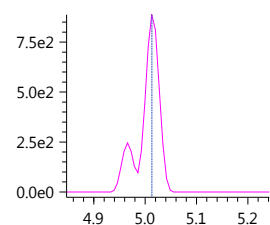
N-MeFOSAA

Conc 0.0958
Area 8835
R#1 31.28 (0.00)

Q 570.20>419.05 (-) 2.91e3



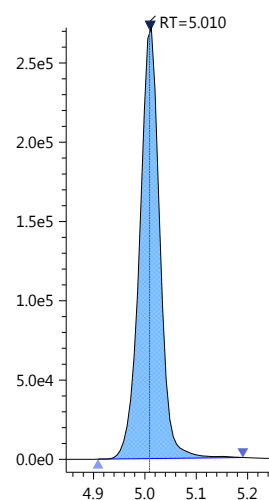
R1 570.20>512.00 (-) 8.87e2



N-MeFOSAA-d3

Conc 5.8569
Area 741693

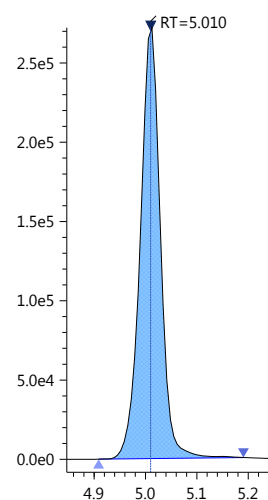
Q 572.80>419.05 (-) 2.72e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 741693

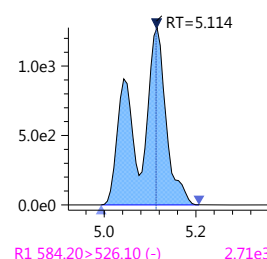
ISTD 572.80>419.05 (-) 2.72e5



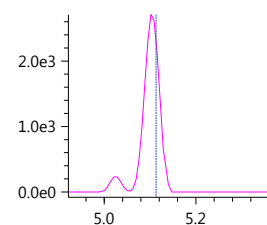
N-EtFOSAA

Conc 0.0758
Area 5615
R#1 162.57 (0.00)

Q 584.20>418.95 (-) 1.28e3



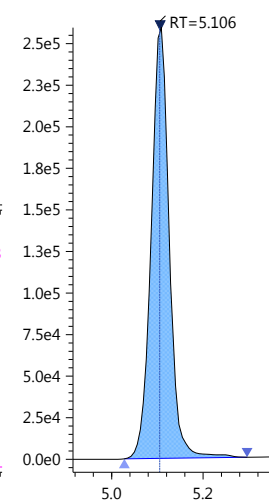
R1 584.20>526.10 (-) 2.71e3



N-EtFOSAA-d5

Conc 6.1154
Area 713608

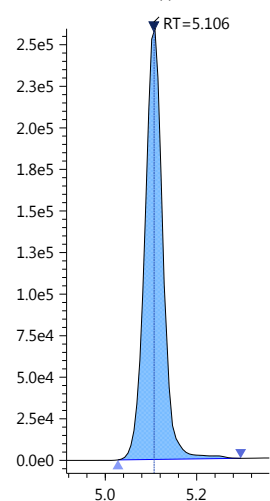
Q 588.80>419.00 (-) 2.60e5



N-EtFOSAA-d5_IS

Conc 5.0000
Area 713608

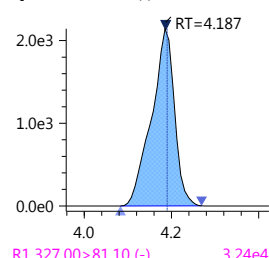
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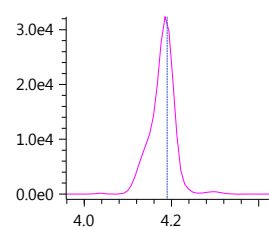
4_2-FTS_1

Conc 0.0990
Area 7835
R#1 1496.76 (0.00)

Q 327.00>307.05 (-) 2.14e3



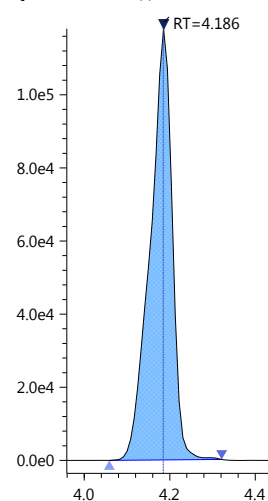
R1 327.00>81.10 (-) 3.24e4



4_2-FTS-13C

Conc 5.6640
Area 420503

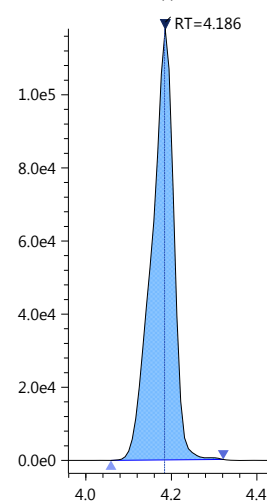
Q 328.80>309.05 (-) 1.18e5



4_2-FTS-13C_IS

Conc 5.0000
Area 420503

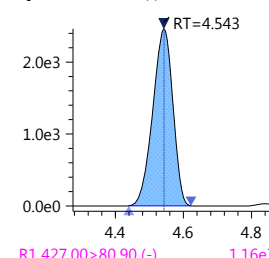
ISTD 328.80>309.05 (-) 1.18e5



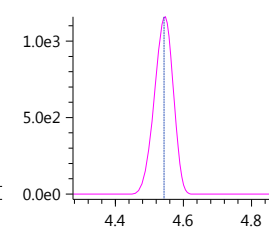
6_2-FTS_1

Conc 0.0962
Area 10088
R#1 45.20 (0.00)

Q 427.00>407.00 (-) 2.46e3



R1 427.00>80.90 (-) 1.16e3

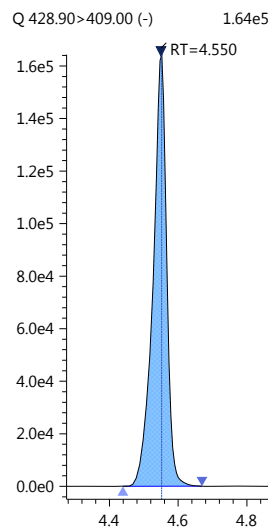


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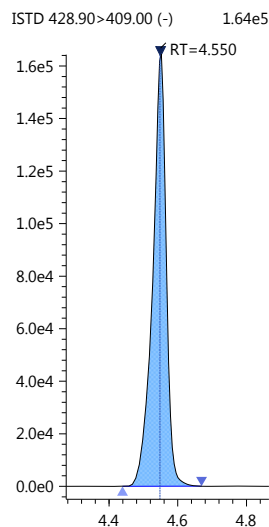
6_2-FTS-13C

Conc 6.1176
Area 453019



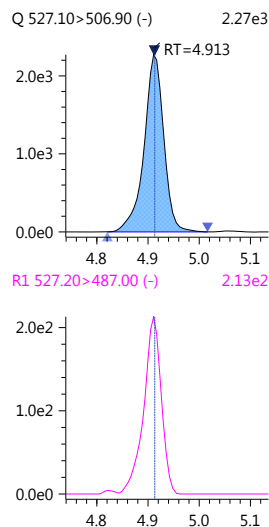
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Conc 5.0000
Area 453019



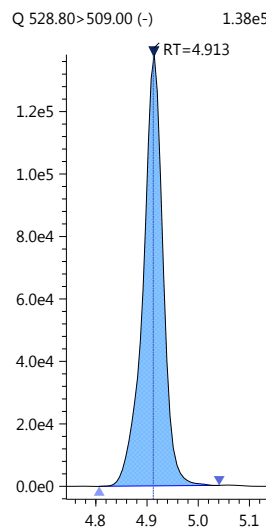
8_2-FTS_1

Conc 0.0985
Area 6097
R#1 9.40 (0.00)



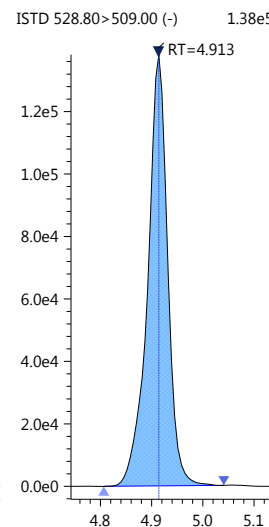
8_2-FTS-13C

Conc 6.2570
Area 375644



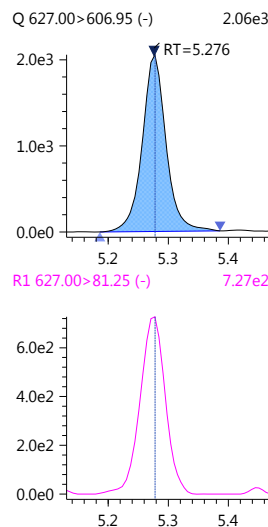
8_2-FTS-13C_IS

Conc 5.0000
Area 375644



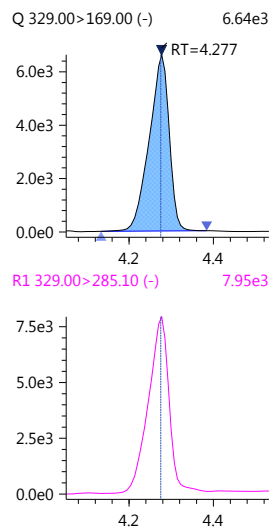
10_2-FtS_1

Conc 0.0937
Area 5660
R#1 34.99 (0.00)



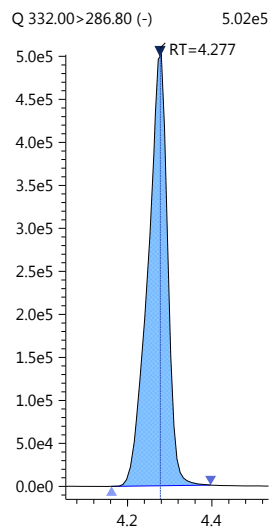
HPFO_DA

Conc 0.1026
Area 21665
R#1 119.09 (0.00)



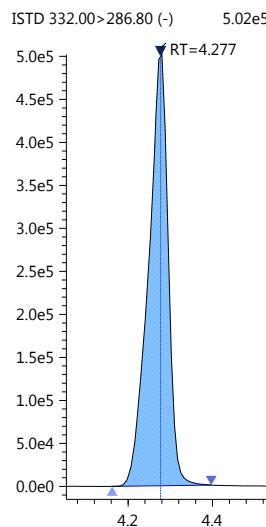
HPFO_DA-13C

Conc 5.6349
Area 1632795



HPFO_DA-13C_IS

Conc 5.0000
Area 1632795



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200417_024

Sample ID: 0.10 PPB ICAL

Date acquired: 4/17/2020 5:45:41 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_curve\200417_024.lcd

Vial: 2 | Inj. Volume: 15.0000uL | Tray: 0

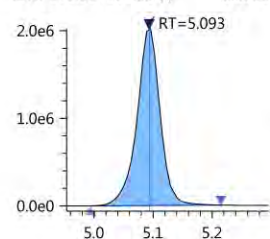
13C7-PFUnDA_IS

Conc 5.0000

Area 5517994

ISTD 570.00>525.00 (-)

2.02e6



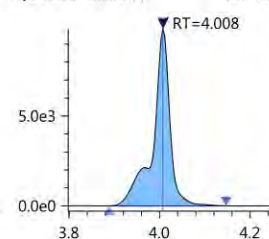
PFBS_1

Conc 0.0877

Area 25603

Q 299.00>80.00 (-)

9.86e3



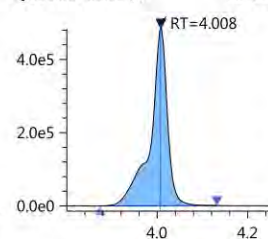
PFBS-13C

Conc 5.8861

Area 1269824

Q 301.80>80.00 (-)

4.84e5



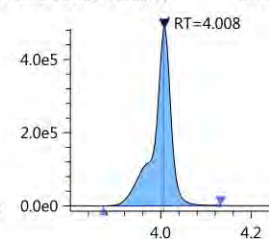
PFBS-13C_IS

Conc 5.0000

Area 1269824

ISTD 301.80>80.00 (-)

4.84e5



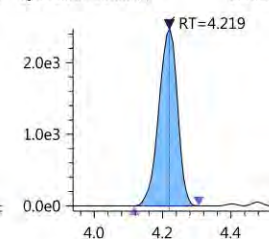
PFPeS

Conc 0.0752

Area 9425

Q 349.00>99.00 (-)

2.48e3



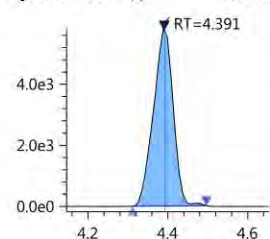
PFHxS_1

Conc 0.0915

Area 19960

Q 399.00>80.00 (-)

5.81e3



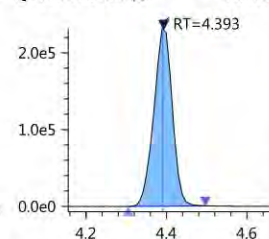
PFHxS-180

Conc 6.0935

Area 740044

Q 402.70>84.05 (-)

2.31e5



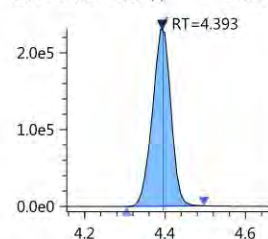
PFHxS-180_IS

Conc 5.0000

Area 740044

ISTD 402.70>84.05 (-)

2.31e5



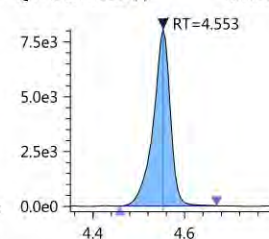
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Conc 0.0902

Area 20824

Q 449.00>80.15 (-)

8.08e3



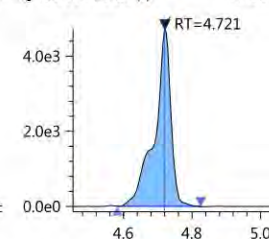
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Conc 0.0907

Area 15622

Q 499.00>80.00 (-)

4.72e3



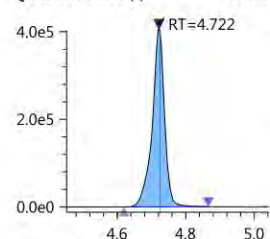
PFOS-13C

Conc 5.9477

Area 1016726

Q 502.80>80.05 (-)

4.05e5



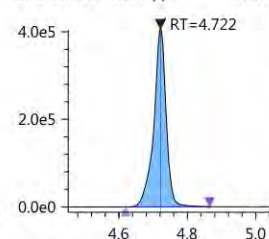
PFOS-13C_IS

Conc 5.0000

Area 1016726

ISTD 502.80>80.05 (-)

4.05e5



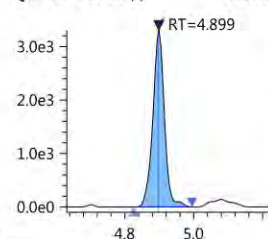
PFNS

Conc 0.0692

Area 7647

Q 549.00>99.00 (-)

3.32e3



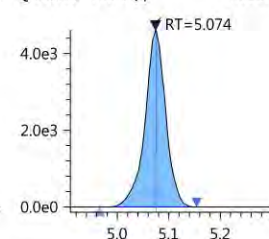
PFDS_1

Conc 0.0797

Area 12834

Q 599.00>79.90 (-)

4.62e3



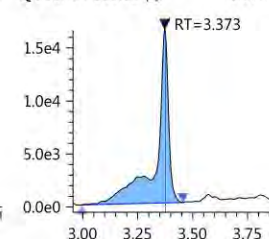
PFBA

Conc 0.0979

Area 64584

Q 213.00>169.10 (-)

1.67e4



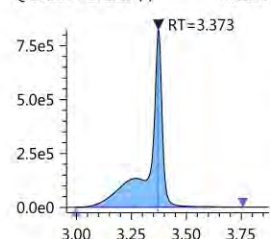
PFBA-13C

Conc 5.7854

Area 3377175

Q 216.90>172.15 (-)

8.22e5



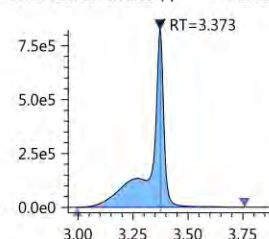
PFBA-13C_IS

Conc 5.0000

Area 3377175

ISTD 216.90>172.15 (-)

8.22e5



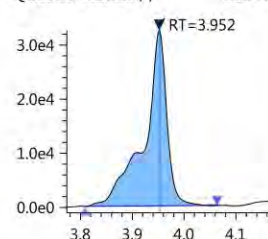
PFPeA

Conc 0.0931

Area 98784

Q 263.05>219.10 (-)

3.27e4



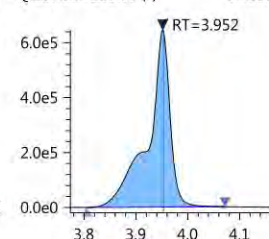
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Conc 5.8518

Area 1922304

Q 267.90>223.00 (-)

6.46e5



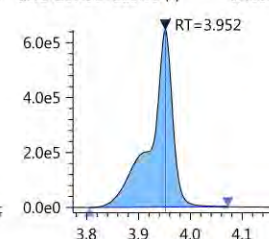
PFPeA-13C_IS

Conc 5.0000

Area 1922304

ISTD 267.90>223.00 (-)

6.46e5

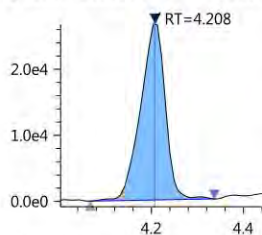


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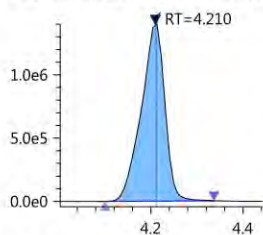
PFHxA

Conc 0.0960
Area 100000
Q 313.00>269.00 (-)



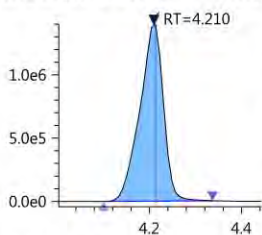
PFHxA-13C

Conc 5.5363
Area 4981808
Q 314.90>270.10 (-)



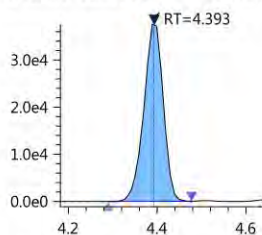
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Conc 5.0000
Area 4981808
ISTD 314.90>270.10 (-)



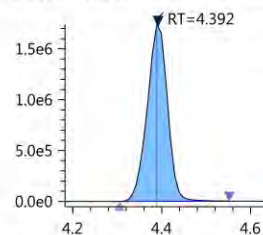
PFHpA

Conc 0.1069
Area 114855
Q 362.90>319.00 (-)



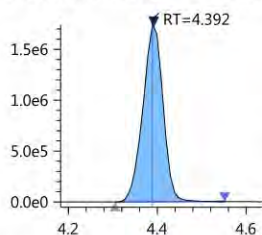
PFHpA-13C

Conc 6.7651
Area 5507149
Q 366.90>322.10 (-)



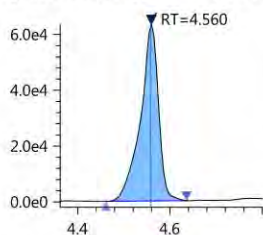
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Conc 5.0000
Area 5507149
ISTD 366.90>322.10 (-)



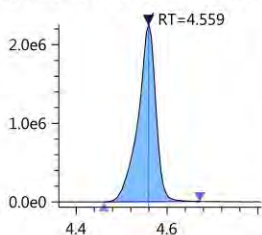
PFOA

Conc 0.1031
Area 172246
Q 413.00>369.00 (-)



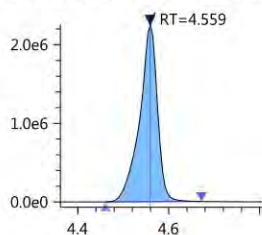
PFOA-13C

Conc 6.2366
Area 6141668
Q 416.80>372.05 (-)



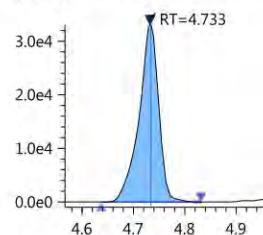
PFOA-13C_IS

Conc 5.0000
Area 6141668
ISTD 416.80>372.05 (-)



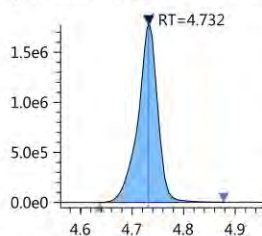
PFNA

Conc 0.0999
Area 87796
Q 463.00>418.90 (-)



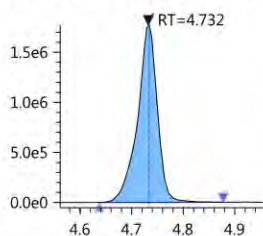
PFNA-13C

Conc 6.4067
Area 4710332
Q 467.80>423.00 (-)



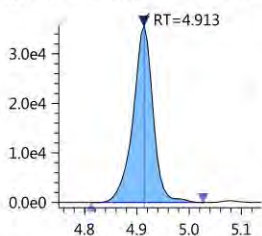
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Conc 5.0000
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ISTD 467.80>423.00 (-)



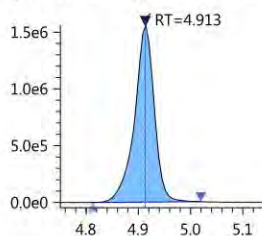
PFDA

Conc 0.1092
Area 94690
Q 513.00>468.80 (-)



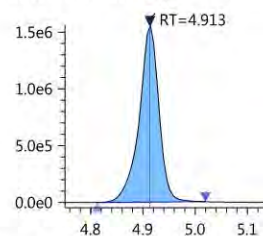
PFDA-13C

Conc 6.1236
Area 4085023
Q 514.80>469.95 (-)



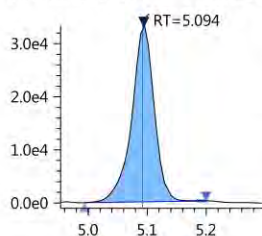
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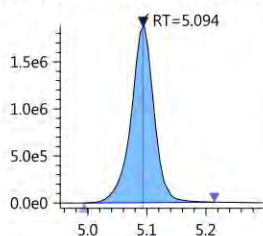
PFUnA

Conc 0.0978
Area 88366
Q 563.00>518.90 (-)



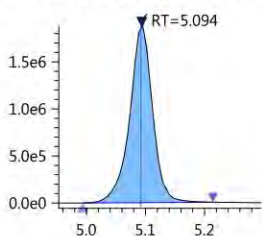
PFUnA-13C

Conc 6.1074
Area 5081945
Q 564.80>519.95 (-)



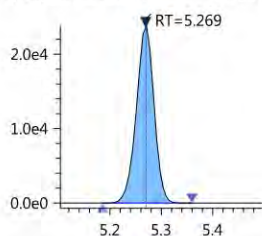
PFUnA-13C_IS

Conc 5.0000
Area 5081945
ISTD 564.80>519.95 (-)



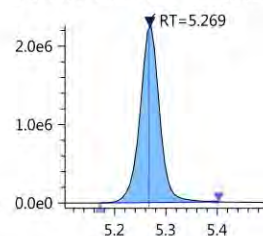
PFDoA

Conc 0.0971
Area 57024
Q 613.05>569.00 (-)



PFDoA-13C

Conc 6.0696
Area 5949897
Q 614.80>569.95 (-)



Insight Report

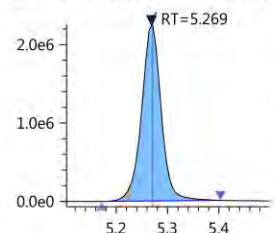
Printed at 4/18/2020 10:35:59 AM

PFDa-13C_IS

Conc 5.0000

Area 5949897

ISTD 614.80>569.95 (-) 2.26e6

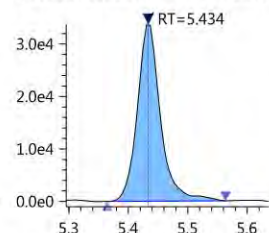


PFTrDA

Conc 0.0982

Area 91375

Q 663.00>618.90 (-) 3.38e4

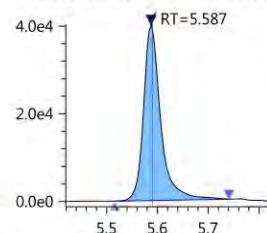


PFTeDA

Conc 0.0957

Area 93958

Q 713.40>669.00 (-) 4.04e4

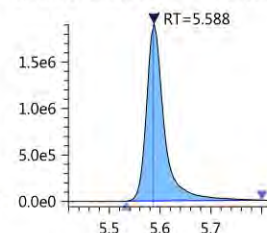


PFTeDA-13C

Conc 5.9081

Area 4620925

Q 714.70>669.90 (-) 1.91e6

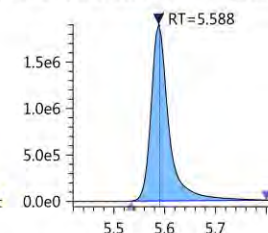


PFTeDA-13C_IS

Conc 5.0000

Area 4620925

ISTD 714.70>669.90 (-) 1.91e6

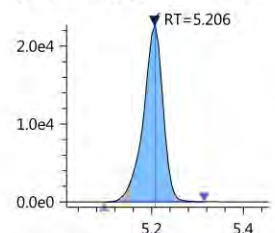


FOSA

Conc 0.1088

Area 67466

Q 498.20>78.00 (-) 2.28e4

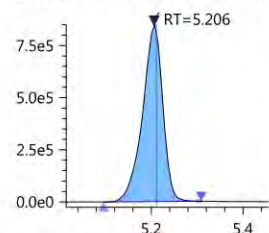


FOSA-13C

Conc 5.8053

Area 2589352

Q 506.00>78.05 (-) 8.50e5

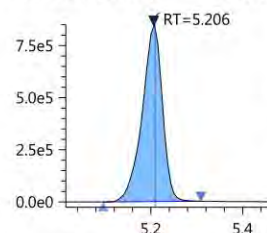


FOSA-13C_IS

Conc 5.0000

Area 2589352

ISTD 506.00>78.05 (-) 8.50e5

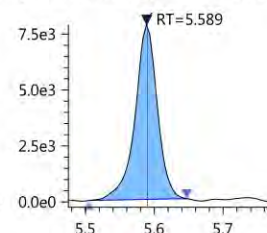


N-MeFOSA

Conc 0.1019

Area 17580

Q 512.00>169.10 (-) 7.92e3

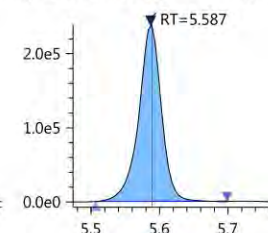


N-MeFOSA-d3

Conc 5.8639

Area 548167

Q 514.90>168.90 (-) 2.39e5

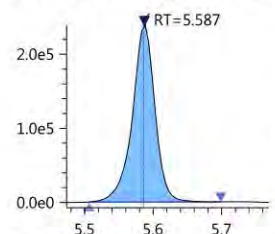


N-MeFOSA-d3_IS

Conc 5.0000

Area 548167

ISTD 514.90>168.90 (-) 2.39e5

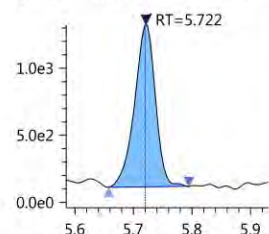


N-EtFOSA

Conc 0.0896

Area 2994

Q 526.90>169.10 (-) 1.32e3

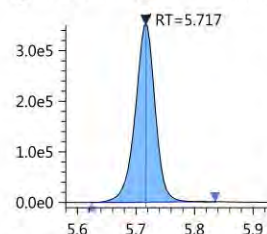


N-EtFOSA-d9

Conc 5.8979

Area 833272

Q 530.90>169.15 (-) 3.50e5

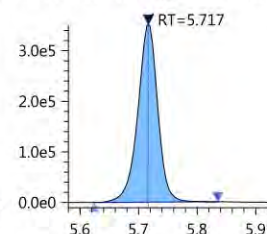


N-EtFOSA-d9_IS

Conc 5.0000

Area 833272

ISTD 530.90>169.15 (-) 3.50e5

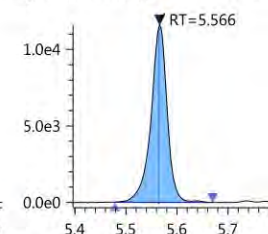


N-MeFOSE

Conc 0.0965

Area 25412

Q 616.00>59.00 (-) 1.16e4

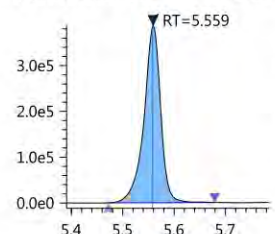


N-MeFOSE-d7

Conc 5.8177

Area 873774

Q 622.70>59.10 (-) 3.87e5

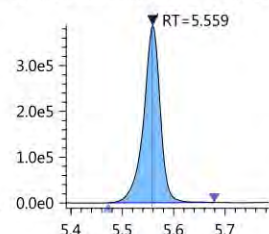


N-MeFOSE-d7_IS

Conc 5.0000

Area 873774

ISTD 622.70>59.10 (-) 3.87e5

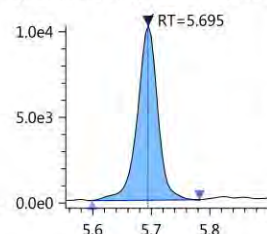


N-EtFOSE

Conc 0.1055

Area 24684

Q 630.00>58.90 (-) 1.04e4

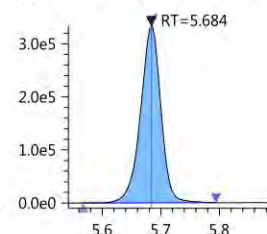


N-EtFOSE-d9

Conc 5.7687

Area 805461

Q 638.70>59.10 (-) 3.34e5

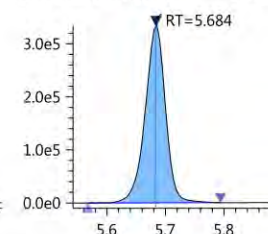


N-EtFOSE-d9_IS

Conc 5.0000

Area 805461

ISTD 638.70>59.10 (-) 3.34e5



Insight Report

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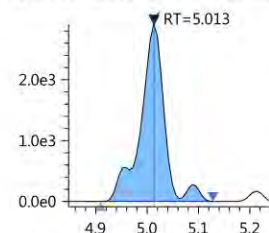
N-MeFOSAA

Conc 0.1007

Area 9360

Q 570.20>419.00 (-)

2.91e3



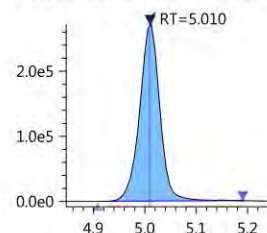
N-MeFOSAA-d3

Conc 5.8569

Area 741693

Q 572.80>419.05 (-)

2.72e5



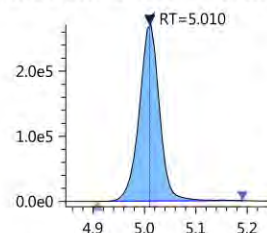
N-MeFOSAA-d3_IS

Conc 5.0000

Area 741693

ISTD 572.80>419.05 (-)

2.72e5



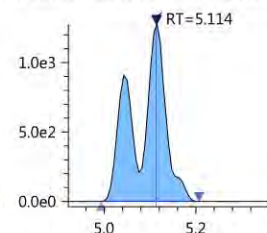
N-EtFOSAA

Conc 0.0854

Area 5615

Q 584.20>418.95 (-)

1.28e3



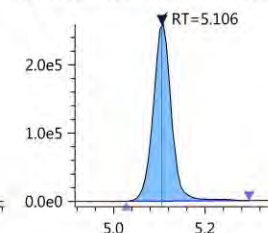
N-EtFOSAA-d5

Conc 6.1154

Area 713608

Q 588.80>419.00 (-)

2.60e5



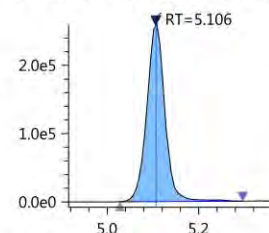
N-EtFOSAA-d5_IS

Conc 5.0000

Area 713608

ISTD 588.80>419.00 (-)

2.60e5



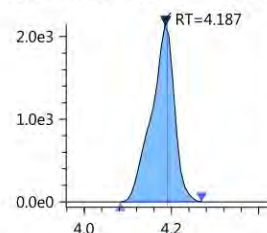
4_2-FTS_1

Conc 0.1000

Area 7835

Q 327.00>307.05 (-)

2.14e3



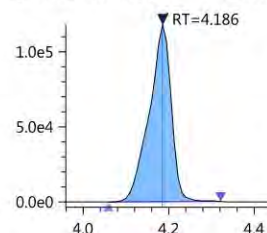
4_2-FTS-13C

Conc 5.6640

Area 420503

Q 328.80>309.05 (-)

1.18e5



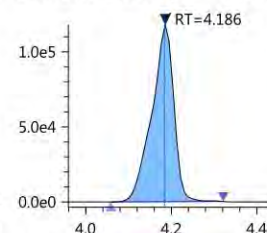
4_2-FTS-13C_IS

Conc 5.0000

Area 420503

ISTD 328.80>309.05 (-)

1.18e5



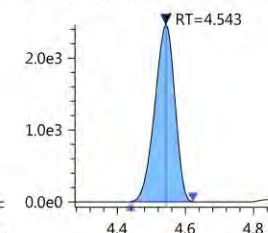
6_2-FTS_1

Conc 0.0962

Area 10088

Q 427.00>407.00 (-)

2.46e3



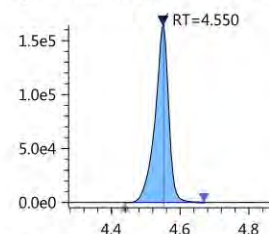
6_2-FTS-13C

Conc 6.1176

Area 453019

Q 428.90>409.00 (-)

1.64e5



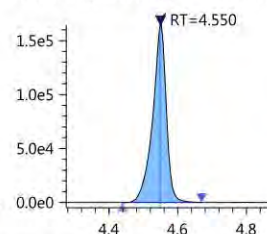
6_2-FTS-13C_IS

Conc 5.0000

Area 453019

ISTD 428.90>409.00 (-)

1.64e5



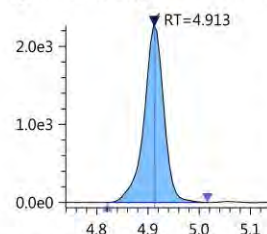
8_2-FTS_1

Conc 0.0985

Area 6097

Q 527.10>506.90 (-)

2.27e3



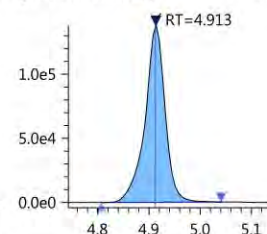
8_2-FTS-13C

Conc 6.2570

Area 375644

Q 528.80>509.00 (-)

1.38e5



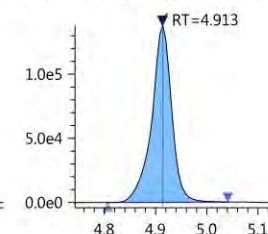
8_2-FTS-13C_IS

Conc 5.0000

Area 375644

ISTD 528.80>509.00 (-)

1.38e5



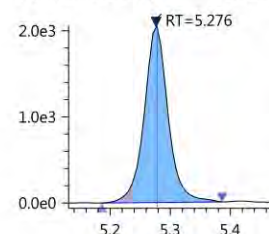
10_2-FTS_1

Conc 0.0937

Area 5660

Q 627.00>606.95 (-)

2.06e3



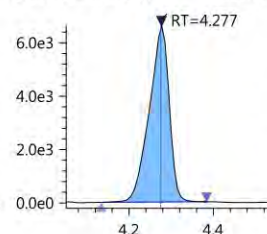
HPFO_DA

Conc 0.1026

Area 21665

Q 329.00>169.00 (-)

6.64e3



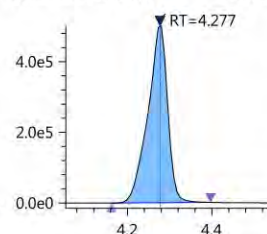
HPFO_DA-13C

Conc 5.6349

Area 1632795

Q 332.00>286.80 (-)

5.02e5



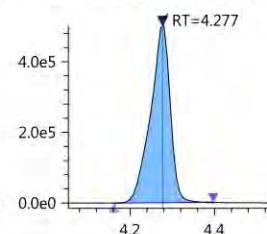
HPFO_DA-13C_IS

Conc 5.0000

Area 1632795

ISTD 332.00>286.80 (-)

5.02e5



Insight Report

Printed at 4/18/2020 11:14:21 AM

200417_025

Sample ID: 0.50 PPB ICAL

Date acquired: 4/17/2020 5:56:08 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_cuvre\200417_025.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	5.097	6897022	6897022	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.013	118310	1200646	2	0.4284	ng/mL	0.4437
PFBS-13C	Auto	4.013	1200646	6897022	1	4.4527	ng/mL	5.0000
PFBS-13C_IS	Auto	4.013	1200646	1200646	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.232	64362	1200646	2	0.5433	ng/mL	0.4705
PFHxS_1	Auto	4.398	80935	687342	3	0.4565	ng/mL	0.4565
PFHxS-18O	Auto	4.399	687342	6897022	1	4.5280	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.399	687342	687342	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.557	102729	687342	3	0.4793	ng/mL	0.4767
PFOS_1	Auto	4.727	76846	962413	4	0.4713	ng/mL	0.4646
PFOS-13C	Auto	4.727	962413	6897022	1	4.5043	ng/mL	5.0000
PFOS-13C_IS	Auto	4.727	962413	962413	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.902	51376	962413	4	0.4559	ng/mL	0.4808
PFDS_1	Auto	5.079	76132	962413	4	0.4996	ng/mL	0.4823
PFBA	Auto	3.376	312792	3163595	5	0.5063	ng/mL	0.5000
PFBA-13C	Auto	3.375	3163595	6897022	1	4.3359	ng/mL	5.0000
PFBA-13C_IS	Auto	3.375	3163595	3163595	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.957	411151	1857002	6	0.4997	ng/mL	0.5000
PFPeA-13C	Auto	3.957	1857002	6897022	1	4.5227	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.957	1857002	1857002	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.216	536819	5353201	7	0.5046	ng/mL	0.5000
PFHxA-13C	Auto	4.215	5353201	6897022	1	4.7595	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.215	5353201	5353201	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.398	453245	4774295	8	0.5215	ng/mL	0.5000
PFHpA-13C	Auto	4.397	4774295	6897022	1	4.6922	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.397	4774295	4774295	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.564	763778	5867099	9	0.5040	ng/mL	0.5000
PFOA-13C	Auto	4.564	5867099	6897022	1	4.7665	ng/mL	5.0000
PFOA-13C_IS	Auto	4.564	5867099	5867099	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.737	368671	4331689	10	0.4721	ng/mL	0.5000
PFNA-13C	Auto	4.738	4331689	6897022	1	4.7137	ng/mL	5.0000
PFNA-13C_IS	Auto	4.738	4331689	4331689	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.919	411289	3952613	11	0.4900	ng/mL	0.5000
PFDA-13C	Auto	4.918	3952613	6897022	1	4.7404	ng/mL	5.0000
PFDA-13C_IS	Auto	4.918	3952613	3952613	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.097	402446	4843874	12	0.5197	ng/mL	0.5000
PFUnA-13C	Auto	5.098	4843874	6897022	1	4.6574	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.098	4843874	4843874	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.271	328853	5527105	13	0.5341	ng/mL	0.5000
PFDoA-13C	Auto	5.272	5527105	6897022	1	4.5110	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.272	5527105	5527105	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.438	459257	4626309	14	0.5109	ng/mL	0.5000
PFTeDA	Auto	5.592	247584	4626309	14	0.4713	ng/mL	0.5000
PFTeDA-13C	Auto	5.592	4626309	6897022	1	4.7323	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.592	4626309	4626309	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.211	321308	2569875	16	0.5220	ng/mL	0.5000
FOSA-13C	Auto	5.211	2569875	6897022	1	4.6096	ng/mL	5.0000
FOSA-13C_IS	Auto	5.211	2569875	2569875	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.595	84344	508856	17	0.5156	ng/mL	0.5000
N-MeFOSA-d3	Auto	5.591	508856	6897022	1	4.3550	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.591	508856	508856	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.726	16646	767765	18	0.5463	ng/mL	0.5000
N-EtFOSA-d9	Auto	5.721	767765	6897022	1	4.3477	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.721	767765	767765	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.572	131144	825376	19	0.5274	ng/mL	0.5000
N-MeFOSE-d7	Auto	5.564	825376	6897022	1	4.3967	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.564	825376	825376	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.698	113523	786093	20	0.4971	ng/mL	0.5000
N-EtFOSE-d9	Auto	5.689	786093	6897022	1	4.5043	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.689	786093	786093	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.016	44734	690312	21	0.5212	ng/mL	0.5000
N-MeFOSAA-d3	Auto	5.015	690312	6897022	1	4.3612	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.015	690312	690312	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.114	38193	668397	22	0.5502	ng/mL	0.5000
N-EtFOSAA-d5	Auto	5.111	668397	6897022	1	4.5827	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.111	668397	668397	22	5.0000	ng/mL	5.0000
4_2-FTS_1	M	4.189	40013	414737	23	0.5128	ng/mL	0.4686
4_2-FTS-13C	Auto	4.189	414737	6897022	1	4.4694	ng/mL	5.0000

Insight Report

Printed at 4/18/2020 11:14:21 AM

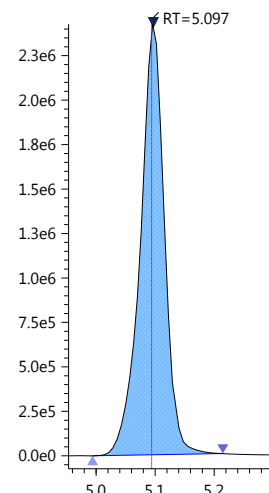
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Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.189	414737	414737	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.551	53234	431434	24	0.5330	ng/mL	0.4756
6_2-FTS-13C	Auto	4.555	431434	6897022	1	4.6612	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.555	431434	431434	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.918	30672	354860	25	0.5244	ng/mL	0.4800
8_2-FTS-13C	Auto	4.918	354860	6897022	1	4.7289	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.918	354860	354860	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.280	30256	354860	25	0.5303	ng/mL	0.4831
HPFO_DA	Auto	4.282	105602	1666795	26	0.4897	ng/mL	0.5000
HPFO_DA-13C	Auto	4.282	1666795	6897022	1	4.6021	ng/mL	5.0000
HPFO_DA-13C_IS	Auto	4.282	1666795	1666795	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS

Conc 5.0000
Area 6897022

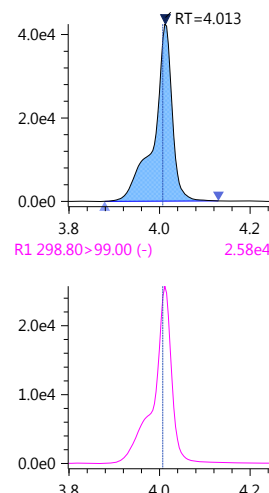
ISTD 570.00>525.00 (-) 2.43e6



PFBS_1

Conc 0.4284
Area 118310
R#1 61.14 (0.00)

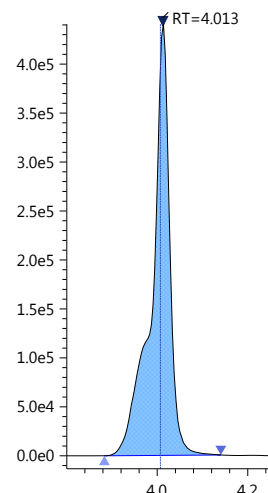
Q 299.00>80.00 (-) 4.25e4



PFBS-13C

Conc 4.4527
Area 1200646

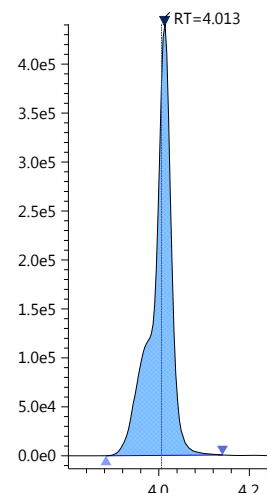
Q 301.80>80.00 (-) 4.41e5



PFBS-13C_IS

Conc 5.0000
Area 1200646

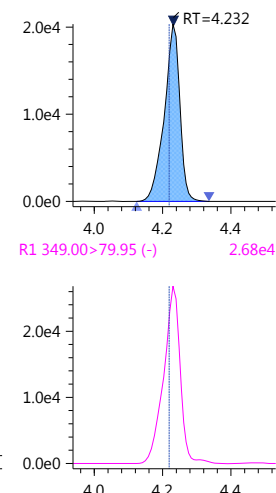
ISTD 301.80>80.00 (-) 4.41e5



PFPeS

Conc 0.5433
Area 64362
R#1 131.51 (0.00)

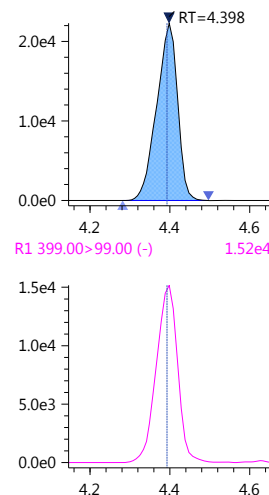
Q 349.00>99.00 (-) 2.03e4



PFHxS_1

Conc 0.4565
Area 80935
R#1 68.30 (0.00)

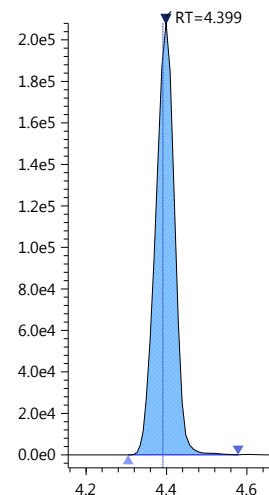
Q 399.00>80.00 (-) 2.23e4



PFHxS-180

Conc 4.5280
Area 687342

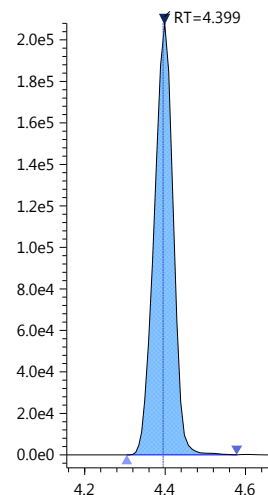
Q 402.70>84.05 (-) 2.08e5



PFHxS-180_IS

Conc 5.0000
Area 687342

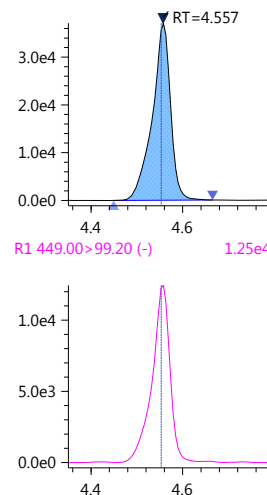
ISTD 402.70>84.05 (-) 2.08e5



PFHpS_1

Conc 0.4793
Area 102729
R#1 33.49 (0.00)

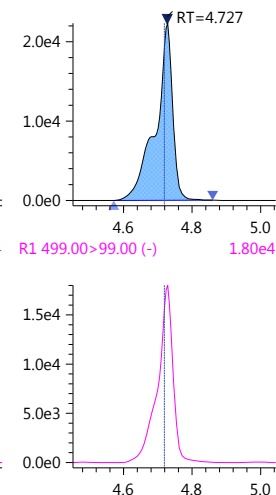
Q 449.00>80.15 (-) 3.71e4



PFOS_1

Conc 0.4713
Area 76846
R#1 80.23 (0.00)

Q 499.00>80.00 (-) 2.23e4



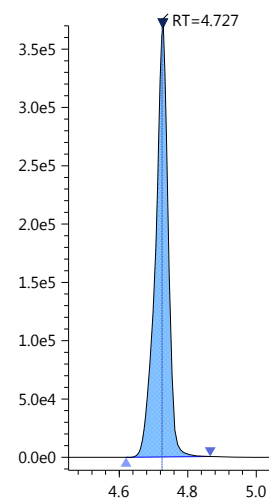
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PFOS-13C

Conc 4.5043
Area 962413

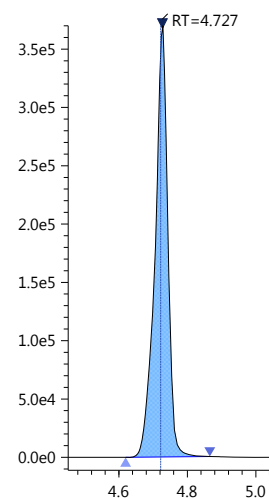
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
Area 962413

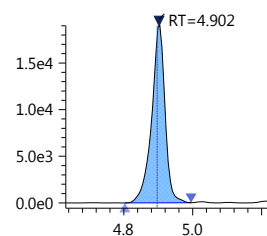
ISTD 502.80>80.05 (-)



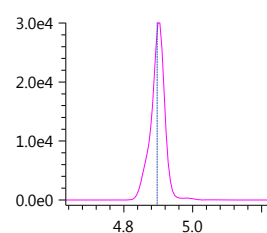
PFNS

Conc 0.4559
Area 51376
R#1 160.35 (0.00)

Q 549.00>99.00 (-)



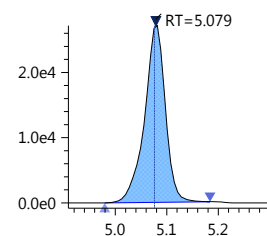
R1 549.00>79.95 (-)



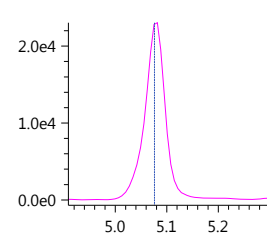
PFDS_1

Conc 0.4996
Area 76132
R#1 84.63 (0.00)

Q 599.00>79.90 (-)



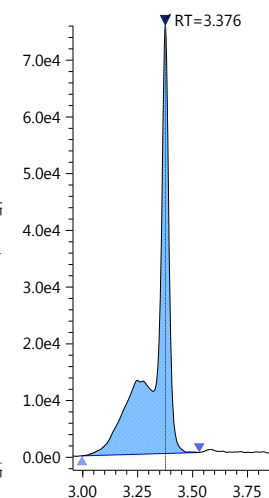
R1 599.00>99.10 (-)



PFBA

Conc 0.5063
Area 312792

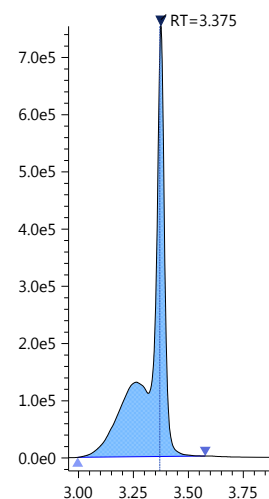
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.3359
Area 3163595

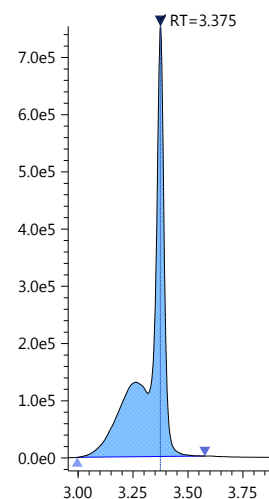
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 3163595

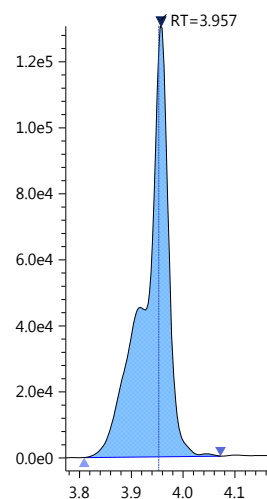
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.4997
Area 411151

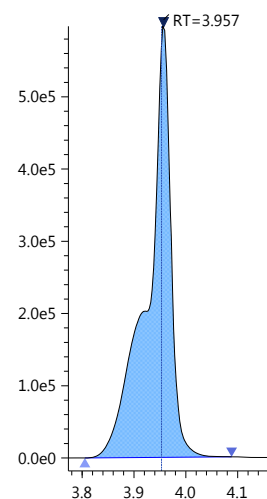
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.5227
Area 1857002

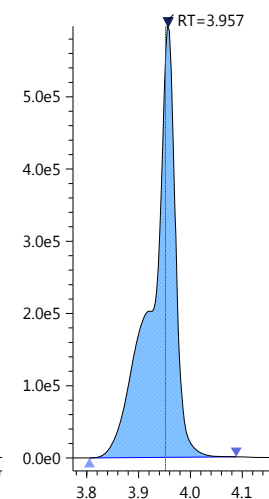
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1857002

ISTD 267.90>223.00 (-)

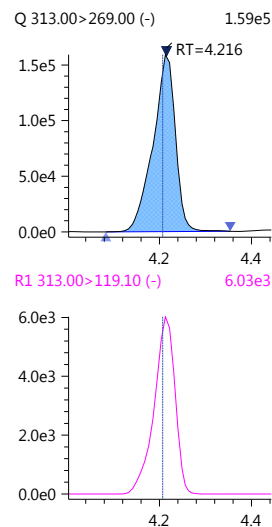


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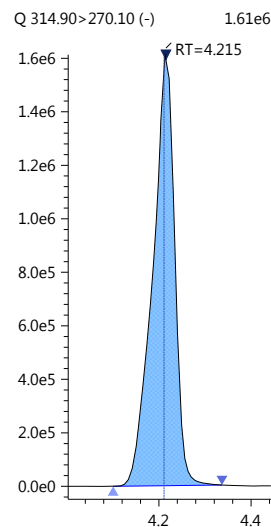
PFHxA

Conc 0.5046
Area 536819
R#1 3.80 (0.00)



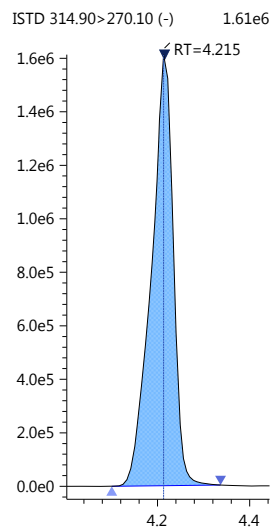
PFHxA-13C

Conc 4.7595
Area 5353201



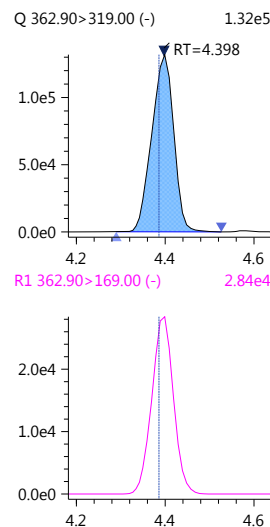
PFHxA-13C_IS

Conc 5.0000
Area 5353201



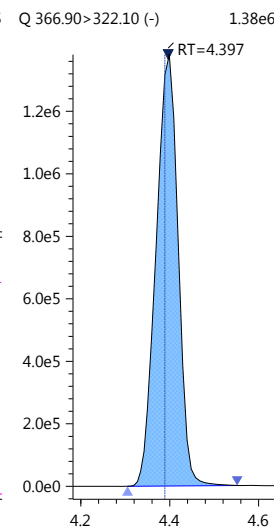
PFHpA

Conc 0.5215
Area 453245
R#1 21.57 (0.00)



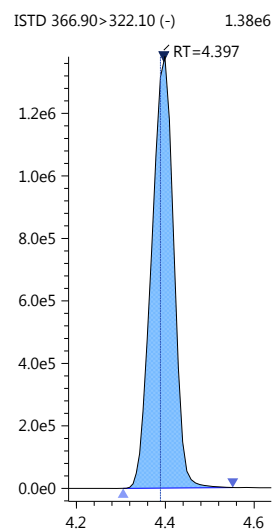
PFHpA-13C

Conc 4.6922
Area 4774295



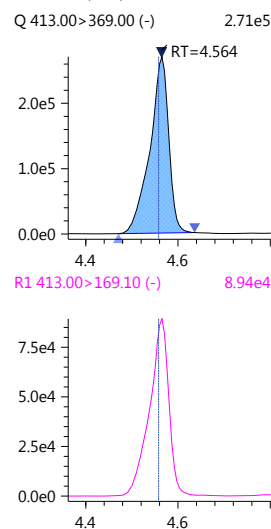
PFHpA-13C_IS

Conc 5.0000
Area 4774295



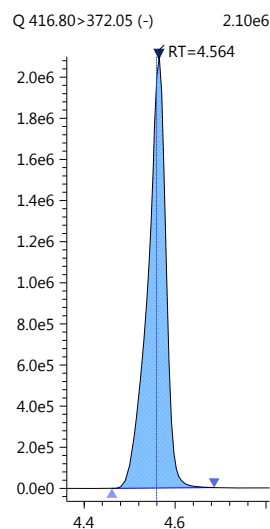
PFOA

Conc 0.5040
Area 763778
R#1 32.95 (0.00)



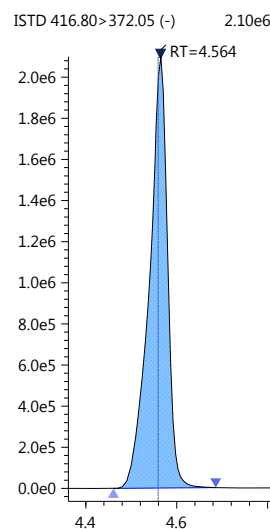
PFOA-13C

Conc 4.7665
Area 5867099



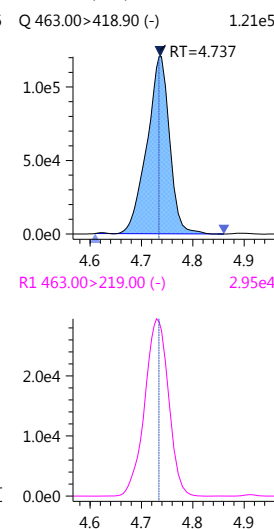
PFOA-13C_IS

Conc 5.0000
Area 5867099



PFNA

Conc 0.4721
Area 368671
R#1 22.20 (0.00)



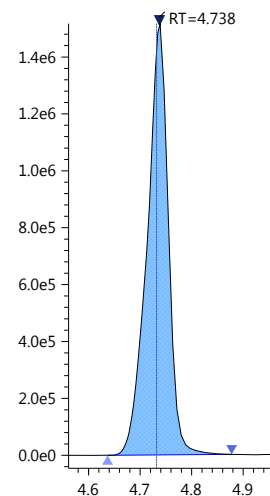
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PFNA-13C

Conc 4.7137
 Area 4331689

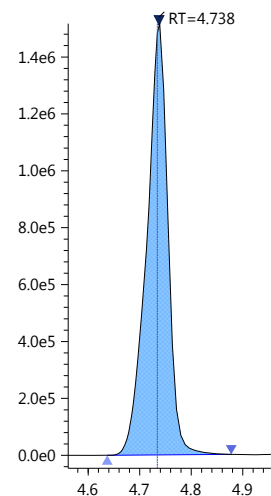
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
 Area 4331689

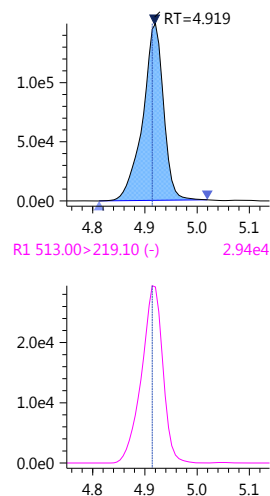
ISTD 467.80>423.00 (-)



PFDA

Conc 0.4900
 Area 411289
 R#1 19.50 (0.00)

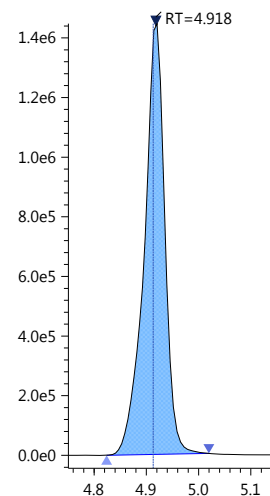
Q 513.00>468.80 (-)



PFDA-13C

Conc 4.7404
 Area 3952613

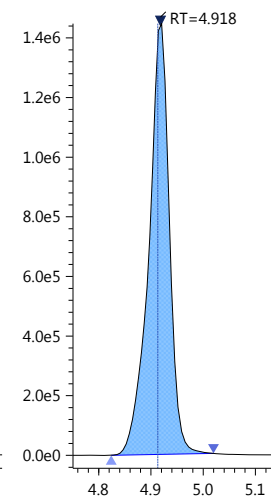
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
 Area 3952613

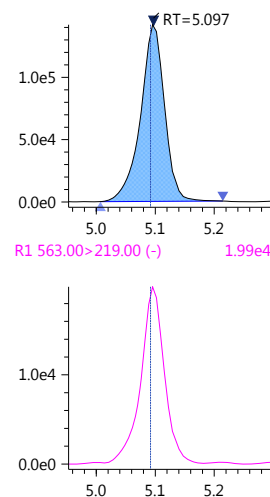
ISTD 514.80>469.95 (-)



PFUnA

Conc 0.5197
 Area 402446
 R#1 13.50 (0.00)

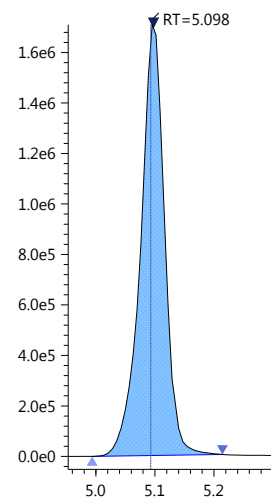
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.6574
 Area 4843874

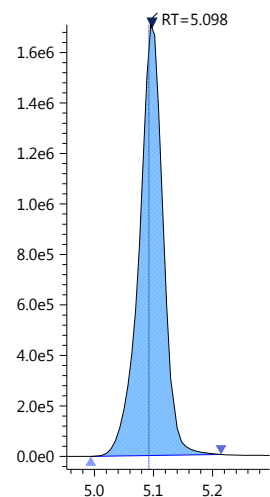
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
 Area 4843874

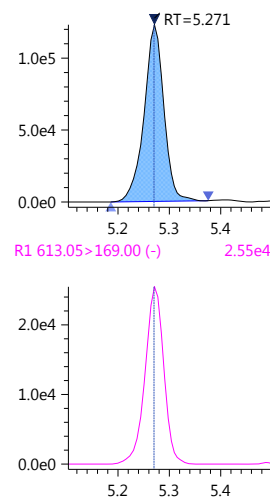
ISTD 564.80>519.95 (-)



PFDaA

Conc 0.5341
 Area 328853
 R#1 20.71 (0.00)

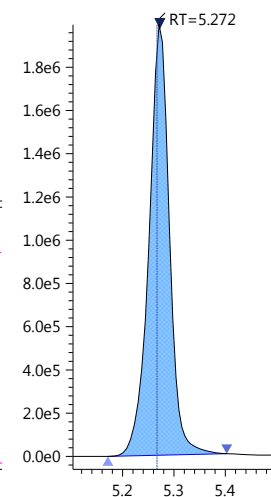
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.5110
 Area 5527105

Q 614.80>569.95 (-)



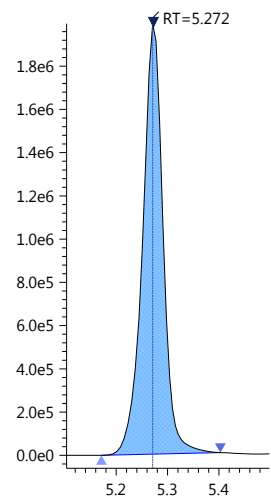
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PFDaA-13C_IS

Conc 5.0000
Area 5527105

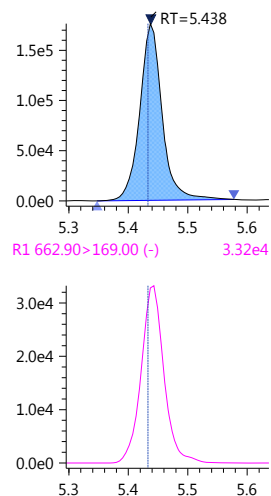
ISTD 614.80>569.95 (-) 2.00e6



PFTrDA

Conc 0.5109
Area 459257
R#1 18.53 (0.00)

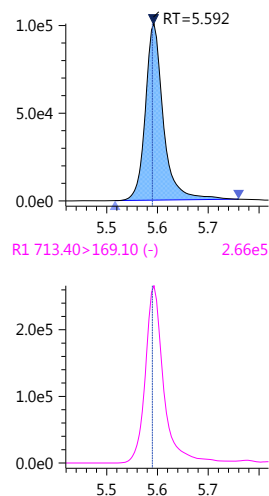
Q 663.00>618.90 (-) 1.77e5



PFTeDA

Conc 0.4713
Area 247584
R#1 264.10 (0.00)

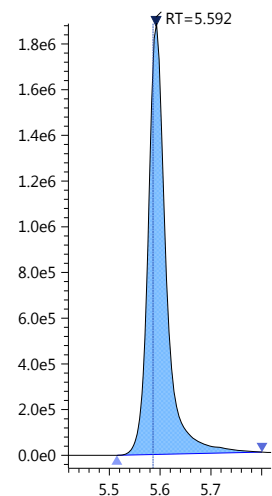
Q 713.40>669.00 (-) 1.01e5



PFTeDA-13C

Conc 4.7323
Area 4626309

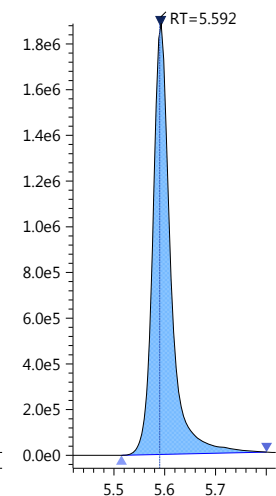
Q 714.70>669.90 (-) 1.89e6



PFTeDA-13C_IS

Conc 5.0000
Area 4626309

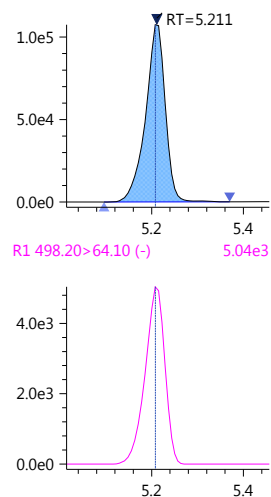
ISTD 714.70>669.90 (-) 1.89e6



FOSA

Conc 0.5220
Area 321308
R#1 4.68 (0.00)

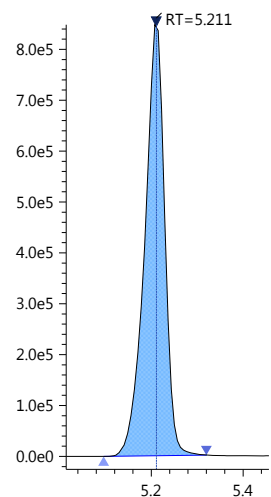
Q 498.20>78.00 (-) 1.08e5



FOSA-13C

Conc 4.6096
Area 2569875

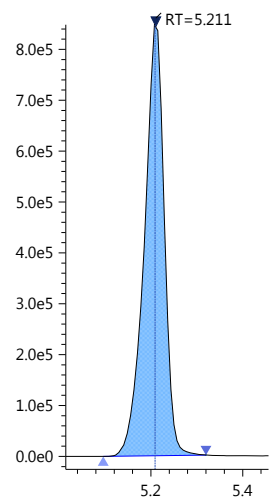
Q 506.00>78.05 (-) 8.48e5



FOSA-13C_IS

Conc 5.0000
Area 2569875

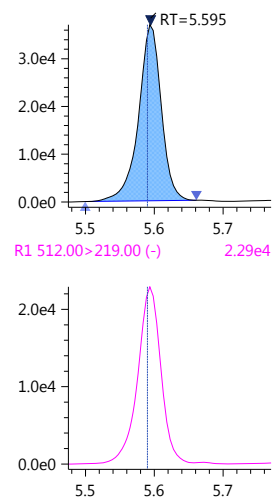
ISTD 506.00>78.05 (-) 8.48e5



N-MeFOSA

Conc 0.5156
Area 84344
R#1 61.22 (0.00)

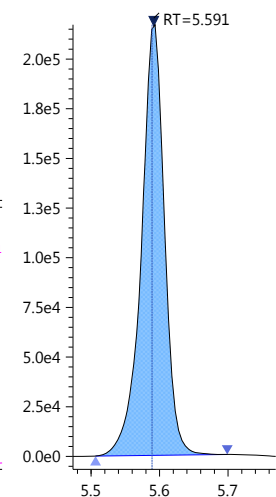
Q 512.00>169.10 (-) 3.71e4



N-MeFOSA-d3

Conc 4.3550
Area 508856

Q 514.90>168.90 (-) 2.17e5



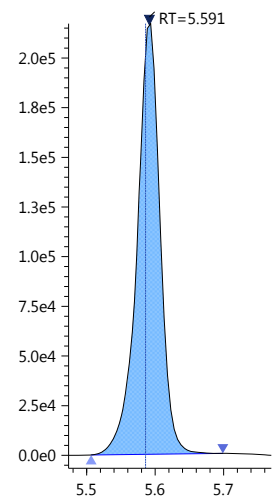
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N-MeFOSA-d3_IS

Conc 5.0000
Area 508856

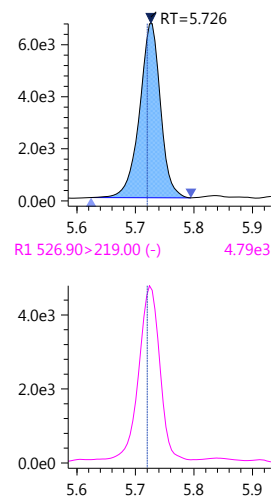
ISTD 514.90>168.90 (-) 2.17e5



N-EtFOSA

Conc 0.5463
Area 16646
R#1 69.21 (0.00)

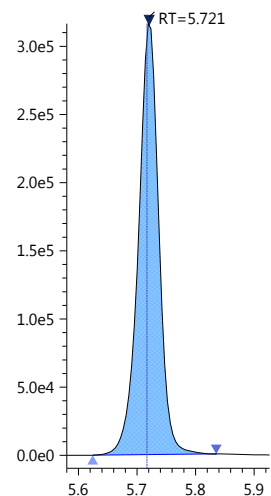
Q 526.90>169.10 (-) 6.81e3



N-EtFOSA-d9

Conc 4.3477
Area 767765

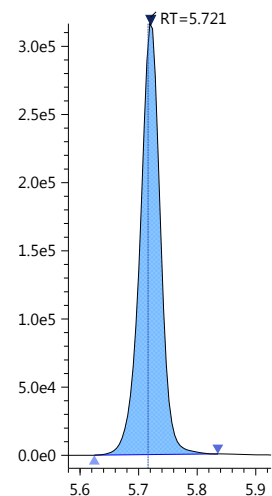
Q 530.90>169.15 (-) 3.17e5



N-EtFOSA-d9_IS

Conc 5.0000
Area 767765

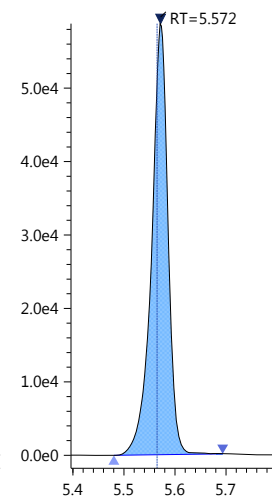
ISTD 530.90>169.15 (-) 3.17e5



N-MeFOSE

Conc 0.5274
Area 131144

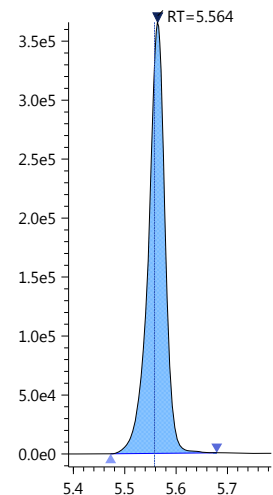
Q 616.00>59.00 (-) 5.88e4



N-MeFOSE-d7

Conc 4.3967
Area 825376

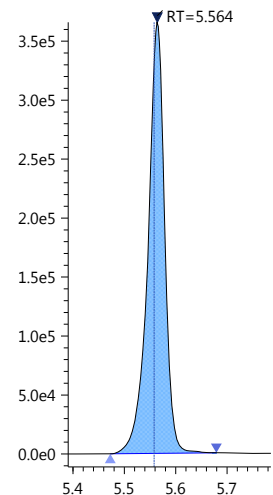
Q 622.70>59.10 (-) 3.66e5



N-MeFOSE-d7_IS

Conc 5.0000
Area 825376

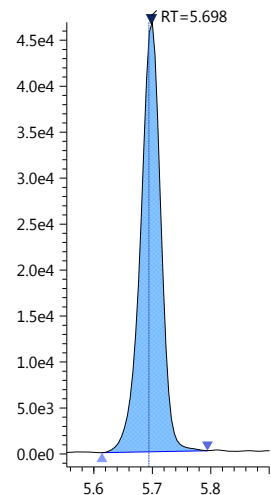
ISTD 622.70>59.10 (-) 3.66e5



N-EtFOSE

Conc 0.4971
Area 113523

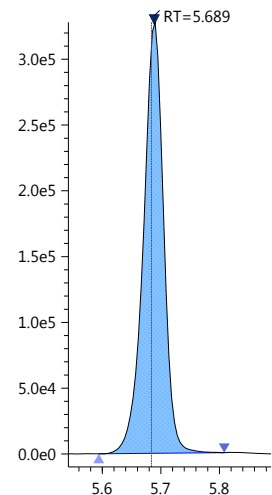
Q 630.00>58.90 (-) 4.70e4



N-EtFOSE-d9

Conc 4.5043
Area 786093

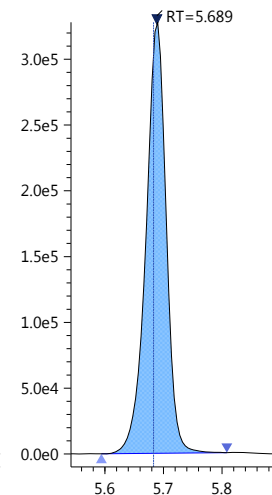
Q 638.70>59.10 (-) 3.28e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 786093

ISTD 638.70>59.10 (-) 3.28e5



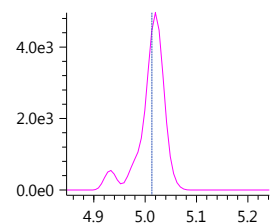
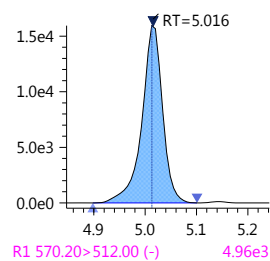
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N-MeFOSAA

Conc 0.5212
 Area 44734
 R#1 31.84 (0.00)

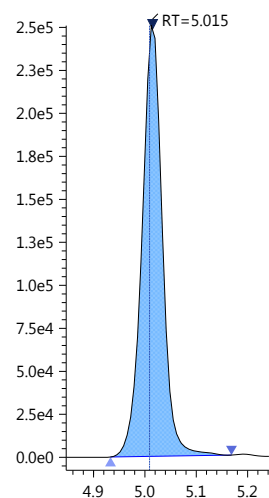
Q 570.20>419.00 (-) 1.60e4



N-MeFOSAA-d3

Conc 4.3612
 Area 690312

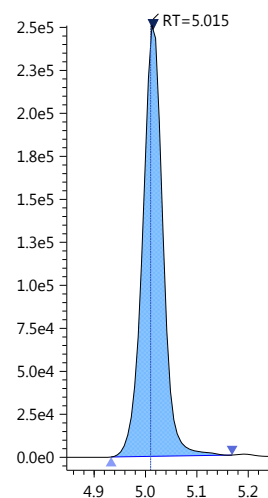
Q 572.80>419.05 (-) 2.51e5



N-MeFOSAA-d3_IS

Conc 5.0000
 Area 690312

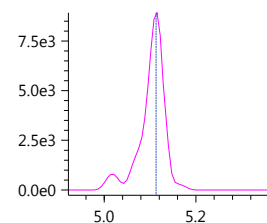
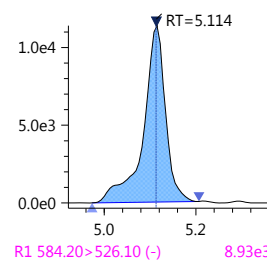
ISTD 572.80>419.05 (-) 2.51e5



N-EtFOSAA

Conc 0.5502
 Area 38193
 R#1 78.86 (0.00)

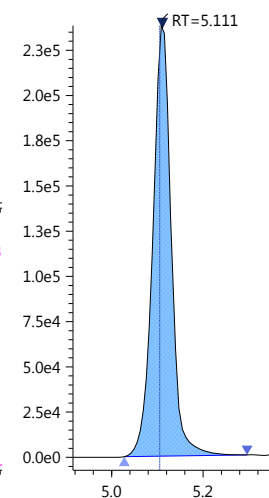
Q 584.20>418.95 (-) 1.14e4



N-EtFOSAA-d5

Conc 4.5827
 Area 668397

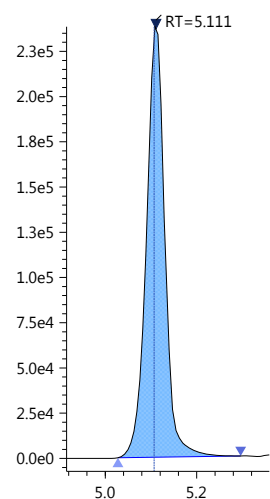
Q 588.80>419.00 (-) 2.39e5



N-EtFOSAA-d5_IS

Conc 5.0000
 Area 668397

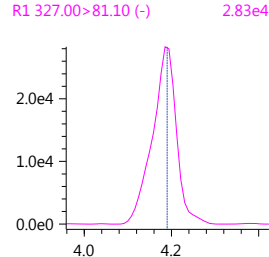
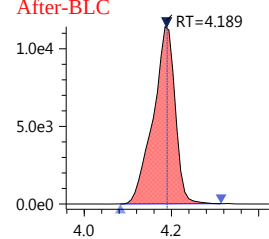
ISTD 588.80>419.00 (-) 2.39e5



4_2-FTS_1

Conc 0.5128
 Area 40013
 R#1 248.77 (0.00)

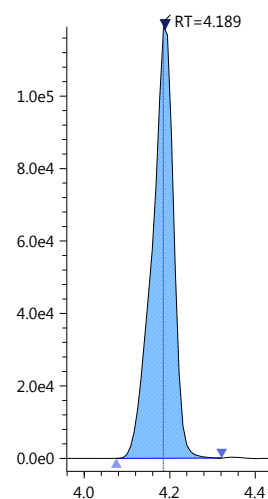
Q 327.00>307.05 (-) 1.14e4



4_2-FTS-13C

Conc 4.4694
 Area 414737

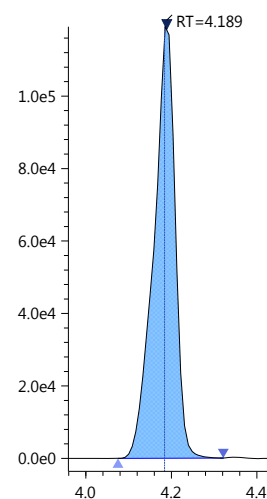
Q 328.80>309.05 (-) 1.19e5



4_2-FTS-13C_IS

Conc 5.0000
 Area 414737

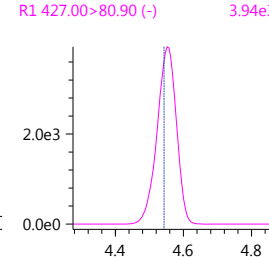
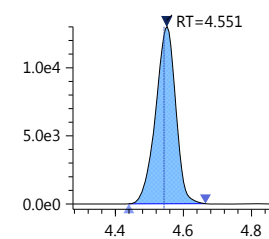
ISTD 328.80>309.05 (-) 1.19e5



6_2-FTS_1

Conc 0.5330
 Area 53234
 R#1 28.26 (0.00)

Q 427.00>407.00 (-) 1.30e4

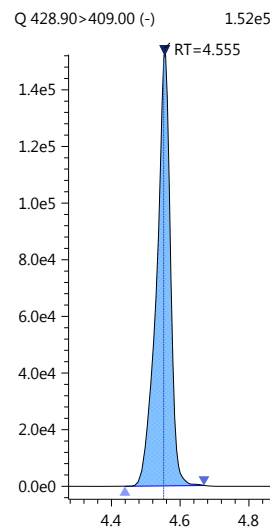


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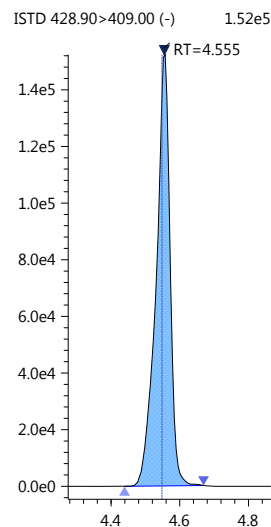
6_2-FTS-13C

Conc 4.6612
 Area 431434



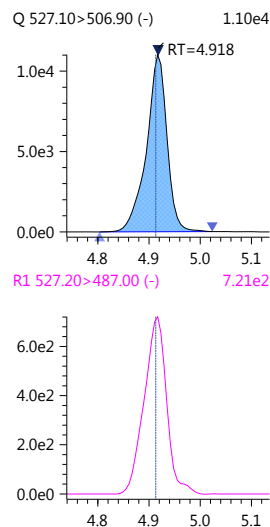
6_2-FTS-13C_IS

Conc 5.0000
 Area 431434



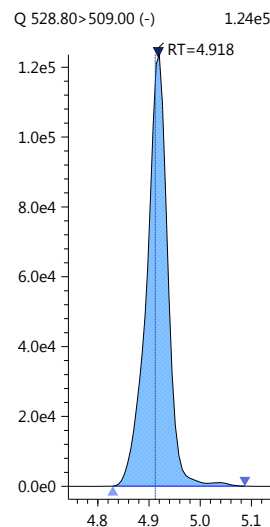
8_2-FTS_1

Conc 0.5244
 Area 30672
 R#1 6.45 (0.00)



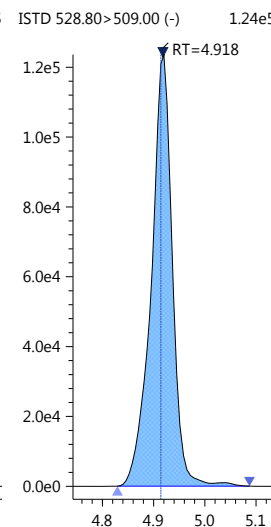
8_2-FTS-13C

Conc 4.7289
 Area 354860



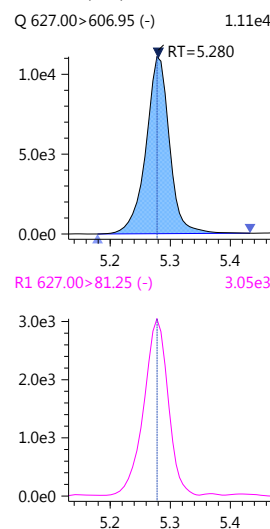
8_2-FTS-13C_IS

Conc 5.0000
 Area 354860



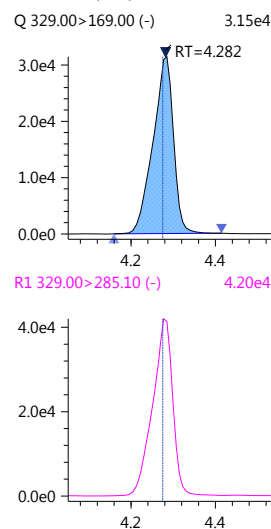
10_2-FtS_1

Conc 0.5303
 Area 30256
 R#1 27.24 (0.00)



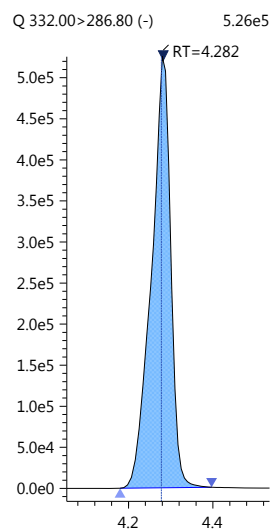
HPFO_DA

Conc 0.4897
 Area 105602
 R#1 135.84 (0.00)



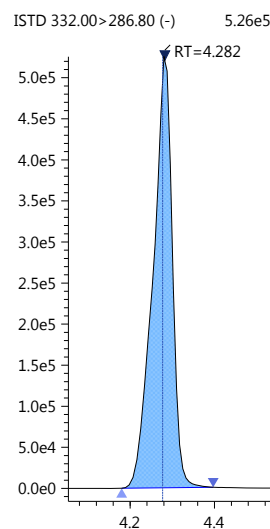
HPFO_DA-13C

Conc 4.6021
 Area 1666795



HPFO_DA-13C_IS

Conc 5.0000
 Area 1666795



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200417_025

Sample ID: 0.50 PPB ICAL

Date acquired: 4/17/2020 5:56:08 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_curve\200417_025.lcd

Vial: 3 | Inj. Volume: 15.0000uL | Tray: 0

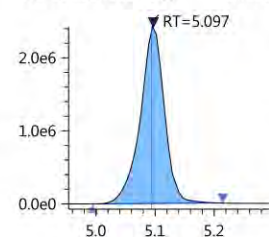
13C7-PFUnDA_IS

Conc 5.0000

Area 6897022

ISTD 570.00>525.00 (-)

2.43e6



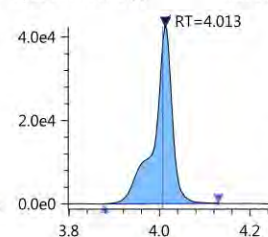
PFBS_1

Conc 0.4284

Area 118310

Q 299.00>80.00 (-)

2.43e6



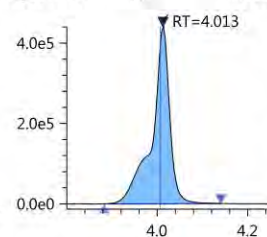
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Conc 4.4527

Area 1200646

Q 301.80>80.00 (-)

4.25e4



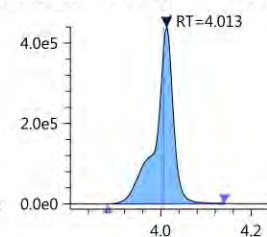
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Conc 5.0000

Area 1200646

ISTD 301.80>80.00 (-)

4.41e5



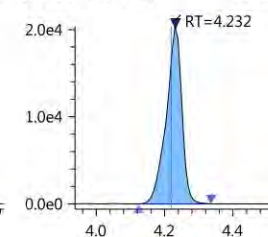
PFPeS

Conc 0.5433

Area 64362

Q 349.00>99.00 (-)

2.03e4



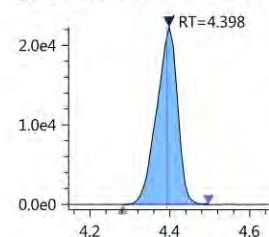
PFHxS_1

Conc 0.4565

Area 80935

Q 399.00>80.00 (-)

2.23e4



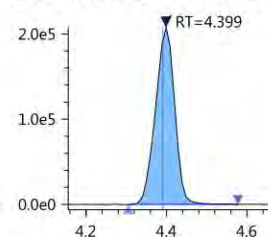
PFHxS-180

Conc 4.5280

Area 687342

Q 402.70>84.05 (-)

2.08e5



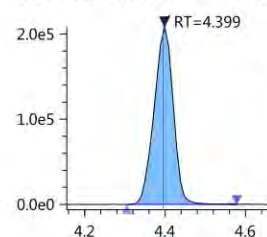
PFHxS-180_IS

Conc 5.0000

Area 687342

ISTD 402.70>84.05 (-)

2.08e5



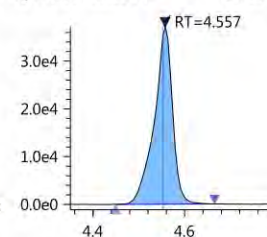
PFHpS_1

Conc 0.4793

Area 102729

Q 449.00>80.15 (-)

3.71e4



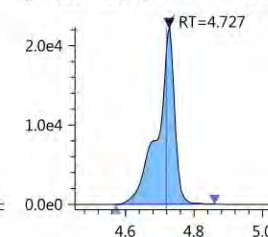
PFOS_1

Conc 0.4713

Area 76846

Q 499.00>80.00 (-)

2.23e4



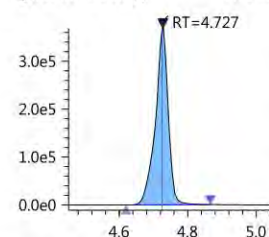
PFOS-13C

Conc 4.5043

Area 962413

Q 502.80>80.05 (-)

3.70e5



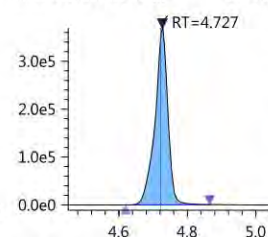
PFOS-13C_IS

Conc 5.0000

Area 962413

ISTD 502.80>80.05 (-)

3.70e5



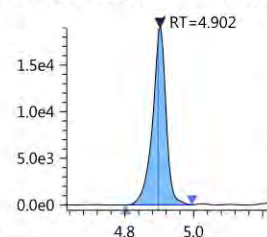
PFNS

Conc 0.4559

Area 51376

Q 549.00>99.00 (-)

1.90e4



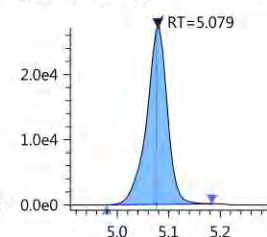
PFDS_1

Conc 0.4996

Area 76132

Q 599.00>79.90 (-)

2.72e4



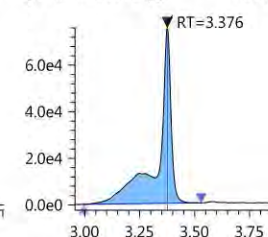
PFBA

Conc 0.5063

Area 312792

Q 213.00>169.10 (-)

7.61e4



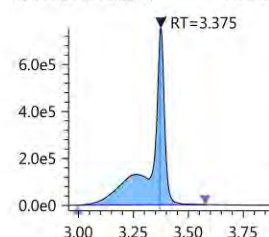
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Conc 4.3359

Area 3163595

Q 216.90>172.15 (-)

7.55e5



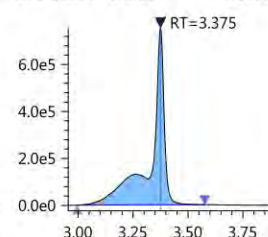
PFBA-13C_IS

Conc 5.0000

Area 3163595

ISTD 216.90>172.15 (-)

7.55e5



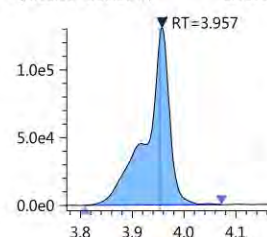
PFPeA

Conc 0.4997

Area 411151

Q 263.05>219.10 (-)

1.31e5



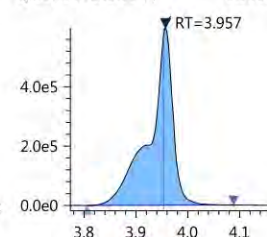
PFPeA-13C

Conc 4.5227

Area 1857002

Q 267.90>223.00 (-)

5.98e5



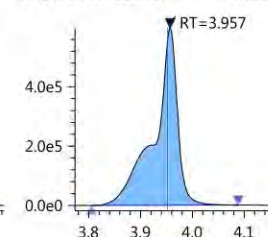
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Conc 5.0000

Area 1857002

ISTD 267.90>223.00 (-)

5.98e5

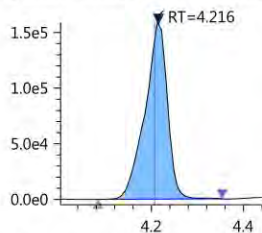


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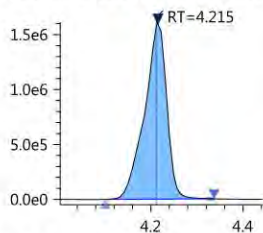
PFHxA

Conc 0.5046
Area 536819
Q 313.00>269.00 (-) 1.59e5



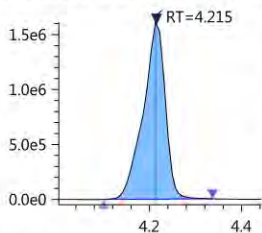
PFHxA-13C

Conc 4.7595
Area 5353201
Q 314.90>270.10 (-) 1.61e6



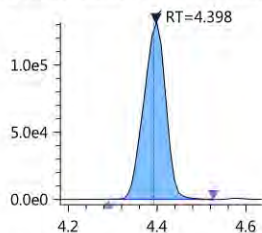
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Conc 5.0000
Area 5353201
ISTD 314.90>270.10 (-) 1.61e6



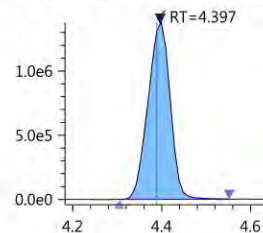
PFHpA

Conc 0.5217
Area 453245
Q 362.90>319.00 (-) 1.32e5



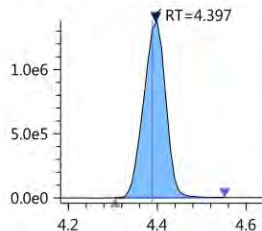
PFHpA-13C

Conc 4.6922
Area 4774295
Q 366.90>322.10 (-) 1.38e6



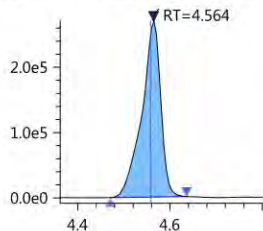
PFHpA-13C_IS

Conc 5.0000
Area 4774295
ISTD 366.90>322.10 (-) 1.38e6



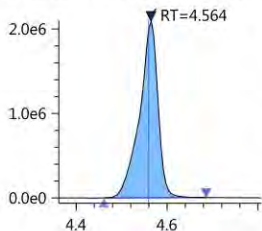
PFOA

Conc 0.5057
Area 763778
Q 413.00>369.00 (-) 2.71e5



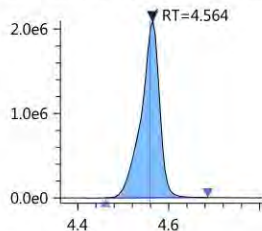
PFOA-13C

Conc 4.7665
Area 5867099
Q 416.80>372.05 (-) 2.10e6



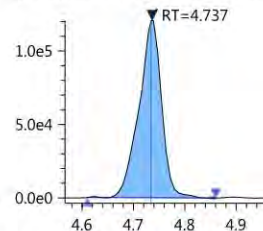
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Area 5867099
ISTD 416.80>372.05 (-) 2.10e6



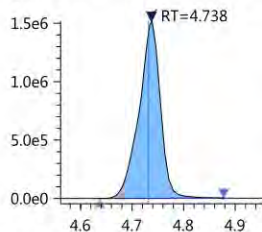
PFNA

Conc 0.4721
Area 368671
Q 463.00>418.90 (-) 1.21e5



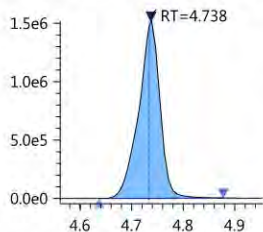
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Conc 4.7137
Area 4331689
Q 467.80>423.00 (-) 1.52e6



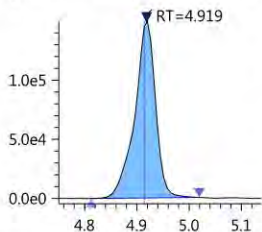
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Conc 5.0000
Area 4331689
ISTD 467.80>423.00 (-) 1.52e6



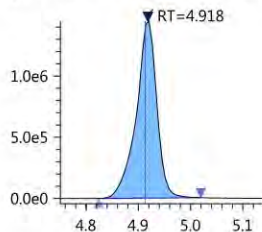
PFDA

Conc 0.4900
Area 411289
Q 513.00>468.80 (-) 1.50e5



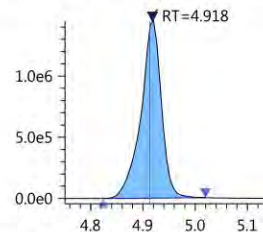
PFDA-13C

Conc 4.7404
Area 3952613
Q 514.80>469.95 (-) 1.45e6



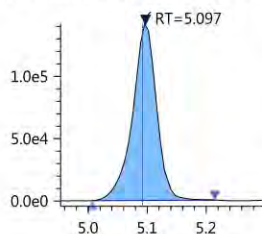
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Conc 5.0000
Area 3952613
ISTD 514.80>469.95 (-) 1.45e6



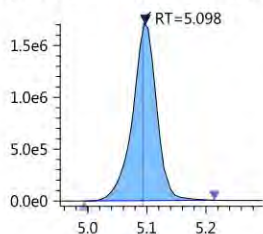
PFUnA

Conc 0.5197
Area 402446
Q 563.00>518.90 (-) 1.42e5



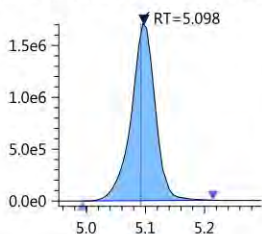
PFUnA-13C

Conc 4.6574
Area 4843874
Q 564.80>519.95 (-) 1.71e6



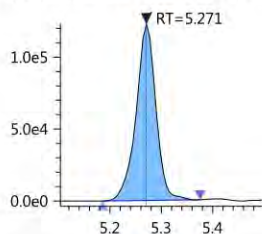
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Conc 5.0000
Area 4843874
ISTD 564.80>519.95 (-) 1.71e6



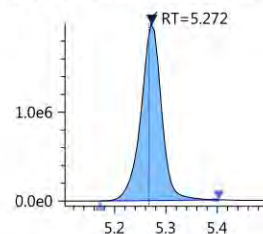
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Conc 0.5341
Area 328853
Q 613.05>569.00 (-) 1.23e5



PFDoA-13C

Conc 4.5110
Area 5527105
Q 614.80>569.95 (-) 2.00e6

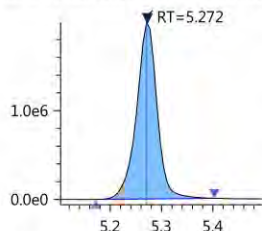


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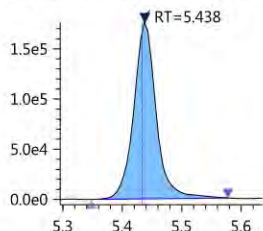
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Area 5527105
ISTD 614.80>569.95 (-) 2.00e6



