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NAVFAC
Naval Facilities Engineering Command

Groundwater Sample Results, Level 2 Laboratory Report, Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, Sample Location Report, SDG 2000314

MCAS
Tustin, CA
April 2021

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

February 29, 2020

Vista Work Order No. 2000314

Ms. Kimberly Shiroodi
KMEA
2423 Hoover Avenue
National City, CA 91950

Dear Ms. Shiroodi,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on February 13, 2020 under your Project Name 'MCAS El Toro and Tustin, PFAS'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 2000314
Case Narrative

Sample Condition on Receipt:

Thirteen groundwater samples and two blank water samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

PFAS Isotope Dilution Method

The samples were extracted and analyzed for a selected list of PFAS using the PFAS Isotope Dilution Method (Modified EPA Method 537). The results for PFHxS, PFOA, PFOS, MeFOSAA, and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ concentrations. The OPR recoveries were within the method acceptance criteria.

As requested, an MS/MSD was performed on sample "I006MW03SR-20200212". The MS recovery of PFHxS was greater than 131%. The MSD recoveries and/or RPDs were out of the acceptance criteria for PFHxA, PFHpA, and PFHxS.

The labeled standard recoveries outside the acceptance criteria are listed in the table below.

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
2000314-11	IS72MW15S-20200212	PFAS Isotope Dilution Method	13C2-PFTeDA	H	34.4

H = Recovery was outside laboratory acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
2000314-01	SB01-20200212		12-Feb-20 07:00	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-02	EB01-20200212		12-Feb-20 07:10	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-03	I006MW03SR-20200212	MS/MSD	12-Feb-20 07:40	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-04	I006MW05SR-20200212		12-Feb-20 08:40	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-05	DUP01-20200212		12-Feb-20 08:45	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-06	I006MW01S-20200212		12-Feb-20 09:20	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-07	I006MW08S-20200212		12-Feb-20 10:00	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-08	BMW07S-20200212		12-Feb-20 11:00	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-09	I005MW01SR-20200212		12-Feb-20 11:50	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-10	DUP05-20200212		12-Feb-20 11:55	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-11	IS72MW15S-20200212		12-Feb-20 13:15	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-12	IS72MW18SR-20200212		12-Feb-20 14:10	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-13	222MW02S-20200212		12-Feb-20 15:00	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-14	DUP03-20200212		12-Feb-20 15:05	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-15	A000MW42S-20200212		12-Feb-20 16:00	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL

Vista Project: 2000314

Client Project: MCAS El Toro and Tustin, PFAS

ANALYTICAL RESULTS

Sample ID: Method Blank

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Aqueous

Laboratory Data

Lab Sample: B0B0118-BLK1
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFHxA	307-24-4	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
HFPO-DA	13252-13-6	ND	0.00241	0.00300	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFHpA	375-85-9	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
ADONA	919005-14-4	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFHxS	355-46-4	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFOA	335-67-1	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFNA	375-95-1	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFOS	1763-23-1	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
9Cl-PF3ONS	756426-58-1	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFDA	335-76-2	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
MeFOSAA	2355-31-9	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
EtFOSAA	2991-50-6	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFUnA	2058-94-8	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
11Cl-PF3OUdS	763051-92-9	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFDoA	307-55-1	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFTrDA	72629-94-8	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFTeDA	376-06-7	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	93.9	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C3-HFPO-DA	IS	87.6	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C2-PFHxA	IS	83.5	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C4-PFHpA	IS	84.5	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C3-PFHxS	IS	89.6	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C5-PFNA	IS	78.0	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C2-PFOA	IS	89.5	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C8-PFOS	IS	91.6	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C2-PFDA	IS	95.9	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
d3-MeFOSAA	IS	84.2	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C2-PFUnA	IS	100	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
d5-EtFOSAA	IS	78.2	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C2-PFDoA	IS	73.3	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C2-PFTeDA	IS	79.9	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR **PFAS Isotope Dilution Method**

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Aqueous

Laboratory Data

Lab Sample: B0B0118-BS1
Column: BEH C18

Analyte	CAS Number	Amt Found (ug/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0400	0.0400	100	72 - 130		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFHxA	307-24-4	0.0388	0.0400	97.1	72 - 129		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
HFPO-DA	13252-13-6	0.0379	0.0400	94.8	70 - 130		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFHpA	375-85-9	0.0365	0.0400	91.3	72 - 130		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
ADONA	919005-14-4	0.0359	0.0400	89.7	70 - 130		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFHxS	355-46-4	0.0393	0.0400	98.2	68 - 131		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFOA	335-67-1	0.0355	0.0400	88.7	71 - 133		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFNA	375-95-1	0.0372	0.0400	93.1	69 - 130		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFOS	1763-23-1	0.0369	0.0400	92.2	65 - 140		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
9Cl-PF3ONS	756426-58-1	0.0344	0.0400	86.1	70 - 130		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFDA	335-76-2	0.0405	0.0400	101	71 - 129		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
MeFOSAA	2355-31-9	0.0346	0.0400	86.5	65 - 136		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
EtFOSAA	2991-50-6	0.0385	0.0400	96.2	61 - 135		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFUnA	2058-94-8	0.0350	0.0400	87.5	69 - 133		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
11Cl-PF3OUdS	763051-92-9	0.0459	0.0400	115	70 - 130		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFDoA	307-55-1	0.0421	0.0400	105	72 - 134		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFTrDA	72629-94-8	0.0381	0.0400	95.2	65 - 144		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFTeDA	376-06-7	0.0389	0.0400	97.3	71 - 132		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	88.9	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C3-HFPO-DA	IS	81.0	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C2-PFHxA	IS	84.6	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C4-PFHpA	IS	83.7	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C3-PFHxS	IS	75.7	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C5-PFNA	IS	82.9	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C2-PFOA	IS	86.1	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C8-PFOS	IS	89.1	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C2-PFDA	IS	86.2	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
d3-MeFOSAA	IS	84.0	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C2-PFUnA	IS	90.9	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
d5-EtFOSAA	IS	76.7	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C2-PFDoA	IS	71.1	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C2-PFTeDA	IS	78.1	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1

Vista Analytical Laboratory

Sample ID: SB01-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Blank Water
Date Collected: 12-Feb-20 07:00

Laboratory Data

Lab Sample: 2000314-01
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFHxA	307-24-4	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
HFPO-DA	13252-13-6	ND	0.00247	0.00307	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFHpA	375-85-9	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
ADONA	919005-14-4	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFHxS	355-46-4	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFOA	335-67-1	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFNA	375-95-1	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFOS	1763-23-1	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
9Cl-PF3ONS	756426-58-1	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFDA	335-76-2	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
MeFOSAA	2355-31-9	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
EtFOSAA	2991-50-6	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFUnA	2058-94-8	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
11Cl-PF3OUdS	763051-92-9	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFDoA	307-55-1	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFTrDA	72629-94-8	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFTeDA	376-06-7	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	95.8	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C3-HFPO-DA	IS	92.6	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C2-PFHxA	IS	92.2	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C4-PFHpA	IS	87.5	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C3-PFHxS	IS	87.4	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C5-PFNA	IS	83.6	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C2-PFOA	IS	91.5	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C8-PFOS	IS	82.9	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C2-PFDA	IS	95.8	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
d3-MeFOSAA	IS	88.2	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C2-PFUnA	IS	102	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
d5-EtFOSAA	IS	85.6	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C2-PFDoA	IS	75.7	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C2-PFTeDA	IS	80.9	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: EB01-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Blank Water
Date Collected: 12-Feb-20 07:10

Laboratory Data

Lab Sample: 2000314-02
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFHxA	307-24-4	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
HFPO-DA	13252-13-6	ND	0.00245	0.00305	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFHpA	375-85-9	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
ADONA	919005-14-4	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFHxS	355-46-4	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFOA	335-67-1	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFNA	375-95-1	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFOS	1763-23-1	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
9Cl-PF3ONS	756426-58-1	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFDA	335-76-2	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
MeFOSAA	2355-31-9	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
EtFOSAA	2991-50-6	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFUnA	2058-94-8	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
11Cl-PF3OUdS	763051-92-9	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFDoA	307-55-1	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFTrDA	72629-94-8	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFTeDA	376-06-7	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	92.1	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C3-HFPO-DA	IS	93.4	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C2-PFHxA	IS	93.7	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C4-PFHpA	IS	86.7	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C3-PFHxS	IS	88.3	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C5-PFNA	IS	86.0	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C2-PFOA	IS	85.8	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C8-PFOS	IS	92.5	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C2-PFDA	IS	104	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
d3-MeFOSAA	IS	96.1	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C2-PFUnA	IS	94.3	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
d5-EtFOSAA	IS	83.7	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C2-PFDoA	IS	79.5	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C2-PFTeDA	IS	88.6	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: I006MW03SR-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 07:40

Laboratory Data

Lab Sample: 2000314-03
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0513	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFHxA	307-24-4	0.628	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
HFPO-DA	13252-13-6	ND	0.00237	0.00295	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFHpA	375-85-9	0.226	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
ADONA	919005-14-4	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFHxS	355-46-4	0.333	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFOA	335-67-1	0.303	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFNA	375-95-1	0.00140	0.00135	0.00197	0.00394	J	B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFOS	1763-23-1	0.00993	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
9Cl-PF3ONS	756426-58-1	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFDA	335-76-2	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
MeFOSAA	2355-31-9	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
EtFOSAA	2991-50-6	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFUnA	2058-94-8	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
11Cl-PF3OUdS	763051-92-9	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFDoA	307-55-1	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFTrDA	72629-94-8	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFTeDA	376-06-7	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	104	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C3-HFPO-DA	IS	108	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C2-PFHxA	IS	99.6	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C4-PFHpA	IS	96.6	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C3-PFHxS	IS	104	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C5-PFNA	IS	91.8	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C2-PFOA	IS	99.4	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C8-PFOS	IS	93.8	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C2-PFDA	IS	93.7	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
d3-MeFOSAA	IS	99.2	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C2-PFUnA	IS	97.2	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
d5-EtFOSAA	IS	93.0	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C2-PFDoA	IS	81.5	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C2-PFTeDA	IS	85.2	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: I006MW03SR-20200212 **PFAS Isotope Dilution Method**

Name:	KMEA	Lab Sample:	B0B0118-MS1/B0B0118-MSD1	Source Lab Sample:	2000314-03
Project:	MCAS El Toro and Tustin, PFAS	QC Batch:	B0B0118	Date Extracted:	19-Feb-20
Matrix:	Aqueous	Samp Size:	0.258/0.253 L	Column:	BEH C18

Analyte	CAS Number	Sample (ug/L)	MS (ug/L)	MS Spike	MS % Rec	MS Quals	MSD (ug/L)	MSD Spike	MSD % Rec	RPD	MSD Quals	%Rec Limits	RPD Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
PFBS	375-73-5	0.0513	0.100	0.0387	126		0.0986	0.0395	120	4.88		72-130	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFHxA	307-24-4	0.628	0.670	0.0387	111		0.655	0.0395	69.2	46.4	H	72-129	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
HFPO-DA	13252-13-6	ND	0.0386	0.0387	99.8		0.0378	0.0395	95.7	4.19		70-130	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFHpA	375-85-9	0.226	0.273	0.0387	119		0.257	0.0395	77.9	41.7	H	72-130	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
ADONA	919005-14-4	ND	0.0381	0.0387	98.4		0.0356	0.0395	90.1	8.81		70-130	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFHxS	355-46-4	0.333	0.401	0.0387	174	H	0.385	0.0395	132	27.5	H	68-131	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFOA	335-67-1	0.303	0.350	0.0387	123		0.349	0.0395	116	5.86		71-133	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFNA	375-95-1	0.00140	0.0402	0.0387	100		0.0379	0.0395	92.5	7.79		69-130	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFOS	1763-23-1	0.00993	0.0498	0.0387	103		0.0447	0.0395	88.1	15.6		65-140	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
9Cl-PF3ONS	756426-58-1	ND	0.0357	0.0387	92.2		0.0349	0.0395	88.3	4.32		70-130	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFDA	335-76-2	ND	0.0399	0.0387	103		0.0394	0.0395	99.7	3.26		71-129	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
MeFOSAA	2355-31-9	ND	0.0357	0.0387	92.2		0.0349	0.0395	88.4	4.21		65-136	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
EtFOSAA	2991-50-6	ND	0.0379	0.0387	98.0		0.0366	0.0395	92.7	5.56		61-135	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFUnA	2058-94-8	ND	0.0350	0.0387	90.4		0.0352	0.0395	89.1	1.45		69-133	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
11Cl-PF3OUdS	763051-92-9	ND	0.0443	0.0387	114		0.0416	0.0395	105	8.22		70-130	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFDoA	307-55-1	ND	0.0429	0.0387	111		0.0410	0.0395	104	6.51		72-134	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFTrDA	72629-94-8	ND	0.0380	0.0387	98.2		0.0392	0.0395	99.2	1.01		65-144	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFTeDA	376-06-7	ND	0.0338	0.0387	87.2		0.0389	0.0395	98.5	12.2		71-132	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1

Labeled Standards	Type	MS % Rec	MS Quals	MSD % Rec	MSD Quals	Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
13C3-PFBS	IS	88.6		94.3		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C3-HFPO-DA	IS	97.0		107		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C2-PFHxA	IS	93.0		104		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C4-PFHpA	IS	82.2		97.6		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C3-PFHxS	IS	84.1		93.8		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C5-PFNA	IS	83.2		90.5		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C2-PFOA	IS	86.1		97.5		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C8-PFOS	IS	80.7		90.2		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C2-PFDA	IS	85.5		92.8		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
d3-MeFOSAA	IS	83.9		95.7		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C2-PFUnA	IS	83.2		92.3		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
d5-EtFOSAA	IS	76.4		90.3		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C2-PFDoA	IS	65.3		71.3		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1

Sample ID: I006MW03SR-20200212 **PFAS Isotope Dilution Method**

Name:	KMEA	Lab Sample:	B0B0118-MS1/B0B0118-MSD1	Source Lab Sample:	2000314-03
Project:	MCAS El Toro and Tustin, PFAS	QC Batch:	B0B0118	Date Extracted:	19-Feb-20
Matrix:	Aqueous	Samp Size:	0.258/0.253 L	Column:	BEH C18

Labeled Standards	Type	MS % Rec	MS Quals	MSD % Rec	MSD Quals	Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
13C2-PFTeDA	IS	68.4		81.6		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1

Sample ID: I006MW05SR-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 08:40

Laboratory Data

Lab Sample: 2000314-04
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0509	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFHxA	307-24-4	0.129	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
HFPO-DA	13252-13-6	ND	0.00240	0.00298	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFHpA	375-85-9	0.0436	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
ADONA	919005-14-4	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFHxS	355-46-4	0.215	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFOA	335-67-1	0.0464	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFNA	375-95-1	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFOS	1763-23-1	0.0182	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
9Cl-PF3ONS	756426-58-1	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFDA	335-76-2	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
MeFOSAA	2355-31-9	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
EtFOSAA	2991-50-6	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFUnA	2058-94-8	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
11Cl-PF3OUdS	763051-92-9	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFDoA	307-55-1	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFTrDA	72629-94-8	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFTeDA	376-06-7	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	99.6	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C3-HFPO-DA	IS	94.4	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C2-PFHxA	IS	97.2	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C4-PFHpA	IS	91.2	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C3-PFHxS	IS	93.5	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C5-PFNA	IS	84.3	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C2-PFOA	IS	89.7	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C8-PFOS	IS	89.4	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C2-PFDA	IS	94.0	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
d3-MeFOSAA	IS	79.2	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C2-PFUnA	IS	86.1	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
d5-EtFOSAA	IS	88.0	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C2-PFDoA	IS	73.3	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C2-PFTeDA	IS	92.6	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DUP01-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 08:45

Laboratory Data

Lab Sample: 2000314-05
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0556	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFHxA	307-24-4	0.130	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
HFPO-DA	13252-13-6	ND	0.00246	0.00306	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFHpA	375-85-9	0.0468	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
ADONA	919005-14-4	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFHxS	355-46-4	0.205	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFOA	335-67-1	0.0441	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFNA	375-95-1	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFOS	1763-23-1	0.0226	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
9Cl-PF3ONS	756426-58-1	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFDA	335-76-2	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
MeFOSAA	2355-31-9	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
EtFOSAA	2991-50-6	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFUnA	2058-94-8	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
11Cl-PF3OUdS	763051-92-9	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFDoA	307-55-1	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFTrDA	72629-94-8	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFTeDA	376-06-7	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	99.2	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C3-HFPO-DA	IS	103	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C2-PFHxA	IS	100	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C4-PFHpA	IS	89.2	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C3-PFHxS	IS	95.8	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C5-PFNA	IS	89.8	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C2-PFOA	IS	96.4	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C8-PFOS	IS	90.1	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C2-PFDA	IS	101	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
d3-MeFOSAA	IS	92.7	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C2-PFUnA	IS	96.0	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
d5-EtFOSAA	IS	78.8	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C2-PFDoA	IS	68.5	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C2-PFTeDA	IS	96.5	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: I006MW01S-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 09:20

Laboratory Data

Lab Sample: 2000314-06
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.217	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFHxA	307-24-4	3.09	0.00671	0.00980	0.0196	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 03:46	5
HFPO-DA	13252-13-6	ND	0.00236	0.00294	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFHpA	375-85-9	3.28	0.00671	0.00980	0.0196	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 03:46	5
ADONA	919005-14-4	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFHxS	355-46-4	1.06	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFOA	335-67-1	1.70	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFNA	375-95-1	0.0412	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFOS	1763-23-1	0.199	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
9Cl-PF3ONS	756426-58-1	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFDA	335-76-2	0.00191	0.00134	0.00196	0.00392	J	B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
MeFOSAA	2355-31-9	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
EtFOSAA	2991-50-6	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFUnA	2058-94-8	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
11Cl-PF3OUdS	763051-92-9	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFDoA	307-55-1	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFTrDA	72629-94-8	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFTeDA	376-06-7	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	101	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C3-HFPO-DA	IS	99.8	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C2-PFHxA	IS	92.0	50 - 150	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 03:46	5
13C4-PFHpA	IS	85.0	50 - 150	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 03:46	5
13C3-PFHxS	IS	91.1	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C5-PFNA	IS	91.8	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C2-PFOA	IS	90.2	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C8-PFOS	IS	94.6	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C2-PFDA	IS	87.8	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
d3-MeFOSAA	IS	93.3	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C2-PFUnA	IS	88.8	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
d5-EtFOSAA	IS	79.1	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C2-PFDoA	IS	65.2	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C2-PFTeDA	IS	79.6	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: I006MW08S-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 10:00

Laboratory Data

Lab Sample: 2000314-07
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.557	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFHxA	307-24-4	0.630	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
HFPO-DA	13252-13-6	ND	0.00240	0.00299	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFHpA	375-85-9	0.112	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
ADONA	919005-14-4	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFHxS	355-46-4	1.92	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFOA	335-67-1	0.194	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFNA	375-95-1	0.00175	0.00137	0.00199	0.00399	J	B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFOS	1763-23-1	0.779	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
9Cl-PF3ONS	756426-58-1	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFDA	335-76-2	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
MeFOSAA	2355-31-9	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
EtFOSAA	2991-50-6	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFUnA	2058-94-8	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
11Cl-PF3OUdS	763051-92-9	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFDoA	307-55-1	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFTrDA	72629-94-8	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFTeDA	376-06-7	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	92.2	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C3-HFPO-DA	IS	91.8	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C2-PFHxA	IS	90.7	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C4-PFHpA	IS	98.9	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C3-PFHxS	IS	76.9	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C5-PFNA	IS	97.8	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C2-PFOA	IS	98.4	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C8-PFOS	IS	90.8	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C2-PFDA	IS	95.3	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
d3-MeFOSAA	IS	89.7	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C2-PFUnA	IS	86.9	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
d5-EtFOSAA	IS	89.3	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C2-PFDoA	IS	68.3	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C2-PFTeDA	IS	65.4	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: BMW07S-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 11:00