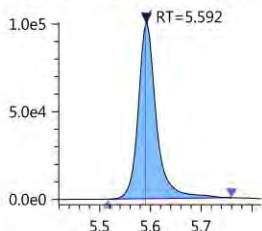
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Conc 0.5109
Area 459257
Q 663.00>618.90 (-) 1.77e5



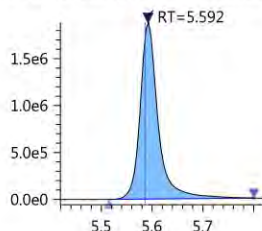
PFTeDA

Conc 0.4753
Area 247584
Q 713.40>669.00 (-) 1.01e5



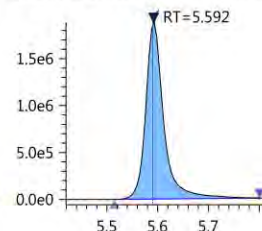
PFTeDA-13C

Conc 4.7323
Area 4626309
Q 714.70>669.90 (-) 1.89e6



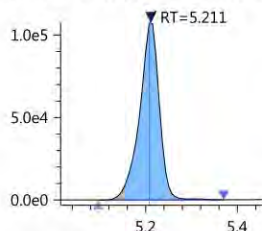
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Conc 5.0000
Area 4626309
ISTD 714.70>669.90 (-) 1.89e6



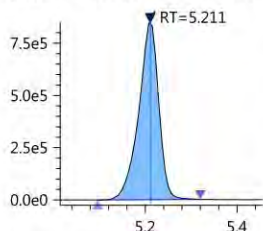
FOSA

Conc 0.5220
Area 321308
Q 498.20>78.00 (-) 1.08e5



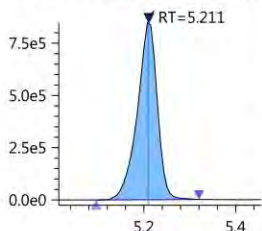
FOSA-13C

Conc 4.6096
Area 2569875
Q 506.00>78.05 (-) 8.48e5



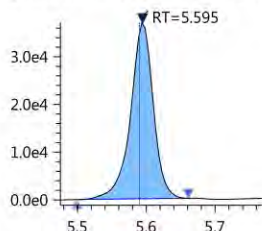
FOSA-13C_IS

Conc 5.0000
Area 2569875
ISTD 506.00>78.05 (-) 8.48e5



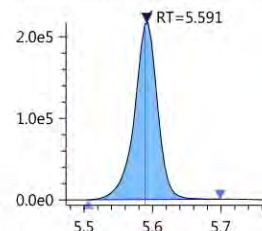
N-MeFOSA

Conc 0.5267
Area 84344
Q 512.00>169.10 (-) 3.71e4



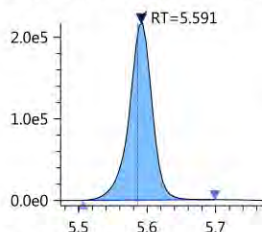
N-MeFOSA-d3

Conc 4.3550
Area 508856
Q 514.90>168.90 (-) 2.17e5



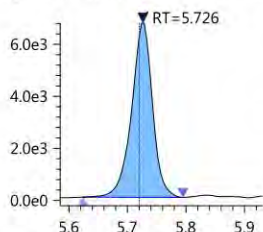
N-MeFOSA-d3_IS

Conc 5.0000
Area 508856
ISTD 514.90>168.90 (-) 2.17e5



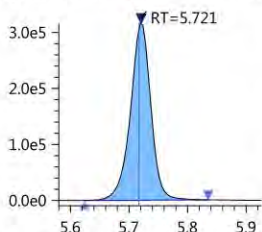
N-EtFOSA

Conc 0.5405
Area 16646
Q 526.90>169.10 (-) 6.81e3



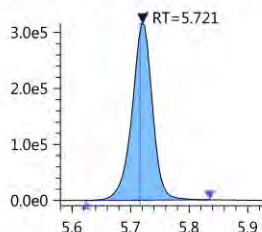
N-EtFOSA-d9

Conc 4.3477
Area 767765
Q 530.90>169.15 (-) 3.17e5



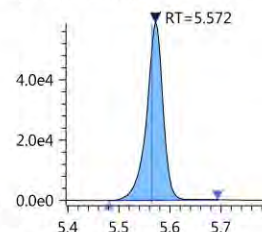
N-EtFOSA-d9_IS

Conc 5.0000
Area 767765
ISTD 530.90>169.15 (-) 3.17e5



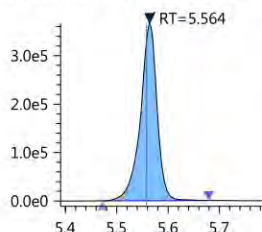
N-MeFOSE

Conc 0.5274
Area 131144
Q 616.00>59.00 (-) 5.88e4



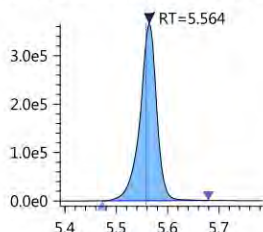
N-MeFOSE-d7

Conc 4.3967
Area 825376
Q 622.70>59.10 (-) 3.66e5



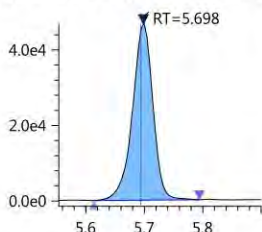
N-MeFOSE-d7_IS

Conc 5.0000
Area 825376
ISTD 622.70>59.10 (-) 3.66e5



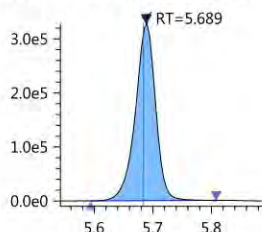
N-EtFOSE

Conc 0.4971
Area 113523
Q 630.00>58.90 (-) 4.70e4



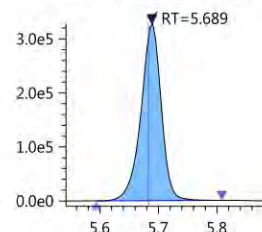
N-EtFOSE-d9

Conc 4.5043
Area 786093
Q 638.70>59.10 (-) 3.28e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 786093
ISTD 638.70>59.10 (-) 3.28e5



Insight Report

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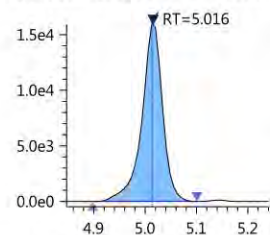
N-MeFOSAA

Conc 0.5170

Area 44734

Q 570.20>419.00 (-)

1.60e4



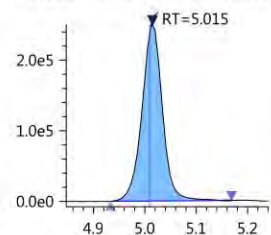
N-MeFOSAA-d3

Conc 4.3612

Area 690312

Q 572.80>419.05 (-)

2.51e5



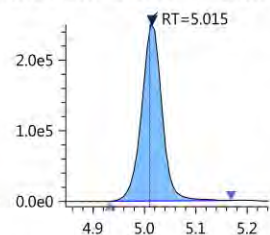
N-MeFOSAA-d3_IS

Conc 5.0000

Area 690312

ISTD 572.80>419.05 (-)

2.51e5



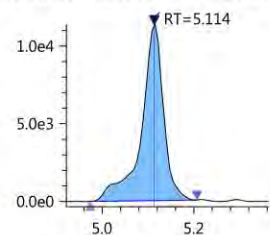
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Conc 0.5259

Area 38193

Q 584.20>418.95 (-)

1.14e4



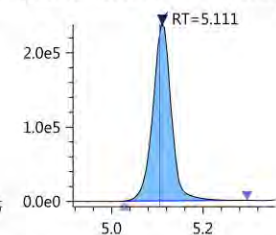
N-EtFOSAA-d5

Conc 4.5827

Area 668397

Q 588.80>419.00 (-)

2.39e5



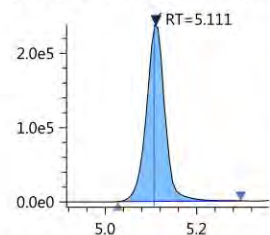
N-EtFOSAA-d5_IS

Conc 5.0000

Area 668397

ISTD 588.80>419.00 (-)

2.39e5



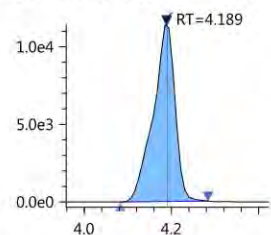
4_2-FTS_1

Conc 0.5139

Area 39717

Q 327.00>307.05 (-)

1.14e4



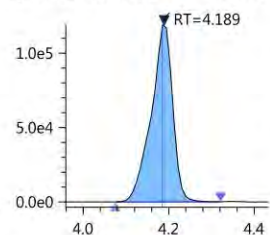
4_2-FTS-13C

Conc 4.4694

Area 414737

Q 328.80>309.05 (-)

1.19e5



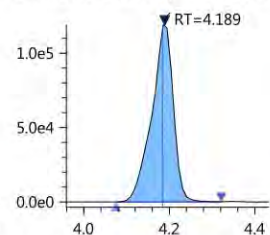
4_2-FTS-13C_IS

Conc 5.0000

Area 414737

ISTD 328.80>309.05 (-)

1.19e5



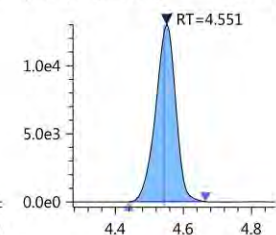
6_2-FTS_1

Conc 0.5330

Area 53234

Q 427.00>407.00 (-)

1.30e4



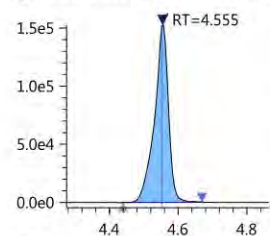
6_2-FTS-13C

Conc 4.6612

Area 431434

Q 428.90>409.00 (-)

1.52e5



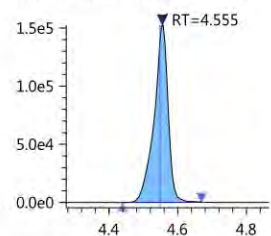
6_2-FTS-13C_IS

Conc 5.0000

Area 431434

ISTD 428.90>409.00 (-)

1.52e5



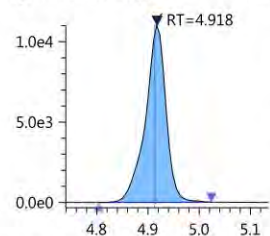
8_2-FTS_1

Conc 0.5244

Area 30672

Q 527.10>506.90 (-)

1.10e4



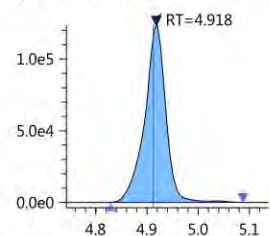
8_2-FTS-13C

Conc 4.7289

Area 354860

Q 528.80>509.00 (-)

1.24e5



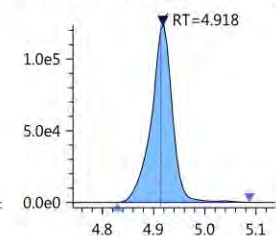
8_2-FTS-13C_IS

Conc 5.0000

Area 354860

ISTD 528.80>509.00 (-)

1.24e5



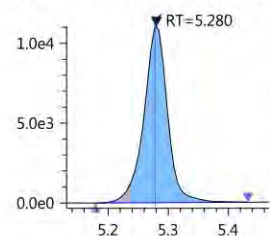
10_2-FTS_1

Conc 0.5303

Area 30256

Q 627.00>606.95 (-)

1.11e4



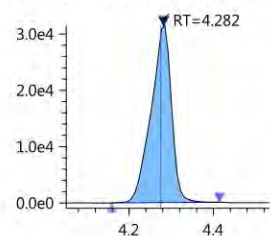
HPFO_DA

Conc 0.4897

Area 105602

Q 329.00>169.00 (-)

3.15e4



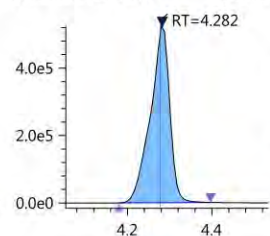
HPFO_DA-13C

Conc 4.6021

Area 1666795

Q 332.00>286.80 (-)

5.26e5



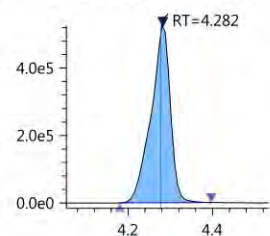
HPFO_DA-13C_IS

Conc 5.0000

Area 1666795

ISTD 332.00>286.80 (-)

5.26e5



Insight Report

Printed at 4/18/2020 11:14:21 AM

200417_026

Sample ID: 1.0 PPB ICAL

Date acquired: 4/17/2020 6:06:35 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_cuvre\200417_026.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	5.097	6616707	6616707	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.014	241515	1206634	2	0.8702	ng/mL	0.8874
PFBS-13C	Auto	4.014	1206634	6616707	1	4.6645	ng/mL	5.0000
PFBS-13C_IS	Auto	4.014	1206634	1206634	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.234	124414	1206634	2	1.0450	ng/mL	0.9409
PFHxS_1	Auto	4.397	159522	704360	3	0.8937	ng/mL	0.9131
PFHxS-18O	Auto	4.401	704360	6616707	1	4.8366	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.401	704360	704360	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.559	205581	704360	3	0.9360	ng/mL	0.9534
PFOS_1	Auto	4.728	153334	974942	4	0.9284	ng/mL	0.9292
PFOS-13C	Auto	4.728	974942	6616707	1	4.7562	ng/mL	5.0000
PFOS-13C_IS	Auto	4.728	974942	974942	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.903	117549	974942	4	1.0224	ng/mL	0.9616
PFDS_1	Auto	5.079	149266	974942	4	0.9670	ng/mL	0.9647
PFBA	Auto	3.382	626879	3275918	5	0.9799	ng/mL	1.0000
PFBA-13C	Auto	3.381	3275918	6616707	1	4.6801	ng/mL	5.0000
PFBA-13C_IS	Auto	3.381	3275918	3275918	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.959	789348	1864361	6	0.9826	ng/mL	1.0000
PFPeA-13C	Auto	3.958	1864361	6616707	1	4.7330	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.958	1864361	1864361	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.217	994382	5307174	7	0.9481	ng/mL	1.0000
PFHxA-13C	Auto	4.216	5307174	6616707	1	4.9185	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.216	5307174	5307174	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.398	801589	4761027	8	0.9327	ng/mL	1.0000
PFHpA-13C	Auto	4.398	4761027	6616707	1	4.8774	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.398	4761027	4761027	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.566	1452019	5909606	9	0.9588	ng/mL	1.0000
PFOA-13C	Auto	4.566	5909606	6616707	1	5.0045	ng/mL	5.0000
PFOA-13C_IS	Auto	4.566	5909606	5909606	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.738	714201	4370403	10	0.9105	ng/mL	1.0000
PFNA-13C	Auto	4.738	4370403	6616707	1	4.9573	ng/mL	5.0000
PFNA-13C_IS	Auto	4.738	4370403	4370403	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.918	794856	4063065	11	0.9213	ng/mL	1.0000
PFDA-13C	Auto	4.918	4063065	6616707	1	5.0793	ng/mL	5.0000
PFDA-13C_IS	Auto	4.918	4063065	4063065	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.097	759594	4907675	12	0.9800	ng/mL	1.0000
PFUnA-13C	Auto	5.098	4907675	6616707	1	4.9186	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.098	4907675	4907675	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.272	600318	5587422	13	0.9537	ng/mL	1.0000
PFDoA-13C	Auto	5.272	5587422	6616707	1	4.7534	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.272	5587422	5587422	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.437	861446	4528059	14	0.9831	ng/mL	1.0000
PFTeDA	Auto	5.592	446515	4528059	14	0.9875	ng/mL	1.0000
PFTeDA-13C	Auto	5.592	4528059	6616707	1	4.8281	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.592	4528059	4528059	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.210	603843	2649049	16	0.9517	ng/mL	1.0000
FOSA-13C	Auto	5.210	2649049	6616707	1	4.9529	ng/mL	5.0000
FOSA-13C_IS	Auto	5.210	2649049	2649049	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.593	167904	532099	17	0.9815	ng/mL	1.0000
N-MeFOSA-d3	Auto	5.591	532099	6616707	1	4.7469	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.591	532099	532099	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.727	32910	796534	18	1.0410	ng/mL	1.0000
N-EtFOSA-d9	Auto	5.722	796534	6616707	1	4.7017	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.722	796534	796534	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.571	263110	863283	19	1.0116	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.563	863283	6616707	1	4.7934	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.563	863283	863283	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.698	226146	784113	20	0.9927	ng/mL	1.0000
N-EtFOSE-d9	Auto	5.688	784113	6616707	1	4.6833	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.688	784113	784113	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.017	91100	711781	21	1.0295	ng/mL	1.0000
N-MeFOSAA-d3	Auto	5.014	711781	6616707	1	4.6874	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.014	711781	711781	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.114	78040	683573	22	1.0993	ng/mL	1.0000
N-EtFOSAA-d5	Auto	5.111	683573	6616707	1	4.8853	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.111	683573	683573	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.191	70377	392161	23	0.9539	ng/mL	0.9372
4_2-FTS-13C	Auto	4.192	392161	6616707	1	4.4051	ng/mL	5.0000

Insight Report

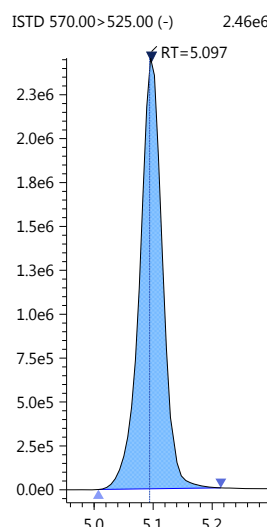
Printed at 4/18/2020 11:14:21 AM

(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.192	392161	392161	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.554	96991	427289	24	0.9805	ng/mL	0.9512
6_2-FTS-13C	Auto	4.556	427289	6616707	1	4.8120	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.556	427289	427289	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.918	57444	362513	25	0.9614	ng/mL	0.9600
8_2-FTS-13C	Auto	4.919	362513	6616707	1	5.0356	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.919	362513	362513	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.281	57184	362513	25	0.9811	ng/mL	0.9662
HPFO_DA	Auto	4.284	210761	1648519	26	0.9882	ng/mL	1.0000
HPFO_DA-13C	Auto	4.283	1648519	6616707	1	4.7445	ng/mL	5.0000
HPFO_DA-13C_IS	Auto	4.283	1648519	1648519	26	5.0000	ng/mL	5.0000

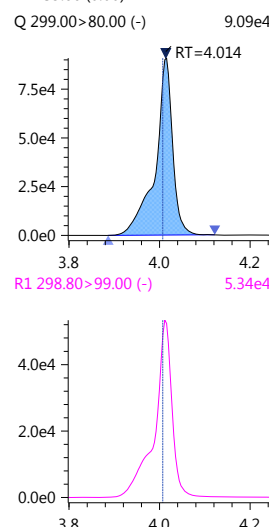
13C7-PFUnDA_IS

Conc 5.0000
Area 6616707



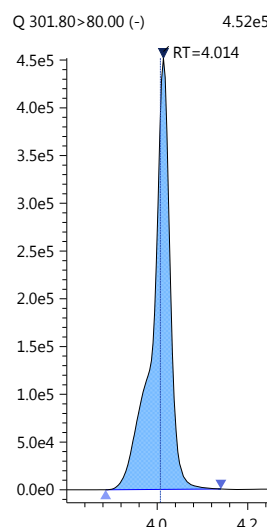
PFBS_1

Conc 0.8702
Area 241515
R#1 59.66 (0.00)



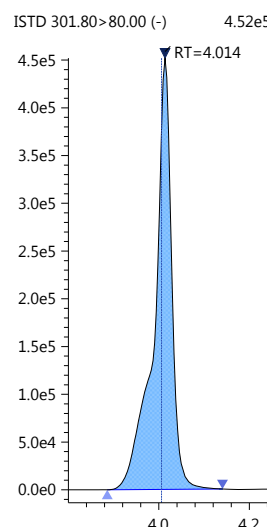
PFBS-13C

Conc 4.6645
Area 1206634



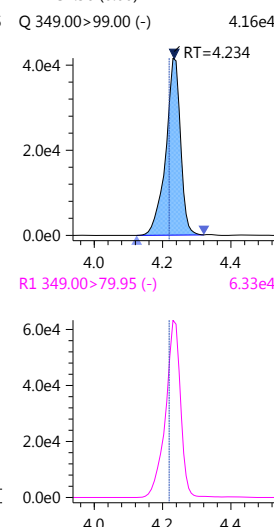
PFBS-13C_IS

Conc 5.0000
Area 1206634



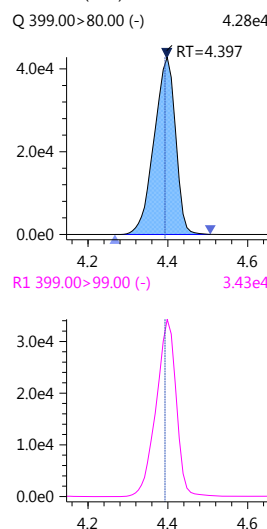
PFPeS

Conc 1.0450
Area 124414
R#1 151.96 (0.00)



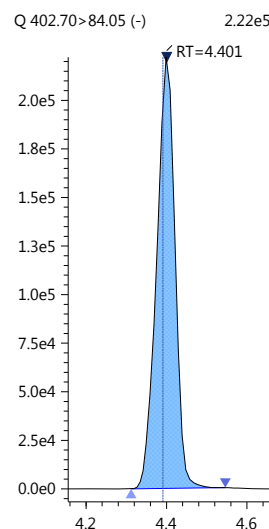
PFHxS_1

Conc 0.8937
Area 159522
R#1 79.51 (0.00)



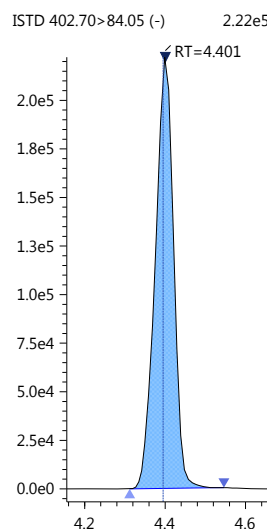
PFHxS-180

Conc 4.8366
Area 704360



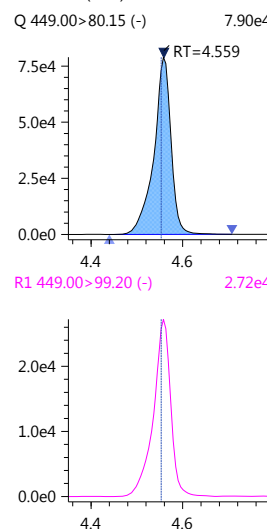
PFHxS-180_IS

Conc 5.0000
Area 704360



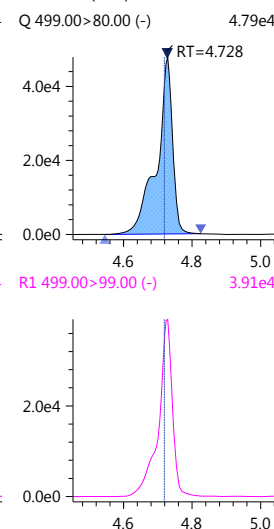
PFHpS_1

Conc 0.9360
Area 205581
R#1 34.23 (0.00)



PFOS_1

Conc 0.9284
Area 153334
R#1 81.09 (0.00)



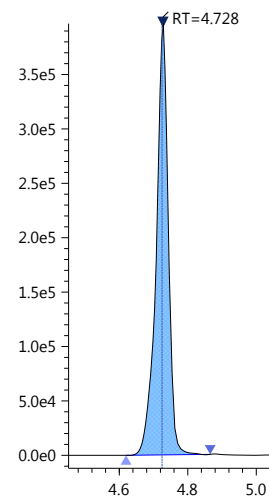
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PFOS-13C

Conc 4.7562
Area 974942

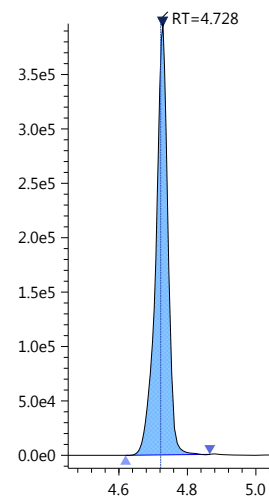
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
Area 974942

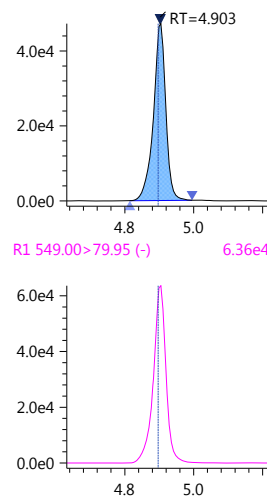
ISTD 502.80>80.05 (-)



PFNS

Conc 1.0224
Area 117549
R#1 134.76 (0.00)

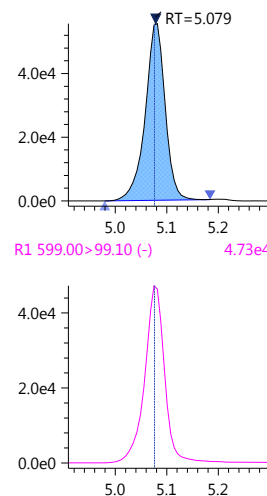
Q 549.00>99.00 (-)



PFDS_1

Conc 0.9670
Area 149266
R#1 83.20 (0.00)

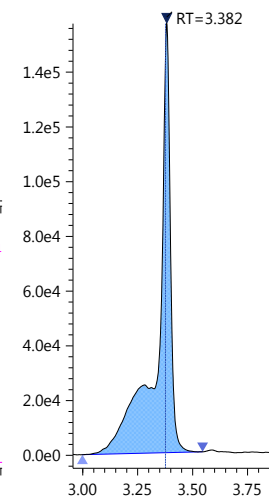
Q 599.00>79.90 (-)



PFBA

Conc 0.9799
Area 626879

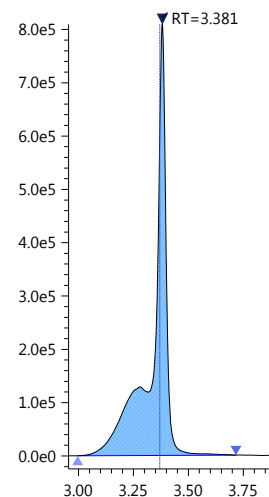
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.6801
Area 3275918

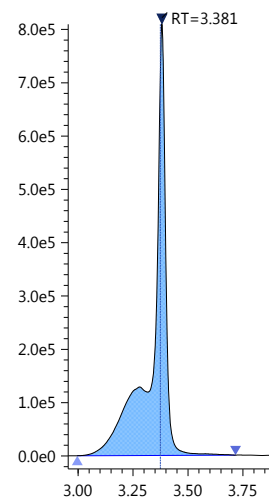
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 3275918

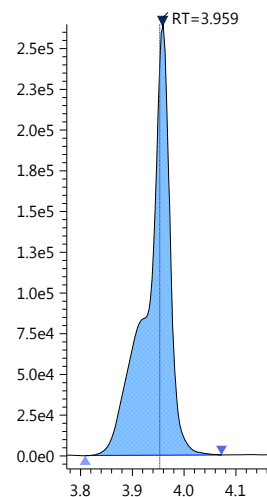
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.9826
Area 789348

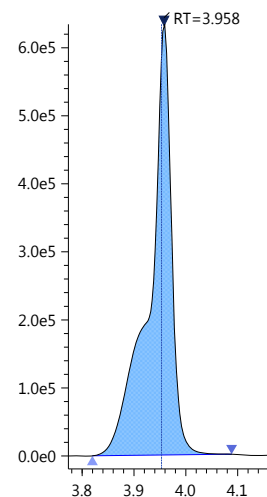
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.7330
Area 1864361

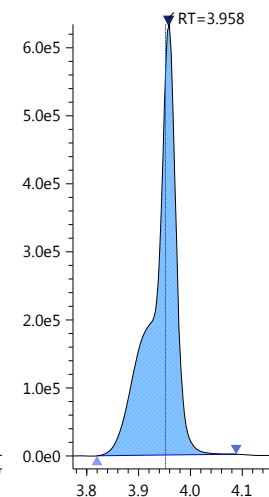
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1864361

ISTD 267.90>223.00 (-)



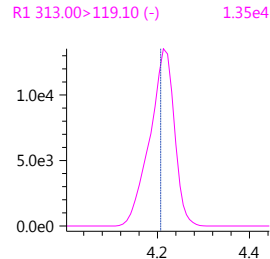
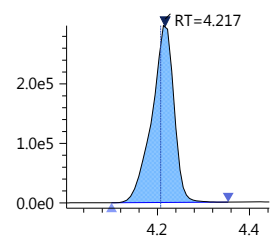
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PFHxA

Conc 0.9481
Area 994382
R#1 4.57 (0.00)

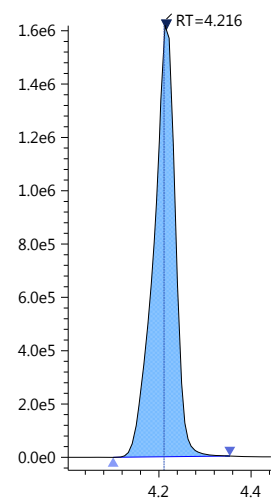
Q 313.00>269.00 (-) 2.98e5



PFHxA-13C

Conc 4.9185
Area 5307174

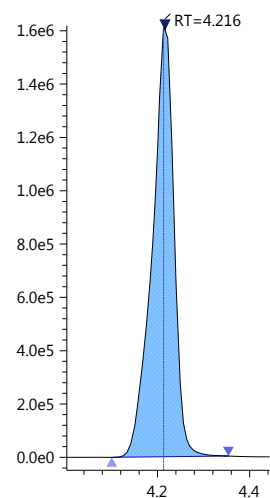
Q 314.90>270.10 (-) 1.62e6



PFHxA-13C_IS

Conc 5.0000
Area 5307174

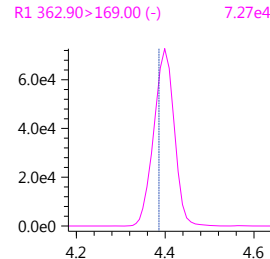
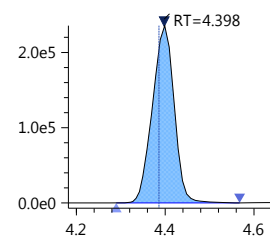
ISTD 314.90>270.10 (-) 1.62e6



PFHpA

Conc 0.9327
Area 801589
R#1 30.75 (0.00)

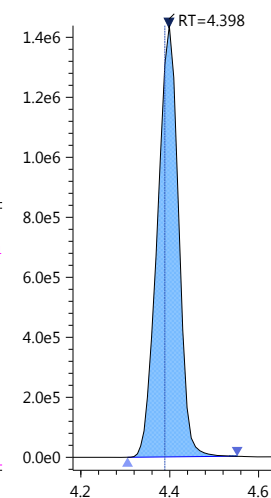
Q 362.90>319.00 (-) 2.36e5



PFHpA-13C

Conc 4.8774
Area 4761027

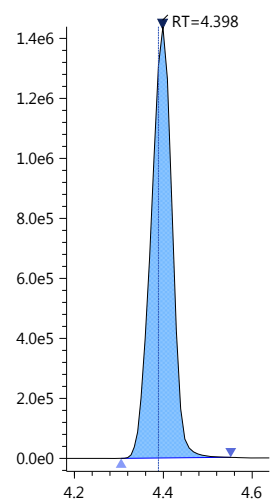
Q 366.90>322.10 (-) 1.44e6



PFHpA-13C_IS

Conc 5.0000
Area 4761027

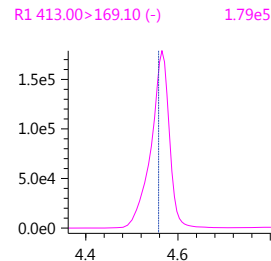
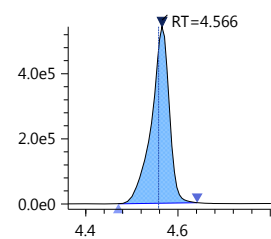
ISTD 366.90>322.10 (-) 1.44e6



PFOA

Conc 0.9588
Area 1452019
R#1 32.84 (0.00)

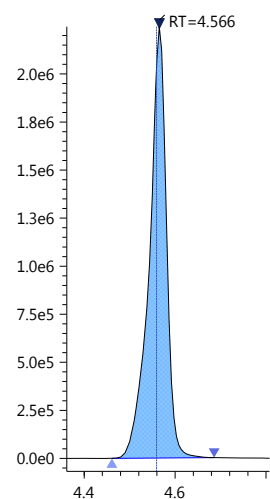
Q 413.00>369.00 (-) 5.44e5



PFOA-13C

Conc 5.0045
Area 5909606

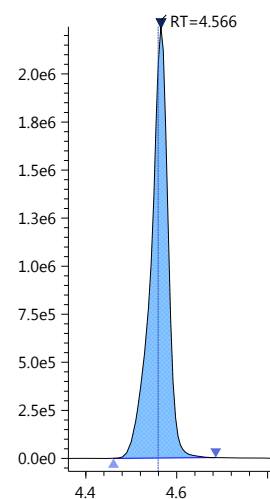
Q 416.80>372.05 (-) 2.25e6



PFOA-13C_IS

Conc 5.0000
Area 5909606

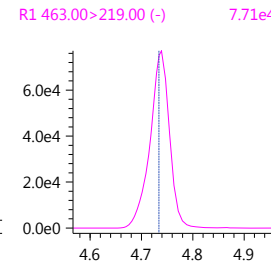
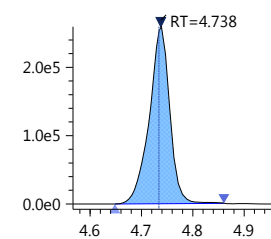
ISTD 416.80>372.05 (-) 2.25e6



PFNA

Conc 0.9105
Area 714201
R#1 29.79 (0.00)

Q 463.00>418.90 (-) 2.59e5



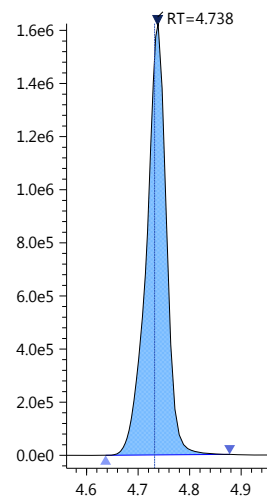
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PFNA-13C

Conc 4.9573
Area 4370403

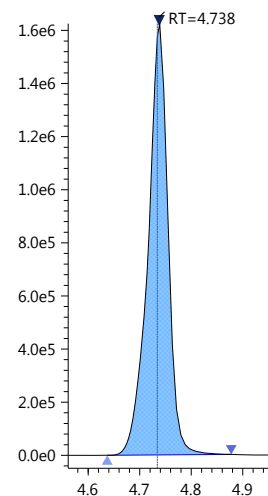
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
Area 4370403

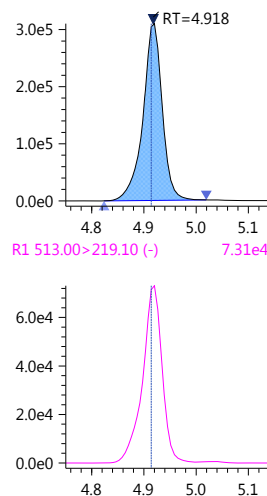
ISTD 467.80>423.00 (-)



PFDA

Conc 0.9213
Area 794856
R#1 23.53 (0.00)

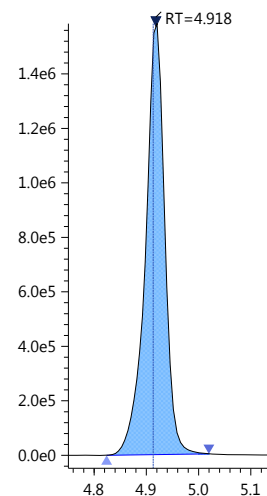
Q 513.00>468.80 (-)



PFDA-13C

Conc 5.0793
Area 4063065

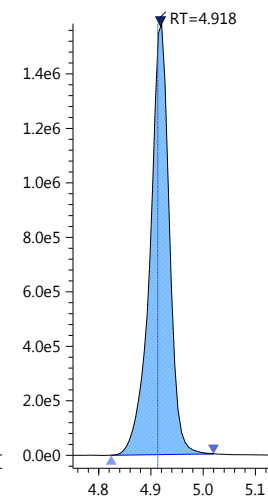
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
Area 4063065

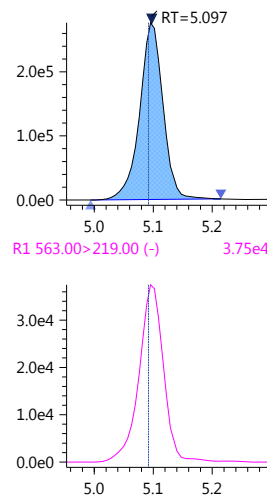
ISTD 514.80>469.95 (-)



PFUnA

Conc 0.9800
Area 759594
R#1 13.67 (0.00)

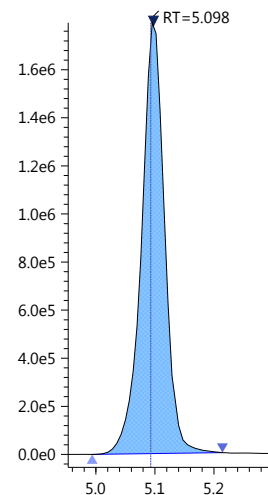
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.9186
Area 4907675

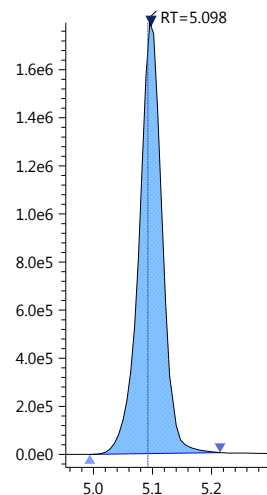
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
Area 4907675

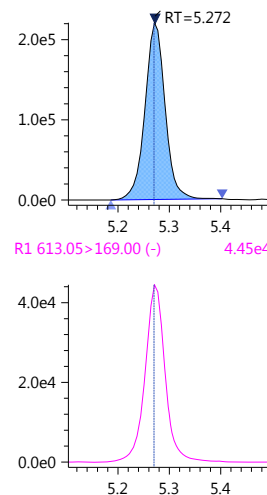
ISTD 564.80>519.95 (-)



PFDaA

Conc 0.9537
Area 600318
R#1 20.20 (0.00)

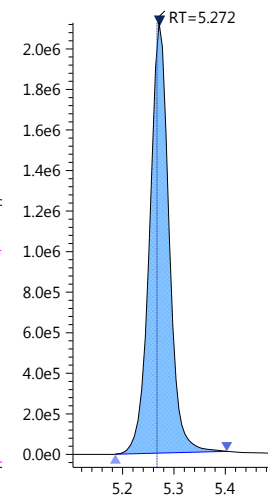
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.7534
Area 5587422

Q 614.80>569.95 (-)



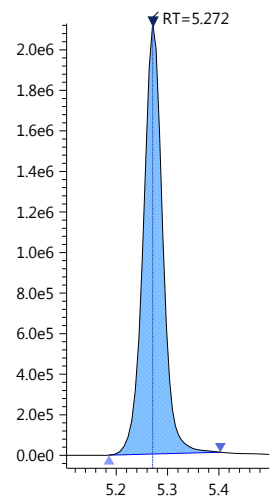
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PFDaA-13C_IS

Conc 5.0000
Area 5587422

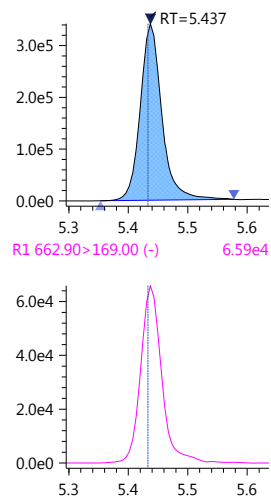
ISTD 614.80>569.95 (-) 2.13e6



PFTrDA

Conc 0.9831
Area 861446
R#1 19.34 (0.00)

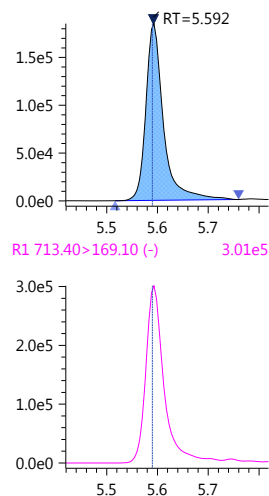
Q 663.00>618.90 (-) 3.43e5



PFTeDA

Conc 0.9875
Area 446515
R#1 159.19 (0.00)

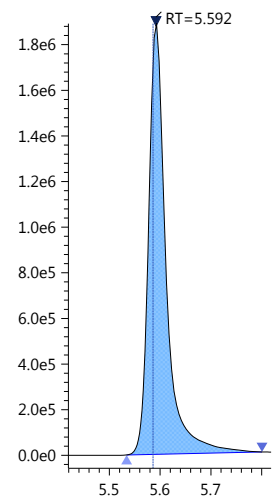
Q 713.40>669.00 (-) 1.85e5



PFTeDA-13C

Conc 4.8281
Area 4528059

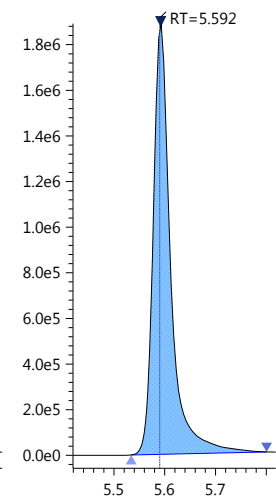
Q 714.70>669.90 (-) 1.89e6



PFTeDA-13C_IS

Conc 5.0000
Area 4528059

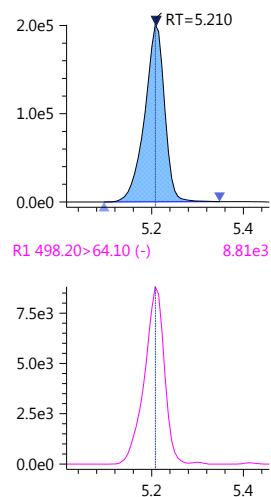
ISTD 714.70>669.90 (-) 1.89e6



FOSA

Conc 0.9517
Area 603843
R#1 4.38 (0.00)

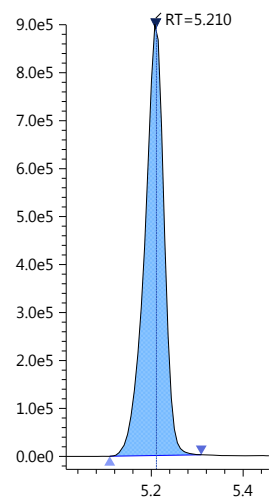
Q 498.20>78.00 (-) 2.01e5



FOSA-13C

Conc 4.9529
Area 2649049

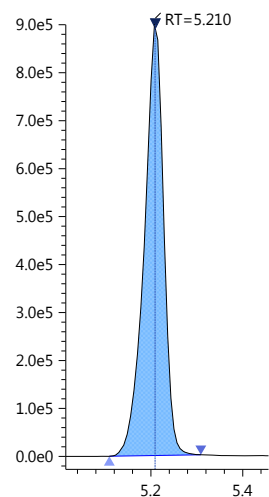
Q 506.00>78.05 (-) 9.00e5



FOSA-13C_IS

Conc 5.0000
Area 2649049

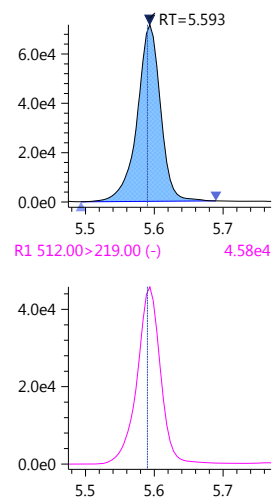
ISTD 506.00>78.05 (-) 9.00e5



N-MeFOSA

Conc 0.9815
Area 167904
R#1 64.12 (0.00)

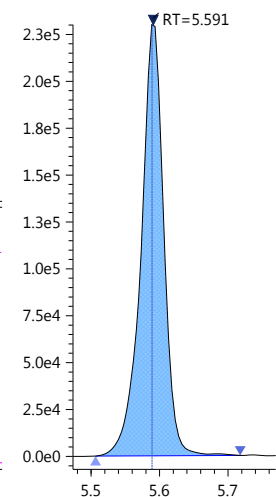
Q 512.00>169.10 (-) 7.19e4



N-MeFOSA-d3

Conc 4.7469
Area 532099

Q 514.90>168.90 (-) 2.30e5



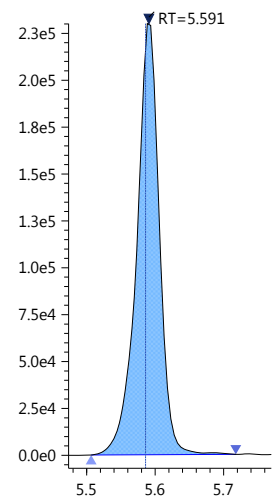
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N-MeFOSA-d3_IS

Conc 5.0000
 Area 532099

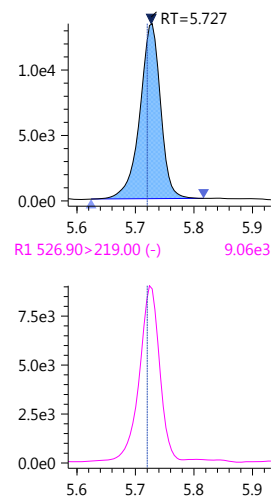
ISTD 514.90>168.90 (-) 2.30e5



N-EtFOSA

Conc 1.0410
 Area 32910
 R#1 65.60 (0.00)

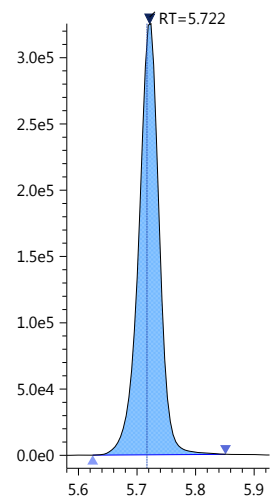
Q 526.90>169.10 (-) 1.35e4



N-EtFOSA-d9

Conc 4.7017
 Area 796534

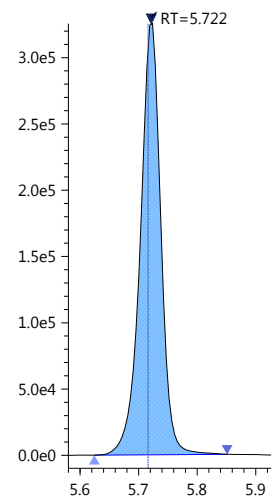
Q 530.90>169.15 (-) 3.26e5



N-EtFOSA-d9_IS

Conc 5.0000
 Area 796534

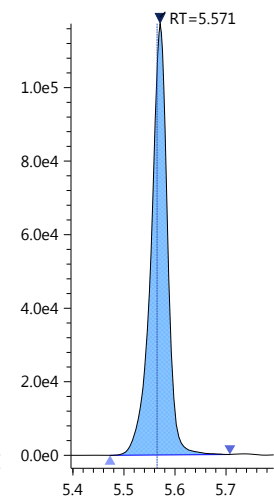
ISTD 530.90>169.15 (-) 3.26e5



N-MeFOSE

Conc 1.0116
 Area 263110

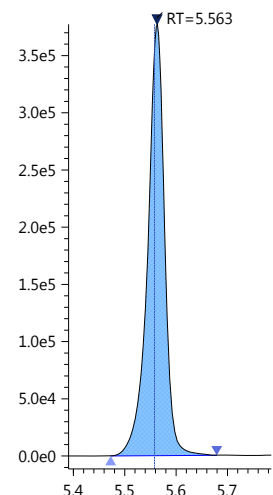
Q 616.00>59.00 (-) 1.17e5



N-MeFOSE-d7

Conc 4.7934
 Area 863283

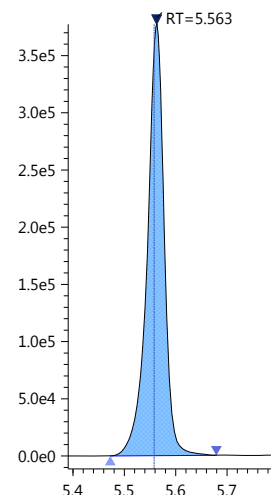
Q 622.70>59.10 (-) 3.77e5



N-MeFOSE-d7_IS

Conc 5.0000
 Area 863283

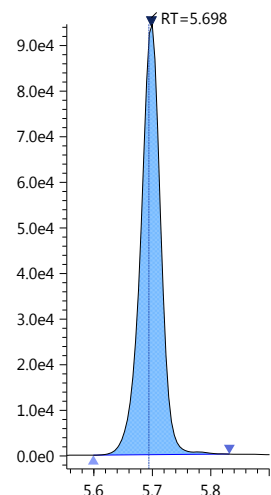
ISTD 622.70>59.10 (-) 3.77e5



N-EtFOSE

Conc 0.9927
 Area 226146

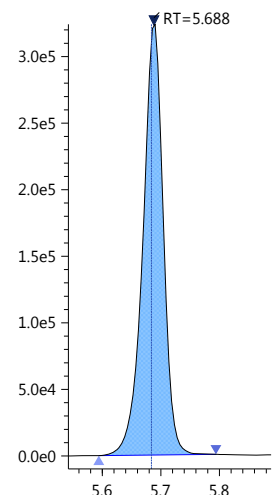
Q 630.00>58.90 (-) 9.47e4



N-EtFOSE-d9

Conc 4.6833
 Area 784113

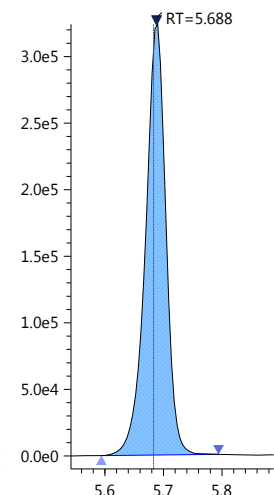
Q 638.70>59.10 (-) 3.24e5



N-EtFOSE-d9_IS

Conc 5.0000
 Area 784113

ISTD 638.70>59.10 (-) 3.24e5



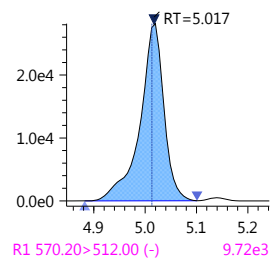
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N-MeFOSAA

Conc 1.0295
Area 91100
R#1 34.07 (0.00)

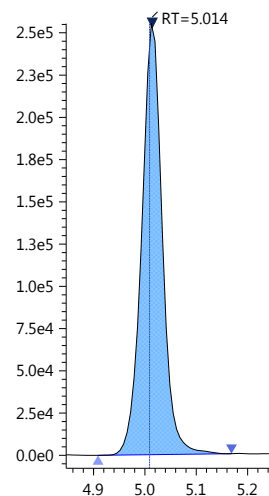
Q 570.20>419.00 (-) 2.82e4



N-MeFOSAA-d3

Conc 4.6874
Area 711781

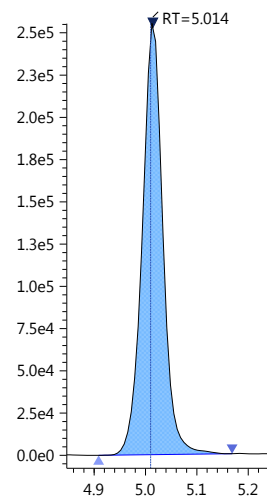
Q 572.80>419.05 (-) 2.55e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 711781

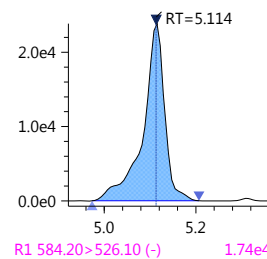
ISTD 572.80>419.05 (-) 2.55e5



N-EtFOSAA

Conc 1.0993
Area 78040
R#1 71.73 (0.00)

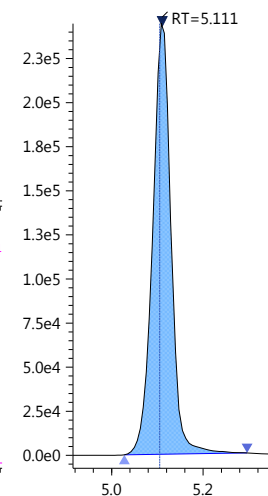
Q 584.20>418.95 (-) 2.39e4



N-EtFOSAA-d5

Conc 4.8853
Area 683573

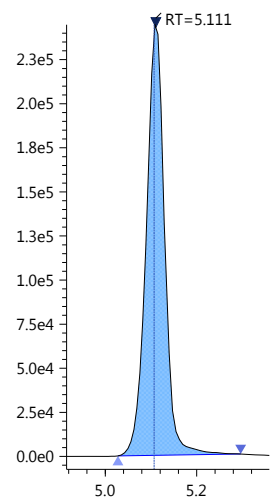
Q 588.80>419.00 (-) 2.45e5



N-EtFOSAA-d5_IS

Conc 5.0000
Area 683573

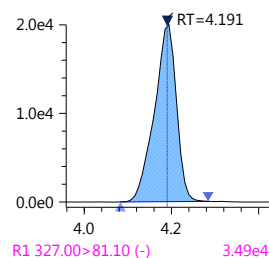
ISTD 588.80>419.00 (-) 2.45e5



4_2-FTS_1

Conc 0.9539
Area 70377
R#1 174.10 (0.00)

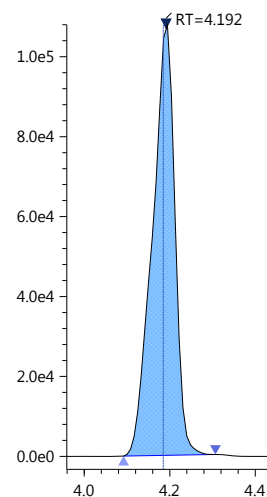
Q 327.00>307.05 (-) 2.00e4



4_2-FTS-13C

Conc 4.4051
Area 392161

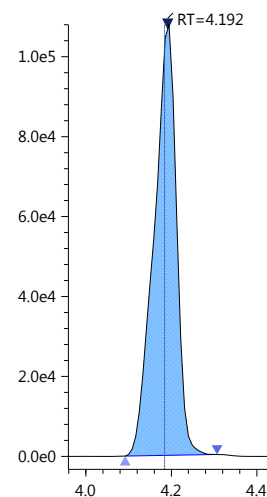
Q 328.80>309.05 (-) 1.08e5



4_2-FTS-13C_IS

Conc 5.0000
Area 392161

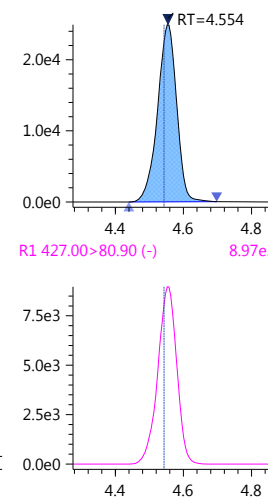
ISTD 328.80>309.05 (-) 1.08e5



6_2-FTS_1

Conc 0.9805
Area 96991
R#1 35.98 (0.00)

Q 427.00>407.00 (-) 2.49e4

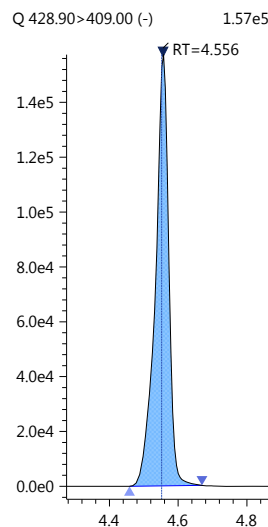


Insight Report

Printed at 4/18/2020 11:14:21 AM

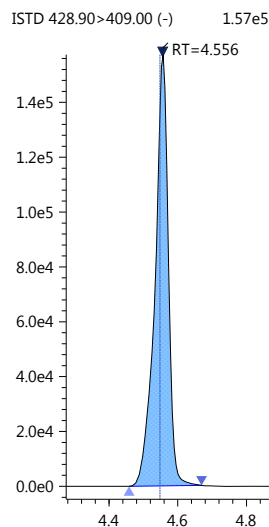
6_2-FTS-13C

Conc 4.8120
 Area 427289



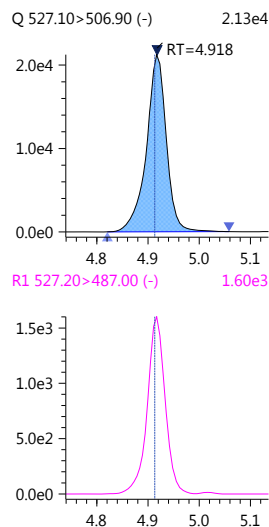
6_2-FTS-13C_IS

Conc 5.0000
 Area 427289



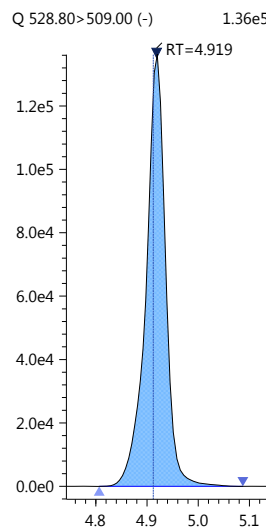
8_2-FTS_1

Conc 0.9614
 Area 57444
 R#1 7.56 (0.00)



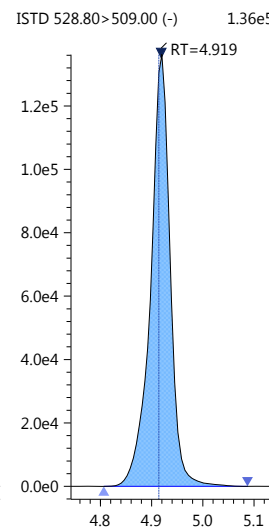
8_2-FTS-13C

Conc 5.0356
 Area 362513



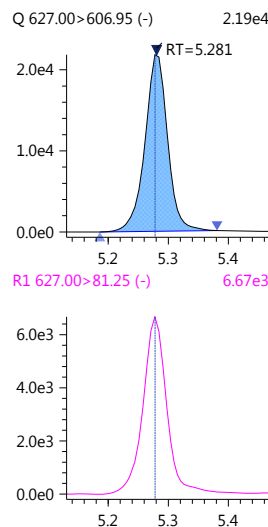
8_2-FTS-13C_IS

Conc 5.0000
 Area 362513



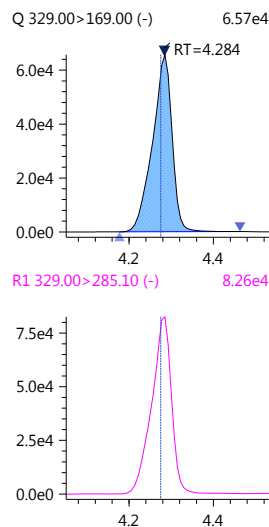
10_2-FtS_1

Conc 0.9811
 Area 57184
 R#1 30.55 (0.00)



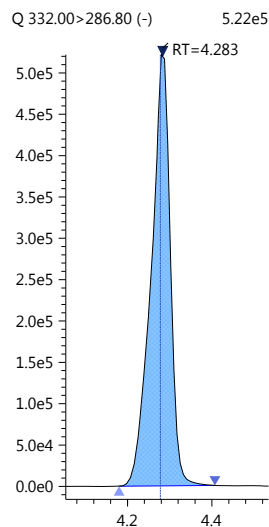
HPFO_DA

Conc 0.9882
 Area 210761
 R#1 125.61 (0.00)



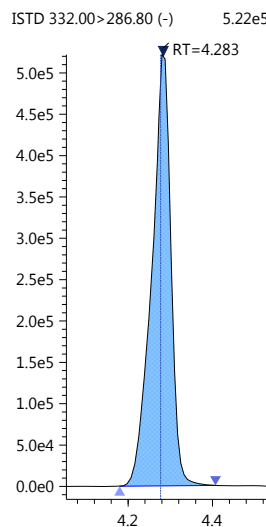
HPFO_DA-13C

Conc 4.7445
 Area 1648519



HPFO_DA-13C_IS

Conc 5.0000
 Area 1648519



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Printed at 4/18/2020 10:35:59 AM

200417_026

Sample ID: 1.0 PPB ICAL

Date acquired: 4/17/2020 6:06:35 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_curve\200417_026.lcd

Vial: 4 | Inj. Volume: 15.0000uL | Tray: 0

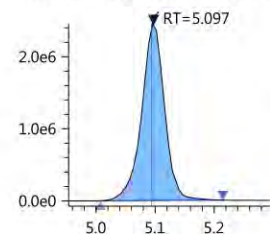
13C7-PFUnDA_IS

Conc 5.0000

Area 6616707

ISTD 570.00>525.00 (-)

2.46e6



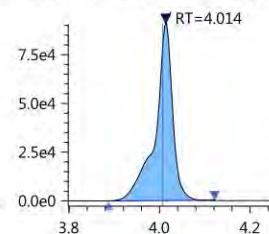
PFBS_1

Conc 0.8702

Area 241515

Q 299.00>80.00 (-)

2.46e6



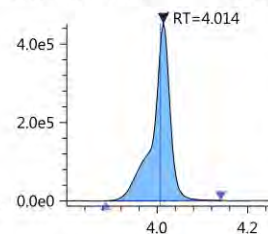
PFBS-13C

Conc 4.6645

Area 1206634

Q 301.80>80.00 (-)

9.09e4



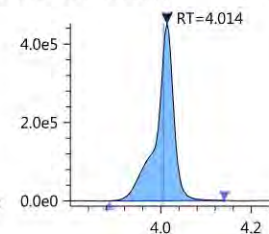
PFBS-13C_IS

Conc 5.0000

Area 1206634

ISTD 301.80>80.00 (-)

4.52e5



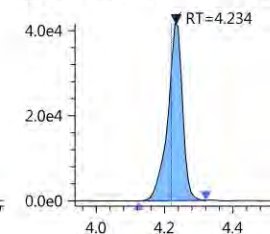
PFPeS

Conc 1.0450

Area 124414

Q 349.00>99.00 (-)

4.52e5



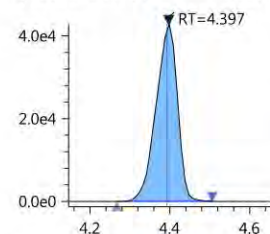
PFHxS_1

Conc 0.8937

Area 159522

Q 399.00>80.00 (-)

4.28e4



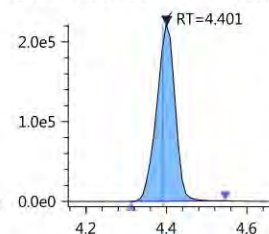
PFHxS-180

Conc 4.8366

Area 704360

Q 402.70>84.05 (-)

2.22e5



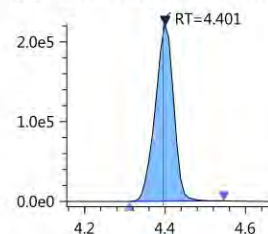
PFHxS-180_IS

Conc 5.0000

Area 704360

ISTD 402.70>84.05 (-)

2.22e5



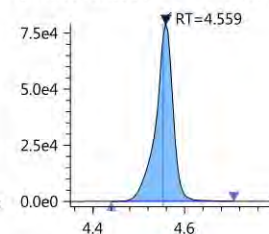
PFHpS_1

Conc 0.9360

Area 205581

Q 449.00>80.15 (-)

7.90e4



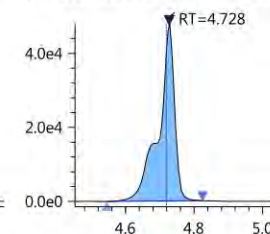
PFOS_1

Conc 0.9284

Area 153334

Q 499.00>80.00 (-)

4.79e4



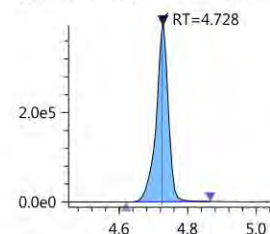
PFOS-13C

Conc 4.7562

Area 974942

Q 502.80>80.05 (-)

3.97e5



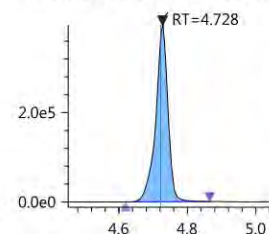
PFOS-13C_IS

Conc 5.0000

Area 974942

ISTD 502.80>80.05 (-)

3.97e5



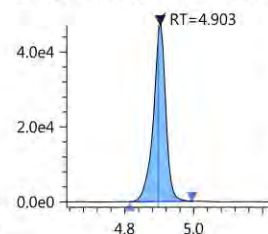
PFNS

Conc 1.0224

Area 117549

Q 549.00>99.00 (-)

4.73e4



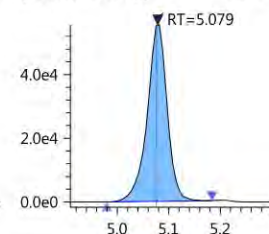
PFDS_1

Conc 0.9670

Area 149266

Q 599.00>79.90 (-)

5.57e4



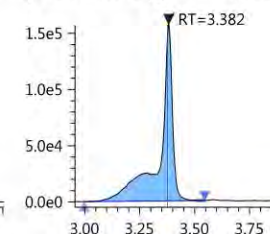
PFBA

Conc 0.9799

Area 626879

Q 213.00>169.10 (-)

1.58e5



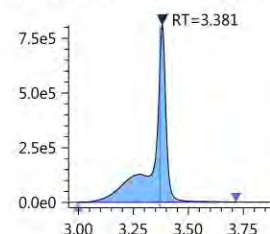
PFBA-13C

Conc 4.6801

Area 3275918

Q 216.90>172.15 (-)

8.10e5



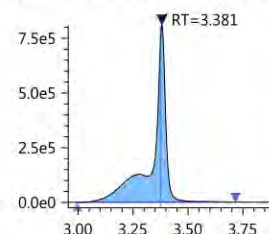
PFBA-13C_IS

Conc 5.0000

Area 3275918

ISTD 216.90>172.15 (-)

8.10e5



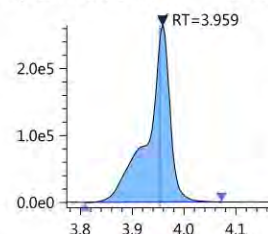
PFPeA

Conc 0.9826

Area 789348

Q 263.05>219.10 (-)

2.65e5



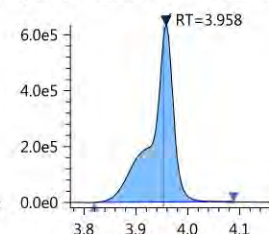
PFPeA-13C

Conc 4.7330

Area 1864361

Q 267.90>223.00 (-)

6.34e5



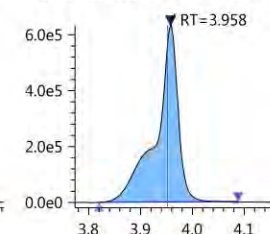
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Conc 5.0000

Area 1864361

ISTD 267.90>223.00 (-)

6.34e5

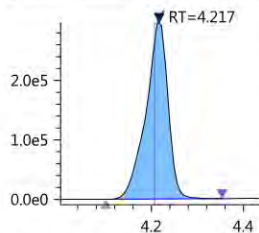


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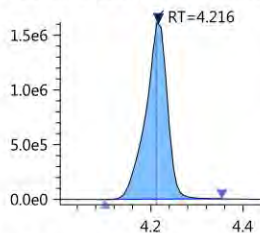
PFHxA

Conc 0.9481
 Area 994382
 Q 313.00>269.00 (-)



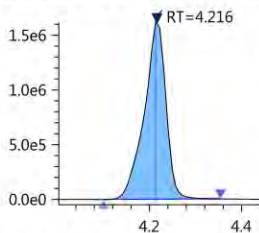
PFHxA-13C

Conc 4.9185
 Area 5307174
 Q 314.90>270.10 (-)



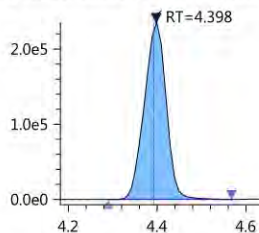
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Conc 5.0000
 Area 5307174
 ISTD 314.90>270.10 (-)



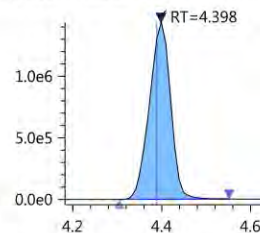
PFHpA

Conc 0.9329
 Area 801589
 Q 362.90>319.00 (-)



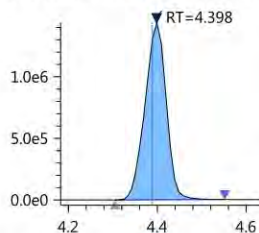
PFHpA-13C

Conc 4.8774
 Area 4761027
 Q 366.90>322.10 (-)



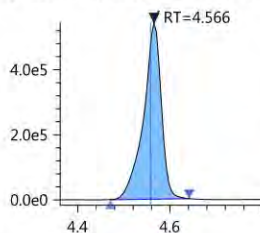
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Conc 5.0000
 Area 4761027
 ISTD 366.90>322.10 (-)



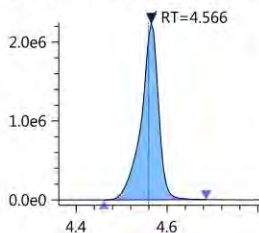
PFOA

Conc 0.9612
 Area 1452019
 Q 413.00>369.00 (-)



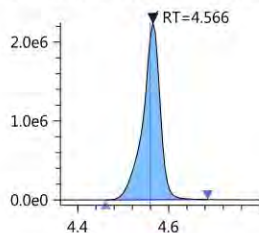
PFOA-13C

Conc 5.0045
 Area 5909606
 Q 416.80>372.05 (-)



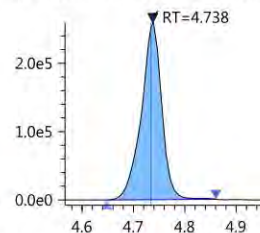
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Conc 5.0000
 Area 5909606
 ISTD 416.80>372.05 (-)



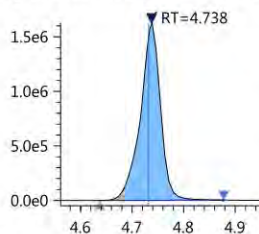
PFNA

Conc 0.9105
 Area 714201
 Q 463.00>418.90 (-)



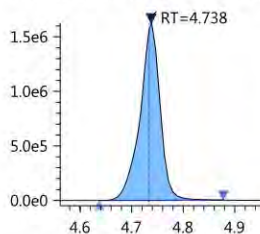
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Conc 4.9573
 Area 4370403
 Q 467.80>423.00 (-)



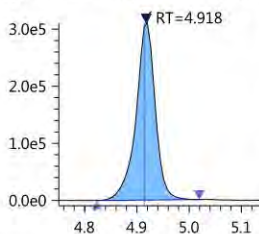
PFNA-13C_IS

Conc 5.0000
 Area 4370403
 ISTD 467.80>423.00 (-)



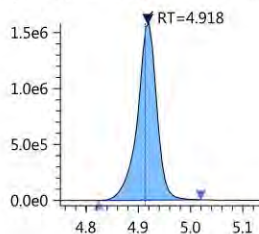
PFDA

Conc 0.9213
 Area 794856
 Q 513.00>468.80 (-)



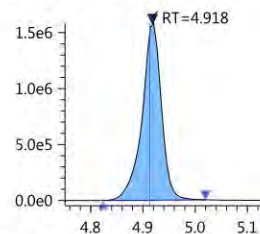
PFDA-13C

Conc 5.0793
 Area 4063065
 Q 514.80>469.95 (-)



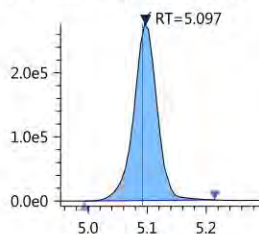
PFDA-13C_IS

Conc 5.0000
 Area 4063065
 ISTD 514.80>469.95 (-)



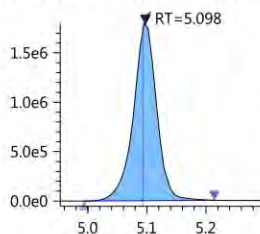
PFUnA

Conc 0.9800
 Area 759594
 Q 563.00>518.90 (-)



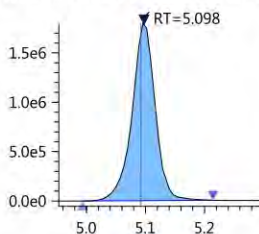
PFUnA-13C

Conc 4.9186
 Area 4907675
 Q 564.80>519.95 (-)



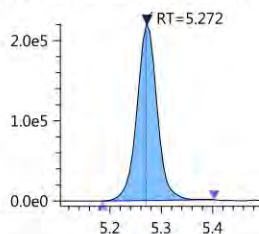
PFUnA-13C_IS

Conc 5.0000
 Area 4907675
 ISTD 564.80>519.95 (-)



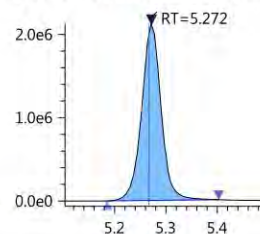
PFDoA

Conc 0.9537
 Area 600318
 Q 613.05>569.00 (-)



PFDoA-13C

Conc 4.7534
 Area 5587422
 Q 614.80>569.95 (-)



Insight Report

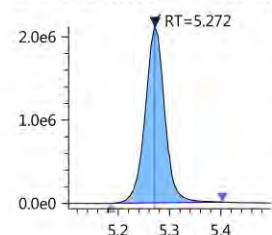
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PFDa-13C_IS

Conc 5.0000

Area 5587422

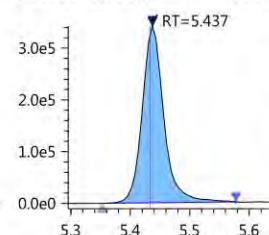
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**PFTrDA**

Conc 0.9831

Area 861446

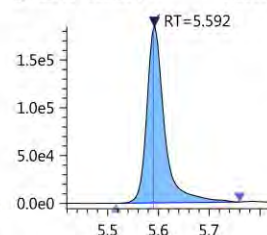
Q 663.00>618.90 (-) 3.43e5

**PFTeDA**

Conc 0.9912

Area 446515

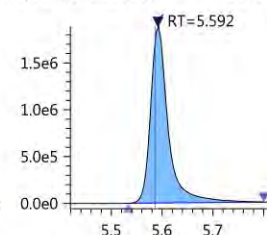
Q 713.40>669.00 (-) 1.85e5

**PFTeDA-13C**

Conc 4.8281

Area 4528059

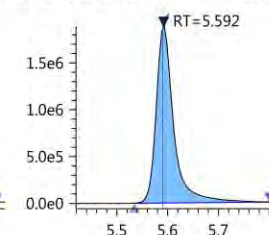
Q 714.70>669.90 (-) 1.89e6

**PFTeDA-13C_IS**

Conc 5.0000

Area 4528059

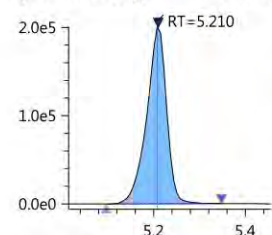
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**FOSA**

Conc 0.9517

Area 603843

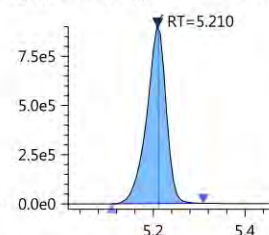
Q 498.20>78.00 (-) 2.01e5

**FOSA-13C**

Conc 4.9529

Area 2649049

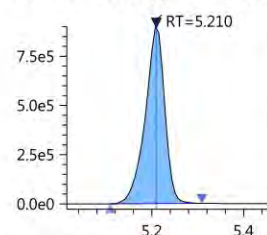
Q 506.00>78.05 (-) 9.00e5

**FOSA-13C_IS**

Conc 5.0000

Area 2649049

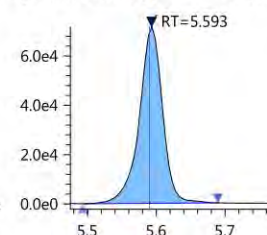
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**N-MeFOSA**

Conc 1.0027

Area 167904

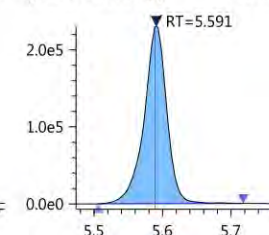
Q 512.00>169.10 (-) 7.19e4

**N-MeFOSA-d3**

Conc 4.7469

Area 532099

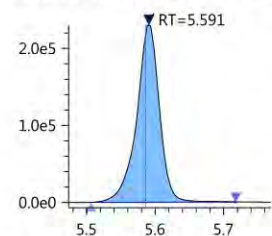
Q 514.90>168.90 (-) 2.30e5

**N-MeFOSA-d3_IS**

Conc 5.0000

Area 532099

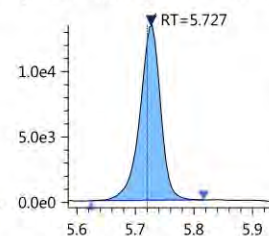
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**N-EtFOSA**

Conc 1.0299

Area 32910

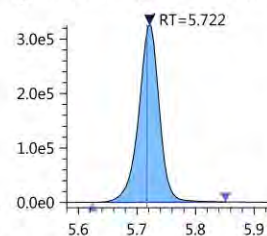
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**N-EtFOSA-d9**

Conc 4.7017

Area 796534

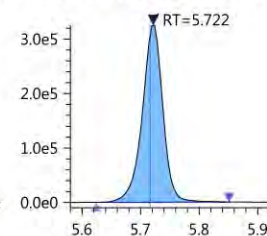
Q 530.90>169.15 (-) 3.26e5

**N-EtFOSA-d9_IS**

Conc 5.0000

Area 796534

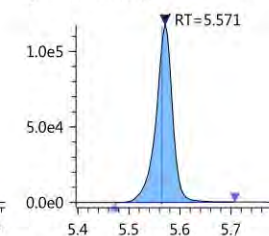
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**N-MeFOSE**

Conc 1.0116

Area 263110

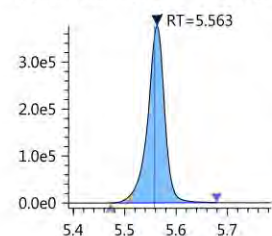
Q 616.00>59.00 (-) 1.17e5

**N-MeFOSE-d7**

Conc 4.7934

Area 863283

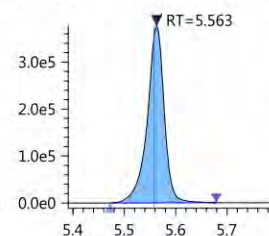
Q 622.70>59.10 (-) 3.77e5

**N-MeFOSE-d7_IS**

Conc 5.0000

Area 863283

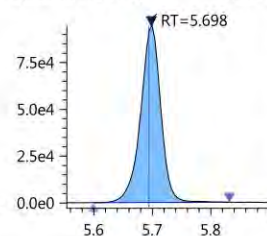
ISTD 622.70>59.10 (-) 3.77e5

**N-EtFOSE**

Conc 0.9927

Area 226146

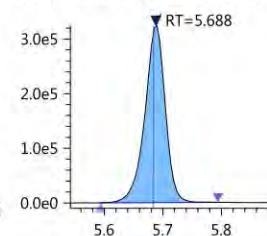
Q 630.00>58.90 (-) 9.47e4

**N-EtFOSE-d9**

Conc 4.6833

Area 784113

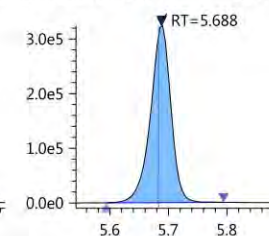
Q 638.70>59.10 (-) 3.24e5

**N-EtFOSE-d9_IS**

Conc 5.0000

Area 784113

ISTD 638.70>59.10 (-) 3.24e5



Insight Report

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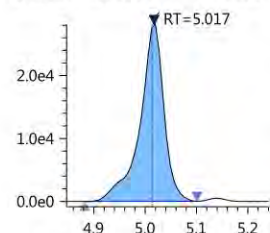
N-MeFOSAA

Conc 1.0212

Area 91100

Q 570.20>419.00 (-)

2.82e4



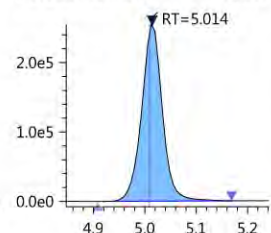
N-MeFOSAA-d3

Conc 4.6874

Area 711781

Q 572.80>419.05 (-)

2.55e5



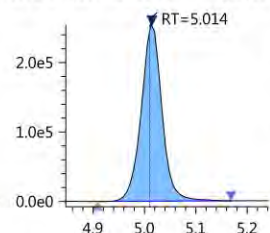
N-MeFOSAA-d3_IS

Conc 5.0000

Area 711781

ISTD 572.80>419.05 (-)

2.55e5



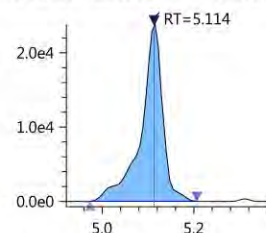
N-EtFOSAA

Conc 1.0357

Area 78040

Q 584.20>418.95 (-)

2.39e4



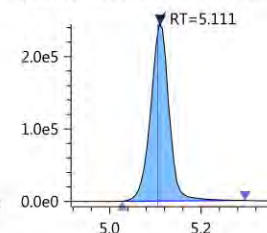
N-EtFOSAA-d5

Conc 4.8853

Area 683573

Q 588.80>419.00 (-)

2.45e5



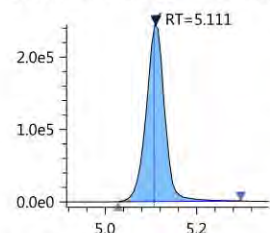
N-EtFOSAA-d5_IS

Conc 5.0000

Area 683573

ISTD 588.80>419.00 (-)

2.45e5



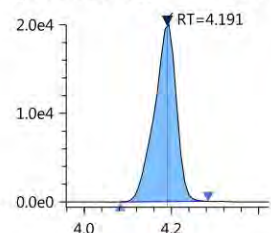
4_2-FTS_1

Conc 0.9631

Area 70377

Q 327.00>307.05 (-)

2.00e4



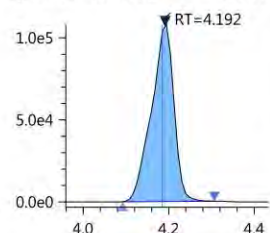
4_2-FTS-13C

Conc 4.4051

Area 392161

Q 328.80>309.05 (-)

1.08e5



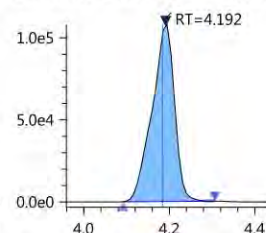
4_2-FTS-13C_IS

Conc 5.0000

Area 392161

ISTD 328.80>309.05 (-)

1.08e5



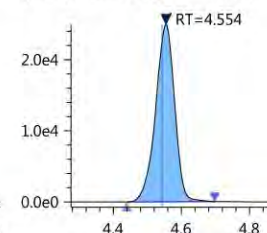
6_2-FTS_1

Conc 0.9805

Area 96991

Q 427.00>407.00 (-)

2.49e4



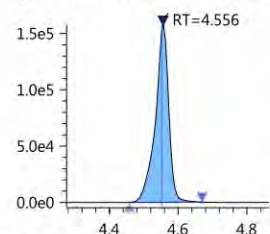
6_2-FTS-13C

Conc 4.8120

Area 427289

Q 428.90>409.00 (-)

1.57e5



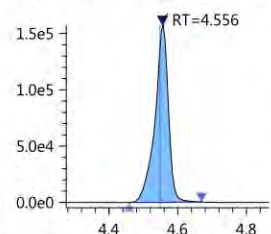
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Conc 5.0000

Area 427289

ISTD 428.90>409.00 (-)

1.57e5



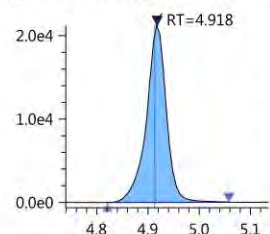
8_2-FTS_1

Conc 0.9614

Area 57444

Q 527.10>506.90 (-)

2.13e4



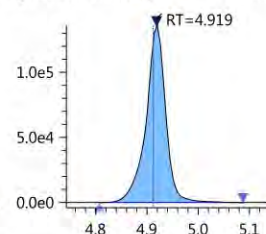
8_2-FTS-13C

Conc 5.0356

Area 362513

Q 528.80>509.00 (-)

1.36e5



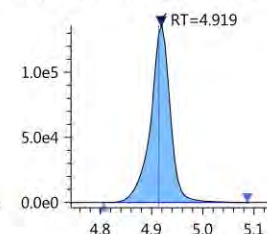
8_2-FTS-13C_IS

Conc 5.0000

Area 362513

ISTD 528.80>509.00 (-)

1.36e5



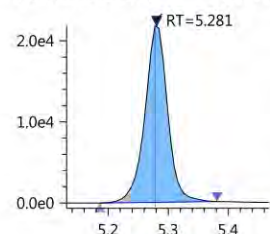
10_2-FTS_1

Conc 0.9811

Area 57184

Q 627.00>606.95 (-)

2.19e4



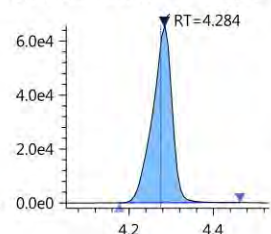
HPFO_DA

Conc 0.9882

Area 210761

Q 329.00>169.00 (-)

6.57e4



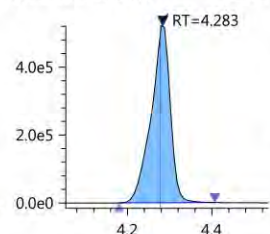
HPFO_DA-13C

Conc 4.7445

Area 1648519

Q 332.00>286.80 (-)

5.22e5



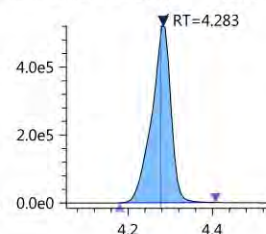
HPFO_DA-13C_IS

Conc 5.0000

Area 1648519

ISTD 332.00>286.80 (-)

5.22e5



Insight Report

Printed at 4/18/2020 11:14:21 AM

200417_027

Sample ID: 5.0 PPB ICAL

Date acquired: 4/17/2020 6:17:00 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_cuvre\200417_027.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	5.100	6345402	6345402	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.013	1184279	1152171	2	4.4687	ng/mL	4.4368
PFBS-13C	Auto	4.013	1152171	6345402	1	4.6444	ng/mL	5.0000
PFBS-13C_IS	Auto	4.013	1152171	1152171	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.234	591638	1152171	2	5.2041	ng/mL	4.7046
PFHxS_1	Auto	4.395	751522	672306	3	4.4776	ng/mL	4.5654
PFHxS-18O	Auto	4.399	672306	6345402	1	4.8139	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.399	672306	672306	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.557	993505	672306	3	4.7389	ng/mL	4.7672
PFOS_1	Auto	4.727	744796	935128	4	4.7015	ng/mL	4.6461
PFOS-13C	Auto	4.727	935128	6345402	1	4.7570	ng/mL	5.0000
PFOS-13C_IS	Auto	4.727	935128	935128	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.903	534139	935128	4	4.8219	ng/mL	4.8079
PFDS_1	Auto	5.080	732277	935128	4	4.9459	ng/mL	4.8233
PFBA	Auto	3.380	3104618	3161705	5	5.0281	ng/mL	5.0000
PFBA-13C	Auto	3.379	3161705	6345402	1	4.7100	ng/mL	5.0000
PFBA-13C_IS	Auto	3.379	3161705	3161705	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.958	3811167	1792298	6	5.0546	ng/mL	5.0000
PFPeA-13C	Auto	3.957	1792298	6345402	1	4.7446	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.957	1792298	1792298	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.216	4830832	4972834	7	4.9417	ng/mL	5.0000
PFHxA-13C	Auto	4.216	4972834	6345402	1	4.8057	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.216	4972834	4972834	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.397	3826105	4275336	8	5.0013	ng/mL	5.0000
PFHpA-13C	Auto	4.397	4275336	6345402	1	4.5671	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.397	4275336	4275336	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.565	6647251	5246538	9	4.9793	ng/mL	5.0000
PFOA-13C	Auto	4.565	5246538	6345402	1	4.6329	ng/mL	5.0000
PFOA-13C_IS	Auto	4.565	5246538	5246538	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.738	3401877	3809421	10	4.9957	ng/mL	5.0000
PFNA-13C	Auto	4.738	3809421	6345402	1	4.5057	ng/mL	5.0000
PFNA-13C_IS	Auto	4.738	3809421	3809421	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.919	3650010	3560442	11	4.8278	ng/mL	5.0000
PFDA-13C	Auto	4.920	3560442	6345402	1	4.6413	ng/mL	5.0000
PFDA-13C_IS	Auto	4.920	3560442	3560442	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.100	3478092	4422119	12	5.0365	ng/mL	5.0000
PFUnA-13C	Auto	5.100	4422119	6345402	1	4.6215	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.100	4422119	4422119	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.274	3056491	5330557	13	5.0324	ng/mL	5.0000
PFDoA-13C	Auto	5.274	5330557	6345402	1	4.7287	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.274	5330557	5330557	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.439	4287400	4249354	14	5.2331	ng/mL	5.0000
PFTeDA	Auto	5.594	1947784	4249354	14	5.1062	ng/mL	5.0000
PFTeDA-13C	Auto	5.594	4249354	6345402	1	4.7246	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.594	4249354	4249354	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.212	2779619	2473254	16	4.6921	ng/mL	5.0000
FOSA-13C	Auto	5.212	2473254	6345402	1	4.8220	ng/mL	5.0000
FOSA-13C_IS	Auto	5.212	2473254	2473254	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.595	818135	507990	17	5.0095	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.593	507990	6345402	1	4.7255	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.593	507990	507990	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.728	160429	750864	18	5.3835	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.723	750864	6345402	1	4.6216	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.723	750864	750864	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.573	1235704	817060	19	5.0199	ng/mL	5.0000
N-MeFOSE-d7	Auto	5.566	817060	6345402	1	4.7308	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.566	817060	817060	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.700	1089776	733000	20	5.1174	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.691	733000	6345402	1	4.5652	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.691	733000	733000	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.018	459991	722548	21	5.1207	ng/mL	5.0000
N-MeFOSAA-d3	Auto	5.016	722548	6345402	1	4.9617	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.016	722548	722548	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.116	352523	640074	22	5.3034	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.112	640074	6345402	1	4.7700	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.112	640074	640074	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.191	360725	400704	23	4.7850	ng/mL	4.6861
4_2-FTS-13C	Auto	4.191	400704	6345402	1	4.6935	ng/mL	5.0000

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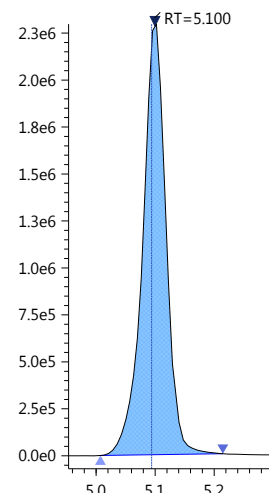
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.191	400704	400704	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.552	430793	399022	24	4.6636	ng/mL	4.7558
6_2-FTS-13C	Auto	4.554	399022	6345402	1	4.6858	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.554	399022	399022	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.919	247000	327588	25	4.5747	ng/mL	4.8002
8_2-FTS-13C	Auto	4.920	327588	6345402	1	4.7450	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.920	327588	327588	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.283	244817	327588	25	4.6483	ng/mL	4.8310
HPFO_DA	Auto	4.284	1033579	1572492	26	5.0806	ng/mL	5.0000
HPFO_DA-13C	Auto	4.284	1572492	6345402	1	4.7192	ng/mL	5.0000
HPFO_DA-13C_IS	Auto	4.284	1572492	1572492	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS

Conc 5.0000
Area 6345402

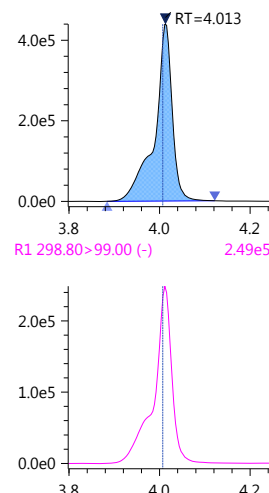
ISTD 570.00>525.00 (-)



PFBS_1

Conc 4.4687
Area 1184279
R#1 56.44 (0.00)

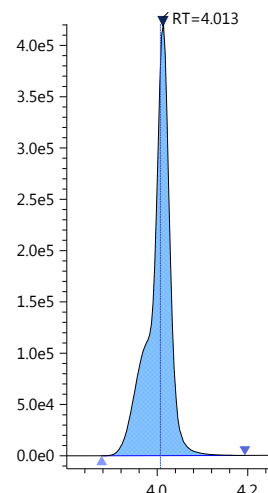
Q 299.00>80.00 (-)



PFBS-13C

Conc 4.6444
Area 1152171

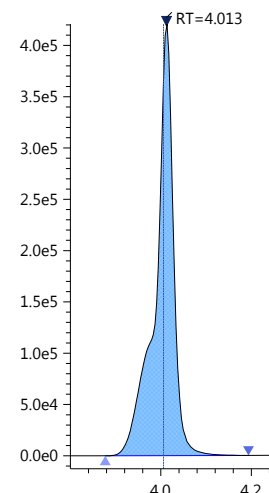
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
Area 1152171

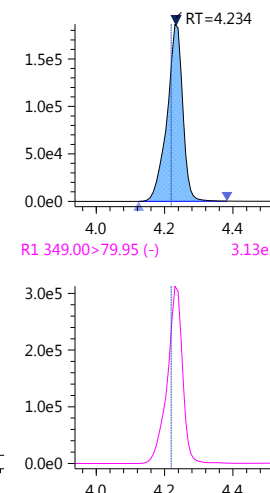
ISTD 301.80>80.00 (-)



PFPeS

Conc 5.2041
Area 591638
R#1 167.16 (0.00)

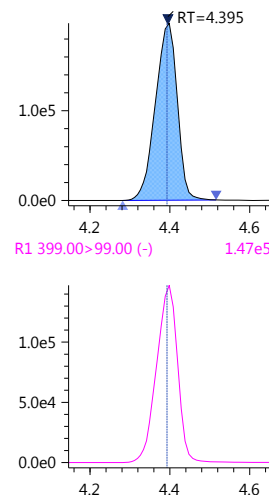
Q 349.00>99.00 (-)



PFHxS_1

Conc 4.4776
Area 751522
R#1 74.33 (0.00)

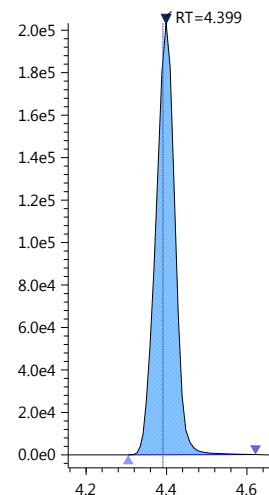
Q 399.00>80.00 (-)



PFHxS-180

Conc 4.8139
Area 672306

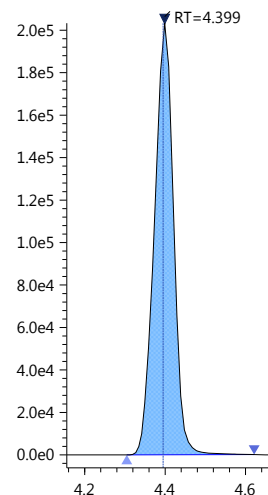
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
Area 672306

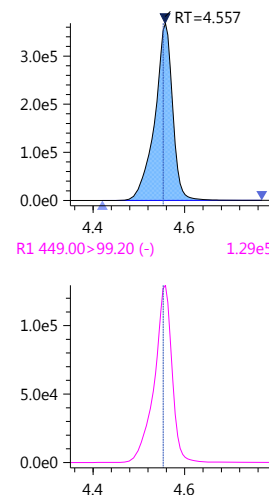
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 4.7389
Area 993505
R#1 35.26 (0.00)

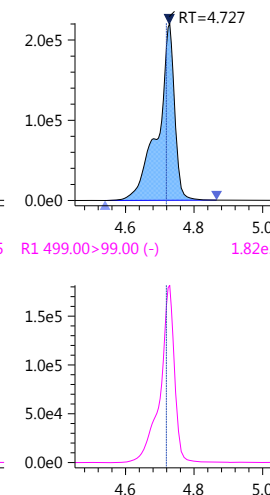
Q 449.00>80.15 (-)



PFOS_1

Conc 4.7015
Area 744796
R#1 81.90 (0.00)

Q 499.00>80.00 (-)



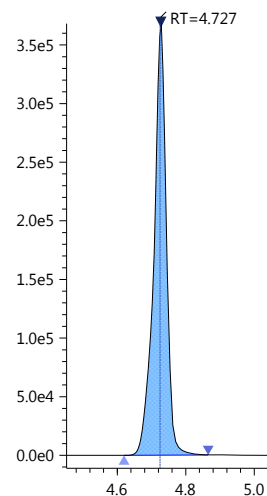
Insight Report

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PFOS-13C

Conc 4.7570
Area 935128

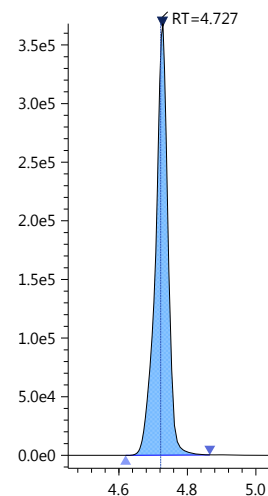
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
Area 935128

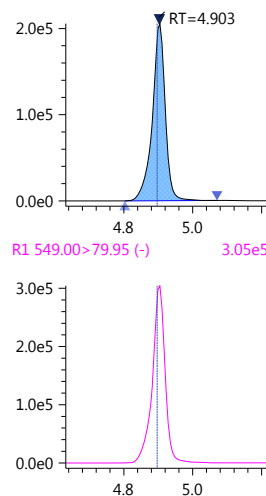
ISTD 502.80>80.05 (-)



PFNS

Conc 4.8219
Area 534139
R#1 150.10 (0.00)