Laboratory Data

Lab Sample: 2000314-08
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.515	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFHxA	307-24-4	2.08	0.00674	0.00984	0.0197	D	B0B0118	19-Feb-20	0.254 L	26-Feb-20 04:28	5
HFPO-DA	13252-13-6	ND	0.00237	0.00295	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFHpA	375-85-9	0.625	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
ADONA	919005-14-4	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFHxS	355-46-4	3.08	0.00674	0.00984	0.0197	D	B0B0118	19-Feb-20	0.254 L	26-Feb-20 04:28	5
PFOA	335-67-1	6.29	0.0135	0.0197	0.0394	D	B0B0118	19-Feb-20	0.254 L	28-Feb-20 06:55	10
PFNA	375-95-1	0.0250	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFOS	1763-23-1	1.10	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
9Cl-PF3ONS	756426-58-1	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFDA	335-76-2	0.00150	0.00135	0.00197	0.00394	J, Q	B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
MeFOSAA	2355-31-9	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
EtFOSAA	2991-50-6	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFUnA	2058-94-8	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
11Cl-PF3OUdS	763051-92-9	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFDoA	307-55-1	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFTrDA	72629-94-8	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFTeDA	376-06-7	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	96.8	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C3-HFPO-DA	IS	110	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C2-PFHxA	IS	111	50 - 150	D	B0B0118	19-Feb-20	0.254 L	26-Feb-20 04:28	5
13C4-PFHpA	IS	92.0	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C3-PFHxS	IS	109	50 - 150	D	B0B0118	19-Feb-20	0.254 L	26-Feb-20 04:28	5
13C5-PFNA	IS	90.7	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C2-PFOA	IS	92.1	50 - 150	D	B0B0118	19-Feb-20	0.254 L	28-Feb-20 06:55	10
13C8-PFOS	IS	98.4	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C2-PFDA	IS	114	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
d3-MeFOSAA	IS	106	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C2-PFUnA	IS	107	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
d5-EtFOSAA	IS	95.1	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C2-PFDoA	IS	86.5	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C2-PFTeDA	IS	102	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: I005MW01SR-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 11:50

Laboratory Data

Lab Sample: 2000314-09
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.501	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFHxA	307-24-4	1.52	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
HFPO-DA	13252-13-6	ND	0.00236	0.00294	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFHpA	375-85-9	0.395	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
ADONA	919005-14-4	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFHxS	355-46-4	2.62	0.00672	0.00980	0.0196	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:39	5
PFOA	335-67-1	3.76	0.00672	0.00980	0.0196	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:39	5
PFNA	375-95-1	0.0245	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFOS	1763-23-1	1.08	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
9Cl-PF3ONS	756426-58-1	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFDA	335-76-2	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
MeFOSAA	2355-31-9	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
EtFOSAA	2991-50-6	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFUnA	2058-94-8	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
11Cl-PF3OUdS	763051-92-9	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFDoA	307-55-1	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFTrDA	72629-94-8	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFTeDA	376-06-7	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	103	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C3-HFPO-DA	IS	94.4	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C2-PFHxA	IS	93.7	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C4-PFHpA	IS	97.5	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C3-PFHxS	IS	122	50 - 150	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:39	5
13C5-PFNA	IS	101	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C2-PFOA	IS	134	50 - 150	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:39	5
13C8-PFOS	IS	96.5	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C2-PFDA	IS	98.0	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
d3-MeFOSAA	IS	101	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C2-PFUnA	IS	97.4	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
d5-EtFOSAA	IS	105	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C2-PFDoA	IS	70.8	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C2-PFTeDA	IS	78.6	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DUP05-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 11:55

Laboratory Data

Lab Sample: 2000314-10
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.525	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFHxA	307-24-4	1.51	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
HFPO-DA	13252-13-6	ND	0.00238	0.00296	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFHpA	375-85-9	0.411	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
ADONA	919005-14-4	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFHxS	355-46-4	2.84	0.00677	0.00988	0.0198	D	B0B0118	19-Feb-20	0.253 L	26-Feb-20 05:11	5
PFOA	335-67-1	4.15	0.00677	0.00988	0.0198	D	B0B0118	19-Feb-20	0.253 L	26-Feb-20 05:11	5
PFNA	375-95-1	0.0267	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFOS	1763-23-1	1.11	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
9Cl-PF3ONS	756426-58-1	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFDA	335-76-2	0.00176	0.00135	0.00198	0.00396	J, Q	B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
MeFOSAA	2355-31-9	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
EtFOSAA	2991-50-6	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFUnA	2058-94-8	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
11Cl-PF3OUdS	763051-92-9	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFDoA	307-55-1	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFTrDA	72629-94-8	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFTeDA	376-06-7	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	87.2	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C3-HFPO-DA	IS	92.2	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C2-PFHxA	IS	86.8	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C4-PFHpA	IS	84.8	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C3-PFHxS	IS	105	50 - 150	D	B0B0118	19-Feb-20	0.253 L	26-Feb-20 05:11	5
13C5-PFNA	IS	85.9	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C2-PFOA	IS	112	50 - 150	D	B0B0118	19-Feb-20	0.253 L	26-Feb-20 05:11	5
13C8-PFOS	IS	80.6	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C2-PFDA	IS	88.2	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
d3-MeFOSAA	IS	96.9	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C2-PFUnA	IS	93.8	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
d5-EtFOSAA	IS	79.6	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C2-PFDoA	IS	73.7	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C2-PFTeDA	IS	83.0	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: IS72MW15S-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 13:15

Laboratory Data

Lab Sample: 2000314-11
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0993	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFHxA	307-24-4	0.258	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
HFPO-DA	13252-13-6	ND	0.00237	0.00295	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFHpA	375-85-9	0.0730	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
ADONA	919005-14-4	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFHxS	355-46-4	0.829	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFOA	335-67-1	0.420	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFNA	375-95-1	0.0216	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFOS	1763-23-1	1.71	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
9Cl-PF3ONS	756426-58-1	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFDA	335-76-2	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
MeFOSAA	2355-31-9	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
EtFOSAA	2991-50-6	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFUnA	2058-94-8	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
11Cl-PF3OUdS	763051-92-9	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFDoA	307-55-1	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFTrDA	72629-94-8	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFTeDA	376-06-7	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	92.3	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C3-HFPO-DA	IS	88.0	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C2-PFHxA	IS	85.6	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C4-PFHpA	IS	85.0	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C3-PFHxS	IS	79.9	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C5-PFNA	IS	79.7	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C2-PFOA	IS	90.0	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C8-PFOS	IS	82.7	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C2-PFDA	IS	81.4	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
d3-MeFOSAA	IS	70.6	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C2-PFUnA	IS	75.9	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
d5-EtFOSAA	IS	79.6	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C2-PFDoA	IS	53.2	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C2-PFTeDA	IS	34.4	50 - 150	H	B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: IS72MW18SR-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 14:10

Laboratory Data

Lab Sample: 2000314-12
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0451	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFHxA	307-24-4	0.0998	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
HFPO-DA	13252-13-6	ND	0.00246	0.00306	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFHpA	375-85-9	0.0378	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
ADONA	919005-14-4	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFHxS	355-46-4	0.323	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFOA	335-67-1	0.325	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFNA	375-95-1	0.00422	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFOS	1763-23-1	0.252	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
9Cl-PF3ONS	756426-58-1	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFDA	335-76-2	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
MeFOSAA	2355-31-9	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
EtFOSAA	2991-50-6	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFUnA	2058-94-8	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
11Cl-PF3OUdS	763051-92-9	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFDoA	307-55-1	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFTrDA	72629-94-8	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFTeDA	376-06-7	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	99.2	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C3-HFPO-DA	IS	92.6	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C2-PFHxA	IS	89.6	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C4-PFHpA	IS	85.3	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C3-PFHxS	IS	90.6	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C5-PFNA	IS	90.2	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C2-PFOA	IS	91.4	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C8-PFOS	IS	84.5	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C2-PFDA	IS	94.8	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
d3-MeFOSAA	IS	74.2	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C2-PFUnA	IS	96.0	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
d5-EtFOSAA	IS	80.5	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C2-PFDoA	IS	67.3	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C2-PFTeDA	IS	86.1	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: 222MW02S-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 15:00

Laboratory Data

Lab Sample: 2000314-13
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.00456	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFHxA	307-24-4	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
HFPO-DA	13252-13-6	ND	0.00239	0.00298	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFHpA	375-85-9	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
ADONA	919005-14-4	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFHxS	355-46-4	0.0145	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFOA	335-67-1	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFNA	375-95-1	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFOS	1763-23-1	0.00624	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
9Cl-PF3ONS	756426-58-1	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFDA	335-76-2	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
MeFOSAA	2355-31-9	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
EtFOSAA	2991-50-6	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFUnA	2058-94-8	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
11Cl-PF3OUdS	763051-92-9	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFDoA	307-55-1	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFTrDA	72629-94-8	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFTeDA	376-06-7	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	94.3	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C3-HFPO-DA	IS	96.6	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C2-PFHxA	IS	87.3	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C4-PFHpA	IS	83.3	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C3-PFHxS	IS	88.2	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C5-PFNA	IS	84.7	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C2-PFOA	IS	90.4	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C8-PFOS	IS	89.6	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C2-PFDA	IS	88.1	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
d3-MeFOSAA	IS	88.7	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C2-PFUnA	IS	92.0	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
d5-EtFOSAA	IS	83.0	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C2-PFDoA	IS	67.5	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C2-PFTeDA	IS	87.5	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DUP03-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 15:05

Laboratory Data

Lab Sample: 2000314-14
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.00587	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFHxA	307-24-4	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
HFPO-DA	13252-13-6	ND	0.00246	0.00307	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFHpA	375-85-9	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
ADONA	919005-14-4	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFHxS	355-46-4	0.0166	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFOA	335-67-1	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFNA	375-95-1	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFOS	1763-23-1	0.00544	0.00140	0.00205	0.00409	Q	B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
9Cl-PF3ONS	756426-58-1	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFDA	335-76-2	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
MeFOSAA	2355-31-9	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
EtFOSAA	2991-50-6	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFUnA	2058-94-8	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
11Cl-PF3OUdS	763051-92-9	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFDoA	307-55-1	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFTrDA	72629-94-8	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFTeDA	376-06-7	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	95.7	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C3-HFPO-DA	IS	93.6	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C2-PFHxA	IS	94.4	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C4-PFHpA	IS	90.6	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C3-PFHxS	IS	91.1	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C5-PFNA	IS	82.7	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C2-PFOA	IS	91.0	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C8-PFOS	IS	92.6	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C2-PFDA	IS	92.4	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
d3-MeFOSAA	IS	89.8	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C2-PFUnA	IS	91.8	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
d5-EtFOSAA	IS	79.8	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C2-PFDoA	IS	80.3	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C2-PFTeDA	IS	79.5	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: A000MW42S-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 16:00

Laboratory Data

Lab Sample: 2000314-15
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0134	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFHxA	307-24-4	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
HFPO-DA	13252-13-6	ND	0.00238	0.00296	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFHpA	375-85-9	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
ADONA	919005-14-4	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFHxS	355-46-4	0.0302	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFOA	335-67-1	0.00366	0.00135	0.00198	0.00395	J	B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFNA	375-95-1	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFOS	1763-23-1	0.00333	0.00135	0.00198	0.00395	J, Q	B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
9Cl-PF3ONS	756426-58-1	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFDA	335-76-2	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
MeFOSAA	2355-31-9	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
EtFOSAA	2991-50-6	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFUnA	2058-94-8	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
11Cl-PF3OUdS	763051-92-9	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFDoA	307-55-1	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFTrDA	72629-94-8	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFTeDA	376-06-7	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	103	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C3-HFPO-DA	IS	105	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C2-PFHxA	IS	106	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C4-PFHpA	IS	95.5	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C3-PFHxS	IS	104	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C5-PFNA	IS	90.1	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C2-PFOA	IS	99.3	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C8-PFOS	IS	98.5	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C2-PFDA	IS	107	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
d3-MeFOSAA	IS	96.3	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C2-PFUnA	IS	102	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
d5-EtFOSAA	IS	89.5	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C2-PFDoA	IS	72.8	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C2-PFTeDA	IS	90.0	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
TEQ	Toxic Equivalency
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	19-013-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-23
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2018017
Massachusetts Department of Environmental Protection	N/A
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1521520
New Hampshire Environmental Accreditation Program	207718-B
New Jersey Department of Environmental Protection	190001
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-010
Pennsylvania Department of Environmental Protection	016
Texas Commission on Environmental Quality	T104704189-19-10
Vermont Department of Health	VT-4042
Virginia Department of General Services	10272
Washington Department of Ecology	C584-19
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	**Method**
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	**Method**
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613/1613B
1,4-Dioxane (1,4-Diethyleneoxide) analysis by GC/HRMS	EPA 522
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	**Method**
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

Vista Analytical

1104 Windfield Way
El Dorado Hills, CA 95762
TEL: 916-673-1520

2000314 1.2°C
Vista PM: Jade White-Dobbs

CHAIN OF CUSTODY RECORD

DATE: 2/12/2020
PAGE: 1 OF 2

LABORATORY CLIENT: KMEA
ADDRESS: 9210 Sky Park Court, Suite 220
CITY: San Diego, CA 92123
TEL: (619) 399-5900 | E-Mail: kimberly.shiroodi@woodplc.com | E-MAIL: brian.johnson@woodplc.com

CLIENT PROJECT NAME / NUMBER: MCAS El Toro and Tustin, PFAS
PROJECT CONTACT: Kimberly Shiroodi / Brian Johnson
SAMPLER(S): (SIGNATURE) Lee Ritter

P.O. NO.: TO 008 Mod 4
CONTRACT NO.: N62473-16-D-2405
LAB USE ONLY

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 10 DAYS ☒ Standard

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS
samples potentially contain elevated levels of PFAS.

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	QC Level	PFAS by LC/MS-MS
	S801 - 20200212	2/12/20	7:00	BW	2		X
	EB01 - 20200212		7:10	"	2		X
	I006MW03SR-20200212		7:40	GW	6	IV	X
	I006MW05SR-20200212		8:40		2	IV	X
	DUP01 - 20200212		8:45		2	IV	X
	I006MW01S - 20200212		9:20		2	IV	X
	I006MW08S - 20200212		10:00		2	IV	X
	BMW07S - 20200212		11:00		2	IV	X
	I005MW01SR - 20200212		11:50		2	IV	X
	DUP05 - 20200212		11:55		2	IV	X

MS / MSD

Relinquished by: (Signature) Lee Ritter	Received by: (Signature) / Carrier Tracking Number FedEx	Date: 2/12/20	Time: 17:00
Relinquished by: (Signature) FedEx	Received by: (Signature)	Date: 02/13/20	Time: 0915
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Vista Analytical

1104 Windfield Way
El Dorado Hills, CA 95762
TEL: 916-673-1520

2000314
Vista PM: Jade White-Dobbs

CHAIN OF CUSTODY RECORD

DATE: 2/12/2020
PAGE: 2 OF 2

LABORATORY CLIENT: KMEA	CLIENT PROJECT NAME / NUMBER: MCAS El Toro and Tustin, PFAS	P.O. NO.: TO 008 Mod 4
ADDRESS: 9210 Sky Park Court, Suite 220	PROJECT CONTACT: Kimberly Shiroodi / Brian Johnson	CONTRACT NO.: N62473-16-D-2405
CITY: San Diego, CA 92123	SAMPLER(S): (SIGNATURE) Uly Ruiz	LAB USE ONLY
TEL: (619) 399-5900 / E-Mail: kimberly.shiroodi@woodplc.com / E-MAIL: brian.johnson@woodplc.com		

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 10 DAYS ☒ Standard

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS
Samples potentially contain elevated levels of PFAS.

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	QC Level	PFAS by LC/MS-MS
	IS72MW15S-20200212	2/12/20	13:15	GW	2	IV	X
	IS72MW18SR-20200212	"	14:10	"	2	IV	X
	222MW02S-20200212	"	15:00	"	2	IV	X
	DUP03-20200212	"	15:05	"	2	IV	X
	A000MW42S-20200212	"	16:00	"	2	IV	X

Uly Ruiz 2-12-20

Relinquished by: (Signature) Uly Ruiz	Received by: (Signature) / Carrier Tracking Number FedEx	Date: 2/12/20	Time: 17:00
Relinquished by: (Signature) FedEx	Received by: (Signature)	Date: 02/13/20	Time: 0915
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Vista Analytical Laboratory

Sample Log-In Checklist

Vista Work Order #: 2000314 **TAT** 14 days

Samples Arrival:	**Date/Time** 02/13/20 0915		**Initials:** MWS		**Location:** WR-2 **Shelf/Rack:** N/A		
Delivered By:	FedEx	UPS	On Trac	GSO	DHL	Hand Delivered	Other
Preservation:	Ice		Blue Ice		Dry Ice		None
Temp °C: 1.2 (uncorrected)			**Probe used:** Y / N		**Thermometer ID:** IR-4		
Temp °C: 1.2 (corrected)							

	YES	NO	NA
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Airbill — Trk # 8106 7954 5940	✓		
Shipping Documentation Present?	✓		
Shipping Container: Vista / Client / Retain / Return / Dispose			
Chain of Custody / Sample Documentation Present?	✓		
Chain of Custody / Sample Documentation Complete?	✓		
Holding Time Acceptable?	✓		

Logged In:	**Date/Time** 02/13/20 1603	**Initials:** MWS	**Location:** R-13, WR-2 **Shelf/Rack:** D-3, E-5
COC Anomaly/Sample Acceptance Form completed?		✓	✓

Comments:

CoC/Label Reconciliation Report WO# 2000314

LabNumber	CoC Sample ID	SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
2000314-01	A SB01-20200212		12-Feb-20 07:00	HDPE Bottle, 250 mL	Aqueous	
2000314-01	B SB01-20200212		12-Feb-20 07:00	HDPE Bottle, 250 mL	Aqueous	
2000314-02	A EB01-20200212		12-Feb-20 07:10	HDPE Bottle, 250 mL	Aqueous	
2000314-02	B EB01-20200212		12-Feb-20 07:10	HDPE Bottle, 250 mL	Aqueous	
2000314-03	A I006MW03SR-20200212		12-Feb-20 07:40	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000314-03	B I006MW03SR-20200212		12-Feb-20 07:40	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000314-03	C I006MW03SR-20200212		12-Feb-20 07:40	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000314-03	D I006MW03SR-20200212		12-Feb-20 07:40	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000314-03	E I006MW03SR-20200212		12-Feb-20 07:40	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000314-03	F I006MW03SR-20200212		12-Feb-20 07:40	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000314-04	A I006MW05SR-20200212		12-Feb-20 08:40	HDPE Bottle, 250 mL	Aqueous	
2000314-04	B I006MW05SR-20200212		12-Feb-20 08:40	HDPE Bottle, 250 mL	Aqueous	
2000314-05	A DUP01-20200212		12-Feb-20 08:45	HDPE Bottle, 250 mL	Aqueous	
2000314-05	B DUP01-20200212		12-Feb-20 08:45	HDPE Bottle, 250 mL	Aqueous	
2000314-06	A I006MW01S-20200212		12-Feb-20 09:20	HDPE Bottle, 250 mL	Aqueous	
2000314-06	B I006MW01S-20200212		12-Feb-20 09:20	HDPE Bottle, 250 mL	Aqueous	
2000314-07	A I006MW08S-20200212		12-Feb-20 10:00	HDPE Bottle, 250 mL	Aqueous	
2000314-07	B I006MW08S-20200212		12-Feb-20 10:00	HDPE Bottle, 250 mL	Aqueous	
2000314-08	A BMW07S-20200212		12-Feb-20 11:00	HDPE Bottle, 250 mL	Aqueous	
2000314-08	B BMW07S-20200212		12-Feb-20 11:00	HDPE Bottle, 250 mL	Aqueous	
2000314-09	A I005MW01SR-20200212		12-Feb-20 11:50	HDPE Bottle, 250 mL	Aqueous	
2000314-09	B I005MW01SR-20200212		12-Feb-20 11:50	HDPE Bottle, 250 mL	Aqueous	
2000314-10	A DUP05-20200212		12-Feb-20 11:55	HDPE Bottle, 250 mL	Aqueous	
2000314-10	B DUP05-20200212		12-Feb-20 11:55	HDPE Bottle, 250 mL	Aqueous	
2000314-11	A IS72MW15S-20200212		12-Feb-20 13:15	HDPE Bottle, 250 mL	Aqueous	
2000314-11	B IS72MW15S-20200212		12-Feb-20 13:15	HDPE Bottle, 250 mL	Aqueous	
2000314-12	A IS72MW18SR-20200212		12-Feb-20 14:10	HDPE Bottle, 250 mL	Aqueous	
2000314-12	B IS72MW18SR-20200212		12-Feb-20 14:10	HDPE Bottle, 250 mL	Aqueous	
2000314-13	A 222MW02S-20200212		12-Feb-20 15:00	HDPE Bottle, 250 mL	Aqueous	

2000314-13	B	222MW02S-20200212	☑	12-Feb-20 15:00	☑	HDPE Bottle, 250 mL	Aqueous
2000314-14	A	DUP03-20200212	☑	12-Feb-20 15:05	☑	HDPE Bottle, 250 mL	Aqueous
2000314-14	B	DUP03-20200212	☑	12-Feb-20 15:05	☑	HDPE Bottle, 250 mL	Aqueous
2000314-15	A	A000MW42S-20200212	☑	12-Feb-20 16:00	☑	HDPE Bottle, 250 mL	Aqueous
2000314-15	B	A000MW42S-20200212	☑	12-Feb-20 16:00	☑	HDPE Bottle, 250 mL	Aqueous

Checkmarks indicate that information on the COC reconciled with the sample label.
Any discrepancies are noted in the following columns.

	Yes	No	NA
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Adequate Sample Volume?	✓		
Container Type Appropriate for Analysis(es)	✓		
Preservation Documented: Na2S2O3 Trizma None Other			✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

Comments:

Verifed by/Date: WWS 02/13/20

February 29, 2020

Vista Work Order No. 2000314

Ms. Kimberly Shiroodi
KMEA
2423 Hoover Avenue
National City, CA 91950

Dear Ms. Shiroodi,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on February 13, 2020 under your Project Name 'MCAS El Toro and Tustin, PFAS'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 2000314
Case Narrative

Sample Condition on Receipt:

Thirteen groundwater samples and two blank water samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

PFAS Isotope Dilution Method

The samples were extracted and analyzed for a selected list of PFAS using the PFAS Isotope Dilution Method (Modified EPA Method 537). The results for PFHxS, PFOA, PFOS, MeFOSAA, and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ concentrations. The OPR recoveries were within the method acceptance criteria.

As requested, an MS/MSD was performed on sample "I006MW03SR-20200212". The MS recovery of PFHxS was greater than 131%. The MSD recoveries and/or RPDs were out of the acceptance criteria for PFHxA, PFHpA, and PFHxS.

The labeled standard recoveries outside the acceptance criteria are listed in the table below.

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
2000314-11	IS72MW15S-20200212	PFAS Isotope Dilution Method	13C2-PFTeDA	H	34.4

H = Recovery was outside laboratory acceptance criteria.

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ICAL with ICV and IB..... 349

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Standards..... 987

Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
2000314-01	SB01-20200212		12-Feb-20 07:00	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-02	EB01-20200212		12-Feb-20 07:10	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-03	I006MW03SR-20200212	MS/MSD	12-Feb-20 07:40	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-04	I006MW05SR-20200212		12-Feb-20 08:40	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-05	DUP01-20200212		12-Feb-20 08:45	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-06	I006MW01S-20200212		12-Feb-20 09:20	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-07	I006MW08S-20200212		12-Feb-20 10:00	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-08	BMW07S-20200212		12-Feb-20 11:00	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-09	I005MW01SR-20200212		12-Feb-20 11:50	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-10	DUP05-20200212		12-Feb-20 11:55	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-11	IS72MW15S-20200212		12-Feb-20 13:15	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-12	IS72MW18SR-20200212		12-Feb-20 14:10	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-13	222MW02S-20200212		12-Feb-20 15:00	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-14	DUP03-20200212		12-Feb-20 15:05	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000314-15	A000MW42S-20200212		12-Feb-20 16:00	13-Feb-20 09:15	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL

Vista Project: 2000314

Client Project: MCAS El Toro and Tustin, PFAS

ANALYTICAL RESULTS

Sample ID: Method Blank

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Aqueous

Laboratory Data

Lab Sample: B0B0118-BLK1
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFHxA	307-24-4	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
HFPO-DA	13252-13-6	ND	0.00241	0.00300	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFHpA	375-85-9	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
ADONA	919005-14-4	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFHxS	355-46-4	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFOA	335-67-1	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFNA	375-95-1	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFOS	1763-23-1	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
9Cl-PF3ONS	756426-58-1	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFDA	335-76-2	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
MeFOSAA	2355-31-9	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
EtFOSAA	2991-50-6	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFUnA	2058-94-8	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
11Cl-PF3OUdS	763051-92-9	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFDoA	307-55-1	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFTrDA	72629-94-8	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
PFTeDA	376-06-7	ND	0.00137	0.00200	0.00400		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	93.9	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C3-HFPO-DA	IS	87.6	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C2-PFHxA	IS	83.5	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C4-PFHpA	IS	84.5	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C3-PFHxS	IS	89.6	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C5-PFNA	IS	78.0	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C2-PFOA	IS	89.5	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C8-PFOS	IS	91.6	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C2-PFDA	IS	95.9	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
d3-MeFOSAA	IS	84.2	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C2-PFUnA	IS	100	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
d5-EtFOSAA	IS	78.2	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C2-PFDoA	IS	73.3	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1
13C2-PFTeDA	IS	79.9	50 - 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:28	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR **PFAS Isotope Dilution Method**

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Aqueous

Laboratory Data

Lab Sample: B0B0118-BS1
Column: BEH C18

Analyte	CAS Number	Amt Found (ug/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0400	0.0400	100	72 - 130		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFHxA	307-24-4	0.0388	0.0400	97.1	72 - 129		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
HFPO-DA	13252-13-6	0.0379	0.0400	94.8	70 - 130		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFHpA	375-85-9	0.0365	0.0400	91.3	72 - 130		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
ADONA	919005-14-4	0.0359	0.0400	89.7	70 - 130		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFHxS	355-46-4	0.0393	0.0400	98.2	68 - 131		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFOA	335-67-1	0.0355	0.0400	88.7	71 - 133		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFNA	375-95-1	0.0372	0.0400	93.1	69 - 130		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFOS	1763-23-1	0.0369	0.0400	92.2	65 - 140		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
9Cl-PF3ONS	756426-58-1	0.0344	0.0400	86.1	70 - 130		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFDA	335-76-2	0.0405	0.0400	101	71 - 129		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
MeFOSAA	2355-31-9	0.0346	0.0400	86.5	65 - 136		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
EtFOSAA	2991-50-6	0.0385	0.0400	96.2	61 - 135		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFUnA	2058-94-8	0.0350	0.0400	87.5	69 - 133		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
11Cl-PF3OUdS	763051-92-9	0.0459	0.0400	115	70 - 130		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFDoA	307-55-1	0.0421	0.0400	105	72 - 134		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFTrDA	72629-94-8	0.0381	0.0400	95.2	65 - 144		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
PFTeDA	376-06-7	0.0389	0.0400	97.3	71 - 132		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	88.9	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C3-HFPO-DA	IS	81.0	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C2-PFHxA	IS	84.6	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C4-PFHpA	IS	83.7	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C3-PFHxS	IS	75.7	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C5-PFNA	IS	82.9	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C2-PFOA	IS	86.1	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C8-PFOS	IS	89.1	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C2-PFDA	IS	86.2	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
d3-MeFOSAA	IS	84.0	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C2-PFUnA	IS	90.9	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
d5-EtFOSAA	IS	76.7	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C2-PFDoA	IS	71.1	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1
13C2-PFTeDA	IS	78.1	50- 150		B0B0118	19-Feb-20	0.250 L	20-Feb-20 22:39	1

Sample ID: SB01-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Blank Water
Date Collected: 12-Feb-20 07:00

Laboratory Data

Lab Sample: 2000314-01
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFHxA	307-24-4	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
HFPO-DA	13252-13-6	ND	0.00247	0.00307	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFHpA	375-85-9	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
ADONA	919005-14-4	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFHxS	355-46-4	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFOA	335-67-1	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFNA	375-95-1	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFOS	1763-23-1	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
9Cl-PF3ONS	756426-58-1	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFDA	335-76-2	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
MeFOSAA	2355-31-9	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
EtFOSAA	2991-50-6	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFUnA	2058-94-8	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
11Cl-PF3OUdS	763051-92-9	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFDoA	307-55-1	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFTrDA	72629-94-8	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
PFTeDA	376-06-7	ND	0.00140	0.00205	0.00410		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	95.8	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C3-HFPO-DA	IS	92.6	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C2-PFHxA	IS	92.2	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C4-PFHpA	IS	87.5	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C3-PFHxS	IS	87.4	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C5-PFNA	IS	83.6	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C2-PFOA	IS	91.5	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C8-PFOS	IS	82.9	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C2-PFDA	IS	95.8	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
d3-MeFOSAA	IS	88.2	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C2-PFUnA	IS	102	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
d5-EtFOSAA	IS	85.6	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C2-PFDoA	IS	75.7	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1
13C2-PFTeDA	IS	80.9	50 - 150		B0B0118	19-Feb-20	0.244 L	20-Feb-20 23:10	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: EB01-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Blank Water
Date Collected: 12-Feb-20 07:10

Laboratory Data

Lab Sample: 2000314-02
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFHxA	307-24-4	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
HFPO-DA	13252-13-6	ND	0.00245	0.00305	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFHpA	375-85-9	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
ADONA	919005-14-4	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFHxS	355-46-4	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFOA	335-67-1	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFNA	375-95-1	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFOS	1763-23-1	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
9Cl-PF3ONS	756426-58-1	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFDA	335-76-2	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
MeFOSAA	2355-31-9	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
EtFOSAA	2991-50-6	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFUnA	2058-94-8	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
11Cl-PF3OUdS	763051-92-9	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFDoA	307-55-1	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFTrDA	72629-94-8	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
PFTeDA	376-06-7	ND	0.00139	0.00203	0.00406		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	92.1	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C3-HFPO-DA	IS	93.4	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C2-PFHxA	IS	93.7	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C4-PFHpA	IS	86.7	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C3-PFHxS	IS	88.3	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C5-PFNA	IS	86.0	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C2-PFOA	IS	85.8	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C8-PFOS	IS	92.5	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C2-PFDA	IS	104	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
d3-MeFOSAA	IS	96.1	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C2-PFUnA	IS	94.3	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
d5-EtFOSAA	IS	83.7	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C2-PFDoA	IS	79.5	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1
13C2-PFTeDA	IS	88.6	50 - 150		B0B0118	19-Feb-20	0.246 L	20-Feb-20 23:21	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: I006MW03SR-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 07:40

Laboratory Data

Lab Sample: 2000314-03
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0513	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFHxA	307-24-4	0.628	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
HFPO-DA	13252-13-6	ND	0.00237	0.00295	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFHpA	375-85-9	0.226	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
ADONA	919005-14-4	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFHxS	355-46-4	0.333	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFOA	335-67-1	0.303	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFNA	375-95-1	0.00140	0.00135	0.00197	0.00394	J	B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFOS	1763-23-1	0.00993	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
9Cl-PF3ONS	756426-58-1	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFDA	335-76-2	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
MeFOSAA	2355-31-9	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
EtFOSAA	2991-50-6	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFUnA	2058-94-8	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
11Cl-PF3OUdS	763051-92-9	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFDoA	307-55-1	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFTrDA	72629-94-8	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
PFTeDA	376-06-7	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	104	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C3-HFPO-DA	IS	108	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C2-PFHxA	IS	99.6	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C4-PFHpA	IS	96.6	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C3-PFHxS	IS	104	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C5-PFNA	IS	91.8	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C2-PFOA	IS	99.4	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C8-PFOS	IS	93.8	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C2-PFDA	IS	93.7	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
d3-MeFOSAA	IS	99.2	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C2-PFUnA	IS	97.2	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
d5-EtFOSAA	IS	93.0	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C2-PFDoA	IS	81.5	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1
13C2-PFTeDA	IS	85.2	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:03	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: I006MW03SR-20200212 **PFAS Isotope Dilution Method**

Name:	KMEA	Lab Sample:	B0B0118-MS1/B0B0118-MSD1	Source Lab Sample:	2000314-03
Project:	MCAS El Toro and Tustin, PFAS	QC Batch:	B0B0118	Date Extracted:	19-Feb-20
Matrix:	Aqueous	Samp Size:	0.258/0.253 L	Column:	BEH C18

Analyte	CAS Number	Sample (ug/L)	MS (ug/L)	MS Spike	MS % Rec	MS Quals	MSD (ug/L)	MSD Spike	MSD % Rec	RPD	MSD Quals	%Rec Limits	RPD Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
PFBS	375-73-5	0.0513	0.100	0.0387	126		0.0986	0.0395	120	4.88		72-130	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFHxA	307-24-4	0.628	0.670	0.0387	111		0.655	0.0395	69.2	46.4	H	72-129	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
HFPO-DA	13252-13-6	ND	0.0386	0.0387	99.8		0.0378	0.0395	95.7	4.19		70-130	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFHpA	375-85-9	0.226	0.273	0.0387	119		0.257	0.0395	77.9	41.7	H	72-130	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
ADONA	919005-14-4	ND	0.0381	0.0387	98.4		0.0356	0.0395	90.1	8.81		70-130	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFHxS	355-46-4	0.333	0.401	0.0387	174	H	0.385	0.0395	132	27.5	H	68-131	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFOA	335-67-1	0.303	0.350	0.0387	123		0.349	0.0395	116	5.86		71-133	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFNA	375-95-1	0.00140	0.0402	0.0387	100		0.0379	0.0395	92.5	7.79		69-130	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFOS	1763-23-1	0.00993	0.0498	0.0387	103		0.0447	0.0395	88.1	15.6		65-140	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
9Cl-PF3ONS	756426-58-1	ND	0.0357	0.0387	92.2		0.0349	0.0395	88.3	4.32		70-130	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFDA	335-76-2	ND	0.0399	0.0387	103		0.0394	0.0395	99.7	3.26		71-129	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
MeFOSAA	2355-31-9	ND	0.0357	0.0387	92.2		0.0349	0.0395	88.4	4.21		65-136	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
EtFOSAA	2991-50-6	ND	0.0379	0.0387	98.0		0.0366	0.0395	92.7	5.56		61-135	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFUnA	2058-94-8	ND	0.0350	0.0387	90.4		0.0352	0.0395	89.1	1.45		69-133	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
11Cl-PF3OUdS	763051-92-9	ND	0.0443	0.0387	114		0.0416	0.0395	105	8.22		70-130	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFDoA	307-55-1	ND	0.0429	0.0387	111		0.0410	0.0395	104	6.51		72-134	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFTrDA	72629-94-8	ND	0.0380	0.0387	98.2		0.0392	0.0395	99.2	1.01		65-144	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1
PFTeDA	376-06-7	ND	0.0338	0.0387	87.2		0.0389	0.0395	98.5	12.2		71-132	30	20-Feb-20 22:49	1	20-Feb-20 23:00	1

Labeled Standards	Type	MS % Rec	MS Quals	MSD % Rec	MSD Quals	Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
13C3-PFBS	IS	88.6		94.3		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C3-HFPO-DA	IS	97.0		107		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C2-PFHxA	IS	93.0		104		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C4-PFHpA	IS	82.2		97.6		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C3-PFHxS	IS	84.1		93.8		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C5-PFNA	IS	83.2		90.5		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C2-PFOA	IS	86.1		97.5		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C8-PFOS	IS	80.7		90.2		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C2-PFDA	IS	85.5		92.8		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
d3-MeFOSAA	IS	83.9		95.7		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C2-PFUnA	IS	83.2		92.3		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
d5-EtFOSAA	IS	76.4		90.3		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1
13C2-PFDoA	IS	65.3		71.3		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1

Sample ID: I006MW03SR-20200212 **PFAS Isotope Dilution Method**

Name:	KMEA	Lab Sample:	B0B0118-MS1/B0B0118-MSD1	Source Lab Sample:	2000314-03
Project:	MCAS El Toro and Tustin, PFAS	QC Batch:	B0B0118	Date Extracted:	19-Feb-20
Matrix:	Aqueous	Samp Size:	0.258/0.253 L	Column:	BEH C18

Labeled Standards	Type	MS % Rec	MS Quals	MSD % Rec	MSD Quals	Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
13C2-PFTeDA	IS	68.4		81.6		50-150	20-Feb-20 22:49	1	20-Feb-20 23:00	1

Sample ID: I006MW05SR-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 08:40

Laboratory Data

Lab Sample: 2000314-04
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0509	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFHxA	307-24-4	0.129	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
HFPO-DA	13252-13-6	ND	0.00240	0.00298	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFHpA	375-85-9	0.0436	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
ADONA	919005-14-4	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFHxS	355-46-4	0.215	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFOA	335-67-1	0.0464	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFNA	375-95-1	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFOS	1763-23-1	0.0182	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
9Cl-PF3ONS	756426-58-1	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFDA	335-76-2	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
MeFOSAA	2355-31-9	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
EtFOSAA	2991-50-6	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFUnA	2058-94-8	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
11Cl-PF3OUdS	763051-92-9	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFDoA	307-55-1	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFTrDA	72629-94-8	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
PFTeDA	376-06-7	ND	0.00136	0.00198	0.00398		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	99.6	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C3-HFPO-DA	IS	94.4	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C2-PFHxA	IS	97.2	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C4-PFHpA	IS	91.2	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C3-PFHxS	IS	93.5	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C5-PFNA	IS	84.3	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C2-PFOA	IS	89.7	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C8-PFOS	IS	89.4	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C2-PFDA	IS	94.0	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
d3-MeFOSAA	IS	79.2	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C2-PFUnA	IS	86.1	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
d5-EtFOSAA	IS	88.0	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C2-PFDoA	IS	73.3	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1
13C2-PFTeDA	IS	92.6	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 00:13	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DUP01-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 08:45

Laboratory Data

Lab Sample: 2000314-05
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0556	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFHxA	307-24-4	0.130	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
HFPO-DA	13252-13-6	ND	0.00246	0.00306	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFHpA	375-85-9	0.0468	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
ADONA	919005-14-4	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFHxS	355-46-4	0.205	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFOA	335-67-1	0.0441	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFNA	375-95-1	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFOS	1763-23-1	0.0226	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
9Cl-PF3ONS	756426-58-1	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFDA	335-76-2	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
MeFOSAA	2355-31-9	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
EtFOSAA	2991-50-6	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFUnA	2058-94-8	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
11Cl-PF3OUdS	763051-92-9	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFDoA	307-55-1	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFTrDA	72629-94-8	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
PFTeDA	376-06-7	ND	0.00140	0.00204	0.00408		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	99.2	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C3-HFPO-DA	IS	103	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C2-PFHxA	IS	100	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C4-PFHpA	IS	89.2	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C3-PFHxS	IS	95.8	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C5-PFNA	IS	89.8	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C2-PFOA	IS	96.4	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C8-PFOS	IS	90.1	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C2-PFDA	IS	101	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
d3-MeFOSAA	IS	92.7	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C2-PFUnA	IS	96.0	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
d5-EtFOSAA	IS	78.8	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C2-PFDoA	IS	68.5	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1
13C2-PFTeDA	IS	96.5	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 00:24	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Vista Analytical Laboratory