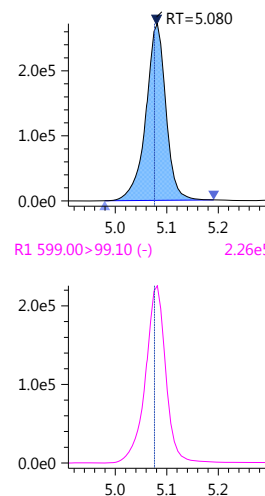
Q 549.00>99.00 (-)



PFDS_1

Conc 4.9459
Area 732277
R#1 82.78 (0.00)

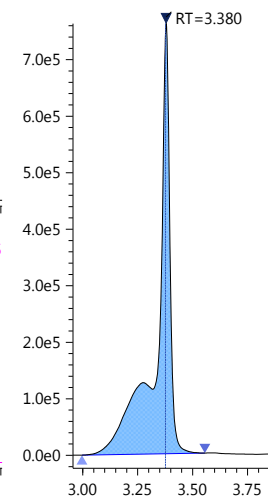
Q 599.00>79.90 (-)



PFBA

Conc 5.0281
Area 3104618

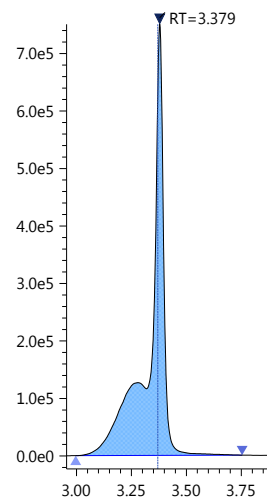
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.7100
Area 3161705

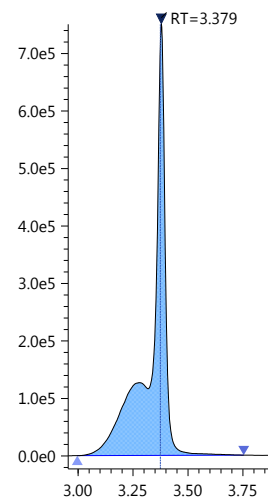
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 3161705

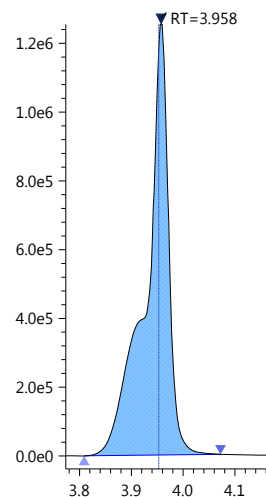
ISTD 216.90>172.15 (-)



PFPeA

Conc 5.0546
Area 3811167

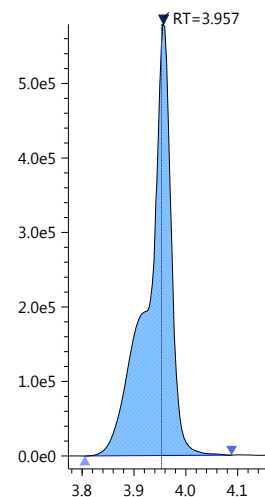
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.7446
Area 1792298

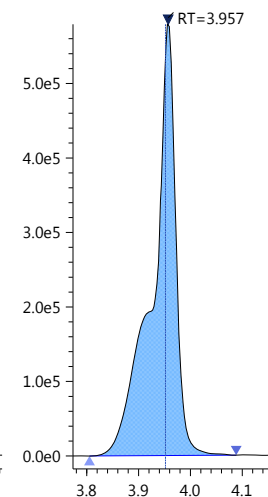
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1792298

ISTD 267.90>223.00 (-)



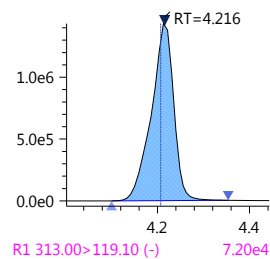
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PFHxA

Conc 4.9417
Area 4830832
R#1 5.02 (0.00)

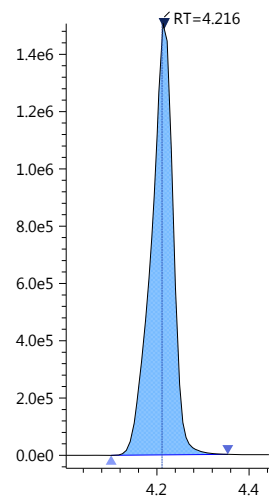
Q 313.00>269.00 (-) 1.43e6



PFHxA-13C

Conc 4.8057
Area 4972834

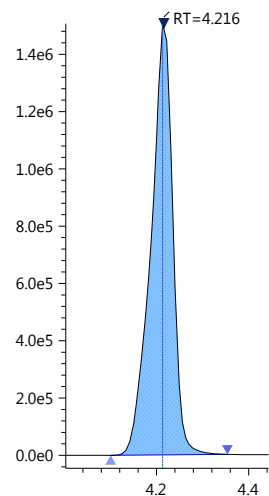
Q 314.90>270.10 (-) 1.51e6



PFHxA-13C_IS

Conc 5.0000
Area 4972834

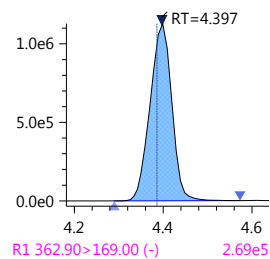
ISTD 314.90>270.10 (-) 1.51e6



PFHpA

Conc 5.0013
Area 3826105
R#1 23.90 (0.00)

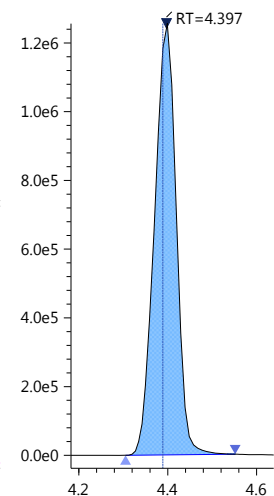
Q 362.90>319.00 (-) 1.13e6



PFHpA-13C

Conc 4.5671
Area 4275336

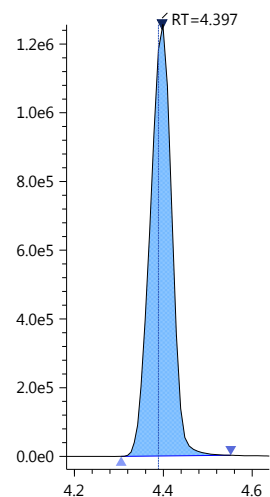
Q 366.90>322.10 (-) 1.26e6



PFHpA-13C_IS

Conc 5.0000
Area 4275336

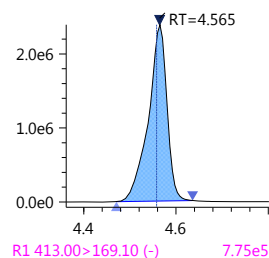
ISTD 366.90>322.10 (-) 1.26e6



PFOA

Conc 4.9793
Area 6647251
R#1 32.37 (0.00)

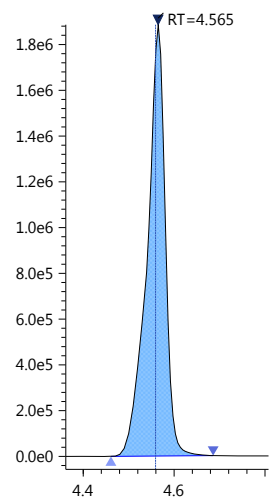
Q 413.00>369.00 (-) 2.39e6



PFOA-13C

Conc 4.6329
Area 5246538

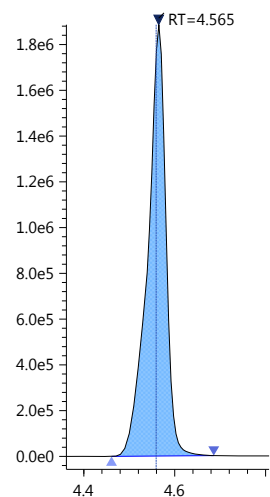
Q 416.80>372.05 (-) 1.89e6



PFOA-13C_IS

Conc 5.0000
Area 5246538

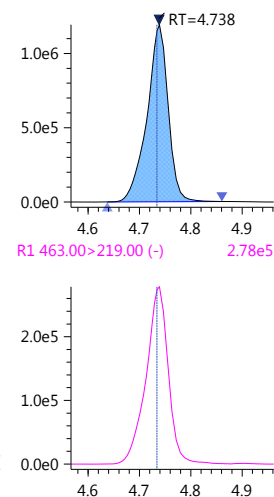
ISTD 416.80>372.05 (-) 1.89e6



PFNA

Conc 4.9957
Area 3401877
R#1 23.04 (0.00)

Q 463.00>418.90 (-) 1.19e6

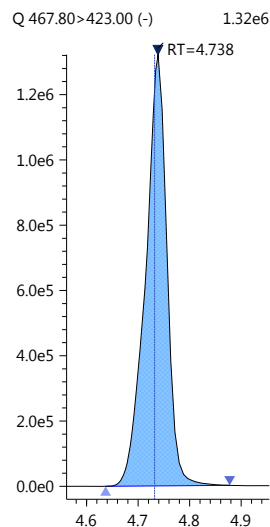


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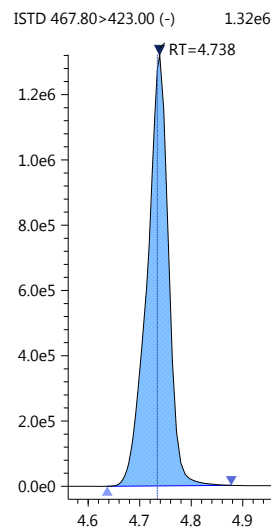
PFNA-13C

Conc 4.5057
Area 3809421



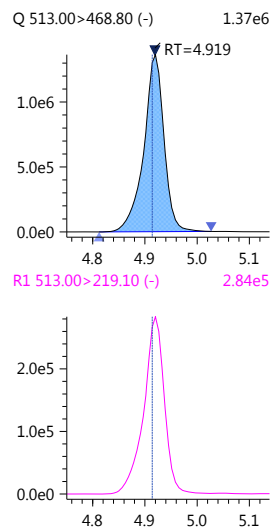
PFNA-13C_IS

Conc 5.0000
Area 3809421



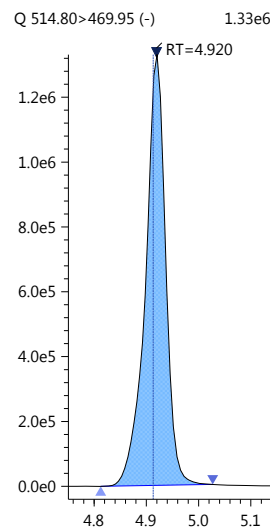
PFDA

Conc 4.8278
Area 3650010
R#1 20.73 (0.00)



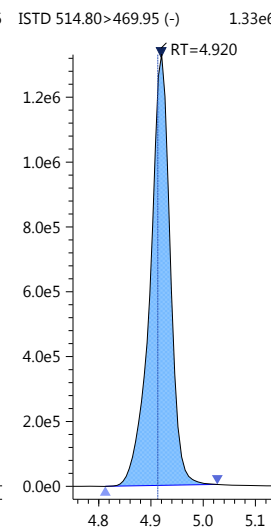
PFDA-13C

Conc 4.6413
Area 3560442



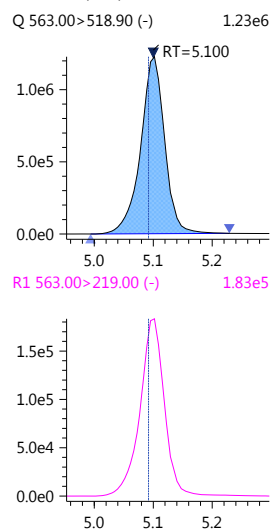
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Conc 5.0000
Area 3560442



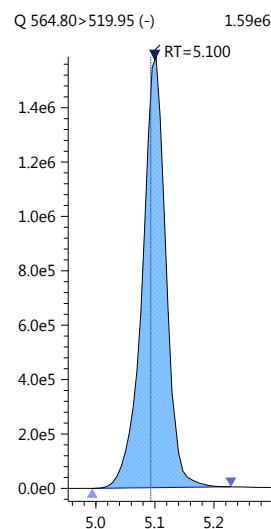
PFUnA

Conc 5.0365
Area 3478092
R#1 14.88 (0.00)



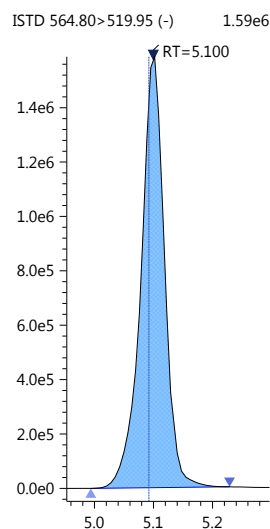
PFUnA-13C

Conc 4.6215
Area 4422119



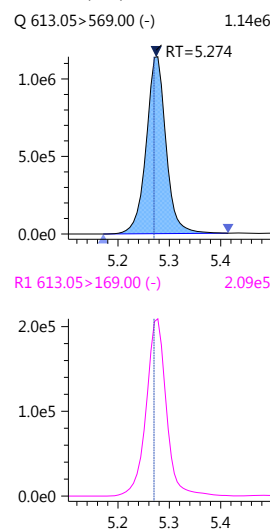
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Conc 5.0000
Area 4422119



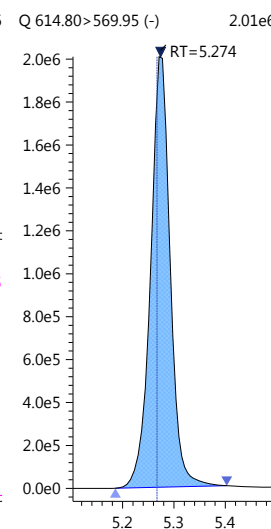
PFDaA

Conc 5.0324
Area 3056491
R#1 18.07 (0.00)



PFDaA-13C

Conc 4.7287
Area 5330557



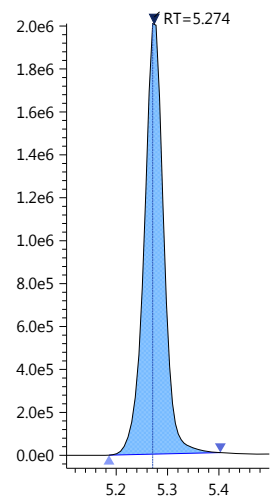
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PFDaA-13C_IS

Conc 5.0000
Area 5330557

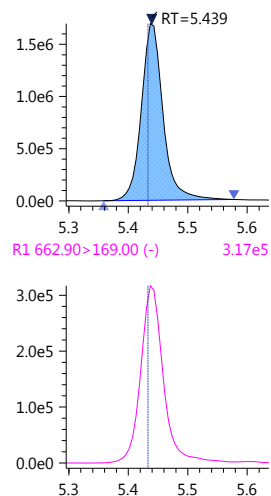
ISTD 614.80>569.95 (-) 2.01e6



PFTrDA

Conc 5.2331
Area 4287400
R#1 18.40 (0.00)

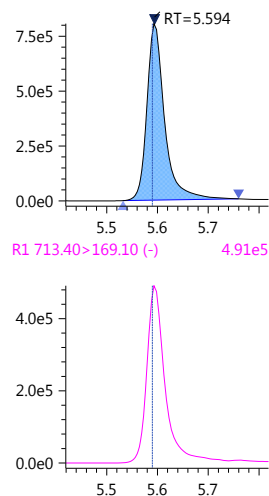
Q 663.00>618.90 (-) 1.70e6



PFTeDA

Conc 5.1062
Area 1947784
R#1 60.78 (0.00)

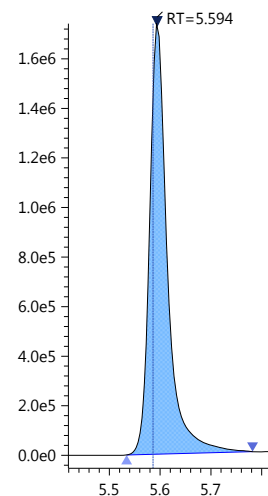
Q 713.40>669.00 (-) 8.07e5



PFTeDA-13C

Conc 4.7246
Area 4249354

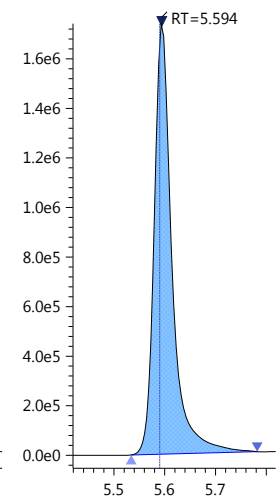
Q 714.70>669.90 (-) 1.74e6



PFTeDA-13C_IS

Conc 5.0000
Area 4249354

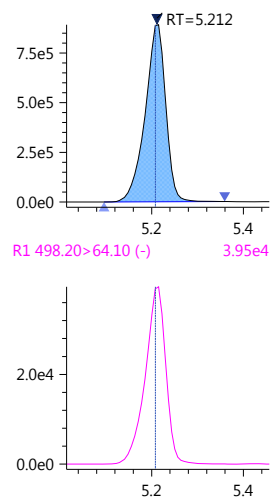
ISTD 714.70>669.90 (-) 1.74e6



FOSA

Conc 4.6921
Area 2779619
R#1 4.40 (0.00)

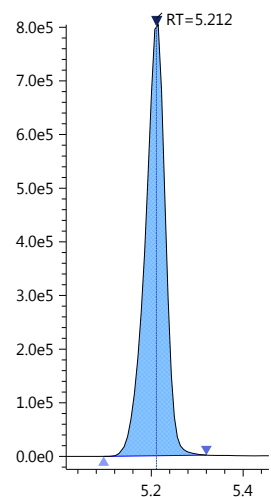
Q 498.20>78.00 (-) 8.93e5



FOSA-13C

Conc 4.8220
Area 2473254

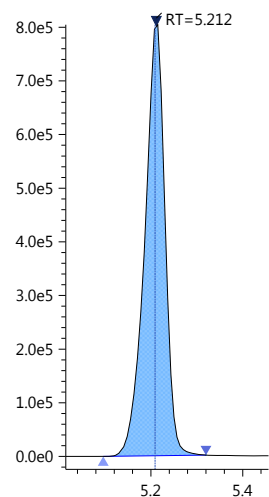
Q 506.00>78.05 (-) 8.05e5



FOSA-13C_IS

Conc 5.0000
Area 2473254

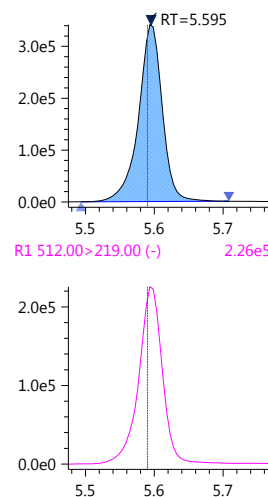
ISTD 506.00>78.05 (-) 8.05e5



N-MeFOSA

Conc 5.0095
Area 818135
R#1 65.98 (0.00)

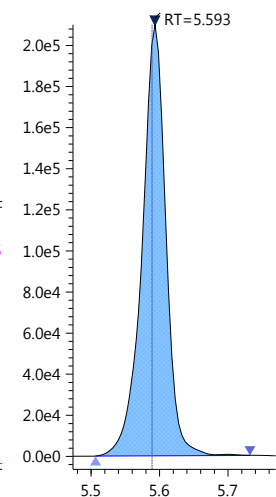
Q 512.00>169.10 (-) 3.42e5



N-MeFOSA-d3

Conc 4.7255
Area 507990

Q 514.90>168.90 (-) 2.10e5



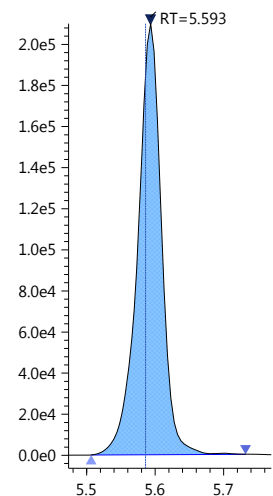
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N-MeFOSA-d3_IS

Conc 5.0000
Area 507990

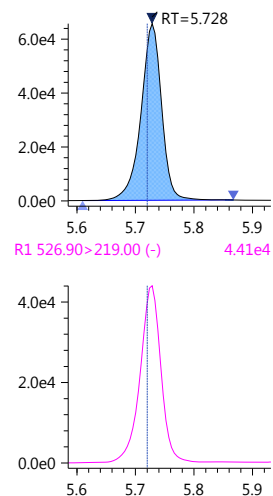
ISTD 514.90>168.90 (-) 2.10e5



N-EtFOSA

Conc 5.3835
Area 160429
R#1 67.01 (0.00)

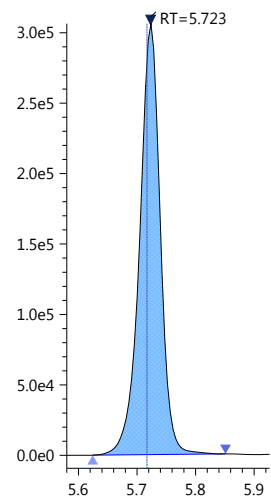
Q 526.90>169.10 (-) 6.58e4



N-EtFOSA-d9

Conc 4.6216
Area 750864

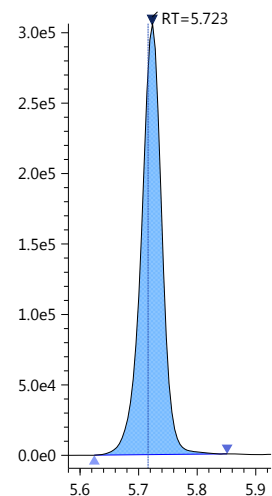
Q 530.90>169.15 (-) 3.06e5



N-EtFOSA-d9_IS

Conc 5.0000
Area 750864

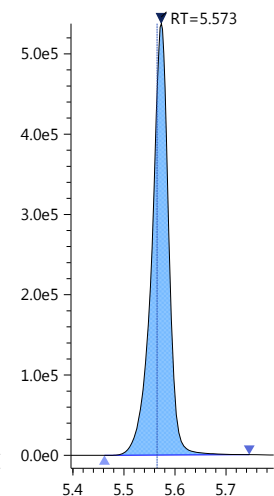
ISTD 530.90>169.15 (-) 3.06e5



N-MeFOSE

Conc 5.0199
Area 1235704

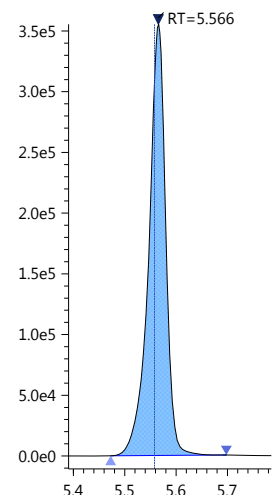
Q 616.00>59.00 (-) 5.38e5



N-MeFOSE-d7

Conc 4.7308
Area 817060

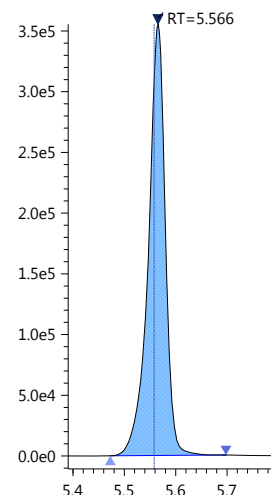
Q 622.70>59.10 (-) 3.56e5



N-MeFOSE-d7_IS

Conc 5.0000
Area 817060

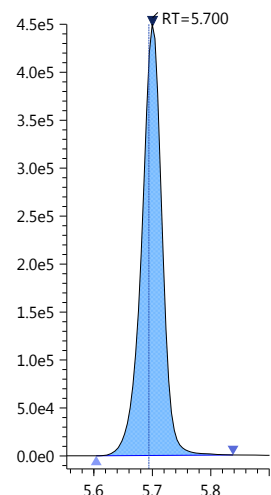
ISTD 622.70>59.10 (-) 3.56e5



N-EtFOSE

Conc 5.1174
Area 1089776

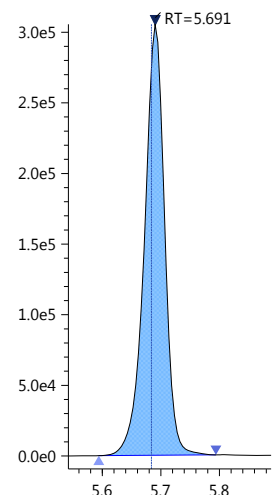
Q 630.00>58.90 (-) 4.50e5



N-EtFOSE-d9

Conc 4.5652
Area 733000

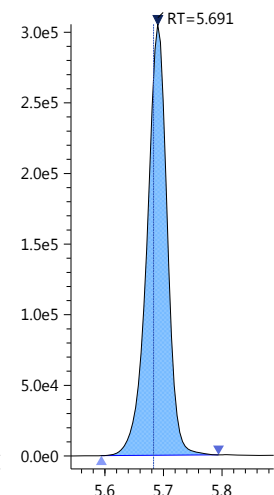
Q 638.70>59.10 (-) 3.06e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 733000

ISTD 638.70>59.10 (-) 3.06e5



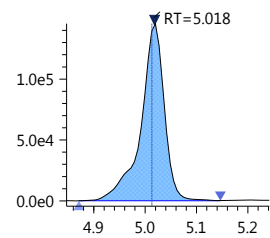
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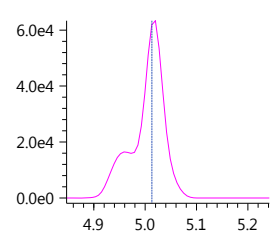
N-MeFOSAA

Conc 5.1207
Area 459991
R#1 43.63 (0.00)

Q 570.20>419.00 (-) 1.46e5



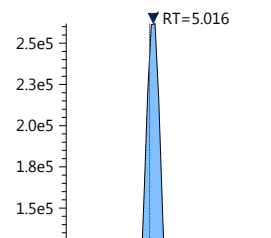
R1 570.20>512.00 (-) 6.34e4



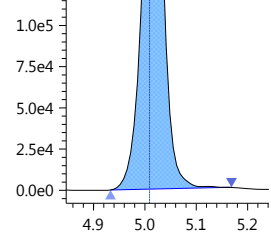
N-MeFOSAA-d3

Conc 4.9617
Area 722548

Q 572.80>419.05 (-) 2.62e5



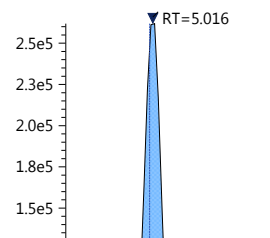
R1 572.80>512.00 (-) 6.34e4



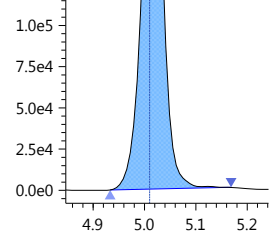
N-MeFOSAA-d3_IS

Conc 5.0000
Area 722548

ISTD 572.80>419.05 (-) 2.62e5



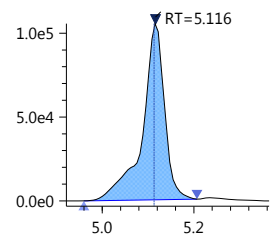
R1 572.80>512.00 (-) 6.34e4



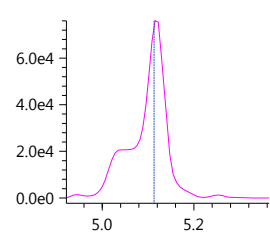
N-EtFOSAA

Conc 5.3034
Area 352523
R#1 71.71 (0.00)

Q 584.20>418.95 (-) 1.06e5



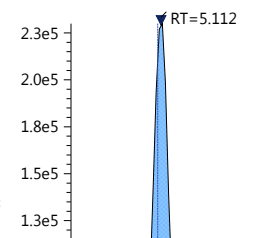
R1 584.20>526.10 (-) 7.60e4



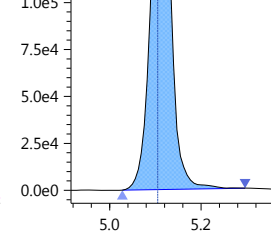
N-EtFOSAA-d5

Conc 4.7700
Area 640074

Q 588.80>419.00 (-) 2.30e5



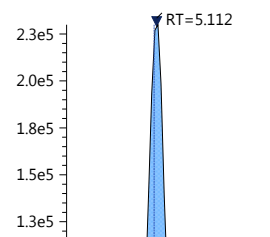
R1 588.80>526.10 (-) 7.60e4



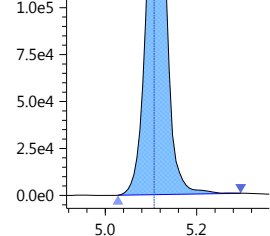
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Conc 5.0000
Area 640074

ISTD 588.80>419.00 (-) 2.30e5



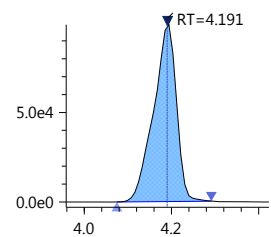
R1 588.80>526.10 (-) 7.60e4



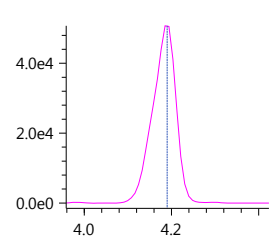
4_2-FTS_1

Conc 4.7850
Area 360725
R#1 52.83 (0.00)

Q 327.00>307.05 (-) 9.91e4



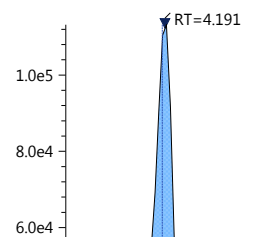
R1 327.00>81.10 (-) 5.07e4



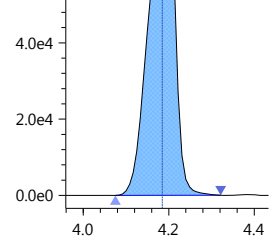
4_2-FTS-13C

Conc 4.6935
Area 400704

Q 328.80>309.05 (-) 1.13e5



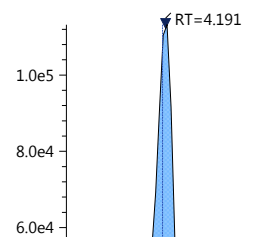
R1 328.80>81.10 (-) 5.07e4



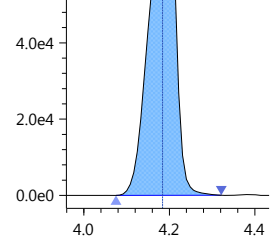
4_2-FTS-13C_IS

Conc 5.0000
Area 400704

ISTD 328.80>309.05 (-) 1.13e5



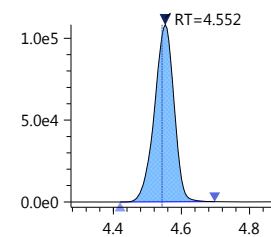
R1 328.80>81.10 (-) 5.07e4



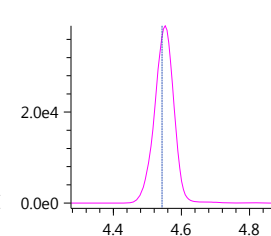
6_2-FTS_1

Conc 4.6636
Area 430793
R#1 36.72 (0.00)

Q 427.00>407.00 (-) 1.08e5



R1 427.00>80.90 (-) 3.90e4

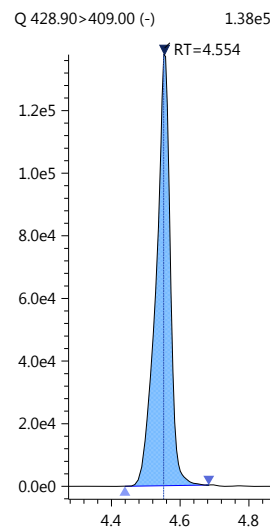


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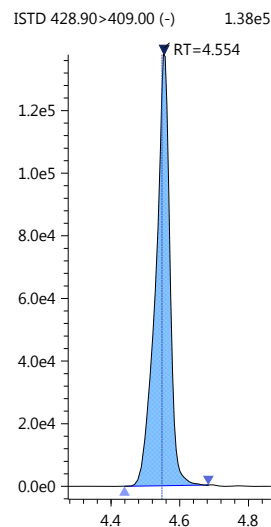
6_2-FTS-13C

Conc 4.6858
 Area 399022



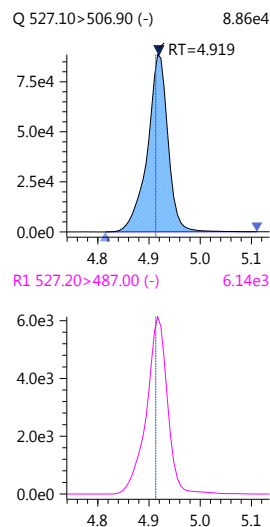
6_2-FTS-13C_IS

Conc 5.0000
 Area 399022



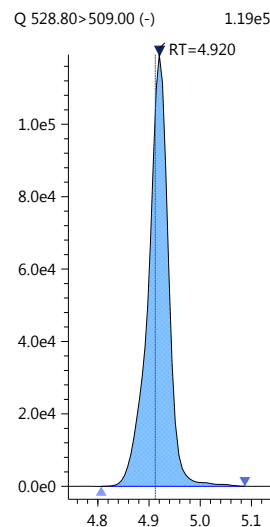
8_2-FTS_1

Conc 4.5747
 Area 247000
 R#1 6.92 (0.00)



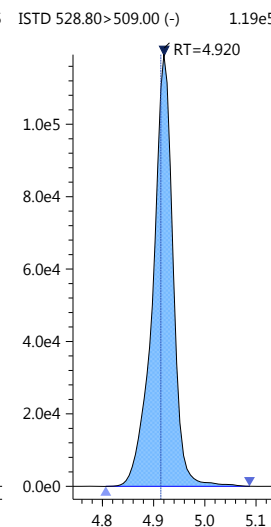
8_2-FTS-13C

Conc 4.7450
 Area 327588



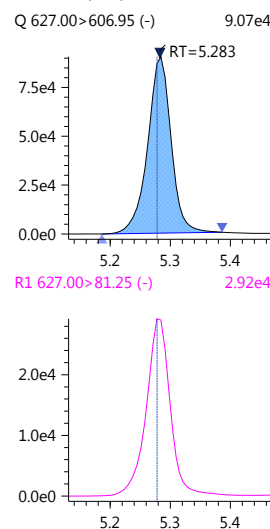
8_2-FTS-13C_IS

Conc 5.0000
 Area 327588



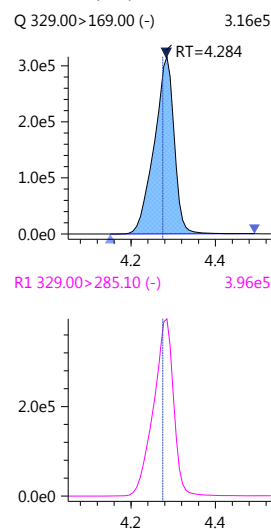
10_2-FtS_1

Conc 4.6483
 Area 244817
 R#1 31.95 (0.00)



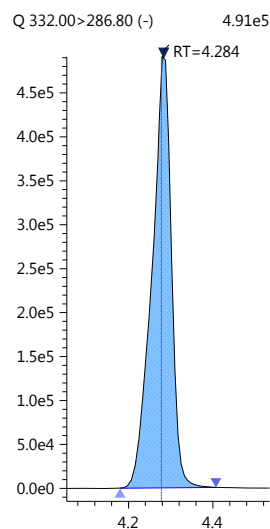
HPFO_DA

Conc 5.0806
 Area 1033579
 R#1 125.27 (0.00)



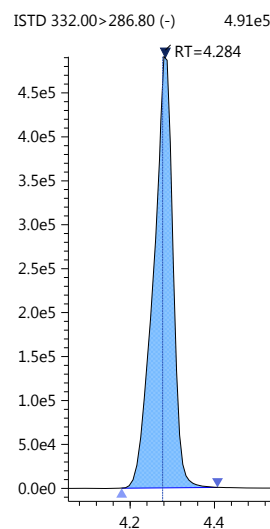
HPFO_DA-13C

Conc 4.7192
 Area 1572492



HPFO_DA-13C_IS

Conc 5.0000
 Area 1572492



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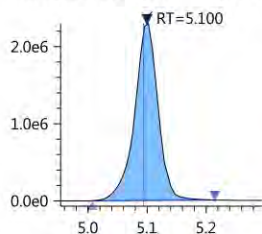
Printed at 4/18/2020 10:35:59 AM

200417_027

Sample ID: 5.0 PPB ICAL
Date acquired: 4/17/2020 6:17:00 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200417_curve\200417_027.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 0

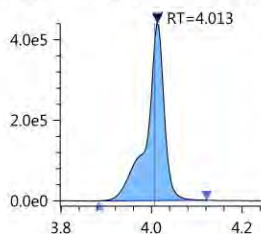
13C7-PFUnDA_IS

Conc 5.0000
Area 6345402
ISTD 570.00>525.00 (-)



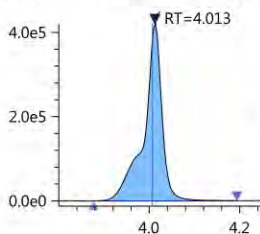
PFBS_1

Conc 4.4687
Area 1184279
Q 299.00>80.00 (-)



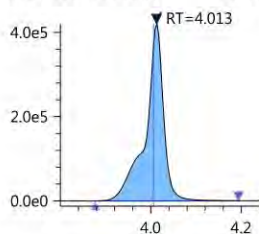
PFBS-13C

Conc 4.6444
Area 1152171
Q 301.80>80.00 (-)



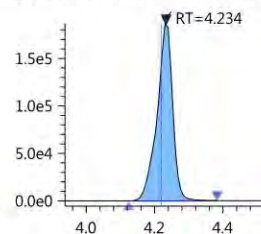
PFBS-13C_IS

Conc 5.0000
Area 1152171
ISTD 301.80>80.00 (-)



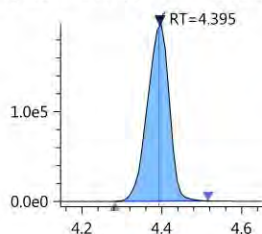
PFPeS

Conc 5.2041
Area 591638
Q 349.00>99.00 (-)



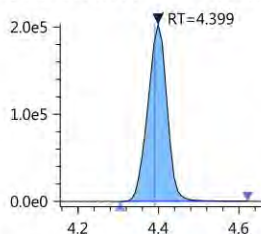
PFHxS_1

Conc 4.4776
Area 751522
Q 399.00>80.00 (-)



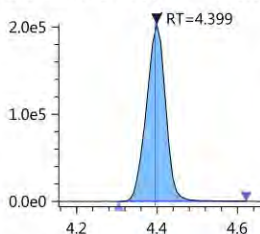
PFHxS-180

Conc 4.8139
Area 672306
Q 402.70>84.05 (-)



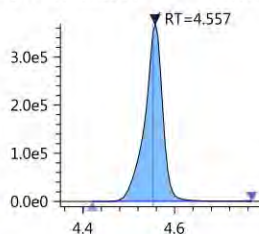
PFHxS-180_IS

Conc 5.0000
Area 672306
ISTD 402.70>84.05 (-)



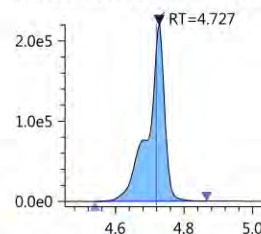
PFHpS_1

Conc 4.7389
Area 993505
Q 449.00>80.15 (-)



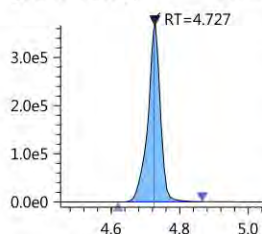
PFOS_1

Conc 4.7015
Area 744796
Q 499.00>80.00 (-)



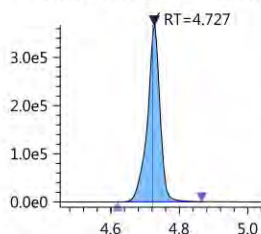
PFOS-13C

Conc 4.7570
Area 935128
Q 502.80>80.05 (-)



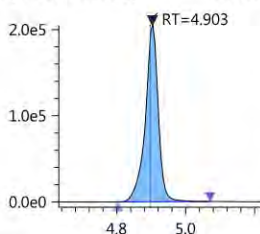
PFOS-13C_IS

Conc 5.0000
Area 935128
ISTD 502.80>80.05 (-)



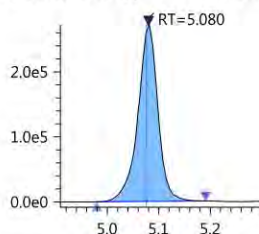
PFNS

Conc 4.8219
Area 534139
Q 549.00>99.00 (-)



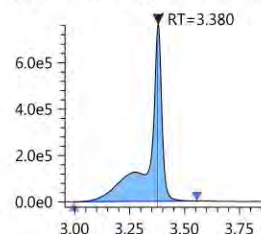
PFDS_1

Conc 4.9459
Area 732277
Q 599.00>79.90 (-)



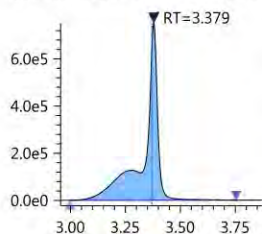
PFBA

Conc 5.0281
Area 3104618
Q 213.00>169.10 (-)



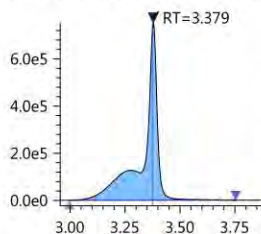
PFBA-13C

Conc 4.7100
Area 3161705
Q 216.90>172.15 (-)



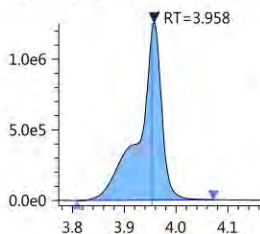
PFBA-13C_IS

Conc 5.0000
Area 3161705
ISTD 216.90>172.15 (-)



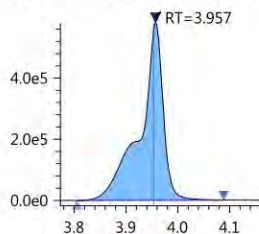
PFPeA

Conc 5.0546
Area 3811167
Q 263.05>219.10 (-)



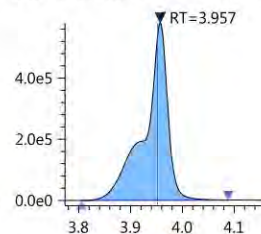
PFPeA-13C

Conc 4.7446
Area 1792298
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1792298
ISTD 267.90>223.00 (-)

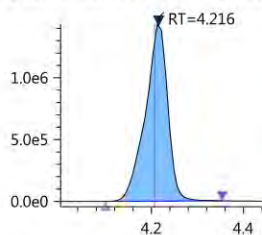


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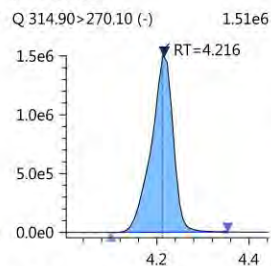
PFHxA

Conc 4.9417
Area 4830832
Q 313.00>269.00 (-)



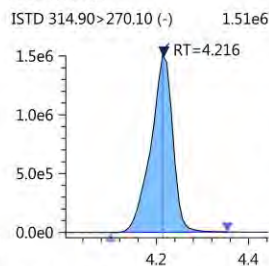
PFHxA-13C

Conc 4.8057
Area 4972834



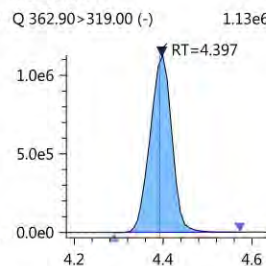
PFHxA-13C_IS

Conc 5.0000
Area 4972834



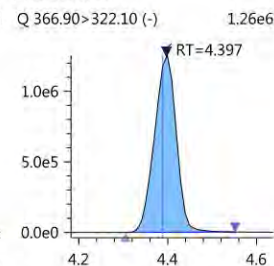
PFHpA

Conc 5.0013
Area 3826105



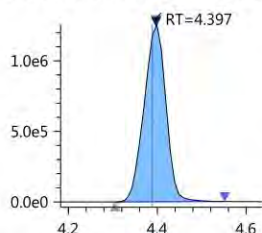
PFHpA-13C

Conc 4.5671
Area 4275336



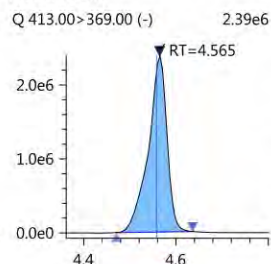
PFHpA-13C_IS

Conc 5.0000
Area 4275336
ISTD 366.90>322.10 (-)



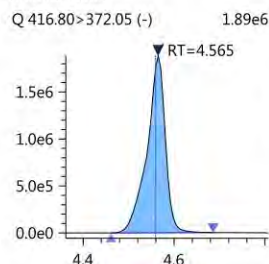
PFOA

Conc 4.9879
Area 6647251



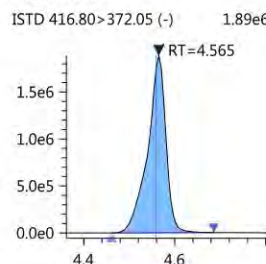
PFOA-13C

Conc 4.6329
Area 5246538



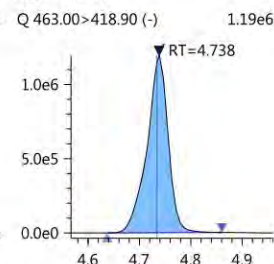
PFOA-13C_IS

Conc 5.0000
Area 5246538



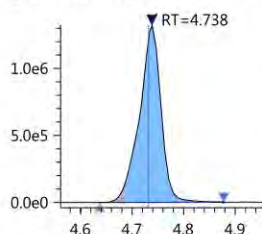
PFNA

Conc 4.9957
Area 3401877



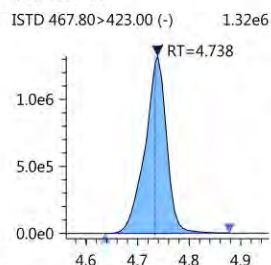
PFNA-13C

Conc 4.5057
Area 3809421
Q 467.80>423.00 (-)



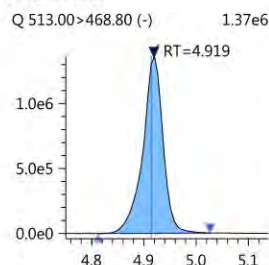
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Conc 5.0000
Area 3809421



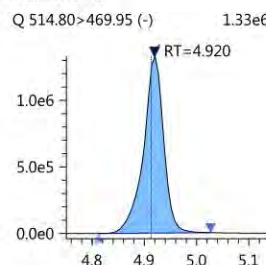
PFDA

Conc 4.8278
Area 3650010



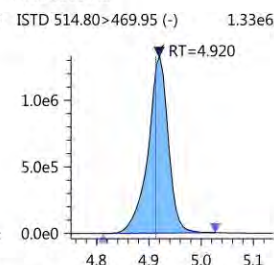
PFDA-13C

Conc 4.6413
Area 3560442



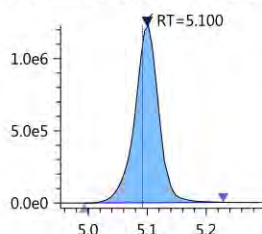
PFDA-13C_IS

Conc 5.0000
Area 3560442



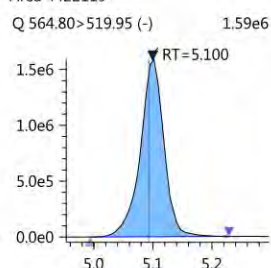
PFUnA

Conc 5.0365
Area 3478092
Q 563.00>518.90 (-)



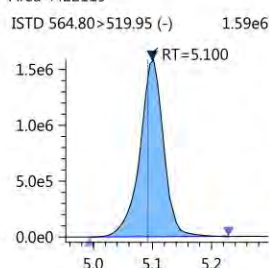
PFUnA-13C

Conc 4.6215
Area 4422119



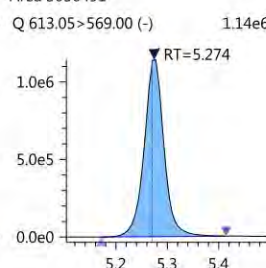
PFUnA-13C_IS

Conc 5.0000
Area 4422119



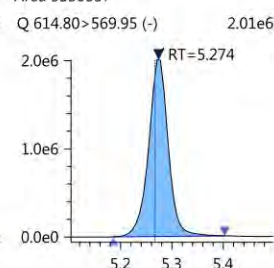
PFDoA

Conc 5.0324
Area 3056491



PFDoA-13C

Conc 4.7287
Area 5330557

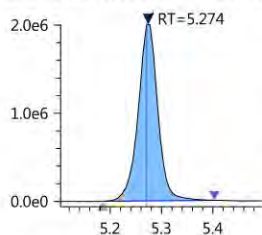


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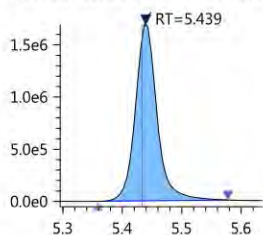
PFDaA-13C_IS

Conc 5.0000
Area 5330557
ISTD 614.80>569.95 (-) 2.01e6



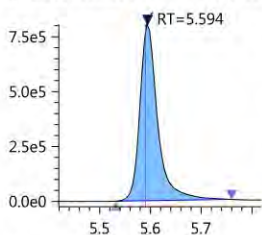
PFTrDA

Conc 5.2331
Area 4287400
Q 663.00>618.90 (-) 1.70e6



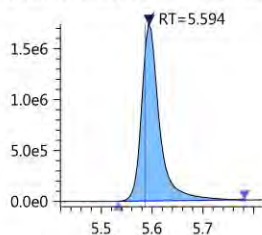
PFTeDA

Conc 5.1067
Area 1947784
Q 713.40>669.00 (-) 8.07e5



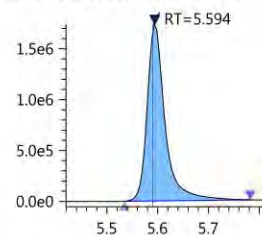
PFTeDA-13C

Conc 4.7246
Area 4249354
Q 714.70>669.90 (-) 1.74e6



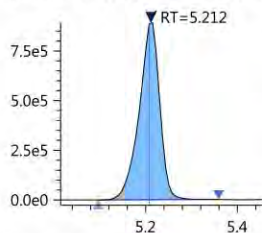
PFTeDA-13C_IS

Conc 5.0000
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ISTD 714.70>669.90 (-) 1.74e6



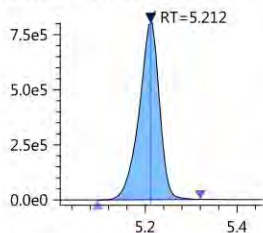
FOSA

Conc 4.6921
Area 2779619
Q 498.20>78.00 (-) 8.93e5



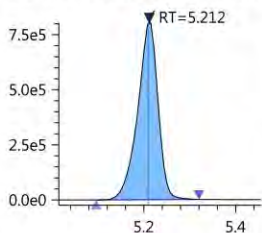
FOSA-13C

Conc 4.8220
Area 2473254
Q 506.00>78.05 (-) 8.05e5



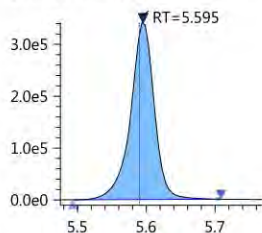
FOSA-13C_IS

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ISTD 506.00>78.05 (-) 8.05e5



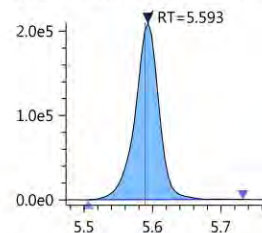
N-MeFOSA

Conc 5.1175
Area 818135
Q 512.00>169.10 (-) 3.42e5



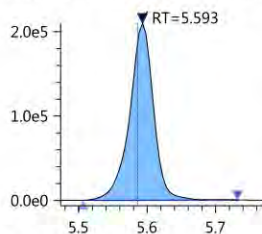
N-MeFOSA-d3

Conc 4.7255
Area 507990
Q 514.90>168.90 (-) 2.10e5



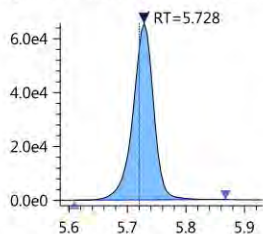
N-MeFOSA-d3_IS

Conc 5.0000
Area 507990
ISTD 514.90>168.90 (-) 2.10e5



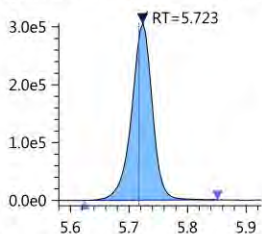
N-EtFOSA

Conc 5.3261
Area 160429
Q 526.90>169.10 (-) 6.58e4



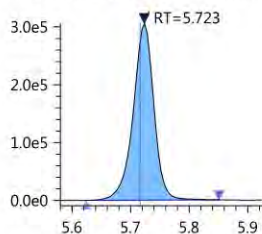
N-EtFOSA-d9

Conc 4.6216
Area 750864
Q 530.90>169.15 (-) 3.06e5



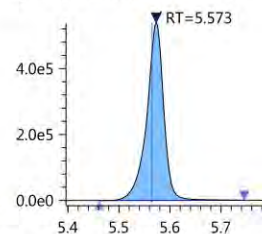
N-EtFOSA-d9_IS

Conc 5.0000
Area 750864
ISTD 530.90>169.15 (-) 3.06e5



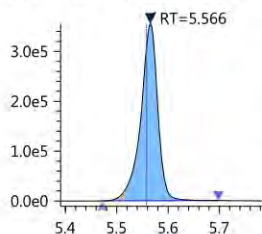
N-MeFOSE

Conc 5.0199
Area 1235704
Q 616.00>59.00 (-) 5.38e5



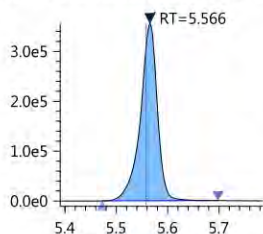
N-MeFOSE-d7

Conc 4.7308
Area 817060
Q 622.70>59.10 (-) 3.56e5



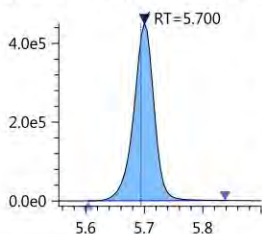
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Conc 5.0000
Area 817060
ISTD 622.70>59.10 (-) 3.56e5



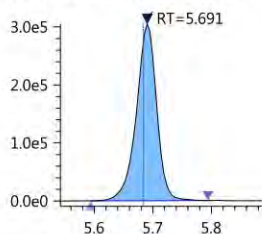
N-EtFOSE

Conc 5.1174
Area 1089776
Q 630.00>58.90 (-) 4.50e5



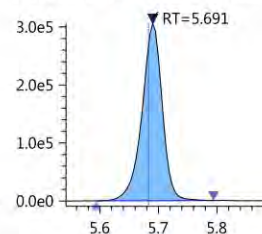
N-EtFOSE-d9

Conc 4.5652
Area 733000
Q 638.70>59.10 (-) 3.06e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 733000
ISTD 638.70>59.10 (-) 3.06e5



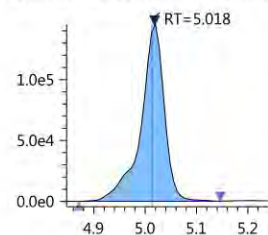
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N-MeFOSAA

Conc 5.0794
Area 459991

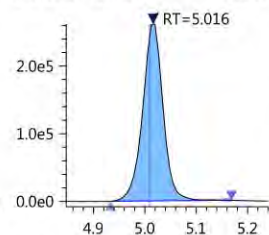
Q 570.20>419.00 (-)



N-MeFOSAA-d3

Conc 4.9617
Area 722548

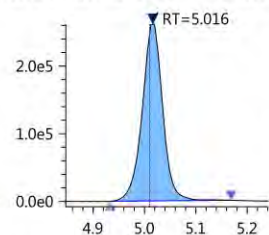
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
Area 722548

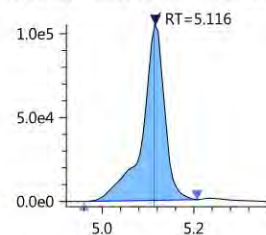
ISTD 572.80>419.05 (-)



N-EtFOSAA

Conc 4.9391
Area 352523

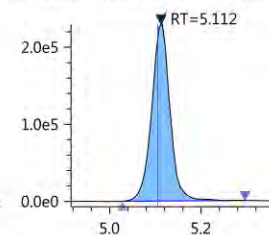
Q 584.20>418.95 (-)



N-EtFOSAA-d5

Conc 4.7700
Area 640074

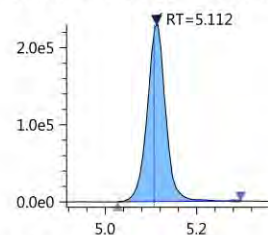
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
Area 640074

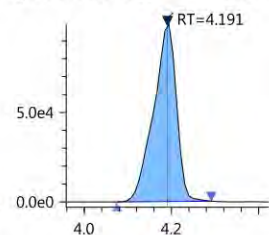
ISTD 588.80>419.00 (-)



4_2-FTS_1

Conc 4.8312
Area 360725

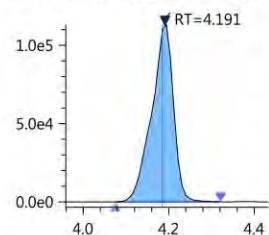
Q 327.00>307.05 (-)



4_2-FTS-13C

Conc 4.6935
Area 400704

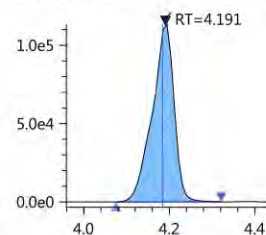
Q 328.80>309.05 (-)



4_2-FTS-13C_IS

Conc 5.0000
Area 400704

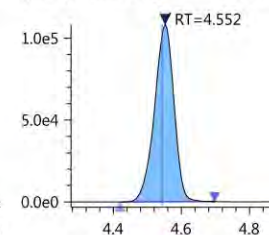
ISTD 328.80>309.05 (-)



6_2-FTS_1

Conc 4.6636
Area 430793

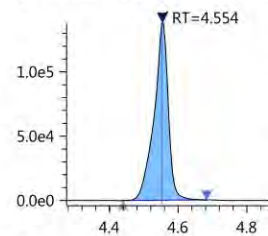
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 4.6858
Area 399022

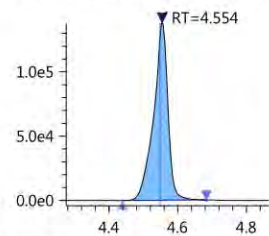
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6_2-FTS-13C_IS

Conc 5.0000
Area 399022

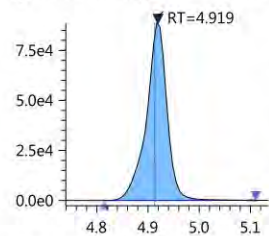
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8_2-FTS_1

Conc 4.5747
Area 247000

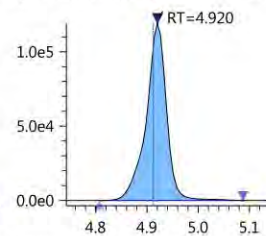
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 4.7450
Area 327588

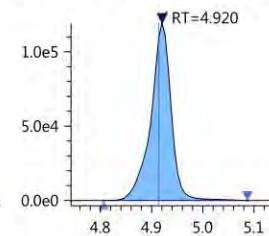
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
Area 327588

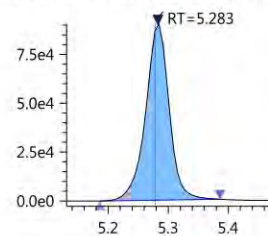
ISTD 528.80>509.00 (-)



10_2-FtS_1

Conc 4.6483
Area 244817

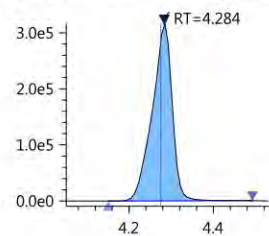
Q 627.00>606.95 (-)



HPFO_DA

Conc 5.0806
Area 1033579

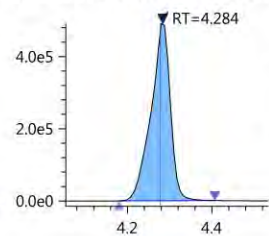
Q 329.00>169.00 (-)



HPFO_DA-13C

Conc 4.7192
Area 1572492

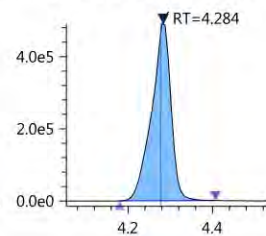
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
Area 1572492

ISTD 332.00>286.80 (-)



Insight Report

Printed at 4/18/2020 11:14:21 AM

200417_028

Sample ID: 10.0 PPB ICAL

Date acquired: 4/17/2020 6:27:25 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_cuvre\200417_028.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	5.097	5677651	5677651	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.011	2368007	1180374	2	8.7219	ng/mL	8.8737
PFBS-13C	Auto	4.012	1180374	5677651	1	5.3177	ng/mL	5.0000
PFBS-13C_IS	Auto	4.012	1180374	1180374	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.231	1051905	1180374	2	9.0316	ng/mL	9.4092
PFHxS_1	Auto	4.389	1374839	575450	3	9.5894	ng/mL	9.1308
PFHxS-18O	Auto	4.394	575450	5677651	1	4.6050	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.394	575450	575450	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.555	1967086	575450	3	10.9619	ng/mL	9.5344
PFOS_1	Auto	4.726	1442058	918722	4	9.2655	ng/mL	9.2923
PFOS-13C	Auto	4.726	918722	5677651	1	5.2232	ng/mL	5.0000
PFOS-13C_IS	Auto	4.726	918722	918722	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.901	1058797	918722	4	9.7230	ng/mL	9.6158
PFDS_1	Auto	5.077	1450775	918722	4	9.9737	ng/mL	9.6467
PFBA	Auto	3.377	6232840	3240626	5	9.8485	ng/mL	10.0000
PFBA-13C	Auto	3.376	3240626	5677651	1	5.3954	ng/mL	5.0000
PFBA-13C_IS	Auto	3.376	3240626	3240626	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.956	7391321	1748745	6	10.0764	ng/mL	10.0000
PFPeA-13C	Auto	3.955	1748745	5677651	1	5.1738	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.955	1748745	1748745	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.213	9168083	4559687	7	10.2349	ng/mL	10.0000
PFHxA-13C	Auto	4.213	4559687	5677651	1	4.9247	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.213	4559687	4559687	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.393	6837471	3953068	8	9.6757	ng/mL	10.0000
PFHpA-13C	Auto	4.392	3953068	5677651	1	4.7195	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.392	3953068	3953068	8	5.0000	ng/mL	5.0000
PFOA	M	4.564	12687939	4850047	9	10.2903	ng/mL	10.0000
PFOA-13C	Auto	4.563	4850047	5677651	1	4.7865	ng/mL	5.0000
PFOA-13C_IS	Auto	4.563	4850047	4850047	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.737	6774488	3829688	10	9.9003	ng/mL	10.0000
PFNA-13C	Auto	4.737	3829688	5677651	1	5.0624	ng/mL	5.0000
PFNA-13C_IS	Auto	4.737	3829688	3829688	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.918	6849752	3377323	11	9.5512	ng/mL	10.0000
PFDA-13C	Auto	4.918	3377323	5677651	1	4.9204	ng/mL	5.0000
PFDA-13C_IS	Auto	4.918	3377323	3377323	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.097	6639747	4273547	12	9.9625	ng/mL	10.0000
PFUnA-13C	Auto	5.098	4273547	5677651	1	4.9915	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.098	4273547	4273547	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.272	5866818	4992383	13	10.3000	ng/mL	10.0000
PFDoA-13C	Auto	5.272	4992383	5677651	1	4.9496	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.272	4992383	4992383	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.438	7868021	4138343	14	9.8651	ng/mL	10.0000
PFTeDA	Auto	5.592	3623906	4138343	14	9.8838	ng/mL	10.0000
PFTeDA-13C	Auto	5.592	4138343	5677651	1	5.1423	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.592	4138343	4138343	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.210	5649213	2370768	16	9.9483	ng/mL	10.0000
FOSA-13C	Auto	5.210	2370768	5677651	1	5.1658	ng/mL	5.0000
FOSA-13C_IS	Auto	5.210	2370768	2370768	16	5.0000	ng/mL	5.0000
N-MeFOSA	M	5.594	1586938	504474	17	9.7846	ng/mL	10.0000
N-MeFOSA-d3	Auto	5.591	504474	5677651	1	5.2448	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.591	504474	504474	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.726	322147	780064	18	10.4055	ng/mL	10.0000
N-EtFOSA-d9	Auto	5.721	780064	5677651	1	5.3661	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.721	780064	780064	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.571	2486934	811782	19	10.1686	ng/mL	10.0000
N-MeFOSE-d7	Auto	5.563	811782	5677651	1	5.2530	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.563	811782	811782	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.698	2183710	754901	20	9.9568	ng/mL	10.0000
N-EtFOSE-d9	Auto	5.688	754901	5677651	1	5.2546	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.688	754901	754901	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.016	836121	673347	21	9.9880	ng/mL	10.0000
N-MeFOSAA-d3	Auto	5.014	673347	5677651	1	5.1677	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.014	673347	673347	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.114	712346	596445	22	11.5006	ng/mL	10.0000
N-EtFOSAA-d5	Auto	5.110	596445	5677651	1	4.9677	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.110	596445	596445	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.188	728704	433454	23	8.9359	ng/mL	9.3722
4_2-FTS-13C	Auto	4.188	433454	5677651	1	5.6743	ng/mL	5.0000

Insight Report

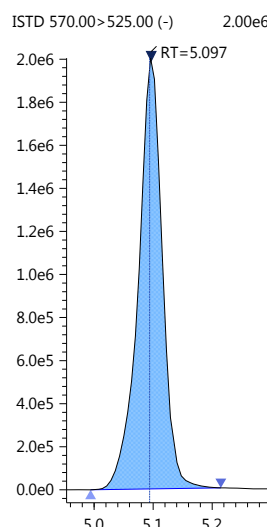
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(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.188	433454	433454	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.550	758363	374044	24	8.7579	ng/mL	9.5117
6_2-FTS-13C	Auto	4.553	374044	5677651	1	4.9091	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.553	374044	374044	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.918	432775	298902	25	8.7846	ng/mL	9.6004
8_2-FTS-13C	Auto	4.919	298902	5677651	1	4.8387	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.919	298902	298902	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.281	452504	298902	25	9.4161	ng/mL	9.6619
HPFO_DA	Auto	4.281	2166075	1588434	26	10.5406	ng/mL	10.0000
HPFO_DA-13C	Auto	4.281	1588434	5677651	1	5.3277	ng/mL	5.0000
HPFO_DA-13C_IS	Auto	4.281	1588434	1588434	26	5.0000	ng/mL	5.0000

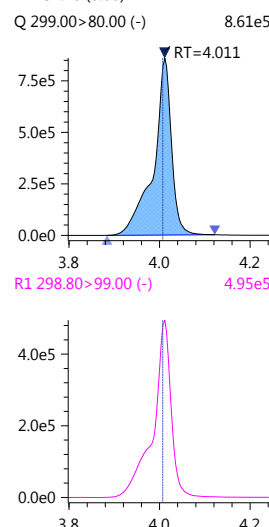
13C7-PFUnDA_IS

Conc 5.0000
Area 5677651



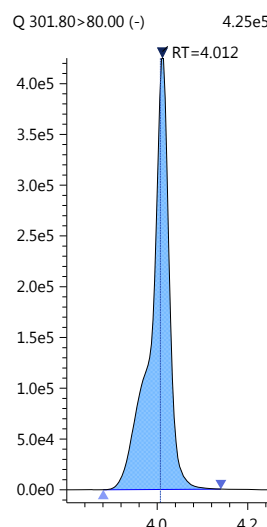
PFBS_1

Conc 8.7219
Area 2368007
R#1 57.46 (0.00)



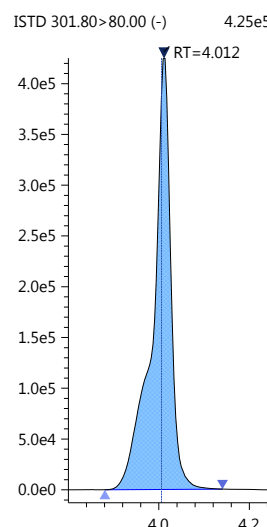
PFBS-13C

Conc 5.3177
Area 1180374



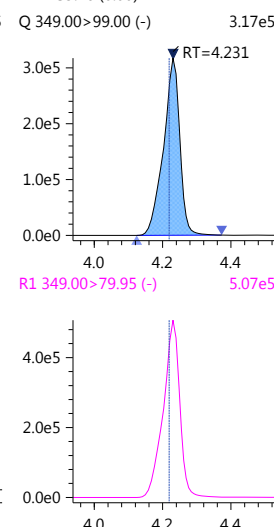
PFBS-13C_IS

Conc 5.0000
Area 1180374



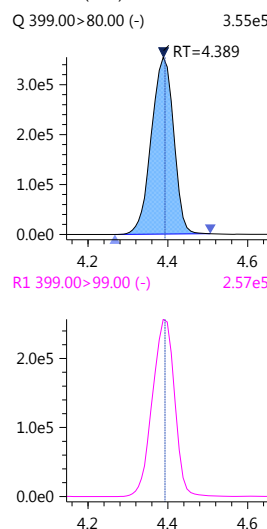
PFPeS

Conc 9.0316
Area 1051905
R#1 159.76 (0.00)



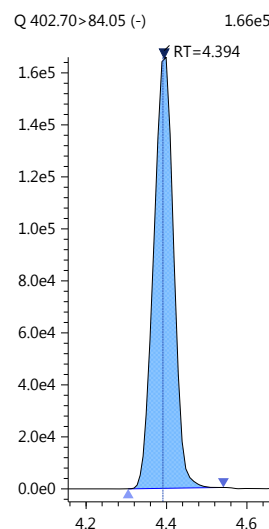
PFHxS_1

Conc 9.5894
Area 1374839
R#1 72.20 (0.00)



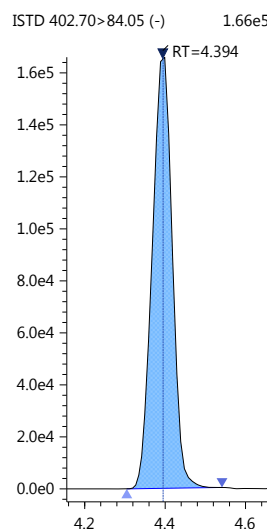
PFHxS-180

Conc 4.6050
Area 575450



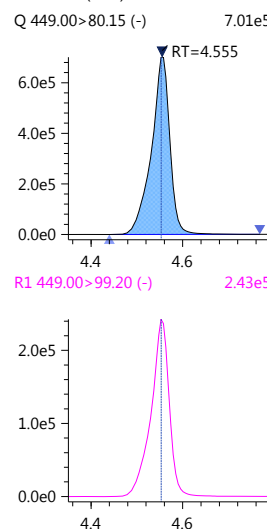
PFHxS-180_IS

Conc 5.0000
Area 575450



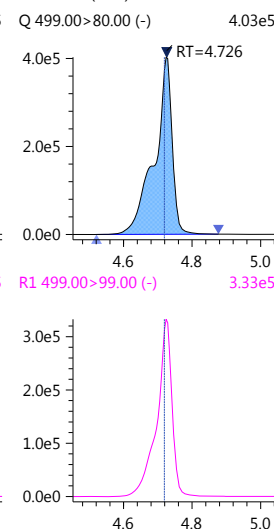
PFHpS_1

Conc 10.9619
Area 1967086
R#1 34.83 (0.00)



PFOS_1

Conc 9.2655
Area 1442058
R#1 81.39 (0.00)

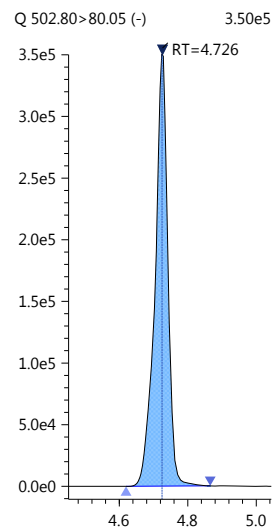


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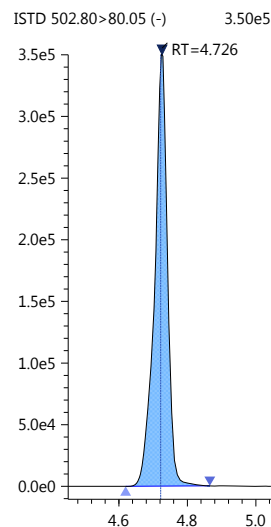
PFOS-13C

Conc 5.2232
Area 918722



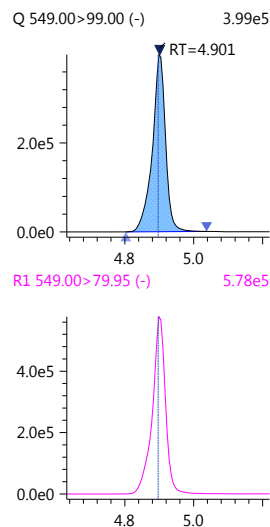
PFOS-13C_IS

Conc 5.0000
Area 918722



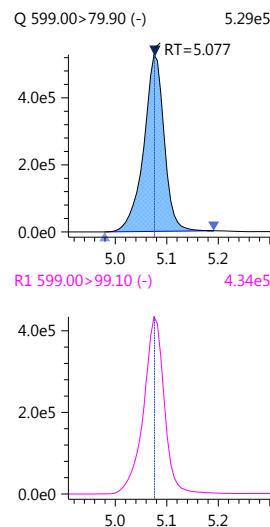
PFNS

Conc 9.7230
Area 1058797
R#1 145.16 (0.00)



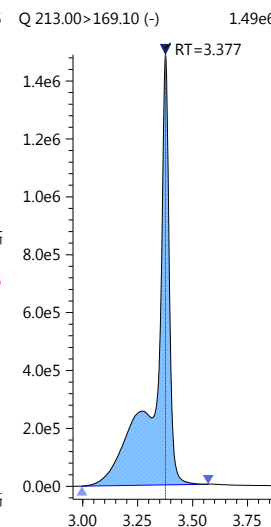
PFDS_1

Conc 9.9737
Area 1450775
R#1 82.09 (0.00)



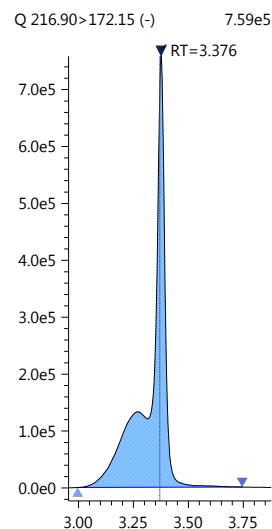
PFBA

Conc 9.8485
Area 6232840



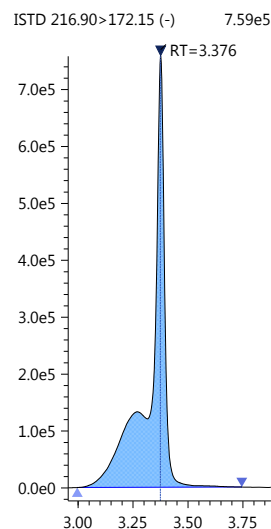
PFBA-13C

Conc 5.3954
Area 3240626



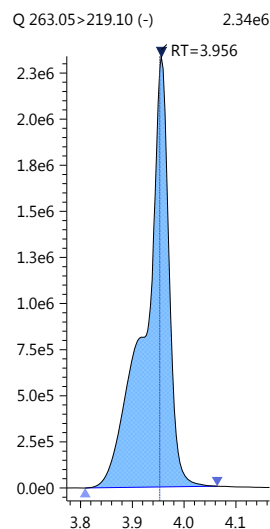
PFBA-13C_IS

Conc 5.0000
Area 3240626



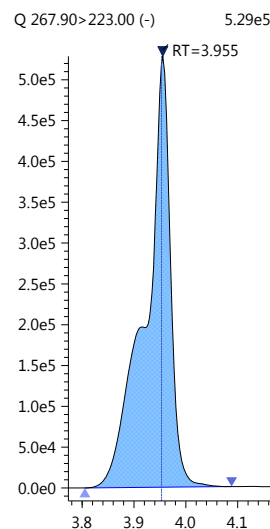
PFPeA

Conc 10.0764
Area 7391321



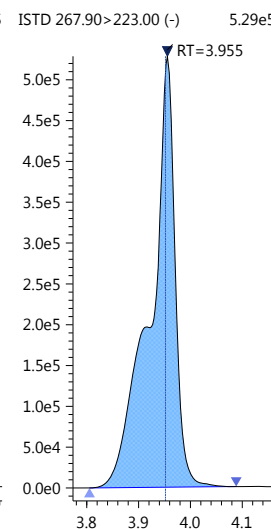
PFPeA-13C

Conc 5.1738
Area 1748745



PFPeA-13C_IS

Conc 5.0000
Area 1748745



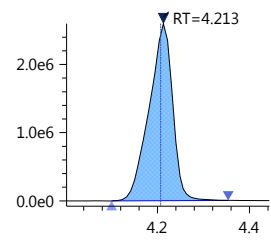
Insight Report

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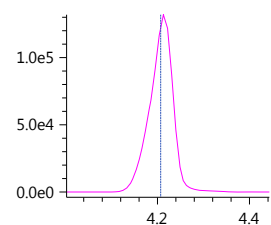
PFHxA

Conc 10.2349
Area 9168083
R#1 5.08 (0.00)

Q 313.00>269.00 (-) 2.60e6



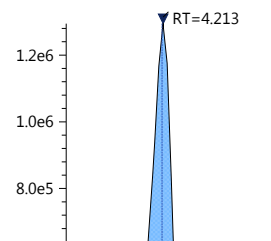
R1 313.00>119.10 (-) 1.32e5



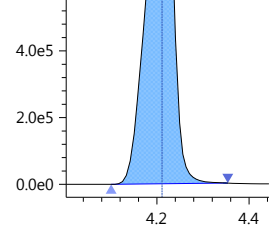
PFHxA-13C

Conc 4.9247
Area 4559687

Q 314.90>270.10 (-) 1.29e6



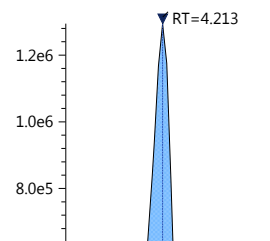
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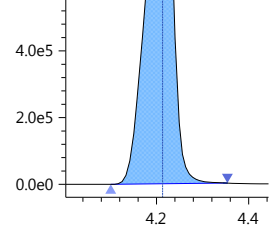
PFHxA-13C_IS

Conc 5.0000
Area 4559687

ISTD 314.90>270.10 (-) 1.29e6



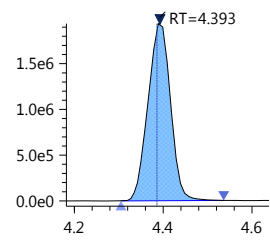
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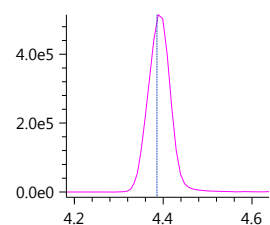
PFHpA

Conc 9.6757
Area 6837471
R#1 26.45 (0.00)

Q 362.90>319.00 (-) 1.94e6



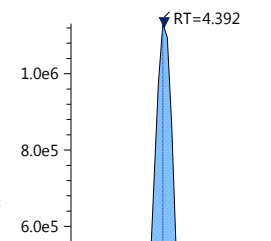
R1 362.90>169.00 (-) 5.15e5



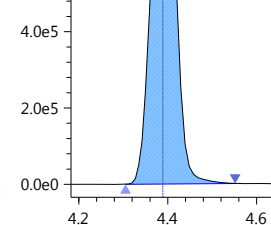
PFHpA-13C

Conc 4.7195
Area 3953068

Q 366.90>322.10 (-) 1.13e6



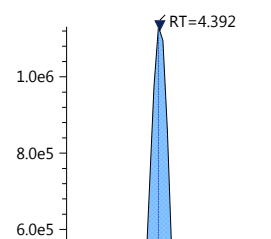
RT=4.392



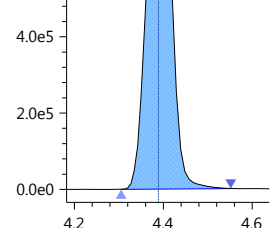
PFHpA-13C_IS

Conc 5.0000
Area 3953068

ISTD 366.90>322.10 (-) 1.13e6



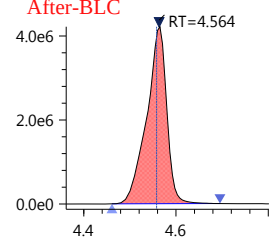
RT=4.392



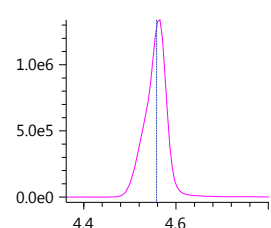
PFOA

Conc 10.2903
Area 12687939
R#1 31.72 (0.00)

Q 413.00>369.00 (-) 4.22e6



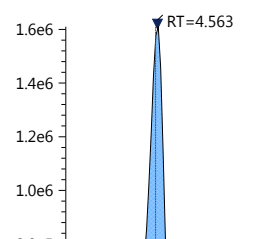
After-BLC
R1 413.00>169.10 (-) 1.34e6



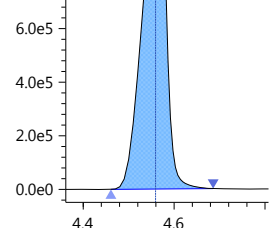
PFOA-13C

Conc 4.7865
Area 4850047

Q 416.80>372.05 (-) 1.61e6



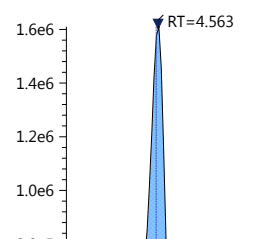
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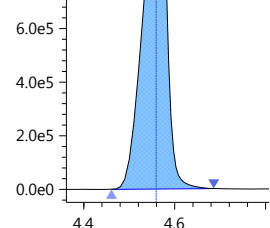
PFOA-13C_IS

Conc 5.0000
Area 4850047

ISTD 416.80>372.05 (-) 1.61e6



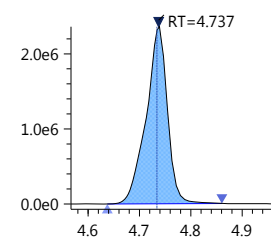
RT=4.563



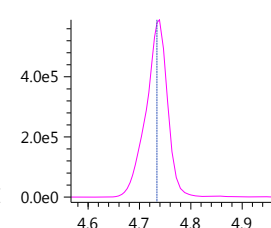
PFNA

Conc 9.9003
Area 6774488
R#1 24.90 (0.00)

Q 463.00>418.90 (-) 2.36e6



R1 463.00>219.00 (-) 5.90e5



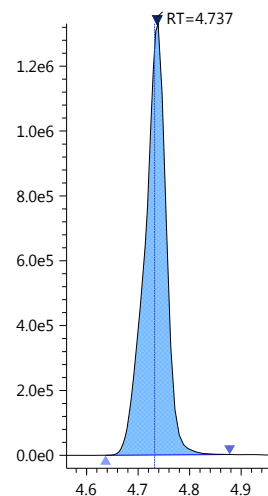
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PFNA-13C

Conc 5.0624
Area 3829688

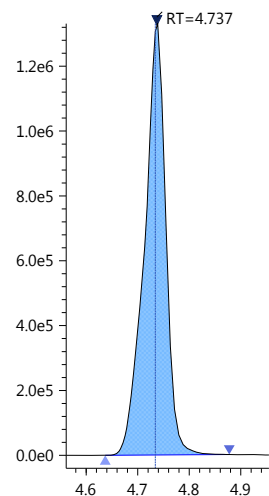
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
Area 3829688

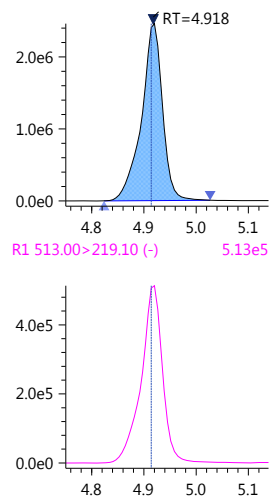
ISTD 467.80>423.00 (-)



PFDA

Conc 9.5512
Area 6849752
R#1 20.84 (0.00)

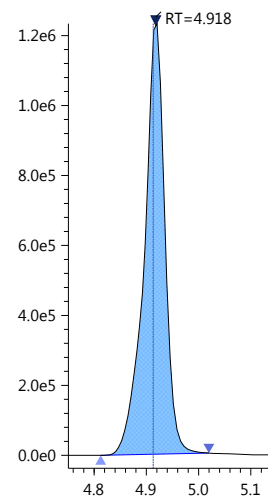
Q 513.00>468.80 (-)



PFDA-13C

Conc 4.9204
Area 3377323

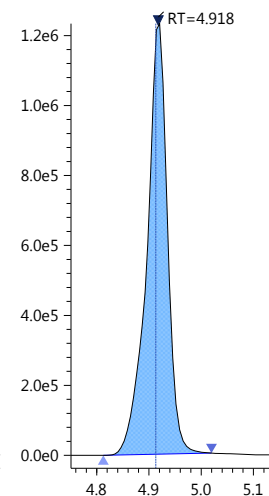
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
Area 3377323

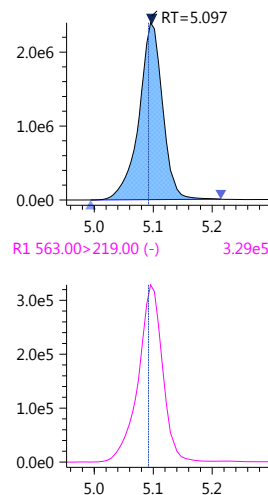
ISTD 514.80>469.95 (-)



PFUnA

Conc 9.9625
Area 6639747
R#1 13.65 (0.00)

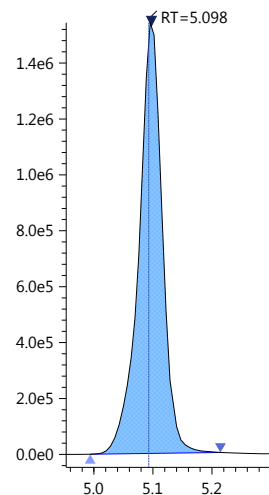
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.9915
Area 4273547

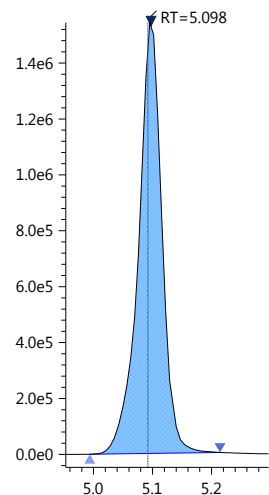
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
Area 4273547

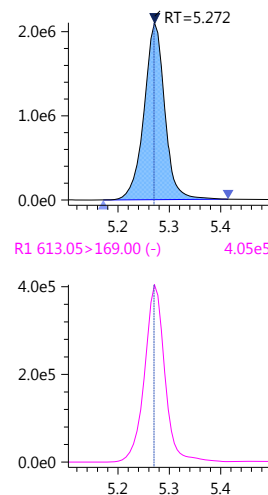
ISTD 564.80>519.95 (-)



PFDaA

Conc 10.3000
Area 5866818
R#1 19.27 (0.00)

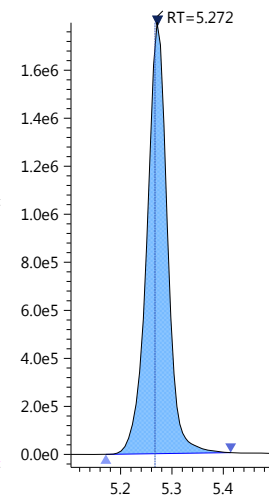
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.9496
Area 4992383

Q 614.80>569.95 (-)



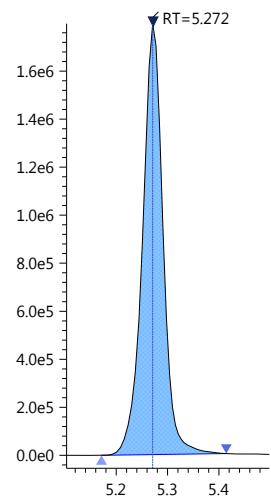
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PFD_oA-13C_{IS}

Conc 5.0000
Area 4992383

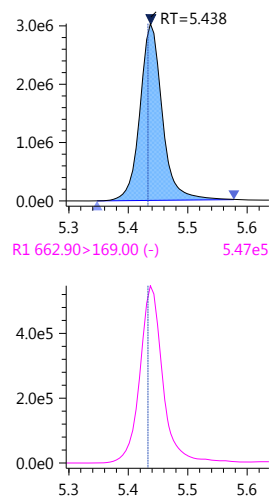
ISTD 614.80>569.95 (-) 1.80e6



PFT_rDA

Conc 9.8651
Area 7868021
R#1 18.00 (0.00)

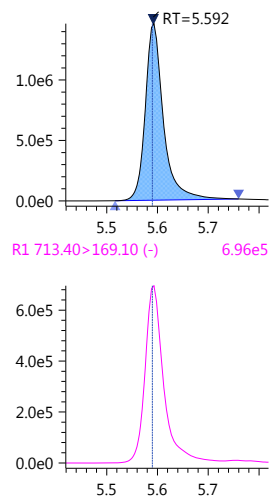
Q 663.00>618.90 (-) 3.04e6



PFT_eDA

Conc 9.8838
Area 3623906
R#1 47.62 (0.00)

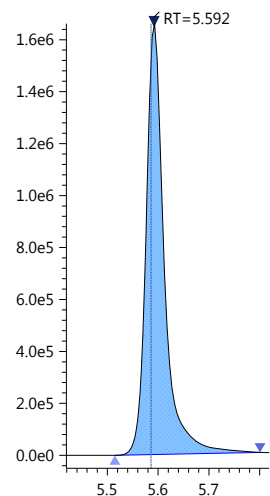
Q 713.40>669.00 (-) 1.47e6



PFT_eDA-13C

Conc 5.1423
Area 4138343

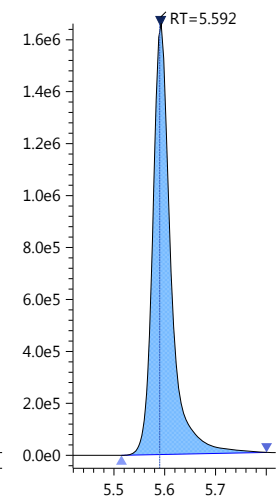
Q 714.70>669.90 (-) 1.66e6



PFT_eDA-13C_{IS}

Conc 5.0000
Area 4138343

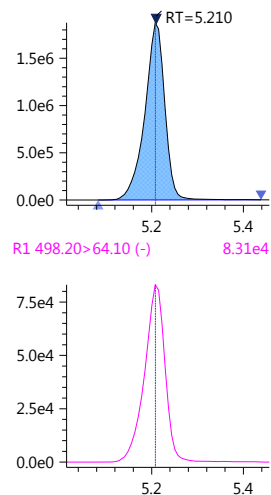
ISTD 714.70>669.90 (-) 1.66e6



FOSA

Conc 9.9483
Area 5649213
R#1 4.43 (0.00)

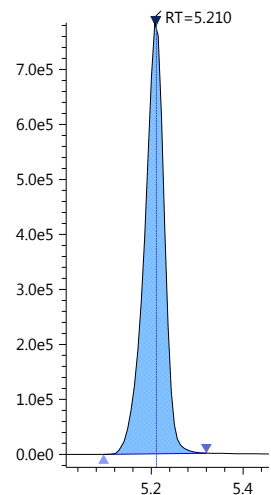
Q 498.20>78.00 (-) 1.88e6



FOSA-13C

Conc 5.1658
Area 2370768

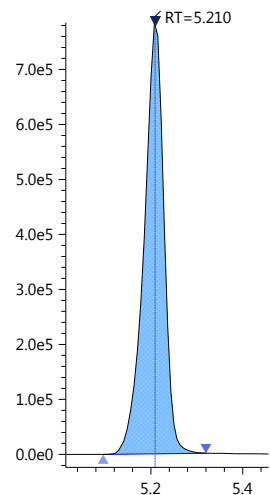
Q 506.00>78.05 (-) 7.85e5



FOSA-13C_{IS}

Conc 5.0000
Area 2370768

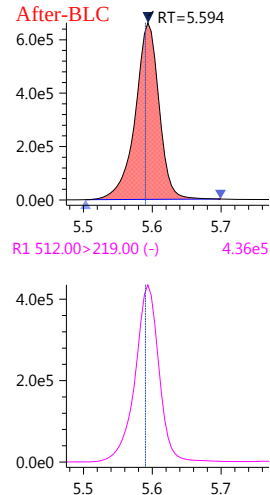
ISTD 506.00>78.05 (-) 7.85e5



N-MeFOSA

Conc 9.7846
Area 1586938
R#1 65.72 (0.00)

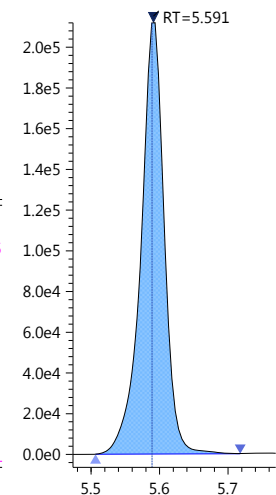
Q 512.00>169.10 (-) 6.64e5



N-MeFOSA-d3

Conc 5.2448
Area 504474

Q 514.90>168.90 (-) 2.12e5



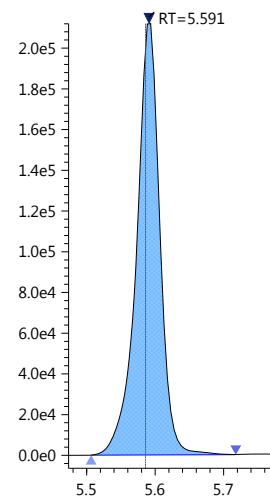
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N-MeFOSA-d3_IS

Conc 5.0000
 Area 504474

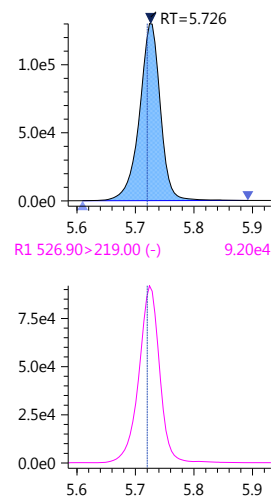
ISTD 514.90>168.90 (-) 2.12e5



N-EtFOSA

Conc 10.4055
 Area 322147
 R#1 70.81 (0.00)

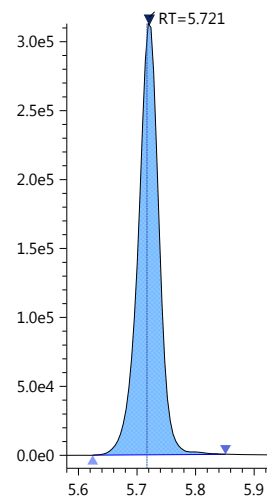
Q 526.90>169.10 (-) 1.30e5



N-EtFOSA-d9

Conc 5.3661
 Area 780064

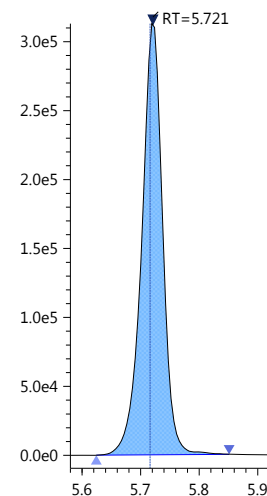
Q 530.90>169.15 (-) 3.13e5



N-EtFOSA-d9_IS

Conc 5.0000
 Area 780064

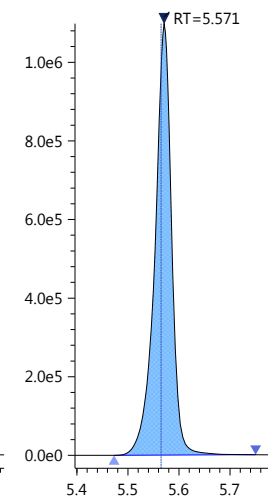
ISTD 530.90>169.15 (-) 3.13e5



N-MeFOSE

Conc 10.1686
 Area 2486934

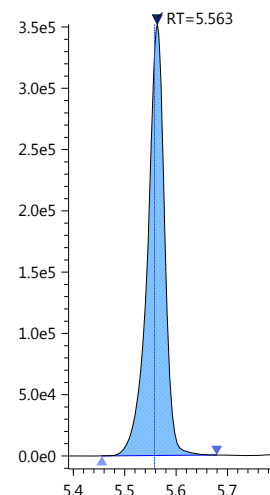
Q 616.00>59.00 (-) 1.10e6



N-MeFOSE-d7

Conc 5.2530
 Area 811782

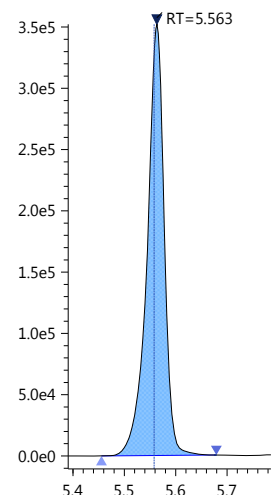
Q 622.70>59.10 (-) 3.52e5



N-MeFOSE-d7_IS

Conc 5.0000
 Area 811782

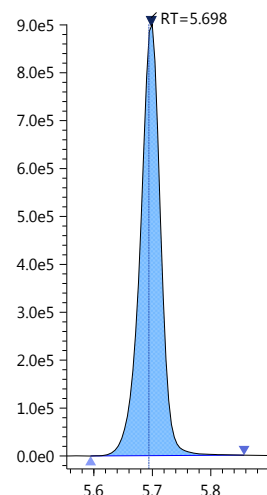
ISTD 622.70>59.10 (-) 3.52e5



N-EtFOSE

Conc 9.9568
 Area 2183710

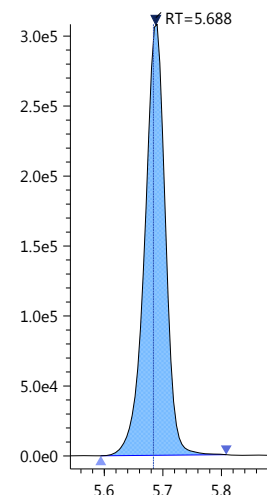
Q 630.00>58.90 (-) 9.01e5



N-EtFOSE-d9

Conc 5.2546
 Area 754901

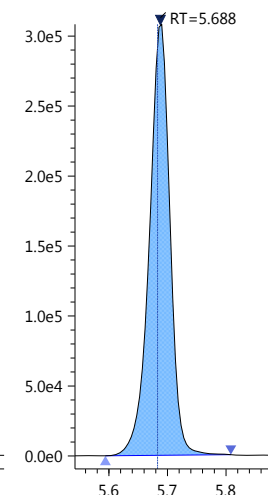
Q 638.70>59.10 (-) 3.08e5



N-EtFOSE-d9_IS

Conc 5.0000
 Area 754901

ISTD 638.70>59.10 (-) 3.08e5



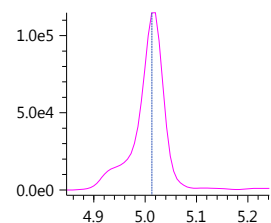
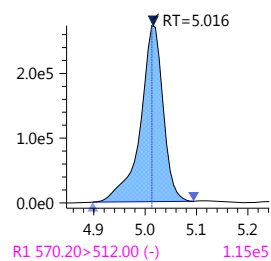
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N-MeFOSAA

Conc 9.9880
Area 836121
R#1 42.13 (0.00)

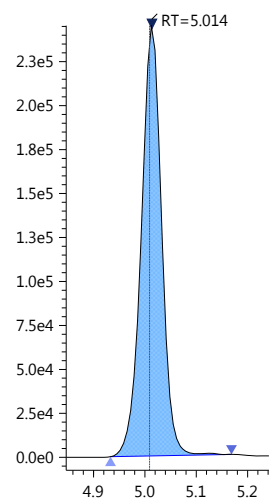
Q 570.20>419.00 (-) 2.74e5



N-MeFOSAA-d3

Conc 5.1677
Area 673347

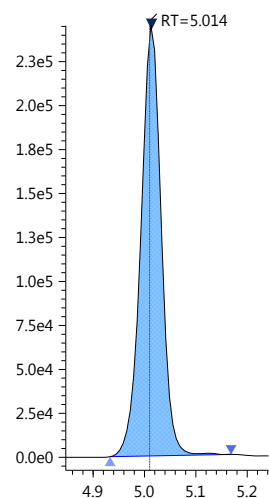
Q 572.80>419.05 (-) 2.45e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 673347

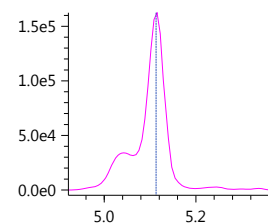
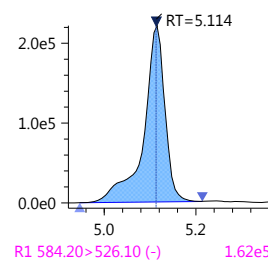
ISTD 572.80>419.05 (-) 2.45e5



N-EtFOSAA

Conc 11.5006
Area 712346
R#1 73.03 (0.00)

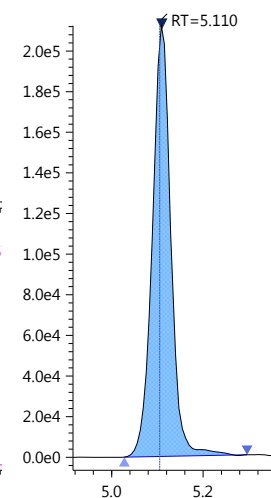
Q 584.20>418.95 (-) 2.22e5



N-EtFOSAA-d5

Conc 4.9677
Area 596445

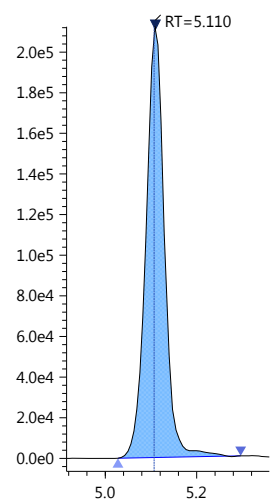
Q 588.80>419.00 (-) 2.12e5



N-EtFOSAA-d5_IS

Conc 5.0000
Area 596445

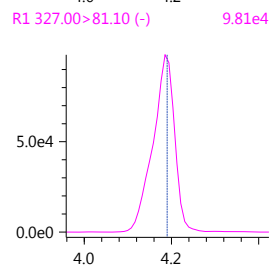
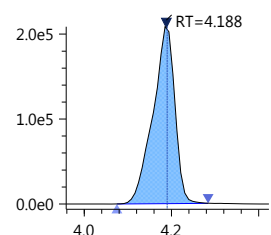
ISTD 588.80>419.00 (-) 2.12e5



4_2-FTS_1

Conc 8.9359
Area 728704
R#1 47.00 (0.00)

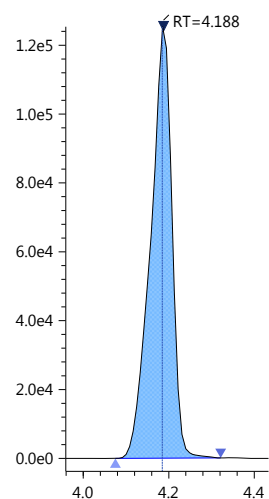
Q 327.00>307.05 (-) 2.09e5



4_2-FTS-13C

Conc 5.6743
Area 433454

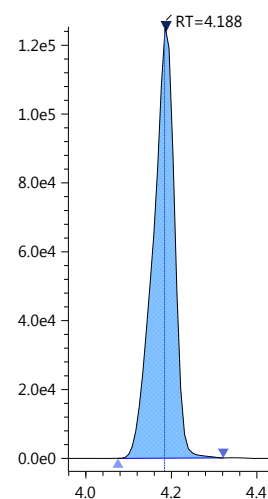
Q 328.80>309.05 (-) 1.25e5



4_2-FTS-13C_IS

Conc 5.0000
Area 433454

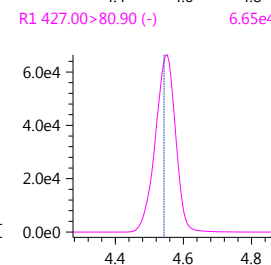
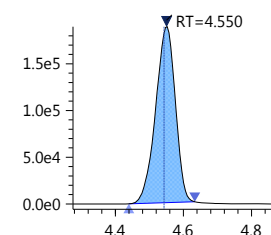
ISTD 328.80>309.05 (-) 1.25e5



6_2-FTS_1

Conc 8.7579
Area 758363
R#1 35.60 (0.00)

Q 427.00>407.00 (-) 1.90e5

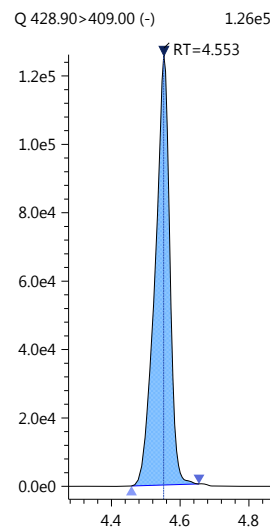


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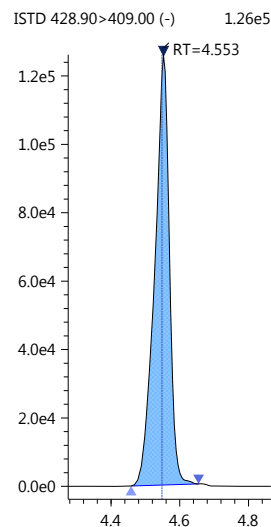
6_2-FTS-13C

Conc 4.9091
 Area 374044



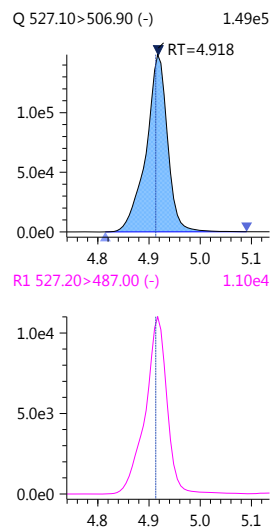
6_2-FTS-13C_IS

Conc 5.0000
 Area 374044



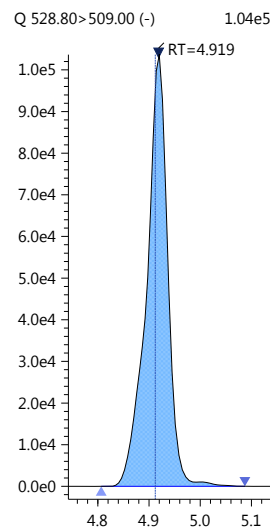
8_2-FTS_1

Conc 8.7846
 Area 432775
 R#1 7.41 (0.00)



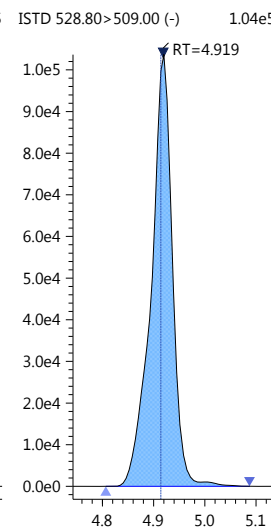
8_2-FTS-13C

Conc 4.8387
 Area 298902



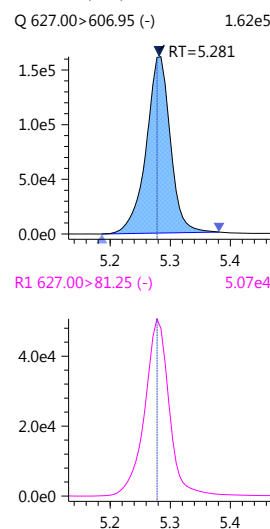
8_2-FTS-13C_IS

Conc 5.0000
 Area 298902



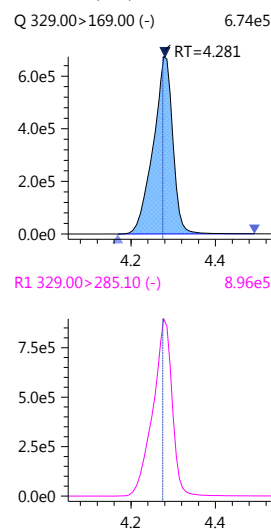
10_2-FtS_1

Conc 9.4161
 Area 452504
 R#1 31.51 (0.00)



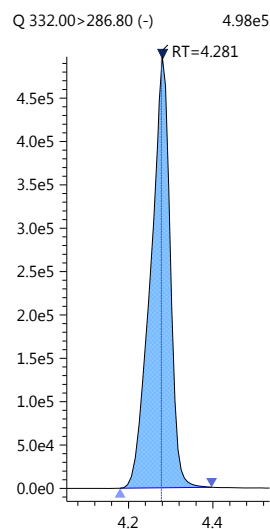
HPFO_DA

Conc 10.5406
 Area 2166075
 R#1 133.20 (0.00)



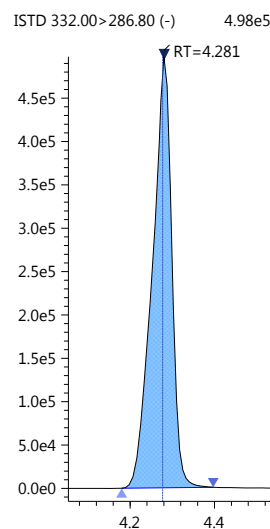
HPFO_DA-13C

Conc 5.3277
 Area 1588434



HPFO_DA-13C_IS

Conc 5.0000
 Area 1588434



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200417_028

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Date acquired: 4/17/2020 6:27:25 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_curve\200417_028.lcd

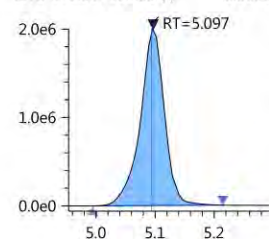
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13C7-PFUnDA_IS

Conc 5.0000

Area 5677651

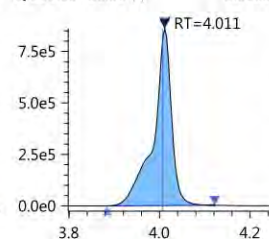
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**PFBS_1**

Conc 8.7219

Area 2368007

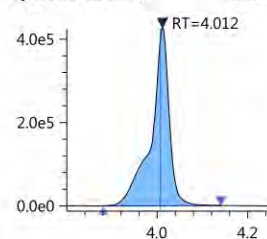
Q 299.00>80.00 (-)

**PFBS-13C**

Conc 5.3177

Area 1180374

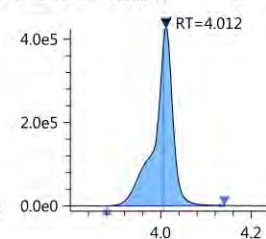
Q 301.80>80.00 (-)

**PFBS-13C_IS**

Conc 5.0000

Area 1180374

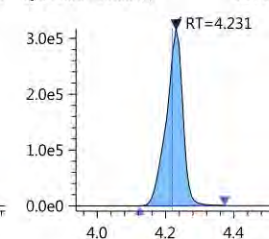
ISTD 301.80>80.00 (-)

**PFPeS**

Conc 9.0316

Area 1051905

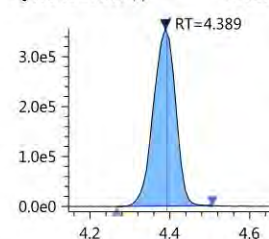
Q 349.00>99.00 (-)

**PFHxS_1**

Conc 9.5894

Area 1374839

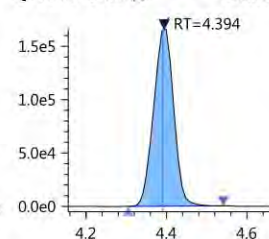
Q 399.00>80.00 (-)

**PFHxS-180**

Conc 4.6050

Area 575450

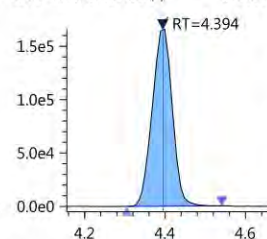
Q 402.70>84.05 (-)

**PFHxS-180_IS**

Conc 5.0000

Area 575450

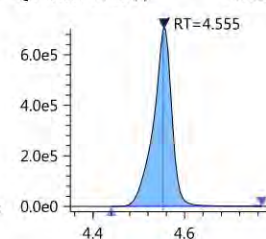
ISTD 402.70>84.05 (-)

**PFHpS_1**

Conc 10.9619

Area 1967086

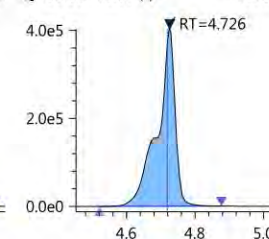
Q 449.00>80.15 (-)

**PFOS_1**

Conc 9.2655

Area 1442058

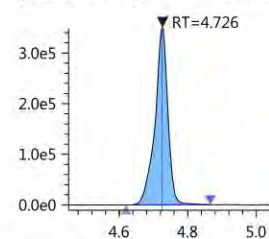
Q 499.00>80.00 (-)

**PFOS-13C**

Conc 5.2232

Area 918722

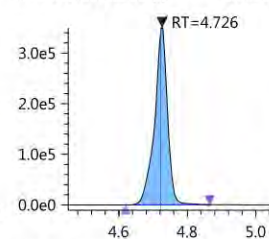
Q 502.80>80.05 (-)

**PFOS-13C_IS**

Conc 5.0000

Area 918722

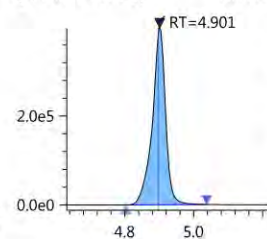
ISTD 502.80>80.05 (-)

**PFNS**

Conc 9.7230

Area 1058797

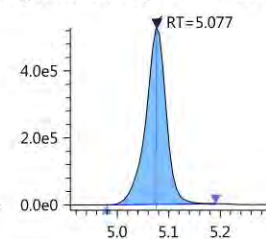
Q 549.00>99.00 (-)

**PFDS_1**

Conc 9.9737

Area 1450775

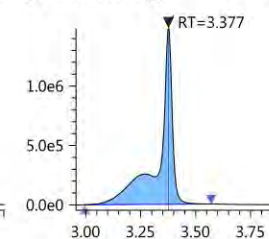
Q 599.00>79.90 (-)

**PFBA**

Conc 9.8485

Area 6232840

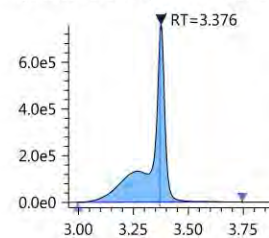
Q 213.00>169.10 (-)

**PFBA-13C**

Conc 5.3954

Area 3240626

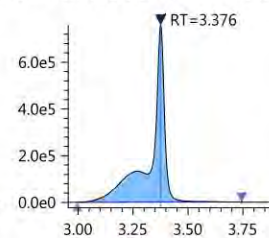
Q 216.90>172.15 (-)

**PFBA-13C_IS**

Conc 5.0000

Area 3240626

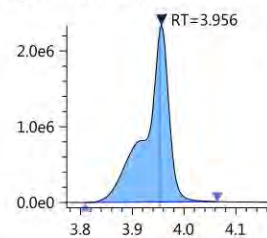
ISTD 216.90>172.15 (-)

**PFPeA**

Conc 10.0764

Area 7391321

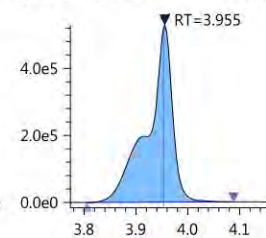
Q 263.05>219.10 (-)

**PFPeA-13C**

Conc 5.1738

Area 1748745

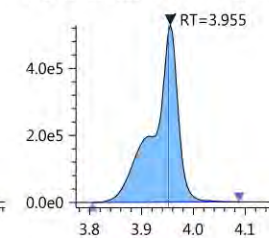
Q 267.90>223.00 (-)

**PFPeA-13C_IS**

Conc 5.0000

Area 1748745

ISTD 267.90>223.00 (-)

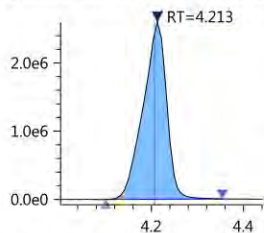


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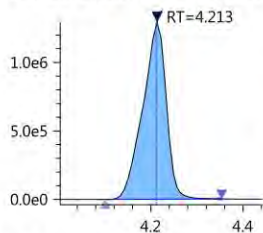
PFHxA

Conc 10.2349
Area 9168083
Q 313.00>269.00 (-)



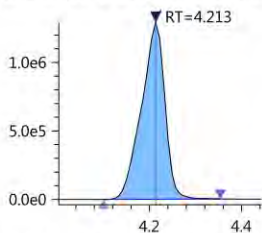
PFHxA-13C

Conc 4.9247
Area 4559687
Q 314.90>270.10 (-)



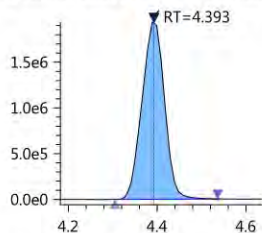
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ISTD 314.90>270.10 (-)



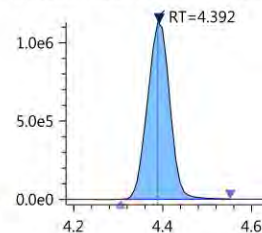
PFHpA

Conc 9.6756
Area 6837471
Q 362.90>319.00 (-)



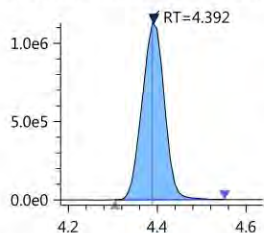
PFHpA-13C

Conc 4.7195
Area 3953068
Q 366.90>322.10 (-)



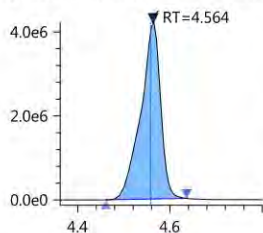
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Conc 5.0000
Area 3953068
ISTD 366.90>322.10 (-)



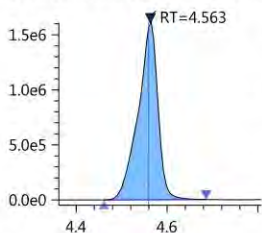
PFOA

Conc 10.1478
Area 12492162
Q 413.00>369.00 (-)



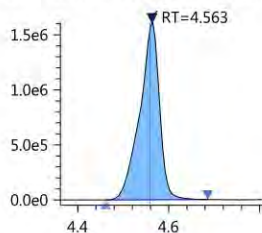
PFOA-13C

Conc 4.7865
Area 4850047
Q 416.80>372.05 (-)



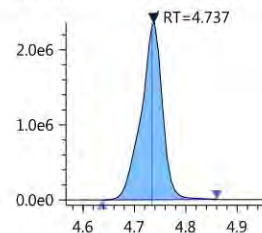
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Conc 5.0000
Area 4850047
ISTD 416.80>372.05 (-)



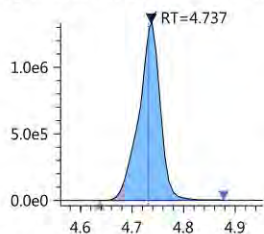
PFNA

Conc 9.9003
Area 6774488
Q 463.00>418.90 (-)



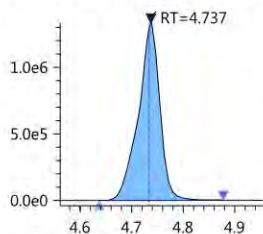
PFNA-13C

Conc 5.0624
Area 3829688
Q 467.80>423.00 (-)



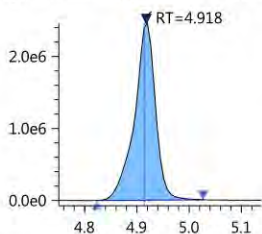
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Conc 5.0000
Area 3829688
ISTD 467.80>423.00 (-)



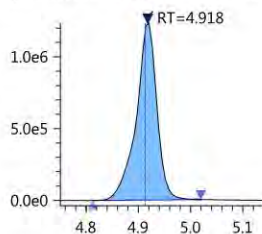
PFDA

Conc 9.5512
Area 6849752
Q 513.00>468.80 (-)



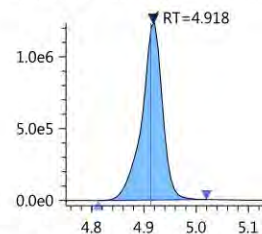
PFDA-13C

Conc 4.9204
Area 3377323
Q 514.80>469.95 (-)



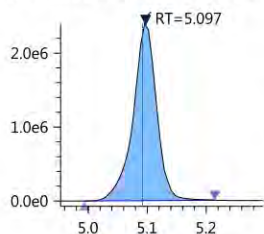
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Conc 5.0000
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ISTD 514.80>469.95 (-)



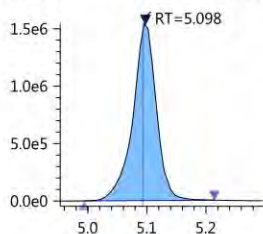
PFUnA

Conc 9.9625
Area 6639747
Q 563.00>518.90 (-)



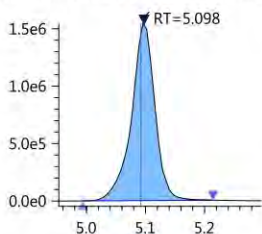
PFUnA-13C

Conc 4.9915
Area 4273547
Q 564.80>519.95 (-)



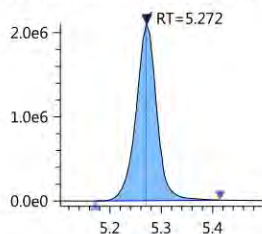
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Conc 5.0000
Area 4273547
ISTD 564.80>519.95 (-)



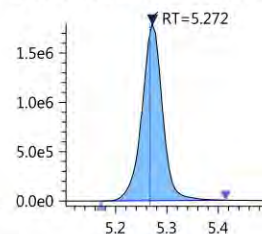
PFDoA

Conc 10.3000
Area 5866818
Q 613.05>569.00 (-)



PFDoA-13C

Conc 4.9496
Area 4992383
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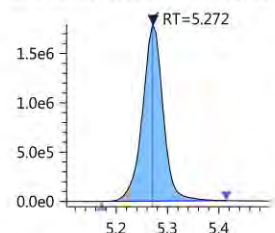


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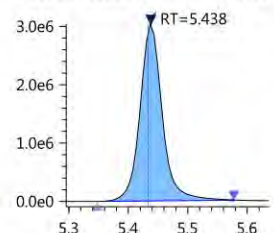
PFDa-13C_IS

Conc 5.0000
Area 4992383
ISTD 614.80>569.95 (-) 1.80e6



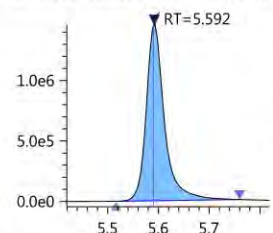
PFTrDA

Conc 9.8651
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Q 663.00>618.90 (-) 3.04e6



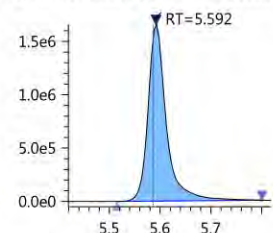
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Conc 9.8808
Area 3623906
Q 713.40>669.00 (-) 1.47e6



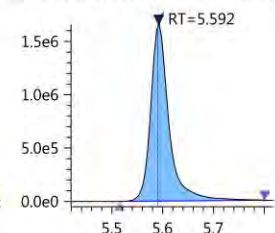
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Conc 5.1423
Area 4138343
Q 714.70>669.90 (-) 1.66e6



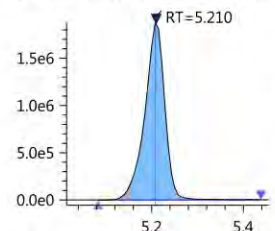
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Conc 5.0000
Area 4138343
ISTD 714.70>669.90 (-) 1.66e6



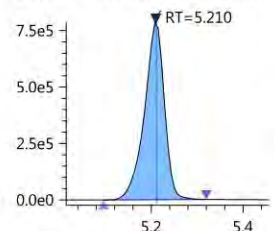
FOSA

Conc 9.9483
Area 5649213
Q 498.20>78.00 (-) 1.88e6



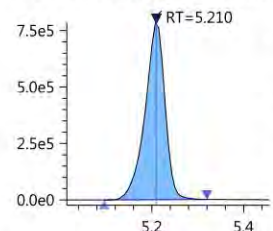
FOSA-13C

Conc 5.1658
Area 2370768
Q 506.00>78.05 (-) 7.85e5



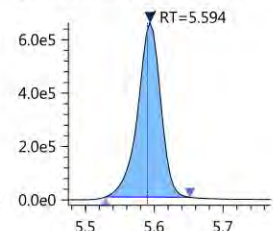
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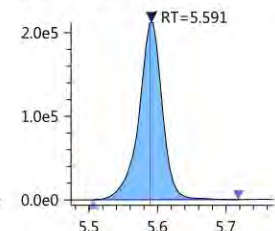
N-MeFOSA

Conc 9.5151
Area 1510646
Q 512.00>169.10 (-) 6.64e5



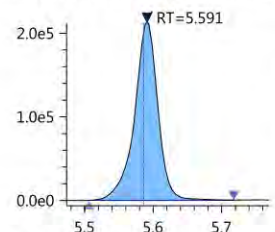
N-MeFOSA-d3

Conc 5.2448
Area 504474
Q 514.90>168.90 (-) 2.12e5



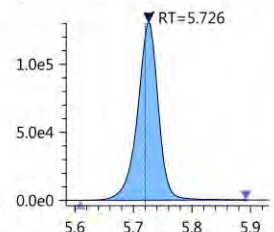
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Conc 5.0000
Area 504474
ISTD 514.90>168.90 (-) 2.12e5



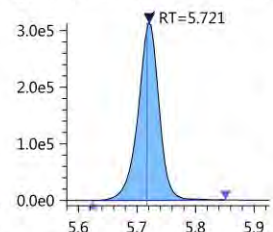
N-EtFOSA

Conc 10.2947
Area 322147
Q 526.90>169.10 (-) 1.30e5



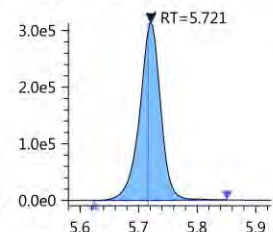
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Conc 5.3661
Area 780064
Q 530.90>169.15 (-) 3.13e5



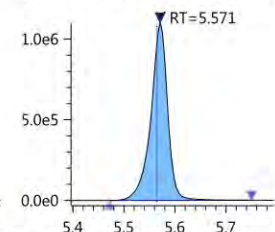
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ISTD 530.90>169.15 (-) 3.13e5



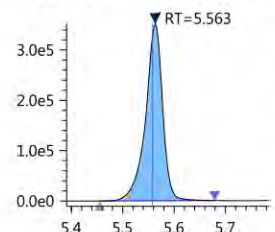
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Conc 10.1686
Area 2486934
Q 616.00>59.00 (-) 1.10e6



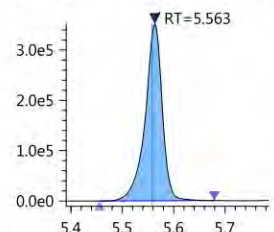
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Area 811782
Q 622.70>59.10 (-) 3.52e5



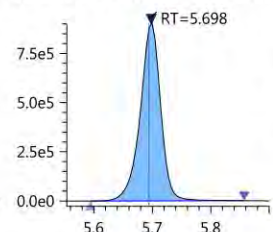
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Conc 5.0000
Area 811782
ISTD 622.70>59.10 (-) 3.52e5



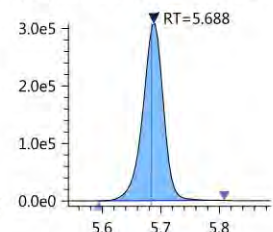
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Conc 9.9568
Area 2183710
Q 630.00>58.90 (-) 9.01e5



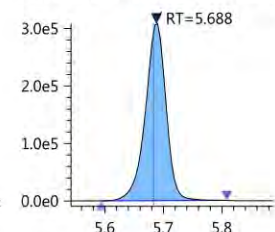
N-EtFOSE-d9

Conc 5.2546
Area 754901
Q 638.70>59.10 (-) 3.08e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 754901
ISTD 638.70>59.10 (-) 3.08e5



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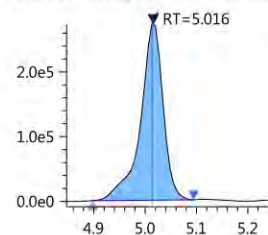
N-MeFOSAA

Conc 9.9074

Area 836121

Q 570.20>419.00 (-)

2.74e5



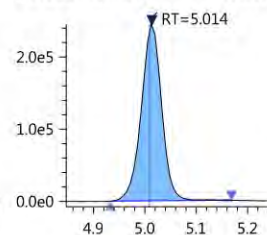
N-MeFOSAA-d3

Conc 5.1677

Area 673347

Q 572.80>419.05 (-)

2.45e5



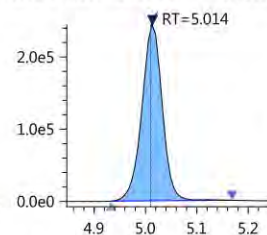
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Conc 5.0000

Area 673347

ISTD 572.80>419.05 (-)

2.45e5



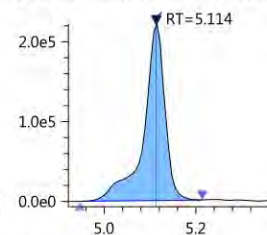
N-EtFOSAA

Conc 10.6929

Area 712346

Q 584.20>418.95 (-)

2.22e5



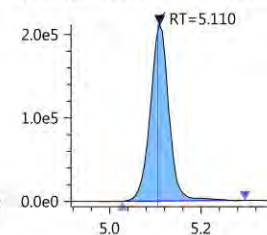
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Conc 4.9677

Area 596445

Q 588.80>419.00 (-)

2.12e5



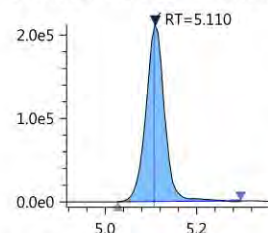
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Conc 5.0000

Area 596445

ISTD 588.80>419.00 (-)

2.12e5



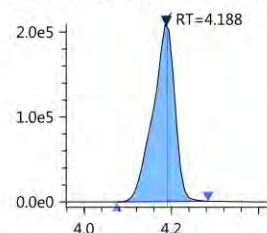
4_2-FTS_1

Conc 9.0221

Area 728704

Q 327.00>307.05 (-)

2.09e5



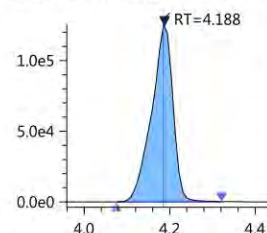
4_2-FTS-13C

Conc 5.6743

Area 433454

Q 328.80>309.05 (-)

1.25e5



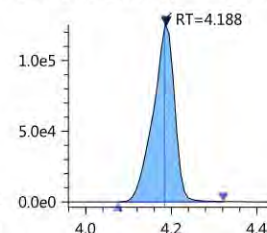
4_2-FTS-13C_IS

Conc 5.0000

Area 433454

ISTD 328.80>309.05 (-)

1.25e5



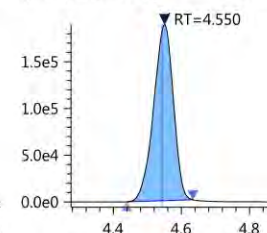
6_2-FTS_1

Conc 8.7579

Area 758363

Q 427.00>407.00 (-)

1.90e5



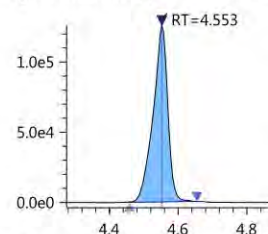
6_2-FTS-13C

Conc 4.9091

Area 374044

Q 428.90>409.00 (-)

1.26e5



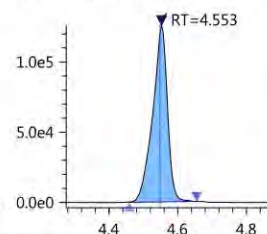
6_2-FTS-13C_IS

Conc 5.0000

Area 374044

ISTD 428.90>409.00 (-)

1.26e5



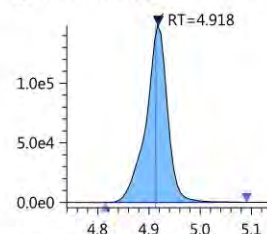
8_2-FTS_1

Conc 8.7846

Area 432775

Q 527.10>506.90 (-)

1.49e5



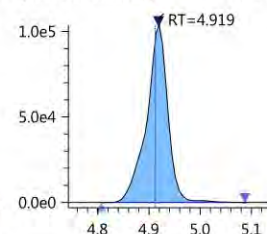
8_2-FTS-13C

Conc 4.8387

Area 298902

Q 528.80>509.00 (-)

1.04e5



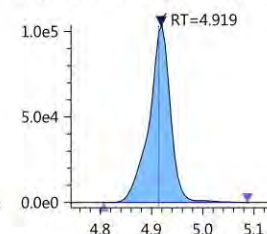
8_2-FTS-13C_IS

Conc 5.0000

Area 298902

ISTD 528.80>509.00 (-)

1.04e5



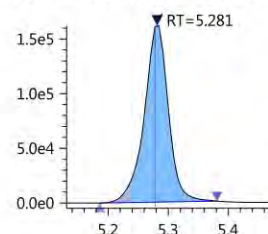
10_2-FTS_1

Conc 9.4161

Area 452504

Q 627.00>606.95 (-)

1.62e5



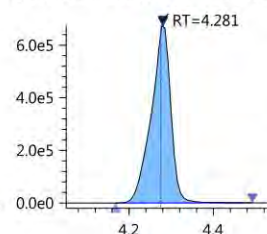
HPFO_DA

Conc 10.5406

Area 2166075

Q 329.00>169.00 (-)

6.74e5



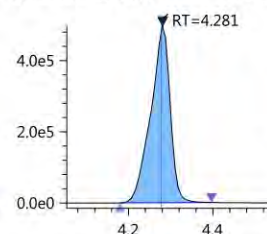
HPFO_DA-13C

Conc 5.3277

Area 1588434

Q 332.00>286.80 (-)

4.98e5



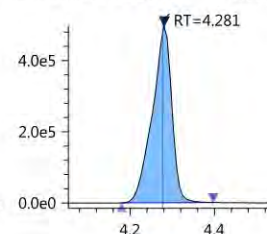
HPFO_DA-13C_IS

Conc 5.0000

Area 1588434

ISTD 332.00>286.80 (-)

4.98e5



Insight Report

Printed at 4/18/2020 11:14:21 AM

200417_029

Sample ID: IB

Date acquired: 4/17/2020 6:37:56 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_curve\200417_029.lcd

Vial: 47 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.091	5628863	5628863	1	5.0000	ng/mL	0.0000
PFBS_1	Auto	4.009	1148	1048947	2	0.0048	ng/mL	0.0000
PFBS-13C	Auto	4.005	1048947	5628863	1	4.7665	ng/mL	0.0000
PFBS-13C_IS	Auto	4.005	1048947	1048947	2	5.0000	ng/mL	0.0000
PFPeS	ND(W/B)	----	----	1048947	2	----	ng/mL	0.0000
PFHxS_1	Auto	4.383	3301	702257	3	0.0020	ng/mL	0.0000
PFHxS-18O	Auto	4.391	702257	5628863	1	5.6685	ng/mL	0.0000
PFHxS-18O_IS	Auto	4.391	702257	702257	3	5.0000	ng/mL	0.0000
PFHpS_1	M	4.536	250	702257	3	0.0011	ng/mL	0.0000
PFOS_1	Auto	4.717	734	872653	4	0.0050	ng/mL	0.0000
PFOS-13C	Auto	4.719	872653	5628863	1	5.0043	ng/mL	0.0000
PFOS-13C_IS	Auto	4.719	872653	872653	4	5.0000	ng/mL	0.0000
PFNS	M	4.908	266	872653	4	0.0083	ng/mL	0.0000
PFDS_1	M	5.065	157	872653	4	0.0011	ng/mL	0.0000
PFBA	ND(W/B)	----	----	2867335	5	----	ng/mL	0.0000
PFBA-13C	Auto	3.372	2867335	5628863	1	4.8152	ng/mL	0.0000
PFBA-13C_IS	Auto	3.372	2867335	2867335	5	5.0000	ng/mL	0.0000
PFPeA	Auto	3.948	23135	1621209	6	0.0044	ng/mL	0.0000
PFPeA-13C	Auto	3.949	1621209	5628863	1	4.8380	ng/mL	0.0000
PFPeA-13C_IS	Auto	3.949	1621209	1621209	6	5.0000	ng/mL	0.0000
PFHxA	Auto	4.204	14127	4492963	7	0.0098	ng/mL	0.0000
PFHxA-13C	Auto	4.207	4492963	5628863	1	4.8947	ng/mL	0.0000
PFHxA-13C_IS	Auto	4.207	4492963	4492963	7	5.0000	ng/mL	0.0000
PFHpA	M	4.378	7398	4608605	8	-0.0012	ng/mL	0.0000
PFHpA-13C	Auto	4.390	4608605	5628863	1	5.5498	ng/mL	0.0000
PFHpA-13C_IS	Auto	4.390	4608605	4608605	8	5.0000	ng/mL	0.0000
PFOA	Auto	4.553	19330	5575510	9	0.0052	ng/mL	0.0000
PFOA-13C	Auto	4.556	5575510	5628863	1	5.5502	ng/mL	0.0000
PFOA-13C_IS	Auto	4.556	5575510	5575510	9	5.0000	ng/mL	0.0000
PFNA	Auto	4.734	3092	4357265	10	-0.0005	ng/mL	0.0000
PFNA-13C	Auto	4.730	4357265	5628863	1	5.8097	ng/mL	0.0000
PFNA-13C_IS	Auto	4.730	4357265	4357265	10	5.0000	ng/mL	0.0000
PFDA	M	4.907	4917	3609363	11	0.0064	ng/mL	0.0000
PFDA-13C	Auto	4.913	3609363	5628863	1	5.3040	ng/mL	0.0000
PFDA-13C_IS	Auto	4.913	3609363	3609363	11	5.0000	ng/mL	0.0000
PFUnA	M	5.094	13676	4512784	12	0.0056	ng/mL	0.0000
PFUnA-13C	Auto	5.091	4512784	5628863	1	5.3166	ng/mL	0.0000
PFUnA-13C_IS	Auto	5.091	4512784	4512784	12	5.0000	ng/mL	0.0000
PFDoA	Auto	5.298	5731	4987561	13	0.0233	ng/mL	0.0000
PFDoA-13C	Auto	5.266	4987561	5628863	1	4.9877	ng/mL	0.0000
PFDoA-13C_IS	Auto	5.266	4987561	4987561	13	5.0000	ng/mL	0.0000
PFTeDA	Auto	5.428	12790	3981854	14	0.0122	ng/mL	0.0000
PFTeDA	Auto	5.586	50886	3981854	14	0.0049	ng/mL	0.0000
PFTeDA-13C	Auto	5.585	3981854	5628863	1	4.9908	ng/mL	0.0000
PFTeDA-13C_IS	Auto	5.585	3981854	3981854	14	5.0000	ng/mL	0.0000
FOSA	Auto	5.206	4528	2074003	16	0.0091	ng/mL	0.0000
FOSA-13C	Auto	5.203	2074003	5628863	1	4.5583	ng/mL	0.0000
FOSA-13C_IS	Auto	5.203	2074003	2074003	16	5.0000	ng/mL	0.0000
N-MeFOSA	M	5.584	1892	330004	17	0.0178	ng/mL	0.0000
N-MeFOSA-d3	Auto	5.584	330004	5628863	1	3.4606	ng/mL	0.0000
N-MeFOSA-d3_IS	Auto	5.584	330004	330004	17	5.0000	ng/mL	0.0000
N-EtFOSA	Auto	5.717	445	470952	18	0.0238	ng/mL	0.0000
N-EtFOSA-d9	Auto	5.715	470952	5628863	1	3.2678	ng/mL	0.0000
N-EtFOSA-d9_IS	Auto	5.715	470952	470952	18	5.0000	ng/mL	0.0000
N-MeFOSE	Auto	5.568	870	566953	19	0.0051	ng/mL	0.0000
N-MeFOSE-d7	Auto	5.557	566953	5628863	1	3.7005	ng/mL	0.0000
N-MeFOSE-d7_IS	Auto	5.557	566953	566953	19	5.0000	ng/mL	0.0000
N-EtFOSE	Auto	5.656	907	547976	20	0.0057	ng/mL	0.0000
N-EtFOSE-d9	Auto	5.682	547976	5628863	1	3.8473	ng/mL	0.0000
N-EtFOSE-d9_IS	Auto	5.682	547976	547976	20	5.0000	ng/mL	0.0000
N-MeFOSAA	Auto	4.999	3782	609707	21	0.0499	ng/mL	0.0000
N-MeFOSAA-d3	Auto	5.009	609707	5628863	1	4.7198	ng/mL	0.0000
N-MeFOSAA-d3_IS	Auto	5.009	609707	609707	21	5.0000	ng/mL	0.0000
N-EtFOSAA	M	5.112	3605	589258	22	0.0589	ng/mL	0.0000
N-EtFOSAA-d5	Auto	5.104	589258	5628863	1	4.9503	ng/mL	0.0000
N-EtFOSAA-d5_IS	Auto	5.104	589258	589258	22	5.0000	ng/mL	0.0000
4_2-FTS_1	M	4.199	238	349060	23	0.0036	ng/mL	0.0000
4_2-FTS-13C	Auto	4.181	349060	5628863	1	4.6091	ng/mL	0.0000

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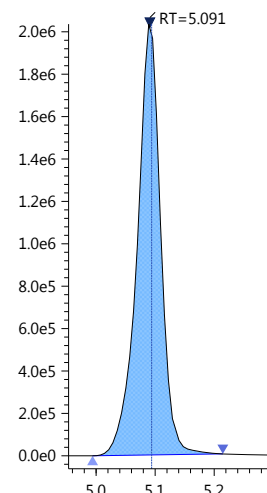
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.181	349060	349060	23	5.0000	ng/mL	0.0000
6_2-FTS_1	Auto	4.539	941	396490	24	0.0103	ng/mL	0.0000
6_2-FTS-13C	Auto	4.548	396490	5628863	1	5.2488	ng/mL	0.0000
6_2-FTS-13C_IS	Auto	4.548	396490	396490	24	5.0000	ng/mL	0.0000
8_2-FTS_1	M	4.899	124	312148	25	0.0024	ng/mL	0.0000
8_2-FTS-13C	Auto	4.912	312148	5628863	1	5.0969	ng/mL	0.0000
8_2-FTS-13C_IS	Auto	4.912	312148	312148	25	5.0000	ng/mL	0.0000
10_2-FTS_1	Auto	5.285	156	312148	25	0.0031	ng/mL	0.0000
HPFO_DA	M	4.263	339	1476353	26	0.0018	ng/mL	0.0000
HPFO_DA-13C	Auto	4.275	1476353	5628863	1	4.9947	ng/mL	0.0000
HPFO_DA-13C_IS	Auto	4.275	1476353	1476353	26	5.0000	ng/mL	0.0000

13C7-PFUnDA_IS

Conc 5.0000
Area 5628863

ISTD 570.00>525.00 (-)



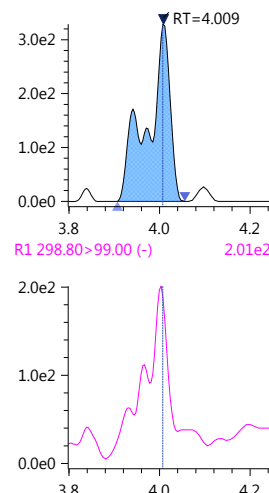
PFBS_1

Conc 0.0048

Area 1148

R#1 45.60 (0.00)

Q 299.00>80.00 (-)

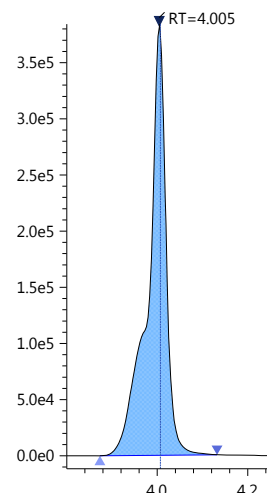


PFBS-13C

Conc 4.7665

Area 1048947

Q 301.80>80.00 (-)

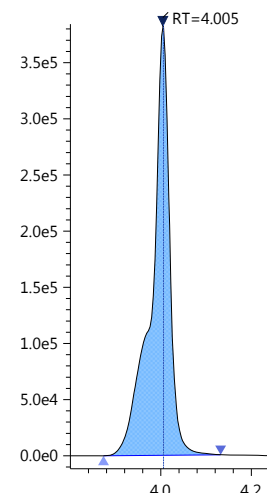


PFBS-13C_IS

Conc 5.0000

Area 1048947

ISTD 301.80>80.00 (-)



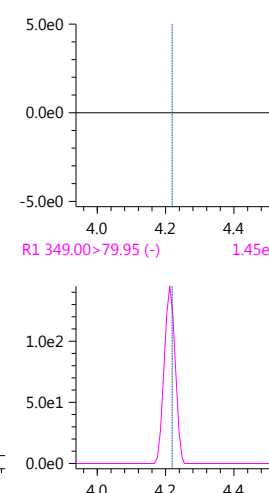
PFPeS

Conc ----

Area ----

R#1 ---- (0.00)

Q 349.00>99.00 (-)



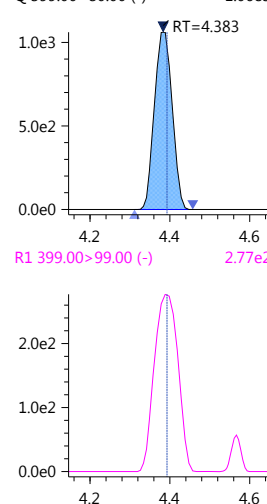
PFHxS_1

Conc 0.0020

Area 3301

R#1 26.81 (0.00)

Q 399.00>80.00 (-)

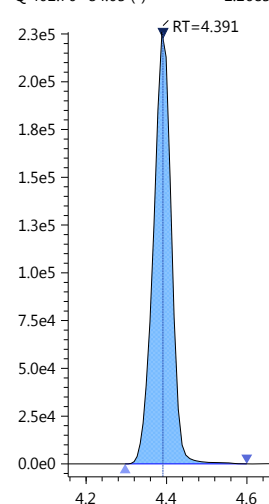


PFHxS-180

Conc 5.6685

Area 702257

Q 402.70>84.05 (-)

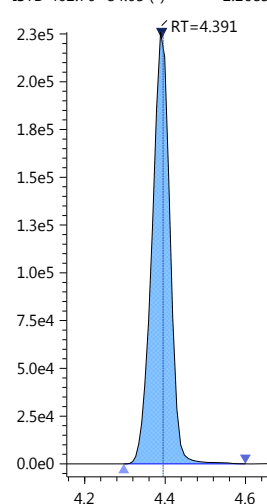


PFHxS-180_IS

Conc 5.0000

Area 702257

ISTD 402.70>84.05 (-)



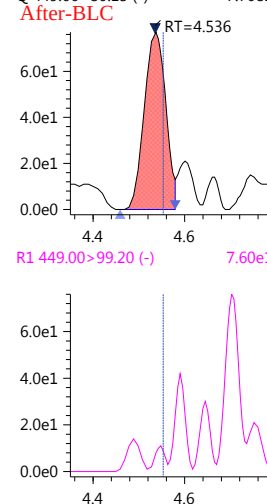
PFHpS_1

Conc 0.0011

Area 250

R#1 0.00 (0.00)

Q 449.00>80.15 (-)



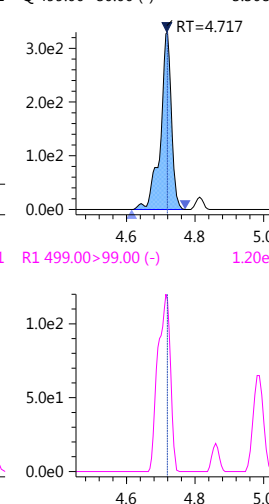
PFOS_1

Conc 0.0050

Area 734

R#1 35.51 (0.00)

Q 499.00>80.00 (-)



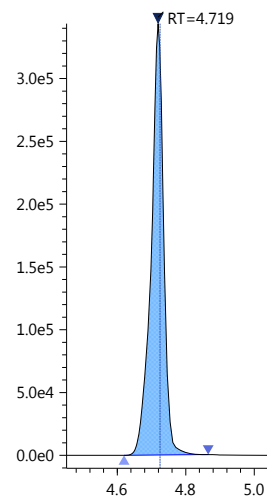
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PFOS-13C

Conc 5.0043
 Area 872653

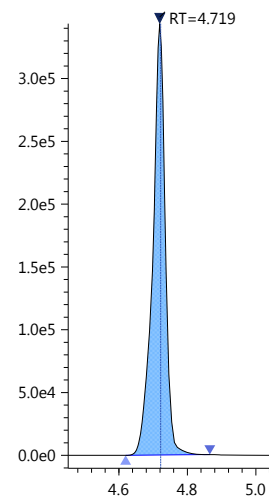
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 Area 872653

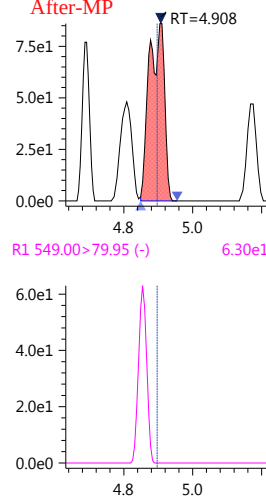
ISTD 502.80>80.05 (-)



PFNS

Conc 0.0083
 Area 266
 R#1 0.00 (0.00)

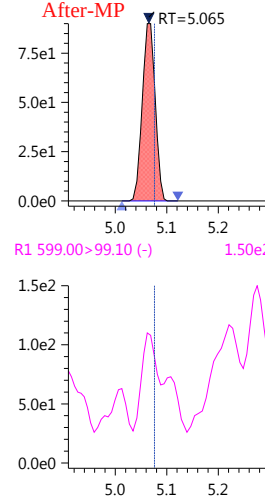
Q 549.00>99.00 (-)



PFDS_1

Conc 0.0011
 Area 157
 R#1 51.04 (0.00)

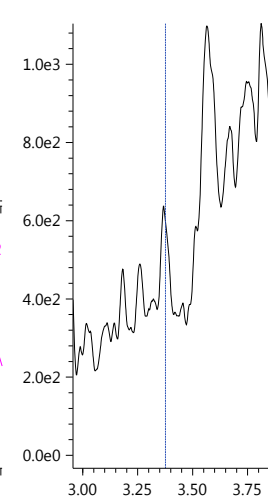
Q 599.00>79.90 (-)



PFBA

Conc ----
 Area ----

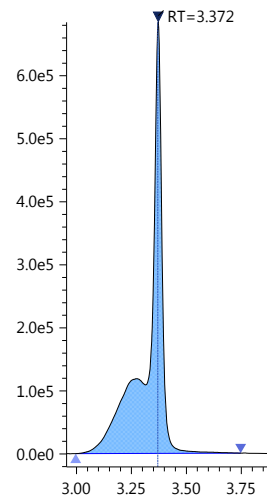
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.8152
 Area 2867335

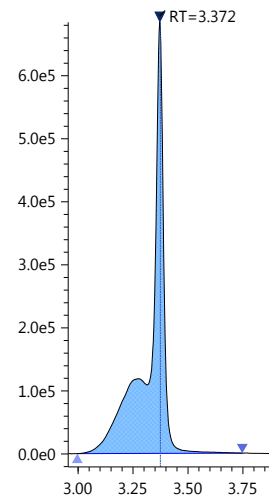
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
 Area 2867335

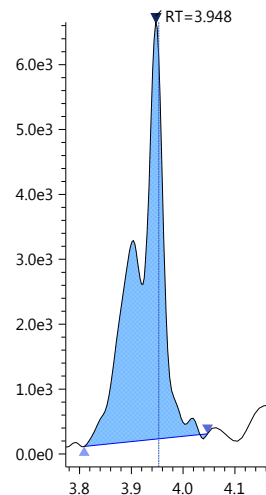
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.0044
 Area 23135

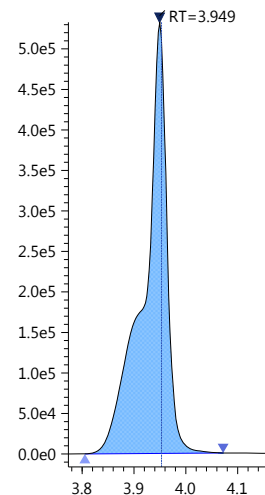
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.8380
 Area 1621209

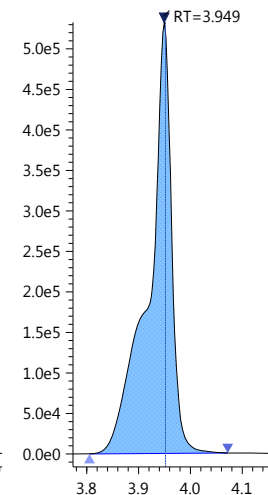
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 Area 1621209

ISTD 267.90>223.00 (-)

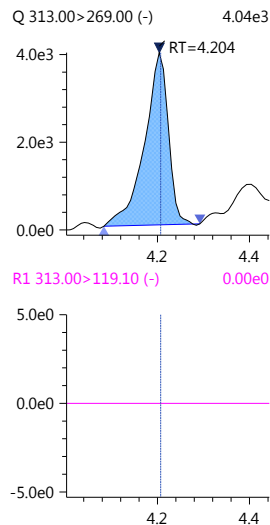


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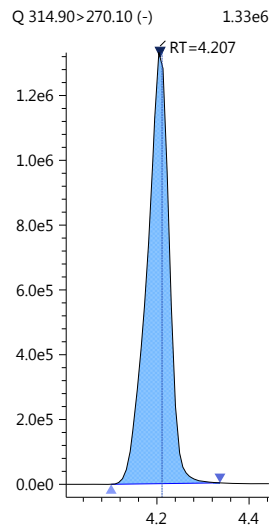
PFHxA

Conc 0.0098
Area 14127
R#1 0.00 (0.00)



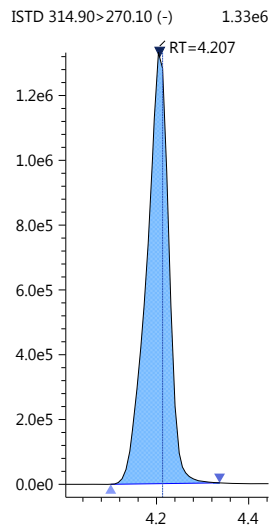
PFHxA-13C

Conc 4.8947
Area 4492963



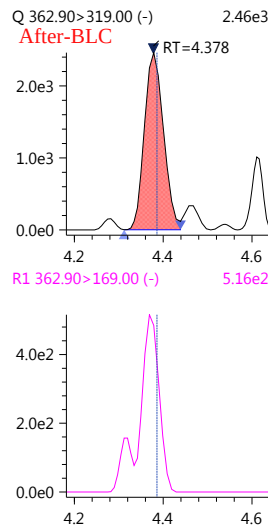
PFHxA-13C_IS

Conc 5.0000
Area 4492963



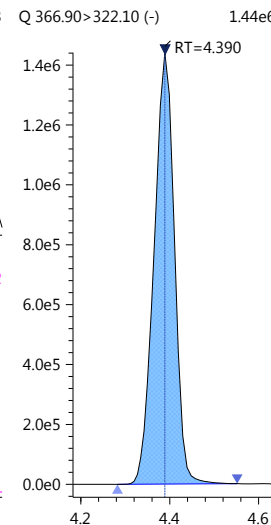
PFHpA

Conc -0.0012
Area 7398
R#1 15.96 (0.00)



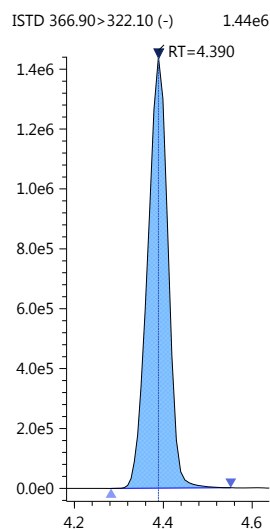
PFHpA-13C

Conc 5.5498
Area 4608605



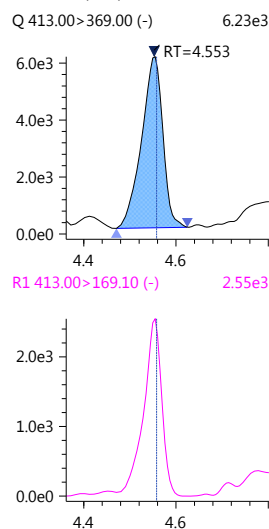
PFHpA-13C_IS

Conc 5.0000
Area 4608605



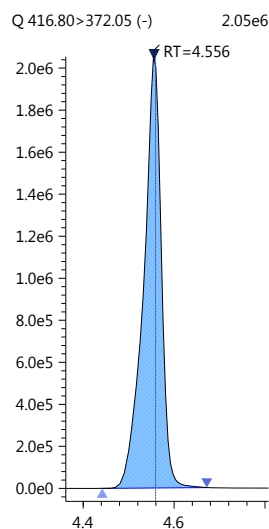
PFOA

Conc 0.0052
Area 19330
R#1 42.96 (0.00)



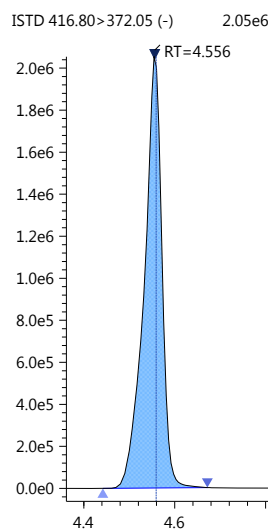
PFOA-13C

Conc 5.5502
Area 5575510



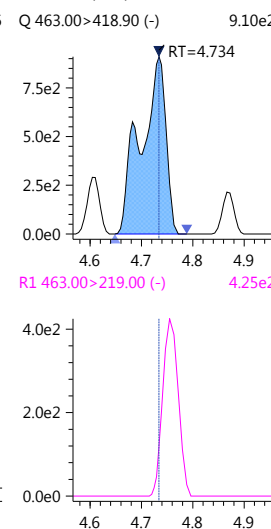
PFOA-13C_IS

Conc 5.0000
Area 5575510



PFNA

Conc -0.0005
Area 3092
R#1 11.58 (0.00)



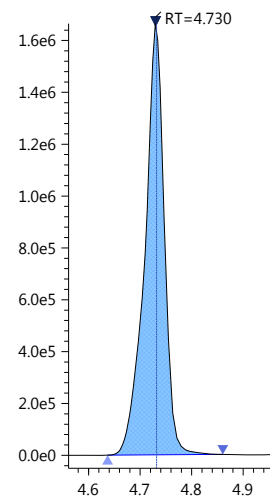
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PFNA-13C

Conc 5.8097
Area 4357265

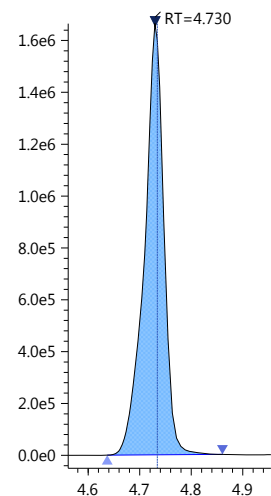
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
Area 4357265

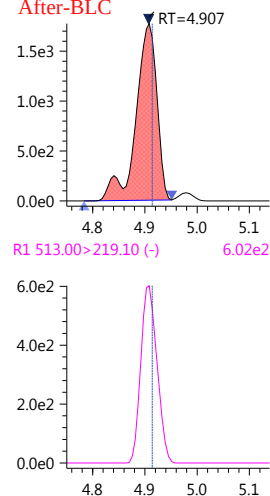
ISTD 467.80>423.00 (-)



PFDA

Conc 0.0064
Area 4917
R#1 34.04 (0.00)

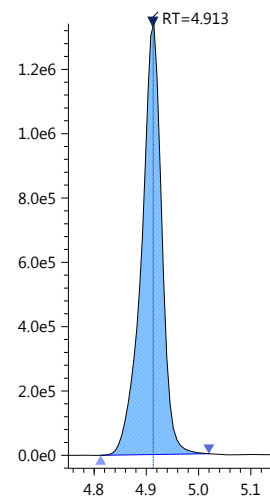
Q 513.00>468.80 (-)



PFDA-13C

Conc 5.3040
Area 3609363

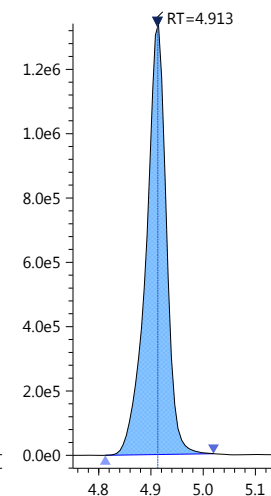
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
Area 3609363

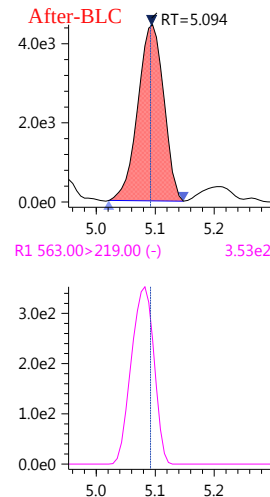
ISTD 514.80>469.95 (-)



PFUnA

Conc 0.0056
Area 13676
R#1 5.52 (0.00)

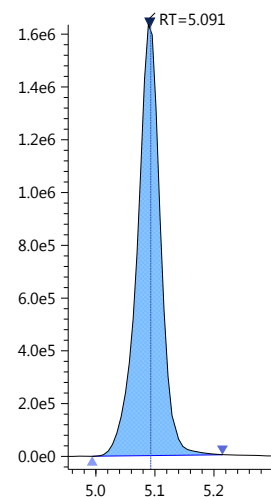
Q 563.00>518.90 (-)



PFUnA-13C

Conc 5.3166
Area 4512784

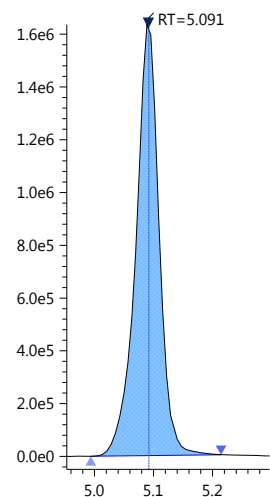
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
Area 4512784

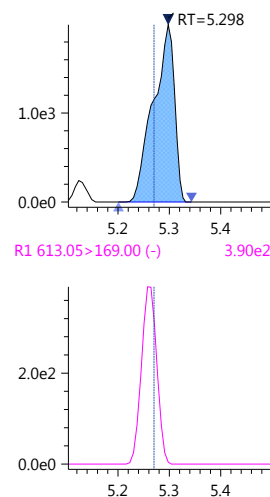
ISTD 564.80>519.95 (-)



PFDaA

Conc 0.0233
Area 5731
R#1 0.00 (0.00)

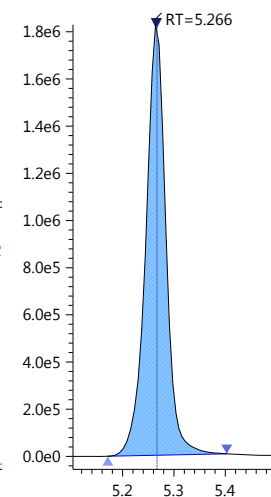
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.9877
Area 4987561

Q 614.80>569.95 (-)



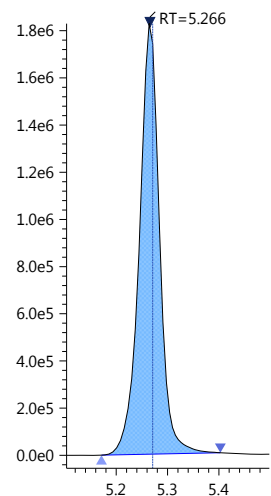
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PFDaA-13C_IS

Conc 5.0000
 Area 4987561

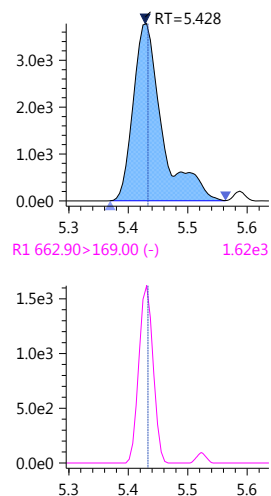
ISTD 614.80>569.95 (-) 1.83e6



PFTrDA

Conc 0.0122
 Area 12790
 R#1 45.33 (0.00)

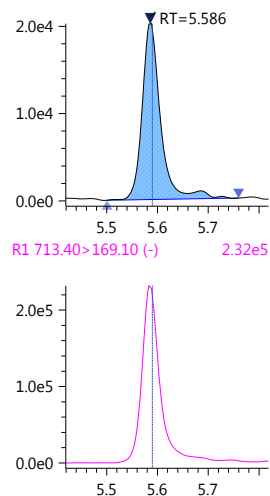
Q 663.00>618.90 (-) 3.78e3



PFTeDA

Conc 0.0049
 Area 50886
 R#1 1151.69 (0.00)

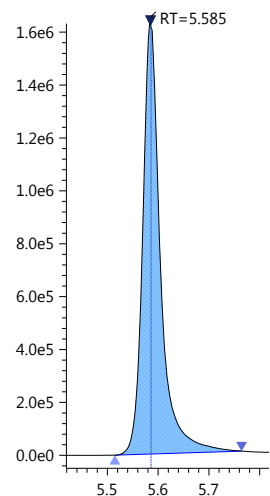
Q 713.40>669.00 (-) 2.03e4



PFTeDA-13C

Conc 4.9908
 Area 3981854

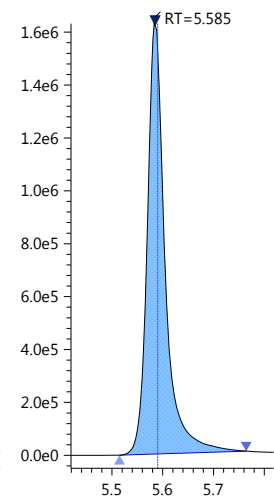
Q 714.70>669.90 (-) 1.63e6



PFTeDA-13C_IS

Conc 5.0000
 Area 3981854

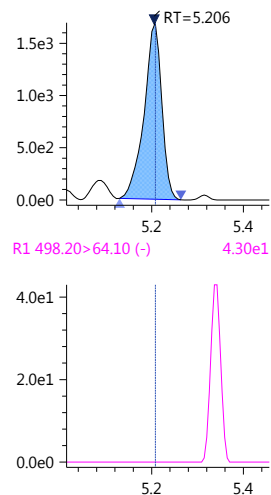
ISTD 714.70>669.90 (-) 1.63e6



FOSA

Conc 0.0091
 Area 4528
 R#1 0.00 (0.00)

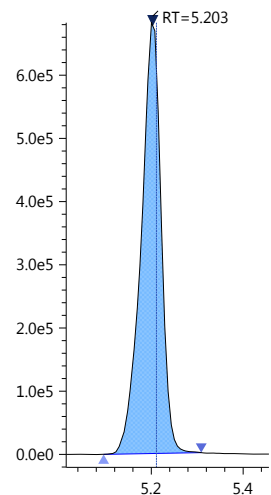
Q 498.20>78.00 (-) 1.70e3



FOSA-13C

Conc 4.5583
 Area 2074003

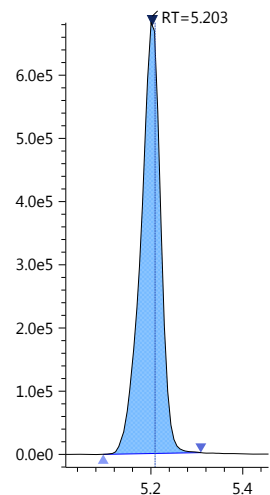
Q 506.00>78.05 (-) 6.83e5



FOSA-13C_IS

Conc 5.0000
 Area 2074003

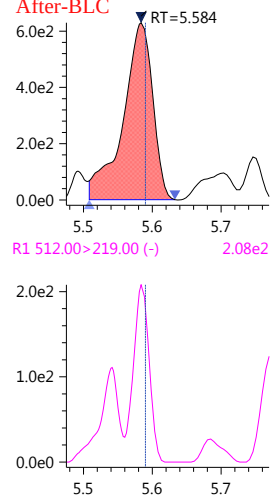
ISTD 506.00>78.05 (-) 6.83e5



N-MeFOSA

Conc 0.0178
 Area 1892
 R#1 40.48 (0.00)

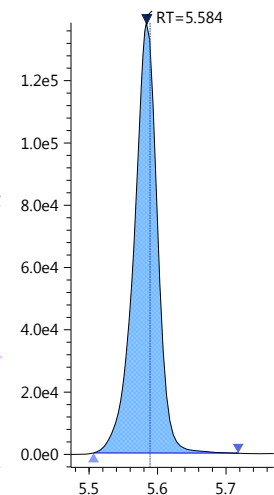
Q 512.00>169.10 (-) 6.30e2



N-MeFOSA-d3

Conc 3.4606
 Area 330004

Q 514.90>168.90 (-) 1.39e5



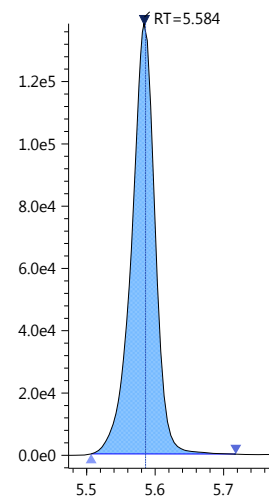
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N-MeFOSA-d3_IS

Conc 5.0000
Area 330004

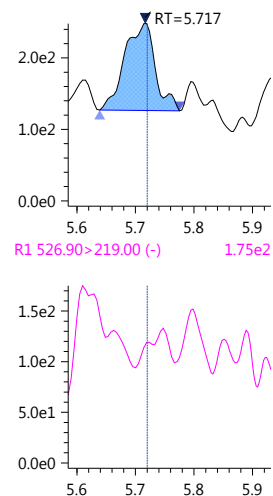
ISTD 514.90>168.90 (-) 1.39e5



N-EtFOSA

Conc 0.0238
Area 445
R#1 0.00 (0.00)

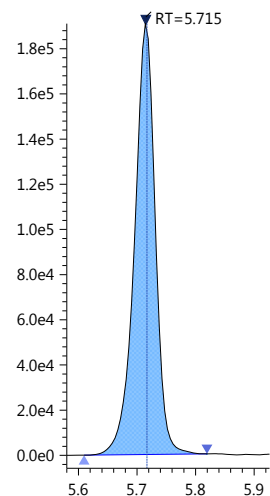
Q 526.90>169.10 (-) 2.48e2



N-EtFOSA-d9

Conc 3.2678
Area 470952

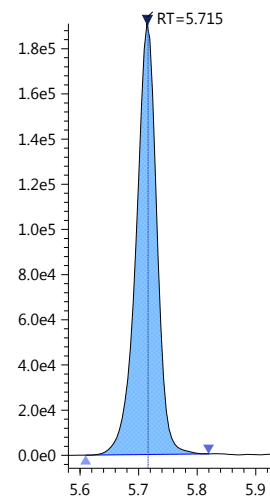
Q 530.90>169.15 (-) 1.91e5



N-EtFOSA-d9_IS

Conc 5.0000
Area 470952

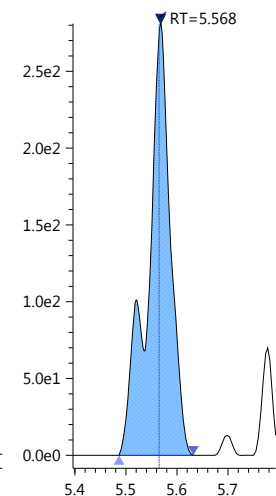
ISTD 530.90>169.15 (-) 1.91e5



N-MeFOSE

Conc 0.0051
Area 870

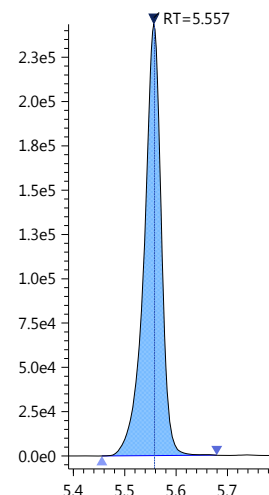
Q 616.00>59.00 (-) 2.81e2



N-MeFOSE-d7

Conc 3.7005
Area 566953

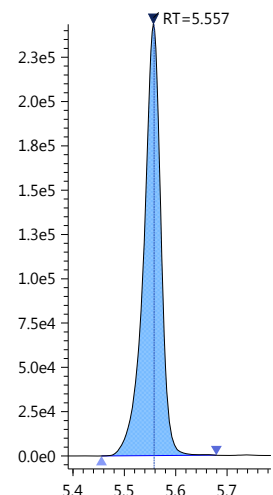
Q 622.70>59.10 (-) 2.44e5



N-MeFOSE-d7_IS

Conc 5.0000
Area 566953

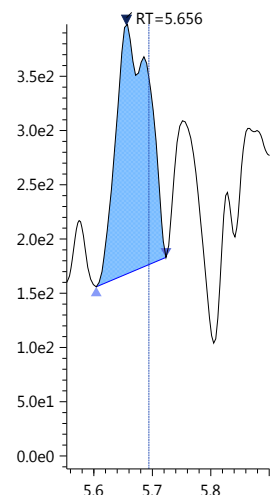
ISTD 622.70>59.10 (-) 2.44e5



N-EtFOSE

Conc 0.0057
Area 907

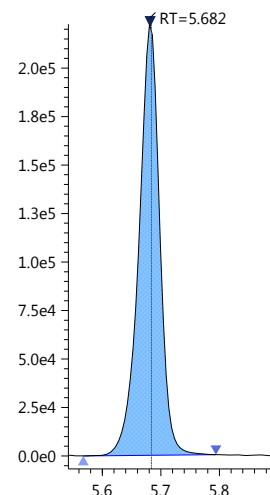
Q 630.00>58.90 (-) 3.98e2



N-EtFOSE-d9

Conc 3.8473
Area 547976

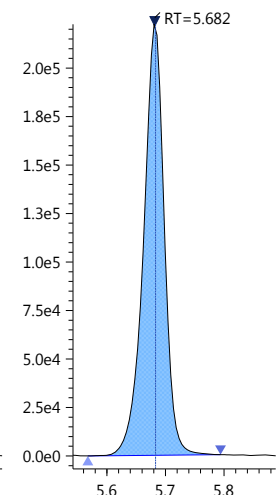
Q 638.70>59.10 (-) 2.23e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 547976

ISTD 638.70>59.10 (-) 2.23e5



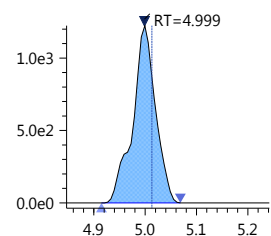
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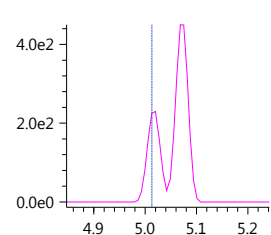
N-MeFOSAA

Conc 0.0499
Area 3782
R#1 0.00 (0.00)

Q 570.20>419.00 (-) 1.22e3



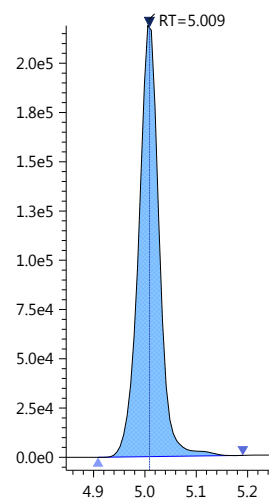
R1 570.20>512.00 (-) 4.50e2



N-MeFOSAA-d3

Conc 4.7198
Area 609707

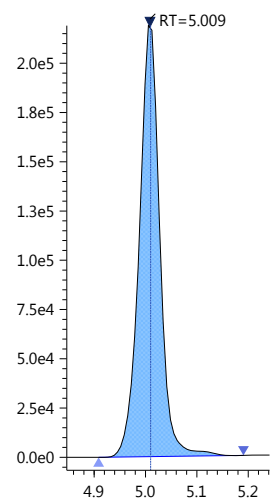
Q 572.80>419.05 (-) 2.19e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 609707

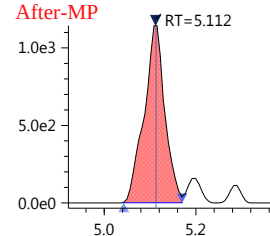
ISTD 572.80>419.05 (-) 2.19e5



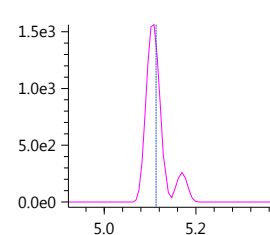
N-EtFOSAA

Conc 0.0589
Area 3605
R#1 94.40 (0.00)

Q 584.20>418.95 (-) 1.14e3



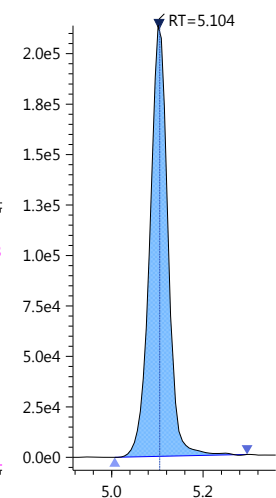
R1 584.20>526.10 (-) 1.56e3



N-EtFOSAA-d5

Conc 4.9503
Area 589258

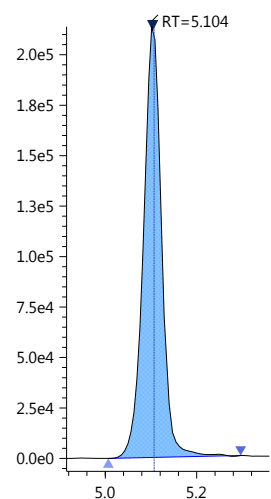
Q 588.80>419.00 (-) 2.14e5



N-EtFOSAA-d5_IS

Conc 5.0000
Area 589258

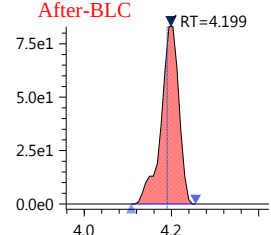
ISTD 588.80>419.00 (-) 2.14e5



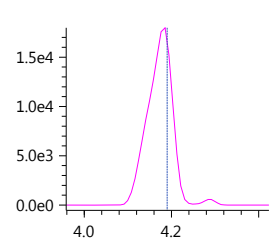
4_2-FTS_1

Conc 0.0036
Area 238
R#1 17754.32 (0.00)

Q 327.00>307.05 (-) 8.30e1



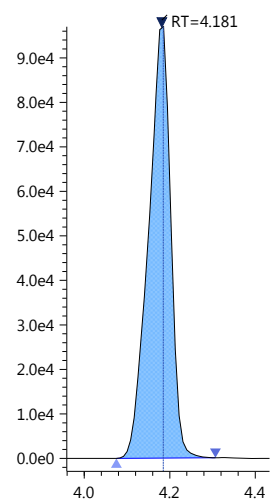
R1 327.00>81.10 (-) 1.80e4



4_2-FTS-13C

Conc 4.6091
Area 349060

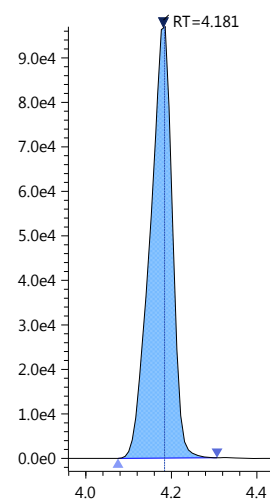
Q 328.80>309.05 (-) 9.70e4



4_2-FTS-13C_IS

Conc 5.0000
Area 349060

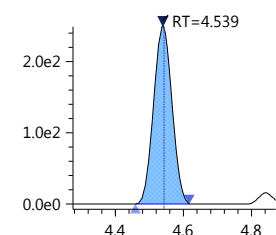
ISTD 328.80>309.05 (-) 9.70e4



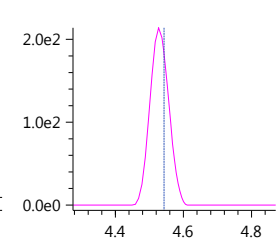
6_2-FTS_1

Conc 0.0103
Area 941
R#1 76.36 (0.00)

Q 427.00>407.00 (-) 2.49e2



R1 427.00>80.90 (-) 2.14e2

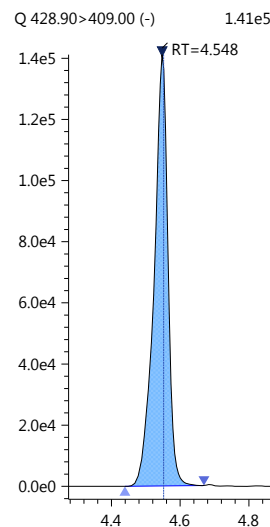


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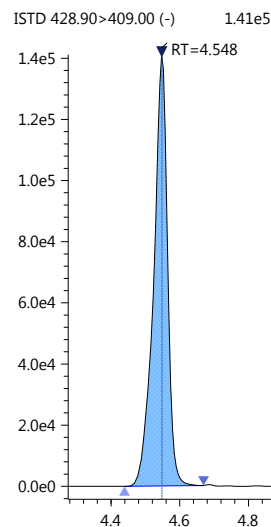
6_2-FTS-13C

Conc 5.2488
 Area 396490



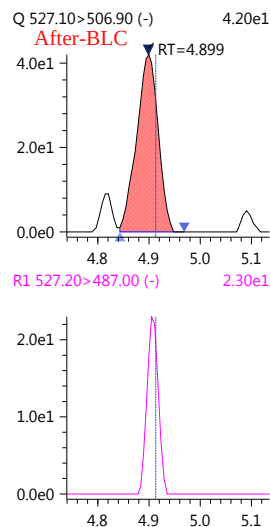
6_2-FTS-13C_IS

Conc 5.0000
 Area 396490



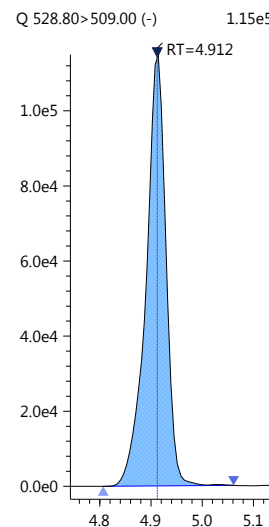
8_2-FTS_1

Conc 0.0024
 Area 124
 R#1 47.73 (0.00)



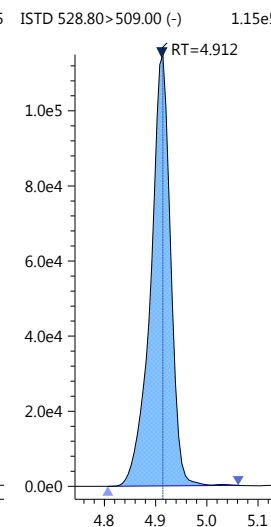
8_2-FTS-13C

Conc 5.0969
 Area 312148



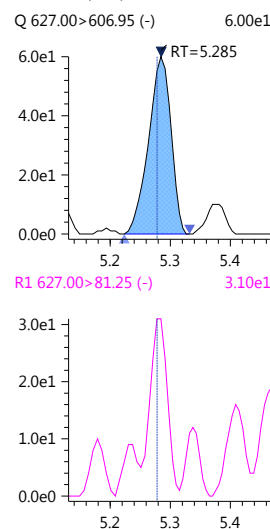
8_2-FTS-13C_IS

Conc 5.0000
 Area 312148



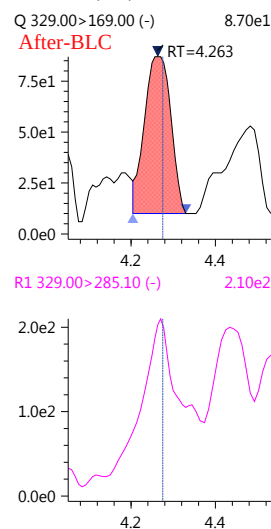
10_2-FtS_1

Conc 0.0031
 Area 156
 R#1 36.51 (0.00)



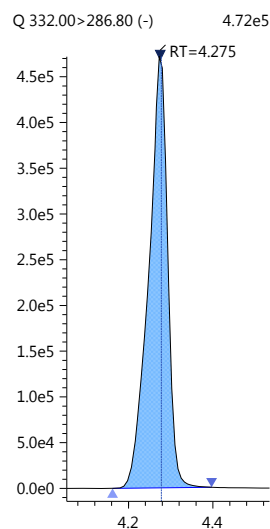
HPFO_DA

Conc 0.0018
 Area 339
 R#1 168.12 (0.00)



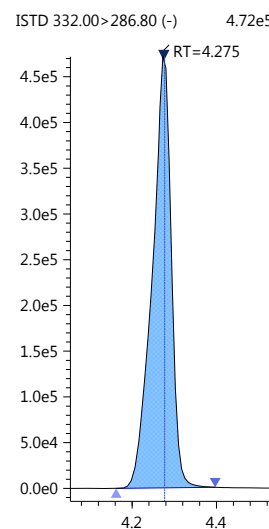
HPFO_DA-13C

Conc 4.9947
 Area 1476353



HPFO_DA-13C_IS

Conc 5.0000
 Area 1476353



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200417_029

Sample ID: IB

Date acquired: 4/17/2020 6:37:56 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_curve\200417_029.lcd

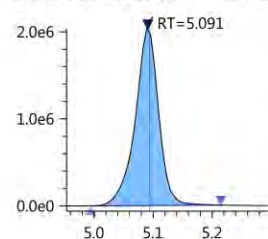
Vial: 47 | Inj. Volume: 15.0000uL | Tray: 1

13C7-PFUnDA_IS

Conc 5.0000

Area 562863

ISTD 570.00>525.00 (-)

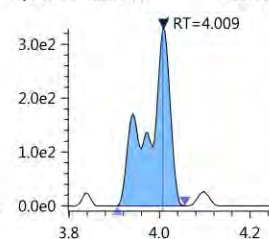


PFBS_1

Conc 0.0048

Area 1148

Q 299.00>80.00 (-)

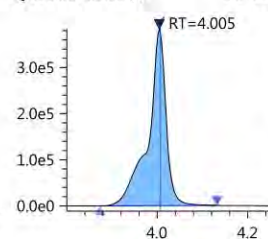


PFBS-13C

Conc 4.7665

Area 1048947

Q 301.80>80.00 (-)

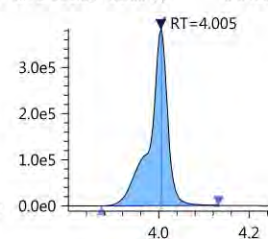


PFBS-13C_IS

Conc 5.0000

Area 1048947

ISTD 301.80>80.00 (-)

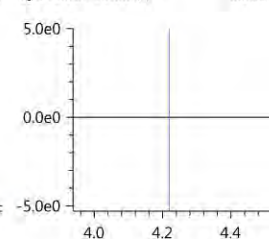


PFPeS

Conc ----

Area ----

Q 349.00>99.00 (-)

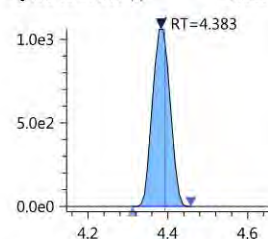


PFHxS_1

Conc 0.0020

Area 3301

Q 399.00>80.00 (-)

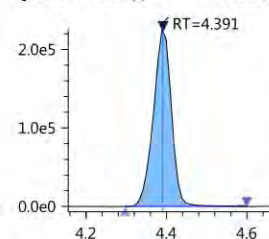


PFHxS-180

Conc 5.6685

Area 702257

Q 402.70>84.05 (-)

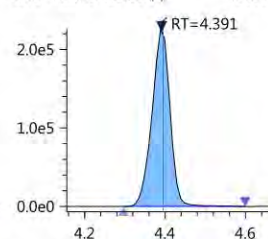


PFHxS-180_IS

Conc 5.0000

Area 702257

ISTD 402.70>84.05 (-)

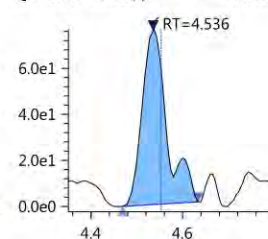


PFHpS_1

Conc 0.0013

Area 286

Q 449.00>80.15 (-)

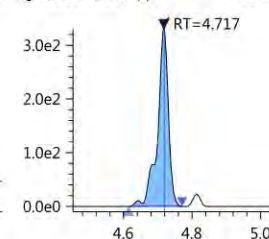


PFOS_1

Conc 0.0050

Area 734

Q 499.00>80.00 (-)

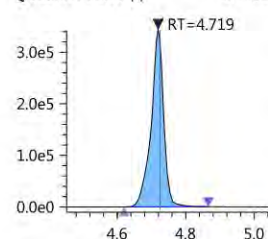


PFOS-13C

Conc 5.0043

Area 872653

Q 502.80>80.05 (-)

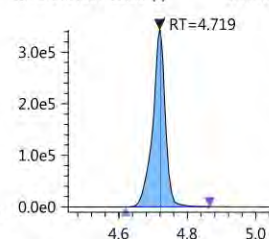


PFOS-13C_IS

Conc 5.0000

Area 872653

ISTD 502.80>80.05 (-)

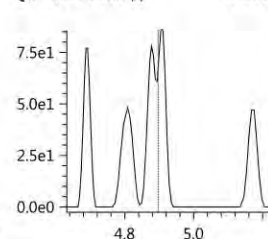


PFNS

Conc ----

Area ----

Q 549.00>99.00 (-)

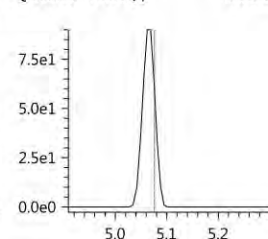


PFDS_1

Conc ----

Area ----

Q 599.00>79.90 (-)

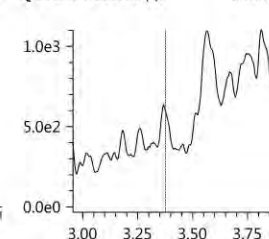


PFBA

Conc ----

Area ----

Q 213.00>169.10 (-)

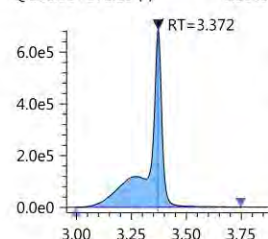


PFBA-13C

Conc 4.8152

Area 2867335

Q 216.90>172.15 (-)

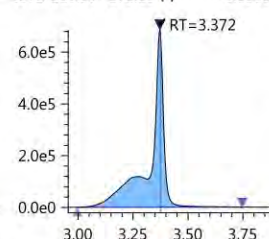


PFBA-13C_IS

Conc 5.0000

Area 2867335

ISTD 216.90>172.15 (-)

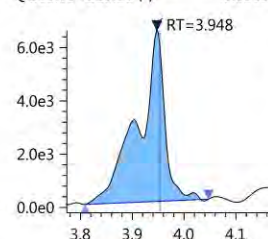


PFPeA

Conc 0.0044

Area 23135

Q 263.05>219.10 (-)

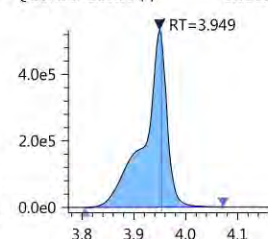


PFPeA-13C

Conc 4.8380

Area 1621209

Q 267.90>223.00 (-)

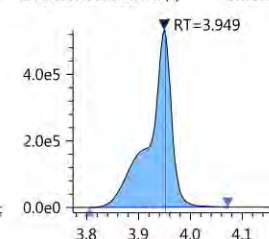


PFPeA-13C_IS

Conc 5.0000

Area 1621209

ISTD 267.90>223.00 (-)



Insight Report

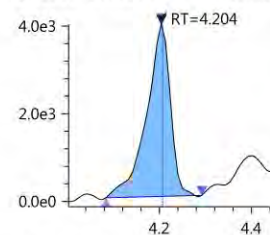
Printed at 4/18/2020 10:35:59 AM

PFHxA

Conc 0.0098

Area 14127

Q 313.00>269.00 (-)

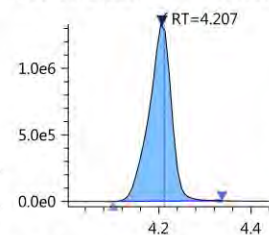


PFHxA-13C

Conc 4.8947

Area 4492963

Q 314.90>270.10 (-)

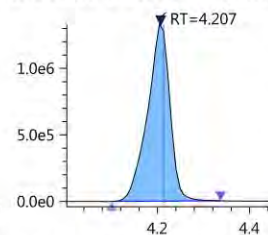


PFHxA-13C_IS

Conc 5.0000

Area 4492963

ISTD 314.90>270.10 (-)

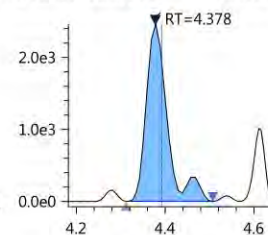


PFHpA

Conc 0.0000

Area 8154

Q 362.90>319.00 (-)

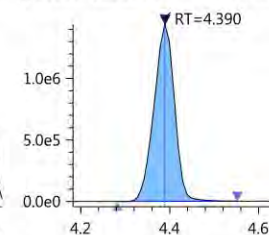


PFHpA-13C

Conc 5.5498

Area 4608605

Q 366.90>322.10 (-)

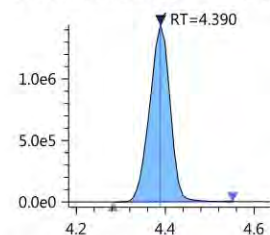


PFHpA-13C_IS

Conc 5.0000

Area 4608605

ISTD 366.90>322.10 (-)

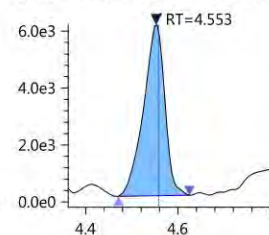


PFOA

Conc 0.0061

Area 19330

Q 413.00>369.00 (-)

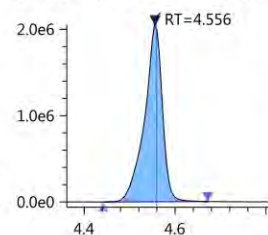


PFOA-13C

Conc 5.5502

Area 5575510

Q 416.80>372.05 (-)

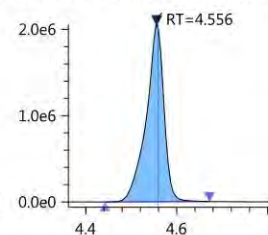


PFOA-13C_IS

Conc 5.0000

Area 5575510

ISTD 416.80>372.05 (-)

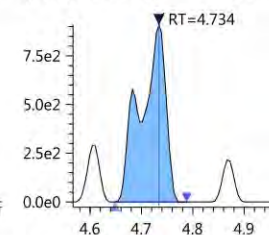


PFNA

Conc -0.0005

Area 3092

Q 463.00>418.90 (-)

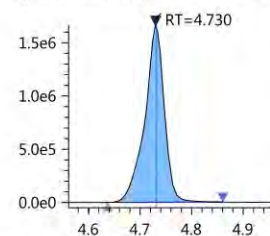


PFNA-13C

Conc 5.8097

Area 4357265

Q 467.80>423.00 (-)

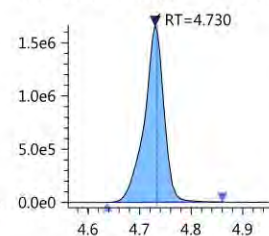


PFNA-13C_IS

Conc 5.0000

Area 4357265

ISTD 467.80>423.00 (-)

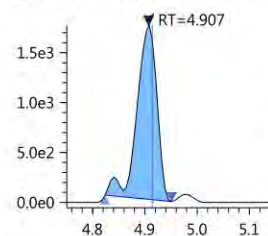


PFDA

Conc 0.0060

Area 4628

Q 513.00>468.80 (-)

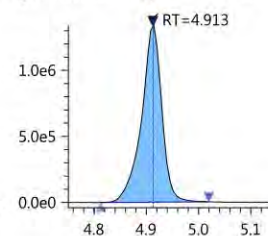


PFDA-13C

Conc 5.3040

Area 3609363

Q 514.80>469.95 (-)

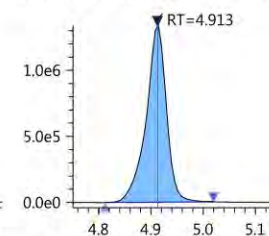


PFDA-13C_IS

Conc 5.0000

Area 3609363

ISTD 514.80>469.95 (-)