Sample ID: I006MW01S-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 09:20

Laboratory Data

Lab Sample: 2000314-06
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.217	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFHxA	307-24-4	3.09	0.00671	0.00980	0.0196	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 03:46	5
HFPO-DA	13252-13-6	ND	0.00236	0.00294	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFHpA	375-85-9	3.28	0.00671	0.00980	0.0196	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 03:46	5
ADONA	919005-14-4	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFHxS	355-46-4	1.06	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFOA	335-67-1	1.70	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFNA	375-95-1	0.0412	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFOS	1763-23-1	0.199	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
9Cl-PF3ONS	756426-58-1	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFDA	335-76-2	0.00191	0.00134	0.00196	0.00392	J	B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
MeFOSAA	2355-31-9	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
EtFOSAA	2991-50-6	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFUnA	2058-94-8	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
11Cl-PF3OUdS	763051-92-9	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFDoA	307-55-1	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFTrDA	72629-94-8	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
PFTeDA	376-06-7	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	101	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C3-HFPO-DA	IS	99.8	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C2-PFHxA	IS	92.0	50 - 150	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 03:46	5
13C4-PFHpA	IS	85.0	50 - 150	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 03:46	5
13C3-PFHxS	IS	91.1	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C5-PFNA	IS	91.8	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C2-PFOA	IS	90.2	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C8-PFOS	IS	94.6	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C2-PFDA	IS	87.8	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
d3-MeFOSAA	IS	93.3	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C2-PFUnA	IS	88.8	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
d5-EtFOSAA	IS	79.1	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C2-PFDoA	IS	65.2	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1
13C2-PFTeDA	IS	79.6	50 - 150		B0B0118	19-Feb-20	0.255 L	21-Feb-20 00:34	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: I006MW08S-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 10:00

Laboratory Data

Lab Sample: 2000314-07
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.557	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFHxA	307-24-4	0.630	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
HFPO-DA	13252-13-6	ND	0.00240	0.00299	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFHpA	375-85-9	0.112	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
ADONA	919005-14-4	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFHxS	355-46-4	1.92	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFOA	335-67-1	0.194	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFNA	375-95-1	0.00175	0.00137	0.00199	0.00399	J	B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFOS	1763-23-1	0.779	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
9Cl-PF3ONS	756426-58-1	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFDA	335-76-2	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
MeFOSAA	2355-31-9	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
EtFOSAA	2991-50-6	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFUnA	2058-94-8	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
11Cl-PF3OUdS	763051-92-9	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFDoA	307-55-1	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFTrDA	72629-94-8	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
PFTeDA	376-06-7	ND	0.00137	0.00199	0.00399		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	92.2	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C3-HFPO-DA	IS	91.8	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C2-PFHxA	IS	90.7	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C4-PFHpA	IS	98.9	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C3-PFHxS	IS	76.9	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C5-PFNA	IS	97.8	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C2-PFOA	IS	98.4	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C8-PFOS	IS	90.8	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C2-PFDA	IS	95.3	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
d3-MeFOSAA	IS	89.7	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C2-PFUnA	IS	86.9	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
d5-EtFOSAA	IS	89.3	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C2-PFDoA	IS	68.3	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1
13C2-PFTeDA	IS	65.4	50 - 150		B0B0118	19-Feb-20	0.251 L	26-Feb-20 04:07	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: BMW07S-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 11:00

Laboratory Data

Lab Sample: 2000314-08
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.515	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFHxA	307-24-4	2.08	0.00674	0.00984	0.0197	D	B0B0118	19-Feb-20	0.254 L	26-Feb-20 04:28	5
HFPO-DA	13252-13-6	ND	0.00237	0.00295	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFHpA	375-85-9	0.625	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
ADONA	919005-14-4	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFHxS	355-46-4	3.08	0.00674	0.00984	0.0197	D	B0B0118	19-Feb-20	0.254 L	26-Feb-20 04:28	5
PFOA	335-67-1	6.29	0.0135	0.0197	0.0394	D	B0B0118	19-Feb-20	0.254 L	28-Feb-20 06:55	10
PFNA	375-95-1	0.0250	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFOS	1763-23-1	1.10	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
9Cl-PF3ONS	756426-58-1	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFDA	335-76-2	0.00150	0.00135	0.00197	0.00394	J, Q	B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
MeFOSAA	2355-31-9	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
EtFOSAA	2991-50-6	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFUnA	2058-94-8	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
11Cl-PF3OUdS	763051-92-9	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFDoA	307-55-1	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFTrDA	72629-94-8	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
PFTeDA	376-06-7	ND	0.00135	0.00197	0.00394		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	96.8	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C3-HFPO-DA	IS	110	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C2-PFHxA	IS	111	50 - 150	D	B0B0118	19-Feb-20	0.254 L	26-Feb-20 04:28	5
13C4-PFHpA	IS	92.0	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C3-PFHxS	IS	109	50 - 150	D	B0B0118	19-Feb-20	0.254 L	26-Feb-20 04:28	5
13C5-PFNA	IS	90.7	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C2-PFOA	IS	92.1	50 - 150	D	B0B0118	19-Feb-20	0.254 L	28-Feb-20 06:55	10
13C8-PFOS	IS	98.4	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C2-PFDA	IS	114	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
d3-MeFOSAA	IS	106	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C2-PFUnA	IS	107	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
d5-EtFOSAA	IS	95.1	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C2-PFDoA	IS	86.5	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1
13C2-PFTeDA	IS	102	50 - 150		B0B0118	19-Feb-20	0.254 L	21-Feb-20 00:55	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Vista Analytical Laboratory

Sample ID: I005MW01SR-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 11:50

Laboratory Data

Lab Sample: 2000314-09
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.501	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFHxA	307-24-4	1.52	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
HFPO-DA	13252-13-6	ND	0.00236	0.00294	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFHpA	375-85-9	0.395	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
ADONA	919005-14-4	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFHxS	355-46-4	2.62	0.00672	0.00980	0.0196	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:39	5
PFOA	335-67-1	3.76	0.00672	0.00980	0.0196	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:39	5
PFNA	375-95-1	0.0245	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFOS	1763-23-1	1.08	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
9Cl-PF3ONS	756426-58-1	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFDA	335-76-2	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
MeFOSAA	2355-31-9	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
EtFOSAA	2991-50-6	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFUnA	2058-94-8	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
11Cl-PF3OUdS	763051-92-9	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFDoA	307-55-1	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFTrDA	72629-94-8	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
PFTeDA	376-06-7	ND	0.00134	0.00196	0.00392		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	103	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C3-HFPO-DA	IS	94.4	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C2-PFHxA	IS	93.7	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C4-PFHpA	IS	97.5	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C3-PFHxS	IS	122	50 - 150	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:39	5
13C5-PFNA	IS	101	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C2-PFOA	IS	134	50 - 150	D	B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:39	5
13C8-PFOS	IS	96.5	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C2-PFDA	IS	98.0	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
d3-MeFOSAA	IS	101	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C2-PFUnA	IS	97.4	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
d5-EtFOSAA	IS	105	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C2-PFDoA	IS	70.8	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1
13C2-PFTeDA	IS	78.6	50 - 150		B0B0118	19-Feb-20	0.255 L	26-Feb-20 04:50	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Vista Analytical Laboratory

Sample ID: DUP05-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 11:55

Laboratory Data

Lab Sample: 2000314-10
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.525	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFHxA	307-24-4	1.51	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
HFPO-DA	13252-13-6	ND	0.00238	0.00296	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFHpA	375-85-9	0.411	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
ADONA	919005-14-4	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFHxS	355-46-4	2.84	0.00677	0.00988	0.0198	D	B0B0118	19-Feb-20	0.253 L	26-Feb-20 05:11	5
PFOA	335-67-1	4.15	0.00677	0.00988	0.0198	D	B0B0118	19-Feb-20	0.253 L	26-Feb-20 05:11	5
PFNA	375-95-1	0.0267	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFOS	1763-23-1	1.11	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
9Cl-PF3ONS	756426-58-1	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFDA	335-76-2	0.00176	0.00135	0.00198	0.00396	J, Q	B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
MeFOSAA	2355-31-9	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
EtFOSAA	2991-50-6	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFUnA	2058-94-8	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
11Cl-PF3OUdS	763051-92-9	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFDoA	307-55-1	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFTrDA	72629-94-8	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
PFTeDA	376-06-7	ND	0.00135	0.00198	0.00396		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	87.2	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C3-HFPO-DA	IS	92.2	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C2-PFHxA	IS	86.8	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C4-PFHpA	IS	84.8	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C3-PFHxS	IS	105	50 - 150	D	B0B0118	19-Feb-20	0.253 L	26-Feb-20 05:11	5
13C5-PFNA	IS	85.9	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C2-PFOA	IS	112	50 - 150	D	B0B0118	19-Feb-20	0.253 L	26-Feb-20 05:11	5
13C8-PFOS	IS	80.6	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C2-PFDA	IS	88.2	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
d3-MeFOSAA	IS	96.9	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C2-PFUnA	IS	93.8	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
d5-EtFOSAA	IS	79.6	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C2-PFDoA	IS	73.7	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1
13C2-PFTeDA	IS	83.0	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 01:16	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: IS72MW15S-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 13:15

Laboratory Data

Lab Sample: 2000314-11
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0993	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFHxA	307-24-4	0.258	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
HFPO-DA	13252-13-6	ND	0.00237	0.00295	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFHpA	375-85-9	0.0730	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
ADONA	919005-14-4	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFHxS	355-46-4	0.829	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFOA	335-67-1	0.420	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFNA	375-95-1	0.0216	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFOS	1763-23-1	1.71	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
9Cl-PF3ONS	756426-58-1	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFDA	335-76-2	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
MeFOSAA	2355-31-9	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
EtFOSAA	2991-50-6	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFUnA	2058-94-8	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
11Cl-PF3OUdS	763051-92-9	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFDoA	307-55-1	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFTrDA	72629-94-8	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
PFTeDA	376-06-7	ND	0.00135	0.00197	0.00393		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	92.3	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C3-HFPO-DA	IS	88.0	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C2-PFHxA	IS	85.6	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C4-PFHpA	IS	85.0	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C3-PFHxS	IS	79.9	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C5-PFNA	IS	79.7	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C2-PFOA	IS	90.0	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C8-PFOS	IS	82.7	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C2-PFDA	IS	81.4	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
d3-MeFOSAA	IS	70.6	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C2-PFUnA	IS	75.9	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
d5-EtFOSAA	IS	79.6	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C2-PFDoA	IS	53.2	50 - 150		B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1
13C2-PFTeDA	IS	34.4	50 - 150	H	B0B0118	19-Feb-20	0.254 L	26-Feb-20 05:21	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: IS72MW18SR-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 14:10

Laboratory Data

Lab Sample: 2000314-12
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0451	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFHxA	307-24-4	0.0998	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
HFPO-DA	13252-13-6	ND	0.00246	0.00306	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFHpA	375-85-9	0.0378	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
ADONA	919005-14-4	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFHxS	355-46-4	0.323	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFOA	335-67-1	0.325	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFNA	375-95-1	0.00422	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFOS	1763-23-1	0.252	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
9Cl-PF3ONS	756426-58-1	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFDA	335-76-2	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
MeFOSAA	2355-31-9	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
EtFOSAA	2991-50-6	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFUnA	2058-94-8	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
11Cl-PF3OUdS	763051-92-9	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFDoA	307-55-1	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFTrDA	72629-94-8	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
PFTeDA	376-06-7	ND	0.00140	0.00204	0.00409		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	99.2	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C3-HFPO-DA	IS	92.6	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C2-PFHxA	IS	89.6	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C4-PFHpA	IS	85.3	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C3-PFHxS	IS	90.6	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C5-PFNA	IS	90.2	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C2-PFOA	IS	91.4	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C8-PFOS	IS	84.5	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C2-PFDA	IS	94.8	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
d3-MeFOSAA	IS	74.2	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C2-PFUnA	IS	96.0	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
d5-EtFOSAA	IS	80.5	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C2-PFDoA	IS	67.3	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1
13C2-PFTeDA	IS	86.1	50 - 150		B0B0118	19-Feb-20	0.245 L	21-Feb-20 01:37	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Vista Analytical Laboratory

Sample ID: 222MW02S-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 15:00

Laboratory Data

Lab Sample: 2000314-13
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.00456	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFHxA	307-24-4	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
HFPO-DA	13252-13-6	ND	0.00239	0.00298	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFHpA	375-85-9	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
ADONA	919005-14-4	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFHxS	355-46-4	0.0145	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFOA	335-67-1	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFNA	375-95-1	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFOS	1763-23-1	0.00624	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
9Cl-PF3ONS	756426-58-1	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFDA	335-76-2	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
MeFOSAA	2355-31-9	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
EtFOSAA	2991-50-6	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFUnA	2058-94-8	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
11Cl-PF3OUdS	763051-92-9	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFDoA	307-55-1	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFTrDA	72629-94-8	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
PFTeDA	376-06-7	ND	0.00136	0.00198	0.00396		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	94.3	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C3-HFPO-DA	IS	96.6	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C2-PFHxA	IS	87.3	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C4-PFHpA	IS	83.3	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C3-PFHxS	IS	88.2	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C5-PFNA	IS	84.7	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C2-PFOA	IS	90.4	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C8-PFOS	IS	89.6	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C2-PFDA	IS	88.1	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
d3-MeFOSAA	IS	88.7	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C2-PFUnA	IS	92.0	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
d5-EtFOSAA	IS	83.0	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C2-PFDoA	IS	67.5	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1
13C2-PFTeDA	IS	87.5	50 - 150		B0B0118	19-Feb-20	0.252 L	21-Feb-20 02:19	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Vista Analytical Laboratory

Sample ID: DUP03-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 15:05

Laboratory Data

Lab Sample: 2000314-14
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.00587	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFHxA	307-24-4	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
HFPO-DA	13252-13-6	ND	0.00246	0.00307	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFHpA	375-85-9	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
ADONA	919005-14-4	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFHxS	355-46-4	0.0166	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFOA	335-67-1	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFNA	375-95-1	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFOS	1763-23-1	0.00544	0.00140	0.00205	0.00409	Q	B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
9Cl-PF3ONS	756426-58-1	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFDA	335-76-2	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
MeFOSAA	2355-31-9	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
EtFOSAA	2991-50-6	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFUnA	2058-94-8	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
11Cl-PF3OUdS	763051-92-9	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFDoA	307-55-1	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFTrDA	72629-94-8	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
PFTeDA	376-06-7	ND	0.00140	0.00205	0.00409		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	95.7	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C3-HFPO-DA	IS	93.6	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C2-PFHxA	IS	94.4	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C4-PFHpA	IS	90.6	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C3-PFHxS	IS	91.1	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C5-PFNA	IS	82.7	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C2-PFOA	IS	91.0	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C8-PFOS	IS	92.6	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C2-PFDA	IS	92.4	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
d3-MeFOSAA	IS	89.8	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C2-PFUnA	IS	91.8	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
d5-EtFOSAA	IS	79.8	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C2-PFDoA	IS	80.3	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1
13C2-PFTeDA	IS	79.5	50 - 150		B0B0118	19-Feb-20	0.244 L	21-Feb-20 02:30	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Vista Analytical Laboratory

Sample ID: A000MW42S-20200212

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 12-Feb-20 16:00

Laboratory Data

Lab Sample: 2000314-15
Date Received: 13-Feb-20 09:15
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0134	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFHxA	307-24-4	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
HFPO-DA	13252-13-6	ND	0.00238	0.00296	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFHpA	375-85-9	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
ADONA	919005-14-4	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFHxS	355-46-4	0.0302	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFOA	335-67-1	0.00366	0.00135	0.00198	0.00395	J	B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFNA	375-95-1	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFOS	1763-23-1	0.00333	0.00135	0.00198	0.00395	J, Q	B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
9Cl-PF3ONS	756426-58-1	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFDA	335-76-2	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
MeFOSAA	2355-31-9	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
EtFOSAA	2991-50-6	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFUnA	2058-94-8	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
11Cl-PF3OUdS	763051-92-9	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFDoA	307-55-1	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFTrDA	72629-94-8	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
PFTeDA	376-06-7	ND	0.00135	0.00198	0.00395		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	103	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C3-HFPO-DA	IS	105	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C2-PFHxA	IS	106	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C4-PFHpA	IS	95.5	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C3-PFHxS	IS	104	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C5-PFNA	IS	90.1	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C2-PFOA	IS	99.3	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C8-PFOS	IS	98.5	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C2-PFDA	IS	107	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
d3-MeFOSAA	IS	96.3	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C2-PFUnA	IS	102	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
d5-EtFOSAA	IS	89.5	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C2-PFDoA	IS	72.8	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1
13C2-PFTeDA	IS	90.0	50 - 150		B0B0118	19-Feb-20	0.253 L	21-Feb-20 02:40	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
TEQ	Toxic Equivalency
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	19-013-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-23
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2018017
Massachusetts Department of Environmental Protection	N/A
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1521520
New Hampshire Environmental Accreditation Program	207718-B
New Jersey Department of Environmental Protection	190001
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-010
Pennsylvania Department of Environmental Protection	016
Texas Commission on Environmental Quality	T104704189-19-10
Vermont Department of Health	VT-4042
Virginia Department of General Services	10272
Washington Department of Ecology	C584-19
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	**Method**
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	**Method**
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613/1613B
1,4-Dioxane (1,4-Diethyleneoxide) analysis by GC/HRMS	EPA 522
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	**Method**
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

Vista Analytical

1104 Windfield Way
El Dorado Hills, CA 95762
TEL: 916-673-1520

2000314 1.2°C
Vista PM: Jade White-Dobbs

CHAIN OF CUSTODY RECORD

DATE: 2/12/2020
PAGE: 1 OF 2

LABORATORY CLIENT: KMEA
ADDRESS: 9210 Sky Park Court, Suite 220
CITY: San Diego, CA 92123
TEL: (619) 399-5900 | E-Mail: kimberly.shiroodi@woodplc.com | E-MAIL: brian.johnson@woodplc.com

CLIENT PROJECT NAME / NUMBER: MCAS El Toro and Tustin, PFAS
PROJECT CONTACT: Kimberly Shiroodi / Brian Johnson
SAMPLER(S): (SIGNATURE) Lee Ritter

P.O. NO.: TO 008 Mod 4
CONTRACT NO.: N62473-16-D-2405
LAB USE ONLY

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 10 DAYS ☒ Standard

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS
Samples potentially contain elevated levels of PFAS.

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	QC Level	PFAS by LC/MS-MS
	S801-20200212	2/12/20	7:00	BW	2		X
	EB01-20200212		7:10	"	2		X
	I006MW03SR-20200212		7:40	GW	6	IV	X
	I006MW05SR-20200212		8:40		2	IV	X
	DUP01-20200212		8:45		2	IV	X
	I006MW01S-20200212		9:20		2	IV	X
	I006MW08S-20200212		10:00		2	IV	X
	BMW07S-20200212		11:00		2	IV	X
	I005MW01SR-20200212		11:50		2	IV	X
	DUP05-20200212		11:55		2	IV	X

MS / MSD

Relinquished by: (Signature) Lee Ritter	Received by: (Signature) / Carrier Tracking Number FedEx	Date: 2/12/20	Time: 17:00
Relinquished by: (Signature) FedEx	Received by: (Signature)	Date: 02/13/20	Time: 0915
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Vista Analytical

1104 Windfield Way
El Dorado Hills, CA 95762
TEL: 916-673-1520

2000314
Vista PM: Jade White-Dobbs

CHAIN OF CUSTODY RECORD

DATE: 2/12/2020
PAGE: 2 OF 2

LABORATORY CLIENT: KMEA	CLIENT PROJECT NAME / NUMBER: MCAS El Toro and Tustin, PFAS	P.O. NO.: TO 008 Mod 4
ADDRESS: 9210 Sky Park Court, Suite 220	PROJECT CONTACT: Kimberly Shiroodi / Brian Johnson	CONTRACT NO.: N62473-16-D-2405
CITY: San Diego, CA 92123	SAMPLER(S): (SIGNATURE) Uly Ruiz	LAB USE ONLY
TEL: (619) 399-5900 / E-Mail: kimberly.shiroodi@woodplc.com / E-MAIL: brian.johnson@woodplc.com		

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 10 DAYS ☒ Standard

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS
Samples potentially contain elevated levels of PFAS.