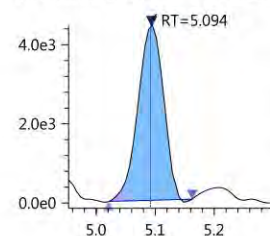


PFUnA

Conc 0.0052

Area 13362

Q 563.00>518.90 (-)

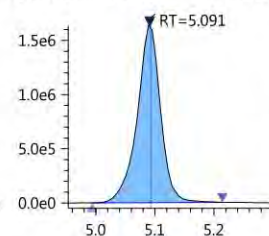


PFUnA-13C

Conc 5.3166

Area 4512784

Q 564.80>519.95 (-)

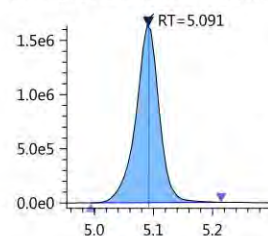


PFUnA-13C_IS

Conc 5.0000

Area 4512784

ISTD 564.80>519.95 (-)

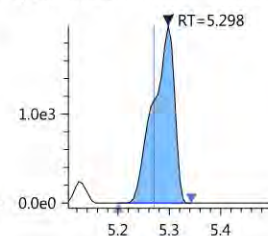


PFDoA

Conc 0.0233

Area 5731

Q 613.05>569.00 (-)

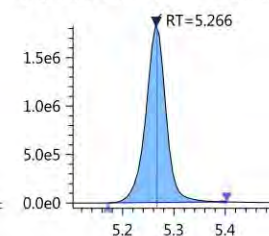


PFDoA-13C

Conc 4.9877

Area 4987561

Q 614.80>569.95 (-)



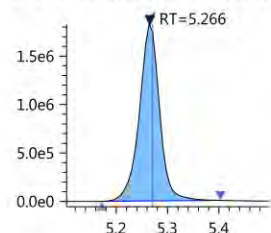
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Printed at 4/18/2020 10:35:59 AM

PFDaA-13C_IS

Conc 5.0000
Area 4987561

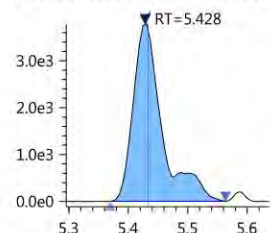
ISTD 614.80>569.95 (-) 1.83e6



PFTrDA

Conc 0.0122
Area 12790

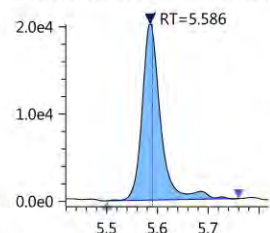
Q 663.00>618.90 (-) 3.78e3



PFTeDA

Conc 0.0093
Area 50886

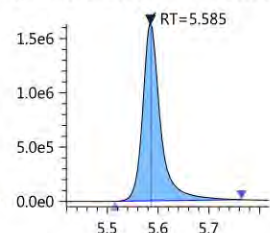
Q 713.40>669.00 (-) 2.03e4



PFTeDA-13C

Conc 4.9908
Area 3981854

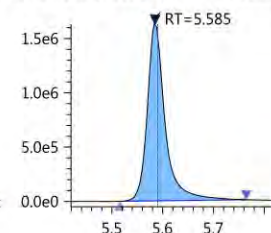
Q 714.70>669.90 (-) 1.63e6



PFTeDA-13C_IS

Conc 5.0000
Area 3981854

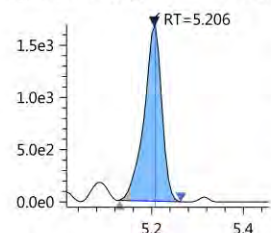
ISTD 714.70>669.90 (-) 1.63e6



FOSA

Conc 0.0091
Area 4528

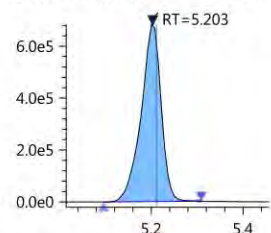
Q 498.20>78.00 (-) 1.70e3



FOSA-13C

Conc 4.5583
Area 2074003

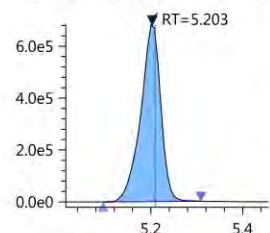
Q 506.00>78.05 (-) 6.83e5



FOSA-13C_IS

Conc 5.0000
Area 2074003

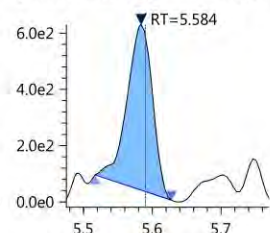
ISTD 506.00>78.05 (-) 6.83e5



N-MeFOSA

Conc 0.0146
Area 1516

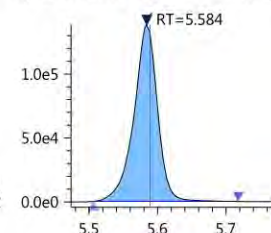
Q 512.00>169.10 (-) 6.30e2



N-MeFOSA-d3

Conc 3.4606
Area 330004

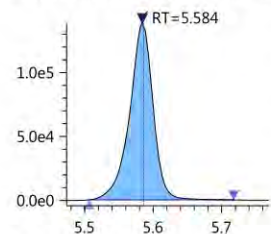
Q 514.90>168.90 (-) 1.39e5



N-MeFOSA-d3_IS

Conc 5.0000
Area 330004

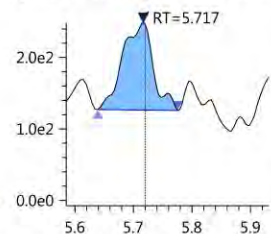
ISTD 514.90>168.90 (-) 1.39e5



N-EtFOSA

Conc 0.0236
Area 445

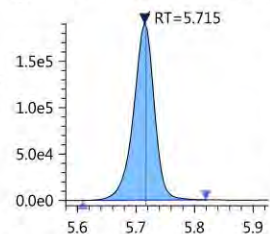
Q 526.90>169.10 (-) 2.48e2



N-EtFOSA-d9

Conc 3.2678
Area 470952

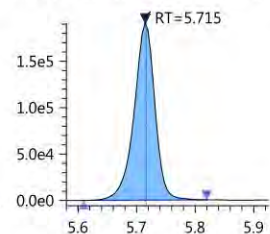
Q 530.90>169.15 (-) 1.91e5



N-EtFOSA-d9_IS

Conc 5.0000
Area 470952

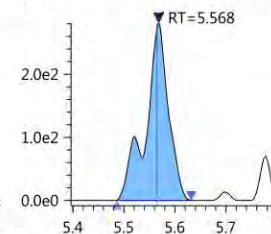
ISTD 530.90>169.15 (-) 1.91e5



N-MeFOSE

Conc 0.0051
Area 870

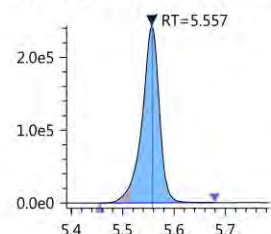
Q 616.00>59.00 (-) 2.81e2



N-MeFOSE-d7

Conc 3.7005
Area 566953

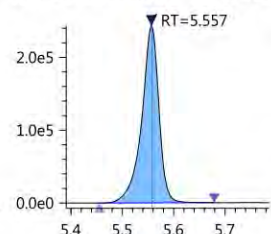
Q 622.70>59.10 (-) 2.44e5



N-MeFOSE-d7_IS

Conc 5.0000
Area 566953

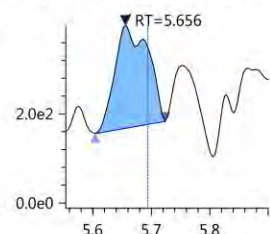
ISTD 622.70>59.10 (-) 2.44e5



N-EtFOSE

Conc 0.0057
Area 907

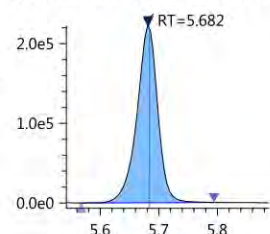
Q 630.00>58.90 (-) 3.98e2



N-EtFOSE-d9

Conc 3.8473
Area 547976

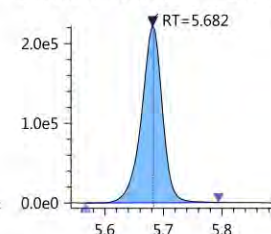
Q 638.70>59.10 (-) 2.23e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 547976

ISTD 638.70>59.10 (-) 2.23e5



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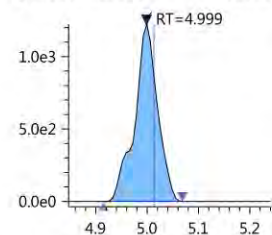
N-MeFOSAA

Conc 0.0495

Area 3782

Q 570.20>419.00 (-)

1.22e3

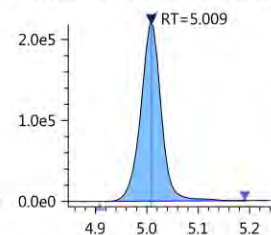
**N-MeFOSAA-d3**

Conc 4.7198

Area 609707

Q 572.80>419.05 (-)

2.19e5

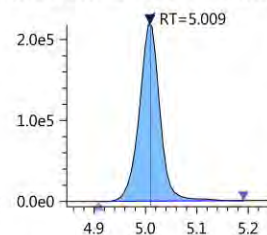
**N-MeFOSAA-d3_IS**

Conc 5.0000

Area 609707

ISTD 572.80>419.05 (-)

2.19e5

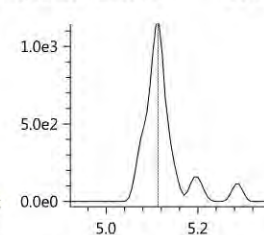
**N-EtFOSAA**

Conc ----

Area ----

Q 584.20>418.95 (-)

1.14e3

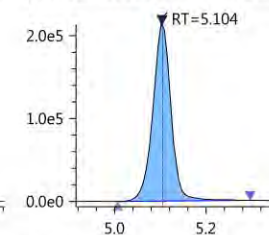
**N-EtFOSAA-d5**

Conc 4.9503

Area 589258

Q 588.80>419.00 (-)

2.14e5

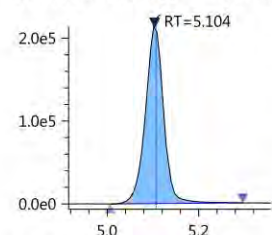
**N-EtFOSAA-d5_IS**

Conc 5.0000

Area 589258

ISTD 588.80>419.00 (-)

2.14e5

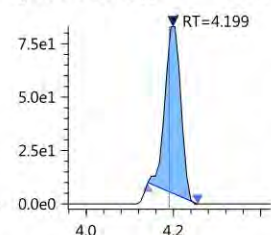
**4_2-FTS_1**

Conc 0.0030

Area 198

Q 327.00>307.05 (-)

8.30e1

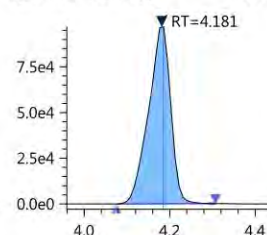
**4_2-FTS-13C**

Conc 4.6091

Area 349060

Q 328.80>309.05 (-)

9.70e4

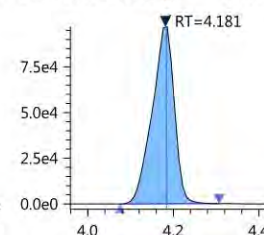
**4_2-FTS-13C_IS**

Conc 5.0000

Area 349060

ISTD 328.80>309.05 (-)

9.70e4

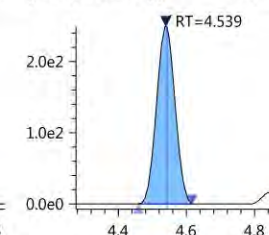
**6_2-FTS_1**

Conc 0.0103

Area 941

Q 427.00>407.00 (-)

2.49e2

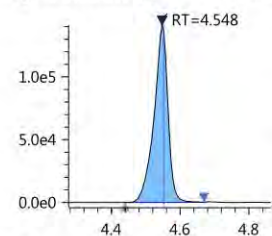
**6_2-FTS-13C**

Conc 5.2488

Area 396490

Q 428.90>409.00 (-)

1.41e5

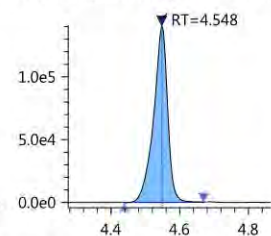
**6_2-FTS-13C_IS**

Conc 5.0000

Area 396490

ISTD 428.90>409.00 (-)

1.41e5

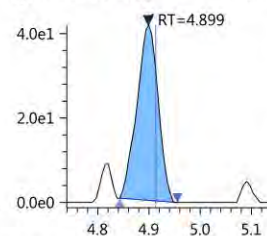
**8_2-FTS_1**

Conc 0.0023

Area 120

Q 527.10>506.90 (-)

4.20e1

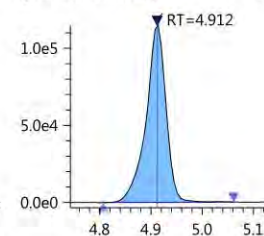
**8_2-FTS-13C**

Conc 5.0969

Area 312148

Q 528.80>509.00 (-)

1.15e5

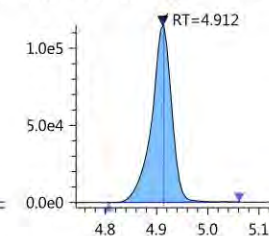
**8_2-FTS-13C_IS**

Conc 5.0000

Area 312148

ISTD 528.80>509.00 (-)

1.15e5

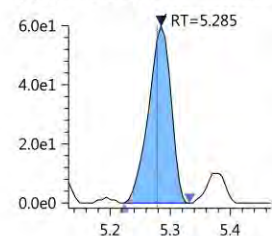
**10_2-FTS_1**

Conc 0.0031

Area 156

Q 627.00>606.95 (-)

6.00e1

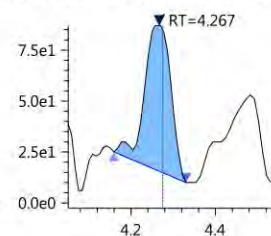
**HPFO_DA**

Conc 0.0016

Area 311

Q 329.00>169.00 (-)

8.70e1

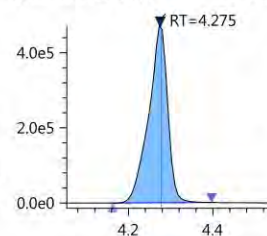
**HPFO_DA-13C**

Conc 4.9947

Area 1476353

Q 332.00>286.80 (-)

4.72e5

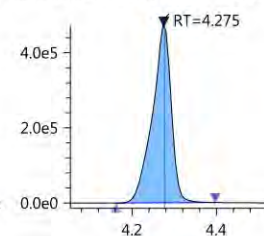
**HPFO_DA-13C_IS**

Conc 5.0000

Area 1476353

ISTD 332.00>286.80 (-)

4.72e5



Insight Report

Printed at 4/18/2020 11:14:21 AM

200417_030

Sample ID: 15.0 PPB ICAL

Date acquired: 4/17/2020 6:48:25 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_cuvre\200417_030.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	5.099	5416299	5416299	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.012	3427996	1177486	2	12.6570	ng/mL	13.3106
PFBS-13C	Auto	4.013	1177486	5416299	1	5.5606	ng/mL	5.0000
PFBS-13C_IS	Auto	4.013	1177486	1177486	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.233	1633418	1177486	2	14.0589	ng/mL	14.1138
PFHxS_1	Auto	4.396	2089397	619944	3	13.5345	ng/mL	13.6961
PFHxS-18O	Auto	4.398	619944	5416299	1	5.2004	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.398	619944	619944	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.556	2711900	619944	3	14.0279	ng/mL	14.3016
PFOS_1	Auto	4.726	2069562	886254	4	13.7844	ng/mL	13.9384
PFOS-13C	Auto	4.726	886254	5416299	1	5.2818	ng/mL	5.0000
PFOS-13C_IS	Auto	4.726	886254	886254	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.902	1500457	886254	4	14.2809	ng/mL	14.4237
PFDS_1	Auto	5.078	2105688	886254	4	15.0064	ng/mL	14.4700
PFBA	Auto	3.379	9397693	3229406	5	14.9009	ng/mL	15.0000
PFBA-13C	Auto	3.378	3229406	5416299	1	5.6361	ng/mL	5.0000
PFBA-13C_IS	Auto	3.378	3229406	3229406	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.957	10932167	1752032	6	14.8898	ng/mL	15.0000
PFPeA-13C	Auto	3.957	1752032	5416299	1	5.4336	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.957	1752032	1752032	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.215	13825447	4733322	7	14.8708	ng/mL	15.0000
PFHxA-13C	Auto	4.215	4733322	5416299	1	5.3589	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.215	4733322	4733322	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.396	10021679	3650297	8	15.3639	ng/mL	15.0000
PFHpA-13C	Auto	4.395	3650297	5416299	1	4.5683	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.395	3650297	3650297	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.564	17290948	4547671	9	14.9597	ng/mL	15.0000
PFOA-13C	Auto	4.564	4547671	5416299	1	4.7047	ng/mL	5.0000
PFOA-13C_IS	Auto	4.564	4547671	4547671	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.738	9204850	3386605	10	15.2144	ng/mL	15.0000
PFNA-13C	Auto	4.738	3386605	5416299	1	4.6927	ng/mL	5.0000
PFNA-13C_IS	Auto	4.738	3386605	3386605	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.919	9148332	3061953	11	14.0701	ng/mL	15.0000
PFDA-13C	Auto	4.919	3061953	5416299	1	4.6761	ng/mL	5.0000
PFDA-13C_IS	Auto	4.919	3061953	3061953	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.099	9125108	3937897	12	14.8654	ng/mL	15.0000
PFUnA-13C	Auto	5.099	3937897	5416299	1	4.8214	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.099	3937897	3937897	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.273	8278281	5033623	13	14.4093	ng/mL	15.0000
PFDoA-13C	Auto	5.273	5033623	5416299	1	5.2313	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.273	5033623	5033623	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.438	11116409	3869064	14	14.9103	ng/mL	15.0000
PFTeDA	Auto	5.592	5135010	3869064	14	15.0528	ng/mL	15.0000
PFTeDA-13C	Auto	5.592	3869064	5416299	1	5.0397	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.592	3869064	3869064	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.211	7883496	2248063	16	14.6406	ng/mL	15.0000
FOSA-13C	Auto	5.210	2248063	5416299	1	5.1348	ng/mL	5.0000
FOSA-13C_IS	Auto	5.210	2248063	2248063	16	5.0000	ng/mL	5.0000
N-MeFOSA	M	5.594	2307953	501276	17	14.3209	ng/mL	15.0000
N-MeFOSA-d3	Auto	5.591	501276	5416299	1	5.4630	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.591	501276	501276	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.726	470495	762178	18	15.5539	ng/mL	15.0000
N-EtFOSA-d9	Auto	5.721	762178	5416299	1	5.4960	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.721	762178	762178	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.571	3628946	806716	19	14.9313	ng/mL	15.0000
N-MeFOSE-d7	Auto	5.563	806716	5416299	1	5.4721	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.563	806716	806716	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.698	3174039	766320	20	14.2567	ng/mL	15.0000
N-EtFOSE-d9	Auto	5.688	766320	5416299	1	5.5915	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.688	766320	766320	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.017	1280311	675200	21	15.2521	ng/mL	15.0000
N-MeFOSAA-d3	Auto	5.015	675200	5416299	1	5.4319	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.015	675200	675200	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.115	919834	574944	22	15.4057	ng/mL	15.0000
N-EtFOSAA-d5	Auto	5.112	574944	5416299	1	5.0196	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.112	574944	574944	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.189	966010	410753	23	12.5006	ng/mL	14.0583
4_2-FTS-13C	Auto	4.189	410753	5416299	1	5.6366	ng/mL	5.0000

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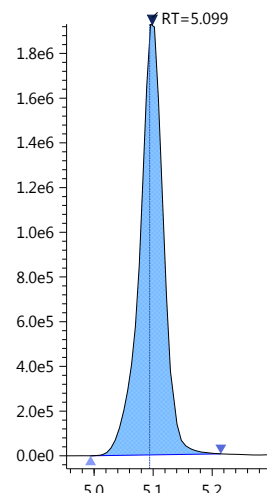
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.189	410753	410753	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.550	1045844	352921	24	12.8008	ng/mL	14.2676
6_2-FTS-13C	Auto	4.554	352921	5416299	1	4.8554	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.554	352921	352921	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.920	583681	272630	25	12.9895	ng/mL	14.4007
8_2-FTS-13C	Auto	4.919	272630	5416299	1	4.6264	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.919	272630	272630	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.282	601149	272630	25	13.7147	ng/mL	14.4929
HPFO_DA	Auto	4.283	2939184	1565495	26	14.5123	ng/mL	15.0000
HPFO_DA-13C	Auto	4.283	1565495	5416299	1	5.5041	ng/mL	5.0000
HPFO_DA-13C_IS	Auto	4.283	1565495	1565495	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS

Conc 5.0000
Area 5416299

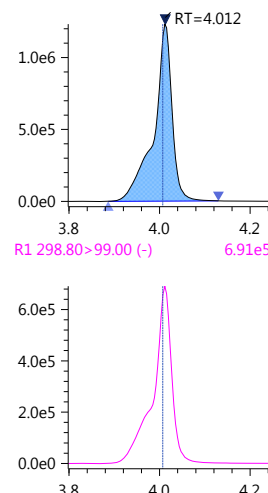
ISTD 570.00>525.00 (-) 1.93e6



PFBS_1

Conc 12.6570
Area 3427996
R#1 56.00 (0.00)

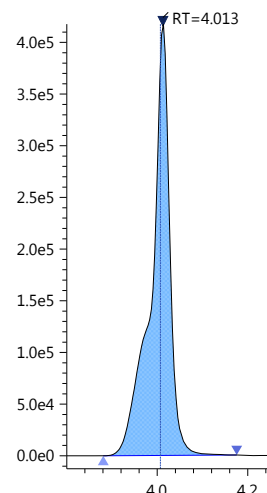
Q 299.00>80.00 (-)



PFBS-13C

Conc 5.5606
Area 1177486

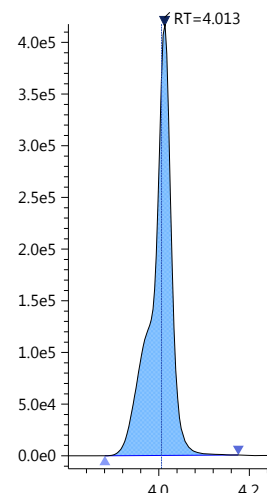
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PFBS-13C_IS

Conc 5.0000
Area 1177486

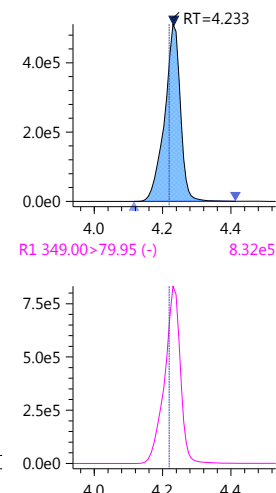
ISTD 301.80>80.00 (-) 4.18e5



PFPeS

Conc 14.0589
Area 1633418
R#1 162.61 (0.00)

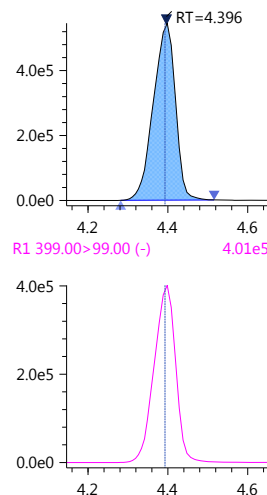
Q 349.00>99.00 (-) 5.12e5



PFHxS_1

Conc 13.5345
Area 2089397
R#1 73.50 (0.00)

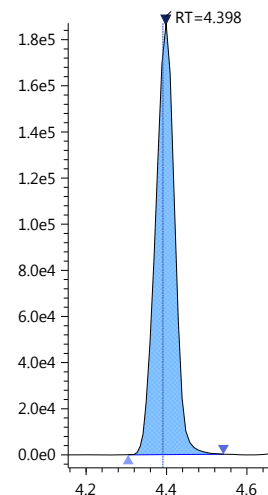
Q 399.00>80.00 (-)



PFHxS-180

Conc 5.2004
Area 619944

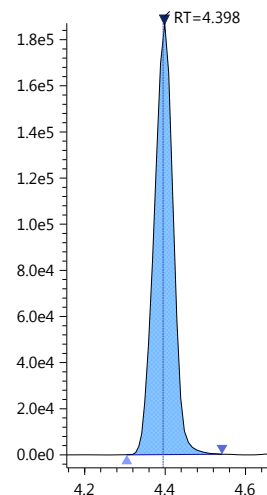
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
Area 619944

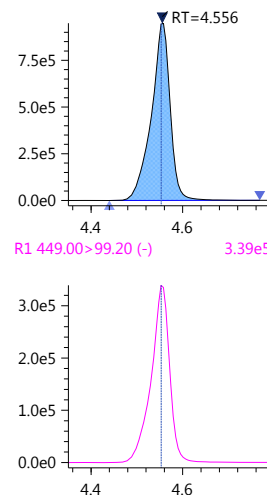
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 14.0279
Area 2711900
R#1 36.22 (0.00)

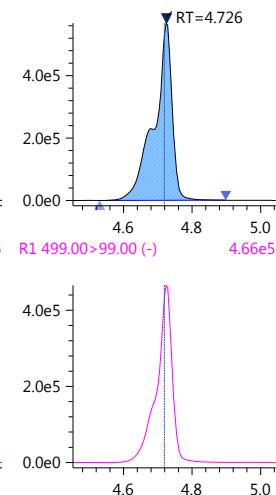
Q 449.00>80.15 (-)



PFOS_1

Conc 13.7844
Area 2069562
R#1 81.84 (0.00)

Q 499.00>80.00 (-)



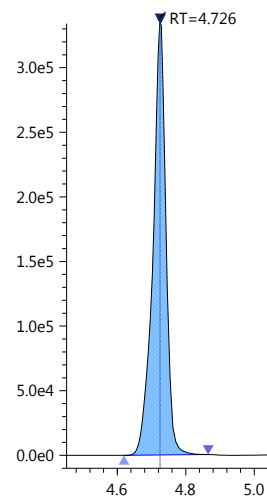
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PFOS-13C

Conc 5.2818
Area 886254

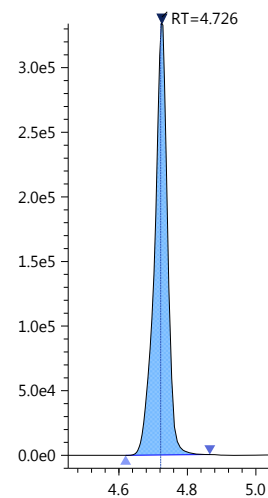
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
Area 886254

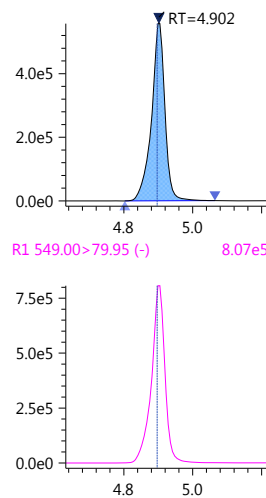
ISTD 502.80>80.05 (-)



PFNS

Conc 14.2809
Area 1500457
R#1 144.78 (0.00)

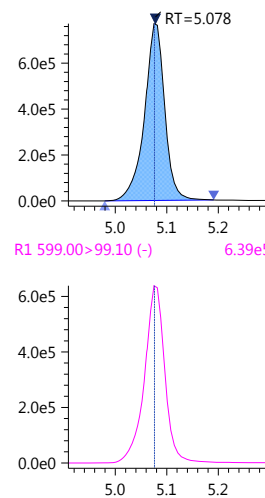
Q 549.00>99.00 (-)



PFDS_1

Conc 15.0064
Area 2105688
R#1 82.48 (0.00)

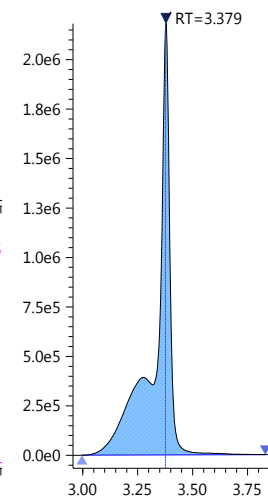
Q 599.00>79.90 (-)



PFBA

Conc 14.9009
Area 9397693

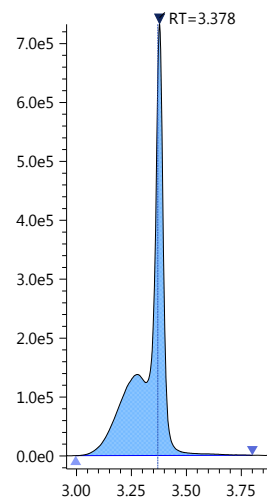
Q 213.00>169.10 (-)



PFBA-13C

Conc 5.6361
Area 3229406

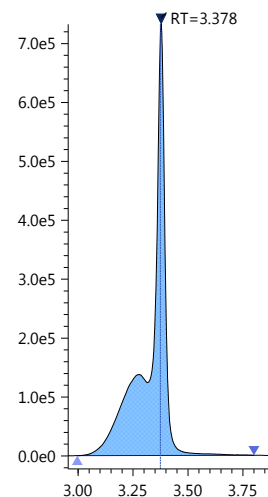
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 3229406

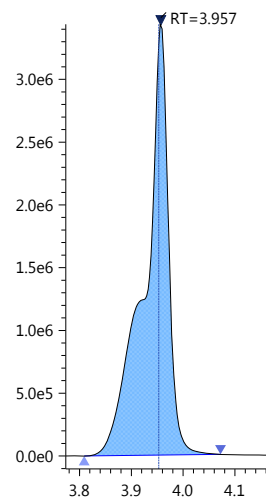
ISTD 216.90>172.15 (-)



PFPeA

Conc 14.8898
Area 10932167

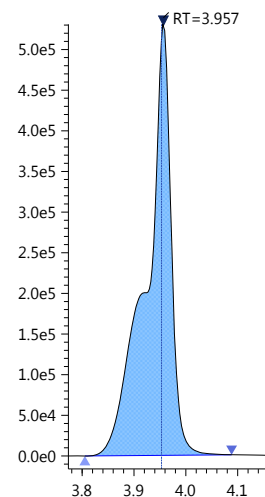
Q 263.05>219.10 (-)



PFPeA-13C

Conc 5.4336
Area 1752032

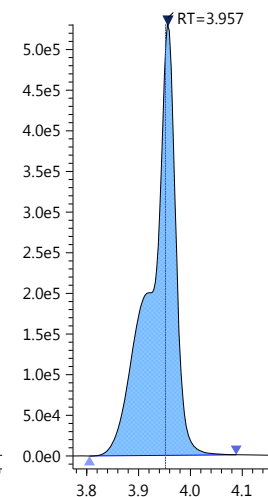
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1752032

ISTD 267.90>223.00 (-)

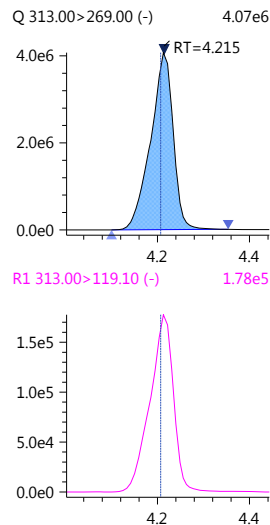


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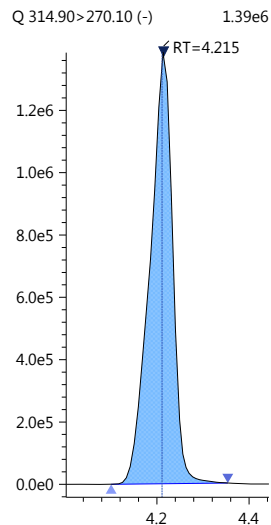
PFHxA

Conc 14.8708
 Area 13825447
 R#1 4.36 (0.00)



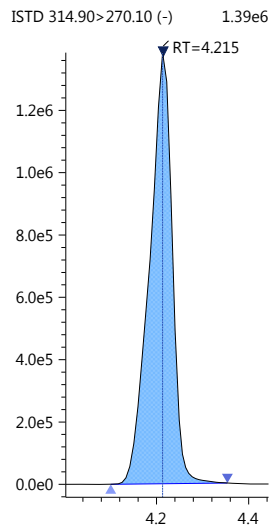
PFHxA-13C

Conc 5.3589
 Area 4733322



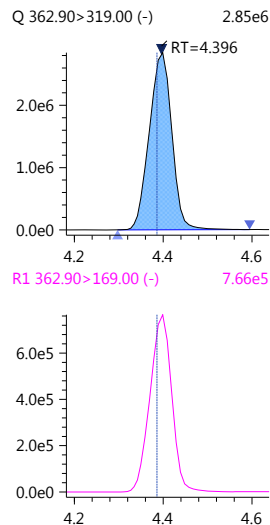
PFHxA-13C_IS

Conc 5.0000
 Area 4733322



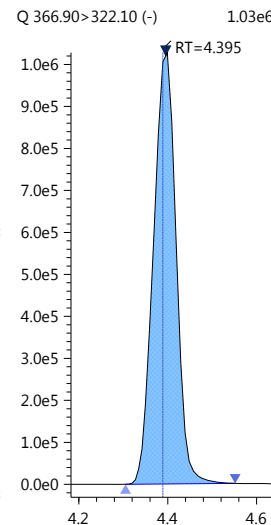
PFHpA

Conc 15.3639
 Area 10021679
 R#1 26.86 (0.00)



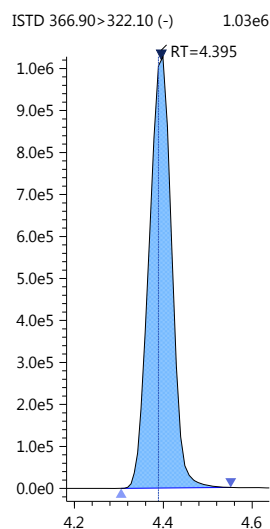
PFHpA-13C

Conc 4.5683
 Area 3650297



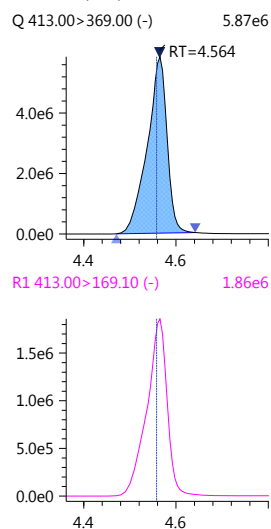
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Conc 5.0000
 Area 3650297



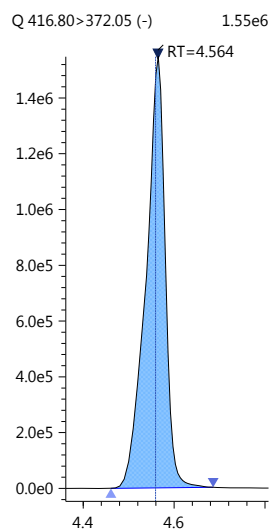
PFOA

Conc 14.9597
 Area 17290948
 R#1 31.66 (0.00)



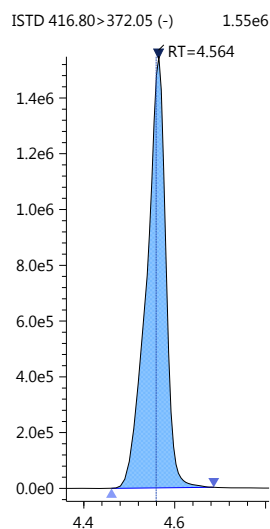
PFOA-13C

Conc 4.7047
 Area 4547671



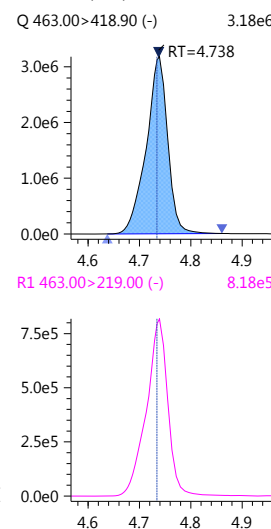
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Conc 5.0000
 Area 4547671



PFNA

Conc 15.2144
 Area 9204850
 R#1 25.94 (0.00)



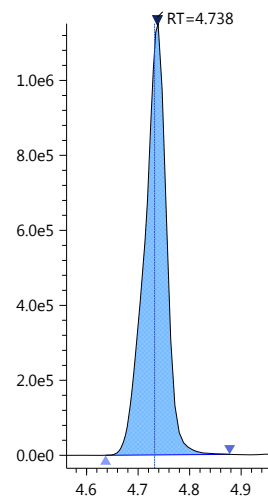
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PFNA-13C

Conc 4.6927
Area 3386605

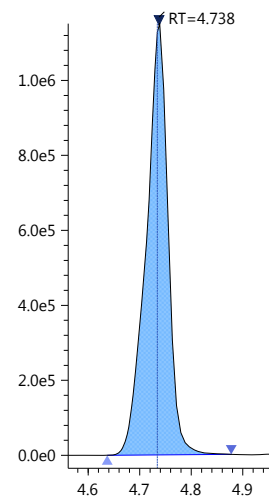
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
Area 3386605

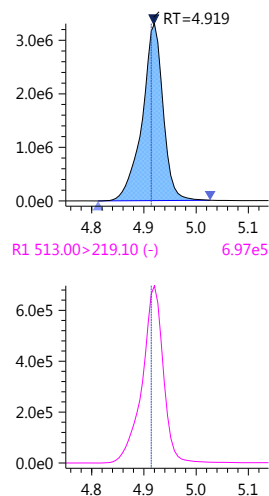
ISTD 467.80>423.00 (-)



PFDA

Conc 14.0701
Area 9148332
R#1 21.02 (0.00)

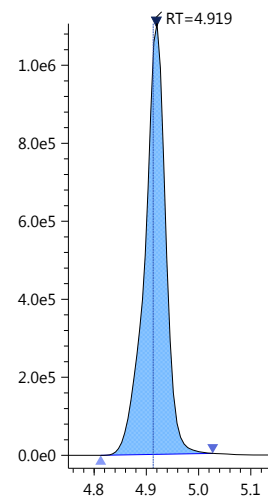
Q 513.00>468.80 (-)



PFDA-13C

Conc 4.6761
Area 3061953

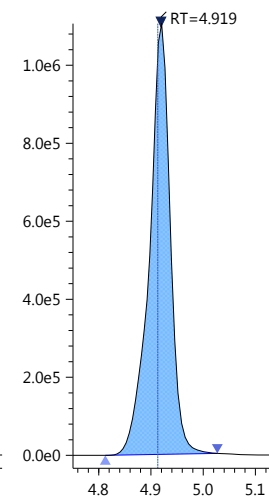
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
Area 3061953

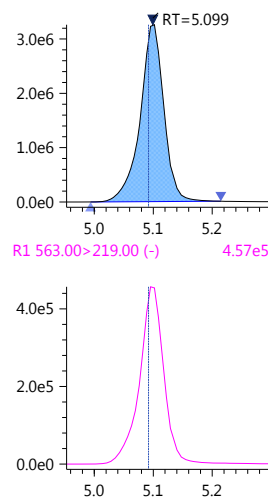
ISTD 514.80>469.95 (-)



PFUnA

Conc 14.8654
Area 9125108
R#1 13.86 (0.00)

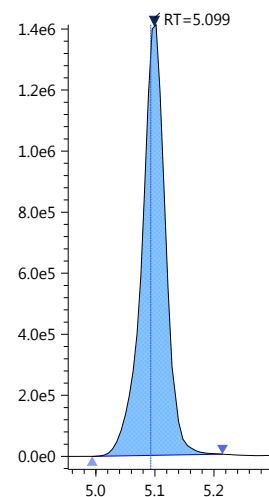
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.8214
Area 3937897

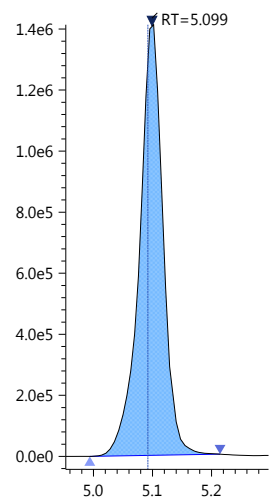
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
Area 3937897

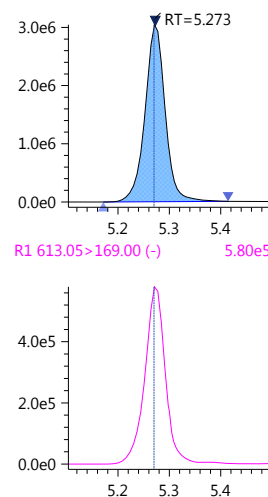
ISTD 564.80>519.95 (-)



PFDaA

Conc 14.4093
Area 8278281
R#1 19.02 (0.00)

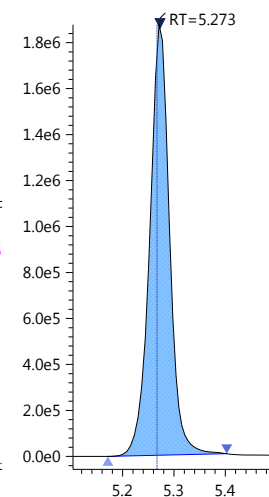
Q 613.05>569.00 (-)



PFDaA-13C

Conc 5.2313
Area 5033623

Q 614.80>569.95 (-)



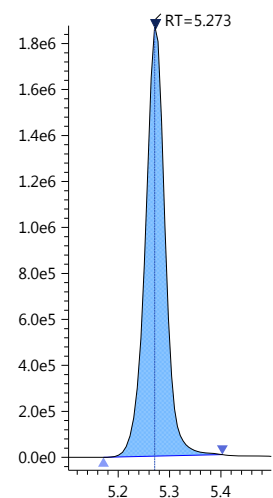
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PFDaA-13C_IS

Conc 5.0000
Area 5033623

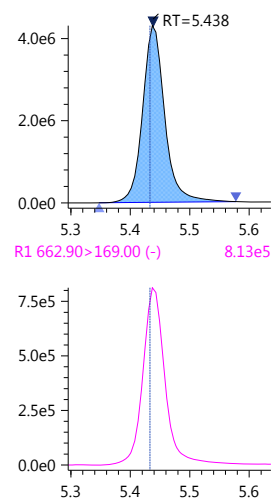
ISTD 614.80>569.95 (-) 1.88e6



PFTrDA

Conc 14.9103
Area 11116409
R#1 19.08 (0.00)

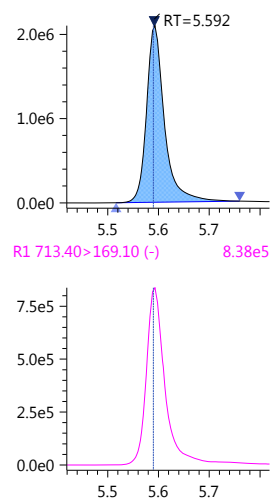
Q 663.00>618.90 (-) 4.32e6



PFTeDA

Conc 15.0528
Area 5135010
R#1 39.84 (0.00)

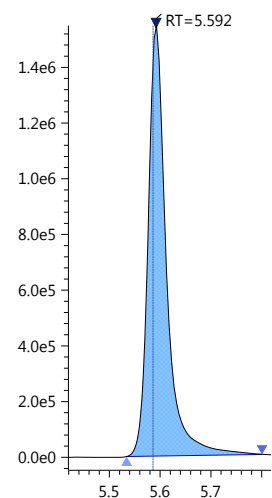
Q 713.40>669.00 (-) 2.10e6



PFTeDA-13C

Conc 5.0397
Area 3869064

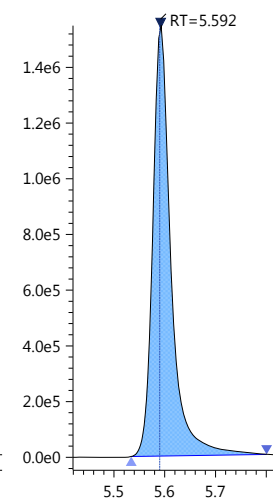
Q 714.70>669.90 (-) 1.55e6



PFTeDA-13C_IS

Conc 5.0000
Area 3869064

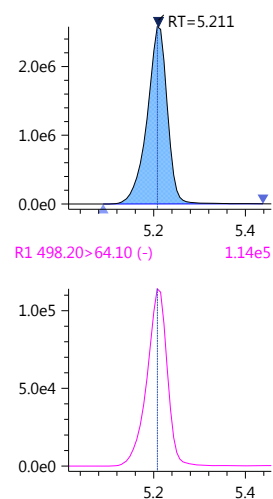
ISTD 714.70>669.90 (-) 1.55e6



FOSA

Conc 14.6406
Area 7883496
R#1 4.42 (0.00)

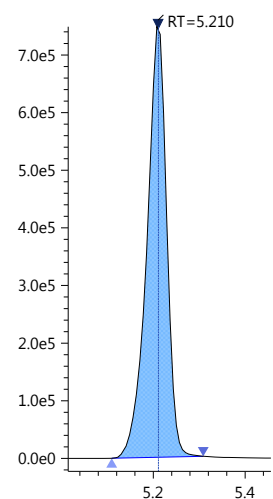
Q 498.20>78.00 (-) 2.58e6



FOSA-13C

Conc 5.1348
Area 2248063

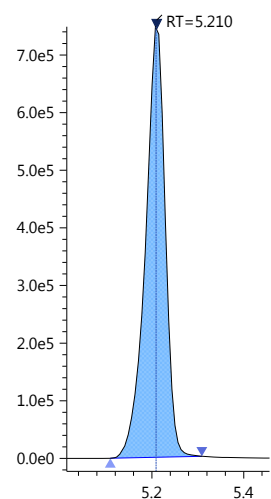
Q 506.00>78.05 (-) 7.49e5



FOSA-13C_IS

Conc 5.0000
Area 2248063

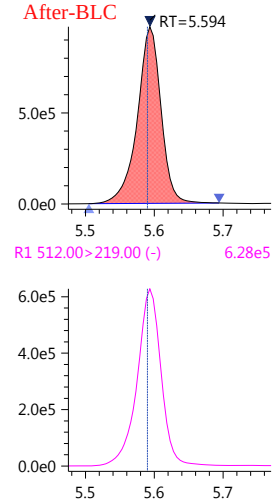
ISTD 506.00>78.05 (-) 7.49e5



N-MeFOSA

Conc 14.3209
Area 2307953
R#1 64.46 (0.00)

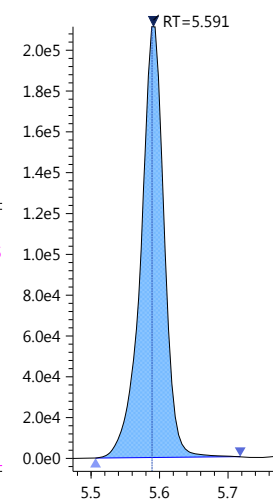
Q 512.00>169.10 (-) 9.73e5



N-MeFOSA-d3

Conc 5.4630
Area 501276

Q 514.90>168.90 (-) 2.12e5



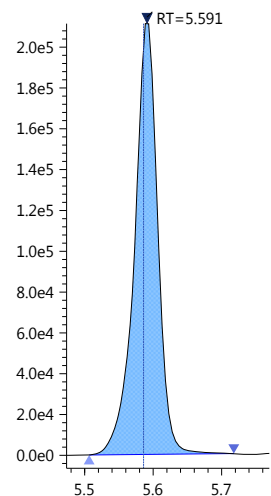
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N-MeFOSA-d3_IS

Conc 5.0000
Area 501276

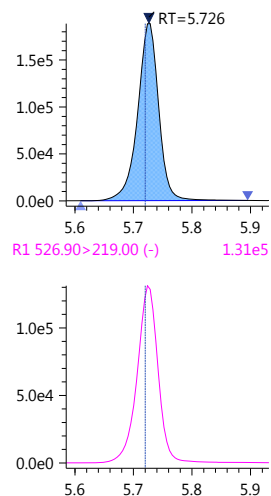
ISTD 514.90>168.90 (-) 2.12e5



N-EtFOSA

Conc 15.5539
Area 470495
R#1 67.94 (0.00)

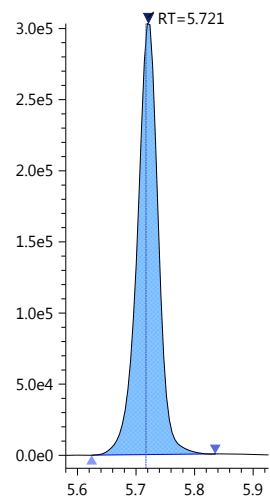
Q 526.90>169.10 (-) 1.89e5



N-EtFOSA-d9

Conc 5.4960
Area 762178

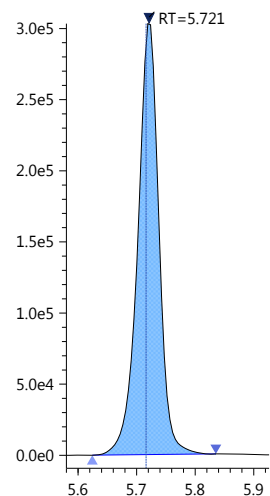
Q 530.90>169.15 (-) 3.03e5



N-EtFOSA-d9_IS

Conc 5.0000
Area 762178

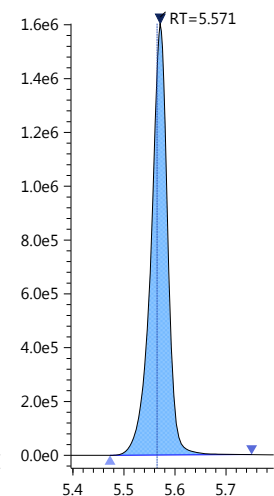
ISTD 530.90>169.15 (-) 3.03e5



N-MeFOSE

Conc 14.9313
Area 3628946

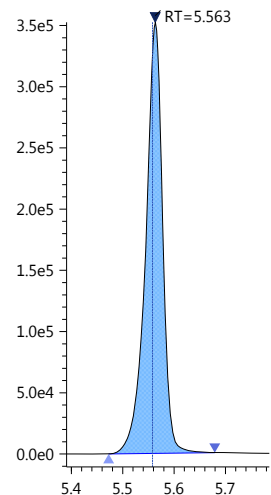
Q 616.00>59.00 (-) 1.60e6



N-MeFOSE-d7

Conc 5.4721
Area 806716

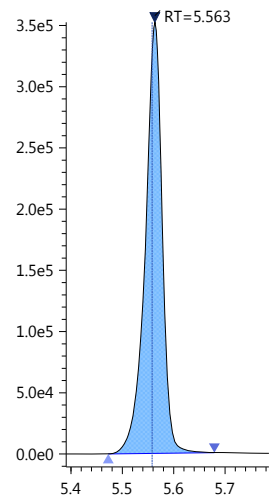
Q 622.70>59.10 (-) 3.53e5



N-MeFOSE-d7_IS

Conc 5.0000
Area 806716

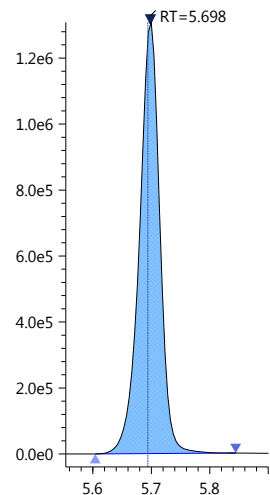
ISTD 622.70>59.10 (-) 3.53e5



N-EtFOSE

Conc 14.2567
Area 3174039

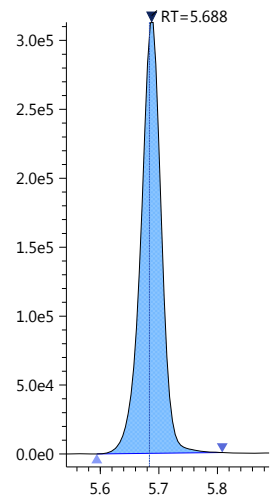
Q 630.00>58.90 (-) 1.31e6



N-EtFOSE-d9

Conc 5.5915
Area 766320

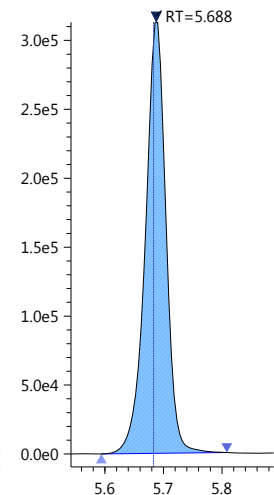
Q 638.70>59.10 (-) 3.13e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 766320

ISTD 638.70>59.10 (-) 3.13e5



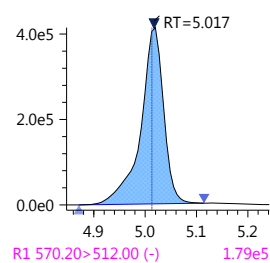
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N-MeFOSAA

Conc 15.2521
Area 1280311
R#1 43.36 (0.00)

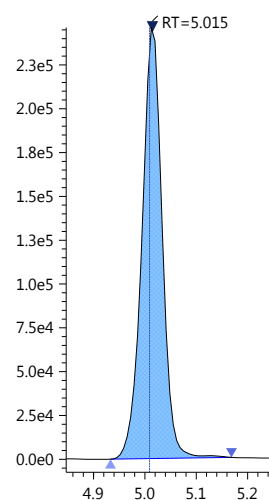
Q 570.20>419.00 (-)



N-MeFOSAA-d3

Conc 5.4319
Area 675200

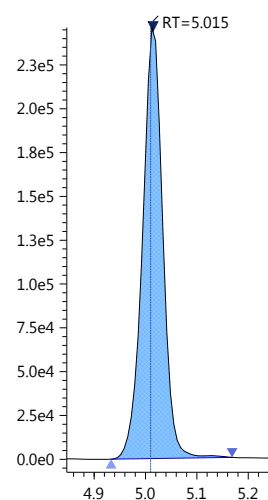
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
Area 675200

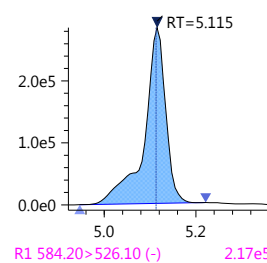
ISTD 572.80>419.05 (-)



N-EtFOSAA

Conc 15.4057
Area 919834
R#1 76.02 (0.00)

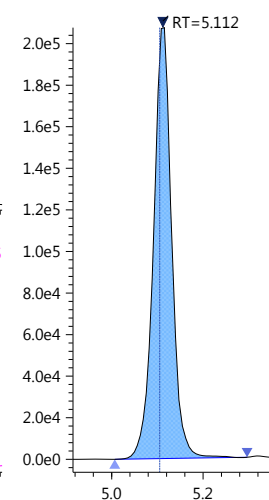
Q 584.20>418.95 (-)



N-EtFOSAA-d5

Conc 5.0196
Area 574944

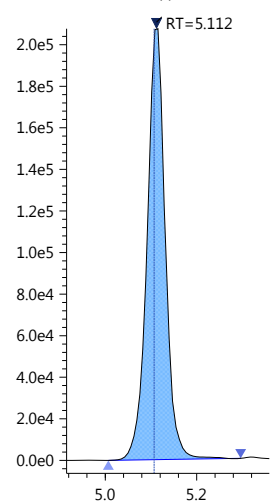
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
Area 574944

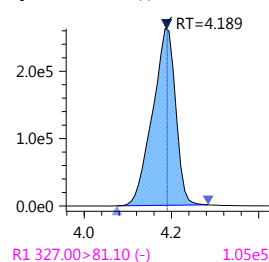
ISTD 588.80>419.00 (-)



4_2-FTS_1

Conc 12.5006
Area 966010
R#1 39.87 (0.00)

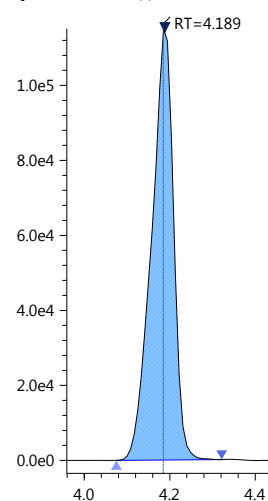
Q 327.00>307.05 (-)



4_2-FTS-13C

Conc 5.6366
Area 410753

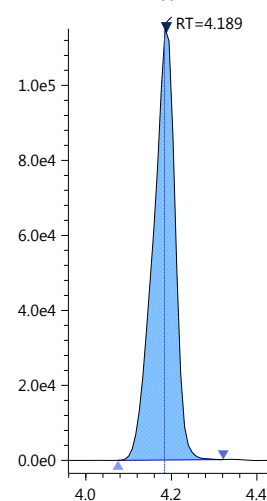
Q 328.80>309.05 (-)



4_2-FTS-13C_IS

Conc 5.0000
Area 410753

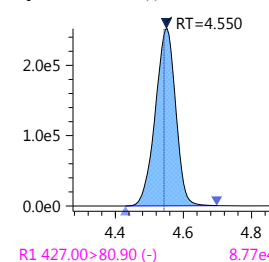
ISTD 328.80>309.05 (-)



6_2-FTS_1

Conc 12.8008
Area 1045844
R#1 35.27 (0.00)

Q 427.00>407.00 (-)

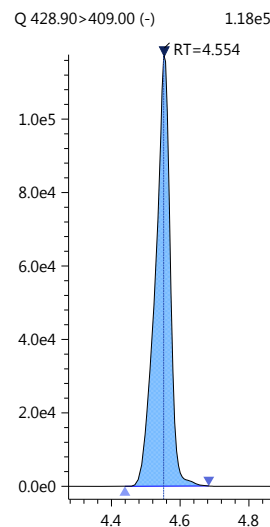


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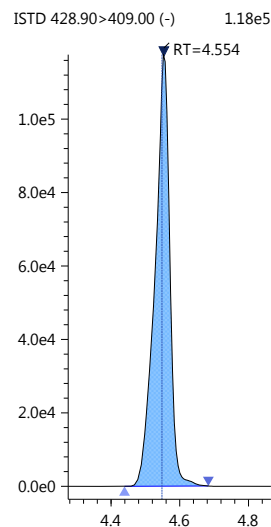
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Conc 4.8554
 Area 352921



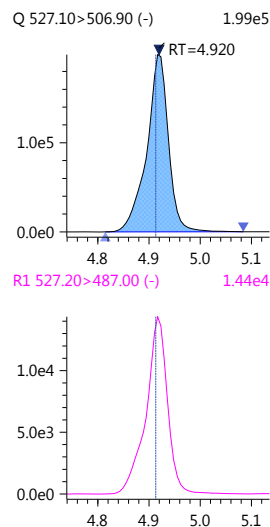
6_2-FTS-13C_IS

Conc 5.0000
 Area 352921



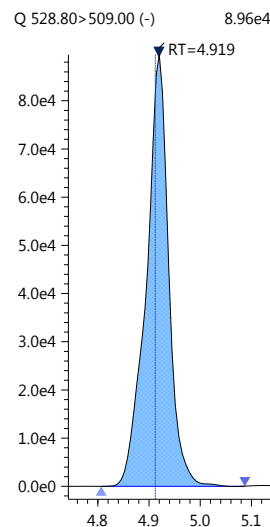
8_2-FTS_1

Conc 12.9895
 Area 583681
 R#1 7.25 (0.00)



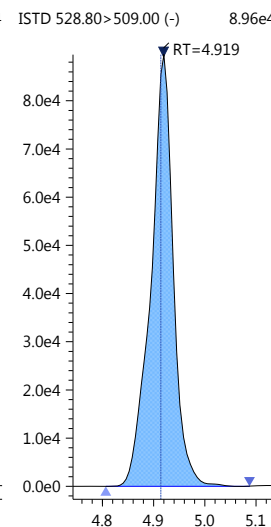
8_2-FTS-13C

Conc 4.6264
 Area 272630



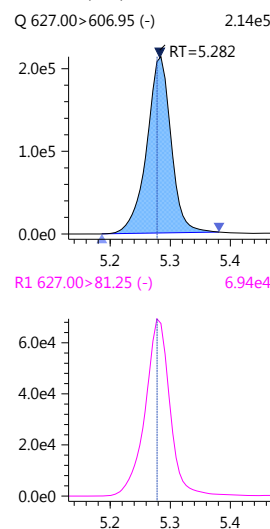
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Conc 5.0000
 Area 272630



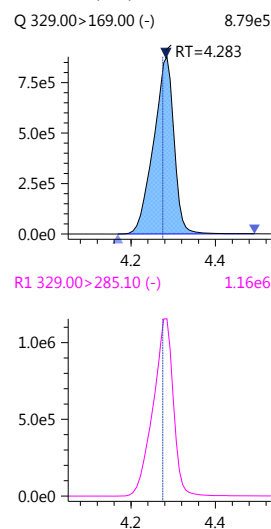
10_2-FtS_1

Conc 13.7147
 Area 601149
 R#1 31.42 (0.00)



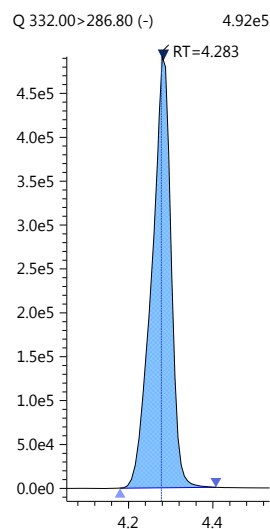
HPFO_DA

Conc 14.5123
 Area 2939184
 R#1 136.41 (0.00)



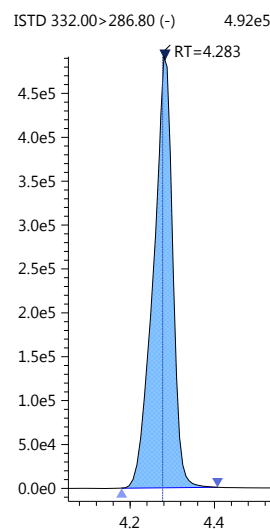
HPFO_DA-13C

Conc 5.5041
 Area 1565495



HPFO_DA-13C_IS

Conc 5.0000
 Area 1565495



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200417_030

Sample ID: 15.0 PPB ICAL
Date acquired: 4/17/2020 6:48:25 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200417_curve\200417_030.lcd
Vial: 7 | Inj. Volume: 15.0000uL | Tray: 0

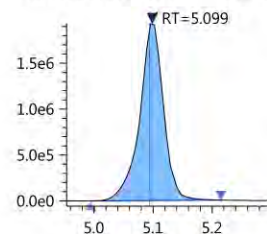
13C7-PFUnDA_IS

Conc 5.0000

Area 5416299

ISTD 570.00>525.00 (-)

1.93e6



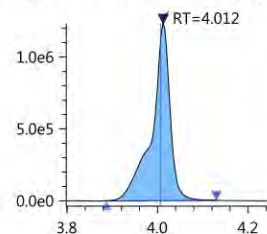
PFBS_1

Conc 12.6570

Area 3427996

Q 299.00>80.00 (-)

1.23e6



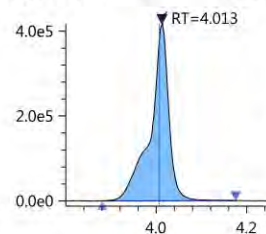
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Conc 5.5606

Area 1177486

Q 301.80>80.00 (-)

4.18e5



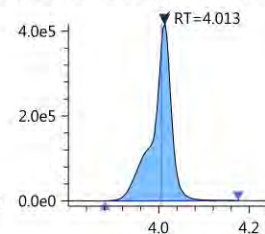
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Conc 5.0000

Area 1177486

ISTD 301.80>80.00 (-)

4.18e5



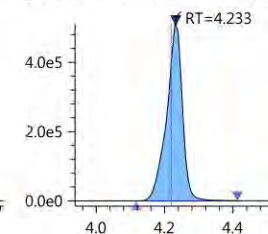
PFPeS

Conc 14.0589

Area 1633418

Q 349.00>99.00 (-)

5.12e5



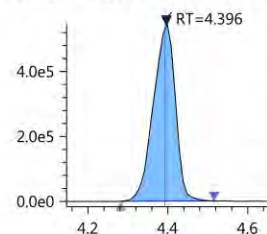
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Conc 13.5345

Area 2089397

Q 399.00>80.00 (-)

5.46e5



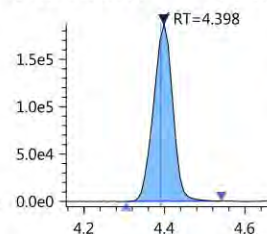
PFHxS-180

Conc 5.2004

Area 619944

Q 402.70>84.05 (-)

1.87e5



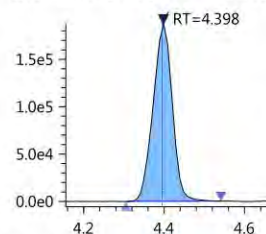
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Conc 5.0000

Area 619944

ISTD 402.70>84.05 (-)

1.87e5



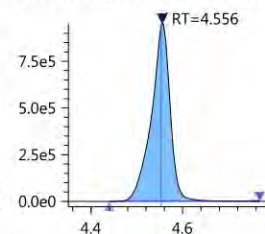
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Conc 14.0279

Area 2711900

Q 449.00>80.15 (-)

9.49e5



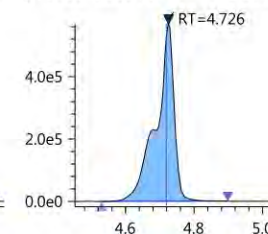
PFOS_1

Conc 13.7844

Area 2069562

Q 499.00>80.00 (-)

5.68e5



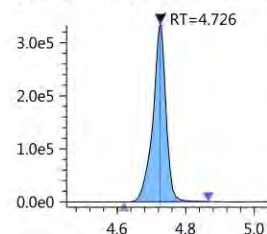
PFOS-13C

Conc 5.2818

Area 886254

Q 502.80>80.05 (-)

3.34e5



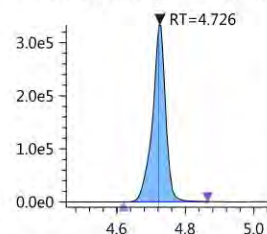
PFOS-13C_IS

Conc 5.0000

Area 886254

ISTD 502.80>80.05 (-)

3.34e5



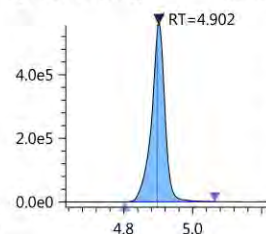
PFNS

Conc 14.2809

Area 1500457

Q 549.00>99.00 (-)

5.57e5



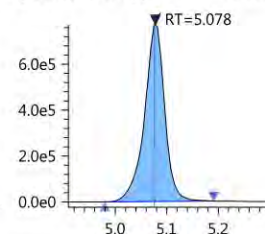
PFDS_1

Conc 15.0064

Area 2105688

Q 599.00>79.90 (-)

7.72e5



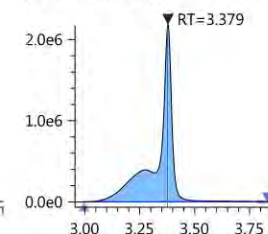
PFBA

Conc 14.9009

Area 9397693

Q 213.00>169.10 (-)

2.18e6



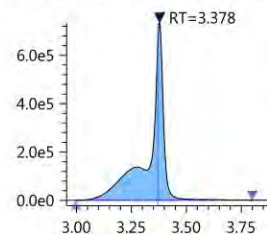
PFBA-13C

Conc 5.6361

Area 3229406

Q 216.90>172.15 (-)

7.33e5



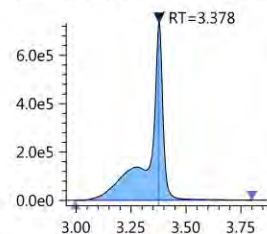
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Conc 5.0000

Area 3229406

ISTD 216.90>172.15 (-)

7.33e5



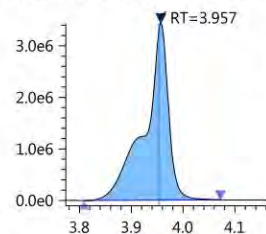
PFPeA

Conc 14.8898

Area 10932167

Q 263.05>219.10 (-)

3.44e6



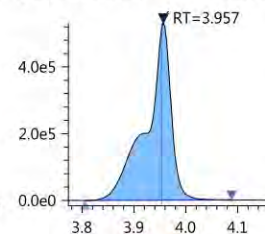
PFPeA-13C

Conc 5.4336

Area 1752032

Q 267.90>223.00 (-)

5.31e5



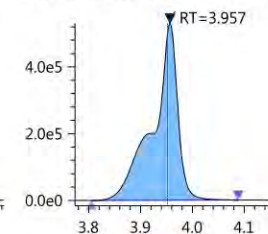
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Conc 5.0000

Area 1752032

ISTD 267.90>223.00 (-)

5.31e5

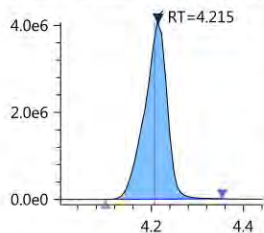


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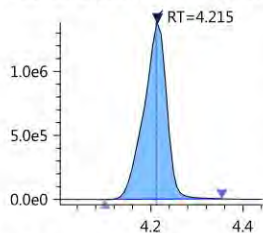
PFHxA

Conc 14.8708
 Area 13825447
 Q 313.00>269.00 (-)



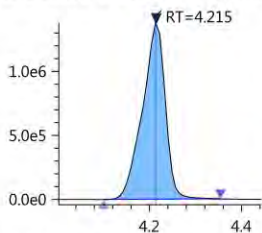
PFHxA-13C

Conc 5.3589
 Area 4733322
 Q 314.90>270.10 (-)



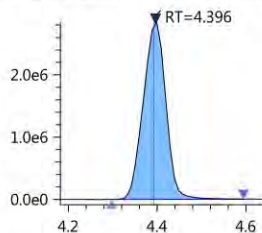
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Conc 5.0000
 Area 4733322
 ISTD 314.90>270.10 (-)



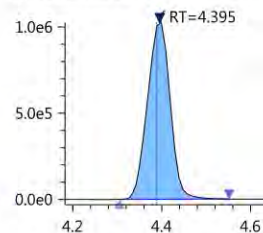
PFHpA

Conc 15.3635
 Area 10021679
 Q 362.90>319.00 (-)



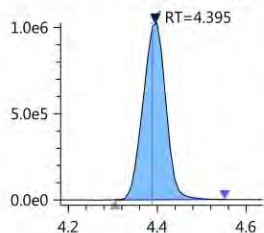
PFHpA-13C

Conc 4.5683
 Area 3650297
 Q 366.90>322.10 (-)



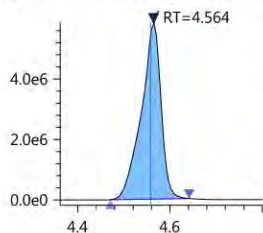
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Conc 5.0000
 Area 3650297
 ISTD 366.90>322.10 (-)



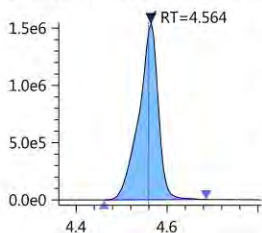
PFOA

Conc 14.9836
 Area 17290948
 Q 413.00>369.00 (-)



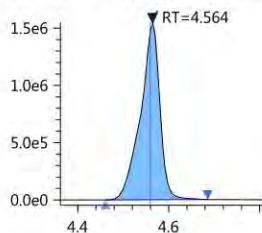
PFOA-13C

Conc 4.7047
 Area 4547671
 Q 416.80>372.05 (-)



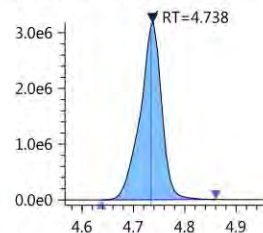
PFOA-13C_IS

Conc 5.0000
 Area 4547671
 ISTD 416.80>372.05 (-)



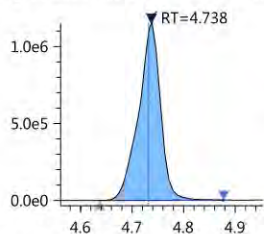
PFNA

Conc 15.2144
 Area 9204850
 Q 463.00>418.90 (-)



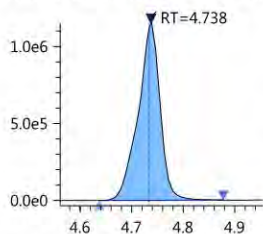
PFNA-13C

Conc 4.6927
 Area 3386605
 Q 467.80>423.00 (-)



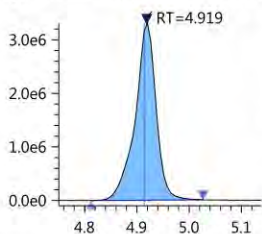
PFNA-13C_IS

Conc 5.0000
 Area 3386605
 ISTD 467.80>423.00 (-)



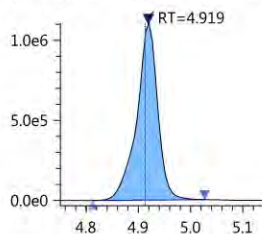
PFDA

Conc 14.0701
 Area 9148332
 Q 513.00>468.80 (-)



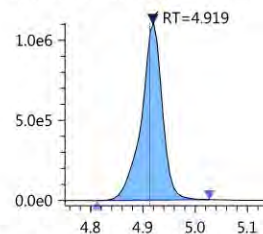
PFDA-13C

Conc 4.6761
 Area 3061953
 Q 514.80>469.95 (-)



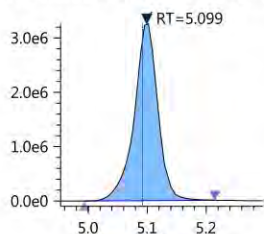
PFDA-13C_IS

Conc 5.0000
 Area 3061953
 ISTD 514.80>469.95 (-)



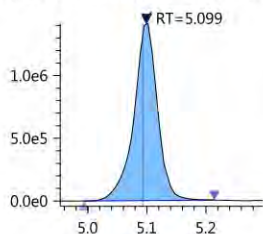
PFUnA

Conc 14.8654
 Area 9125108
 Q 563.00>518.90 (-)



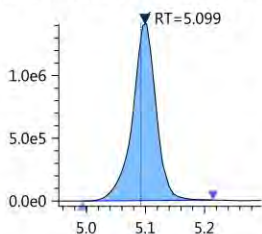
PFUnA-13C

Conc 4.8214
 Area 3937897
 Q 564.80>519.95 (-)



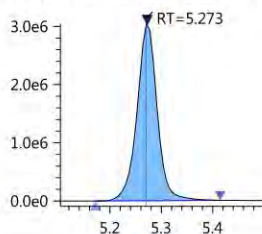
PFUnA-13C_IS

Conc 5.0000
 Area 3937897
 ISTD 564.80>519.95 (-)



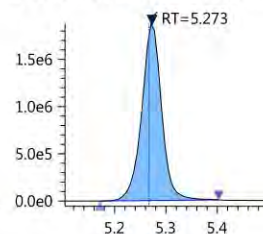
PFDoA

Conc 14.4093
 Area 8278281
 Q 613.05>569.00 (-)



PFDoA-13C

Conc 5.2313
 Area 5033623
 Q 614.80>569.95 (-)

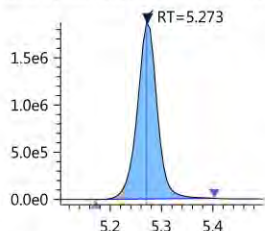


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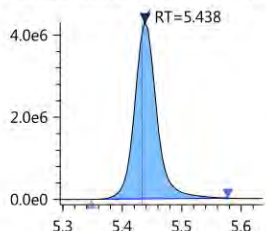
PFDa-13C_IS

Conc 5.0000
Area 5033623
ISTD 614.80>569.95 (-) 1.88e6



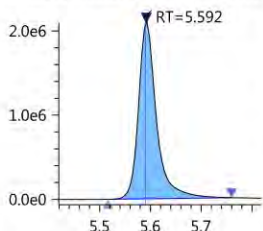
PFTrDA

Conc 14.9103
Area 11116409
Q 663.00>618.90 (-) 4.32e6



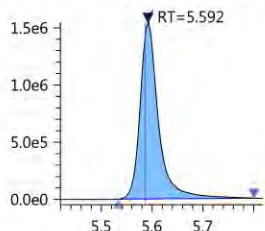
PFTeDA

Conc 15.0459
Area 5135010
Q 713.40>669.00 (-) 2.10e6



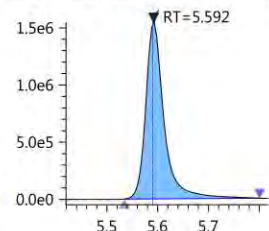
PFTeDA-13C

Conc 5.0397
Area 3869064
Q 714.70>669.90 (-) 1.55e6



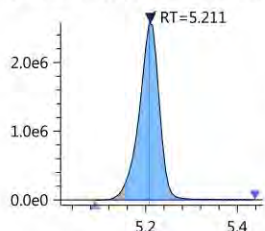
PFTeDA-13C_IS

Conc 5.0000
Area 3869064
ISTD 714.70>669.90 (-) 1.55e6



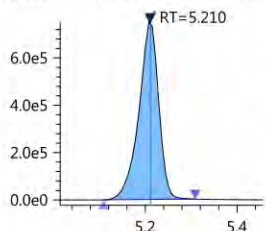
FOSA

Conc 14.6406
Area 7883496
Q 498.20>78.00 (-) 2.58e6



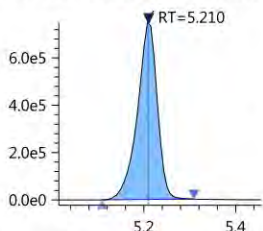
FOSA-13C

Conc 5.1348
Area 2248063
Q 506.00>78.05 (-) 7.49e5



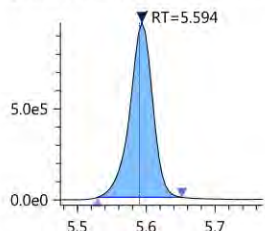
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Area 2248063
ISTD 506.00>78.05 (-) 7.49e5



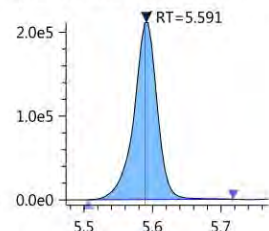
N-MeFOSA

Conc 14.0147
Area 2210904
Q 512.00>169.10 (-) 9.73e5



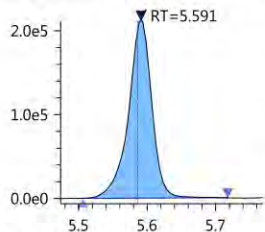
N-MeFOSA-d3

Conc 5.4630
Area 501276
Q 514.90>168.90 (-) 2.12e5



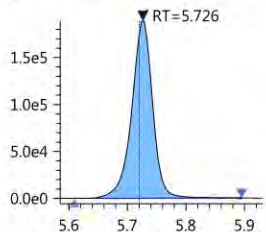
N-MeFOSA-d3_IS

Conc 5.0000
Area 501276
ISTD 514.90>168.90 (-) 2.12e5



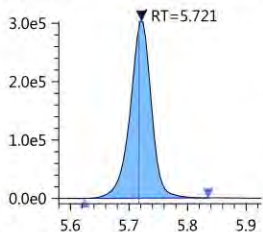
N-EtFOSA

Conc 15.3882
Area 470495
Q 526.90>169.10 (-) 1.89e5



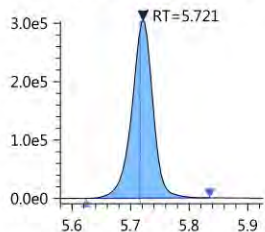
N-EtFOSA-d9

Conc 5.4960
Area 762178
Q 530.90>169.15 (-) 3.03e5



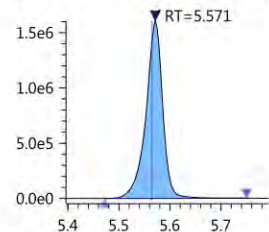
N-EtFOSA-d9_IS

Conc 5.0000
Area 762178
ISTD 530.90>169.15 (-) 3.03e5



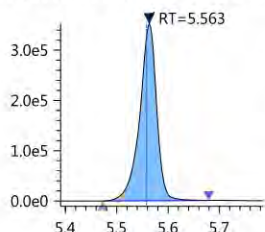
N-MeFOSE

Conc 14.9313
Area 3628946
Q 616.00>59.00 (-) 1.60e6



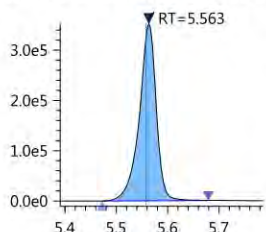
N-MeFOSE-d7

Conc 5.4721
Area 806716
Q 622.70>59.10 (-) 3.53e5



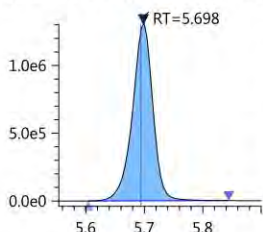
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Conc 5.0000
Area 806716
ISTD 622.70>59.10 (-) 3.53e5



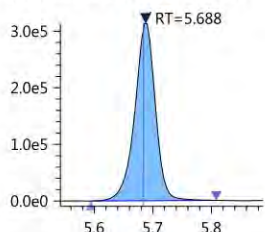
N-EtFOSE

Conc 14.2567
Area 3174039
Q 630.00>58.90 (-) 1.31e6



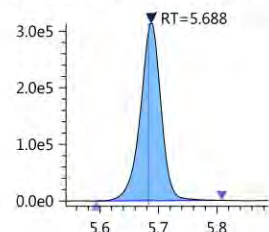
N-EtFOSE-d9

Conc 5.5915
Area 766320
Q 638.70>59.10 (-) 3.13e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 766320
ISTD 638.70>59.10 (-) 3.13e5

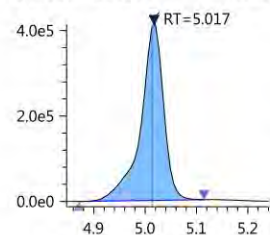


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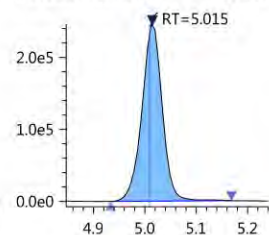
N-MeFOSAA

Conc 15.1291
Area 1280311
Q 570.20>419.00 (-)



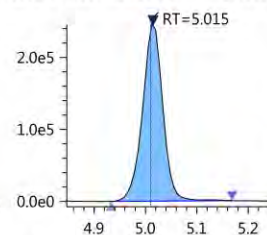
N-MeFOSAA-d3

Conc 5.4319
Area 675200
Q 572.80>419.05 (-)



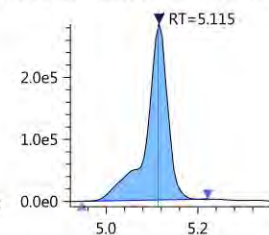
N-MeFOSAA-d3_IS

Conc 5.0000
Area 675200
ISTD 572.80>419.05 (-)



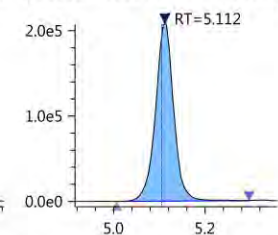
N-EtFOSAA

Conc 14.3187
Area 919834
Q 584.20>418.95 (-)



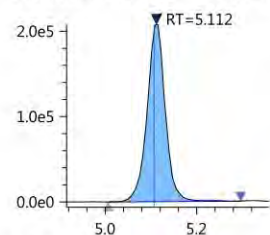
N-EtFOSAA-d5

Conc 5.0196
Area 574944
Q 588.80>419.00 (-)



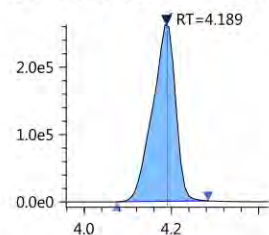
N-EtFOSAA-d5_IS

Conc 5.0000
Area 574944
ISTD 588.80>419.00 (-)



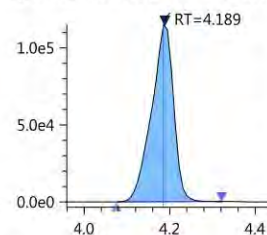
4_2-FTS_1

Conc 12.6213
Area 966010
Q 327.00>307.05 (-)



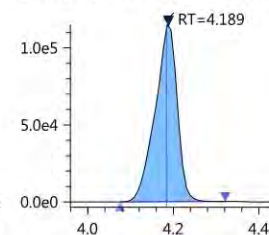
4_2-FTS-13C

Conc 5.6366
Area 410753
Q 328.80>309.05 (-)



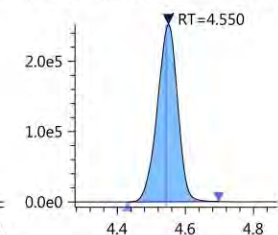
4_2-FTS-13C_IS

Conc 5.0000
Area 410753
ISTD 328.80>309.05 (-)



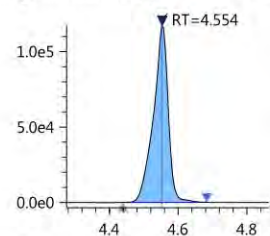
6_2-FTS_1

Conc 12.8008
Area 1045844
Q 427.00>407.00 (-)



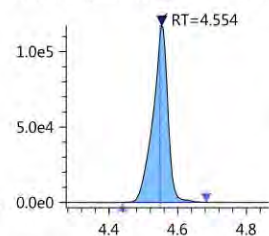
6_2-FTS-13C

Conc 4.8554
Area 352921
Q 428.90>409.00 (-)



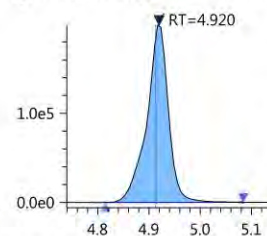
6_2-FTS-13C_IS

Conc 5.0000
Area 352921
ISTD 428.90>409.00 (-)



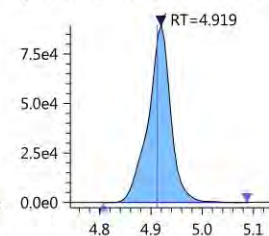
8_2-FTS_1

Conc 12.9895
Area 583681
Q 527.10>506.90 (-)



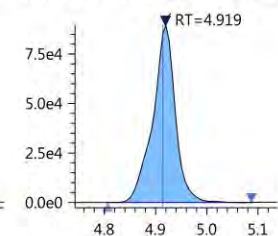
8_2-FTS-13C

Conc 4.6264
Area 272630
Q 528.80>509.00 (-)



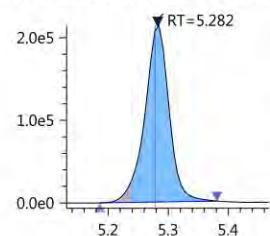
8_2-FTS-13C_IS

Conc 5.0000
Area 272630
ISTD 528.80>509.00 (-)



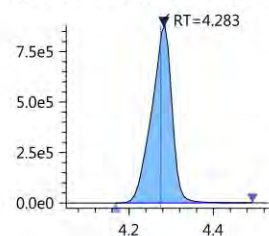
10_2-FtS_1

Conc 13.7147
Area 601149
Q 627.00>606.95 (-)



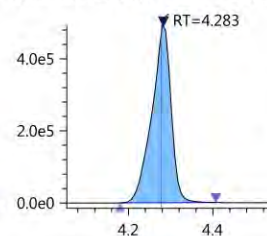
HPFO_DA

Conc 14.5123
Area 2939184
Q 329.00>169.00 (-)



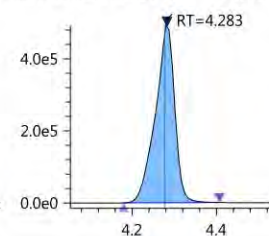
HPFO_DA-13C

Conc 5.5041
Area 1565495
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
Area 1565495
ISTD 332.00>286.80 (-)



Insight Report

Printed at 4/18/2020 11:14:21 AM

200417_031

Sample ID: IB

Date acquired: 4/17/2020 6:58:53 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_cuvre\200417_031.lcd

Vial: 47 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.096	5675357	5675357	1	5.0000	ng/mL	0.0000
PFBS_1	M	4.010	1256	1031971	2	0.0053	ng/mL	0.0000
PFBS-13C	Auto	4.011	1031971	5675357	1	4.6510	ng/mL	0.0000
PFBS-13C_IS	Auto	4.011	1031971	1031971	2	5.0000	ng/mL	0.0000
PFPeS	Auto	4.247	90	1031971	2	0.0009	ng/mL	0.0000
PFHxS_1	Auto	4.398	1440	577299	3	-0.0069	ng/mL	0.0000
PFHxS-18O	Auto	4.397	577299	5675357	1	4.6217	ng/mL	0.0000
PFHxS-18O_IS	Auto	4.397	577299	577299	3	5.0000	ng/mL	0.0000
PFHpS_1	Auto	4.554	429	577299	3	0.0024	ng/mL	0.0000
PFOS_1	Auto	4.721	489	878030	4	0.0033	ng/mL	0.0000
PFOS-13C	Auto	4.726	878030	5675357	1	4.9939	ng/mL	0.0000
PFOS-13C_IS	Auto	4.726	878030	878030	4	5.0000	ng/mL	0.0000
PFNS	M	4.872	199	878030	4	0.0077	ng/mL	0.0000
PFDS_1	M	5.042	82	878030	4	0.0006	ng/mL	0.0000
PFBA	M	3.382	1234	2860117	5	0.0022	ng/mL	0.0000
PFBA-13C	Auto	3.376	2860117	5675357	1	4.7638	ng/mL	0.0000
PFBA-13C_IS	Auto	3.376	2860117	2860117	5	5.0000	ng/mL	0.0000
PFPeA	Auto	3.909	20048	1635861	6	-0.0004	ng/mL	0.0000
PFPeA-13C	Auto	3.955	1635861	5675357	1	4.8418	ng/mL	0.0000
PFPeA-13C_IS	Auto	3.955	1635861	1635861	6	5.0000	ng/mL	0.0000
PFHxA	Auto	4.204	11118	4713826	7	0.0058	ng/mL	0.0000
PFHxA-13C	Auto	4.214	4713826	5675357	1	5.0932	ng/mL	0.0000
PFHxA-13C_IS	Auto	4.214	4713826	4713826	7	5.0000	ng/mL	0.0000
PFHpA	Auto	4.381	4917	4074536	8	-0.0034	ng/mL	0.0000
PFHpA-13C	Auto	4.395	4074536	5675357	1	4.8665	ng/mL	0.0000
PFHpA-13C_IS	Auto	4.395	4074536	4074536	8	5.0000	ng/mL	0.0000
PFOA	M	4.563	13450	5231602	9	0.0017	ng/mL	0.0000
PFOA-13C	Auto	4.563	5231602	5675357	1	5.1652	ng/mL	0.0000
PFOA-13C_IS	Auto	4.563	5231602	5231602	9	5.0000	ng/mL	0.0000
PFNA	Auto	4.731	3248	4133817	10	-0.0001	ng/mL	0.0000
PFNA-13C	Auto	4.736	4133817	5675357	1	5.4666	ng/mL	0.0000
PFNA-13C_IS	Auto	4.736	4133817	4133817	10	5.0000	ng/mL	0.0000
PFDA	M	4.914	7022	3591732	11	0.0092	ng/mL	0.0000
PFDA-13C	Auto	4.916	3591732	5675357	1	5.2348	ng/mL	0.0000
PFDA-13C_IS	Auto	4.916	3591732	3591732	11	5.0000	ng/mL	0.0000
PFUnA	Auto	5.099	12544	4454622	12	0.0042	ng/mL	0.0000
PFUnA-13C	Auto	5.097	4454622	5675357	1	5.2051	ng/mL	0.0000
PFUnA-13C_IS	Auto	5.097	4454622	4454622	12	5.0000	ng/mL	0.0000
PFDoA	Auto	5.272	11930	5084929	13	0.0338	ng/mL	0.0000
PFDoA-13C	Auto	5.272	5084929	5675357	1	5.0434	ng/mL	0.0000
PFDoA-13C_IS	Auto	5.272	5084929	5084929	13	5.0000	ng/mL	0.0000
PFTeDA	Auto	5.438	17766	4059791	14	0.0183	ng/mL	0.0000
PFTeDA	M	5.593	63717	4059791	14	0.0383	ng/mL	0.0000
PFTeDA-13C	Auto	5.592	4059791	5675357	1	5.0468	ng/mL	0.0000
PFTeDA-13C_IS	Auto	5.592	4059791	4059791	14	5.0000	ng/mL	0.0000
FOSA	Auto	5.207	5752	2122292	16	0.0113	ng/mL	0.0000
FOSA-13C	Auto	5.209	2122292	5675357	1	4.6262	ng/mL	0.0000
FOSA-13C_IS	Auto	5.209	2122292	2122292	16	5.0000	ng/mL	0.0000
N-MeFOSA	M	5.590	1839	339962	17	0.0168	ng/mL	0.0000
N-MeFOSA-d3	Auto	5.591	339962	5675357	1	3.5358	ng/mL	0.0000
N-MeFOSA-d3_IS	Auto	5.591	339962	339962	17	5.0000	ng/mL	0.0000
N-EtFOSA	M	5.728	239	472705	18	0.0127	ng/mL	0.0000
N-EtFOSA-d9	Auto	5.721	472705	5675357	1	3.2531	ng/mL	0.0000
N-EtFOSA-d9_IS	Auto	5.721	472705	472705	18	5.0000	ng/mL	0.0000
N-MeFOSE	Auto	5.575	972	566104	19	0.0057	ng/mL	0.0000
N-MeFOSE-d7	Auto	5.564	566104	5675357	1	3.6647	ng/mL	0.0000
N-MeFOSE-d7_IS	Auto	5.564	566104	566104	19	5.0000	ng/mL	0.0000
N-EtFOSE	M	5.699	1734	537313	20	0.0111	ng/mL	0.0000
N-EtFOSE-d9	Auto	5.688	537313	5675357	1	3.7416	ng/mL	0.0000
N-EtFOSE-d9_IS	Auto	5.688	537313	537313	20	5.0000	ng/mL	0.0000
N-MeFOSAA	Auto	5.021	5190	594322	21	0.0702	ng/mL	0.0000
N-MeFOSAA-d3	Auto	5.013	594322	5675357	1	4.5630	ng/mL	0.0000
N-MeFOSAA-d3_IS	Auto	5.013	594322	594322	21	5.0000	ng/mL	0.0000
N-EtFOSAA	M	5.115	8133	587982	22	0.1332	ng/mL	0.0000
N-EtFOSAA-d5	Auto	5.110	587982	5675357	1	4.8991	ng/mL	0.0000
N-EtFOSAA-d5_IS	Auto	5.110	587982	587982	22	5.0000	ng/mL	0.0000
4_2-FTS_1	Auto	4.182	344	358642	23	0.0051	ng/mL	0.0000
4_2-FTS-13C	Auto	4.189	358642	5675357	1	4.6968	ng/mL	0.0000

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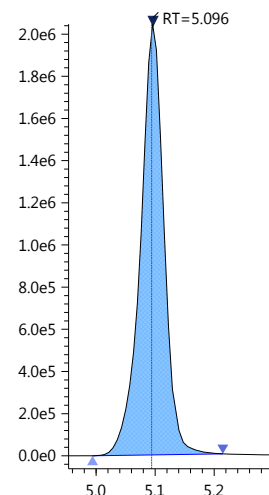
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.189	358642	358642	23	5.0000	ng/mL	0.0000
6_2-FTS_1	Auto	4.556	1089	392378	24	0.0120	ng/mL	0.0000
6_2-FTS-13C	Auto	4.555	392378	5675357	1	5.1518	ng/mL	0.0000
6_2-FTS-13C_IS	Auto	4.555	392378	392378	24	5.0000	ng/mL	0.0000
8_2-FTS_1	M	4.916	211	327688	25	0.0039	ng/mL	0.0000
8_2-FTS-13C	Auto	4.916	327688	5675357	1	5.3068	ng/mL	0.0000
8_2-FTS-13C_IS	Auto	4.916	327688	327688	25	5.0000	ng/mL	0.0000
10_2-FTS_1	M	5.284	203	327688	25	0.0039	ng/mL	0.0000
HPFO_DA	M	4.274	320	1459823	26	0.0017	ng/mL	0.0000
HPFO_DA-13C	Auto	4.282	1459823	5675357	1	4.8983	ng/mL	0.0000
HPFO_DA-13C_IS	Auto	4.282	1459823	1459823	26	5.0000	ng/mL	0.0000

13C7-PFUnDA_IS

Conc 5.0000
Area 5675357

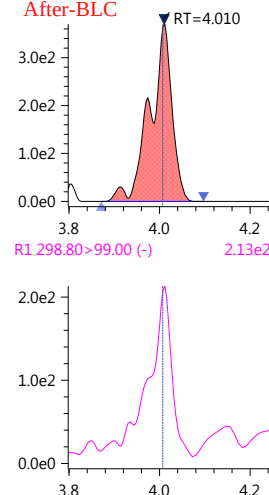
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.0053
Area 1256
R#1 50.84 (0.00)

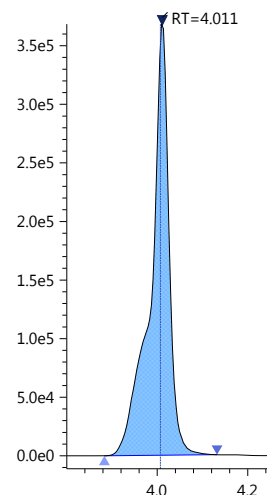
Q 299.00>80.00 (-)



PFBS-13C

Conc 4.6510
Area 1031971

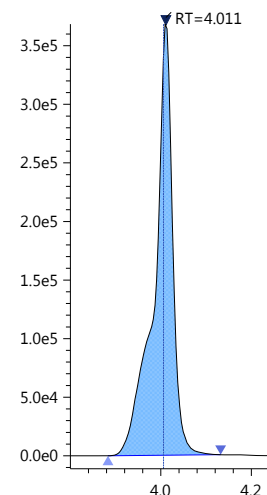
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
Area 1031971

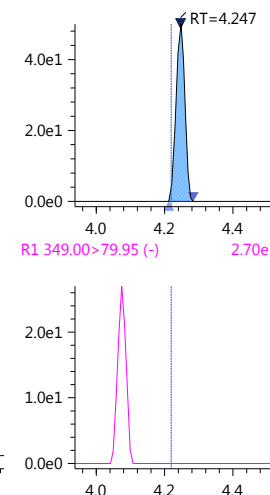
ISTD 301.80>80.00 (-)



PFPeS

Conc 0.0009
Area 90
R#1 0.00 (0.00)

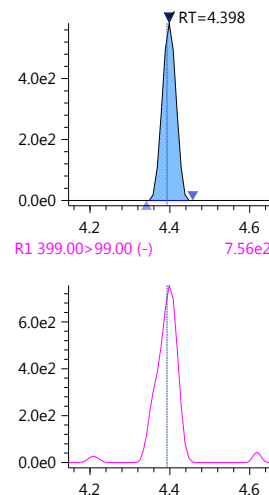
Q 349.00>99.00 (-)



PFHxS_1

Conc -0.0069
Area 1440
R#1 120.07 (0.00)

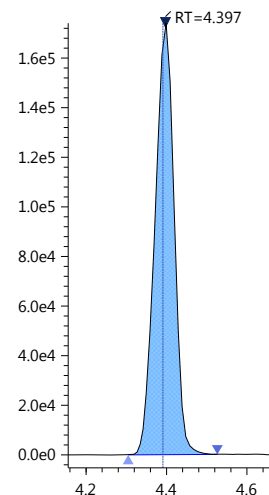
Q 399.00>80.00 (-)



PFHxS-180

Conc 4.6217
Area 577299

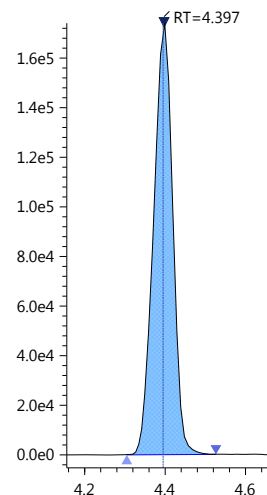
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
Area 577299

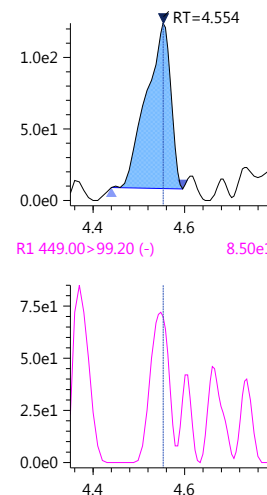
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 0.0024
Area 429
R#1 39.02 (0.00)

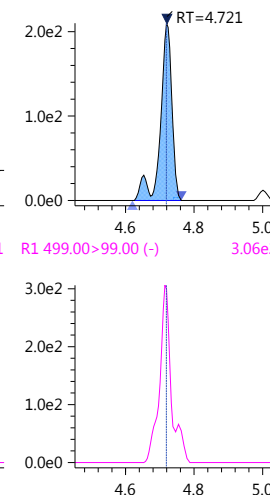
Q 449.00>80.15 (-)



PFOS_1

Conc 0.0033
Area 489
R#1 98.25 (0.00)

Q 499.00>80.00 (-)



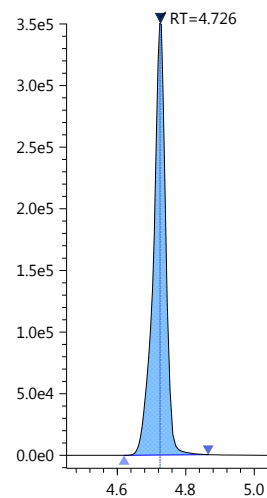
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PFOS-13C

Conc 4.9939
Area 878030

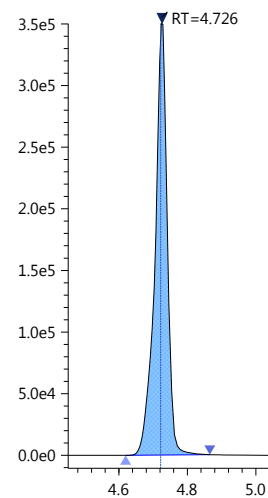
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
Area 878030

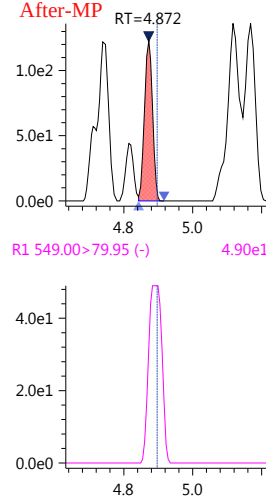
ISTD 502.80>80.05 (-)



PFNS

Conc 0.0077
Area 199
R#1 20.00 (0.00)

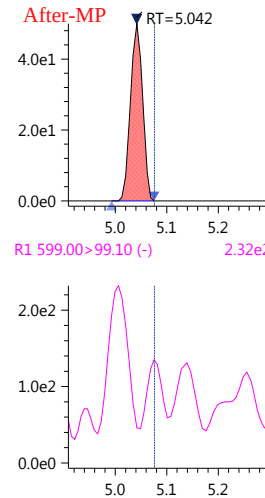
Q 549.00>99.00 (-)



PFDS_1

Conc 0.0006
Area 82
R#1 0.00 (0.00)

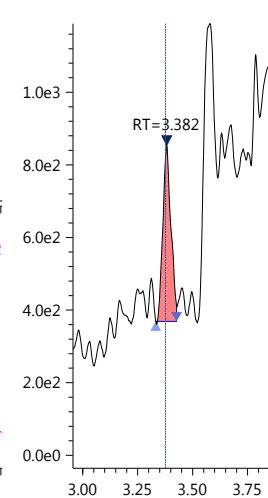
Q 599.00>79.90 (-)



PFBA

Conc 0.0022
Area 1234
After-MP

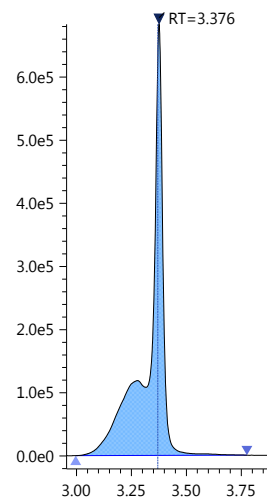
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.7638
Area 2860117

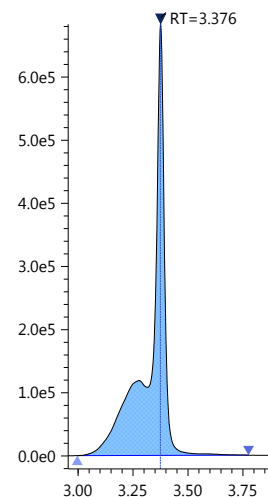
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 2860117

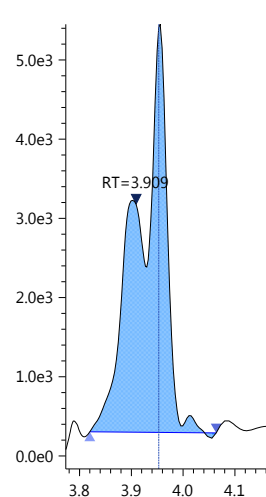
ISTD 216.90>172.15 (-)



PFPeA

Conc -0.0004
Area 20048

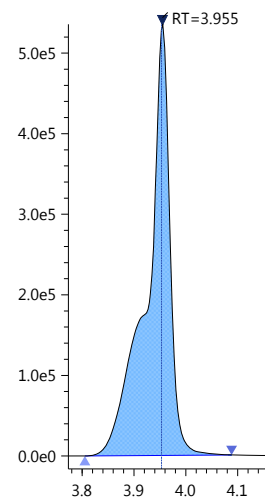
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.8418
Area 1635861

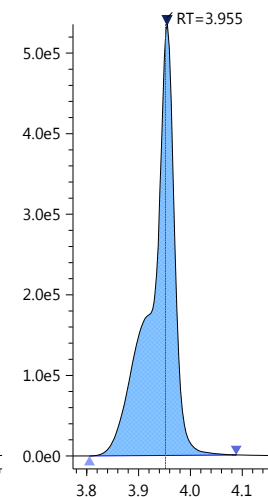
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1635861

ISTD 267.90>223.00 (-)

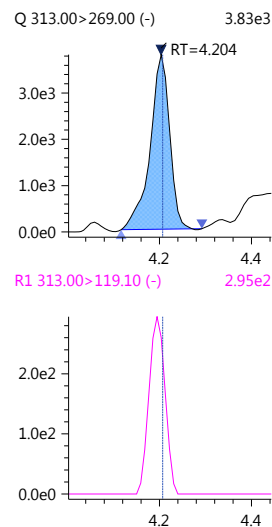


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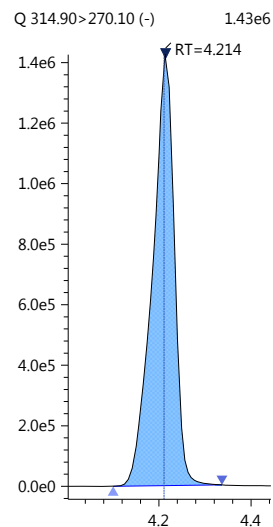
PFHxA

Conc 0.0058
Area 11118
R#1 6.70 (0.00)



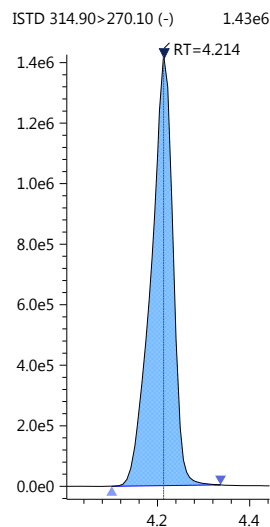
PFHxA-13C

Conc 5.0932
Area 4713826



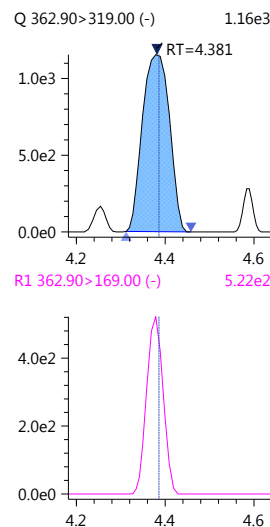
PFHxA-13C_IS

Conc 5.0000
Area 4713826



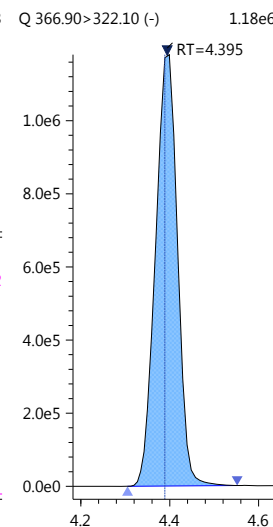
PFHpA

Conc -0.0034
Area 4917
R#1 43.53 (0.00)



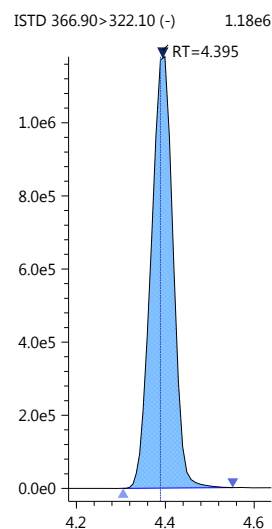
PFHpA-13C

Conc 4.8665
Area 4074536



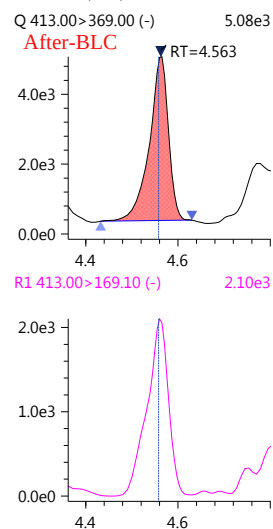
PFHpA-13C_IS

Conc 5.0000
Area 4074536



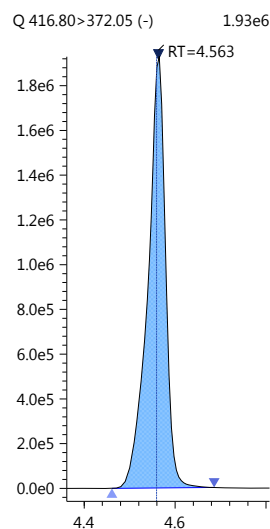
PFOA

Conc 0.0017
Area 13450
R#1 43.13 (0.00)



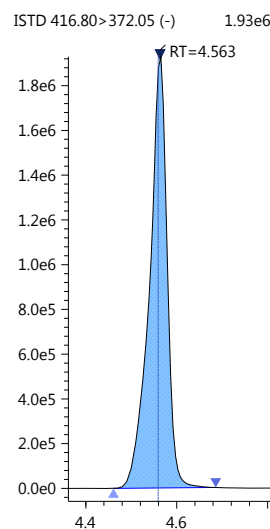
PFOA-13C

Conc 5.1652
Area 5231602



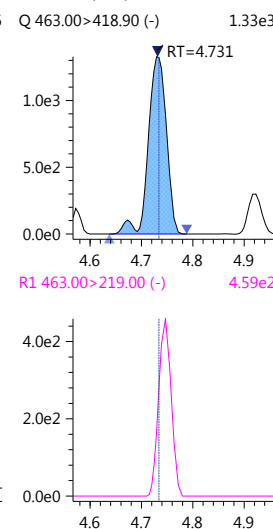
PFOA-13C_IS

Conc 5.0000
Area 5231602



PFNA

Conc -0.0001
Area 3248
R#1 24.68 (0.00)

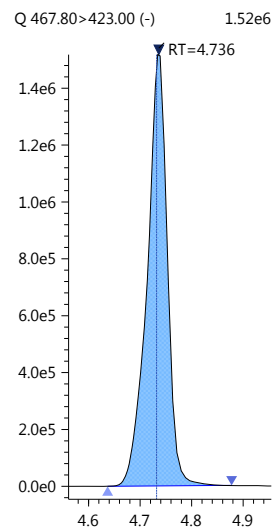


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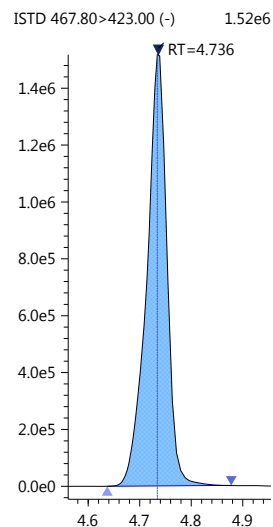
PFNA-13C

Conc 5.4666
Area 4133817



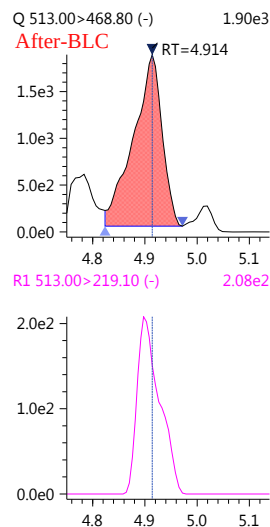
PFNA-13C_IS

Conc 5.0000
Area 4133817



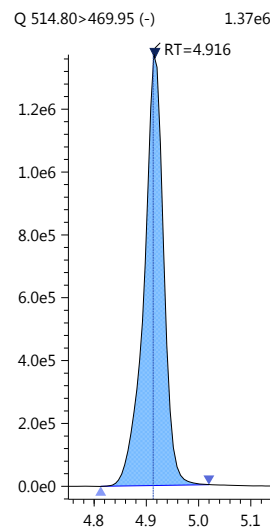
PFDA

Conc 0.0092
Area 7022
R#1 8.43 (0.00)



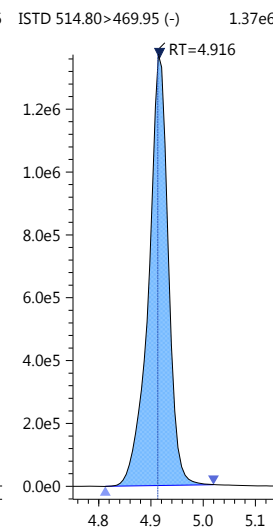
PFDA-13C

Conc 5.2348
Area 3591732



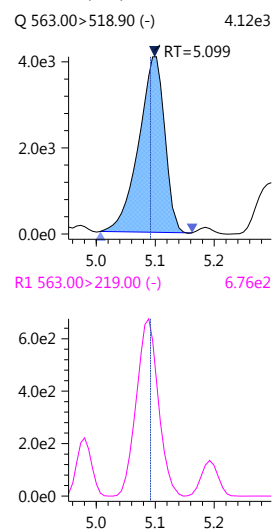
PFDA-13C_IS

Conc 5.0000
Area 3591732



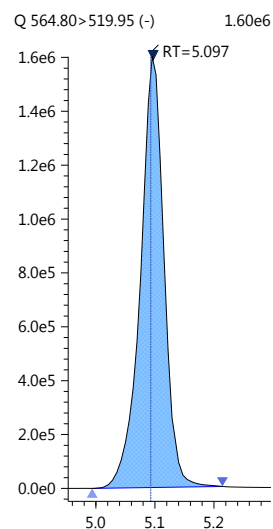
PFUnA

Conc 0.0042
Area 12544
R#1 10.28 (0.00)



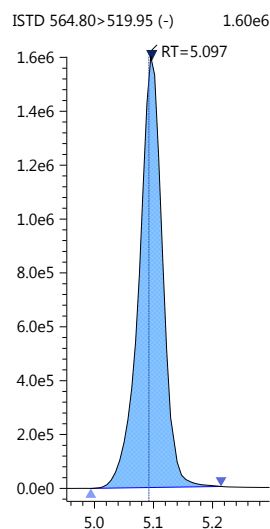
PFUnA-13C

Conc 5.2051
Area 4454622



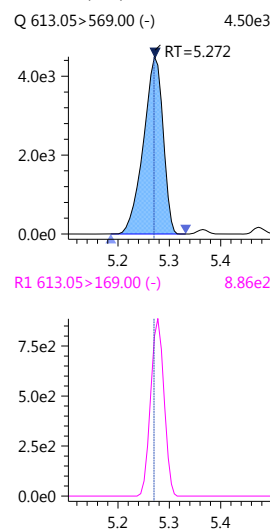
PFUnA-13C_IS

Conc 5.0000
Area 4454622



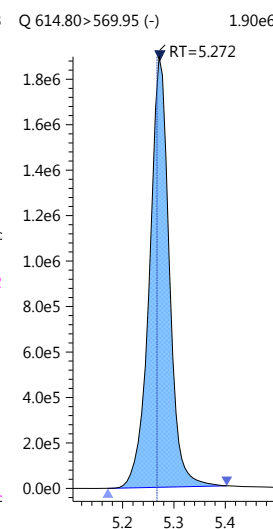
PFDaA

Conc 0.0338
Area 11930
R#1 17.99 (0.00)



PFDaA-13C

Conc 5.0434
Area 5084929



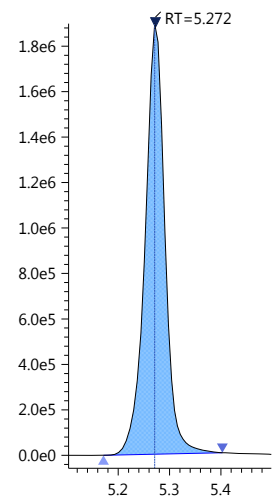
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PFDaA-13C_IS

Conc 5.0000
Area 5084929

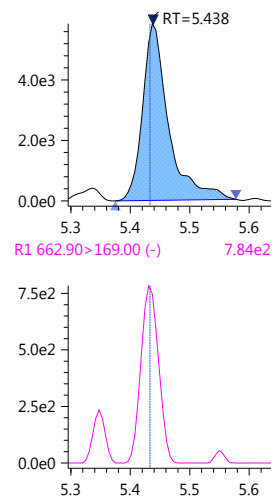
ISTD 614.80>569.95 (-) 1.90e6



PFTrDA

Conc 0.0183
Area 17766
R#1 10.48 (0.00)

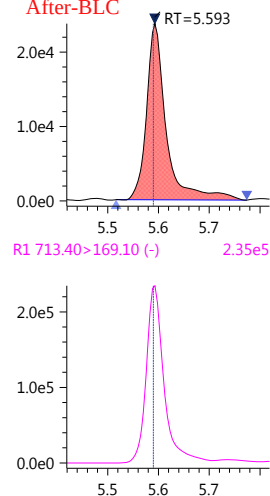
Q 663.00>618.90 (-) 5.86e3



PFTeDA

Conc 0.0383
Area 63717
R#1 980.21 (0.00)

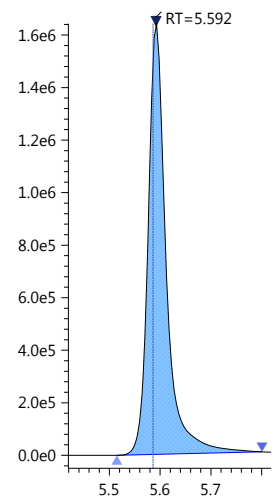
Q 713.40>669.00 (-) 2.38e4



PFTeDA-13C

Conc 5.0468
Area 4059791

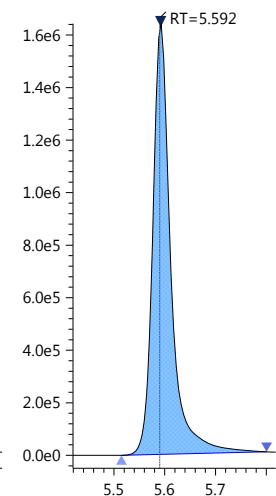
Q 714.70>669.90 (-) 1.64e6



PFTeDA-13C_IS

Conc 5.0000
Area 4059791

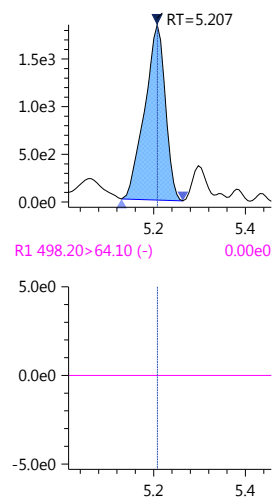
ISTD 714.70>669.90 (-) 1.64e6



FOSA

Conc 0.0113
Area 5752
R#1 0.00 (0.00)

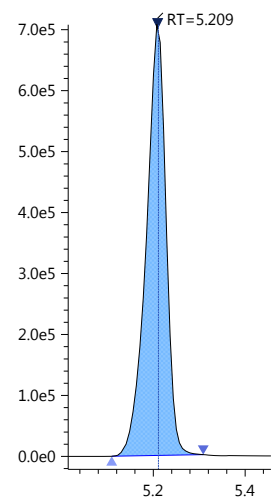
Q 498.20>78.00 (-) 1.86e3



FOSA-13C

Conc 4.6262
Area 2122292

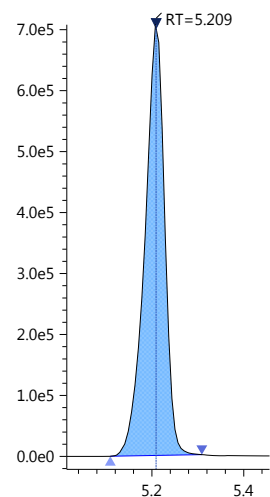
Q 506.00>78.05 (-) 7.08e5



FOSA-13C_IS

Conc 5.0000
Area 2122292

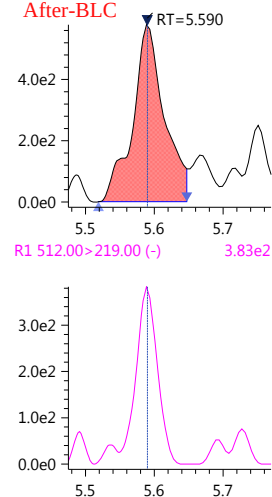
ISTD 506.00>78.05 (-) 7.08e5



N-MeFOSA

Conc 0.0168
Area 1839
R#1 74.43 (0.00)

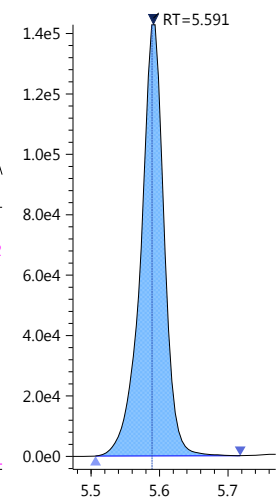
Q 512.00>169.10 (-) 5.79e2



N-MeFOSA-d3

Conc 3.5358
Area 339962

Q 514.90>168.90 (-) 1.43e5



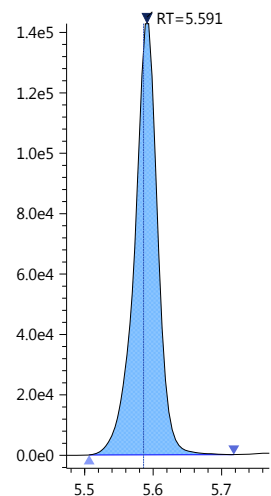
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N-MeFOSA-d3_IS

Conc 5.0000
Area 339962

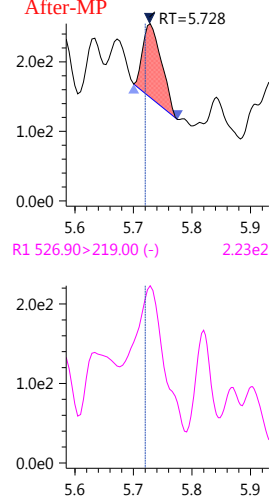
ISTD 514.90>168.90 (-) 1.43e5



N-EtFOSA

Conc 0.0127
Area 239
R#1 80.15 (0.00)

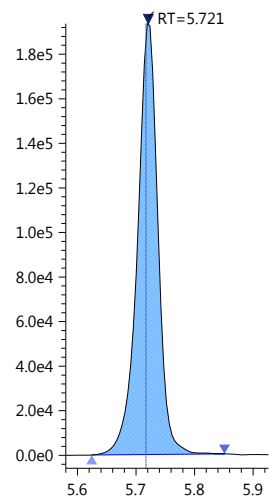
Q 526.90>169.10 (-) 2.55e2



N-EtFOSA-d9

Conc 3.2531
Area 472705

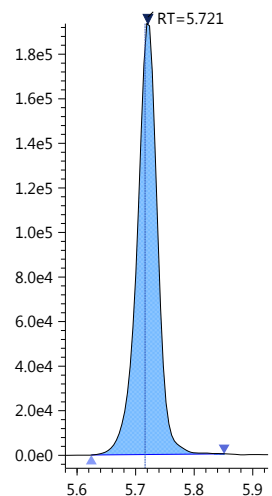
Q 530.90>169.15 (-) 1.94e5



N-EtFOSA-d9_IS

Conc 5.0000
Area 472705

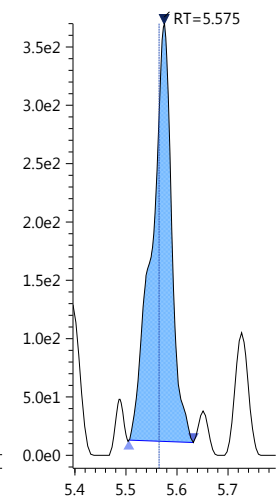
ISTD 530.90>169.15 (-) 1.94e5



N-MeFOSE

Conc 0.0057
Area 972

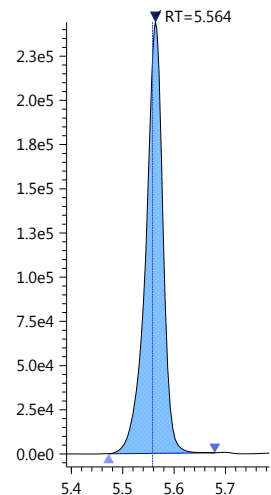
Q 616.00>59.00 (-) 3.70e2



N-MeFOSE-d7

Conc 3.6647
Area 566104

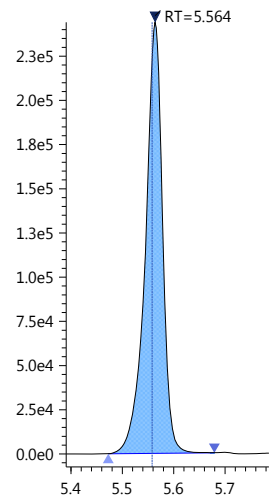
Q 622.70>59.10 (-) 2.44e5



N-MeFOSE-d7_IS

Conc 5.0000
Area 566104

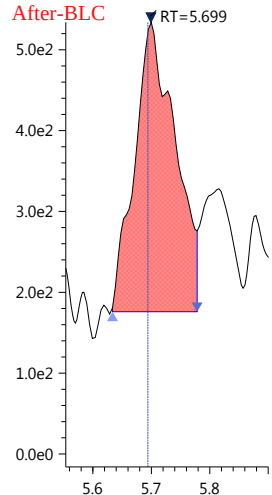
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N-EtFOSE

Conc 0.0111
Area 1734

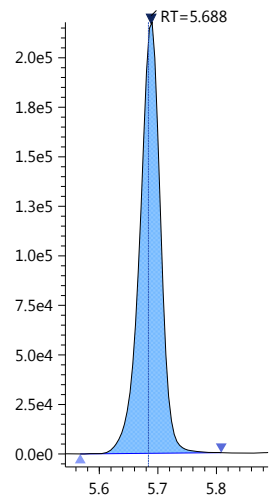
Q 630.00>58.90 (-) 5.34e2



N-EtFOSE-d9

Conc 3.7416
Area 537313

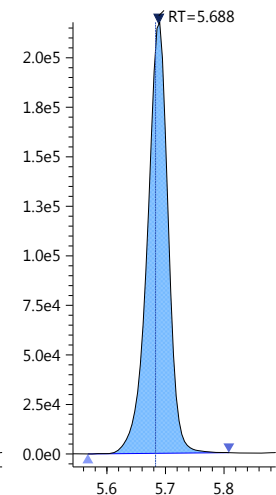
Q 638.70>59.10 (-) 2.18e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 537313

ISTD 638.70>59.10 (-) 2.18e5



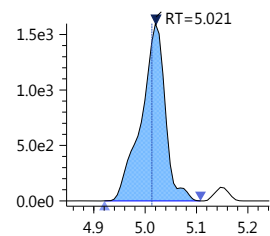
Insight Report

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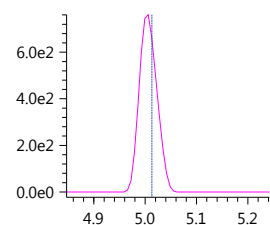
N-MeFOSAA

Conc 0.0702
Area 5190
R#1 30.86 (0.00)

Q 570.20>419.00 (-) 1.60e3



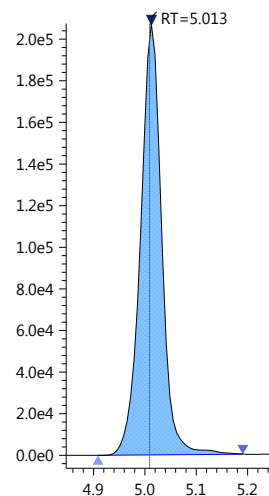
R1 570.20>512.00 (-) 7.61e2



N-MeFOSAA-d3

Conc 4.5630
Area 594322

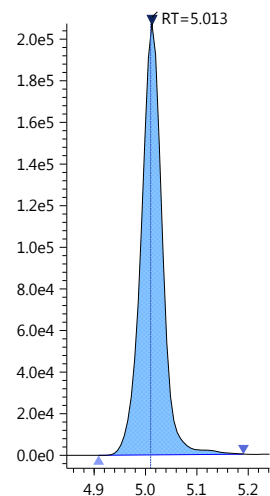
Q 572.80>419.05 (-) 2.07e5



N-MeFOSAA-d3_IS

Conc 5.0000
Area 594322

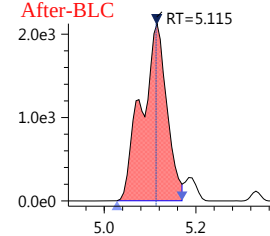
ISTD 572.80>419.05 (-) 2.07e5



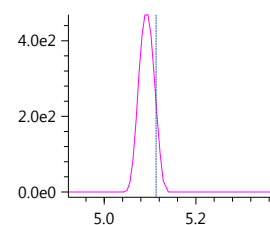
N-EtFOSAA

Conc 0.1332
Area 8133
R#1 9.29 (0.00)

Q 584.20>418.95 (-) 2.13e3



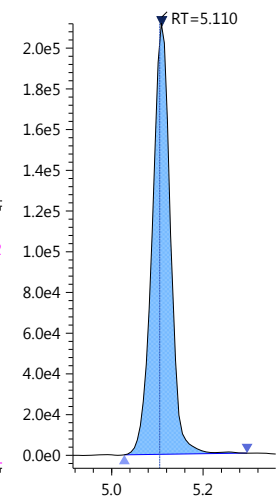
R1 584.20>526.10 (-) 4.69e2



N-EtFOSAA-d5

Conc 4.8991
Area 587982

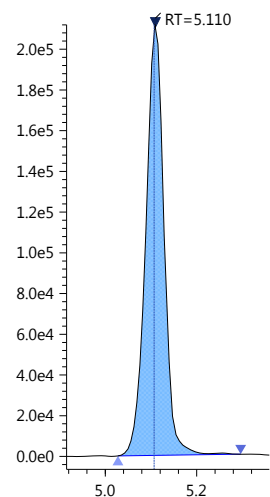
Q 588.80>419.00 (-) 2.12e5



N-EtFOSAA-d5_IS

Conc 5.0000
Area 587982

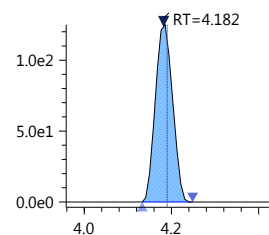
ISTD 588.80>419.00 (-) 2.12e5



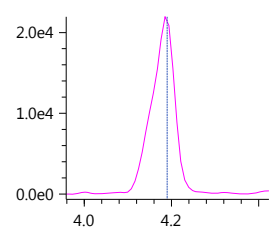
4_2-FTS_1

Conc 0.0051
Area 344
R#1 13224.17 (0.00)

Q 327.00>307.05 (-) 1.25e2



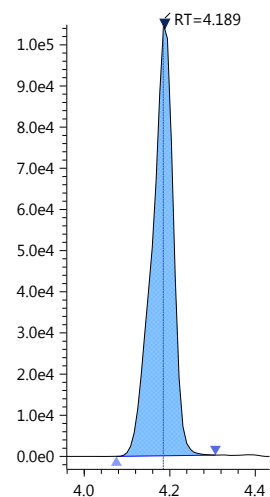
R1 327.00>81.10 (-) 2.20e4



4_2-FTS-13C

Conc 4.6968
Area 358642

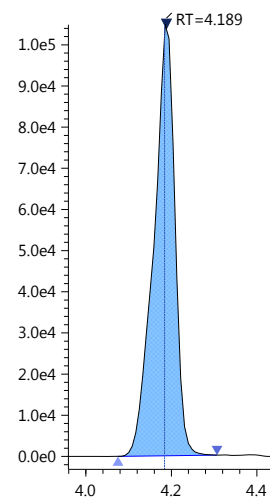
Q 328.80>309.05 (-) 1.05e5



4_2-FTS-13C_IS

Conc 5.0000
Area 358642

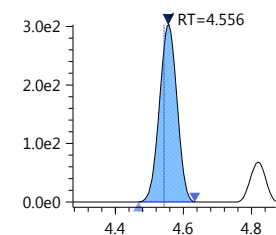
ISTD 328.80>309.05 (-) 1.05e5



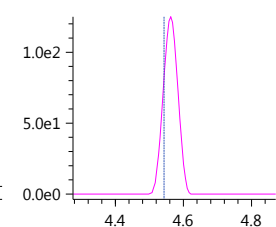
6_2-FTS_1

Conc 0.0120
Area 1089
R#1 35.02 (0.00)

Q 427.00>407.00 (-) 3.03e2



R1 427.00>80.90 (-) 1.25e2

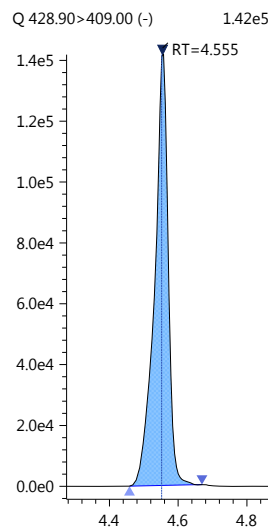


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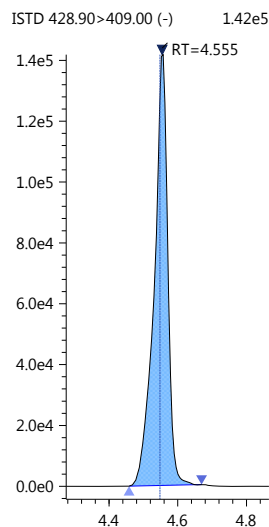
6_2-FTS-13C

Conc 5.1518
Area 392378



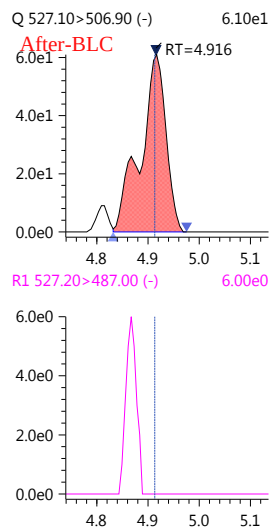
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Conc 5.0000
Area 392378



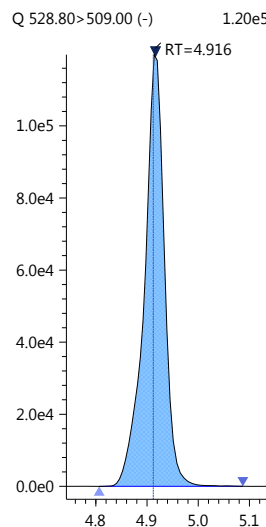
8_2-FTS_1

Conc 0.0039
Area 211
R#1 0.00 (0.00)



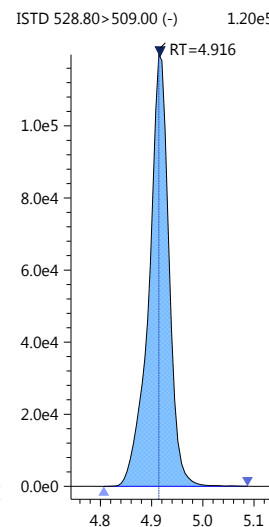
8_2-FTS-13C

Conc 5.3068
Area 327688



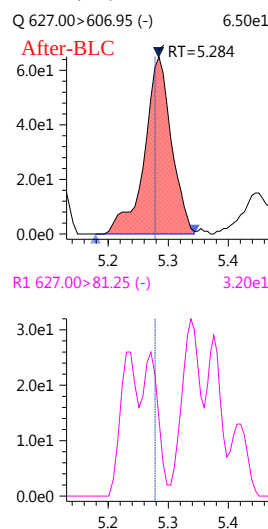
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Conc 5.0000
Area 327688



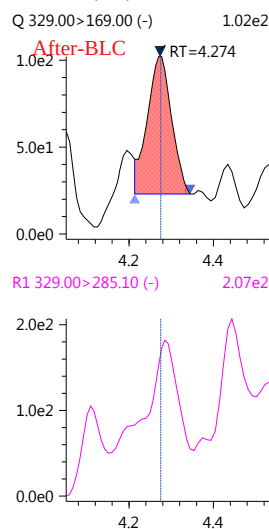
10_2-FtS_1

Conc 0.0039
Area 203
R#1 0.00 (0.00)



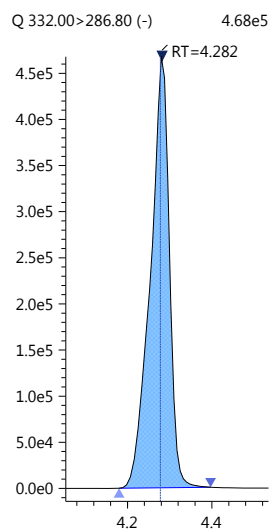
HPFO_DA

Conc 0.0017
Area 320
R#1 124.64 (0.00)



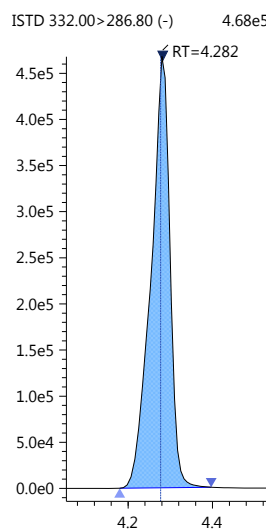
HPFO_DA-13C

Conc 4.8983
Area 1459823



HPFO_DA-13C_IS

Conc 5.0000
Area 1459823



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200417_031

Sample ID: IB

Date acquired: 4/17/2020 6:58:53 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_curve\200417_031.lcd

Vial: 47 | Inj. Volume: 15.0000uL | Tray: 1

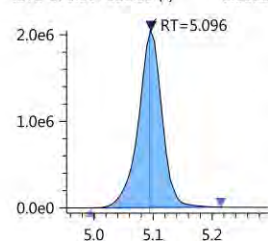
13C7-PFUnDA_IS

Conc 5.0000

Area 5675357

ISTD 570.00>525.00 (-)

2.05e6



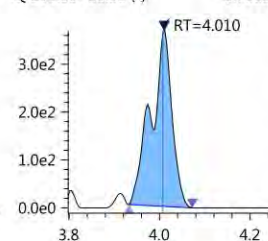
PFBS_1

Conc 0.0050

Area 1181

Q 299.00>80.00 (-)

3.70e2



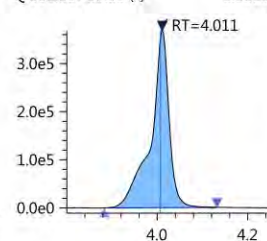
PFBS-13C

Conc 4.6510

Area 1031971

Q 301.80>80.00 (-)

3.68e5



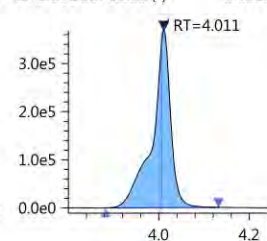
PFBS-13C_IS

Conc 5.0000

Area 1031971

ISTD 301.80>80.00 (-)

3.68e5



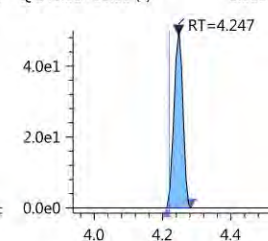
PFPeS

Conc 0.0009

Area 90

Q 349.00>99.00 (-)

5.00e1



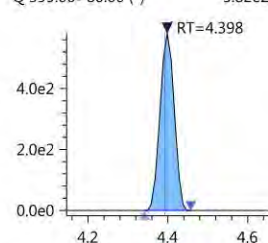
PFHxS_1

Conc -0.0069

Area 1440

Q 399.00>80.00 (-)

5.82e2



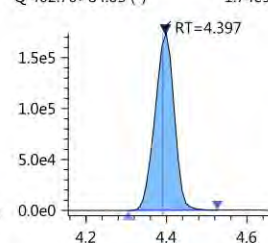
PFHxS-180

Conc 4.6217

Area 577299

Q 402.70>84.05 (-)

1.74e5



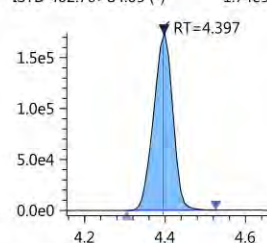
PFHxS-180_IS

Conc 5.0000

Area 577299

ISTD 402.70>84.05 (-)

1.74e5



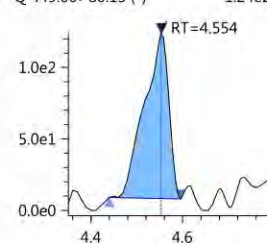
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Conc 0.0024

Area 429

Q 449.00>80.15 (-)

1.24e2



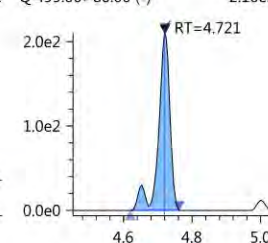
PFOS_1

Conc 0.0033

Area 489

Q 499.00>80.00 (-)

2.10e2



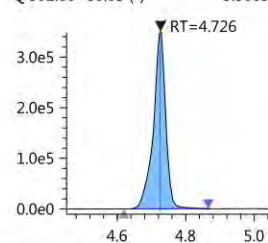
PFOS-13C

Conc 4.9939

Area 878030

Q 502.80>80.05 (-)

3.50e5



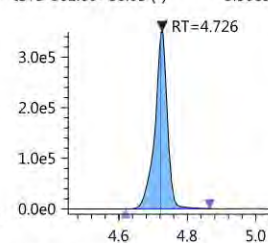
PFOS-13C_IS

Conc 5.0000

Area 878030

ISTD 502.80>80.05 (-)

3.50e5



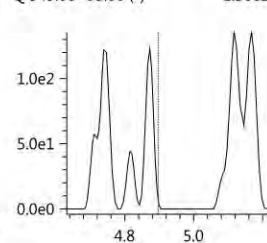
PFNS

Conc ----

Area ----

Q 549.00>99.00 (-)

1.36e2



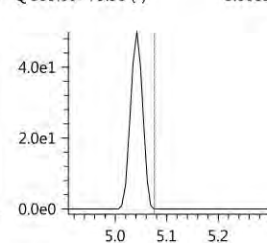
PFDS_1

Conc ----

Area ----

Q 599.00>79.90 (-)

5.00e1



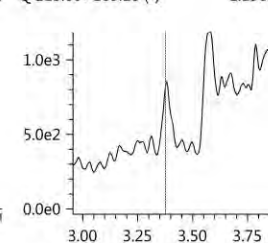
PFBA

Conc ----

Area ----

Q 213.00>169.10 (-)

1.19e3



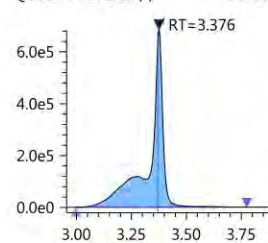
PFBA-13C

Conc 4.7638

Area 2860117

Q 216.90>172.15 (-)

6.84e5



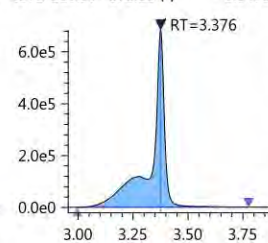
PFBA-13C_IS

Conc 5.0000

Area 2860117

ISTD 216.90>172.15 (-)

6.84e5



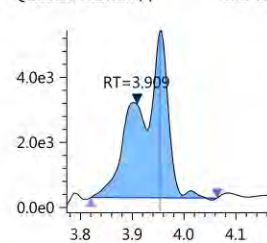
PFPeA

Conc -0.0004

Area 20048

Q 263.05>219.10 (-)

5.45e3



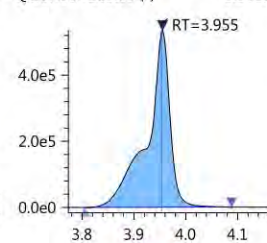
PFPeA-13C

Conc 4.8418

Area 1635861

Q 267.90>223.00 (-)

5.36e5



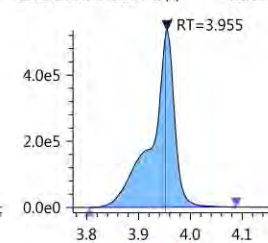
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Conc 5.0000

Area 1635861

ISTD 267.90>223.00 (-)

5.36e5

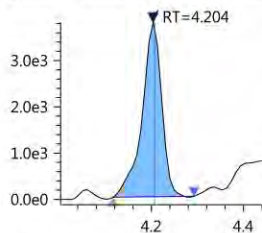


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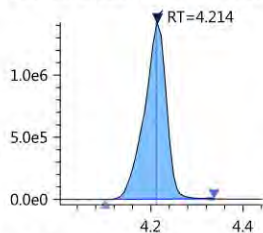
PFHxA

Conc 0.0058
Area 11118
Q 313.00>269.00 (-)



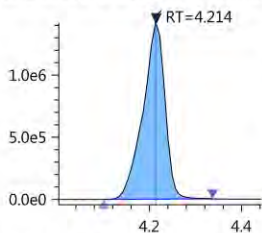
PFHxA-13C

Conc 5.0932
Area 4713826
Q 314.90>270.10 (-)



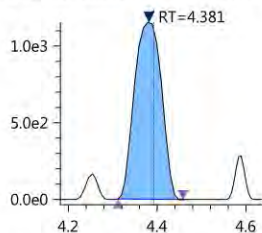
PFHxA-13C_IS

Conc 5.0000
Area 4713826
ISTD 314.90>270.10 (-)



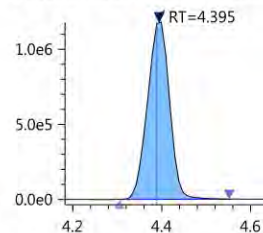
PFHpA

Conc -0.0032
Area 4917
Q 362.90>319.00 (-)



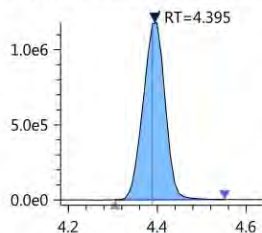
PFHpA-13C

Conc 4.8665
Area 4074536
Q 366.90>322.10 (-)



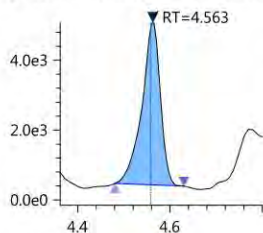
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Conc 5.0000
Area 4074536
ISTD 366.90>322.10 (-)



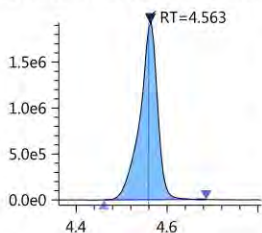
PFOA

Conc 0.0022
Area 12936
Q 413.00>369.00 (-)



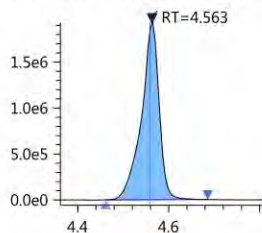
PFOA-13C

Conc 5.1652
Area 5231602
Q 416.80>372.05 (-)



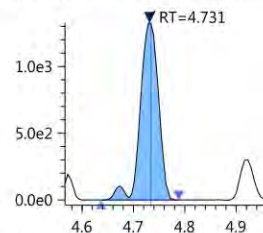
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Conc 5.0000
Area 5231602
ISTD 416.80>372.05 (-)



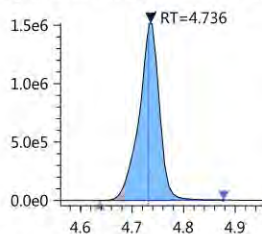
PFNA

Conc -0.0001
Area 3248
Q 463.00>418.90 (-)



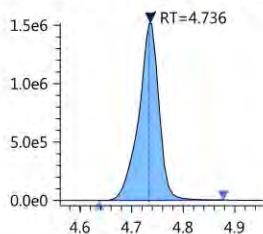
PFNA-13C

Conc 5.4666
Area 4133817
Q 467.80>423.00 (-)



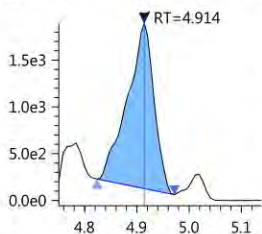
PFNA-13C_IS

Conc 5.0000
Area 4133817
ISTD 467.80>423.00 (-)



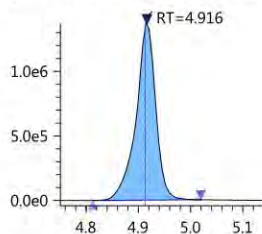
PFDA

Conc 0.0082
Area 6275
Q 513.00>468.80 (-)



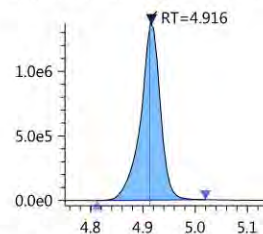
PFDA-13C

Conc 5.2348
Area 3591732
Q 514.80>469.95 (-)



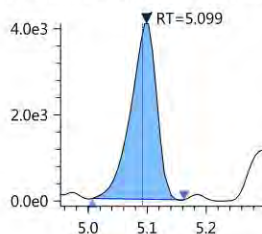
PFDA-13C_IS

Conc 5.0000
Area 3591732
ISTD 514.80>469.95 (-)



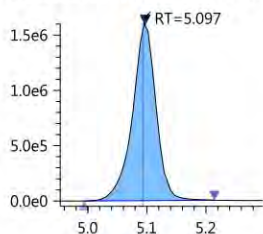
PFUnA

Conc 0.0042
Area 12544
Q 563.00>518.90 (-)



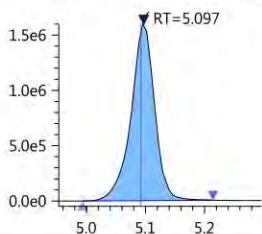
PFUnA-13C

Conc 5.2051
Area 4454622
Q 564.80>519.95 (-)



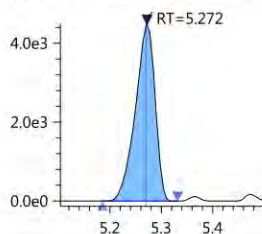
PFUnA-13C_IS

Conc 5.0000
Area 4454622
ISTD 564.80>519.95 (-)



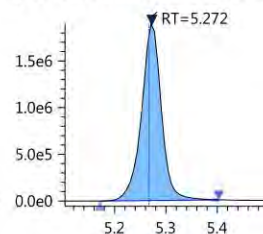
PFDoA

Conc 0.0338
Area 11930
Q 613.05>569.00 (-)



PFDoA-13C

Conc 5.0434
Area 5084929
Q 614.80>569.95 (-)



Insight Report

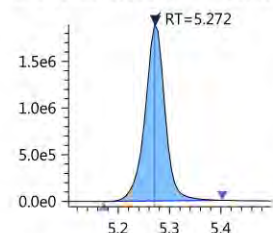
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PFDaA-13C_IS

Conc 5.0000

Area 5084929

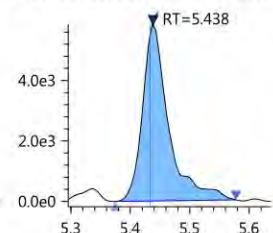
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**PFTrDA**

Conc 0.0183

Area 17766

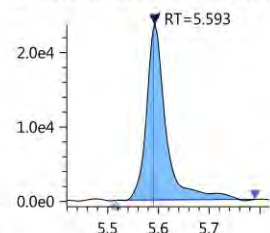
Q 663.00>618.90 (-) 5.86e3

**PFTeDA**

Conc 0.0391

Area 62458

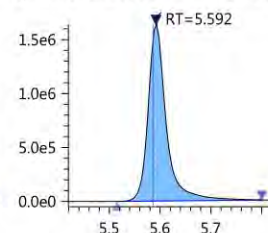
Q 713.40>669.00 (-) 2.38e4

**PFTeDA-13C**

Conc 5.0468

Area 4059791

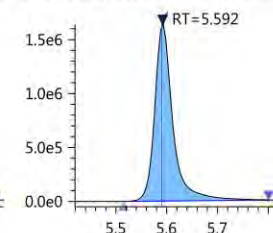
Q 714.70>669.90 (-) 1.64e6

**PFTeDA-13C_IS**

Conc 5.0000

Area 4059791

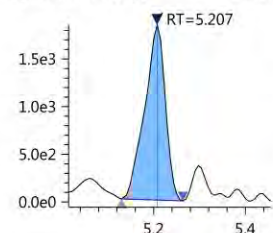
ISTD 714.70>669.90 (-) 1.64e6

**FOSA**

Conc 0.0113

Area 5752

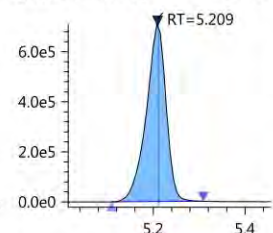
Q 498.20>78.00 (-) 1.86e3

**FOSA-13C**

Conc 4.6262

Area 2122292

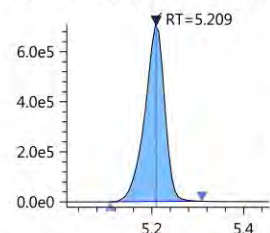
Q 506.00>78.05 (-) 7.08e5

**FOSA-13C_IS**

Conc 5.0000

Area 2122292

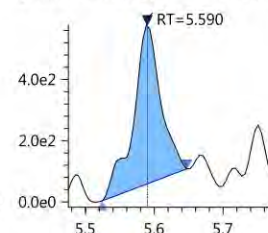
ISTD 506.00>78.05 (-) 7.08e5

**N-MeFOSA**

Conc 0.0134

Area 1436

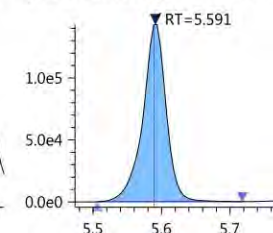
Q 512.00>169.10 (-) 5.79e2

**N-MeFOSA-d3**

Conc 3.5358

Area 339962

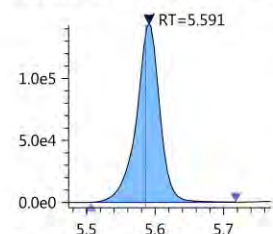
Q 514.90>168.90 (-) 1.43e5

**N-MeFOSA-d3_IS**

Conc 5.0000

Area 339962

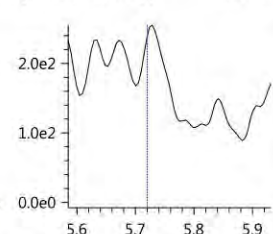
ISTD 514.90>168.90 (-) 1.43e5

**N-EtFOSA**

Conc ----

Area ----

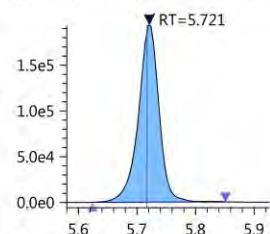
Q 526.90>169.10 (-) 2.55e2

**N-EtFOSA-d9**

Conc 3.2531

Area 472705

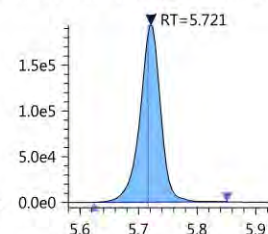
Q 530.90>169.15 (-) 1.94e5

**N-EtFOSA-d9_IS**

Conc 5.0000

Area 472705

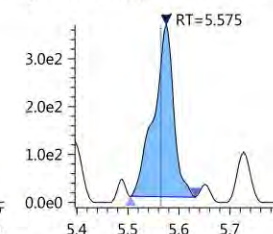
ISTD 530.90>169.15 (-) 1.94e5

**N-MeFOSE**

Conc 0.0057

Area 972

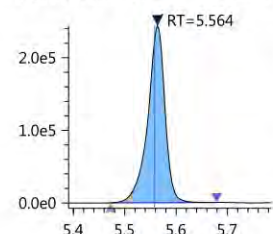
Q 616.00>59.00 (-) 3.70e2

**N-MeFOSE-d7**

Conc 3.6647

Area 566104

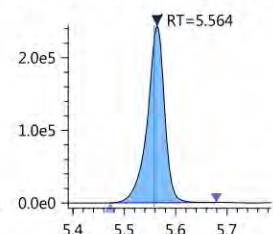
Q 622.70>59.10 (-) 2.44e5

**N-MeFOSE-d7_IS**

Conc 5.0000

Area 566104

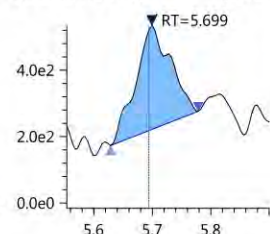
ISTD 622.70>59.10 (-) 2.44e5

**N-EtFOSE**

Conc 0.0083

Area 1298

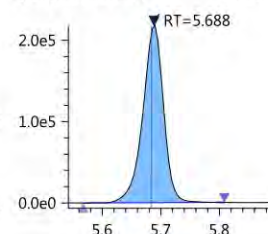
Q 630.00>58.90 (-) 5.34e2

**N-EtFOSE-d9**

Conc 3.7416

Area 537313

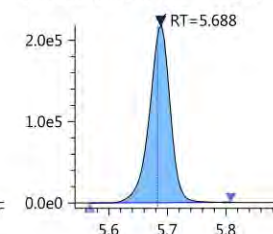
Q 638.70>59.10 (-) 2.18e5

**N-EtFOSE-d9_IS**

Conc 5.0000

Area 537313

ISTD 638.70>59.10 (-) 2.18e5



Insight Report

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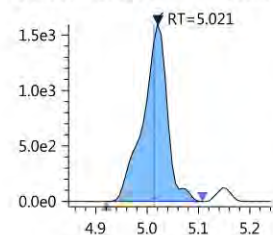
N-MeFOSAA

Conc 0.0697

Area 5190

Q 570.20>419.00 (-)

1.60e3



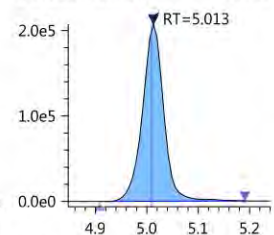
N-MeFOSAA-d3

Conc 4.5630

Area 594322

Q 572.80>419.05 (-)

2.07e5



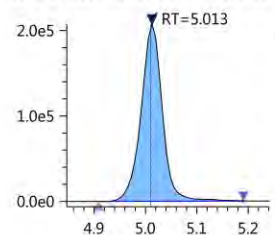
N-MeFOSAA-d3_IS

Conc 5.0000

Area 594322

ISTD 572.80>419.05 (-)

2.07e5



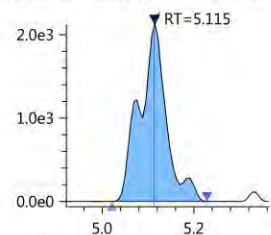
N-EtFOSAA

Conc 0.1471

Area 8687

Q 584.20>418.95 (-)

2.13e3



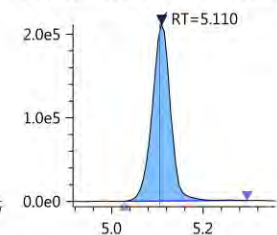
N-EtFOSAA-d5

Conc 4.8991

Area 587982

Q 588.80>419.00 (-)

2.12e5



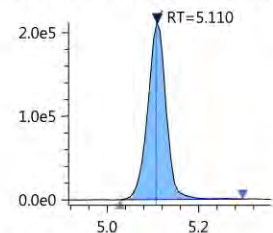
N-EtFOSAA-d5_IS

Conc 5.0000

Area 587982

ISTD 588.80>419.00 (-)

2.12e5



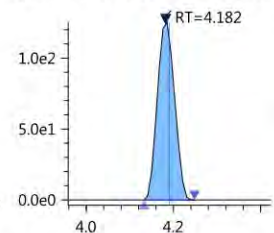
4_2-FTS_1

Conc 0.0052

Area 344

Q 327.00>307.05 (-)

1.25e2



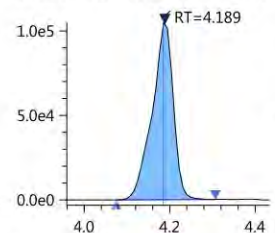
4_2-FTS-13C

Conc 4.6968

Area 358642

Q 328.80>309.05 (-)

1.05e5



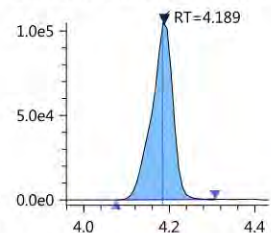
4_2-FTS-13C_IS

Conc 5.0000

Area 358642

ISTD 328.80>309.05 (-)

1.05e5



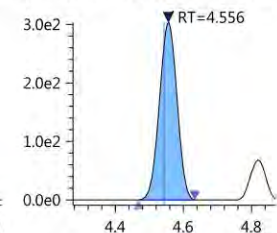
6_2-FTS_1

Conc 0.0120

Area 1089

Q 427.00>407.00 (-)

3.03e2



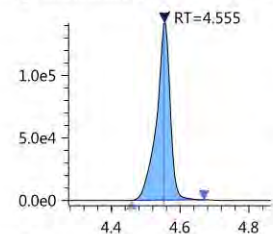
6_2-FTS-13C

Conc 5.1518

Area 392378

Q 428.90>409.00 (-)

1.42e5



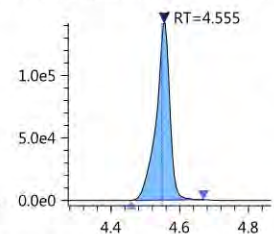
6_2-FTS-13C_IS

Conc 5.0000

Area 392378

ISTD 428.90>409.00 (-)

1.42e5



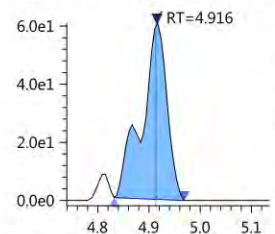
8_2-FTS_1

Conc 0.0038

Area 207

Q 527.10>506.90 (-)

6.10e1



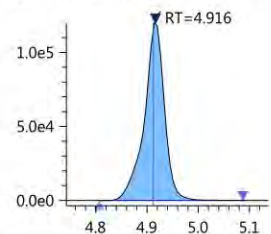
8_2-FTS-13C

Conc 5.3068

Area 327688

Q 528.80>509.00 (-)

1.20e5



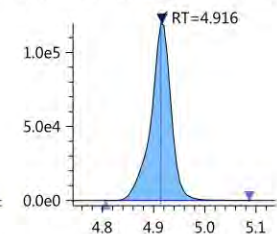
8_2-FTS-13C_IS

Conc 5.0000

Area 327688

ISTD 528.80>509.00 (-)

1.20e5



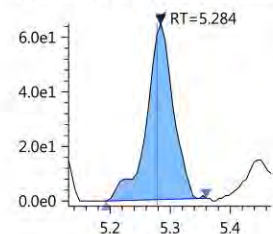
10_2-FTS_1

Conc 0.0038

Area 200

Q 627.00>606.95 (-)

6.50e1



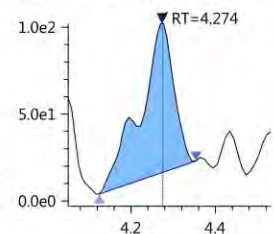
HPFO_DA

Conc 0.0025

Area 480

Q 329.00>169.00 (-)

1.02e2



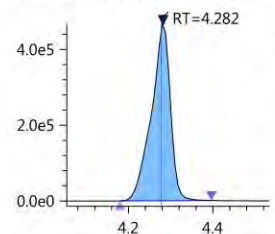
HPFO_DA-13C

Conc 4.8983

Area 1459823

Q 332.00>286.80 (-)

4.68e5



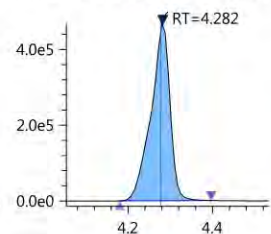
HPFO_DA-13C_IS

Conc 5.0000

Area 1459823

ISTD 332.00>286.80 (-)

4.68e5



Insight Report

Printed at 4/18/2020 11:14:21 AM

200417_032

Sample ID: 1.0 PPB ICV

Date acquired: 4/17/2020 7:09:20 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_cuvre\200417_032.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	5.097	6630172	6630172	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.010	234735	1209416	2	0.8438	ng/mL	0.8874
PFBS-13C	Auto	4.010	1209416	6630172	1	4.6657	ng/mL	5.0000
PFBS-13C_IS	Auto	4.010	1209416	1209416	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.229	104301	1209416	2	0.8740	ng/mL	0.9409
PFHxS_1	Auto	4.396	155161	673032	3	0.9100	ng/mL	0.9131
PFHxS-18O	Auto	4.397	673032	6630172	1	4.6121	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.397	673032	673032	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.556	193434	673032	3	0.9217	ng/mL	0.9534
PFOS_1	Auto	4.727	143655	995443	4	0.8519	ng/mL	0.9292
PFOS-13C	Auto	4.727	995443	6630172	1	4.8464	ng/mL	5.0000
PFOS-13C_IS	Auto	4.727	995443	995443	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.903	116566	995443	4	0.9931	ng/mL	0.9616
PFDS_1	Auto	5.079	150558	995443	4	0.9553	ng/mL	0.9647
PFBA	Auto	3.376	601488	3294707	5	0.9348	ng/mL	1.0000
PFBA-13C	Auto	3.376	3294707	6630172	1	4.6973	ng/mL	5.0000
PFBA-13C_IS	Auto	3.376	3294707	3294707	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.955	760767	1907265	6	0.9240	ng/mL	1.0000
PFPeA-13C	Auto	3.955	1907265	6630172	1	4.8321	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.955	1907265	1907265	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.214	975091	5179046	7	0.9527	ng/mL	1.0000
PFHxA-13C	Auto	4.214	5179046	6630172	1	4.7900	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.214	5179046	5179046	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.394	767341	4520938	8	0.9403	ng/mL	1.0000
PFHpA-13C	Auto	4.395	4520938	6630172	1	4.6220	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.395	4520938	4520938	8	5.0000	ng/mL	5.0000
PFOA	M	4.563	1464967	5913714	9	0.9668	ng/mL	1.0000
PFOA-13C	Auto	4.563	5913714	6630172	1	4.9978	ng/mL	5.0000
PFOA-13C_IS	Auto	4.563	5913714	5913714	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.738	728700	4286172	10	0.9475	ng/mL	1.0000
PFNA-13C	Auto	4.738	4286172	6630172	1	4.8519	ng/mL	5.0000
PFNA-13C_IS	Auto	4.738	4286172	4286172	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.919	832742	4088716	11	0.9591	ng/mL	1.0000
PFDA-13C	Auto	4.919	4088716	6630172	1	5.1010	ng/mL	5.0000
PFDA-13C_IS	Auto	4.919	4088716	4088716	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.098	735593	5004234	12	0.9300	ng/mL	1.0000
PFUnA-13C	Auto	5.098	5004234	6630172	1	5.0052	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.098	5004234	5004234	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.272	622818	5882328	13	0.9401	ng/mL	1.0000
PFDoA-13C	Auto	5.273	5882328	6630172	1	4.9941	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.273	5882328	5882328	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.439	860069	4627529	14	0.9604	ng/mL	1.0000
PFTeDA	Auto	5.592	451326	4627529	14	0.9751	ng/mL	1.0000
PFTeDA-13C	Auto	5.592	4627529	6630172	1	4.9241	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.592	4627529	4627529	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.210	561842	2619310	16	0.8955	ng/mL	1.0000
FOSA-13C	Auto	5.210	2619310	6630172	1	4.8874	ng/mL	5.0000
FOSA-13C_IS	Auto	5.210	2619310	2619310	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.594	150280	544651	17	0.8582	ng/mL	1.0000
N-MeFOSA-d3	Auto	5.591	544651	6630172	1	4.8490	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.591	544651	544651	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.727	31080	778026	18	1.0065	ng/mL	1.0000
N-EtFOSA-d9	Auto	5.722	778026	6630172	1	4.5832	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.722	778026	778026	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.571	250867	851540	19	0.9779	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.564	851540	6630172	1	4.7186	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.564	851540	851540	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.698	217027	807307	20	0.9253	ng/mL	1.0000
N-EtFOSE-d9	Auto	5.688	807307	6630172	1	4.8121	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.688	807307	807307	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.018	117584	736759	21	1.2837	ng/mL	1.0000
N-MeFOSAA-d3	Auto	5.015	736759	6630172	1	4.8420	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.015	736759	736759	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.114	92416	694384	22	1.2816	ng/mL	1.0000
N-EtFOSAA-d5	Auto	5.111	694384	6630172	1	4.9525	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.111	694384	694384	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.189	72696	430446	23	0.8977	ng/mL	0.9372
4_2-FTS-13C	Auto	4.189	430446	6630172	1	4.8254	ng/mL	5.0000

Insight Report

Printed at 4/18/2020 11:14:21 AM

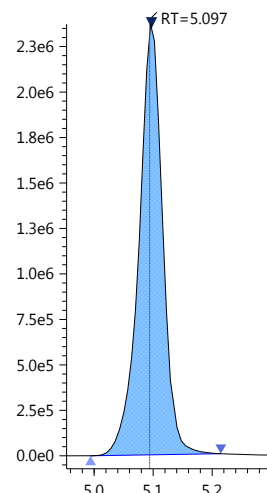
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Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.189	430446	430446	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.552	95125	444101	24	0.9253	ng/mL	0.9512
6_2-FTS-13C	Auto	4.554	444101	6630172	1	4.9912	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.554	444101	444101	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.918	56270	378132	25	0.9029	ng/mL	0.9600
8_2-FTS-13C	Auto	4.918	378132	6630172	1	5.2419	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.918	378132	378132	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.281	53259	378132	25	0.8760	ng/mL	0.9662
HPFO_DA	Auto	4.281	208324	1699926	26	0.9473	ng/mL	1.0000
HPFO_DA-13C	Auto	4.282	1699926	6630172	1	4.8825	ng/mL	5.0000
HPFO_DA-13C_IS	Auto	4.282	1699926	1699926	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS

Conc 5.0000
Area 6630172

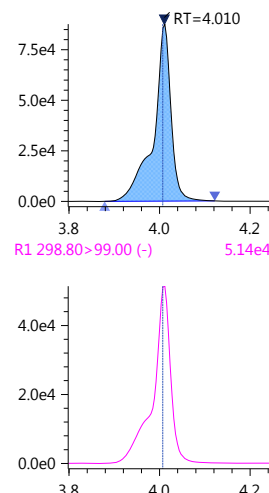
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.8438
Area 234735
R#1 59.99 (0.00)

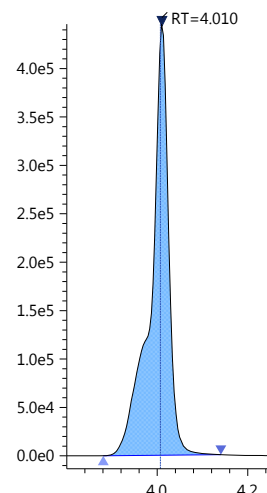
Q 299.00>80.00 (-)



PFBS-13C

Conc 4.6657
Area 1209416

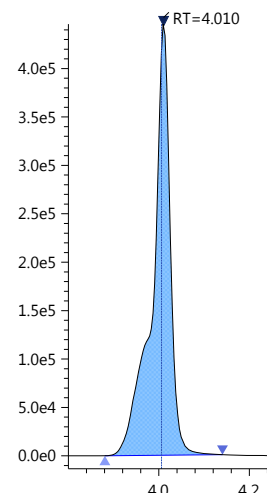
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
Area 1209416

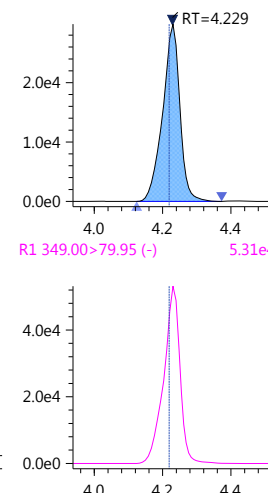
ISTD 301.80>80.00 (-)



PFPeS

Conc 0.8740
Area 104301
R#1 177.02 (0.00)

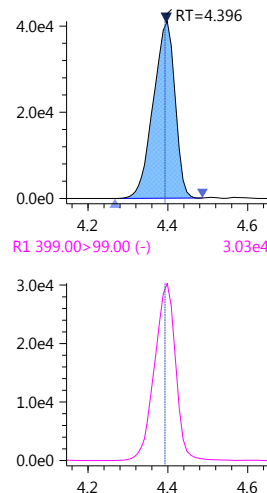
Q 349.00>99.00 (-)



PFHxS_1

Conc 0.9100
Area 155161
R#1 73.43 (0.00)

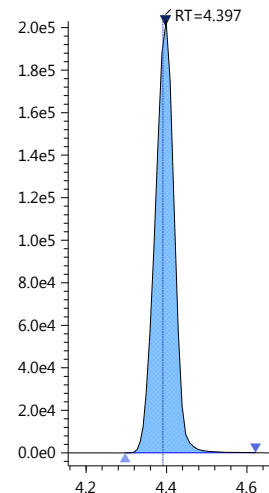
Q 399.00>80.00 (-)



PFHxS-180

Conc 4.6121
Area 673032

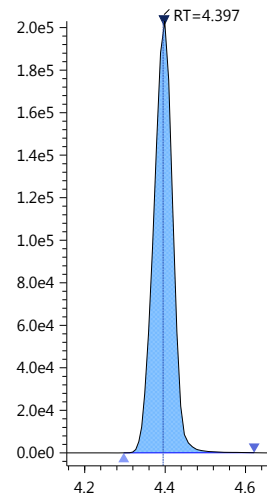
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
Area 673032

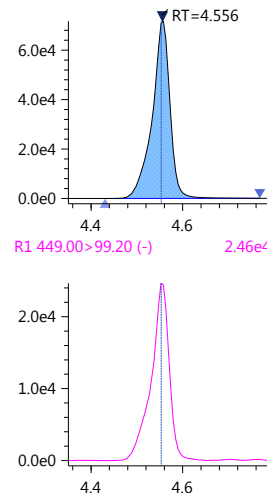
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 0.9217
Area 193434
R#1 35.05 (0.00)

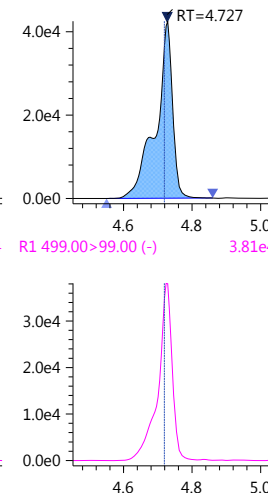
Q 449.00>80.15 (-)



PFOS_1

Conc 0.8519
Area 143655
R#1 88.33 (0.00)

Q 499.00>80.00 (-)



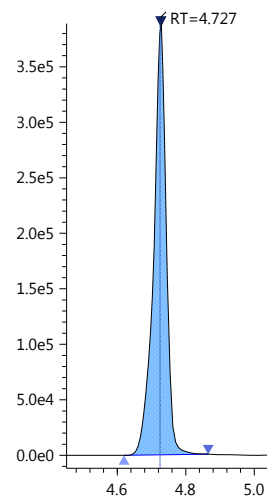
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PFOS-13C

Conc 4.8464
Area 995443

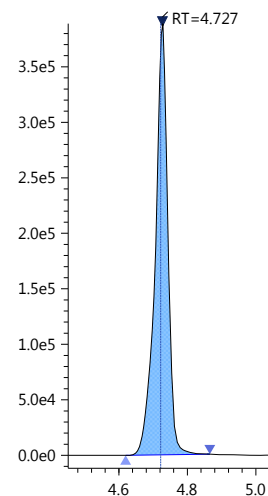
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
Area 995443

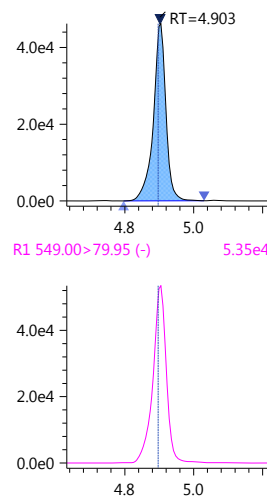
ISTD 502.80>80.05 (-)



PFNS

Conc 0.9931
Area 116566
R#1 114.04 (0.00)

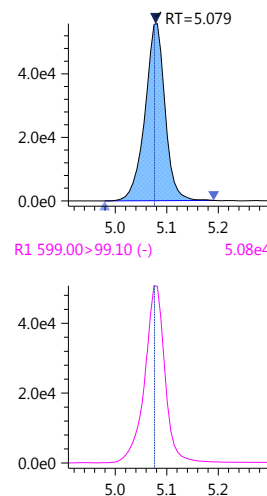
Q 549.00>99.00 (-)



PFDS_1

Conc 0.9553
Area 150558
R#1 90.44 (0.00)

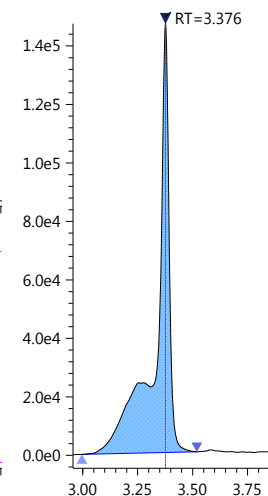
Q 599.00>79.90 (-)



PFBA

Conc 0.9348
Area 601488

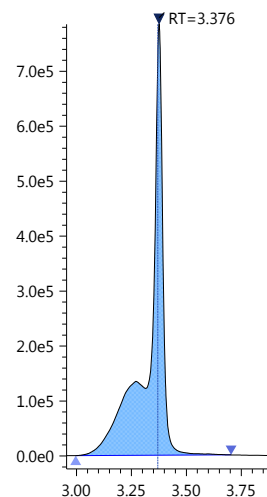
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.6973
Area 3294707

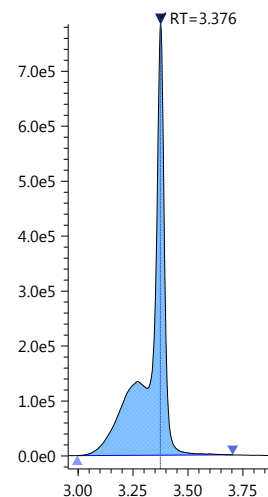
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
Area 3294707

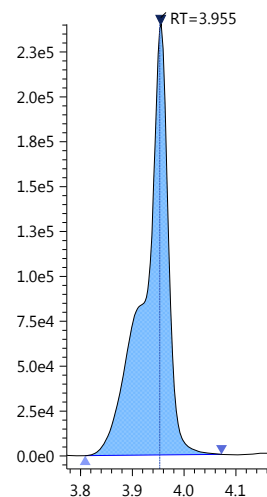
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.9240
Area 760767

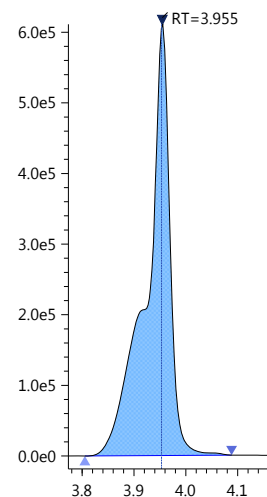
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.8321
Area 1907265

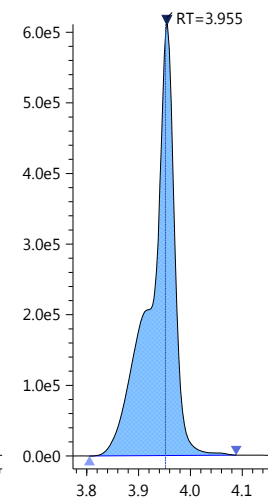
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1907265

ISTD 267.90>223.00 (-)



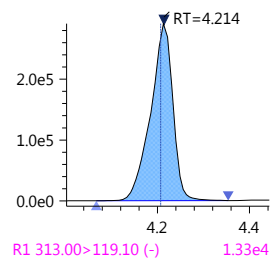
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PFHxA

Conc 0.9527
Area 975091
R#1 4.55 (0.00)

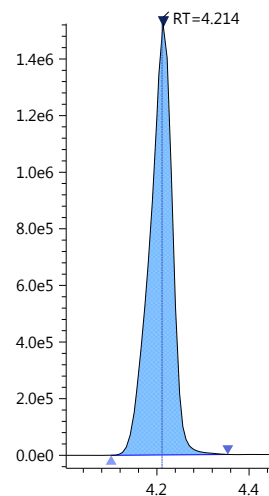
Q 313.00>269.00 (-) 2.91e5



PFHxA-13C

Conc 4.7900
Area 5179046

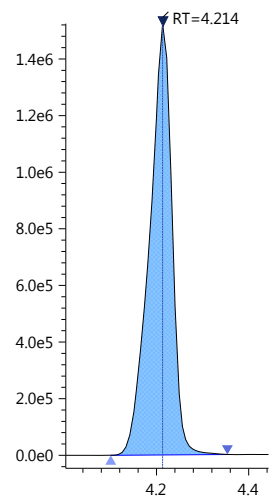
Q 314.90>270.10 (-) 1.52e6



PFHxA-13C_IS

Conc 5.0000
Area 5179046

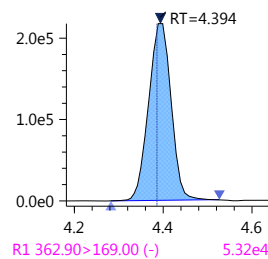
ISTD 314.90>270.10 (-) 1.52e6



PFHpA

Conc 0.9403
Area 767341
R#1 24.54 (0.00)

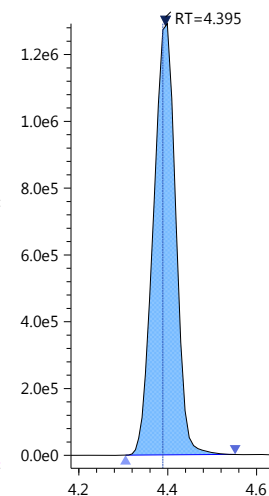
Q 362.90>319.00 (-) 2.18e5



PFHpA-13C

Conc 4.6220
Area 4520938

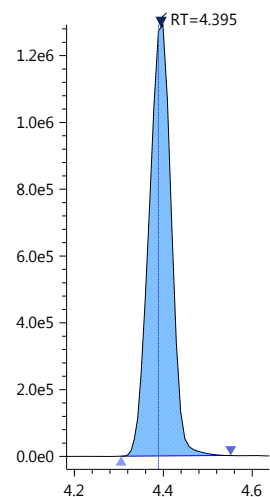
Q 366.90>322.10 (-) 1.29e6



PFHpA-13C_IS

Conc 5.0000
Area 4520938

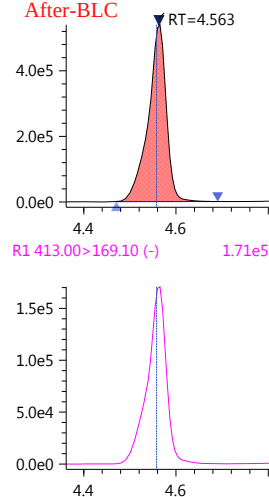
ISTD 366.90>322.10 (-) 1.29e6



PFOA

Conc 0.9668
Area 1464967
R#1 31.56 (0.00)

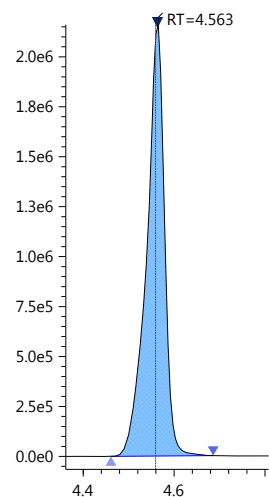
Q 413.00>369.00 (-) 5.40e5



PFOA-13C

Conc 4.9978
Area 5913714

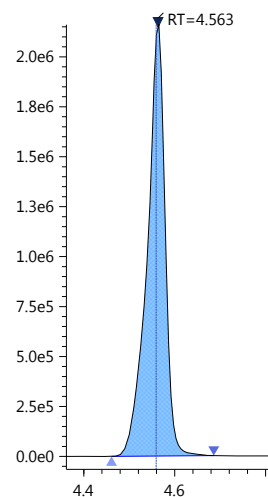
Q 416.80>372.05 (-) 2.16e6



PFOA-13C_IS

Conc 5.0000
Area 5913714

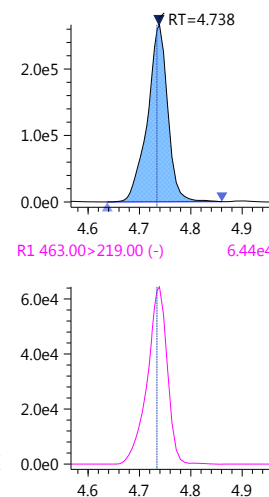
ISTD 416.80>372.05 (-) 2.16e6



PFNA

Conc 0.9475
Area 728700
R#1 24.12 (0.00)

Q 463.00>418.90 (-) 2.67e5



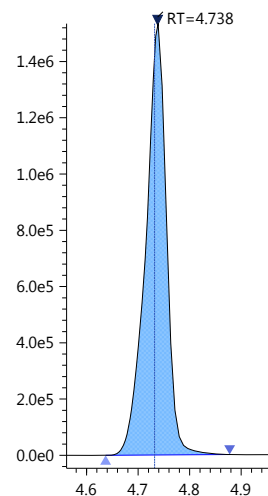
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PFNA-13C

Conc 4.8519
Area 4286172

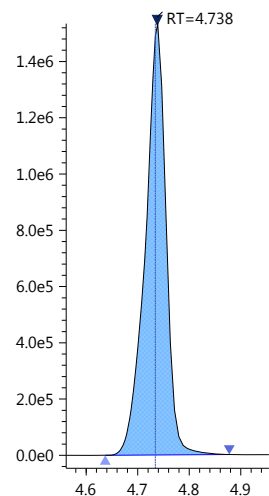
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
Area 4286172

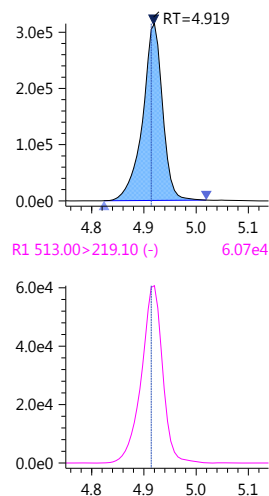
ISTD 467.80>423.00 (-)



PFDA

Conc 0.9591
Area 832742
R#1 19.17 (0.00)

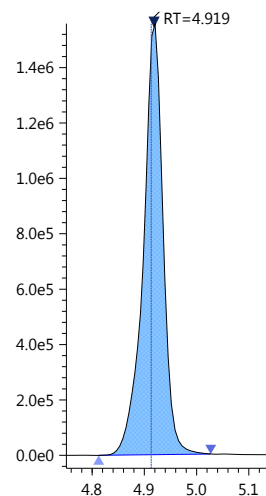
Q 513.00>468.80 (-)



PFDA-13C

Conc 5.1010
Area 4088716

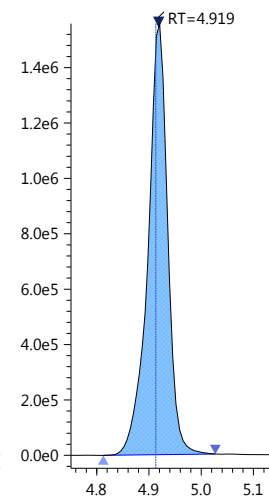
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
Area 4088716

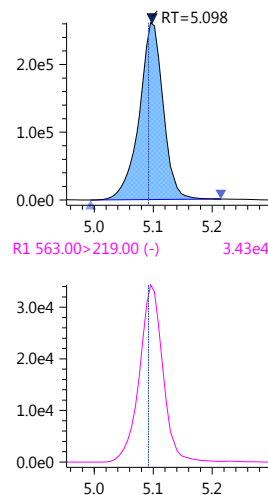
ISTD 514.80>469.95 (-)



PFUnA

Conc 0.9300
Area 735593
R#1 12.81 (0.00)

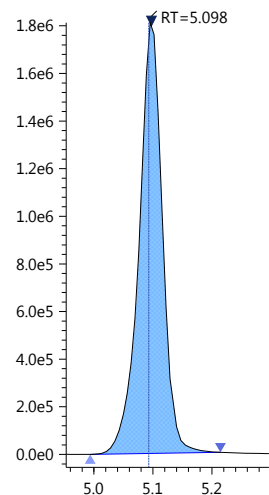
Q 563.00>518.90 (-)



PFUnA-13C

Conc 5.0052
Area 5004234

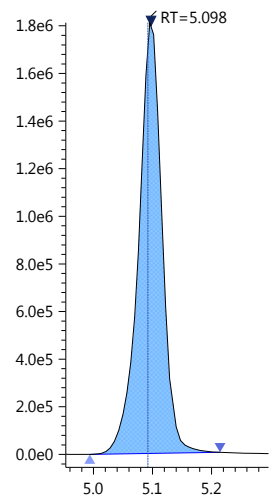
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
Area 5004234

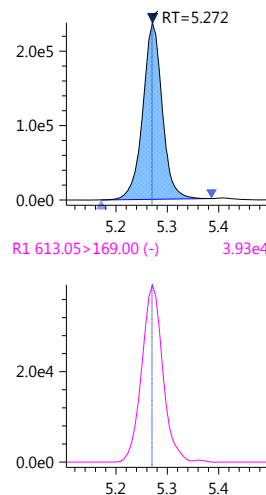
ISTD 564.80>519.95 (-)



PFDaA

Conc 0.9401
Area 622818
R#1 16.37 (0.00)

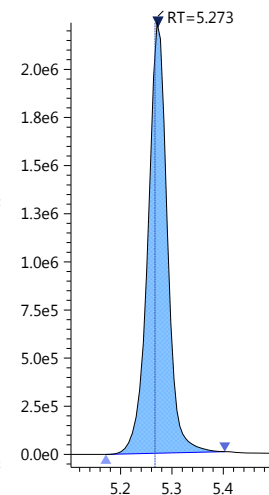
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.9941
Area 5882328

Q 614.80>569.95 (-)



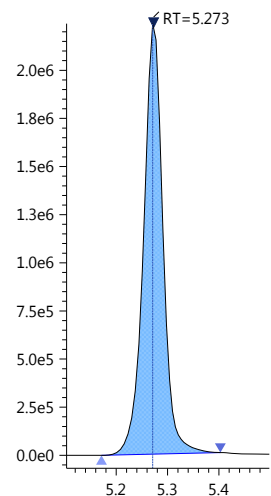
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PFDaA-13C_IS

Conc 5.0000
Area 5882328

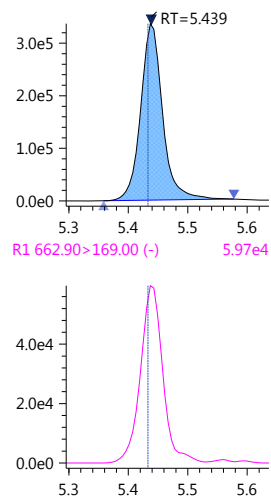
ISTD 614.80>569.95 (-) 2.24e6



PFTrDA

Conc 0.9604
Area 860069
R#1 18.09 (0.00)

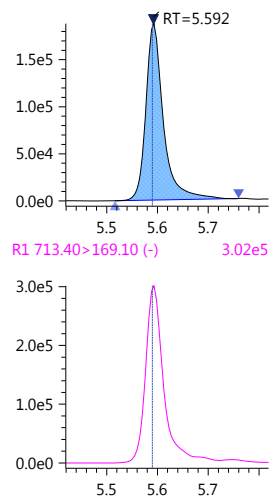
Q 663.00>618.90 (-) 3.37e5



PFTeDA

Conc 0.9751
Area 451326
R#1 158.75 (0.00)

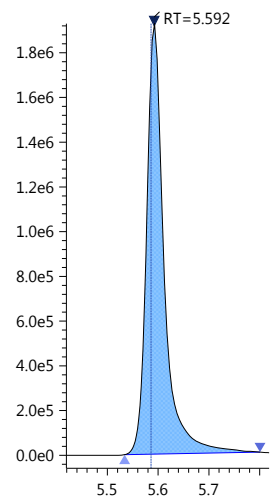
Q 713.40>669.00 (-) 1.88e5



PFTeDA-13C

Conc 4.9241
Area 4627529

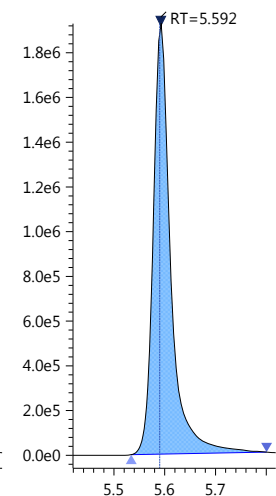
Q 714.70>669.90 (-) 1.93e6



PFTeDA-13C_IS

Conc 5.0000
Area 4627529

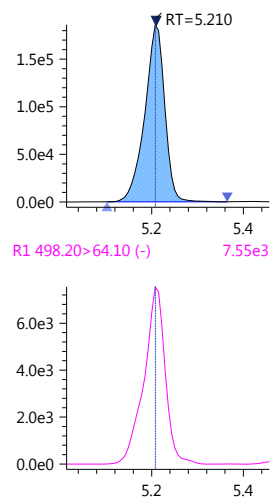
ISTD 714.70>669.90 (-) 1.93e6



FOSA

Conc 0.8955
Area 561842
R#1 4.07 (0.00)

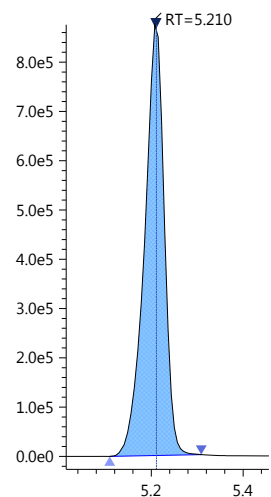
Q 498.20>78.00 (-) 1.86e5



FOSA-13C

Conc 4.8874
Area 2619310

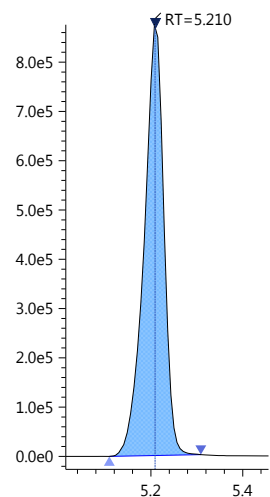
Q 506.00>78.05 (-) 8.76e5



FOSA-13C_IS

Conc 5.0000
Area 2619310

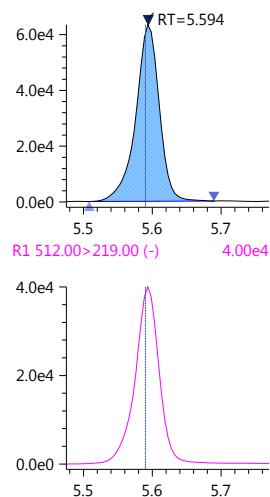
ISTD 506.00>78.05 (-) 8.76e5



N-MeFOSA

Conc 0.8582
Area 150280
R#1 63.03 (0.00)

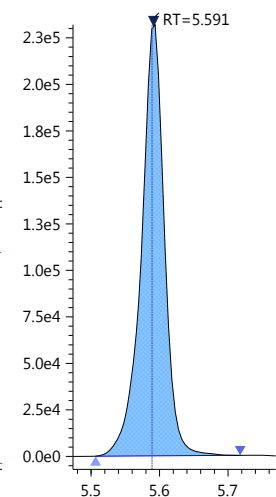
Q 512.00>169.10 (-) 6.36e4



N-MeFOSA-d3

Conc 4.8490
Area 544651

Q 514.90>168.90 (-) 2.32e5



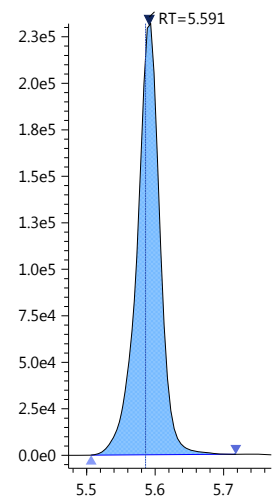
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N-MeFOSA-d3_IS

Conc 5.0000
Area 544651

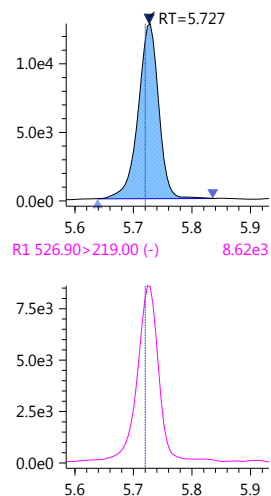
ISTD 514.90>168.90 (-) 2.32e5



N-EtFOSA

Conc 1.0065
Area 31080
R#1 65.50 (0.00)