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	QC Level	PFAS by LC/MS-MS
	IS72MW15S-20200212	2/12/20	13:15	GW	2	IV	X
	IS72MW18SR-20200212	"	14:10	"	2	IV	X
	222MW02S-20200212	"	15:00	"	2	IV	X
	DUP03-20200212	"	15:05	"	2	IV	X
	A000MW42S-20200212	"	16:00	"	2	IV	X

Uly Ruiz 2-12-20

Relinquished by: (Signature) Uly Ruiz	Received by: (Signature) / Carrier Tracking Number FedEx	Date: 2/12/20	Time: 17:00
Relinquished by: (Signature) FedEx	Received by: (Signature)	Date: 02/13/20	Time: 0915
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Vista Analytical Laboratory

Sample Log-In Checklist

Vista Work Order #: 2000314 **TAT** 14 days

Samples Arrival:	**Date/Time** 02/13/20 0915		**Initials:** MWS		**Location:** WR-2 **Shelf/Rack:** N/A		
Delivered By:	FedEx	UPS	On Trac	GSO	DHL	Hand Delivered	Other
Preservation:	Ice		Blue Ice		Dry Ice		None
Temp °C: 1.2 (uncorrected)			**Probe used:** Y / N		**Thermometer ID:** IR-4		
Temp °C: 1.2 (corrected)							

	YES	NO	NA
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Airbill — Trk # 8106 7954 5940	✓		
Shipping Documentation Present?	✓		
Shipping Container: Vista / Client / Retain / Return / Dispose			
Chain of Custody / Sample Documentation Present?	✓		
Chain of Custody / Sample Documentation Complete?	✓		
Holding Time Acceptable?	✓		

Logged In:	**Date/Time** 02/13/20 1603	**Initials:** MWS	**Location:** R-13, WR-2 **Shelf/Rack:** B-3, E-5
COC Anomaly/Sample Acceptance Form completed?		✓	✓

Comments:

CoC/Label Reconciliation Report WO# 2000314

LabNumber	CoC Sample ID	SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
2000314-01	A SB01-20200212		12-Feb-20 07:00	HDPE Bottle, 250 mL	Aqueous	
2000314-01	B SB01-20200212		12-Feb-20 07:00	HDPE Bottle, 250 mL	Aqueous	
2000314-02	A EB01-20200212		12-Feb-20 07:10	HDPE Bottle, 250 mL	Aqueous	
2000314-02	B EB01-20200212		12-Feb-20 07:10	HDPE Bottle, 250 mL	Aqueous	
2000314-03	A I006MW03SR-20200212		12-Feb-20 07:40	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000314-03	B I006MW03SR-20200212		12-Feb-20 07:40	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000314-03	C I006MW03SR-20200212		12-Feb-20 07:40	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000314-03	D I006MW03SR-20200212		12-Feb-20 07:40	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000314-03	E I006MW03SR-20200212		12-Feb-20 07:40	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000314-03	F I006MW03SR-20200212		12-Feb-20 07:40	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000314-04	A I006MW05SR-20200212		12-Feb-20 08:40	HDPE Bottle, 250 mL	Aqueous	
2000314-04	B I006MW05SR-20200212		12-Feb-20 08:40	HDPE Bottle, 250 mL	Aqueous	
2000314-05	A DUP01-20200212		12-Feb-20 08:45	HDPE Bottle, 250 mL	Aqueous	
2000314-05	B DUP01-20200212		12-Feb-20 08:45	HDPE Bottle, 250 mL	Aqueous	
2000314-06	A I006MW01S-20200212		12-Feb-20 09:20	HDPE Bottle, 250 mL	Aqueous	
2000314-06	B I006MW01S-20200212		12-Feb-20 09:20	HDPE Bottle, 250 mL	Aqueous	
2000314-07	A I006MW08S-20200212		12-Feb-20 10:00	HDPE Bottle, 250 mL	Aqueous	
2000314-07	B I006MW08S-20200212		12-Feb-20 10:00	HDPE Bottle, 250 mL	Aqueous	
2000314-08	A BMW07S-20200212		12-Feb-20 11:00	HDPE Bottle, 250 mL	Aqueous	
2000314-08	B BMW07S-20200212		12-Feb-20 11:00	HDPE Bottle, 250 mL	Aqueous	
2000314-09	A I005MW01SR-20200212		12-Feb-20 11:50	HDPE Bottle, 250 mL	Aqueous	
2000314-09	B I005MW01SR-20200212		12-Feb-20 11:50	HDPE Bottle, 250 mL	Aqueous	
2000314-10	A DUP05-20200212		12-Feb-20 11:55	HDPE Bottle, 250 mL	Aqueous	
2000314-10	B DUP05-20200212		12-Feb-20 11:55	HDPE Bottle, 250 mL	Aqueous	
2000314-11	A IS72MW15S-20200212		12-Feb-20 13:15	HDPE Bottle, 250 mL	Aqueous	
2000314-11	B IS72MW15S-20200212		12-Feb-20 13:15	HDPE Bottle, 250 mL	Aqueous	
2000314-12	A IS72MW18SR-20200212		12-Feb-20 14:10	HDPE Bottle, 250 mL	Aqueous	
2000314-12	B IS72MW18SR-20200212		12-Feb-20 14:10	HDPE Bottle, 250 mL	Aqueous	
2000314-13	A 222MW02S-20200212		12-Feb-20 15:00	HDPE Bottle, 250 mL	Aqueous	

2000314-13	B 222MW02S-20200212	☑	12-Feb-20 15:00	HDPE Bottle, 250 mL	Aqueous
2000314-14	A DUP03-20200212	☑	12-Feb-20 15:05	HDPE Bottle, 250 mL	Aqueous
2000314-14	B DUP03-20200212	☑	12-Feb-20 15:05	HDPE Bottle, 250 mL	Aqueous
2000314-15	A A000MW42S-20200212	☑	12-Feb-20 16:00	HDPE Bottle, 250 mL	Aqueous
2000314-15	B A000MW42S-20200212	☑	12-Feb-20 16:00	HDPE Bottle, 250 mL	Aqueous

Checkmarks indicate that information on the COC reconciled with the sample label.
Any discrepancies are noted in the following columns.

	Yes	No	NA
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Adequate Sample Volume?	✓		
Container Type Appropriate for Analysis(es)	✓		
Preservation Documented: Na2S2O3 Trizma None Other			✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

Comments:

Verifed by/Date: WWS 02/13/20

EXTRACTION INFORMATION

PRIORITY

Process Sheet

Workorder: 2000314

Prep Expiration: 2020-02-26
Client: KMEA

Workorder Due: 28-Feb-20 00:00
TAT: 15

Method: **537M PFAS DOD QSM 5.3 (LOQ as mRL)**
Matrix: **Aqueous**

Prep Batch: BOB0118

Prep Data Entered: M 02/20/20
Date and Initials

Version: 537.1 List of 18
DoD: DoD QSM 5.3

Initial Sequence: SØBØØ46

LabSampID	A/B	Prep Rec	Spike Rec	ClientSampleID	Comments	Location	Container
2000314-01	A	✓	✓	SB01-20200212		R-13 A-3	HDPE Bottle, 250 mL
2000314-02	↓	✓	✓	EB01-20200212	// //	R-13 A-3	HDPE Bottle, 250 mL
2000314-03	ABC	✓	✓	I006MW03SR-20200212	**MS/MSD**	R-13 A-3	HDPE Bottle, 250 mL
2000314-04	A	✓	✓	I006MW05SR-20200212		R-13 A-3	HDPE Bottle, 250 mL
2000314-05		✓	✓	DUP01-20200212		R-13 A-3	HDPE Bottle, 250 mL
2000314-06		✓	✓	I006MW01S-20200212		R-13 A-3	HDPE Bottle, 250 mL
2000314-07		✓	✓	I006MW08S-20200212		R-13 A-3	HDPE Bottle, 250 mL
2000314-08		✓	✓	BMW07S-20200212		R-13 A-3	HDPE Bottle, 250 mL
2000314-09		✓	✓	I005MW01SR-20200212		R-13 A-3	HDPE Bottle, 250 mL
2000314-10		✓	✓	DUP05-20200212		R-13 A-3	HDPE Bottle, 250 mL
2000314-11		✓	✓	IS72MW15S-20200212		R-13 A-3	HDPE Bottle, 250 mL
2000314-12		✓	✓	IS72MW18SR-20200212		R-13 A-3	HDPE Bottle, 250 mL
2000314-13		✓	✓	222MW02S-20200212		R-13 A-3	HDPE Bottle, 250 mL
2000314-14		✓	✓	DUP03-20200212		R-13 A-3	HDPE Bottle, 250 mL
2000314-15	↓	✓	✓	A000MW42S-20200212		R-13 A-3	HDPE Bottle, 250 mL

Isolate samples - instr: begin w/ dil 5.
(LW) 02/14/20

WO Comments: [redacted]

Pre-Prep Check Out: CHT 02/14/20
Pre-Prep Check In: CHT 02/14/20

Prep Check Out: LW 02/19/20
Prep Check In: N/A

Prep Reconciled Initals/Date: CHT 02/14/20
Spike Reconciled Initals/Date: 02/19/20 LW
VialBoxID: Tots

Matrix: Aqueous

Method: 537M PFAS DOD QSM 5.3 (LOQ as mRL)

Vista Internal Chain-of-Custody

B0B0118

Vista Analytical Laboratory

	Location		L2	R13	L2	R12	L2	R12	L4		
	Reason		R6	R9	R4	R7	R6	R9	R8		
	Initials		CH	CH	LW	HR	HP	HR	VY		
	Date/Time		02/14/20 0946	02/14/20 1038	02/19/20 0206	02/19/20 1325	02/20/20 6:57	02/20/20 14:37	02/20/20 17:06		
Initial Storage	LabNumber	Cont									
R-13 A-3	2000314-01	A	O	O	O	E	E	E	E		
R-13 A-3	2000314-02	↓	↓	↓	↓	↓	↓	↓	↓		
R-13 A-3	2000314-03	ABC									
R-13 A-3	2000314-04	A									
R-13 A-3	2000314-05	↓									
R-13 A-3	2000314-06										
R-13 A-3	2000314-07										
R-13 A-3	2000314-08										
R-13 A-3	2000314-09										
R-13 A-3	2000314-10										
R-13 A-3	2000314-11										
R-13 A-3	2000314-12										
R-13 A-3	2000314-13										
R-13 A-3	2000314-14										
R-13 A-3	2000314-15		↓	↓	↓	↓	↓	↓	↓		

Location Key:
L1 = Prep Lab 1
L2 = Prep Lab 2
L3 = HRMS Diox
L4 = Instrument
Other = _____

Reason Key:
R1 = Percent Solids
R2 = Eluate Preservation
R3 = Sub-Sample
R4 = Extraction
R6 = Concentration
R7 = Filtering
R8 = Analysis
R9 = Storage
Other = _____

Type Key:
O = Original Sample
E = Extract of Sample

Matrix: Aqueous

Method: 537M PFAS DOD QSM 5.3 (LOQ as mRL)

PREPARATION BENCH SHEET

B0B0118

Chemist: LW

Prep Date: 02/19/20

Prep Time: 0726

Hood#: 6

Prepared using: ☐ Sonication Shaker ☑ SPE Extraction ☐ Centrifuge ID: _____

Rec Date/Initals: LW 02/19/20

Date/Initals: 02/14/20 CHT

BalanceID: HRMS-9

Cen	VISTA Sample ID	Rec Vial1	Rec Vial2	pH	Chlorine (Cl)	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE and Reconciliation	ENVI-Carb and Reconciliation	RS CHEM/WIT DATE
☐	B0B0118-BLK1	☑	☑	5	0	NA	NA	(0.250)	LW HP 02/19/20	LW 02/19/20	LW 02/19/20	LW LW 02/19/20
☐	B0B0118-BS1	☑	☑	5	0	↓	↓	(0.250)	↓	↓	↓	↓
☐	B0B0118-MS1 2000314-03	☑	☑	7	0	284.64	26.42	0.25822				
☐	B0B0118-MSD1 2000314-03	☑	☑	7	0	278.88	25.78	0.25310				
☐	2000314-01	☑	☑	5	0	269.96	26.14	0.24382				
☐	2000314-02	☑	☑	5	0	271.76	25.58	0.24618				
☐	2000314-03	☑	☑	7	0	280.10	26.04	0.25406				
☐	2000314-04	☑	☑	6	0	277.44	25.94	0.25150				
☐	2000314-05	☑	☑	6	0	271.52	26.14	0.24538				
☐	2000314-06	☑	☑	7	0	281.58	26.18	0.25510				
☐	2000314-07	☑	☑	6	0	276.54	26.02	0.25052				
☐	2000314-08	☑	☑	6	0	279.96	26.06	0.25390				
☐	2000314-09	☑	☑	6	0	281.28	26.30	0.25498				
☐	2000314-10	☑	☑	6	0	278.86	26.02	0.25284				

IS: 20A0801, 10mL (V20)

IS SUP: NA

NS: 20A0803, 10mL (V10)

NS SUP: NA

RS: 20A0804, 10mL (V20)

SPE Chem: Strata xLAW 100mg 200mg/6mL

SPE Lot#: 519-000746

ENVI-Carb Lot#: B03074

Ele SOLV: MeOH/0.5%NH4OH in MeOH

Final Volume(s) 1 mL

Notes:

Comments: Assume 1 g = 1 mL
Cen = Centrifuged
Rec = Reconcile final vial transfer

1 = Sample centrifuged twice
2 = Sample deeply colored after centrifuge
3 = Cartridge sorbent discolored after SPE
4 = Sample clogged cartridge, additional cartridge(s) used
5 = Sample recombined at final volume
6 = Sample took longer to SPE, required stronger vacuum
7 = Required Nitrogen line to finish SPE
8 = Required Nitrogen line to finish elution
9 = Sample arrived with low volume
10 = Trizma added to QC (5g/L)

Matrix: Aqueous

Method: 537M PFAS DOD QSM 5.3 (LOQ as mRL)

PREPARATION BENCH SHEET

B0B0118

Chemist: LW

Prep Date: 02/19/20

Prep Time: 0726

Hood#: 6

Prepared using: ☐ Sonication Shaker ☑ SPE Extraction ☐ Centrifuge ID: _____

Rec Date/Initals: 11 02/19/20

Date/Initals: 02/14/20 CHT

BalanceID: HRMS-9

Cen	VISTA Sample ID	Rec Vial1	Rec Vial2	pH	Chlorine (Cl)	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE and Reconciliation	ENVI-Carb and Reconciliation	RS CHEM/WIT DATE
☐	2000314-11	☑	☑	6	0	280.36	25.90	0.25446	LW HP 02/19/20	LW 02/19/20	LW 02/19/20	LW 11 02/19/20
☐	2000314-12	☑	☑	6	0	270.64	26.06	0.24458				
☐	2000314-13	☑	☑	6	0	277.72	25.38	0.25234*				
☐	2000314-14	☑	☑	6	0	270.60	26.14	0.24446				
☐	2000314-15	☑	☑	6	0	279.22	25.98	0.25324				

* 11 02/20/20

IS: 20A0801, 10mL (V20)

IS SUP: NA

NS: 20A0803, 10mL (V10)

NS SUP: NA

RS: 20A0804, 10mL (V20)

SPE Chem: strata x-CAW 100mm 200mg/6mL

SPE Lot#: 519-000746

ENVI-Carb Lot#: B03074

Ele SOLV: MeOH/0.5%NH4OH in MeOH

Final Volume(s) 1 mL

Notes:

Comments: Assume 1 g = 1 mL
Cen = Centrifuged
Rec = Reconcile final vial transfer

1 = Sample centrifuged twice
2 = Sample deeply colored after centrifuge
3 = Cartridge sorbent discolored after SPE
4 = Sample clogged cartridge, additional cartridge(s) used
5 = Sample recombined at final volume
6 = Sample took longer to SPE, required stronger vacuum
7 = Required Nitrogen line to finish SPE
8 = Required Nitrogen line to finish elution
9 = Sample arrived with low volume
10 = Trizma added to QC (5g/L)

Batch: B0B0118

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
2000314-01	0.24382	NA	NA	1000	19-Feb-20 07:26	LW			Blank Water	537M PFAS DOD QSM 5.3
2000314-02	0.24618			1000	19-Feb-20 07:26	LW			Blank Water	537M PFAS DOD QSM 5.3
2000314-03	0.25406			1000	19-Feb-20 07:26	LW			Groundwater	537M PFAS DOD QSM 5.3
2000314-04	0.2515			1000	19-Feb-20 07:26	LW			Groundwater	537M PFAS DOD QSM 5.3
2000314-05	0.24538			1000	19-Feb-20 07:26	LW			Groundwater	537M PFAS DOD QSM 5.3
2000314-06	0.2551			1000	19-Feb-20 07:26	LW			Groundwater	537M PFAS DOD QSM 5.3
2000314-07	0.25052			1000	19-Feb-20 07:26	LW			Groundwater	537M PFAS DOD QSM 5.3
2000314-08	0.2539			1000	19-Feb-20 07:26	LW			Groundwater	537M PFAS DOD QSM 5.3
2000314-09	0.25498			1000	19-Feb-20 07:26	LW			Groundwater	537M PFAS DOD QSM 5.3
2000314-10	0.25284			1000	19-Feb-20 07:26	LW			Groundwater	537M PFAS DOD QSM 5.3
2000314-11	0.25446			1000	19-Feb-20 07:26	LW			Groundwater	537M PFAS DOD QSM 5.3
2000314-12	0.24458			1000	19-Feb-20 07:26	LW			Groundwater	537M PFAS DOD QSM 5.3
2000314-13	0.25234			1000	19-Feb-20 07:26	LW			Groundwater	537M PFAS DOD QSM 5.3
2000314-14	0.24446			1000	19-Feb-20 07:26	LW			Groundwater	537M PFAS DOD QSM 5.3
2000314-15	0.25324			1000	19-Feb-20 07:26	LW			Groundwater	537M PFAS DOD QSM 5.3
B0B0118-BLK1	0.25			1000	19-Feb-20 07:26	LW				QC
B0B0118-BS1	0.25			1000	19-Feb-20 07:26	LW	20A0803	10		QC
B0B0118-MS1	0.25822			1000	19-Feb-20 07:26	LW	20A0803	10		QC
B0B0118-MSD1	0.2531			1000	19-Feb-20 07:26	LW	20A0803	10		QC

All bolded data on report verified against written benchsheet by (initial/date) M 02/20/20

Printed: 2/20/2020 8:34:43AM
Page 1 of 1

Sample Data – PFAS Isotope Dilution Method

Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-30.qld

Last Altered: Monday, February 24, 2020 08:21:27 Pacific Standard Time
Printed: Friday, February 28, 2020 14:38:44 Pacific Standard Time

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	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7		1.34e3	0.250		2.68						NO
2	7	PFHxA	313.0 > 269.0		1.71e4	0.250		3.19						NO
3	9	HFPO-DA	285.1 > 168.9		3.21e3	0.250		3.40						NO
4	11	PFHpA	363.0 > 318.9		1.17e4	0.250		3.78						NO
5	12	ADONA	376.8 > 250.9		1.17e4	0.250		3.88						NO
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.34e3		0.250	114.516	2.70	2.68	1340	46.9352	93.9		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.71e4		0.250	1636.234	3.19	3.19	17100	41.7263	83.5		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.21e3		0.250	293.118	3.43	3.40	3210	43.8116	87.6		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.17e4		0.250	1106.802	3.79	3.78	11700	42.2513	84.5		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.17e4		0.250	1106.802	3.79	3.78	11700	42.2513	84.5		
11	-1													
12	13	L-PFHxS	398.9 > 79.7		2.83e3	0.250		3.92						NO
13	1...	Total PFHxS	398.9 > 79.7	0.00e0	2.83e3	0.250		3.93		0.000				
14	16	L-PFOA	412.8 > 368.9		1.71e4	0.250		4.29						NO
15	1...	Total PFOA	412.8 > 368.9	0.00e0	1.71e4	0.250		4.60		0.000				
16	21	PFNA	463.0 > 418.8		1.34e4	0.250		4.72						NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.83e3		0.250	252.668	3.92	3.92	2830	44.8068	89.6		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.83e3		0.250	252.668	3.92	3.92	2830	44.8068	89.6		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.71e4		0.250	1527.160	4.29	4.29	17100	44.7414	89.5		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.71e4		0.250	1527.160	4.29	4.29	17100	44.7414	89.5		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.34e4		0.250	1373.362	4.72	4.72	13400	38.9851	78.0		
22	-1													
23	23	L-PFOS	498.9 > 79.7		3.39e3	0.250		4.80						NO
24	1...	Total PFOS	498.9 > 79.7	0.00e0	3.39e3	0.250		5.13		0.000				
25	25	9Cl-PF30NS	530.7 > 350.8		3.39e3	0.250		5.01						NO
26	26	PFDA	513 > 468.8		1.63e4	0.250		5.08						NO
27	33	PFUdA	563.0 > 518.9		1.78e4	0.250		5.40						NO
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.39e3		0.250	295.805	4.80	4.80	3390	45.8048	91.6		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.39e3		0.250	295.805	4.80	4.80	3390	45.8048	91.6		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.39e3		0.250	295.805	4.80	4.80	3390	45.8048	91.6		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.63e4		0.250	1356.410	5.08	5.08	16300	47.9263	95.9		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.78e4		0.250	1416.449	5.40	5.40	17800	50.1540	100.3		
33	-1													
34	29	L-MeFOSAA	570 > 419		2.77e3	0.250		5.23						NO
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	2.77e3	0.250		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		3.53e3	0.250		5.38						NO

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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-30.qld

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	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	3.53e3	0.250		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.44e4	0.250		5.60						NO
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.77e3		0.250	262.877	5.22	5.23	2770	42.0795	84.2		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.77e3		0.250	262.877	5.22	5.23	2770	42.0795	84.2		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.53e3		0.250	360.983	5.37	5.38	3530	39.0887	78.2		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.53e3		0.250	360.983	5.37	5.38	3530	39.0887	78.2		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.44e4		0.250	1573.093	5.67	5.67	14400	36.6278	73.3		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.44e4	0.250		5.67						NO
46	39	PFTrDA	662.9 > 618.9		1.44e4	0.250		5.93						NO
47	41	PFTeDA	713.0 > 669.0		1.44e4	0.250		6.12						NO
48	1...	TDCA	498.3>106.9			0.250		4.59						NO
49	99	13C4-PFBA	217.0 > 172.0	1.04e4	1.04e4	0.250		1.48	1.48					
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.44e4		0.250	1573.093	5.67	5.67	14400	36.6278	73.3		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.44e4		0.250	1573.093	5.67	5.67	14400	36.6278	73.3		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.44e4		0.250	1440.513	6.11	6.12	14400	39.9300	79.9		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.39e3		0.250	295.805	4.80	4.80	3390	45.8048	91.6		
54	1...	13C5-PFHxA	318.0 > 272.9	1.74e4	1.74e4	0.250		3.18	3.19					
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.20e3	1.20e3	0.250		3.92	3.92					
57	1...	13C6-PFDA	519.1 > 473.7	1.77e4	1.77e4	0.250		5.08	5.08					
58	1...	13C7-PFUdA	570.1 > 524.8	1.90e4	1.90e4	0.250		5.40	5.40					
59	1...	13C4-PFOS	503 > 79.7	3.41e3	3.41e3	0.250		4.79	4.80					
60	1...	13C9-PFNA	472.2 > 426.9	1.53e4	1.53e4	0.250		4.72	4.72					

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Review: AMR 2/28/2020

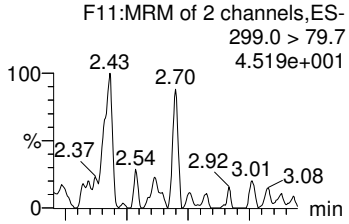
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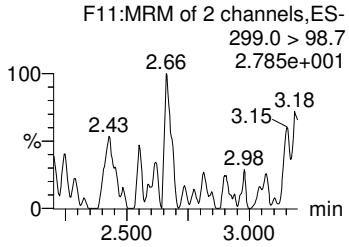
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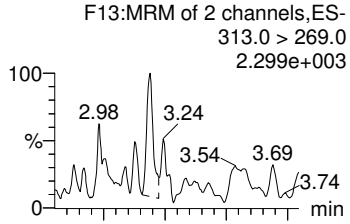
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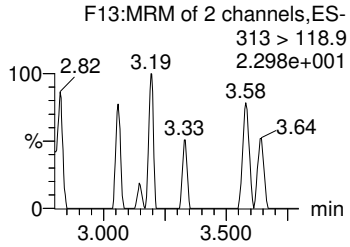
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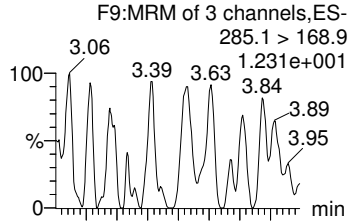


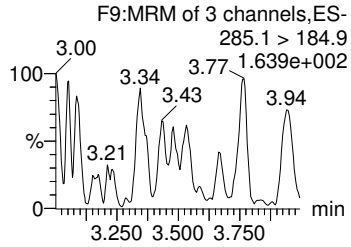
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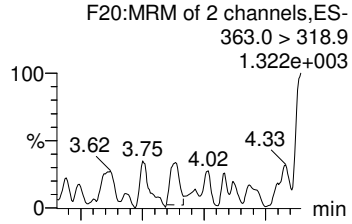


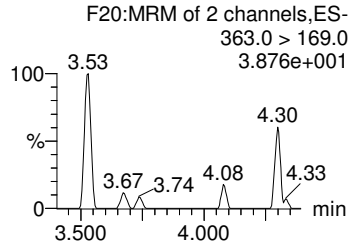
HFPO-DA



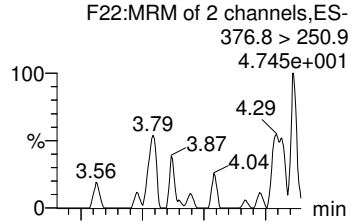


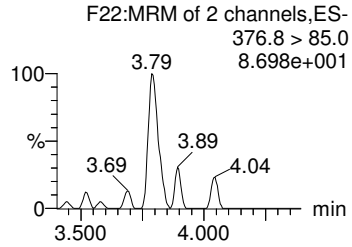
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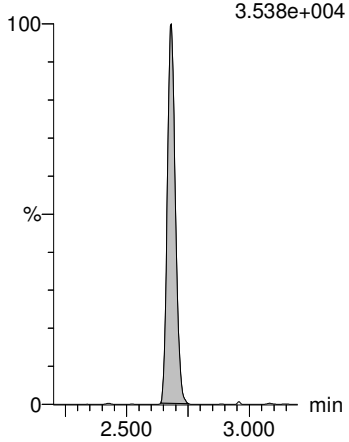


ADONA

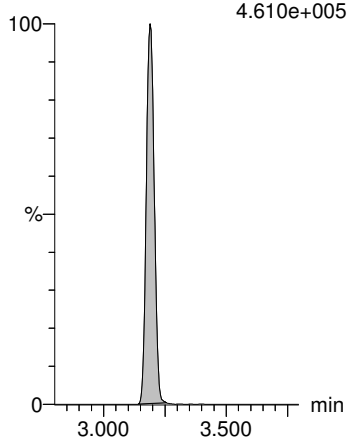




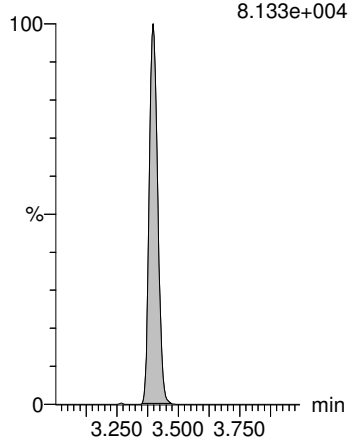
13C3-PFBS-EIS



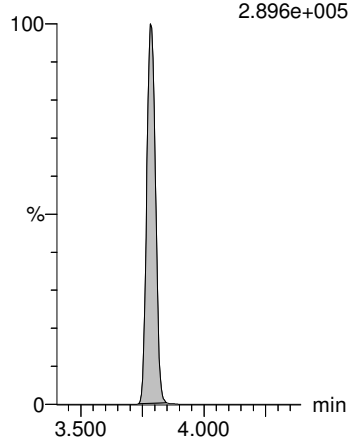
13C2-PFHxA-EIS



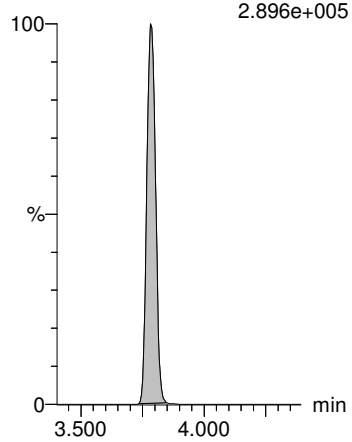
13C3-HFPO-DA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS



QPV 2/28/2020

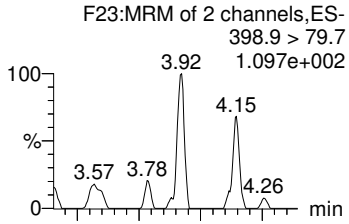
Review: AMR 2/28/2020

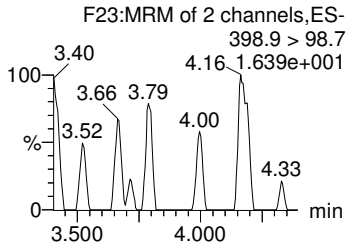
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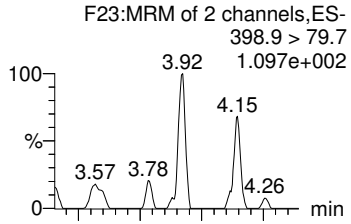
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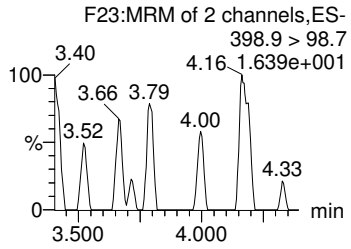
L-PFHxS



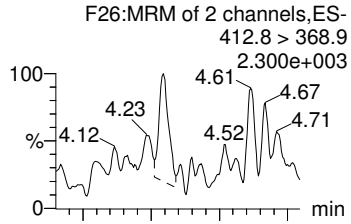


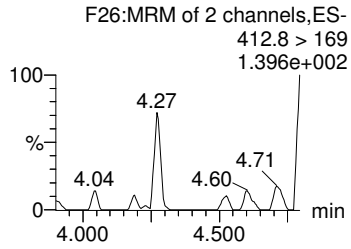
Total PFHxS



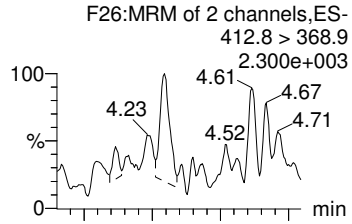


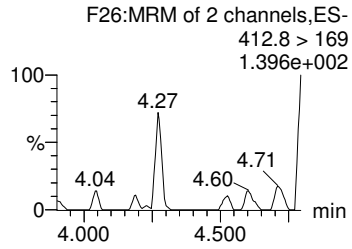
L-PFOA



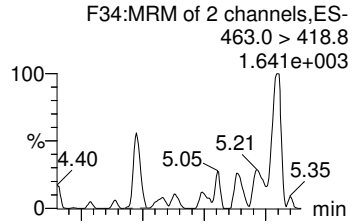


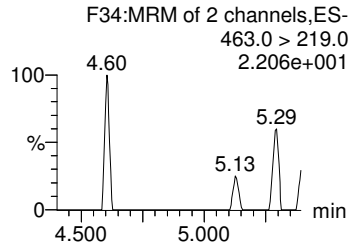
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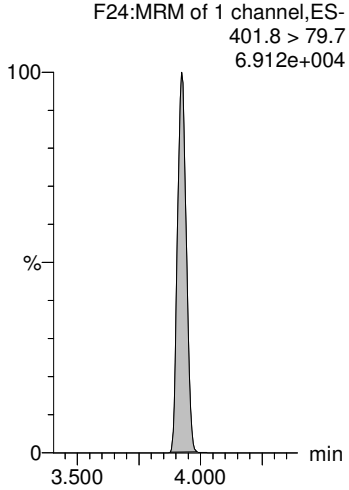


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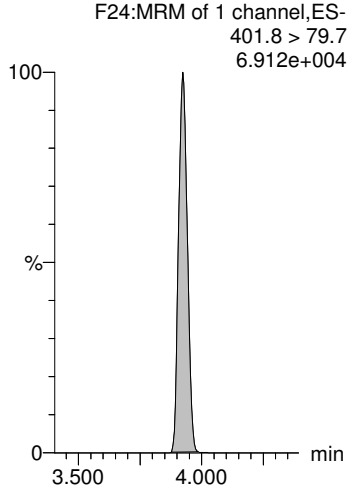




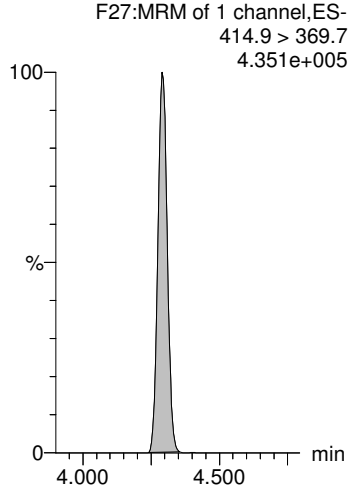
13C3-PFHxS-EIS



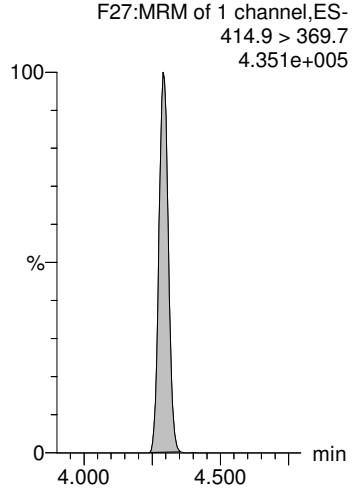
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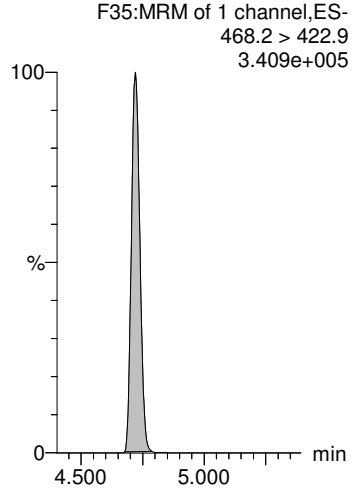
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13C2-PFOA-EIS



13C5-PFNA-EIS



QPV 2/28/2020

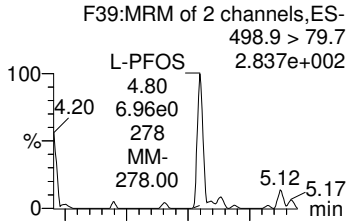
Review: AMR 2/28/2020

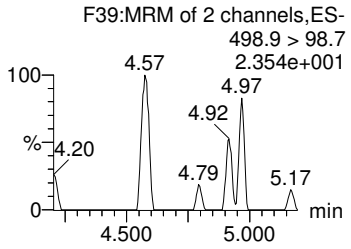
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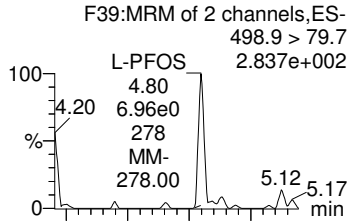
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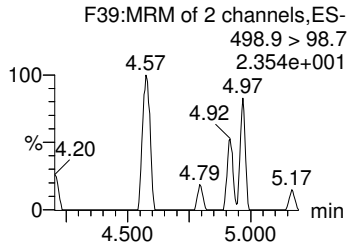
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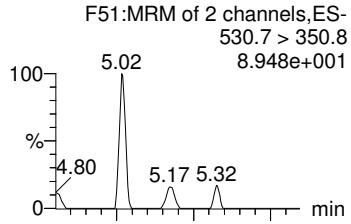


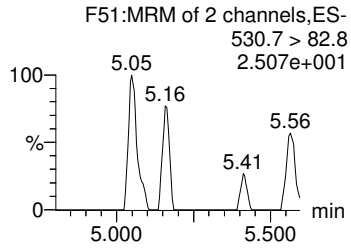
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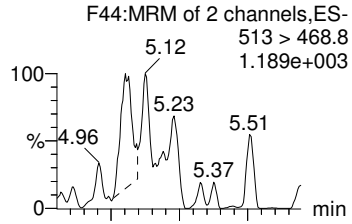


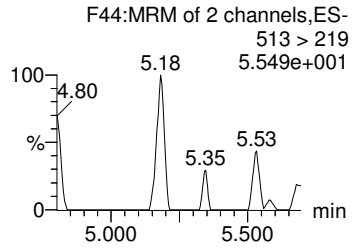
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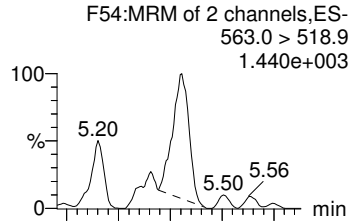


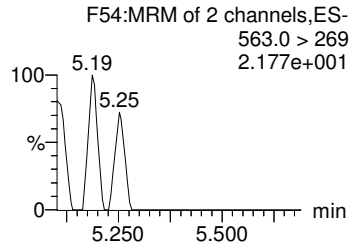
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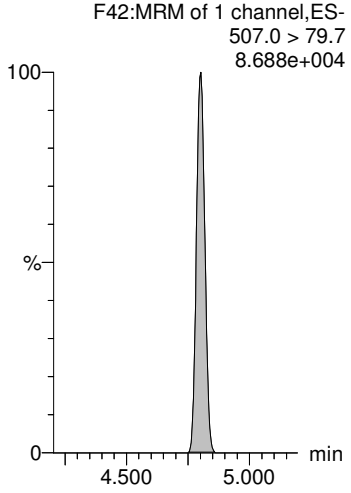


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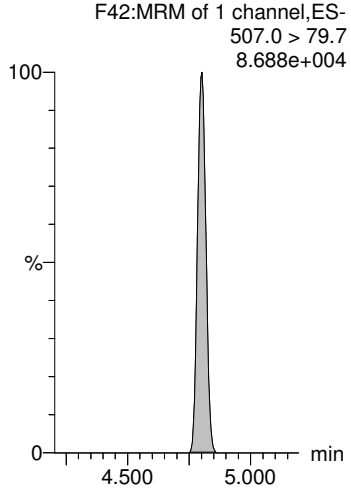