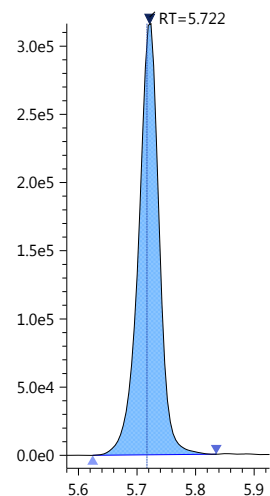
Q 526.90>169.10 (-) 1.29e4



N-EtFOSA-d9

Conc 4.5832
Area 778026

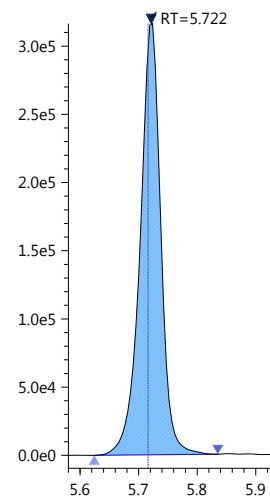
Q 530.90>169.15 (-) 3.17e5



N-EtFOSA-d9_IS

Conc 5.0000
Area 778026

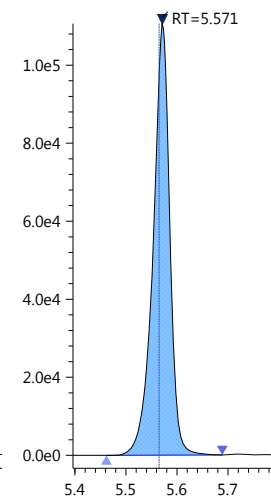
ISTD 530.90>169.15 (-) 3.17e5



N-MeFOSE

Conc 0.9779
Area 250867

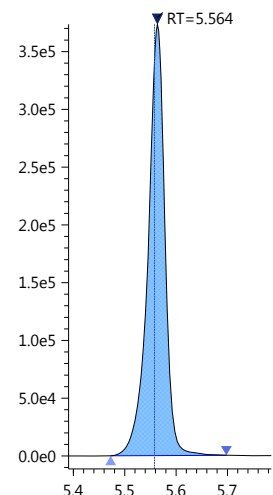
Q 616.00>59.00 (-) 1.11e5



N-MeFOSE-d7

Conc 4.7186
Area 851540

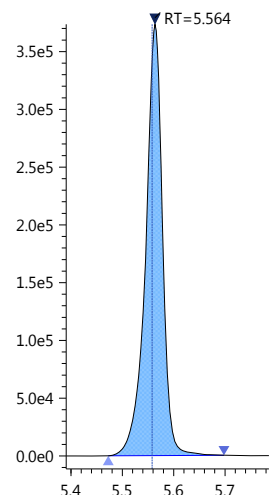
Q 622.70>59.10 (-) 3.74e5



N-MeFOSE-d7_IS

Conc 5.0000
Area 851540

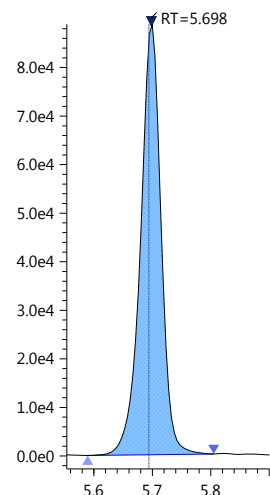
ISTD 622.70>59.10 (-) 3.74e5



N-EtFOSE

Conc 0.9253
Area 217027

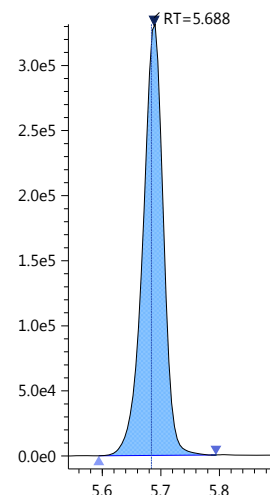
Q 630.00>58.90 (-) 8.89e4



N-EtFOSE-d9

Conc 4.8121
Area 807307

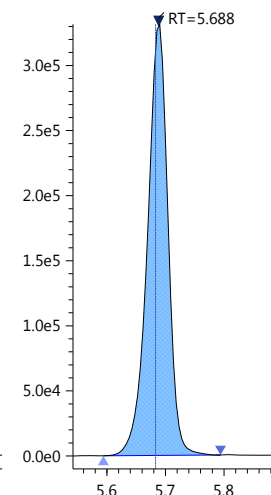
Q 638.70>59.10 (-) 3.32e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 807307

ISTD 638.70>59.10 (-) 3.32e5



Insight Report

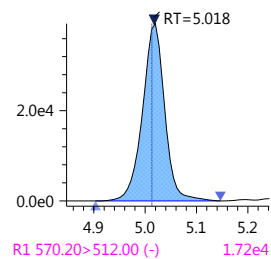
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N-MeFOSAA

Conc 1.2837
Area 117584
R#1 43.11 (0.00)

Q 570.20>419.00 (-)

3.93e4

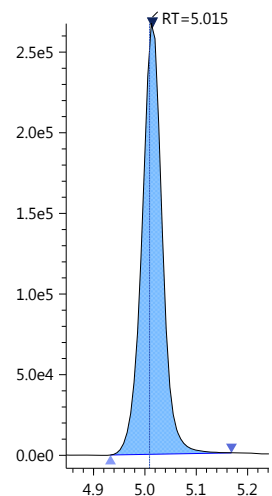


N-MeFOSAA-d3

Conc 4.8420
Area 736759

Q 572.80>419.05 (-)

2.68e5

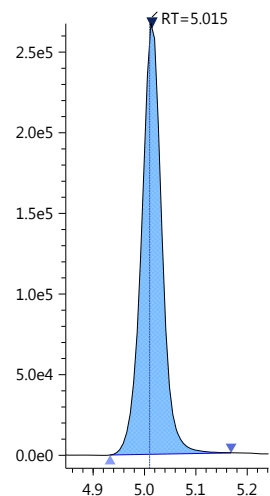


N-MeFOSAA-d3_IS

Conc 5.0000
Area 736759

ISTD 572.80>419.05 (-)

2.68e5

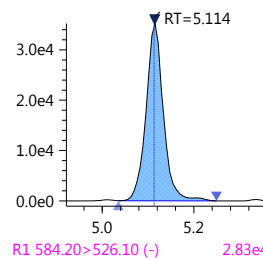


N-EtFOSAA

Conc 1.2816
Area 92416
R#1 80.56 (0.00)

Q 584.20>418.95 (-)

3.52e4

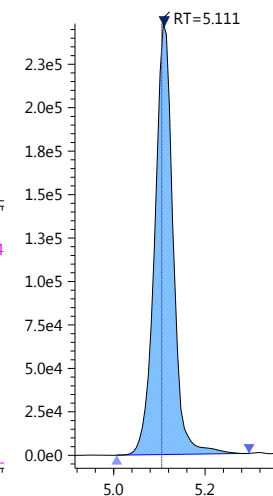


N-EtFOSAA-d5

Conc 4.9525
Area 694384

Q 588.80>419.00 (-)

2.48e5

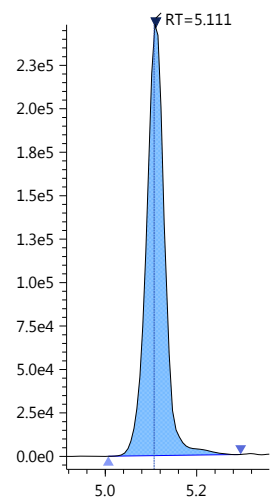


N-EtFOSAA-d5_IS

Conc 5.0000
Area 694384

ISTD 588.80>419.00 (-)

2.48e5

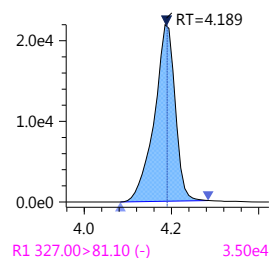


4_2-FTS_1

Conc 0.8977
Area 72696
R#1 159.76 (0.00)

Q 327.00>307.05 (-)

2.20e4

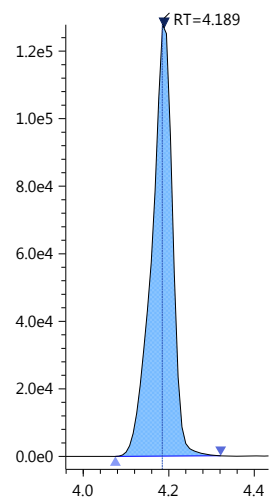


4_2-FTS-13C

Conc 4.8254
Area 430446

Q 328.80>309.05 (-)

1.28e5

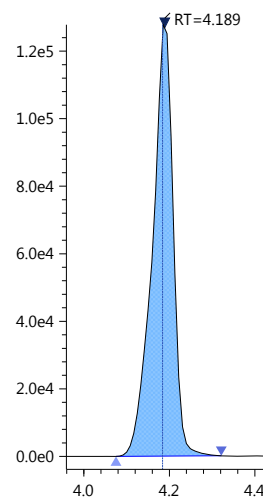


4_2-FTS-13C_IS

Conc 5.0000
Area 430446

ISTD 328.80>309.05 (-)

1.28e5

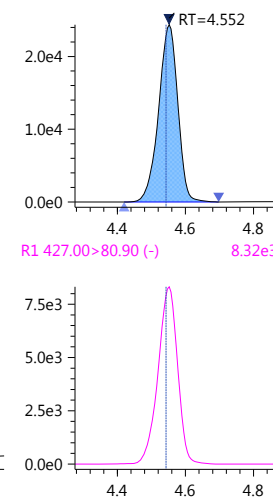


6_2-FTS_1

Conc 0.9253
Area 95125
R#1 34.72 (0.00)

Q 427.00>407.00 (-)

2.44e4

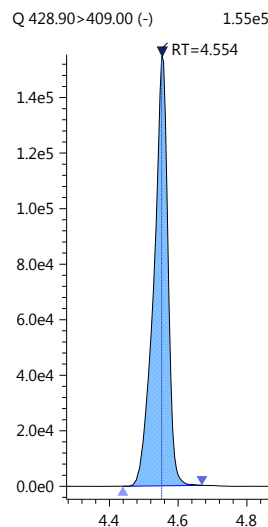


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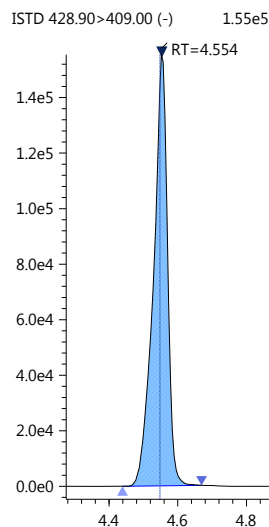
6_2-FTS-13C

Conc 4.9912
Area 444101



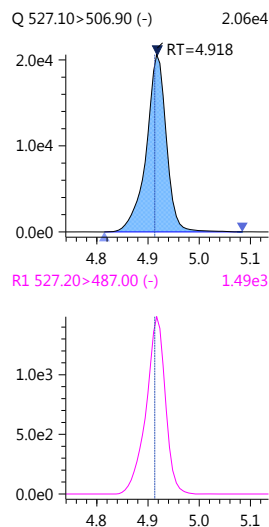
6_2-FTS-13C_IS

Conc 5.0000
Area 444101



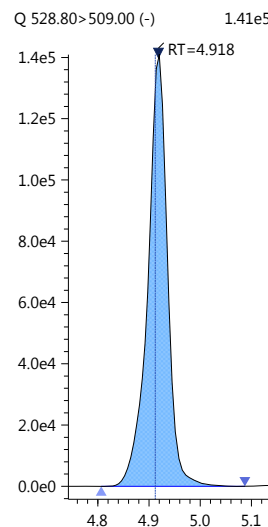
8_2-FTS_1

Conc 0.9029
Area 56270
R#1 7.26 (0.00)



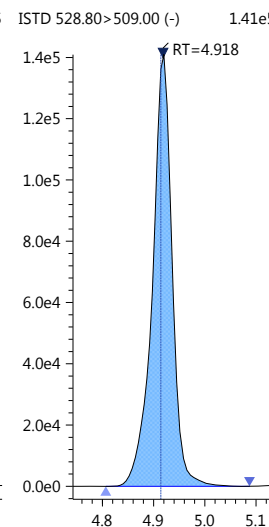
8_2-FTS-13C

Conc 5.2419
Area 378132



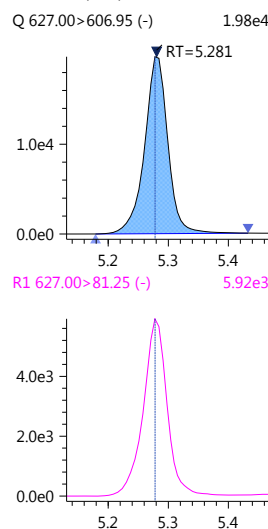
8_2-FTS-13C_IS

Conc 5.0000
Area 378132



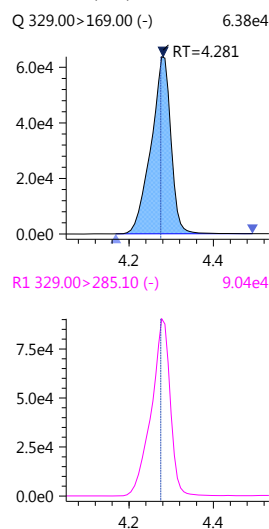
10_2-FtS_1

Conc 0.8760
Area 53259
R#1 29.96 (0.00)



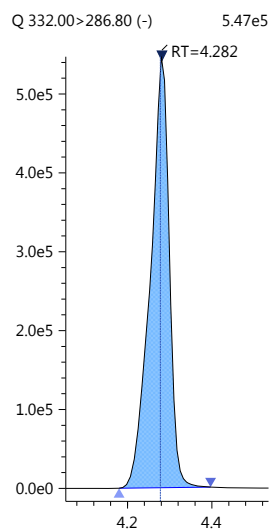
HPFO_DA

Conc 0.9473
Area 208324
R#1 141.96 (0.00)



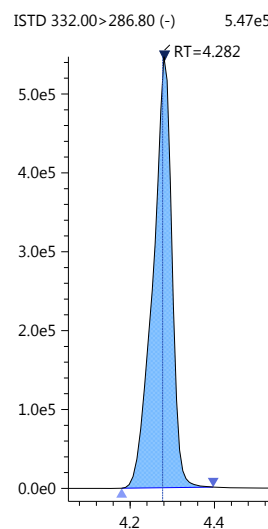
HPFO_DA-13C

Conc 4.8825
Area 1699926



HPFO_DA-13C_IS

Conc 5.0000
Area 1699926



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200417_032

Sample ID: 1.0 PPB ICV

Date acquired: 4/17/2020 7:09:20 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_curve\200417_032.lcd

Vial: 8 | Inj. Volume: 15.0000uL | Tray: 0

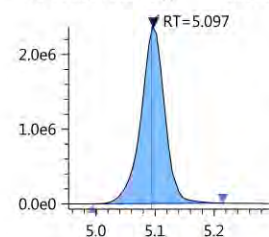
13C7-PFUnDA_IS

Conc 5.0000

Area 6630172

ISTD 570.00>525.00 (-)

2.37e6

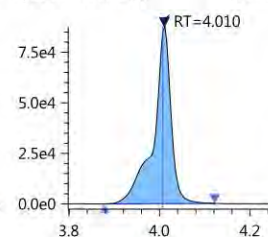
**PFBS_1**

Conc 0.8438

Area 234735

Q 299.00>80.00 (-)

2.37e6

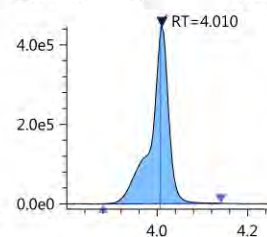
**PFBS-13C**

Conc 4.6657

Area 1209416

Q 301.80>80.00 (-)

8.77e4

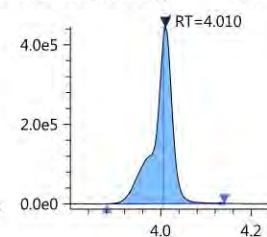
**PFBS-13C_IS**

Conc 5.0000

Area 1209416

ISTD 301.80>80.00 (-)

4.46e5

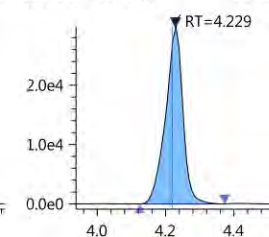
**PFPeS**

Conc 0.8740

Area 104301

Q 349.00>99.00 (-)

4.46e5

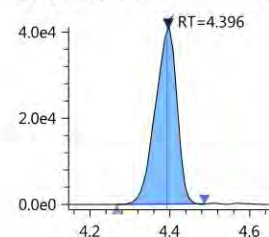
**PFHxS_1**

Conc 0.9100

Area 155161

Q 399.00>80.00 (-)

4.11e4

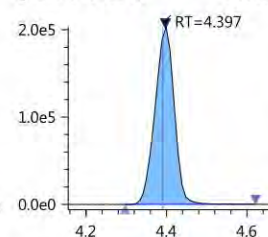
**PFHxS-180**

Conc 4.6121

Area 673032

Q 402.70>84.05 (-)

4.11e4

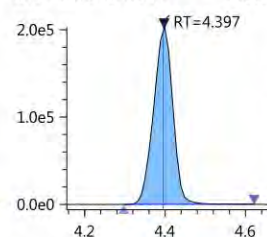
**PFHxS-180_IS**

Conc 5.0000

Area 673032

ISTD 402.70>84.05 (-)

2.03e5

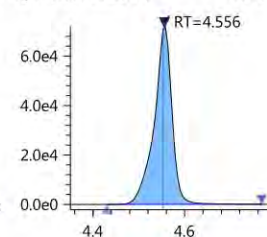
**PFHpS_1**

Conc 0.9217

Area 193434

Q 449.00>80.15 (-)

2.03e5

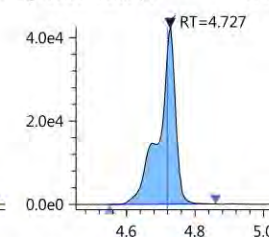
**PFOS_1**

Conc 0.8519

Area 143655

Q 499.00>80.00 (-)

7.17e4

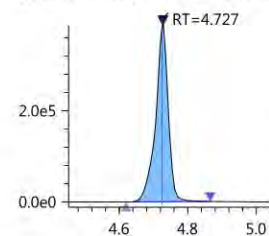
**PFOS-13C**

Conc 4.8464

Area 995443

Q 502.80>80.05 (-)

3.89e5

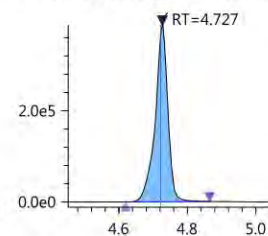
**PFOS-13C_IS**

Conc 5.0000

Area 995443

ISTD 502.80>80.05 (-)

3.89e5

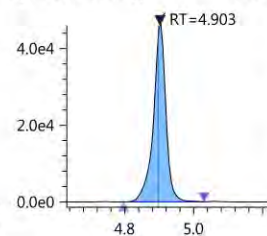
**PFNS**

Conc 0.9931

Area 116566

Q 549.00>99.00 (-)

3.89e5

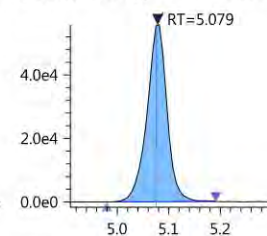
**PFDS_1**

Conc 0.9553

Area 150558

Q 599.00>79.90 (-)

4.62e4

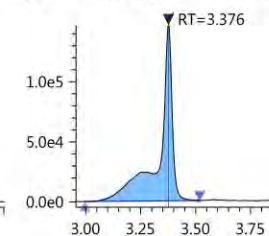
**PFBA**

Conc 0.9348

Area 601488

Q 213.00>169.10 (-)

5.58e4

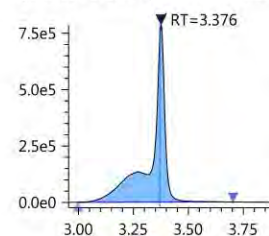
**PFBA-13C**

Conc 4.6973

Area 3294707

Q 216.90>172.15 (-)

7.86e5

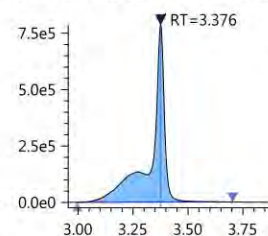
**PFBA-13C_IS**

Conc 5.0000

Area 3294707

ISTD 216.90>172.15 (-)

7.86e5

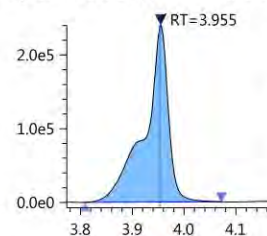
**PFPeA**

Conc 0.9240

Area 760767

Q 263.05>219.10 (-)

2.40e5

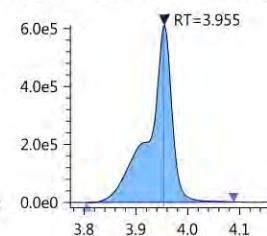
**PFPeA-13C**

Conc 4.8321

Area 1907265

Q 267.90>223.00 (-)

6.11e5

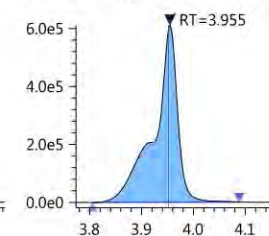
**PFPeA-13C_IS**

Conc 5.0000

Area 1907265

ISTD 267.90>223.00 (-)

6.11e5

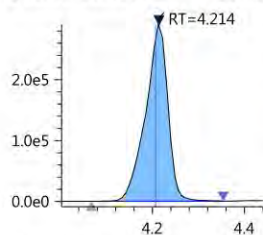


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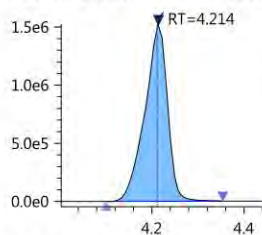
PFHxA

Conc 0.9527
Area 975091
Q 313.00>269.00 (-)



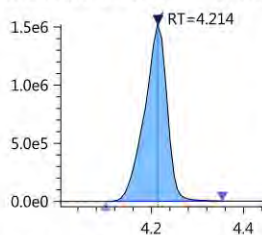
PFHxA-13C

Conc 4.7900
Area 5179046
Q 314.90>270.10 (-)



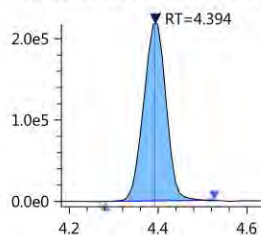
PFHxA-13C_IS

Conc 5.0000
Area 5179046
ISTD 314.90>270.10 (-)



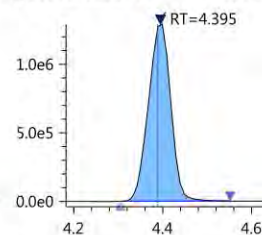
PFHpA

Conc 0.9405
Area 767341
Q 362.90>319.00 (-)



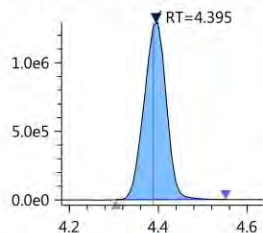
PFHpA-13C

Conc 4.6220
Area 4520938
Q 366.90>322.10 (-)



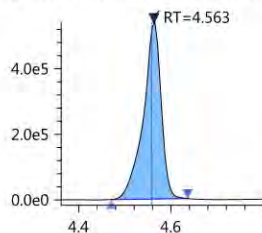
PFHpA-13C_IS

Conc 5.0000
Area 4520938
ISTD 366.90>322.10 (-)



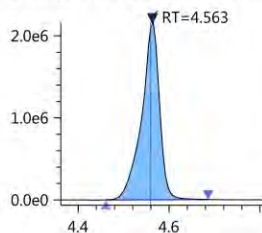
PFOA

Conc 0.9572
Area 1446925
Q 413.00>369.00 (-)



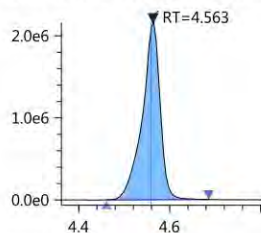
PFOA-13C

Conc 4.9978
Area 5913714
Q 416.80>372.05 (-)



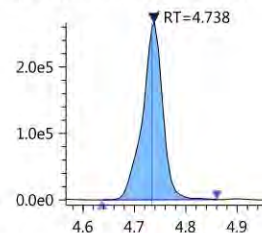
PFOA-13C_IS

Conc 5.0000
Area 5913714
ISTD 416.80>372.05 (-)



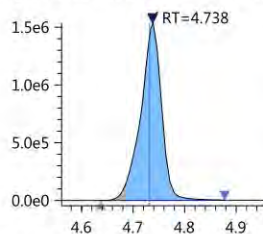
PFNA

Conc 0.9475
Area 728700
Q 463.00>418.90 (-)



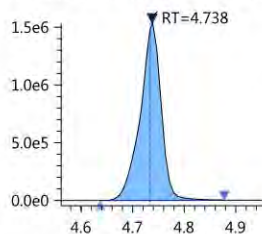
PFNA-13C

Conc 4.8519
Area 4286172
Q 467.80>423.00 (-)



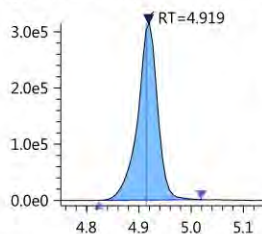
PFNA-13C_IS

Conc 5.0000
Area 4286172
ISTD 467.80>423.00 (-)



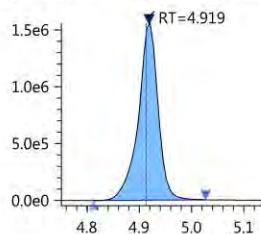
PFDA

Conc 0.9591
Area 832742
Q 513.00>468.80 (-)



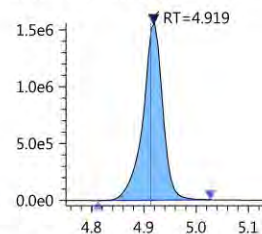
PFDA-13C

Conc 5.1010
Area 4088716
Q 514.80>469.95 (-)



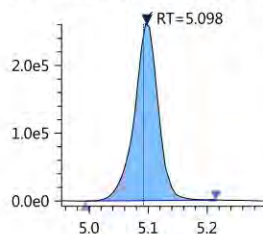
PFDA-13C_IS

Conc 5.0000
Area 4088716
ISTD 514.80>469.95 (-)



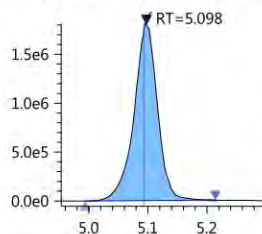
PFUnA

Conc 0.9300
Area 735593
Q 563.00>518.90 (-)



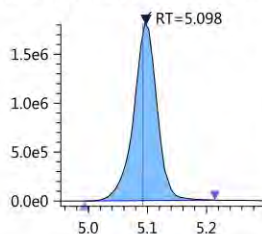
PFUnA-13C

Conc 5.0052
Area 5004234
Q 564.80>519.95 (-)



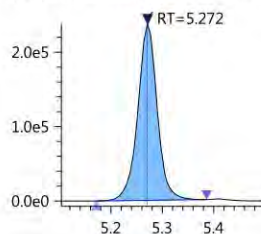
PFUnA-13C_IS

Conc 5.0000
Area 5004234
ISTD 564.80>519.95 (-)



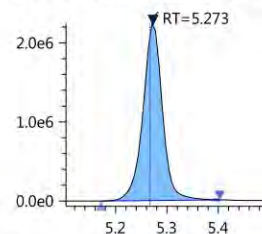
PFDoA

Conc 0.9401
Area 622818
Q 613.05>569.00 (-)



PFDoA-13C

Conc 4.9941
Area 5882328
Q 614.80>569.95 (-)

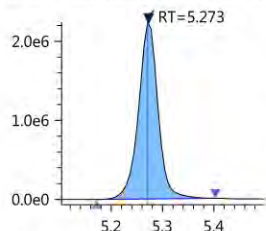


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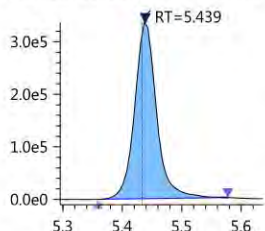
PFDa-13C_IS

Conc 5.0000
Area 5882328
ISTD 614.80>569.95 (-) 2.24e6



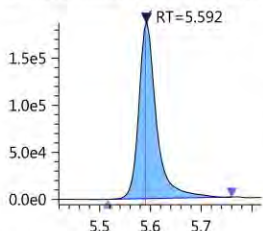
PFTrDA

Conc 0.9604
Area 860069
Q 663.00>618.90 (-) 3.37e5



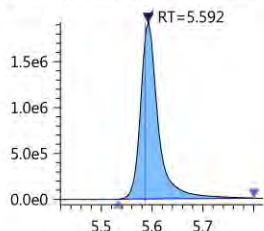
PFTeDA

Conc 0.9788
Area 451326
Q 713.40>669.00 (-) 1.88e5



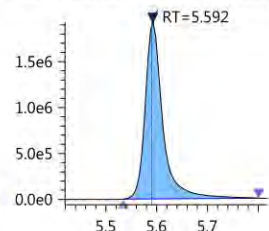
PFTeDA-13C

Conc 4.9241
Area 4627529
Q 714.70>669.90 (-) 1.93e6



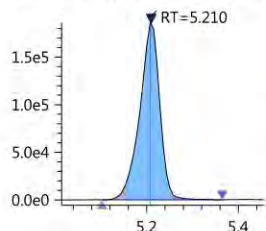
PFTeDA-13C_IS

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Area 4627529
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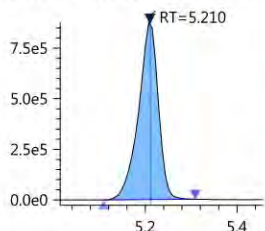
FOSA

Conc 0.8955
Area 561842
Q 498.20>78.00 (-) 1.86e5



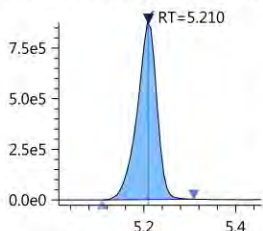
FOSA-13C

Conc 4.8874
Area 2619310
Q 506.00>78.05 (-) 8.76e5



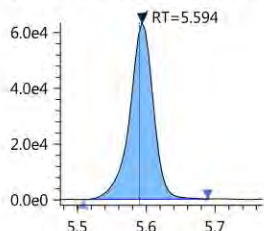
FOSA-13C_IS

Conc 5.0000
Area 2619310
ISTD 506.00>78.05 (-) 8.76e5



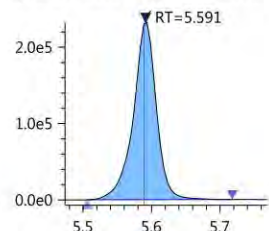
N-MeFOSA

Conc 0.8767
Area 150280
Q 512.00>169.10 (-) 6.36e4



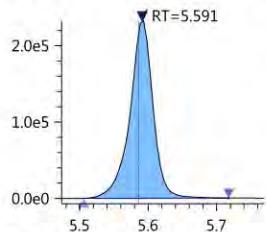
N-MeFOSA-d3

Conc 4.8490
Area 544651
Q 514.90>168.90 (-) 2.32e5



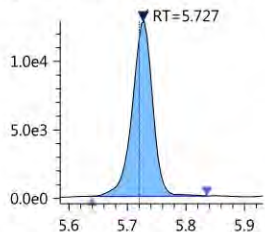
N-MeFOSA-d3_IS

Conc 5.0000
Area 544651
ISTD 514.90>168.90 (-) 2.32e5



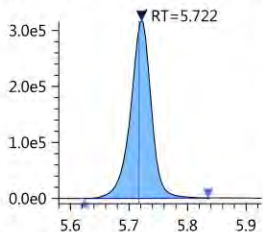
N-EtFOSA

Conc 0.9958
Area 31080
Q 526.90>169.10 (-) 1.29e4



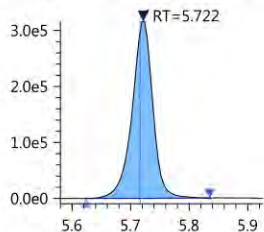
N-EtFOSA-d9

Conc 4.5832
Area 778026
Q 530.90>169.15 (-) 3.17e5



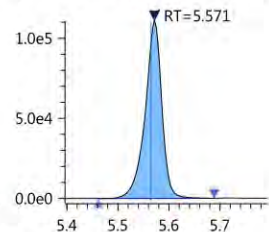
N-EtFOSA-d9_IS

Conc 5.0000
Area 778026
ISTD 530.90>169.15 (-) 3.17e5



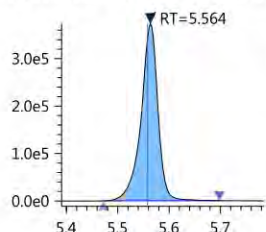
N-MeFOSE

Conc 0.9779
Area 250867
Q 616.00>59.00 (-) 1.11e5



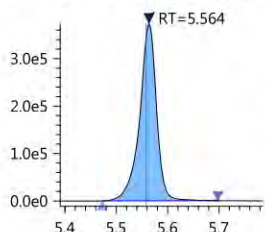
N-MeFOSE-d7

Conc 4.7186
Area 851540
Q 622.70>59.10 (-) 3.74e5



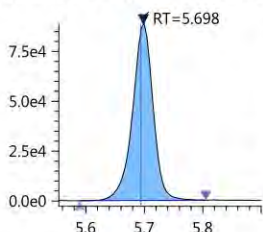
N-MeFOSE-d7_IS

Conc 5.0000
Area 851540
ISTD 622.70>59.10 (-) 3.74e5



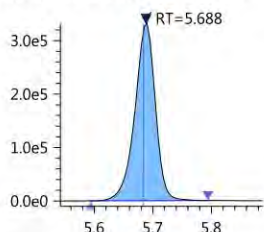
N-EtFOSE

Conc 0.9253
Area 217027
Q 630.00>58.90 (-) 8.89e4



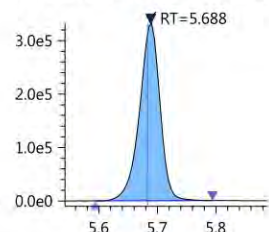
N-EtFOSE-d9

Conc 4.8121
Area 807307
Q 638.70>59.10 (-) 3.32e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 807307
ISTD 638.70>59.10 (-) 3.32e5

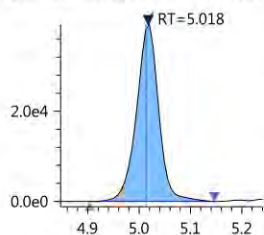


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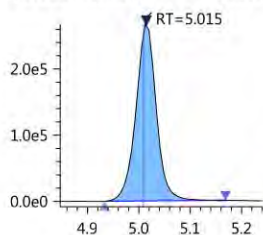
N-MeFOSAA

Conc 1.2734
Area 117584
Q 570.20>419.00 (-) 3.93e4



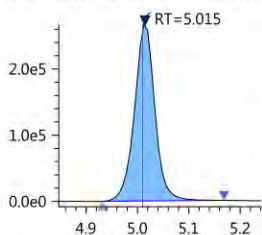
N-MeFOSAA-d3

Conc 4.8420
Area 736759
Q 572.80>419.05 (-) 2.68e5



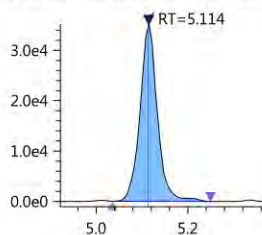
N-MeFOSAA-d3_IS

Conc 5.0000
Area 736759
ISTD 572.80>419.05 (-) 2.68e5



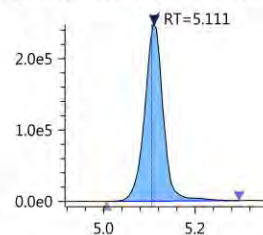
N-EtFOSAA

Conc 1.2049
Area 92416
Q 584.20>418.95 (-) 3.52e4



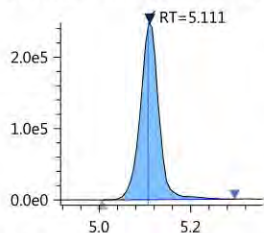
N-EtFOSAA-d5

Conc 4.9525
Area 694384
Q 588.80>419.00 (-) 2.48e5



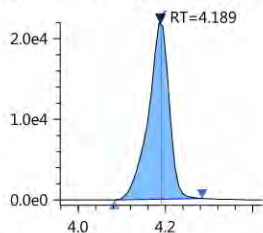
N-EtFOSAA-d5_IS

Conc 5.0000
Area 694384
ISTD 588.80>419.00 (-) 2.48e5



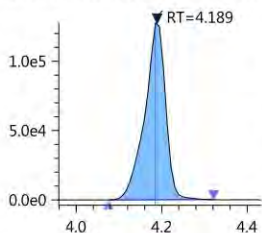
4_2-FTS_1

Conc 0.9063
Area 72696
Q 327.00>307.05 (-) 2.20e4



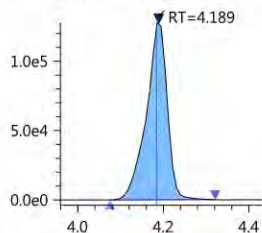
4_2-FTS-13C

Conc 4.8254
Area 430446
Q 328.80>309.05 (-) 1.28e5



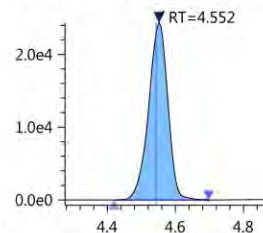
4_2-FTS-13C_IS

Conc 5.0000
Area 430446
ISTD 328.80>309.05 (-) 1.28e5



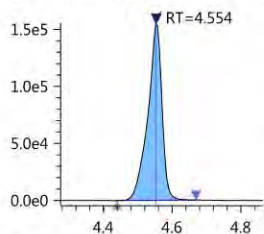
6_2-FTS_1

Conc 0.9253
Area 95125
Q 427.00>407.00 (-) 2.44e4



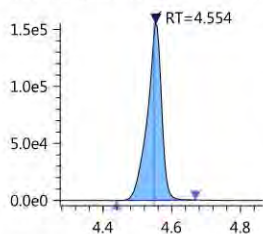
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Conc 4.9912
Area 444101
Q 428.90>409.00 (-) 1.55e5



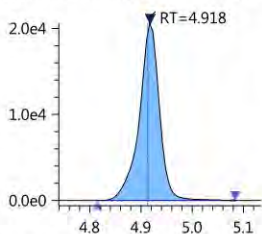
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Conc 5.0000
Area 444101
ISTD 428.90>409.00 (-) 1.55e5



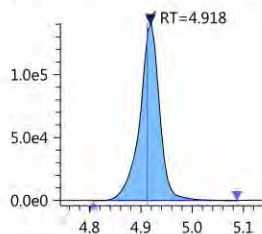
8_2-FTS_1

Conc 0.9029
Area 56270
Q 527.10>506.90 (-) 2.06e4



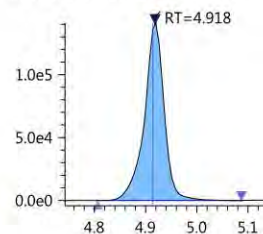
8_2-FTS-13C

Conc 5.2419
Area 378132
Q 528.80>509.00 (-) 1.41e5



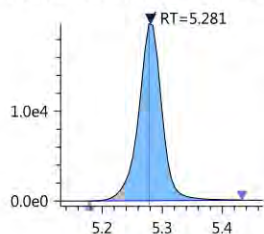
8_2-FTS-13C_IS

Conc 5.0000
Area 378132
ISTD 528.80>509.00 (-) 1.41e5



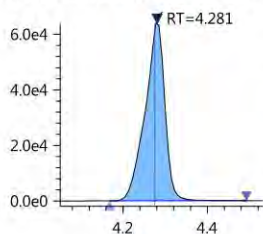
10_2-FTS_1

Conc 0.8760
Area 53259
Q 627.00>606.95 (-) 1.98e4



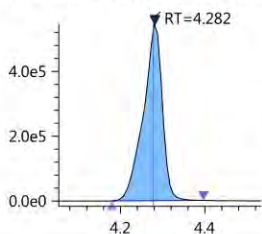
HPFO_DA

Conc 0.9473
Area 208324
Q 329.00>169.00 (-) 6.38e4



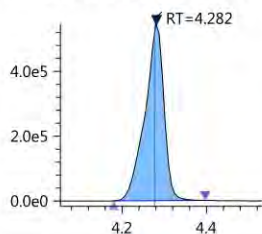
HPFO_DA-13C

Conc 4.8825
Area 1699926
Q 332.00>286.80 (-) 5.47e5



HPFO_DA-13C_IS

Conc 5.0000
Area 1699926
ISTD 332.00>286.80 (-) 5.47e5



Insight Report

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200417_033

Sample ID: IB
Date acquired: 4/17/2020 7:19:47 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200417_cuvre\200417_033.lcd
Vial: 47 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.099	5742886	5742886	1	5.0000	ng/mL	----
PFBS_1	Auto	4.018	1145	1036172	2	0.0048	ng/mL	----
PFBS-13C	Auto	4.012	1036172	5742886	1	4.6150	ng/mL	----
PFBS-13C_IS	Auto	4.012	1036172	1036172	2	5.0000	ng/mL	----
PFPeS	ND(W/B)	----	----	1036172	2	----	ng/mL	----
PFHxS_1	Auto	4.396	838	616150	3	-0.0115	ng/mL	----
PFHxS-18O	Auto	4.399	616150	5742886	1	4.8747	ng/mL	----
PFHxS-18O_IS	Auto	4.399	616150	616150	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.555	118	616150	3	0.0006	ng/mL	----
PFOS_1	Auto	4.723	1063	850627	4	0.0074	ng/mL	----
PFOS-13C	Auto	4.727	850627	5742886	1	4.7812	ng/mL	----
PFOS-13C_IS	Auto	4.727	850627	850627	4	5.0000	ng/mL	----
PFNS	ND(W/B)	----	----	850627	4	----	ng/mL	----
PFDS_1	ND(W/B)	----	----	850627	4	----	ng/mL	----
PFBA	M	3.377	1425	2790168	5	0.0026	ng/mL	----
PFBA-13C	Auto	3.377	2790168	5742886	1	4.5926	ng/mL	----
PFBA-13C_IS	Auto	3.377	2790168	2790168	5	5.0000	ng/mL	----
PFPeA	Auto	3.919	21175	1617859	6	0.0016	ng/mL	----
PFPeA-13C	Auto	3.956	1617859	5742886	1	4.7322	ng/mL	----
PFPeA-13C_IS	Auto	3.956	1617859	1617859	6	5.0000	ng/mL	----
PFHxA	M	4.203	12898	4829137	7	0.0074	ng/mL	----
PFHxA-13C	Auto	4.215	4829137	5742886	1	5.1565	ng/mL	----
PFHxA-13C_IS	Auto	4.215	4829137	4829137	7	5.0000	ng/mL	----
PFHpA	Auto	4.397	8882	4191294	8	0.0017	ng/mL	----
PFHpA-13C	Auto	4.397	4191294	5742886	1	4.9471	ng/mL	----
PFHpA-13C_IS	Auto	4.397	4191294	4191294	8	5.0000	ng/mL	----
PFOA	Auto	4.560	15283	5151632	9	0.0032	ng/mL	----
PFOA-13C	Auto	4.564	5151632	5742886	1	5.0264	ng/mL	----
PFOA-13C_IS	Auto	4.564	5151632	5151632	9	5.0000	ng/mL	----
PFNA	Auto	4.743	2362	3869120	10	-0.0011	ng/mL	----
PFNA-13C	Auto	4.738	3869120	5742886	1	5.0564	ng/mL	----
PFNA-13C_IS	Auto	4.738	3869120	3869120	10	5.0000	ng/mL	----
PFDA	M	4.899	2834	3569672	11	0.0037	ng/mL	----
PFDA-13C	Auto	4.919	3569672	5742886	1	5.1415	ng/mL	----
PFDA-13C_IS	Auto	4.919	3569672	3569672	11	5.0000	ng/mL	----
PFUnA	Auto	5.099	10588	4603538	12	0.0009	ng/mL	----
PFUnA-13C	Auto	5.099	4603538	5742886	1	5.3158	ng/mL	----
PFUnA-13C_IS	Auto	5.099	4603538	4603538	12	5.0000	ng/mL	----
PFDoA	Auto	5.272	3031	5046178	13	0.0185	ng/mL	----
PFDoA-13C	Auto	5.273	5046178	5742886	1	4.9461	ng/mL	----
PFDoA-13C_IS	Auto	5.273	5046178	5046178	13	5.0000	ng/mL	----
PFTeDA	Auto	5.439	5727	4112558	14	0.0028	ng/mL	----
PFTeDA	Auto	5.592	49975	4112558	14	-0.0023	ng/mL	----
PFTeDA-13C	Auto	5.592	4112558	5742886	1	5.0522	ng/mL	----
PFTeDA-13C_IS	Auto	5.592	4112558	4112558	14	5.0000	ng/mL	----
FOSA	Auto	5.210	2309	2045331	16	0.0047	ng/mL	----
FOSA-13C	Auto	5.211	2045331	5742886	1	4.4060	ng/mL	----
FOSA-13C_IS	Auto	5.211	2045331	2045331	16	5.0000	ng/mL	----
N-MeFOSA	M	5.596	722	339090	17	0.0066	ng/mL	----
N-MeFOSA-d3	Auto	5.592	339090	5742886	1	3.4853	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.592	339090	339090	17	5.0000	ng/mL	----
N-EtFOSA	M	5.726	492	482213	18	0.0257	ng/mL	----
N-EtFOSA-d9	Auto	5.722	482213	5742886	1	3.2795	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.722	482213	482213	18	5.0000	ng/mL	----
N-MeFOSE	M	5.566	225	576097	19	0.0013	ng/mL	----
N-MeFOSE-d7	Auto	5.564	576097	5742886	1	3.6855	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.564	576097	576097	19	5.0000	ng/mL	----
N-EtFOSE	M	5.698	528	533429	20	0.0034	ng/mL	----
N-EtFOSE-d9	Auto	5.689	533429	5742886	1	3.6708	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.689	533429	533429	20	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.027	105	591065	21	0.0014	ng/mL	----
N-MeFOSAA-d3	Auto	5.015	591065	5742886	1	4.4847	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.015	591065	591065	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.127	437	620746	22	0.0068	ng/mL	----
N-EtFOSAA-d5	Auto	5.112	620746	5742886	1	5.1113	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.112	620746	620746	22	5.0000	ng/mL	----
4_2-FTS_1	Auto	4.194	158	351947	23	0.0024	ng/mL	----
4_2-FTS-13C	Auto	4.190	351947	5742886	1	4.5549	ng/mL	----

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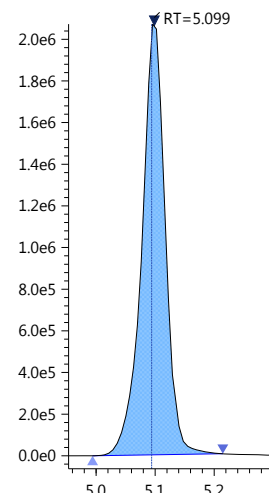
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.190	351947	351947	23	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.549	769	378261	24	0.0088	ng/mL	----
6_2-FTS-13C	Auto	4.555	378261	5742886	1	4.9080	ng/mL	----
6_2-FTS-13C_IS	Auto	4.555	378261	378261	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.919	135	324364	25	0.0025	ng/mL	----
8_2-FTS-13C	Auto	4.919	324364	5742886	1	5.1912	ng/mL	----
8_2-FTS-13C_IS	Auto	4.919	324364	324364	25	5.0000	ng/mL	----
10_2-FTS_1	Auto	5.285	51	324364	25	0.0010	ng/mL	----
HPFO_DA	M	4.286	81	1471414	26	0.0004	ng/mL	----
HPFO_DA-13C	Auto	4.282	1471414	5742886	1	4.8791	ng/mL	----
HPFO_DA-13C_IS	Auto	4.282	1471414	1471414	26	5.0000	ng/mL	----

13C7-PFUnDA_IS

Conc 5.0000
Area 5742886

ISTD 570.00>525.00 (-)

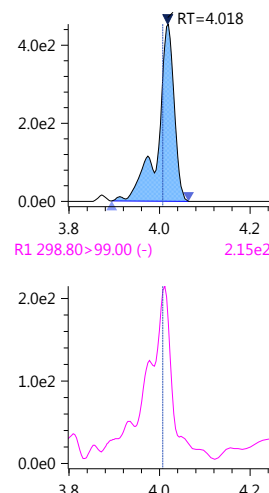


PFBS_1

Conc 0.0048
Area 1145

R#1 39.42 (0.00)

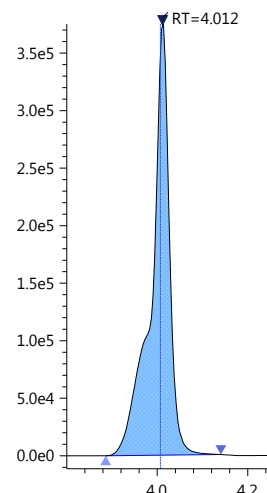
Q 299.00>80.00 (-)



PFBS-13C

Conc 4.6150
Area 1036172

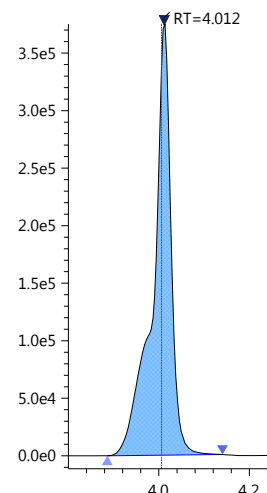
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
Area 1036172

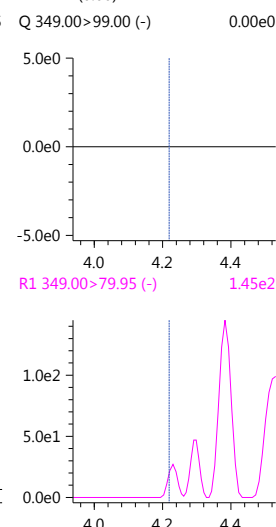
ISTD 301.80>80.00 (-)



PFPeS

Conc ----
Area ----

R#1 ---- (0.00)

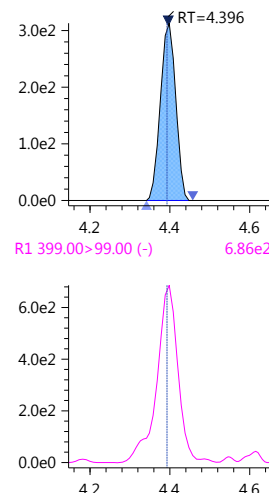


PFHxS_1

Conc -0.0115
Area 838

R#1 201.32 (0.00)

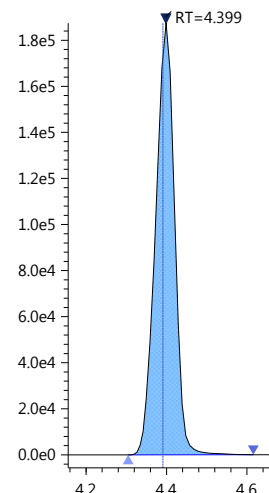
Q 399.00>80.00 (-)



PFHxS-180

Conc 4.8747
Area 616150

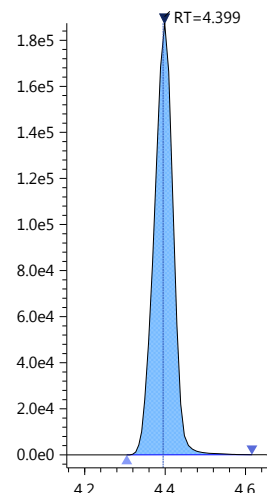
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
Area 616150

ISTD 402.70>84.05 (-)

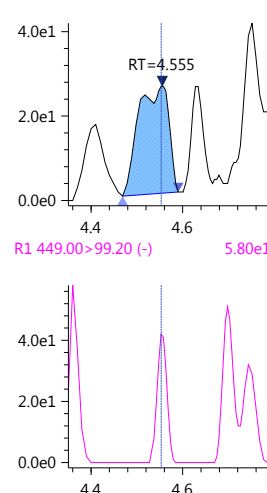


PFHpS_1

Conc 0.0006
Area 118

R#1 177.78 (0.00)

Q 449.00>80.15 (-)

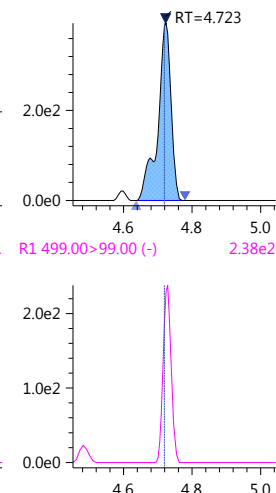


PFOS_1

Conc 0.0074
Area 1063

R#1 63.95 (0.00)

Q 499.00>80.00 (-)



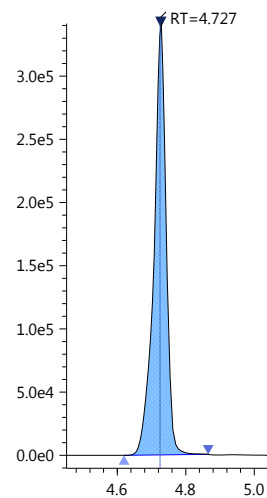
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PFOS-13C

Conc 4.7812
 Area 850627

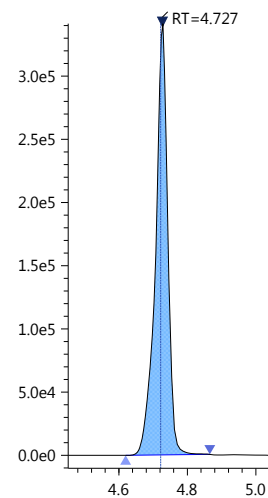
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 Area 850627

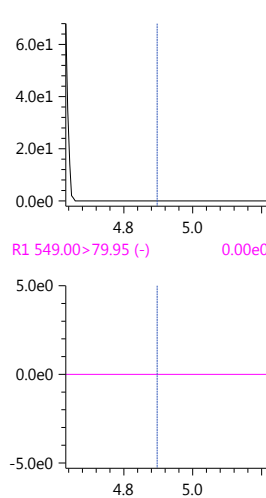
ISTD 502.80>80.05 (-)



PFNS

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

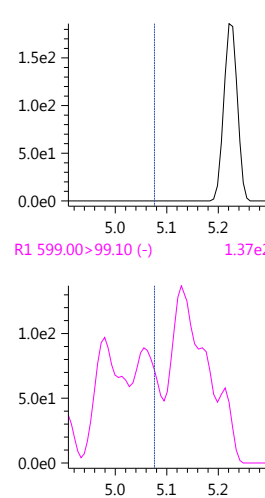
Q 549.00>99.00 (-)



PFDS_1

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

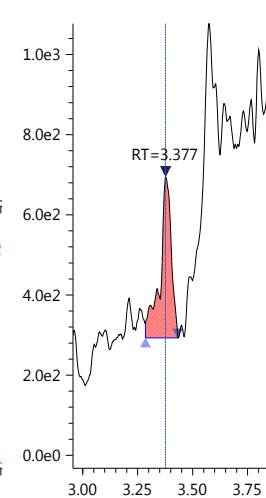
Q 599.00>79.90 (-)



PFBA

Conc 0.0026
 Area 1425
 After-MP

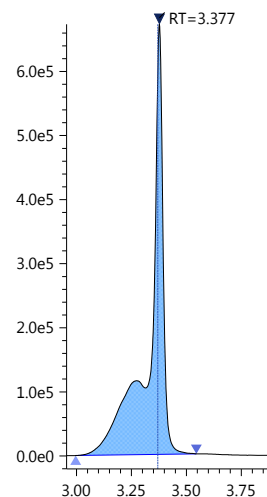
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.5926
 Area 2790168

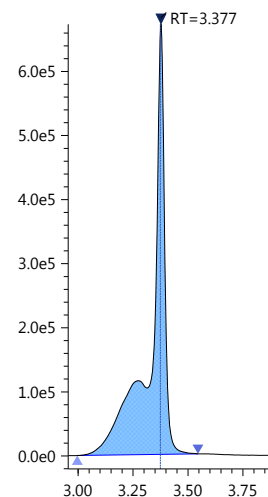
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
 Area 2790168

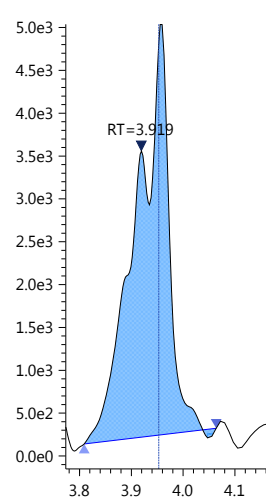
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.0016
 Area 21175

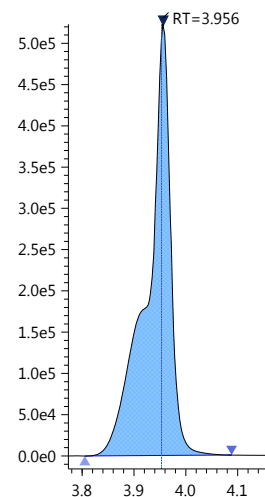
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.7322
 Area 1617859

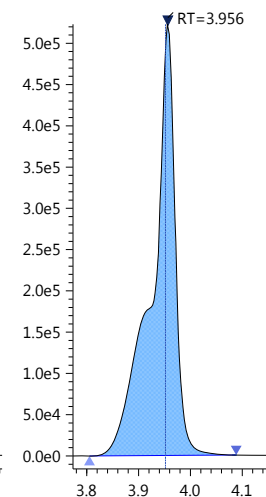
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 Area 1617859

ISTD 267.90>223.00 (-)

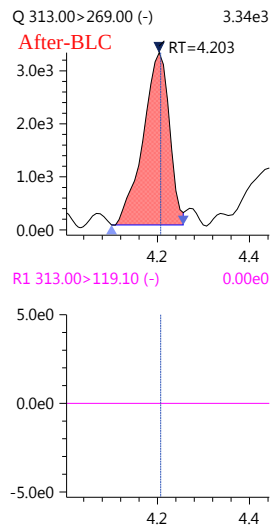


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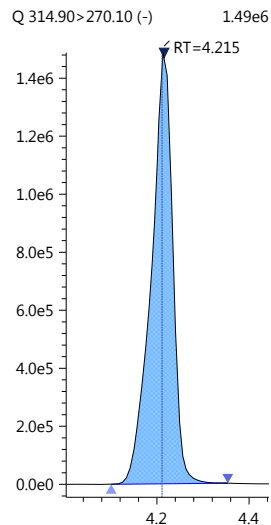
PFHxA

Conc 0.0074
Area 12898
R#1 0.00 (0.00)



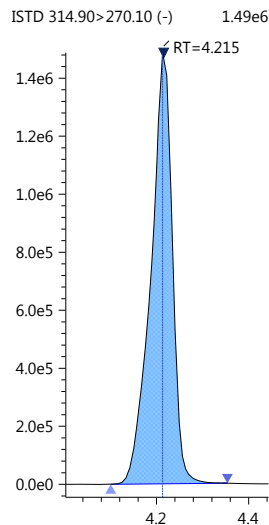
PFHxA-13C

Conc 5.1565
Area 4829137



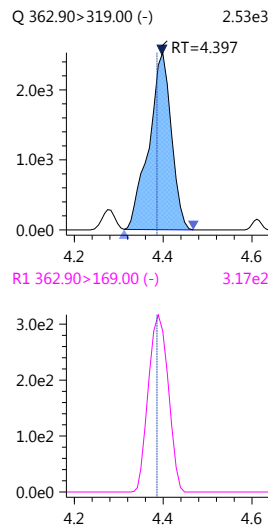
PFHxA-13C_IS

Conc 5.0000
Area 4829137



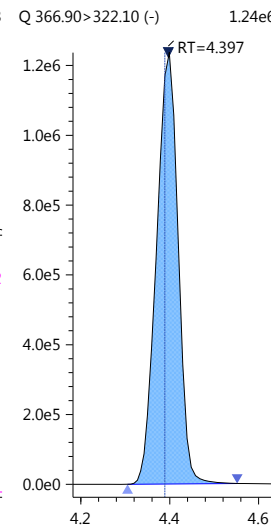
PFHpA

Conc 0.0017
Area 8882
R#1 11.66 (0.00)



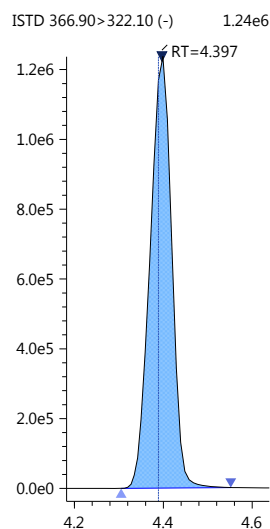
PFHpA-13C

Conc 4.9471
Area 4191294



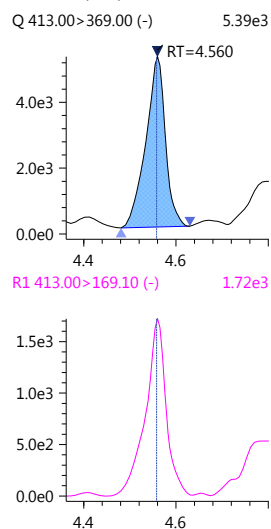
PFHpA-13C_IS

Conc 5.0000
Area 4191294



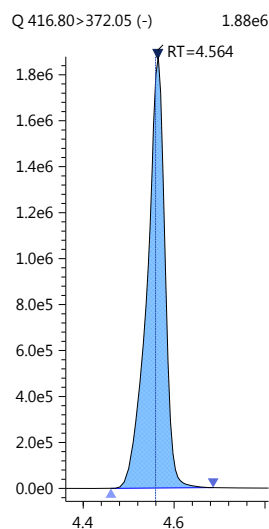
PFOA

Conc 0.0032
Area 15283
R#1 32.94 (0.00)



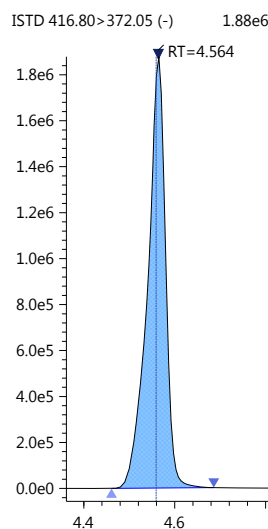
PFOA-13C

Conc 5.0264
Area 5151632



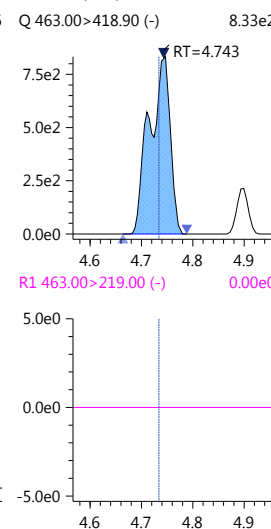
PFOA-13C_IS

Conc 5.0000
Area 5151632



PFNA

Conc -0.0011
Area 2362
R#1 0.00 (0.00)



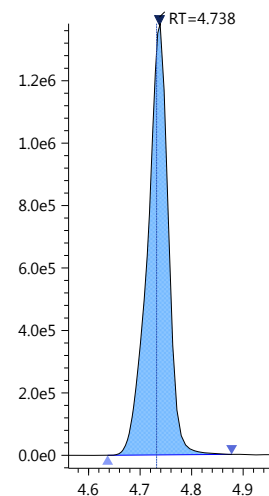
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PFNA-13C

Conc 5.0564
Area 3869120

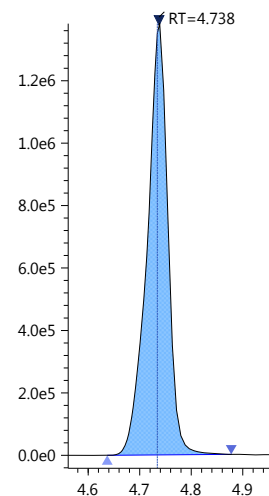
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
Area 3869120

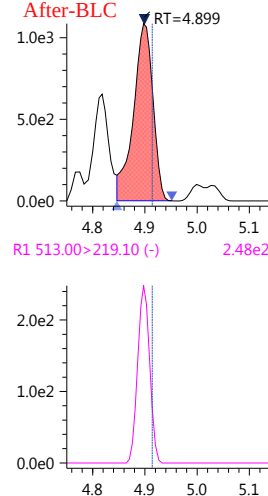
ISTD 467.80>423.00 (-)



PFDA

Conc 0.0037
Area 2834
R#1 22.85 (0.00)

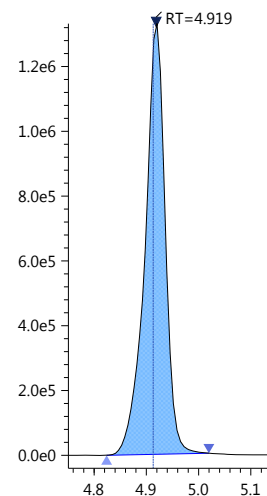
Q 513.00>468.80 (-)



PFDA-13C

Conc 5.1415
Area 3569672

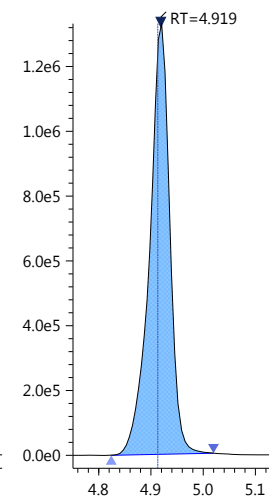
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
Area 3569672

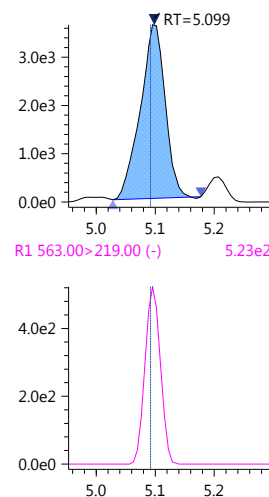
ISTD 514.80>469.95 (-)



PFUnA

Conc 0.0009
Area 10588
R#1 12.68 (0.00)

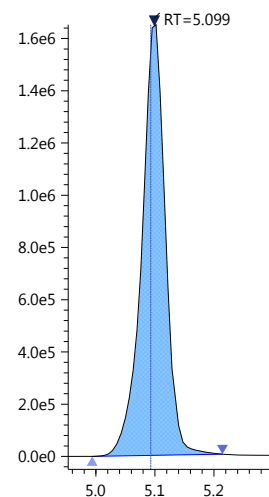
Q 563.00>518.90 (-)



PFUnA-13C

Conc 5.3158
Area 4603538

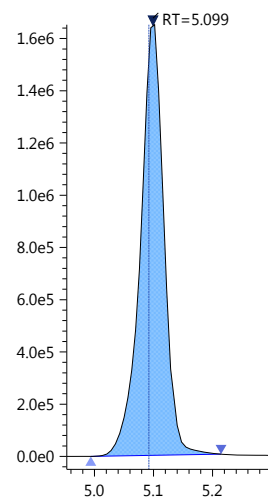
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
Area 4603538

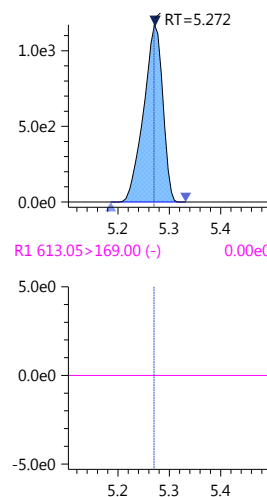
ISTD 564.80>519.95 (-)



PFDaA

Conc 0.0185
Area 3031
R#1 0.00 (0.00)

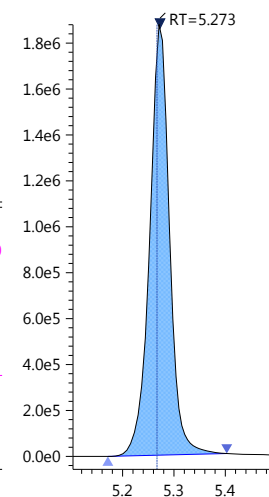
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.9461
Area 5046178

Q 614.80>569.95 (-)



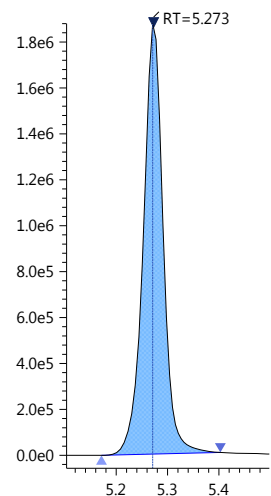
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PFDaA-13C_IS

Conc 5.0000
Area 5046178

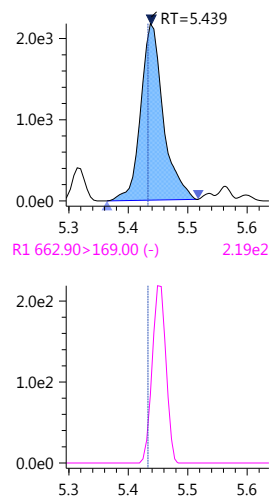
ISTD 614.80>569.95 (-) 1.88e6



PFTeDA

Conc 0.0028
Area 5727
R#1 7.54 (0.00)

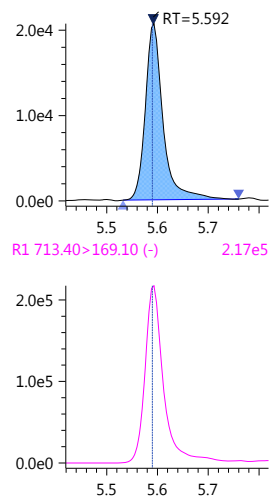
Q 663.00>618.90 (-) 2.18e3



PFTeDA

Conc -0.0023
Area 49975
R#1 1050.06 (0.00)

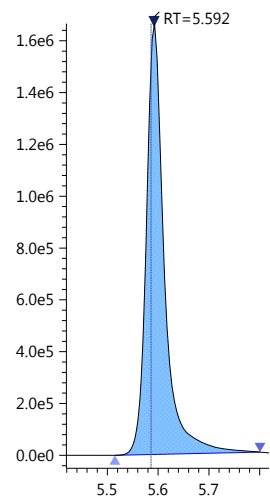
Q 713.40>669.00 (-) 2.08e4



PFTeDA-13C

Conc 5.0522
Area 4112558

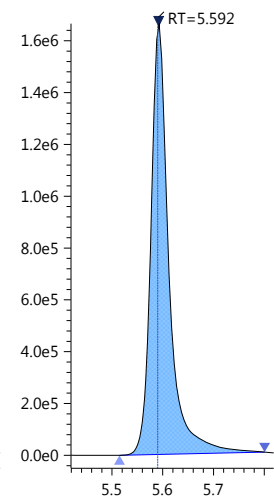
Q 714.70>669.90 (-) 1.67e6



PFTeDA-13C_IS

Conc 5.0000
Area 4112558

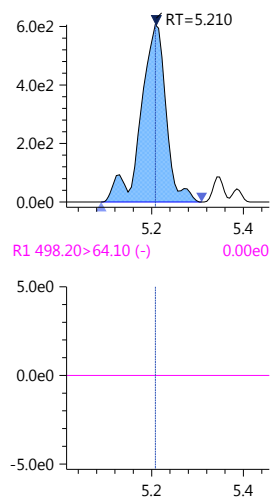
ISTD 714.70>669.90 (-) 1.67e6



FOSA

Conc 0.0047
Area 2309
R#1 0.00 (0.00)

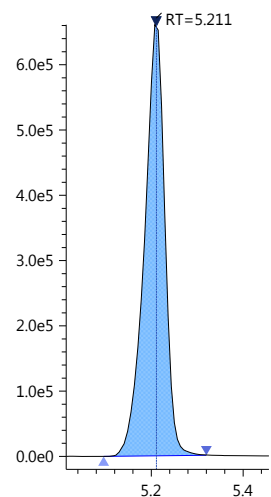
Q 498.20>78.00 (-) 6.06e2



FOSA-13C

Conc 4.4060
Area 2045331

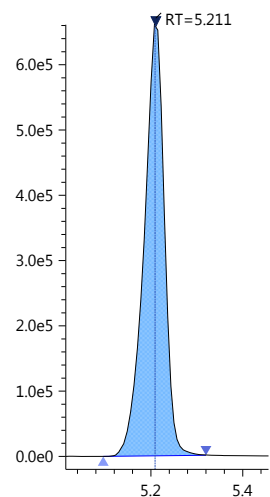
Q 506.00>78.05 (-) 6.61e5



FOSA-13C_IS

Conc 5.0000
Area 2045331

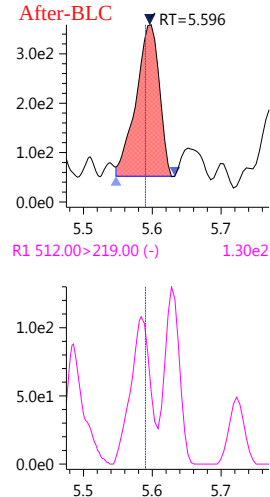
ISTD 506.00>78.05 (-) 6.61e5



N-MeFOSA

Conc 0.0066
Area 722
R#1 0.00 (0.00)

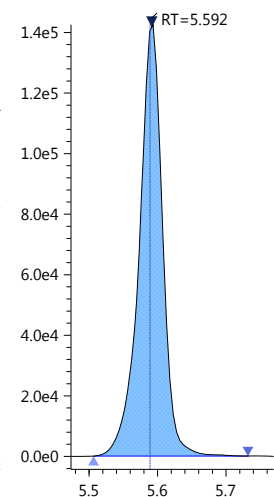
Q 512.00>169.10 (-) 3.59e2



N-MeFOSA-d3

Conc 3.4853
Area 339090

Q 514.90>168.90 (-) 1.43e5



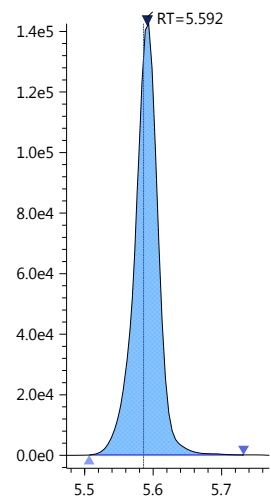
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N-MeFOSA-d3_IS

Conc 5.0000
Area 339090

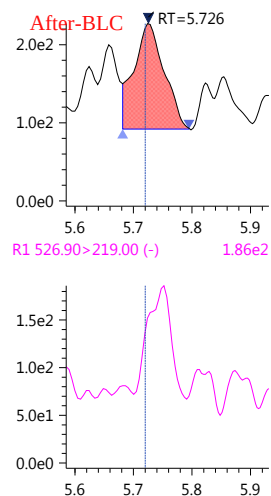
ISTD 514.90>168.90 (-) 1.43e5



N-EtFOSA

Conc 0.0257
Area 492
R#1 85.98 (0.00)

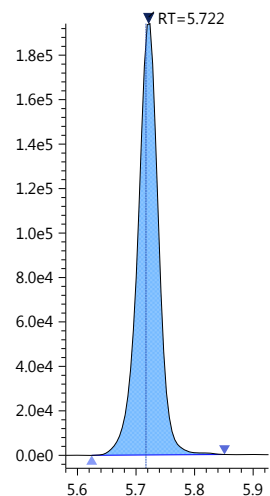
Q 526.90>169.10 (-) 2.27e2



N-EtFOSA-d9

Conc 3.2795
Area 482213

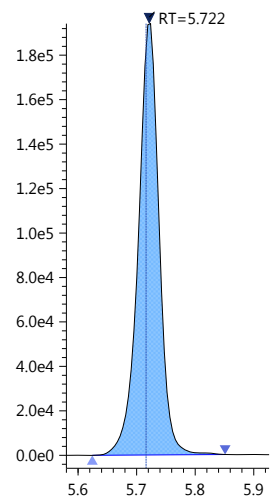
Q 530.90>169.15 (-) 1.94e5



N-EtFOSA-d9_IS

Conc 5.0000
Area 482213

ISTD 530.90>169.15 (-) 1.94e5

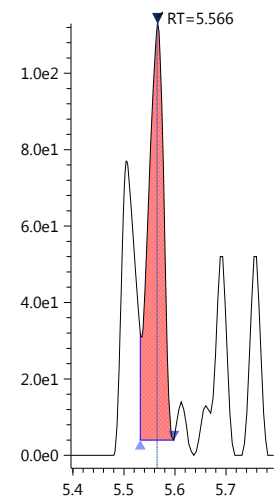


N-MeFOSE

Conc 0.0013
Area 225

After-BLC

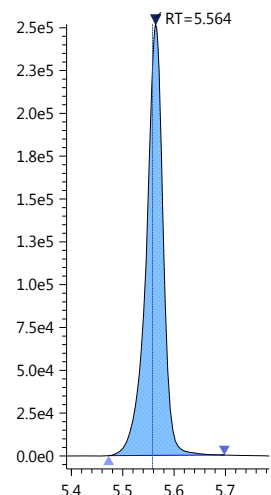
Q 616.00>59.00 (-) 1.13e2



N-MeFOSE-d7

Conc 3.6855
Area 576097

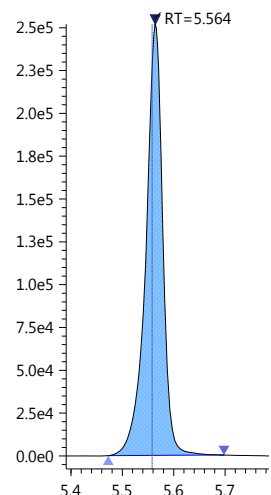
Q 622.70>59.10 (-) 2.52e5



N-MeFOSE-d7_IS

Conc 5.0000
Area 576097

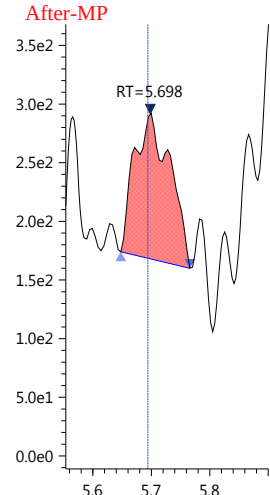
ISTD 622.70>59.10 (-) 2.52e5



N-EtFOSE

Conc 0.0034
Area 528

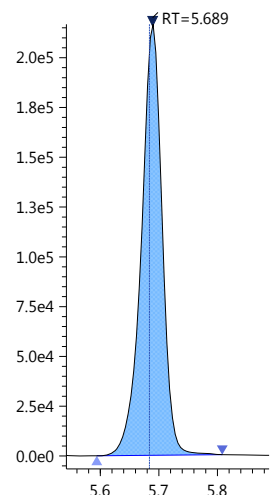
Q 630.00>58.90 (-) 3.68e2



N-EtFOSE-d9

Conc 3.6708
Area 533429

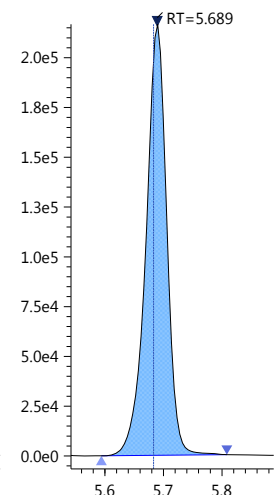
Q 638.70>59.10 (-) 2.17e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 533429

ISTD 638.70>59.10 (-) 2.17e5

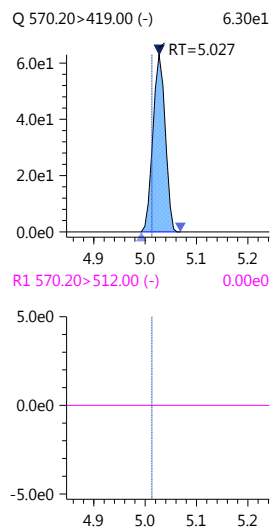


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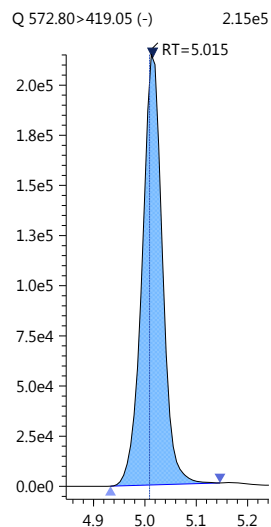
N-MeFOSAA

Conc 0.0014
Area 105
R#1 0.00 (0.00)



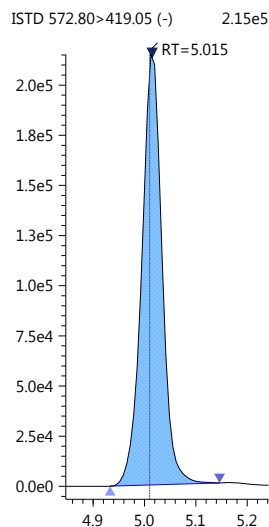
N-MeFOSAA-d3

Conc 4.4847
Area 591065



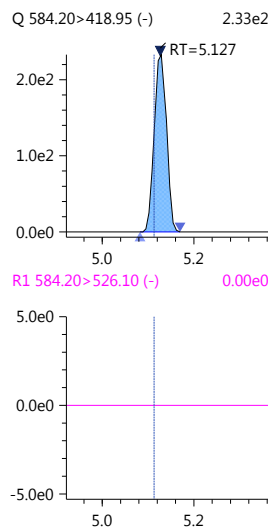
N-MeFOSAA-d3_IS

Conc 5.0000
Area 591065



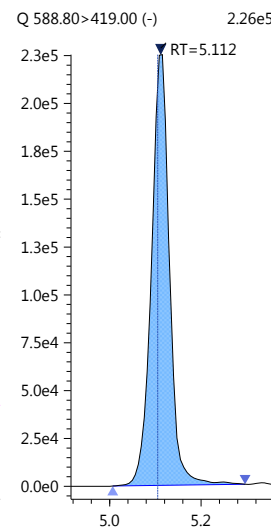
N-EtFOSAA

Conc 0.0068
Area 437
R#1 0.00 (0.00)



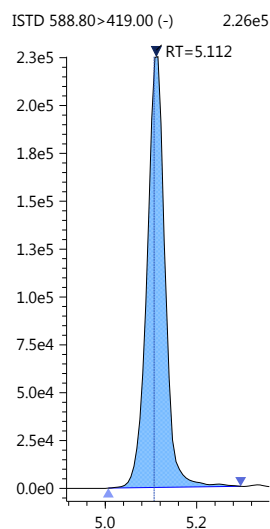
N-EtFOSAA-d5

Conc 5.1113
Area 620746



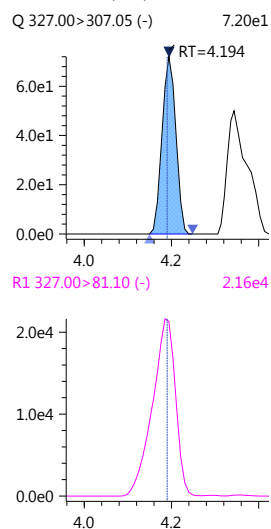
N-EtFOSAA-d5_IS

Conc 5.0000
Area 620746



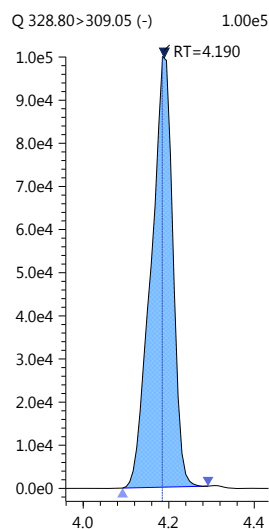
4_2-FTS_1

Conc 0.0024
Area 158
R#1 22690.00 (0.00)



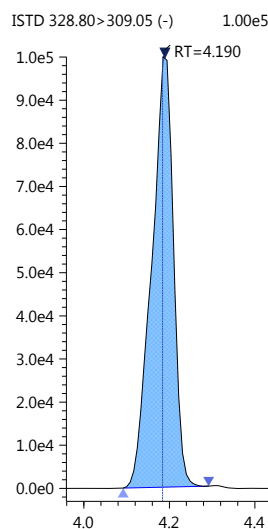
4_2-FTS-13C

Conc 4.5549
Area 351947



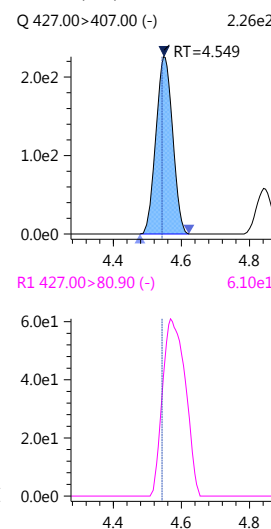
4_2-FTS-13C_IS

Conc 5.0000
Area 351947



6_2-FTS_1

Conc 0.0088
Area 769
R#1 6.74 (0.00)

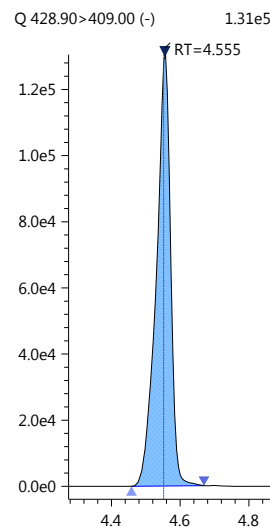


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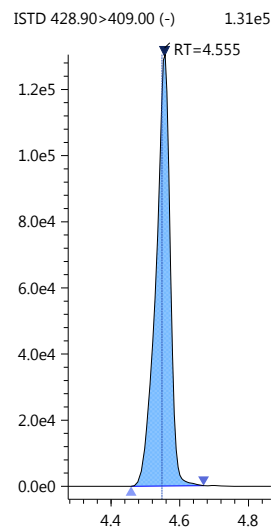
6_2-FTS-13C

Conc 4.9080
 Area 378261



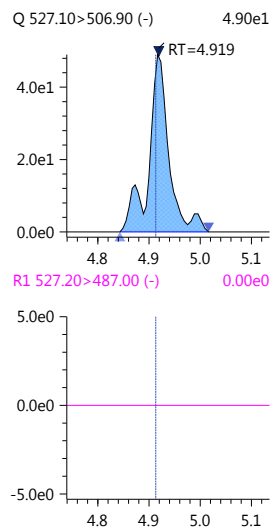
6_2-FTS-13C_IS

Conc 5.0000
 Area 378261



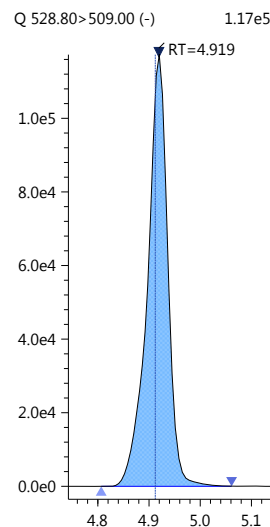
8_2-FTS_1

Conc 0.0025
 Area 135
 R#1 0.00 (0.00)



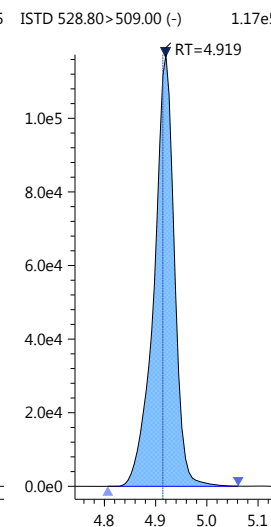
8_2-FTS-13C

Conc 5.1912
 Area 324364



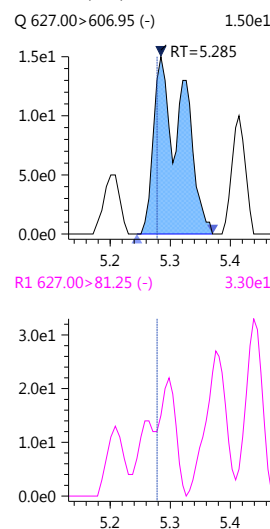
8_2-FTS-13C_IS

Conc 5.0000
 Area 324364



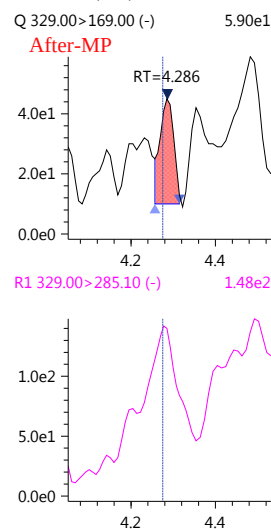
10_2-FtS_1

Conc 0.0010
 Area 51
 R#1 11.76 (0.00)



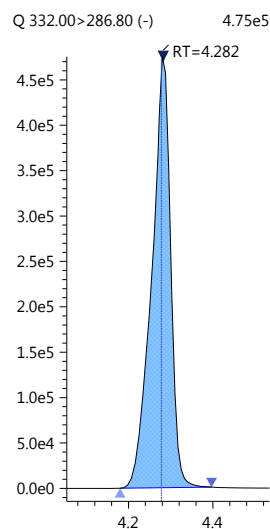
HPFO_DA

Conc 0.0004
 Area 81
 R#1 142.86 (0.00)



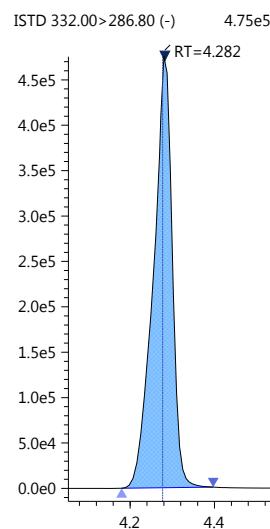
HPFO_DA-13C

Conc 4.8791
 Area 1471414



HPFO_DA-13C_IS

Conc 5.0000
 Area 1471414



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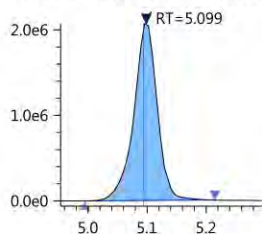
Printed at 4/18/2020 10:35:59 AM

200417_033

Sample ID: IB
Date acquired: 4/17/2020 7:19:47 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\200417_curve\200417_033.lcd
Vial: 47 | Inj. Volume: 15.0000uL | Tray: 1

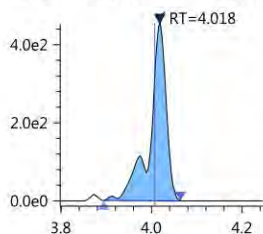
13C7-PFUnDA_IS

Conc 5.0000
Area 5742886
ISTD 570.00>525.00 (-)



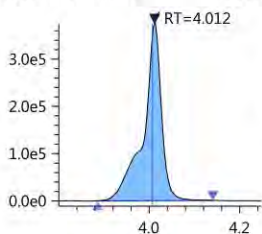
PFBS_1

Conc 0.0048
Area 1145
Q 299.00>80.00 (-)



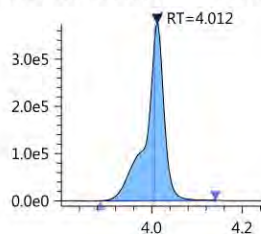
PFBS-13C

Conc 4.6150
Area 1036172
Q 301.80>80.00 (-)



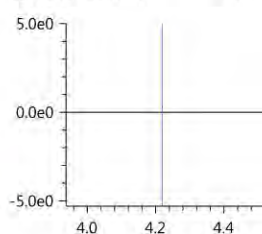
PFBS-13C_IS

Conc 5.0000
Area 1036172
ISTD 301.80>80.00 (-)



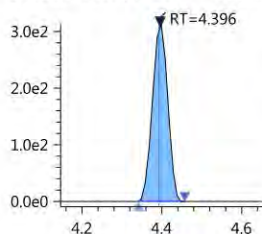
PFPeS

Conc ----
Area ----
Q 349.00>99.00 (-)



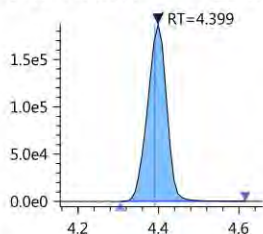
PFHxS_1

Conc -0.0115
Area 838
Q 399.00>80.00 (-)



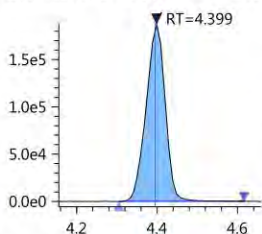
PFHxS-180

Conc 4.8747
Area 616150
Q 402.70>84.05 (-)



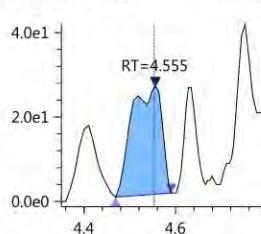
PFHxS-180_IS

Conc 5.0000
Area 616150
ISTD 402.70>84.05 (-)



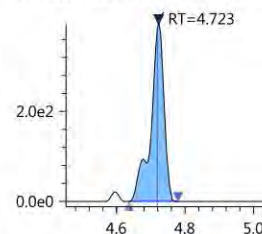
PFHpS_1

Conc 0.0006
Area 118
Q 449.00>80.15 (-)



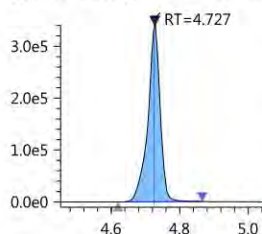
PFOS_1

Conc 0.0074
Area 1063
Q 499.00>80.00 (-)



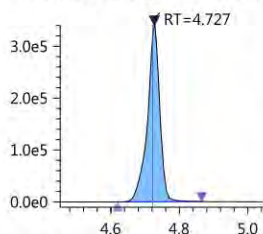
PFOS-13C

Conc 4.7812
Area 850627
Q 502.80>80.05 (-)



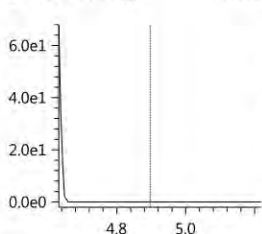
PFOS-13C_IS

Conc 5.0000
Area 850627
ISTD 502.80>80.05 (-)



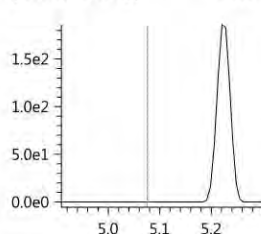
PFNS

Conc ----
Area ----
Q 549.00>99.00 (-)



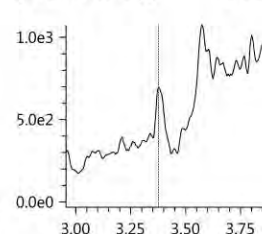
PFDS_1

Conc ----
Area ----
Q 599.00>79.90 (-)



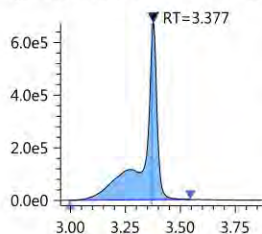
PFBA

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



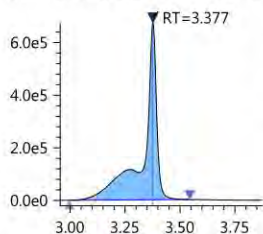
PFBA-13C

Conc 4.5926
Area 2790168
Q 216.90>172.15 (-)



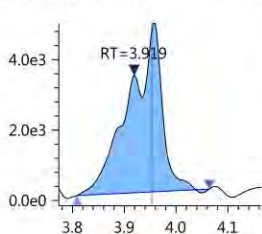
PFBA-13C_IS

Conc 5.0000
Area 2790168
ISTD 216.90>172.15 (-)



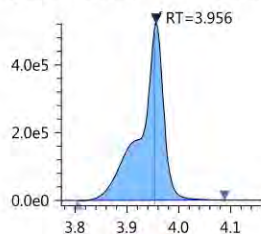
PFPeA

Conc 0.0016
Area 21175
Q 263.05>219.10 (-)



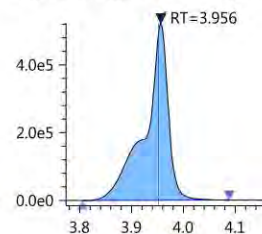
PFPeA-13C

Conc 4.7322
Area 1617859
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
Area 1617859
ISTD 267.90>223.00 (-)

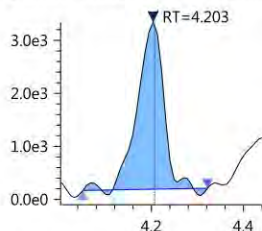


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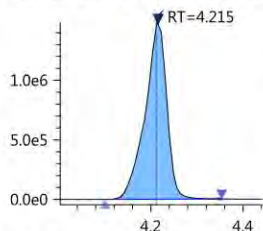
PFHxA

Conc 0.0068
Area 12368
Q 313.00>269.00 (-) 3.34e3



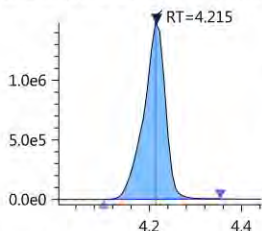
PFHxA-13C

Conc 5.1565
Area 4829137
Q 314.90>270.10 (-) 1.49e6



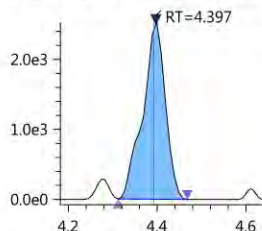
PFHxA-13C_IS

Conc 5.0000
Area 4829137
ISTD 314.90>270.10 (-) 1.49e6



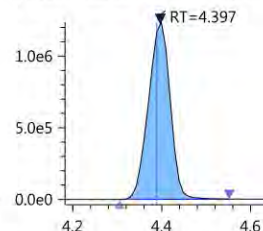
PFHpA

Conc 0.0020
Area 8882
Q 362.90>319.00 (-) 2.53e3



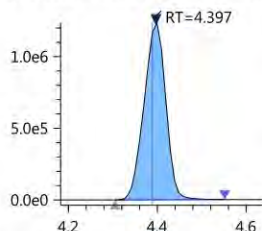
PFHpA-13C

Conc 4.9471
Area 4191294
Q 366.90>322.10 (-) 1.24e6



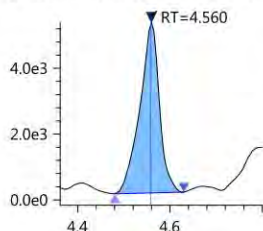
PFHpA-13C_IS

Conc 5.0000
Area 4191294
ISTD 366.90>322.10 (-) 1.24e6



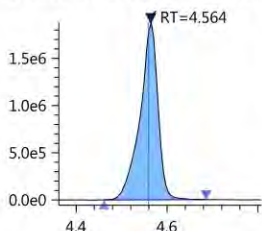
PFOA

Conc 0.0042
Area 15283
Q 413.00>369.00 (-) 5.39e3



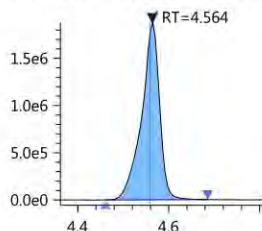
PFOA-13C

Conc 5.0264
Area 5151632
Q 416.80>372.05 (-) 1.88e6



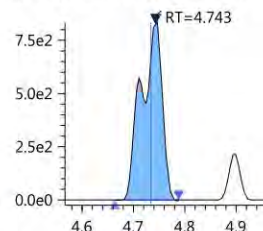
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Conc 5.0000
Area 5151632
ISTD 416.80>372.05 (-) 1.88e6