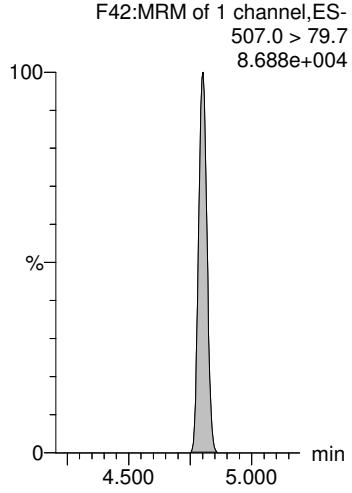
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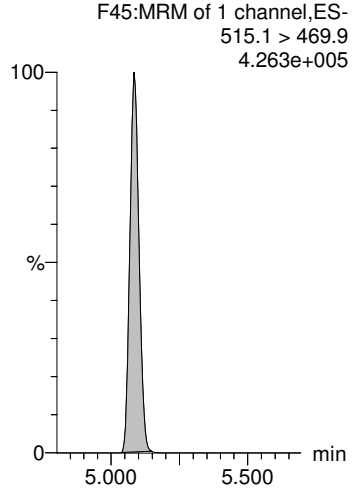
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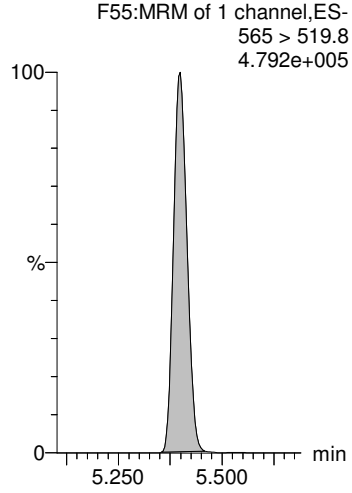
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13C2-PFDA-EIS



13C2-PFUdA-EIS



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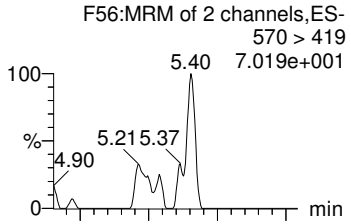
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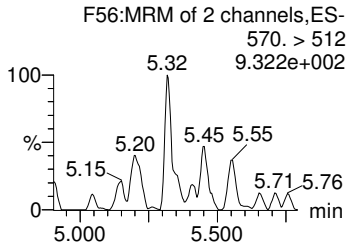
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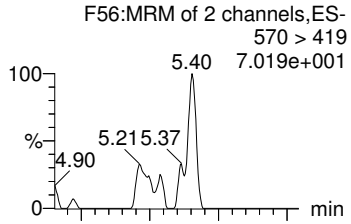
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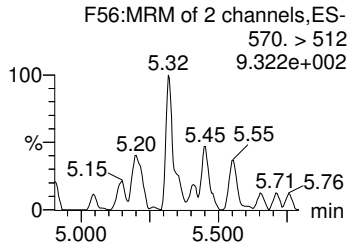
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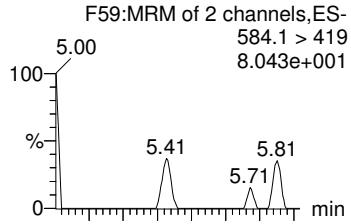


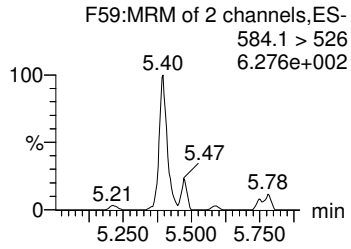
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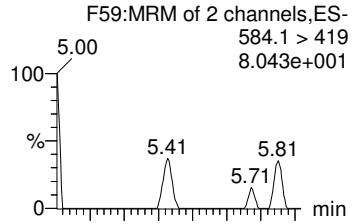


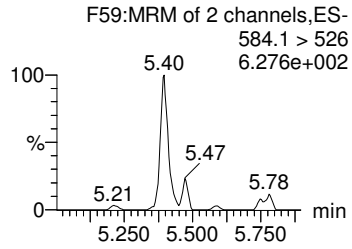
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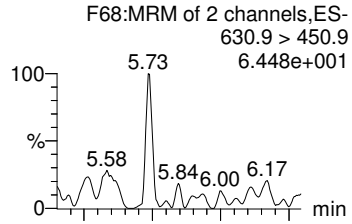


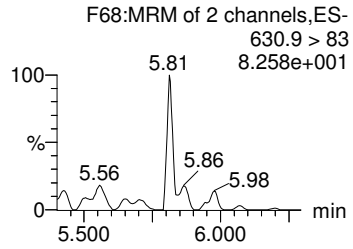
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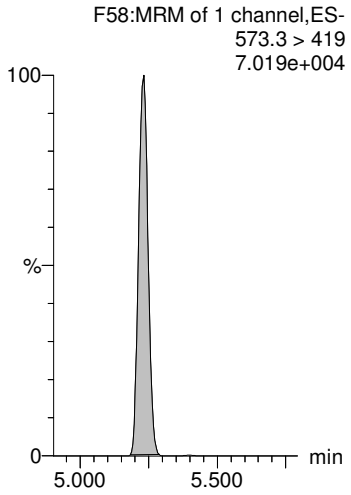


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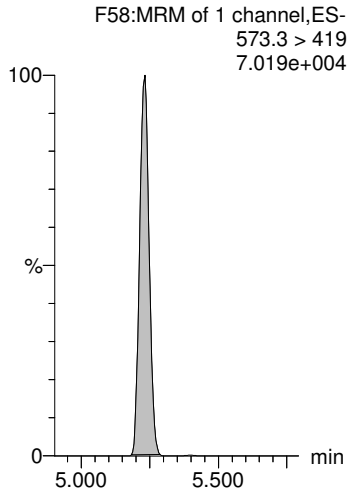




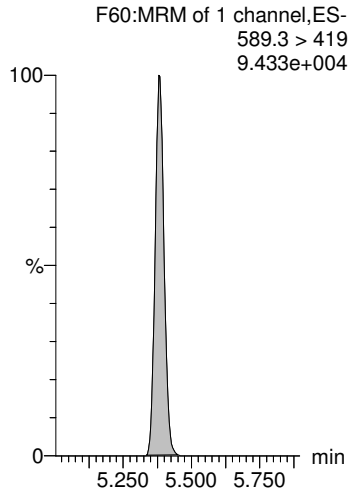
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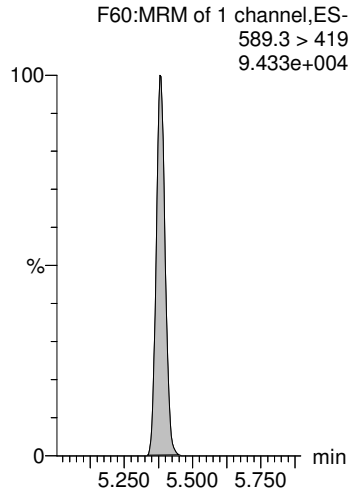
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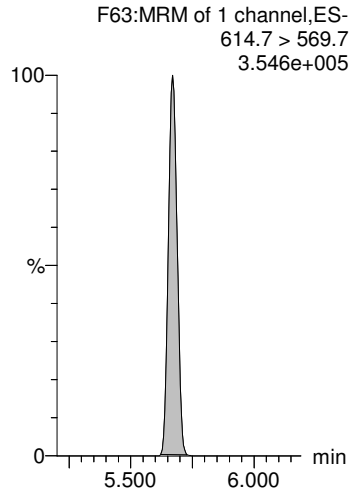
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d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS



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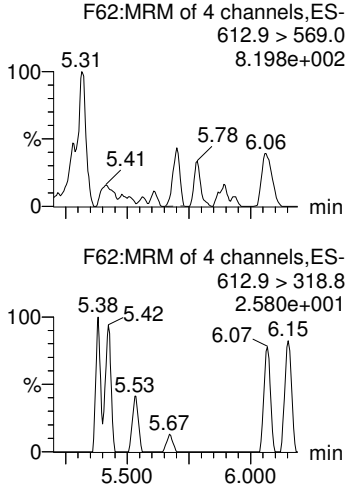
Review: AMR 2/28/2020

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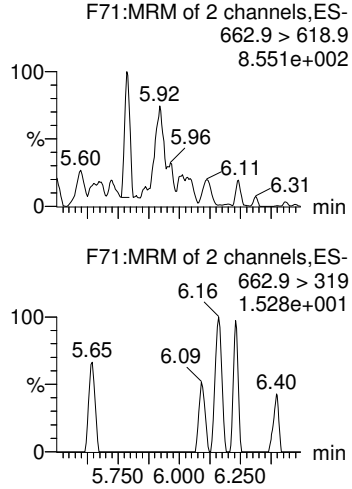
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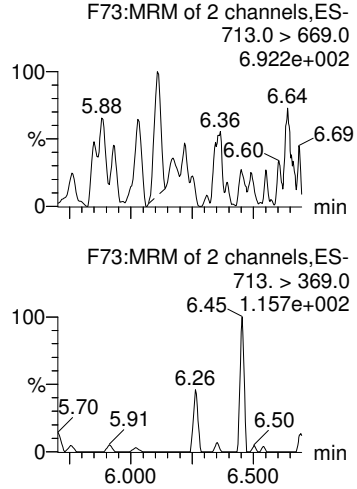
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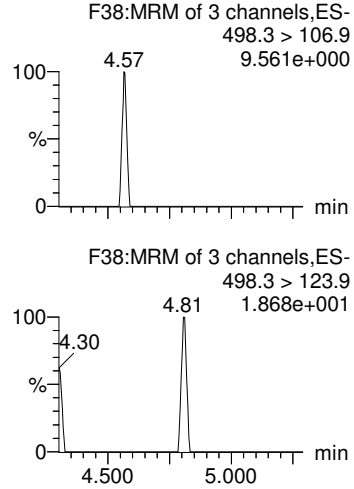
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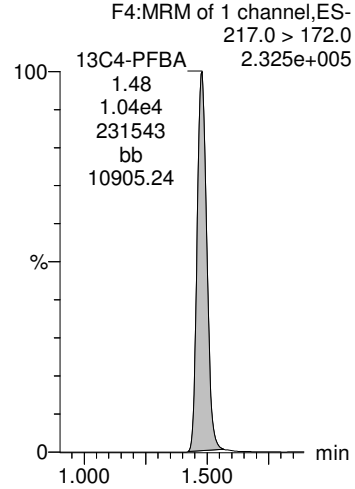
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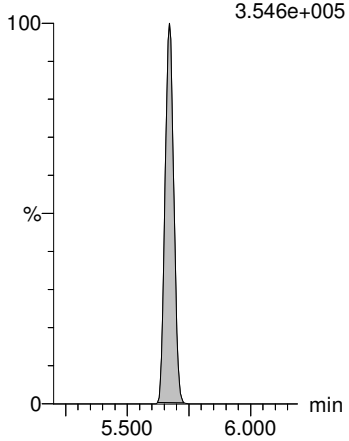
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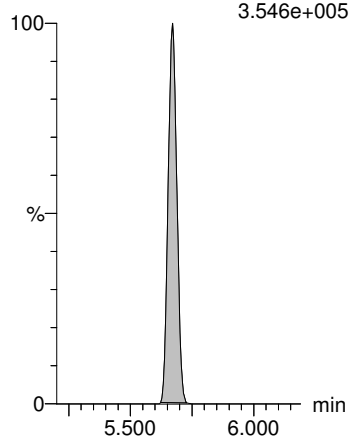
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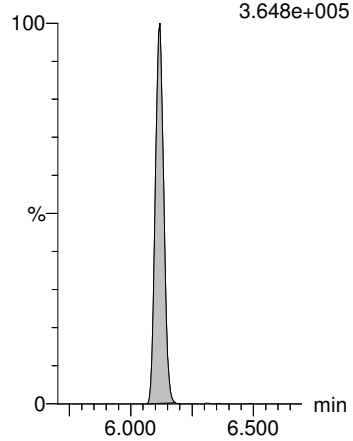
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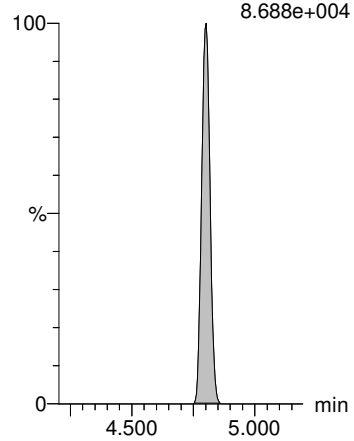
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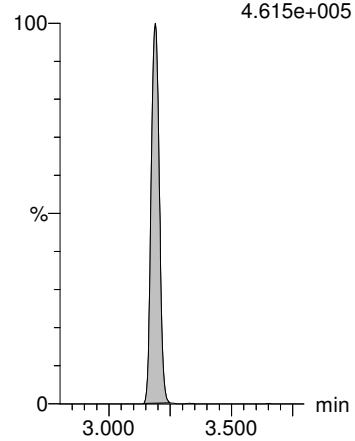
13C2-PFTeDA-EIS



13C8-PFOS-EIS



13C5-PFHxA



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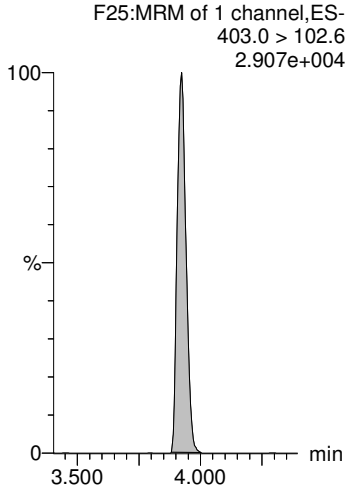
Review: AMR 2/28/2020

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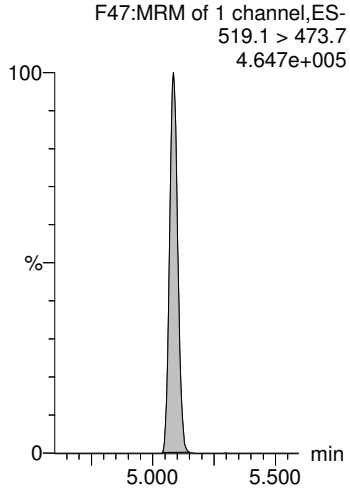
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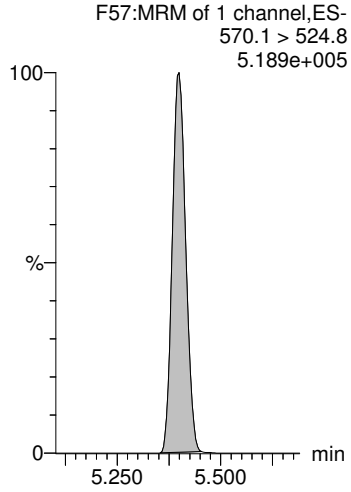
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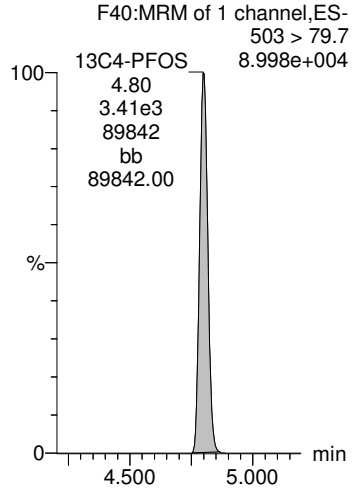
13C6-PFDA



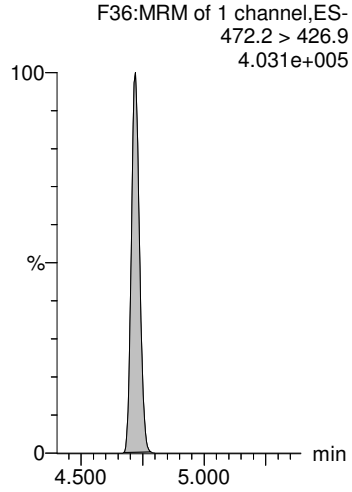
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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Vista Analytical Laboratory L18

Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-31.qld

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1	5	PFBS	299.0 > 79.7	2.35e3	1.27e3	0.250		2.68	2.68	23.1	40.0351	100.1	2.990	NO
2	7	PFHxA	313.0 > 269.0	1.20e4	1.73e4	0.250		3.19	3.19	8.67	38.8202	97.1	20.319	NO
3	9	HFPO-DA	285.1 > 168.9	2.34e3	2.97e3	0.250		3.40	3.40	9.85	37.9360	94.8	2.614	NO
4	11	PFHpA	363.0 > 318.9	1.06e4	1.16e4	0.250		3.78	3.79	11.4	36.5283	91.3	25.509	NO
5	12	ADONA	376.8 > 250.9	2.58e4	1.16e4	0.250		3.88	3.89	27.9	35.8820	89.7	3.924	NO
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.27e3		0.250	114.516	2.70	2.68	1270	44.4693	88.9		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.73e4		0.250	1636.234	3.19	3.19	17300	42.2897	84.6		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	2.97e3		0.250	293.118	3.43	3.40	2970	40.4939	81.0		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.16e4		0.250	1106.802	3.79	3.78	11600	41.8724	83.7		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.16e4		0.250	1106.802	3.79	3.78	11600	41.8724	83.7		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	2.09e3	2.39e3	0.250		3.92	3.92	10.9	39.2757	98.2	2.449	NO
13	1...	Total PFHxS	398.9 > 79.7	2.09e3	2.39e3	0.250		3.93		10.9	39.2757			
14	16	L-PFOA	412.8 > 368.9	1.41e4	1.64e4	0.250		4.29	4.29	10.7	35.4927	88.7	3.084	NO
15	1...	Total PFOA	412.8 > 368.9	1.41e4	1.64e4	0.250		4.60		10.7	35.4927			
16	21	PFNA	463.0 > 418.8	1.31e4	1.42e4	0.250		4.72	4.72	11.5	37.2262	93.1	7.206	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.39e3		0.250	252.668	3.92	3.92	2390	37.8517	75.7		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.39e3		0.250	252.668	3.92	3.92	2390	37.8517	75.7		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.64e4		0.250	1527.160	4.29	4.29	16400	43.0376	86.1		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.64e4		0.250	1527.160	4.29	4.29	16400	43.0376	86.1		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.42e4		0.250	1373.362	4.72	4.72	14200	41.4545	82.9		
22	-1													
23	23	L-PFOS	498.9 > 79.7	2.25e3	3.29e3	0.250		4.80	4.80	8.53	36.8644	92.2	2.202	NO
24	1...	Total PFOS	498.9 > 79.7	2.25e3	3.29e3	0.250		5.13		8.53	36.8644			
25	25	9Cl-PF30NS	530.7 > 350.8	2.63e3	3.29e3	0.250		5.01	5.01	9.99	34.4403	86.1	14.373	NO
26	26	PFDA	513 > 468.8	1.46e4	1.46e4	0.250		5.08	5.08	12.5	40.5334	101.3	9.193	NO
27	33	PFUdA	563.0 > 518.9	1.18e4	1.61e4	0.250		5.40	5.40	9.18	34.9982	87.5	22.552	NO
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.29e3		0.250	295.805	4.80	4.80	3290	44.5511	89.1		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.29e3		0.250	295.805	4.80	4.80	3290	44.5511	89.1		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.29e3		0.250	295.805	4.80	4.80	3290	44.5511	89.1		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.46e4		0.250	1356.410	5.08	5.08	14600	43.0797	86.2		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.61e4		0.250	1416.449	5.40	5.40	16100	45.4621	90.9		
33	-1													
34	29	L-MeFOSAA	570 > 419	3.63e3	2.76e3	0.250		5.23	5.23	16.4	34.5947	86.5	1.773	NO
35	1...	Total N-MeFOSAA	570. > 419	3.63e3	2.76e3	0.250		5.19		16.4	34.5947			
36	31	L-EtFOSAA	584.1 > 419	3.36e3	3.46e3	0.250		5.38	5.39	12.1	38.4963	96.2	1.218	NO

OPV 2/28/2020

Vista Analytical Laboratory L18

Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-31.qld

Last Altered: Monday, February 24, 2020 08:29:29 Pacific Standard Time
Printed: Friday, February 28, 2020 14:39:21 Pacific Standard Time

Name: 200220P1-31, Date: 20-Feb-2020, Time: 22:39:11, ID: B0B0118-BS1 OPR 0.25, Description: OPR