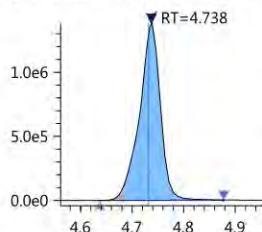
PFNA

Conc -0.0011
Area 2362
Q 463.00>418.90 (-) 8.33e2



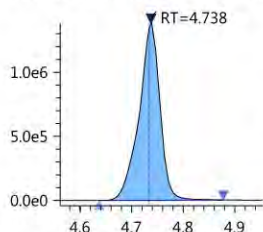
PFNA-13C

Conc 5.0564
Area 3869120
Q 467.80>423.00 (-) 1.38e6



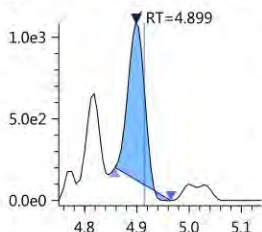
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Conc 5.0000
Area 3869120
ISTD 467.80>423.00 (-) 1.38e6



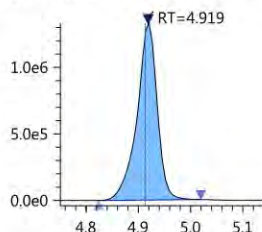
PFDA

Conc 0.0027
Area 2065
Q 513.00>468.80 (-) 1.09e3



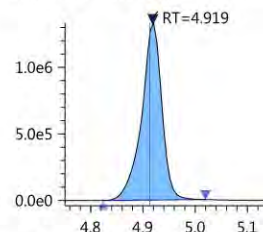
PFDA-13C

Conc 5.1415
Area 3569672
Q 514.80>469.95 (-) 1.33e6



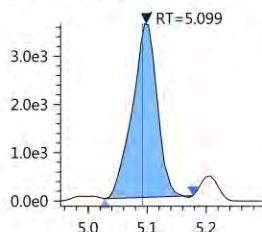
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Conc 5.0000
Area 3569672
ISTD 514.80>469.95 (-) 1.33e6



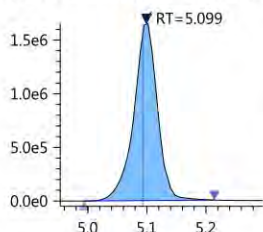
PFUnA

Conc 0.0009
Area 10588
Q 563.00>518.90 (-) 3.67e3



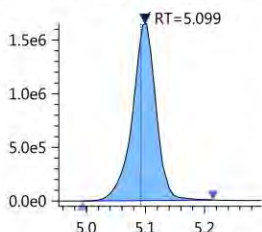
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Conc 5.3158
Area 4603538
Q 564.80>519.95 (-) 1.65e6



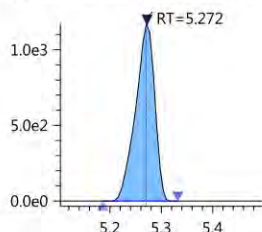
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Conc 5.0000
Area 4603538
ISTD 564.80>519.95 (-) 1.65e6



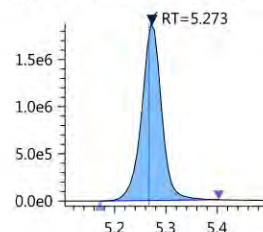
PFDoA

Conc 0.0185
Area 3031
Q 613.05>569.00 (-) 1.17e3



PFDoA-13C

Conc 4.9461
Area 5046178
Q 614.80>569.95 (-) 1.88e6

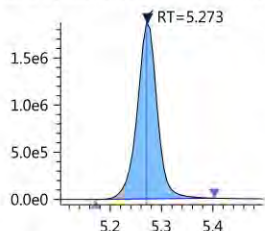


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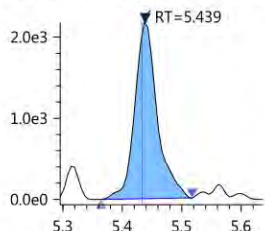
PFDaA-13C_IS

Conc 5.0000
Area 5046178
ISTD 614.80>569.95 (-) 1.88e6



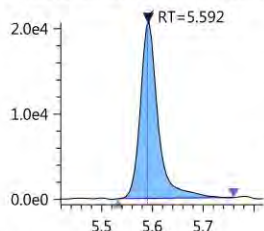
PFTrDA

Conc 0.0028
Area 5727
Q 663.00>618.90 (-) 2.18e3



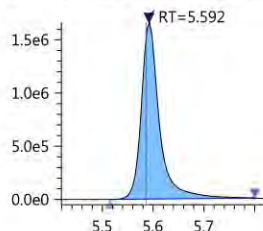
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Conc 0.0021
Area 49975
Q 713.40>669.00 (-) 2.08e4



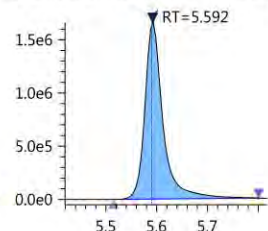
PFTeDA-13C

Conc 5.0522
Area 4112558
Q 714.70>669.90 (-) 1.67e6



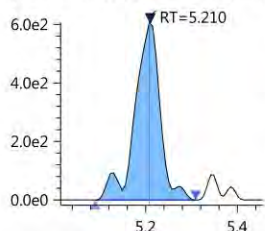
PFTeDA-13C_IS

Conc 5.0000
Area 4112558
ISTD 714.70>669.90 (-) 1.67e6



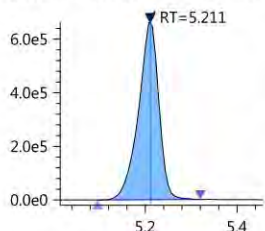
FOSA

Conc 0.0047
Area 2309
Q 498.20>78.00 (-) 6.06e2



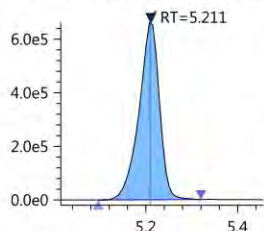
FOSA-13C

Conc 4.4060
Area 2045331
Q 506.00>78.05 (-) 6.61e5



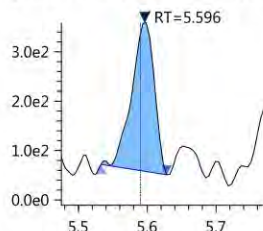
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Conc 5.0000
Area 2045331
ISTD 506.00>78.05 (-) 6.61e5



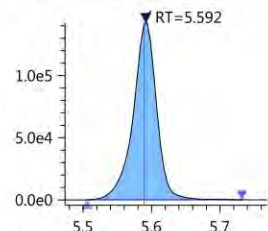
N-MeFOSA

Conc 0.0064
Area 688
Q 512.00>169.10 (-) 3.59e2



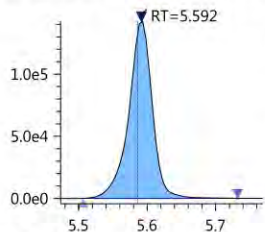
N-MeFOSA-d3

Conc 3.4853
Area 339090
Q 514.90>168.90 (-) 1.43e5



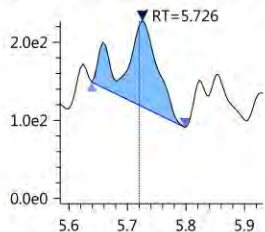
N-MeFOSA-d3_IS

Conc 5.0000
Area 339090
ISTD 514.90>168.90 (-) 1.43e5



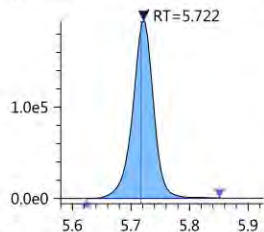
N-EtFOSA

Conc 0.0223
Area 432
Q 526.90>169.10 (-) 2.27e2



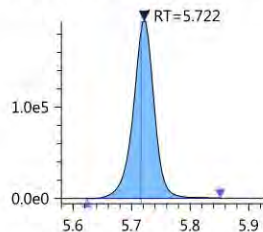
N-EtFOSA-d9

Conc 3.2795
Area 482213
Q 530.90>169.15 (-) 1.94e5



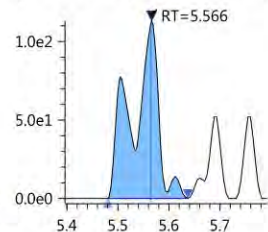
N-EtFOSA-d9_IS

Conc 5.0000
Area 482213
ISTD 530.90>169.15 (-) 1.94e5



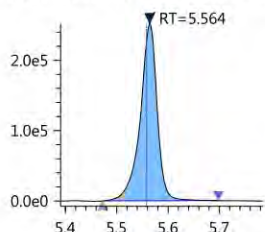
N-MeFOSE

Conc 0.0023
Area 402
Q 616.00>59.00 (-) 1.13e2



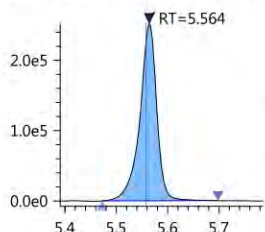
N-MeFOSE-d7

Conc 3.6855
Area 576097
Q 622.70>59.10 (-) 2.52e5



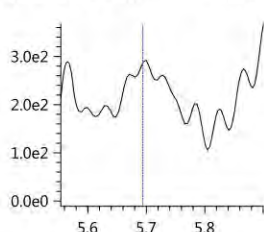
N-MeFOSE-d7_IS

Conc 5.0000
Area 576097
ISTD 622.70>59.10 (-) 2.52e5



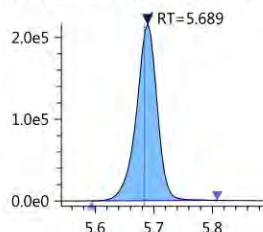
N-EtFOSE

Conc ---
Area ---
Q 630.00>58.90 (-) 3.68e2



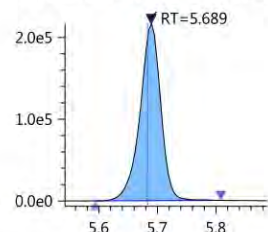
N-EtFOSE-d9

Conc 3.6708
Area 533429
Q 638.70>59.10 (-) 2.17e5



N-EtFOSE-d9_IS

Conc 5.0000
Area 533429
ISTD 638.70>59.10 (-) 2.17e5



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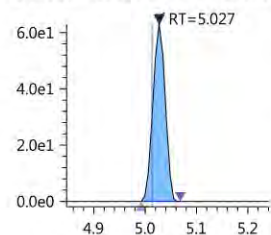
N-MeFOSAA

Conc 0.0014

Area 105

Q 570.20>419.00 (-)

6.30e1



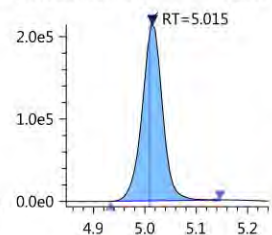
N-MeFOSAA-d3

Conc 4.4847

Area 591065

Q 572.80>419.05 (-)

2.15e5



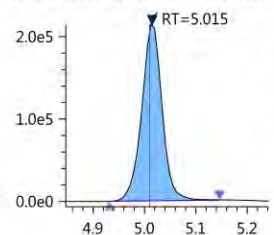
N-MeFOSAA-d3_IS

Conc 5.0000

Area 591065

ISTD 572.80>419.05 (-)

2.15e5



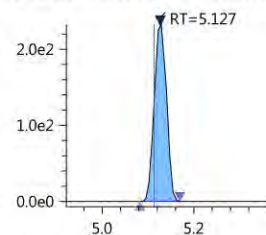
N-EtFOSAA

Conc 0.0213

Area 437

Q 584.20>418.95 (-)

2.33e2



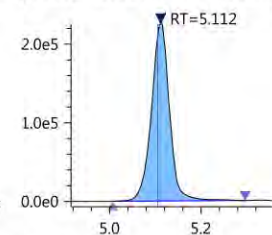
N-EtFOSAA-d5

Conc 5.1113

Area 620746

Q 588.80>419.00 (-)

2.26e5



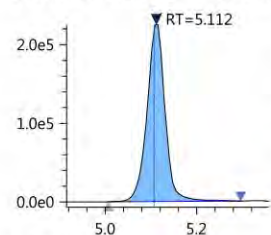
N-EtFOSAA-d5_IS

Conc 5.0000

Area 620746

ISTD 588.80>419.00 (-)

2.26e5



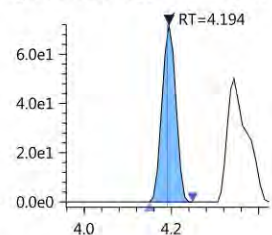
4_2-FTS_1

Conc 0.0024

Area 158

Q 327.00>307.05 (-)

7.20e1



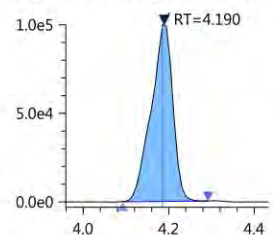
4_2-FTS-13C

Conc 4.5549

Area 351947

Q 328.80>309.05 (-)

1.00e5



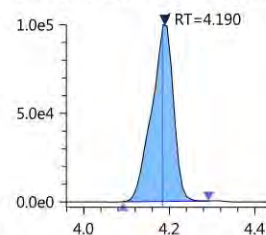
4_2-FTS-13C_IS

Conc 5.0000

Area 351947

ISTD 328.80>309.05 (-)

1.00e5



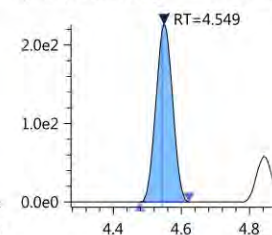
6_2-FTS_1

Conc 0.0088

Area 769

Q 427.00>407.00 (-)

2.26e2



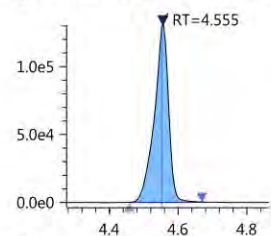
6_2-FTS-13C

Conc 4.9080

Area 378261

Q 428.90>409.00 (-)

1.31e5



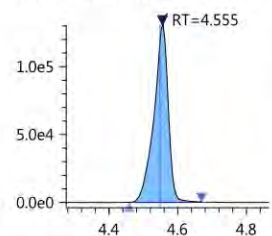
6_2-FTS-13C_IS

Conc 5.0000

Area 378261

ISTD 428.90>409.00 (-)

1.31e5



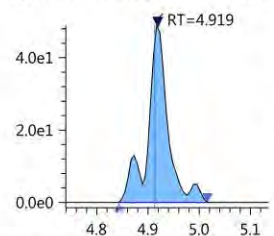
8_2-FTS_1

Conc 0.0025

Area 135

Q 527.10>506.90 (-)

4.90e1



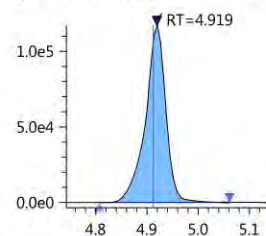
8_2-FTS-13C

Conc 5.1912

Area 324364

Q 528.80>509.00 (-)

1.17e5



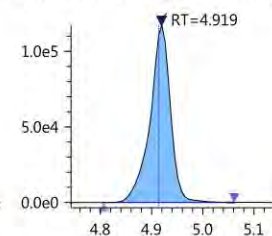
8_2-FTS-13C_IS

Conc 5.0000

Area 324364

ISTD 528.80>509.00 (-)

1.17e5



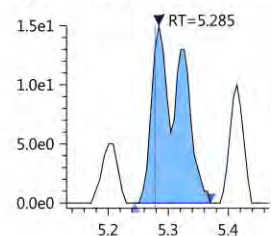
10_2-FtS_1

Conc 0.0010

Area 51

Q 627.00>606.95 (-)

1.50e1



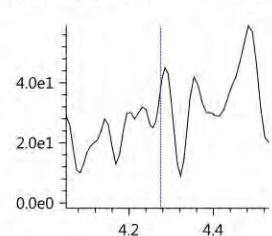
HPFO_DA

Conc ----

Area ----

Q 329.00>169.00 (-)

5.90e1



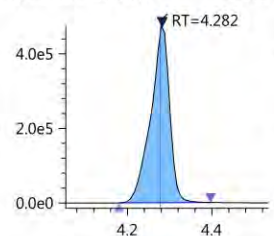
HPFO_DA-13C

Conc 4.8791

Area 1471414

Q 332.00>286.80 (-)

4.75e5



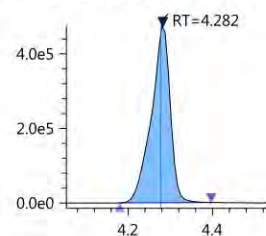
HPFO_DA-13C_IS

Conc 5.0000

Area 1471414

ISTD 332.00>286.80 (-)

4.75e5



Insight Report

Printed at 4/18/2020 11:14:21 AM

200417_034

Sample ID: T-PFOA

Date acquired: 4/17/2020 7:30:12 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_curve\200417_034.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	5.090	2825	2825	1	5.0000	ng/mL	0.0000
PFBS_1	Auto	3.997	232	53	2	19.0308	ng/mL	0.0000
PFBS-13C	Auto	3.992	53	2825	1	0.4799	ng/mL	0.0000
PFBS-13C_IS	Auto	3.992	53	53	2	5.0000	ng/mL	0.0000
PFPeS	ND(W/B)	----	----	53	2	----	ng/mL	0.0000
PFHxS_1	ND(W/B)	----	----	----	3	----	ng/mL	0.0000
PFHxS-18O	ND(W/B)	----	----	2825	1	----	ng/mL	0.0000
PFHxS-18O_IS	ND(W/B)	----	----	----	3	----	ng/mL	0.0000
PFHpS_1	ND(W/B)	----	----	----	3	----	ng/mL	0.0000
PFOS_1	Auto	4.656	129	----	4	0.0000	ng/mL	0.0000
PFOS-13C	ND(W/B)	----	----	2825	1	----	ng/mL	0.0000
PFOS-13C_IS	ND(W/B)	----	----	----	4	----	ng/mL	0.0000
PFNS	Auto	5.082	194	----	4	0.0000	ng/mL	0.0000
PFDS_1	ND(W/B)	----	----	----	4	----	ng/mL	0.0000
PFBA	ND(W/B)	----	----	----	5	----	ng/mL	0.0000
PFBA-13C	ND(W/B)	----	----	2825	1	----	ng/mL	0.0000
PFBA-13C_IS	ND(W/B)	----	----	----	5	----	ng/mL	0.0000
PFPeA	Auto	3.880	3911	203	6	46.1337	ng/mL	0.0000
PFPeA-13C	Auto	4.049	203	2825	1	1.2046	ng/mL	0.0000
PFPeA-13C_IS	Auto	4.049	203	203	6	5.0000	ng/mL	0.0000
PFHxA	Auto	4.188	6315	1151	7	27.9324	ng/mL	0.0000
PFHxA-13C	Auto	4.200	1151	2825	1	2.4990	ng/mL	0.0000
PFHxA-13C_IS	Auto	4.200	1151	1151	7	5.0000	ng/mL	0.0000
PFHpA	Auto	4.380	15817	1258	8	70.3824	ng/mL	0.0000
PFHpA-13C	Auto	4.353	1258	2825	1	3.0190	ng/mL	0.0000
PFHpA-13C_IS	Auto	4.353	1258	1258	8	5.0000	ng/mL	0.0000
PFOA	Auto	4.549	1601244	2086	9	3022.3858	ng/mL	0.0000
PFOA-13C	Auto	4.506	2086	2825	1	4.1367	ng/mL	0.0000
PFOA-13C_IS	Auto	4.506	2086	2086	9	5.0000	ng/mL	0.0000
PFNA	Auto	4.713	5235	1612	10	18.1763	ng/mL	0.0000
PFNA-13C	Auto	4.738	1612	2825	1	4.2830	ng/mL	0.0000
PFNA-13C_IS	Auto	4.738	1612	1612	10	5.0000	ng/mL	0.0000
PFDA	Auto	4.889	1990	1723	11	5.4362	ng/mL	0.0000
PFDA-13C	Auto	4.908	1723	2825	1	5.0462	ng/mL	0.0000
PFDA-13C_IS	Auto	4.908	1723	1723	11	5.0000	ng/mL	0.0000
PFUnA	Auto	5.078	1102	898	12	7.8630	ng/mL	0.0000
PFUnA-13C	Auto	5.083	898	2825	1	2.1082	ng/mL	0.0000
PFUnA-13C_IS	Auto	5.083	898	898	12	5.0000	ng/mL	0.0000
PFDoA	Auto	5.264	1857	3985	13	4.0916	ng/mL	0.0000
PFDoA-13C	Auto	5.271	3985	2825	1	7.9405	ng/mL	0.0000
PFDoA-13C_IS	Auto	5.271	3985	3985	13	5.0000	ng/mL	0.0000
PFTeDA	Auto	5.429	3581	11546	14	1.6055	ng/mL	0.0000
PFTeDA	Auto	5.589	1809	11546	14	1.6522	ng/mL	0.0000
PFTeDA-13C	Auto	5.584	11546	2825	1	28.8341	ng/mL	0.0000
PFTeDA-13C_IS	Auto	5.584	11546	11546	14	5.0000	ng/mL	0.0000
FOSA	Auto	5.202	482	2022	16	0.9952	ng/mL	0.0000
FOSA-13C	Auto	5.196	2022	2825	1	8.8549	ng/mL	0.0000
FOSA-13C_IS	Auto	5.196	2022	2022	16	5.0000	ng/mL	0.0000
N-MeFOSA	Auto	5.618	581	----	17	0.0000	ng/mL	0.0000
N-MeFOSA-d3	ND(W/B)	----	----	2825	1	----	ng/mL	0.0000
N-MeFOSA-d3_IS	ND(W/B)	----	----	----	17	----	ng/mL	0.0000
N-EtFOSA	ND(W/B)	----	----	676	18	----	ng/mL	0.0000
N-EtFOSA-d9	Auto	5.716	676	2825	1	9.3406	ng/mL	0.0000
N-EtFOSA-d9_IS	Auto	5.716	676	676	18	5.0000	ng/mL	0.0000
N-MeFOSE	Auto	5.578	309	----	19	0.0000	ng/mL	0.0000
N-MeFOSE-d7	ND(W/B)	----	----	2825	1	----	ng/mL	0.0000
N-MeFOSE-d7_IS	ND(W/B)	----	----	----	19	----	ng/mL	0.0000
N-EtFOSE	ND(W/B)	----	----	----	20	----	ng/mL	0.0000
N-EtFOSE-d9	ND(W/B)	----	----	2825	1	----	ng/mL	0.0000
N-EtFOSE-d9_IS	ND(W/B)	----	----	----	20	----	ng/mL	0.0000
N-MeFOSAA	Auto	4.997	508	----	21	0.0000	ng/mL	0.0000
N-MeFOSAA-d3	ND(W/B)	----	----	2825	1	----	ng/mL	0.0000
N-MeFOSAA-d3_IS	ND(W/B)	----	----	----	21	----	ng/mL	0.0000
N-EtFOSAA	Auto	5.117	450	4679	22	0.9261	ng/mL	0.0000
N-EtFOSAA-d5	Auto	5.106	4679	2825	1	78.3208	ng/mL	0.0000
N-EtFOSAA-d5_IS	Auto	5.106	4679	4679	22	5.0000	ng/mL	0.0000
4_2-FTS_1	ND(W/B)	----	----	----	23	----	ng/mL	0.0000
4_2-FTS-13C	ND(W/B)	----	----	2825	1	----	ng/mL	0.0000

Insight Report

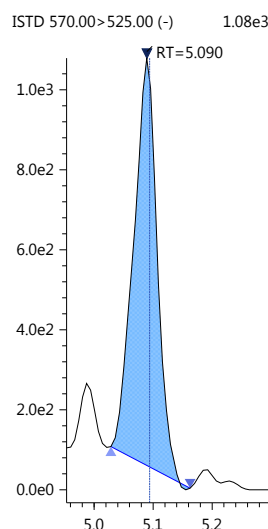
Printed at 4/18/2020 11:14:21 AM

(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	ND(W/B)	----	----	----	23	----	ng/mL	0.0000
6_2-FTS_1	Auto	4.552	36	----	24	0.0000	ng/mL	0.0000
6_2-FTS-13C	ND(W/B)	----	----	2825	1	----	ng/mL	0.0000
6_2-FTS-13C_IS	ND(W/B)	----	----	----	24	----	ng/mL	0.0000
8_2-FTS_1	Auto	4.878	2	----	25	0.0000	ng/mL	0.0000
8_2-FTS-13C	ND(W/B)	----	----	2825	1	----	ng/mL	0.0000
8_2-FTS-13C_IS	ND(W/B)	----	----	----	25	----	ng/mL	0.0000
10_2-FTS_1	ND(W/B)	----	----	----	25	----	ng/mL	0.0000
HPFO_DA	ND(W/B)	----	----	----	26	----	ng/mL	0.0000
HPFO_DA-13C	ND(W/B)	----	----	2825	1	----	ng/mL	0.0000
HPFO_DA-13C_IS	ND(W/B)	----	----	----	26	----	ng/mL	0.0000

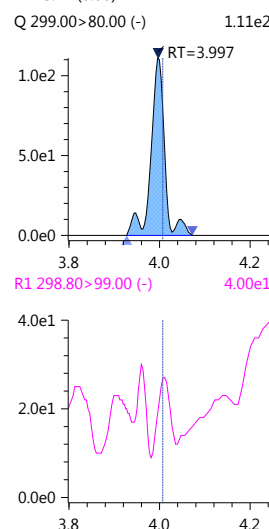
13C7-PFUnDA_IS

Conc 5.0000
Area 2825



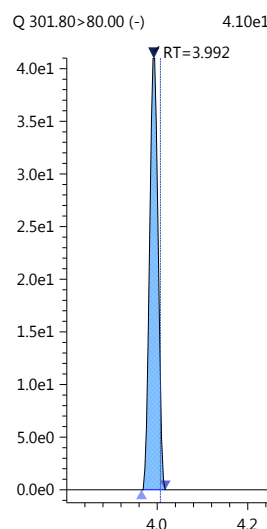
PFBS_1

Conc 19.0308
Area 232
R#1 5.47 (0.00)



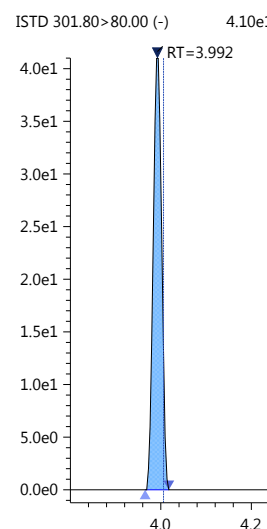
PFBS-13C

Conc 0.4799
Area 53



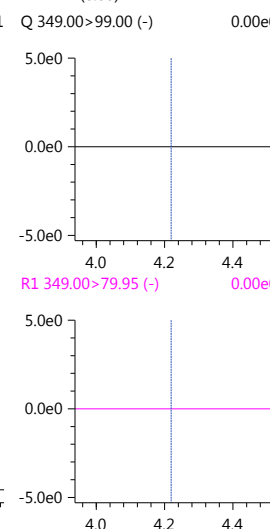
PFBS-13C_IS

Conc 5.0000
Area 53



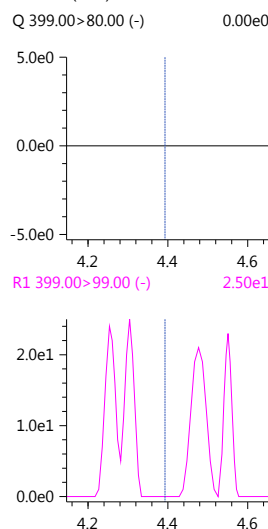
PFPoS

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



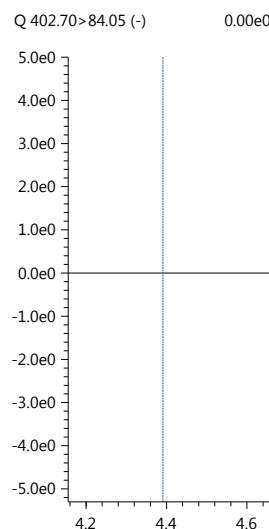
PFHxS_1

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



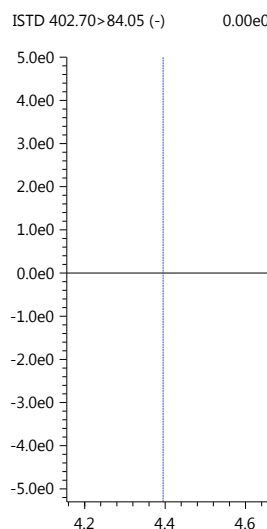
PFHxS-180

Conc ----
Area ----



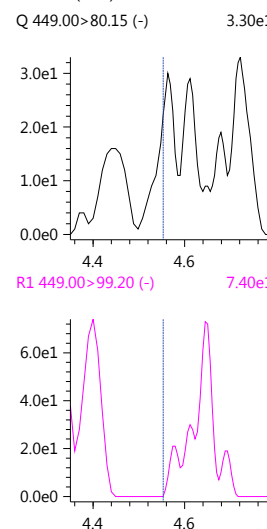
PFHxS-180_IS

Conc ----
Area ----



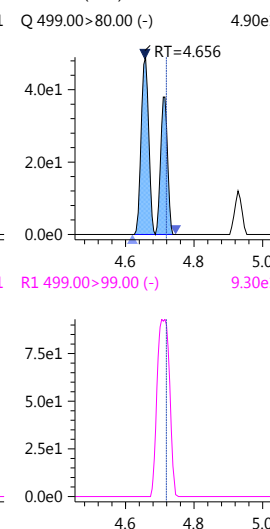
PFHpS_1

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



PFOS_1

Conc 0.0000
Area 129
R#1 0.00 (0.00)



Insight Report

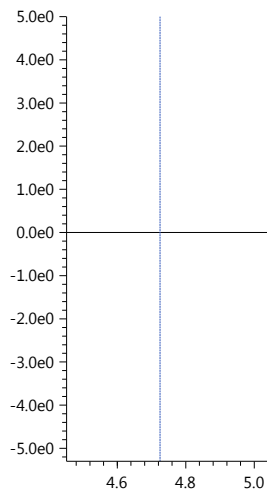
Printed at 4/18/2020 11:14:21 AM

PFOS-13C

Conc ----
 Area ----

Q 502.80>80.05 (-)

0.00e0

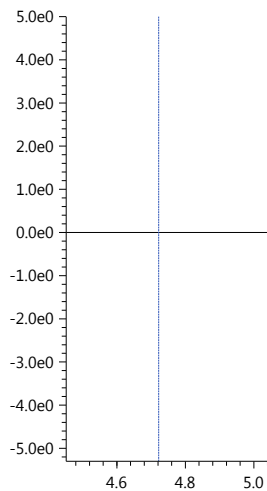


PFOS-13C_IS

Conc ----
 Area ----

ISTD 502.80>80.05 (-)

0.00e0

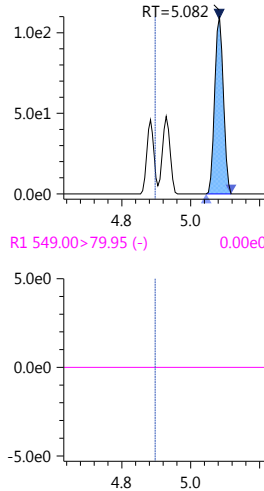


PFNS

Conc 0.0000
 Area 194
 R#1 0.00 (0.00)

Q 549.00>99.00 (-)

1.10e2

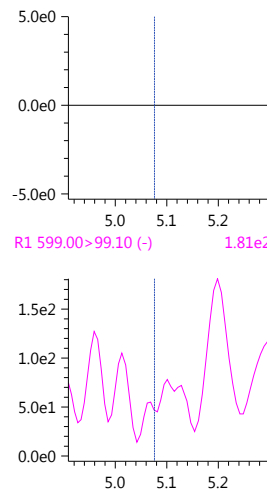


PFDS_1

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

Q 599.00>79.90 (-)

0.00e0

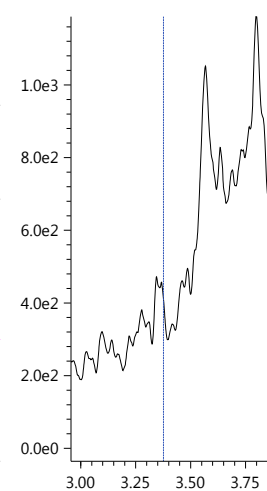


PFBA

Conc ----
 Area ----

Q 213.00>169.10 (-)

1.19e3

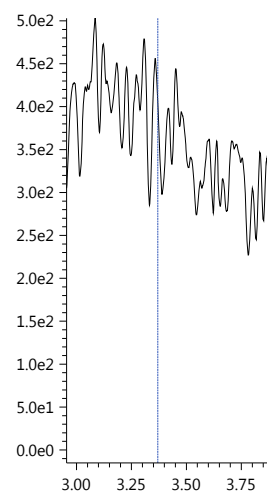


PFBA-13C

Conc ----
 Area ----

Q 216.90>172.15 (-)

5.03e2

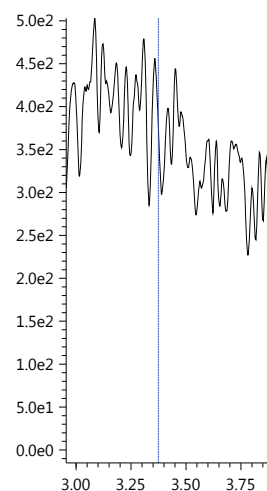


PFBA-13C_IS

Conc ----
 Area ----

ISTD 216.90>172.15 (-)

5.03e2

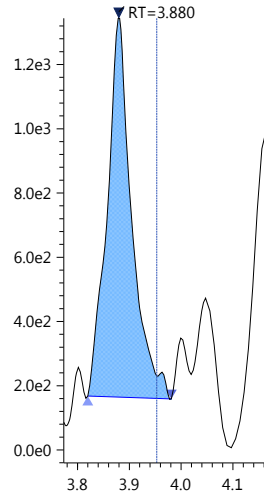


PFPeA

Conc 46.1337
 Area 3911

Q 263.05>219.10 (-)

1.34e3

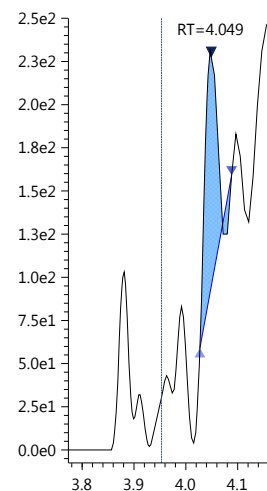


PFPeA-13C

Conc 1.2046
 Area 203

Q 267.90>223.00 (-)

2.50e2

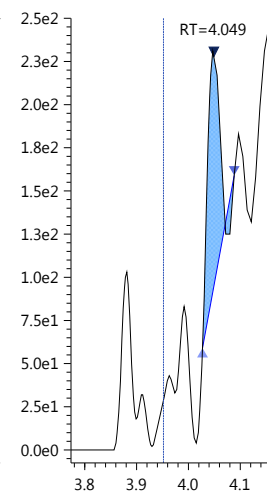


PFPeA-13C_IS

Conc 5.0000
 Area 203

ISTD 267.90>223.00 (-)

2.50e2

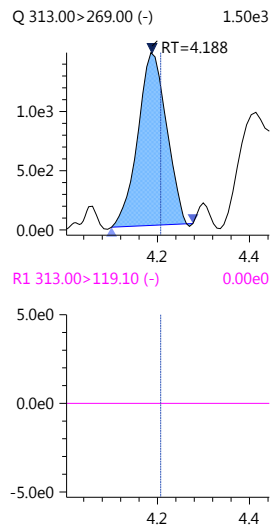


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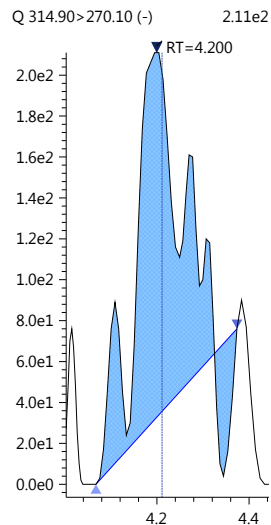
PFHxA

Conc 27.9324
Area 6315
R#1 0.00 (0.00)



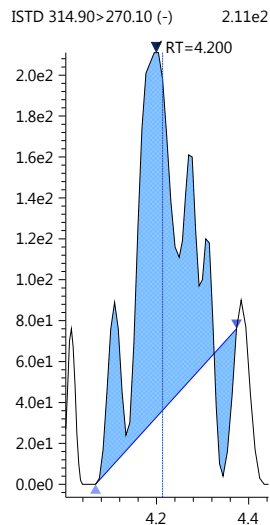
PFHxA-13C

Conc 2.4990
Area 1151



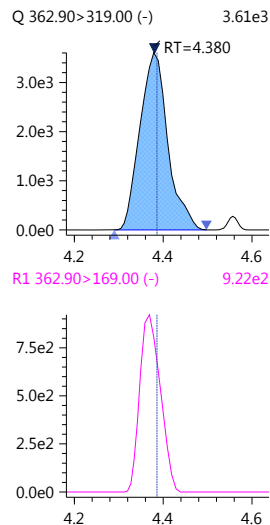
PFHxA-13C_IS

Conc 5.0000
Area 1151



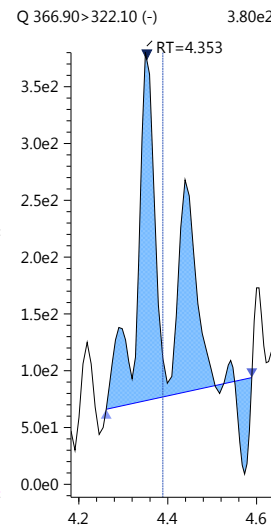
PFHpA

Conc 70.3824
Area 15817
R#1 22.68 (0.00)



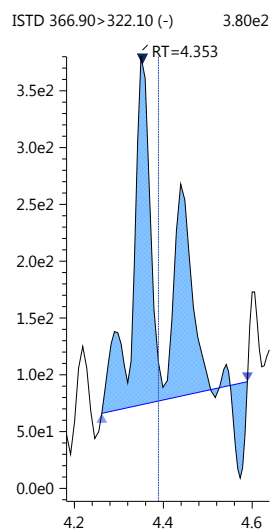
PFHpA-13C

Conc 3.0190
Area 1258



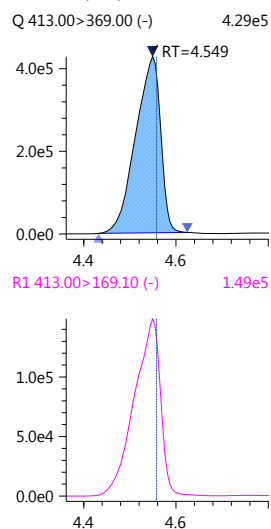
PFHpA-13C_IS

Conc 5.0000
Area 1258



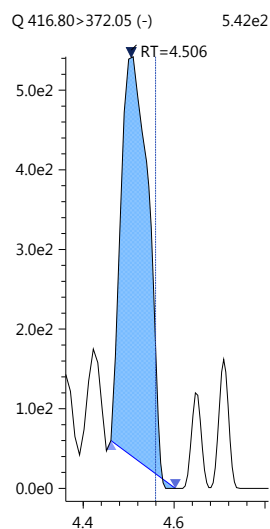
PFOA

Conc 3022.3858
Area 1601244
R#1 34.95 (0.00)



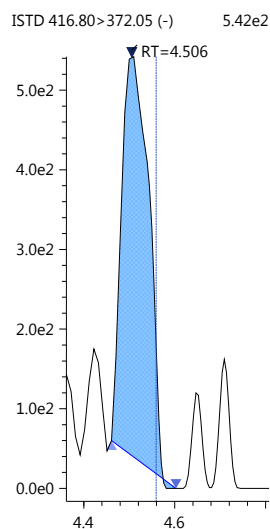
PFOA-13C

Conc 4.1367
Area 2086



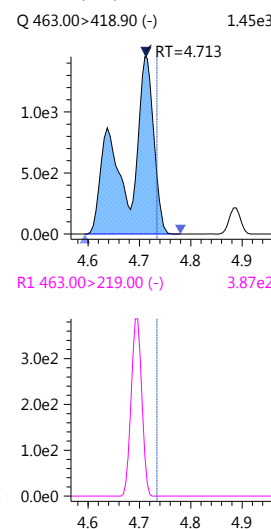
PFOA-13C_IS

Conc 5.0000
Area 2086



PFNA

Conc 18.1763
Area 5235
R#1 0.00 (0.00)



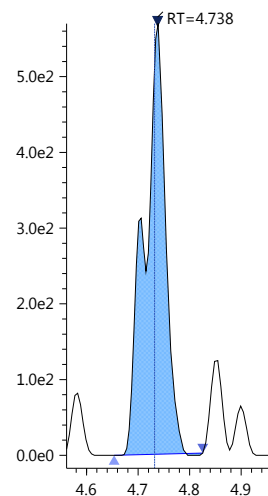
Insight Report

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PFNA-13C

Conc 4.2830
Area 1612

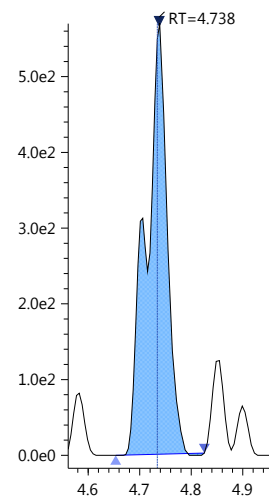
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
Area 1612

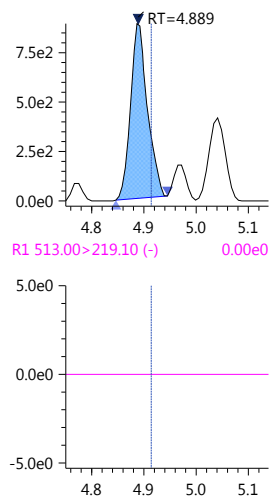
ISTD 467.80>423.00 (-)



PFDA

Conc 5.4362
Area 1990
R#1 0.00 (0.00)

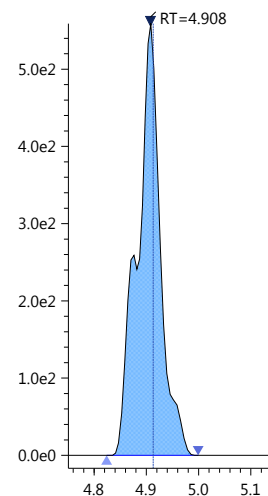
Q 513.00>468.80 (-)



PFDA-13C

Conc 5.0462
Area 1723

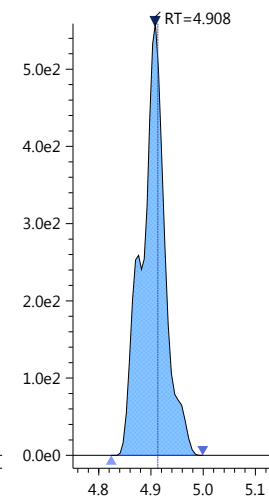
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
Area 1723

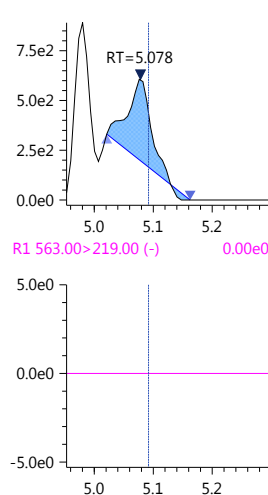
ISTD 514.80>469.95 (-)



PFUnA

Conc 7.8630
Area 1102
R#1 0.00 (0.00)

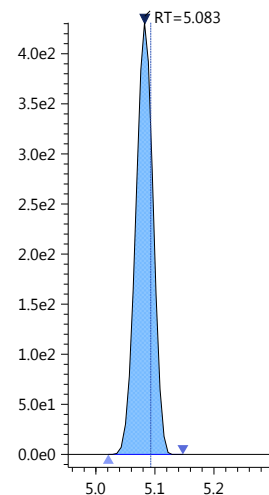
Q 563.00>518.90 (-)



PFUnA-13C

Conc 2.1082
Area 898

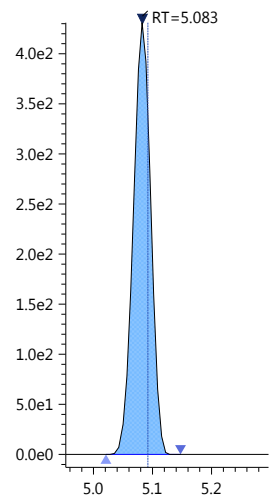
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
Area 898

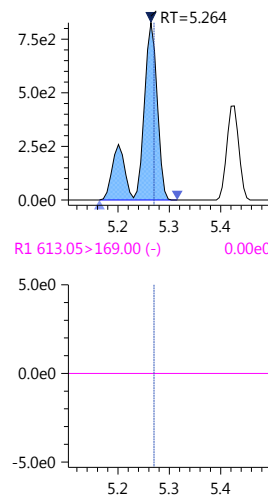
ISTD 564.80>519.95 (-)



PFDaA

Conc 4.0916
Area 1857
R#1 0.00 (0.00)

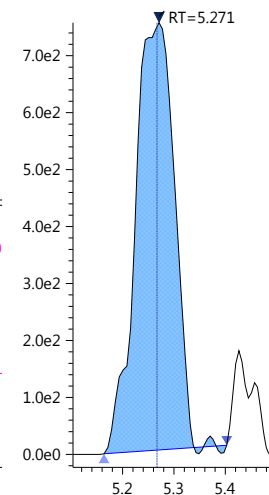
Q 613.05>569.00 (-)



PFDaA-13C

Conc 7.9405
Area 3985

Q 614.80>569.95 (-)



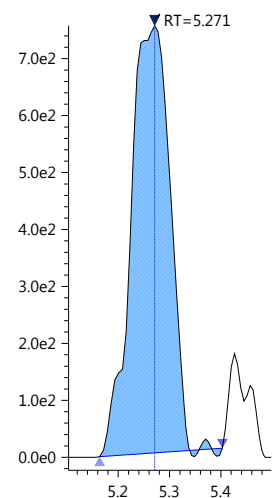
Insight Report

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PFDaA-13C_IS

Conc 5.0000
Area 3985

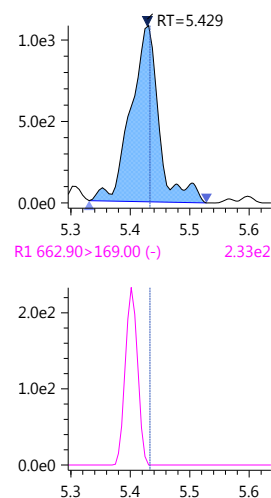
ISTD 614.80>569.95 (-) 7.58e2



PFTrDA

Conc 1.6055
Area 3581
R#1 0.00 (0.00)

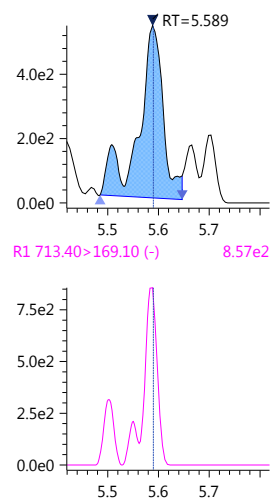
Q 663.00>618.90 (-) 1.09e3



PFTeDA

Conc 1.6522
Area 1809
R#1 182.09 (0.00)

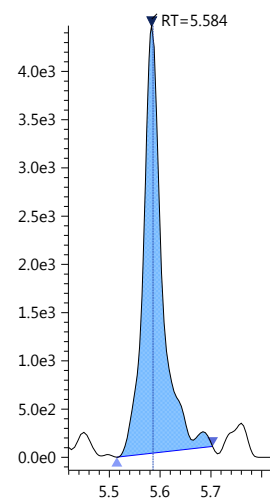
Q 713.40>669.00 (-) 5.51e2



PFTeDA-13C

Conc 28.8341
Area 11546

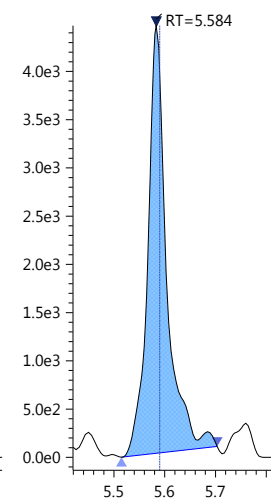
Q 714.70>669.90 (-) 4.48e3



PFTeDA-13C_IS

Conc 5.0000
Area 11546

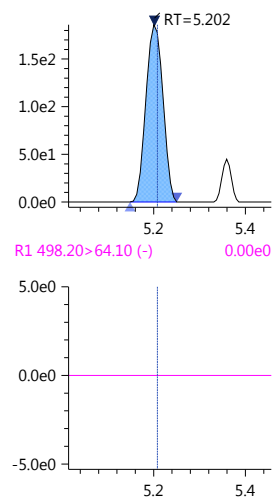
ISTD 714.70>669.90 (-) 4.48e3



FOSA

Conc 0.9952
Area 482
R#1 0.00 (0.00)

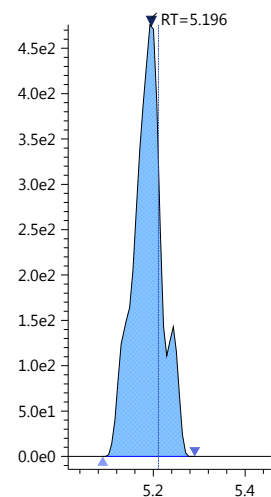
Q 498.20>78.00 (-) 1.86e2



FOSA-13C

Conc 8.8549
Area 2022

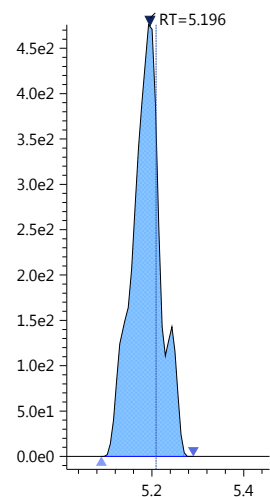
Q 506.00>78.05 (-) 4.76e2



FOSA-13C_IS

Conc 5.0000
Area 2022

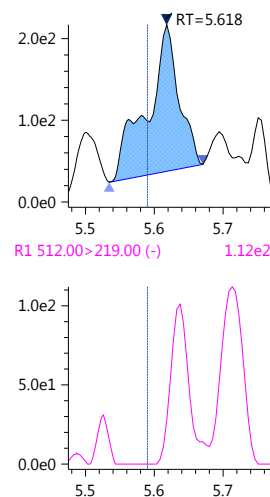
ISTD 506.00>78.05 (-) 4.76e2



N-MeFOSA

Conc 0.0000
Area 581
R#1 3.29 (0.00)

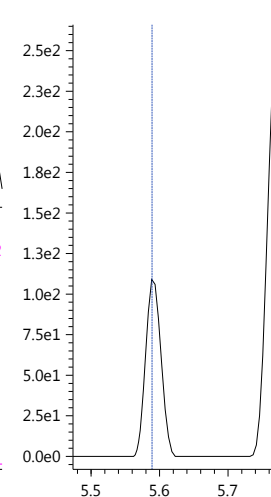
Q 512.00>169.10 (-) 2.17e2



N-MeFOSA-d3

Conc ----
Area ----

Q 514.90>168.90 (-) 2.66e2



Insight Report

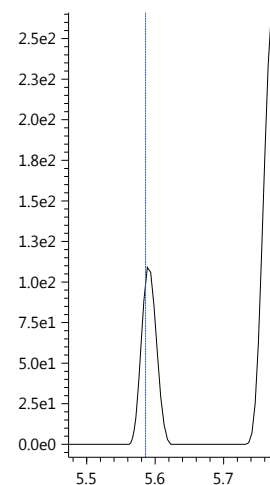
Printed at 4/18/2020 11:14:21 AM

N-MeFOSA-d3_IS

Conc ----
Area ----

ISTD 514.90>168.90 (-)

2.66e2



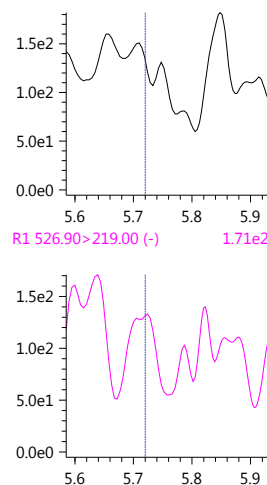
N-EtFOSA

Conc ----
Area ----

R#1 ---- (0.00)

Q 526.90>169.10 (-)

1.82e2

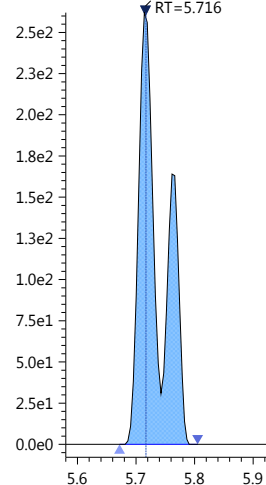


N-EtFOSA-d9

Conc 9.3406
Area 676

Q 530.90>169.15 (-)

2.62e2

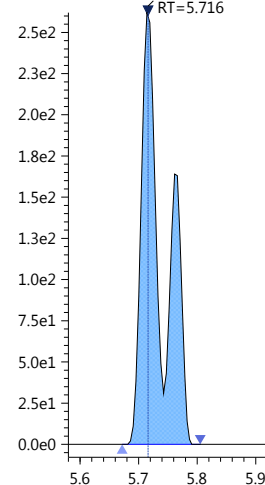


N-EtFOSA-d9_IS

Conc 5.0000
Area 676

ISTD 530.90>169.15 (-)

2.62e2

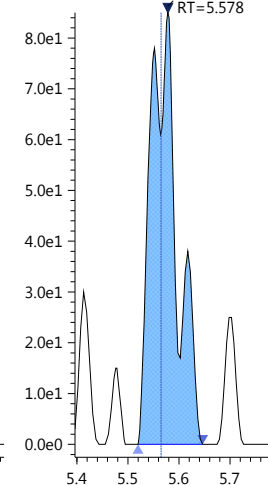


N-MeFOSE

Conc 0.0000
Area 309

Q 616.00>59.00 (-)

8.50e1

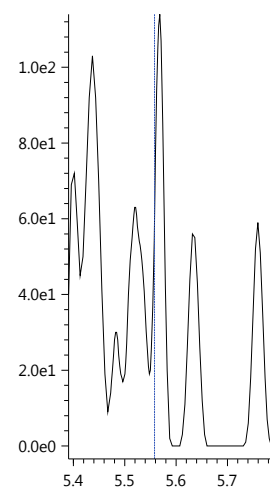


N-MeFOSE-d7

Conc ----
Area ----

Q 622.70>59.10 (-)

1.14e2

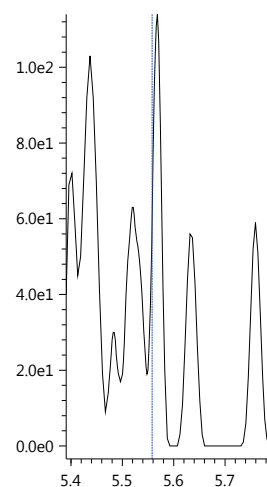


N-MeFOSE-d7_IS

Conc ----
Area ----

ISTD 622.70>59.10 (-)

1.14e2

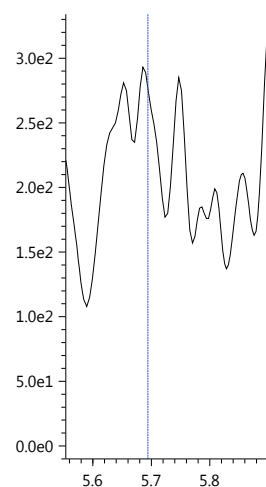


N-EtFOSE

Conc ----
Area ----

Q 630.00>58.90 (-)

3.34e2

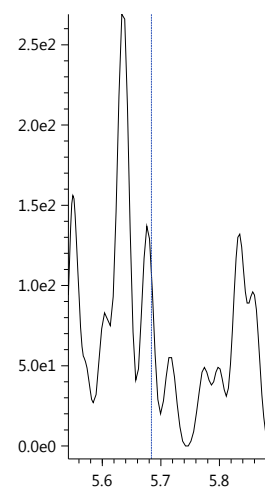


N-EtFOSE-d9

Conc ----
Area ----

Q 638.70>59.10 (-)

2.69e2

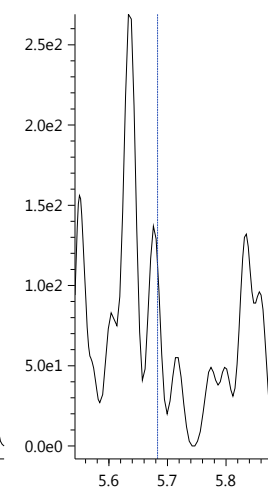


N-EtFOSE-d9_IS

Conc ----
Area ----

ISTD 638.70>59.10 (-)

2.69e2

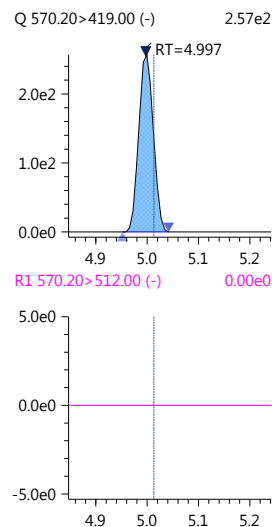


Insight Report

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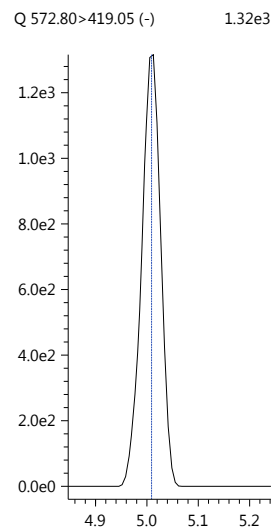
N-MeFOSAA

Conc 0.0000
Area 508
R#1 0.00 (0.00)



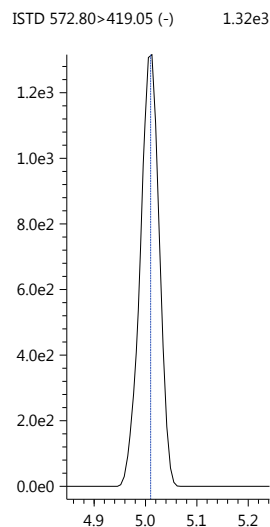
N-MeFOSAA-d3

Conc ----
Area ----



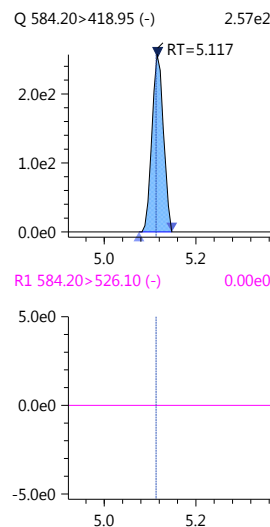
N-MeFOSAA-d3_IS

Conc ----
Area ----



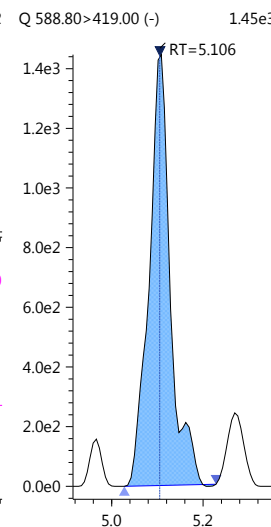
N-EtFOSAA

Conc 0.9261
Area 450
R#1 0.00 (0.00)



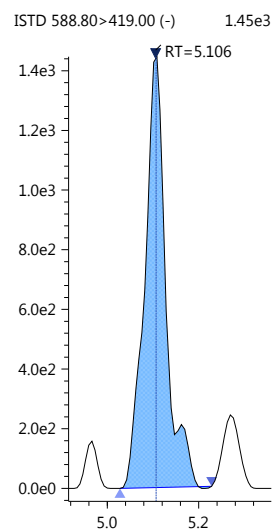
N-EtFOSAA-d5

Conc 78.3208
Area 4679



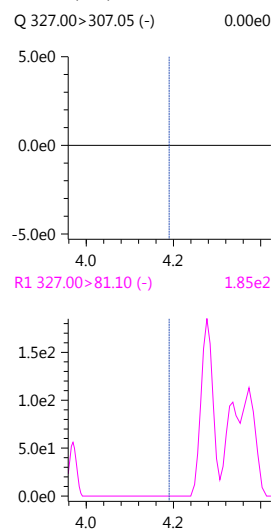
N-EtFOSAA-d5_IS

Conc 5.0000
Area 4679



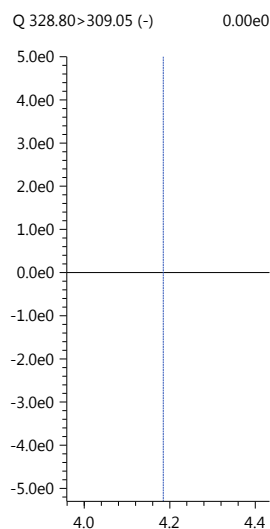
4_2-FTS_1

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



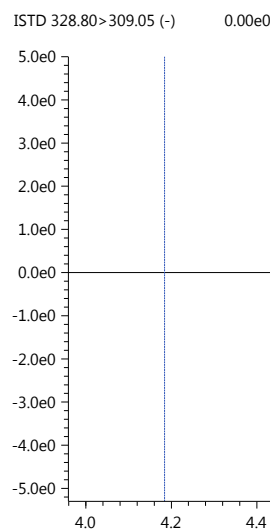
4_2-FTS-13C

Conc ----
Area ----



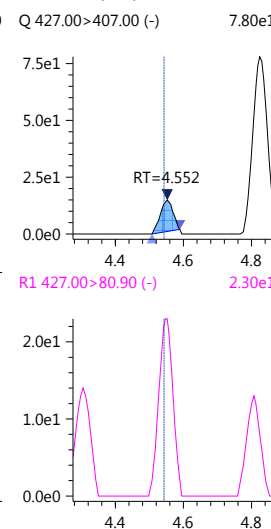
4_2-FTS-13C_IS

Conc ----
Area ----



6_2-FTS_1

Conc 0.0000
Area 36
R#1 137.14 (0.00)



Insight Report

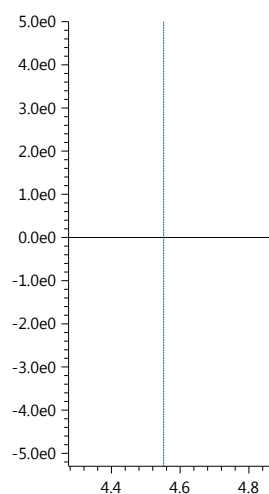
Printed at 4/18/2020 11:14:21 AM

6_2-FTS-13C

Conc ----
 Area ----

Q 428.90>409.00 (-)

0.00e0

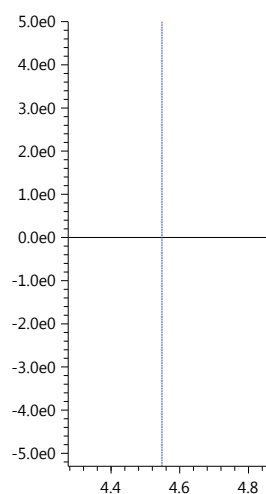


6_2-FTS-13C_IS

Conc ----
 Area ----

ISTD 428.90>409.00 (-)

0.00e0

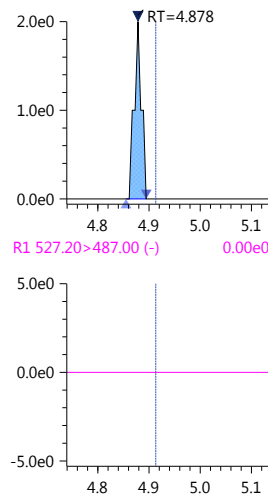


8_2-FTS_1

Conc 0.0000
 Area 2
 R#1 0.00 (0.00)

Q 527.10>506.90 (-)

2.00e0

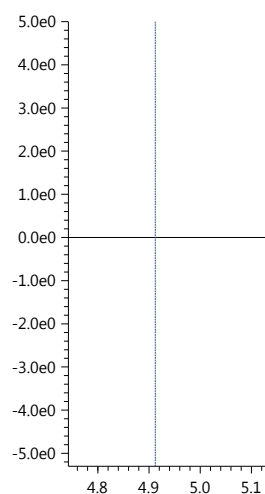


8_2-FTS-13C

Conc ----
 Area ----

Q 528.80>509.00 (-)

0.00e0

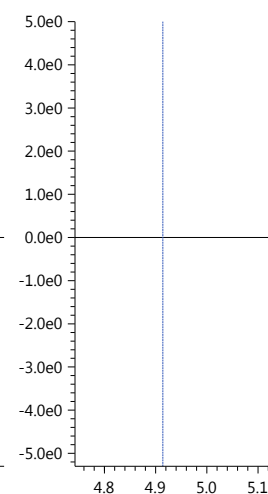


8_2-FTS-13C_IS

Conc ----
 Area ----

ISTD 528.80>509.00 (-)

0.00e0

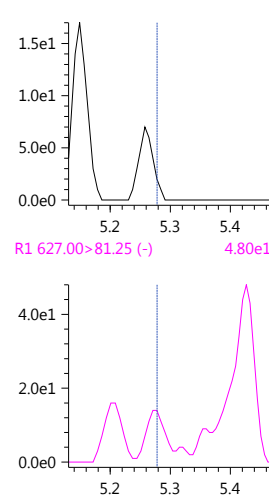


10_2-FtS_1

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

Q 627.00>606.95 (-)

1.70e1

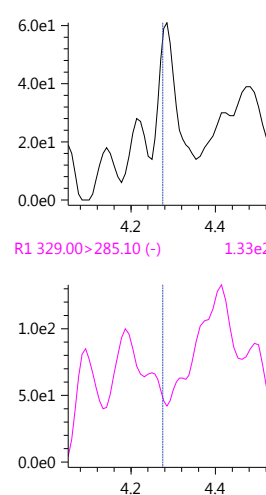


HPFO_DA

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

Q 329.00>169.00 (-)

6.10e1

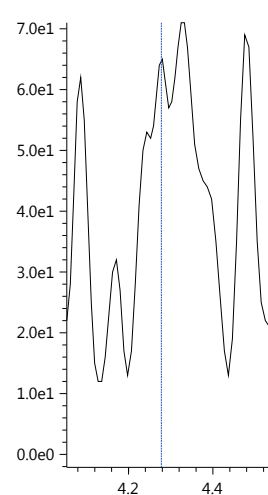


HPFO_DA-13C

Conc ----
 Area ----

Q 332.00>286.80 (-)

7.10e1

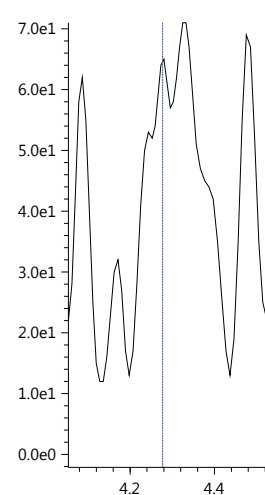


HPFO_DA-13C_IS

Conc ----
 Area ----

ISTD 332.00>286.80 (-)

7.10e1



Insight Report

Printed at 4/18/2020 10:35:59 AM

200417_034

Sample ID: T-PFOA

Date acquired: 4/17/2020 7:30:12 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\200417_curve\200417_034.lcd

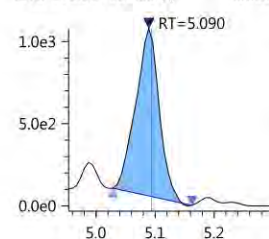
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 0

13C7-PFUnDA_IS

Conc 5.0000

Area 2825

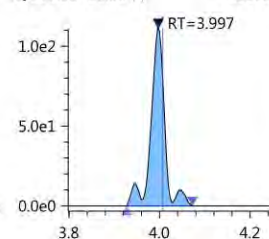
ISTD 570.00>525.00 (-)

**PFBS_1**

Conc 19.0308

Area 232

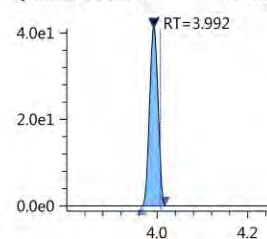
Q 299.00>80.00 (-)

**PFBS-13C**

Conc 0.4799

Area 53

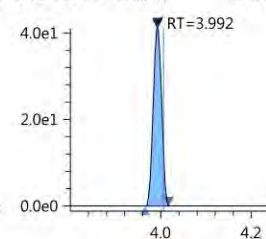
Q 301.80>80.00 (-)

**PFBS-13C_IS**

Conc 5.0000

Area 53

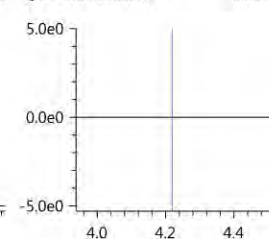
ISTD 301.80>80.00 (-)

**PFPeS**

Conc ----

Area ----

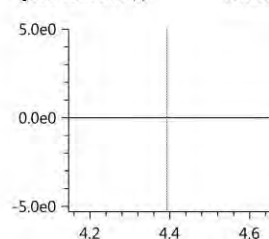
Q 349.00>99.00 (-)

**PFHxS_1**

Conc ----

Area ----

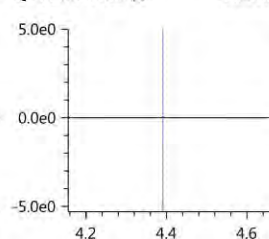
Q 399.00>80.00 (-)

**PFHxS-180**

Conc ----

Area ----

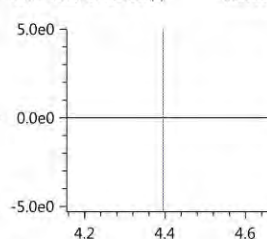
Q 402.70>84.05 (-)

**PFHxS-180_IS**

Conc ----

Area ----

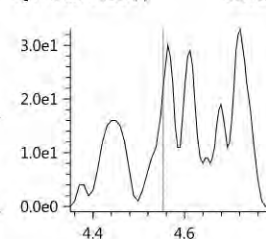
ISTD 402.70>84.05 (-)

**PFHpS_1**

Conc ----

Area ----

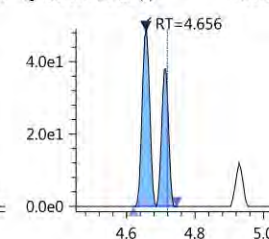
Q 449.00>80.15 (-)

**PFOS_1**

Conc 0.0000

Area 129

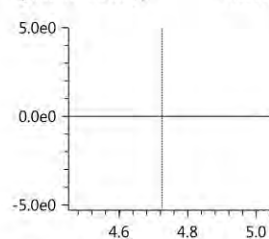
Q 499.00>80.00 (-)

**PFOS-13C**

Conc ----

Area ----

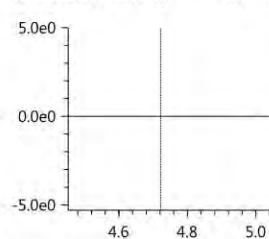
Q 502.80>80.05 (-)

**PFOS-13C_IS**

Conc ----

Area ----

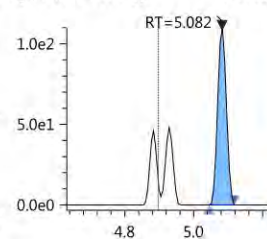
ISTD 502.80>80.05 (-)

**PFNS**

Conc 0.0000

Area 194

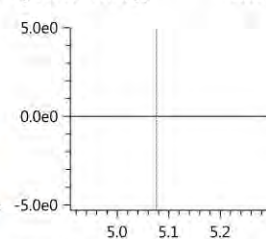
Q 549.00>99.00 (-)

**PFDS_1**

Conc ----

Area ----

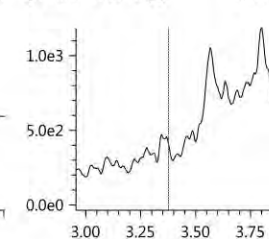
Q 599.00>79.90 (-)

**PFBA**

Conc ----

Area ----

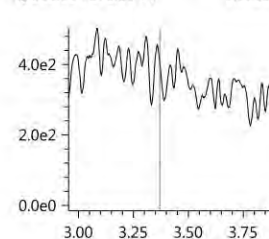
Q 213.00>169.10 (-)

**PFBA-13C**

Conc ----

Area ----

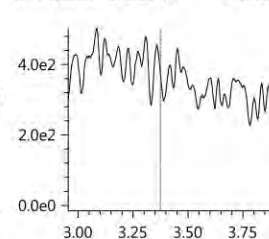
Q 216.90>172.15 (-)

**PFBA-13C_IS**

Conc ----

Area ----

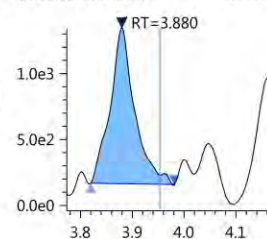
ISTD 216.90>172.15 (-)

**PFPeA**

Conc 46.1337

Area 3911

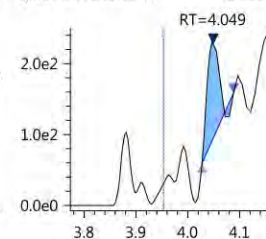
Q 263.05>219.10 (-)

**PFPeA-13C**

Conc 1.2046

Area 203

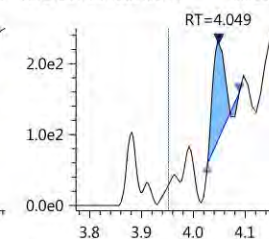
Q 267.90>223.00 (-)

**PFPeA-13C_IS**

Conc 5.0000

Area 203

ISTD 267.90>223.00 (-)



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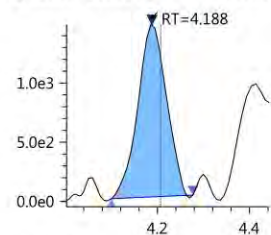
PFHxA

Conc 27.9324

Area 6315

Q 313.00>269.00 (-)

1.50e3



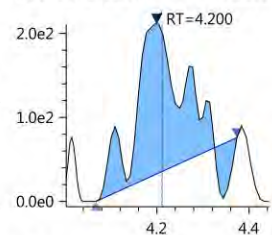
PFHxA-13C

Conc 2.4990

Area 1151

Q 314.90>270.10 (-)

2.11e2



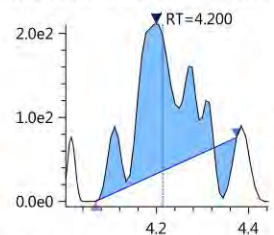
PFHxA-13C_IS

Conc 5.0000

Area 1151

ISTD 314.90>270.10 (-)

2.11e2



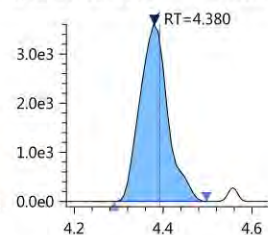
PFHpA

Conc 70.3798

Area 15817

Q 362.90>319.00 (-)

3.61e3



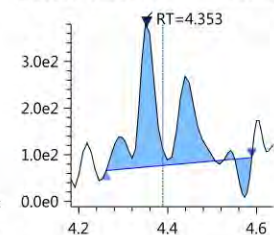
PFHpA-13C

Conc 3.0190

Area 1258

Q 366.90>322.10 (-)

3.80e2



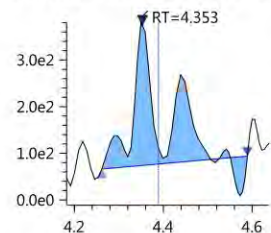
PFHpA-13C_IS

Conc 5.0000

Area 1258

ISTD 366.90>322.10 (-)

3.80e2



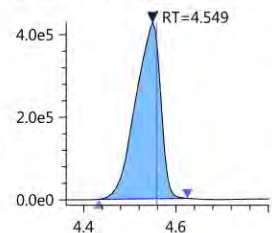
PFOA

Conc 3027.0201

Area 1601244

Q 413.00>369.00 (-)

4.29e5



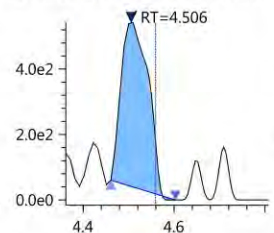
PFOA-13C

Conc 4.1367

Area 2086

Q 416.80>372.05 (-)

5.42e2



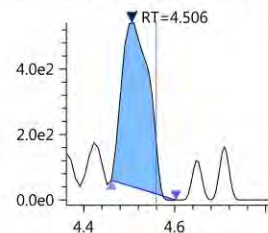
PFOA-13C_IS

Conc 5.0000

Area 2086

ISTD 416.80>372.05 (-)

5.42e2



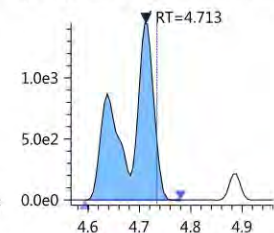
PFNA

Conc 18.1763

Area 5235

Q 463.00>418.90 (-)

1.45e3



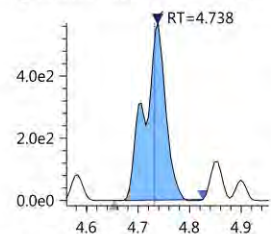
PFNA-13C

Conc 4.2830

Area 1612

Q 467.80>423.00 (-)

5.70e2



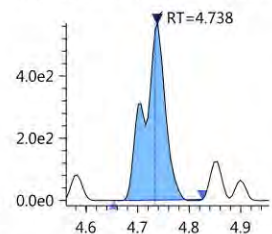
PFNA-13C_IS

Conc 5.0000

Area 1612

ISTD 467.80>423.00 (-)

5.70e2



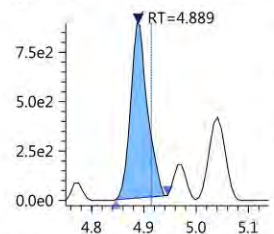
PFDA

Conc 5.4362

Area 1990

Q 513.00>468.80 (-)

8.97e2



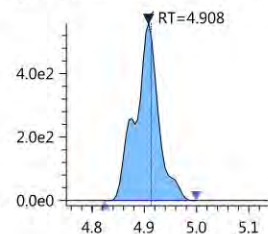
PFDA-13C

Conc 5.0462

Area 1723

Q 514.80>469.95 (-)

5.59e2



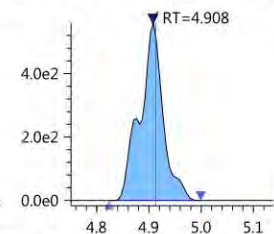
PFDA-13C_IS

Conc 5.0000

Area 1723

ISTD 514.80>469.95 (-)

5.59e2



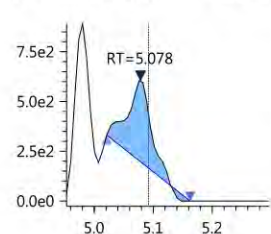
PFUnA

Conc 7.8630

Area 1102

Q 563.00>518.90 (-)

8.91e2



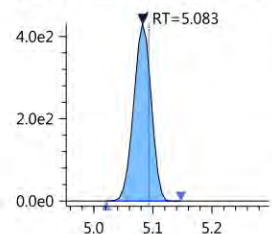
PFUnA-13C

Conc 2.1082

Area 898

Q 564.80>519.95 (-)

4.31e2



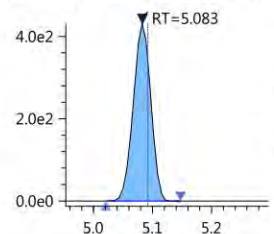
PFUnA-13C_IS

Conc 5.0000

Area 898

ISTD 564.80>519.95 (-)

4.31e2



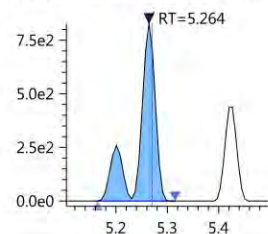
PFDoA

Conc 4.0916

Area 1857

Q 613.05>569.00 (-)

8.27e2



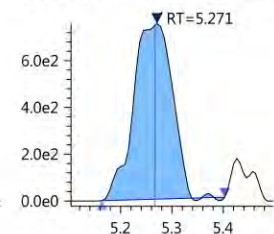
PFDoA-13C

Conc 7.9405

Area 3985

Q 614.80>569.95 (-)

7.58e2

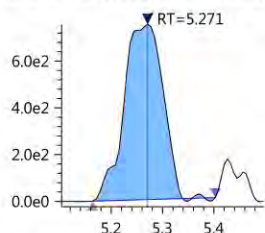


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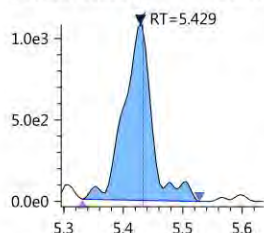
PFDaA-13C_IS

Conc 5.0000
Area 3985
ISTD 614.80>569.95 (-) 7.58e2



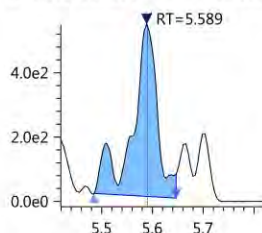
PFTrDA

Conc 1.6055
Area 3581
Q 663.00>618.90 (-) 1.09e3



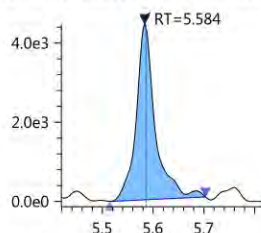
PFTeDA

Conc 1.6553
Area 1809
Q 713.40>669.00 (-) 5.51e2



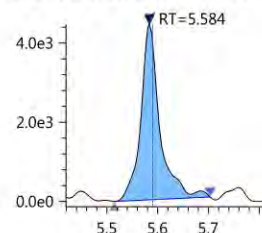
PFTeDA-13C

Conc 28.8341
Area 11546
Q 714.70>669.90 (-) 4.48e3



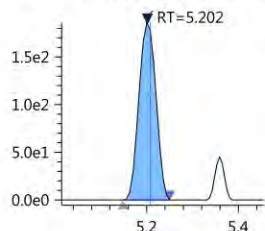
PFTeDA-13C_IS

Conc 5.0000
Area 11546
ISTD 714.70>669.90 (-) 4.48e3



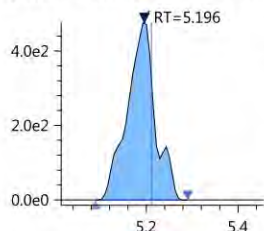
FOSA

Conc 0.9952
Area 482
Q 498.20>78.00 (-) 1.86e2



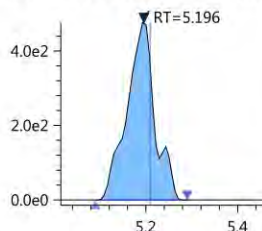
FOSA-13C

Conc 8.8549
Area 2022
Q 506.00>78.05 (-) 4.76e2



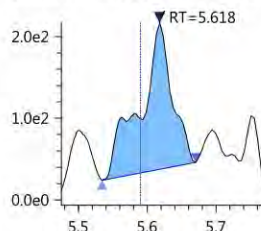
FOSA-13C_IS

Conc 5.0000
Area 2022
ISTD 506.00>78.05 (-) 4.76e2



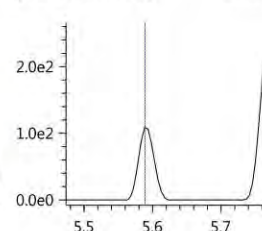
N-MeFOSA

Conc 0.0000
Area 581
Q 512.00>169.10 (-) 2.17e2



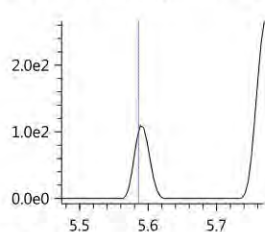
N-MeFOSA-d3

Conc ----
Area ----
Q 514.90>168.90 (-) 2.66e2



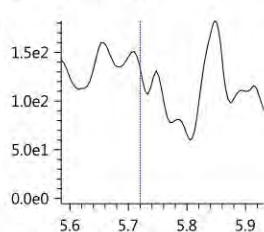
N-MeFOSA-d3_IS

Conc ----
Area ----
ISTD 514.90>168.90 (-) 2.66e2



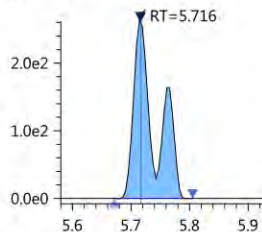
N-EtFOSA

Conc ----
Area ----
Q 526.90>169.10 (-) 1.82e2



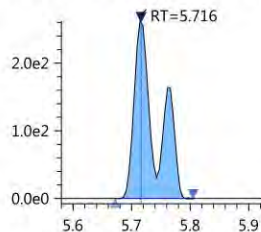
N-EtFOSA-d9

Conc 9.3406
Area 676
Q 530.90>169.15 (-) 2.62e2



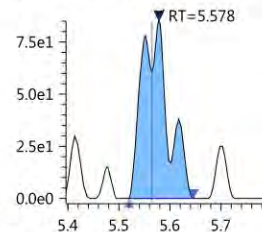
N-EtFOSA-d9_IS

Conc 5.0000
Area 676
ISTD 530.90>169.15 (-) 2.62e2



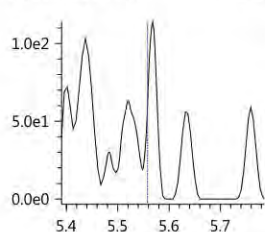
N-MeFOSE

Conc 0.0000
Area 309
Q 616.00>59.00 (-) 8.50e1



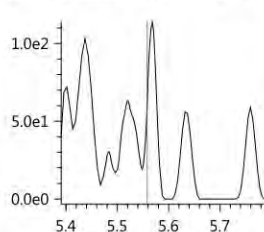
N-MeFOSE-d7

Conc ----
Area ----
Q 622.70>59.10 (-) 1.14e2



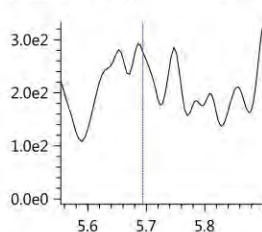
N-MeFOSE-d7_IS

Conc ----
Area ----
ISTD 622.70>59.10 (-) 1.14e2



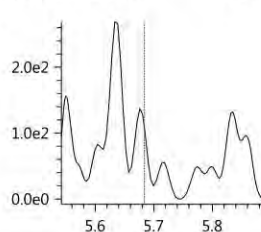
N-EtFOSE

Conc ----
Area ----
Q 630.00>58.90 (-) 3.34e2



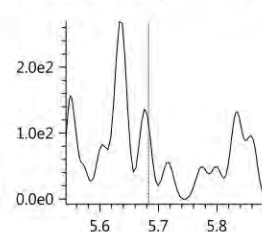
N-EtFOSE-d9

Conc ----
Area ----
Q 638.70>59.10 (-) 2.69e2



N-EtFOSE-d9_IS

Conc ----
Area ----
ISTD 638.70>59.10 (-) 2.69e2



Insight Report

Printed at 4/18/2020 10:35:59 AM

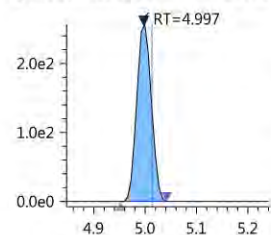
N-MeFOSAA

Conc 0.0000

Area 508

Q 570.20>419.00 (-)

2.57e2



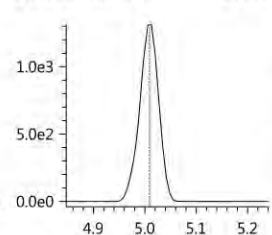
N-MeFOSAA-d3

Conc ----

Area ----

Q 572.80>419.05 (-)

1.32e3



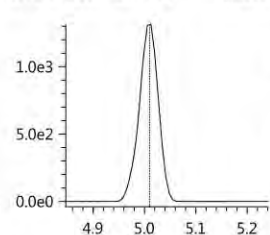
N-MeFOSAA-d3_IS

Conc ----

Area ----

ISTD 572.80>419.05 (-)

1.32e3



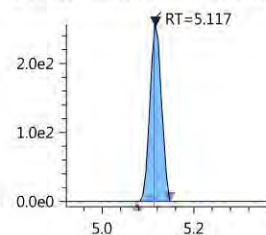
N-EtFOSAA

Conc 0.8748

Area 450

Q 584.20>418.95 (-)

2.57e2



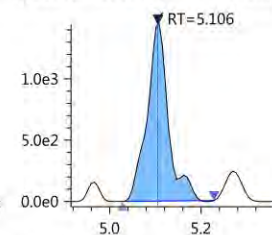
N-EtFOSAA-d5

Conc 78.3208

Area 4679

Q 588.80>419.00 (-)

1.45e3



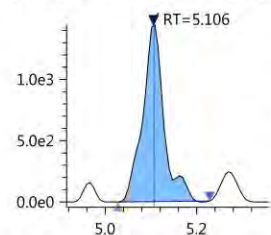
N-EtFOSAA-d5_IS

Conc 5.0000

Area 4679

ISTD 588.80>419.00 (-)

1.45e3



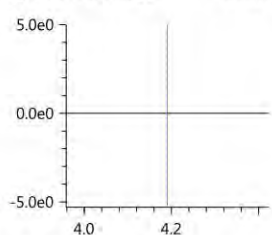
4_2-FTS_1

Conc ----

Area ----

Q 327.00>307.05 (-)

0.00e0



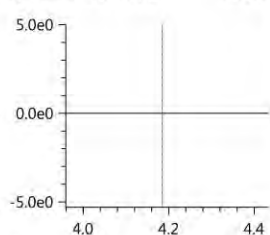
4_2-FTS-13C

Conc ----

Area ----

Q 328.80>309.05 (-)

0.00e0



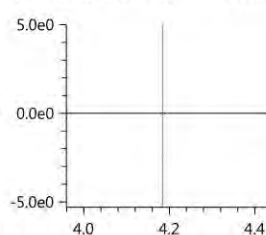
4_2-FTS-13C_IS

Conc ----

Area ----

ISTD 328.80>309.05 (-)

0.00e0



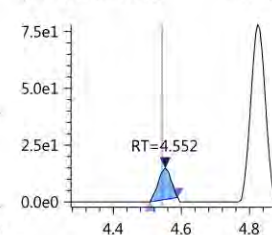
6_2-FTS_1

Conc 0.0000

Area 36

Q 427.00>407.00 (-)

7.80e1



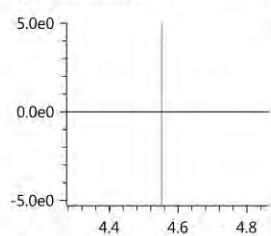
6_2-FTS-13C

Conc ----

Area ----

Q 428.90>409.00 (-)

0.00e0



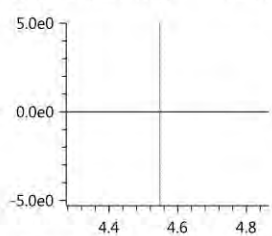
6_2-FTS-13C_IS

Conc ----

Area ----

ISTD 428.90>409.00 (-)

0.00e0



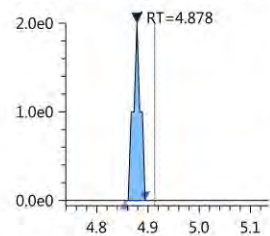
8_2-FTS_1

Conc 0.0000

Area 2

Q 527.10>506.90 (-)

2.00e0



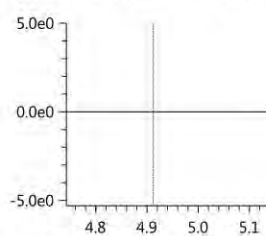
8_2-FTS-13C

Conc ----

Area ----

Q 528.80>509.00 (-)

0.00e0



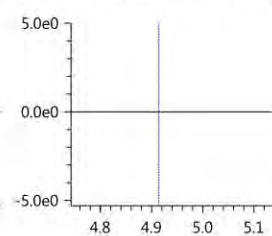
8_2-FTS-13C_IS

Conc ----

Area ----

ISTD 528.80>509.00 (-)

0.00e0



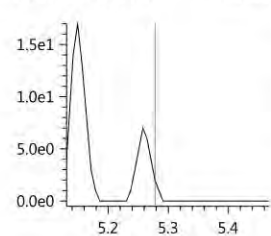
10_2-FtS_1

Conc ----

Area ----

Q 627.00>606.95 (-)

1.70e1



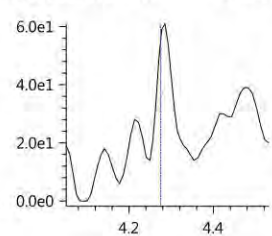
HPFO_DA

Conc ----

Area ----

Q 329.00>169.00 (-)

6.10e1



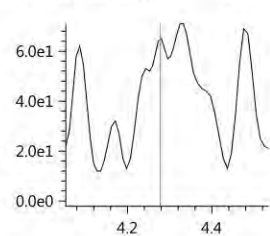
HPFO_DA-13C

Conc ----

Area ----

Q 332.00>286.80 (-)

7.10e1



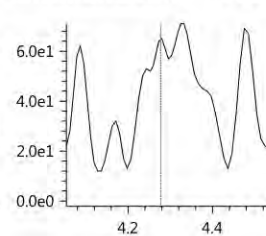
HPFO_DA-13C_IS

Conc ----

Area ----

ISTD 332.00>286.80 (-)

7.10e1



200430_b3



LCMS06 -Shimadzu 8050

ICAL Date: 4/17/2020

Std. xp: 6/9/2020

ICAL ID: KC2000203

LIMS ID: 678575

1st Review:

Cmuller

2nd Review:

DJH

Column:

Phenomenex EVO-C18 100X4 6 mm S/N: H20-069918

Mobile Phases

A: 5mM Ammonium Acetate in H2O 19-OLC-01-80E

B: 5mM Ammonium Acetate In MeOH 19-OLC-01-80F

	Sample Name	File Name	Acquisition Method	Dilution	R	
1	1.0 PPB CCV	19-OLC-01-811	200430_016	PFAS_191226_30_LCMS06.lcm	1x	☒ High HxS surr, native ok
2	1B	19-OLC-01-81H	200430_017	PFAS_191226_30_LCMS06.lcm	1x	☒
3	K2003195-004	10X	200430_018	PFAS_191226_30_LCMS06.lcm	1x	☒ PFOS only
4	K2003195-011	10X	200430_019	PFAS_191226_30_LCMS06.lcm	1x	☒ PFOS only
5	K2003195-013	10X	200430_020	PFAS_191226_30_LCMS06.lcm	1x	☒ PFOS only
6	R2003266-001		200430_021	PFAS_191226_30_LCMS06.lcm	1x	☒ Confirms low PeA, HxA surr
7	R2003266-005		200430_022	PFAS_191226_30_LCMS06.lcm	1x	NN
8	R2003266-007		200430_023	PFAS_191226_30_LCMS06.lcm	1x	☒ Confirms low PFBA, PeA, HxA surr

Analysis: PFC	IS/Lot/Exp.: 19-OLC-02-9113 x8 10/3/20	Filter lot: 91082103 0.45 µm	Solvent/Lot: Honeywell MeOH D4138-1U				
Pipette: Ostwald, Newton, Pascal		Envi-Carb: N/A	Centrifuge: N/A				
Sample ID	IS Amount	Sample Aliquot	Final Volume	Dilution Factor	Date Prepared	Analyst	Analyte for dilution
R2003266-001	10 uL	990 uL	1 mL	1x	4/29/20	N/A	1X confirm low PFBA-13C, PFPeA-13C, PFHxA-13C
R2003266-005	10 uL	990 uL	1 mL	1x			1x rerun to confirm: many surrogates high
R2003266-007	10 uL	990 uL	1 mL	1x			1X confirm low PFBA-13C, PFPeA-13C, PFHxA-13C
K2003195-004	10 uL	100 uL	1 mL	10x			10X dil for PFOS
K2003195-011	10 uL	100 uL	1 mL	10x			10X dil for PFOS
K2003195-013	10 uL	100 uL	1 mL	10x			10X dil for PFOS

200428_b4

1st Review:
2nd Review:
Column:
Mobile Phases

Cmuller

Phenomenex EVO-C18 100X4.6 mm S/N: H20-069918



LCMS06 -Shimadzu 8050

ICAL Date: 4/17/2020

Std. xp: 6/9/2020

ICAL ID: KC2000203

LIMS ID: 678319

A: 5mM Ammonium Acetate in H2O 19-OLC-01-80E

B: 5mM Ammonium Acetate In MeOH 19-OLC-01-80F

	Sample Name	File Name	Acquisition Method	Dilution	R	
1	1.0 PPB CCV	19-OLC-01-81A	200428_052	PFAS_191226_30_LCMS06.lcm	1x	☒
2	1B	19-OLC-01-80M	200428_053	PFAS_191226_30_LCMS06.lcm	1x	☒
3	KQ2005615-03	LCS	200428_054	PFAS_191226_30_LCMS06.lcm	1x	☒
4	KQ2005615-04	MB	200428_055	PFAS_191226_30_LCMS06.lcm	1x	☒
5	R2003266-001		200428_056	PFAS_191226_30_LCMS06.lcm	1x	☒
6	R2003266-002		200428_057	PFAS_191226_30_LCMS06.lcm	1x	☒
7	R2003266-003		200428_058	PFAS_191226_30_LCMS06.lcm	1x	☒
8	R2003266-004		200428_059	PFAS_191226_30_LCMS06.lcm	1x	☒
						RR to confirm low PeA, HxA surr. High 6/8:2 surr, High bias ND
9	R2003266-005		200428_060	PFAS_191226_30_LCMS06.lcm	1x	☒
10	R2003266-006		200428_061	PFAS_191226_30_LCMS06.lcm	1x	☒
11	KQ2005615-01	R2003266-006 MS	200428_062	PFAS_191226_30_LCMS06.lcm	1x	☒
12	KQ2005615-02	R2003266-006 DMS	200428_063	PFAS_191226_30_LCMS06.lcm	1x	☒
						High PFBS, HxS, PFOS, PFBA, HxA, HpA, PFOA, PFNA, PFDA, UnDA, DoDA, TeDA, MeFOSAA, EtFOSAA surr, High bias ND
						High 6/8:2 surr, High bias ND
						High 6/8:2 surr, Native ok
13	R2003266-007		200428_064	PFAS_191226_30_LCMS06.lcm	1x	☒
						RR to confirm low PEFBA, PeA, HxA surr. High 6/8:2 surr, High bias ND