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	3.36e3	3.46e3	0.250		5.37		12.1	38.4963			
38	35	11Cl-PF30UdS	630.9 > 450.9	5.83e3	1.40e4	0.250		5.60	5.60	5.21	45.8745	114.7	22.279	NO
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.76e3		0.250	262.877	5.22	5.23	2760	41.9999	84.0		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.76e3		0.250	262.877	5.22	5.23	2760	41.9999	84.0		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.46e3		0.250	360.983	5.37	5.38	3460	38.3598	76.7		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.46e3		0.250	360.983	5.37	5.38	3460	38.3598	76.7		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.40e4		0.250	1573.093	5.67	5.67	14000	35.5304	71.1		
44	-1													
45	37	PFDoA	612.9 > 569.0	1.13e4	1.40e4	0.250		5.67	5.67	10.1	42.0520	105.1	11.545	NO
46	39	PFTrDA	662.9 > 618.9	1.06e4	1.40e4	0.250		5.93	5.91	9.45	38.0880	95.2	55.338	NO
47	41	PFTeDA	713.0 > 669.0	1.15e4	1.41e4	0.250		6.12	6.12	10.2	38.9021	97.3	15.108	NO
48	1...	TDCA	498.3>106.9			0.250		4.59						NO
49	99	13C4-PFBA	217.0 > 172.0	1.01e4	1.01e4	0.250	1.000	1.48	1.48	12.5	50.0000	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.40e4		0.250	1573.093	5.67	5.67	14000	35.5304	71.1		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.40e4		0.250	1573.093	5.67	5.67	14000	35.5304	71.1		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.41e4		0.250	1440.513	6.11	6.12	14100	39.0567	78.1		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.29e3		0.250	295.805	4.80	4.80	3290	44.5511	89.1		
54	1...	13C5-PFHxA	318.0 > 272.9	1.78e4	1.78e4	0.250	1.000	3.18	3.19	12.5	50.0000	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.05e3	1.05e3	0.250	1.000	3.92	3.92	12.5	50.0000	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.66e4	1.66e4	0.250	1.000	5.08	5.08	12.5	50.0000	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.69e4	1.69e4	0.250	1.000	5.40	5.40	12.5	50.0000	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.06e3	3.06e3	0.250	1.000	4.79	4.80	12.5	50.0000	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.46e4	1.46e4	0.250	1.000	4.72	4.72	12.5	50.0000	100.0		

QPV 2/28/2020

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Review: AMR 2/28/2020

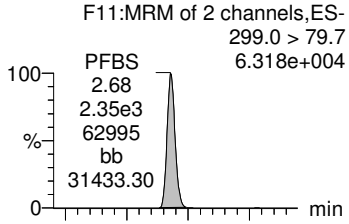
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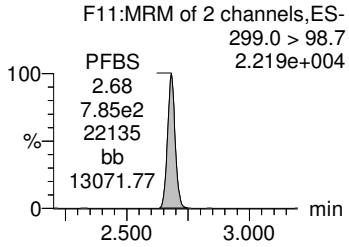
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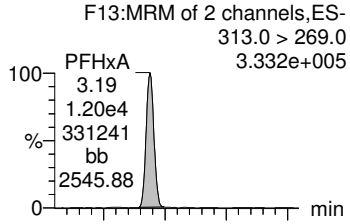
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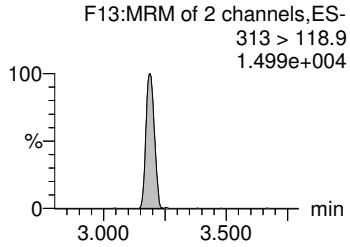
PFBS



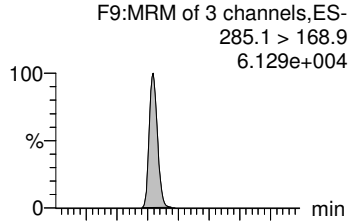


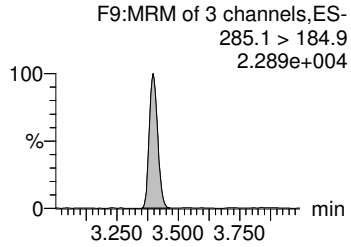
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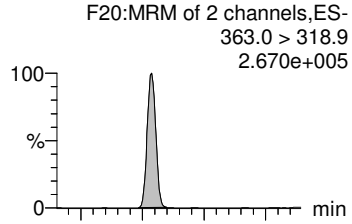


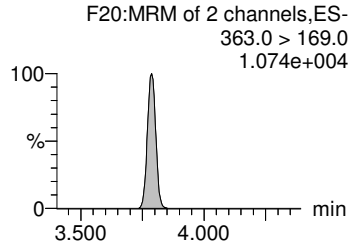
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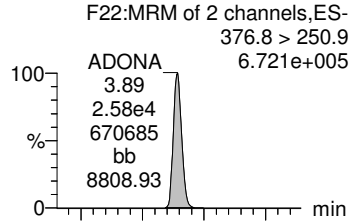


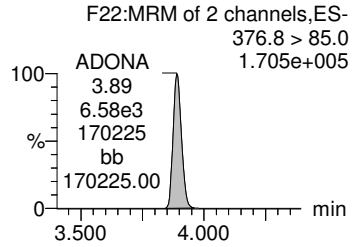
PFHpA



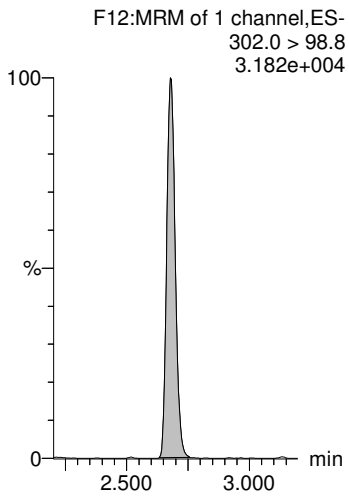


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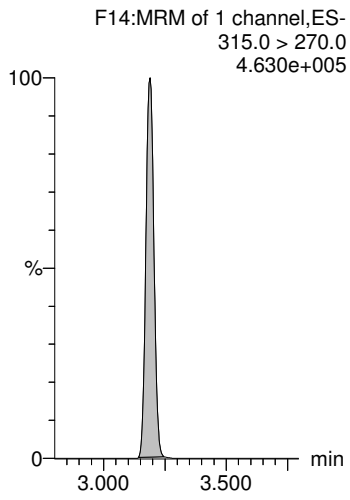




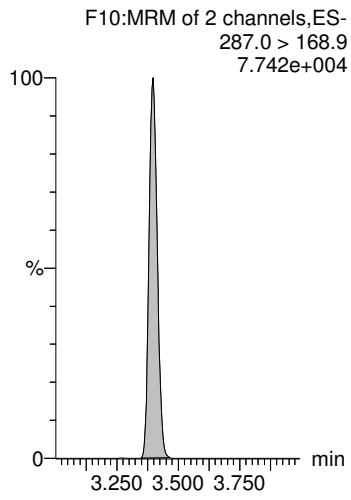
13C3-PFBS-EIS



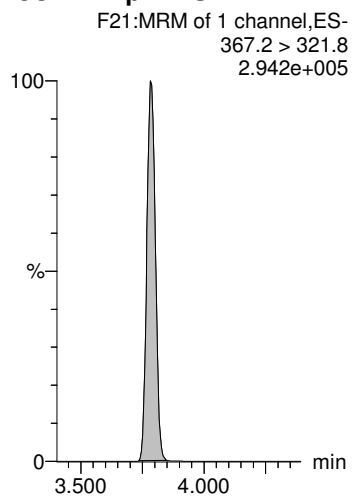
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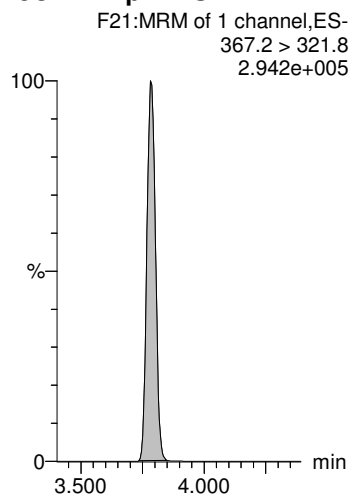
13C3-HFPO-DA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS



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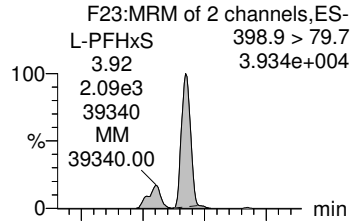
Review: AMR 2/28/2020

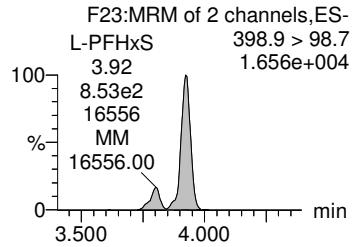
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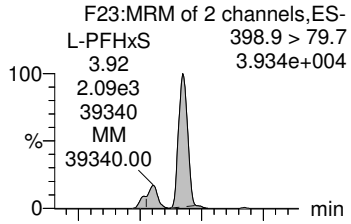
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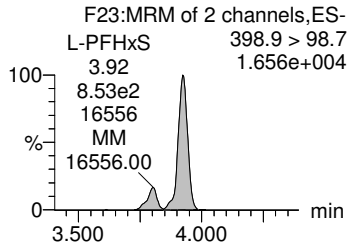
L-PFHxS



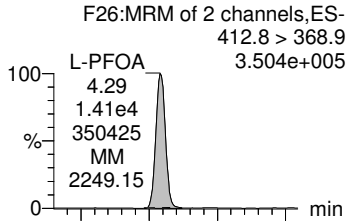


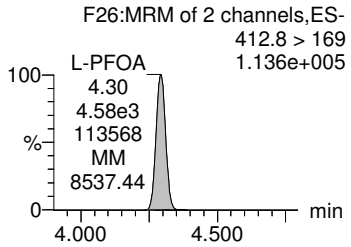
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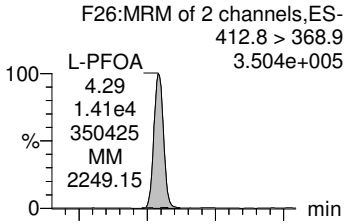


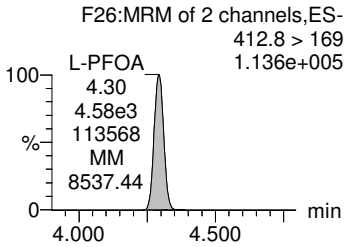
L-PFOA



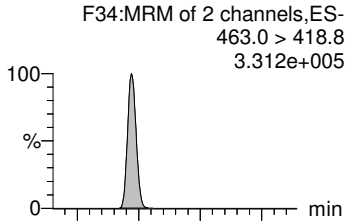


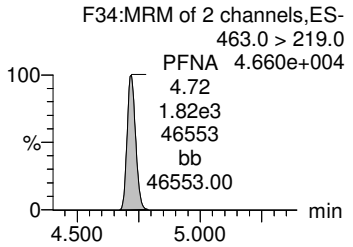
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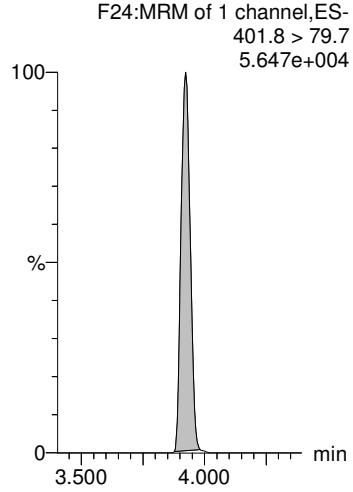


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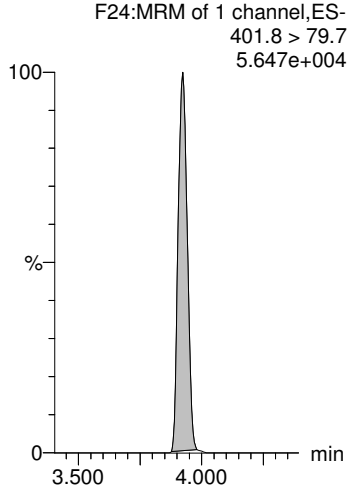




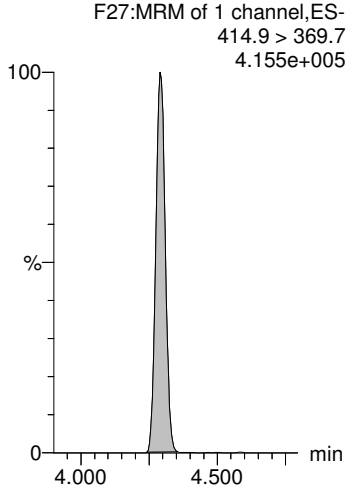
13C3-PFHxS-EIS



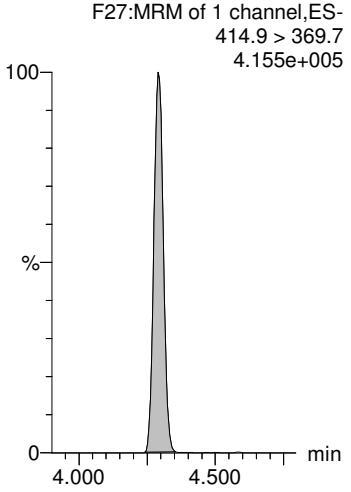
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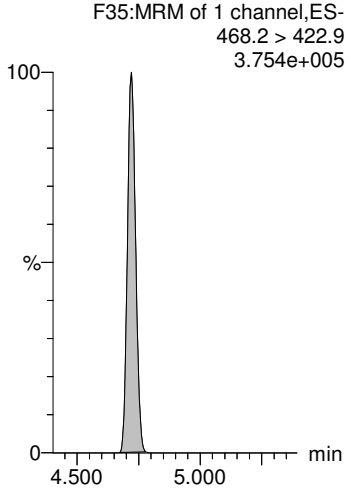
13C2-PFOA-EIS



13C2-PFOA-EIS



13C5-PFNA-EIS



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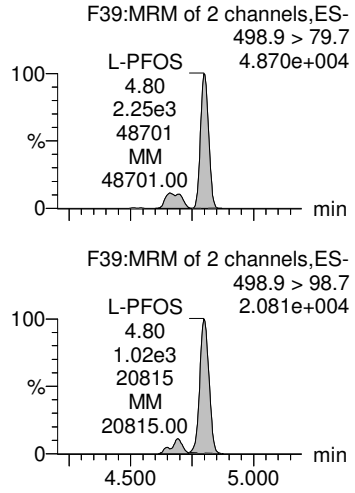
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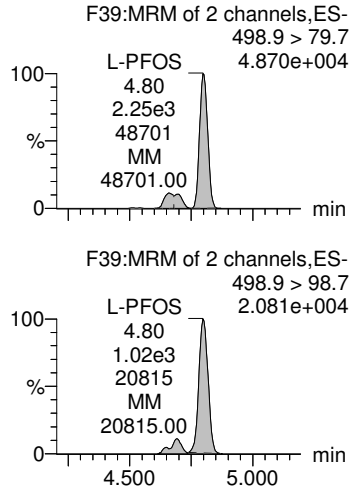
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Printed: Friday, February 28, 2020 14:39:21 Pacific Standard Time

Name: 200220P1-31, Date: 20-Feb-2020, Time: 22:39:11, ID: B0B0118-BS1 OPR 0.25, Description: OPR

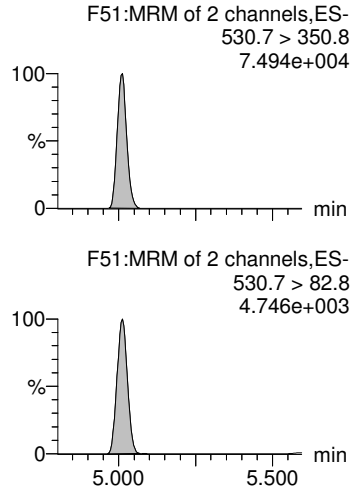
L-PFOS



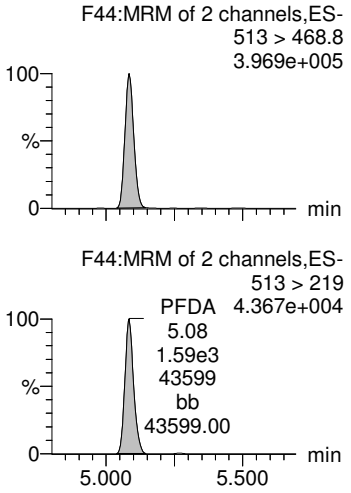
Total PFOS



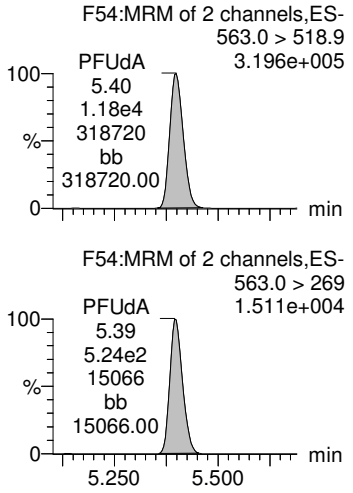
9Cl-PF30NS



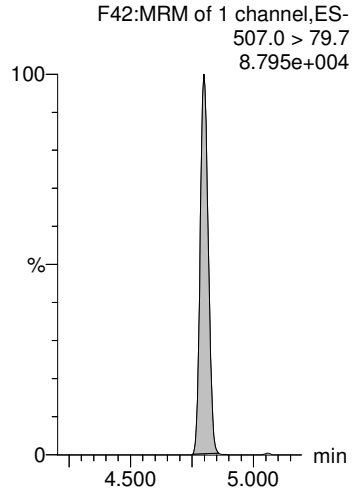
PFDA



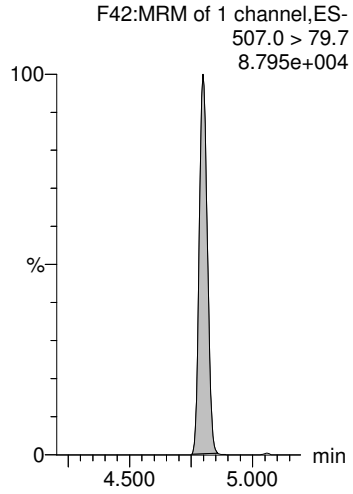
PFUdA



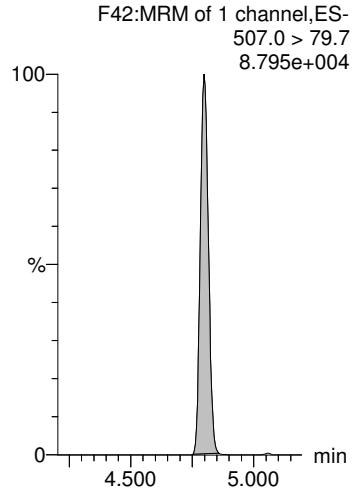
13C8-PFOS-EIS



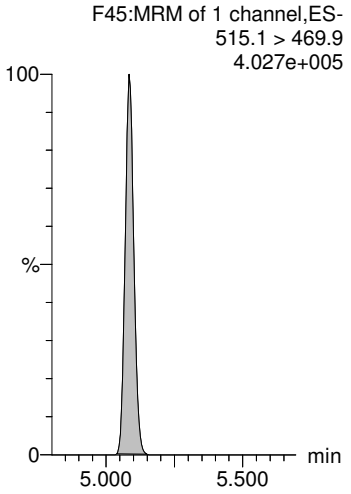
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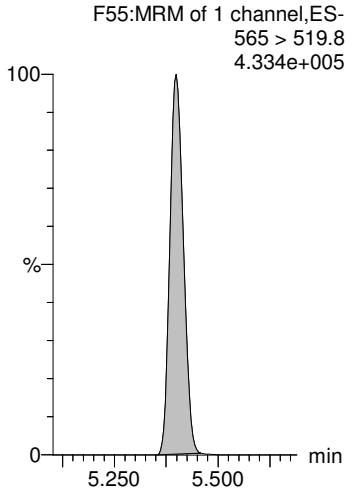
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-PFUdA-EIS



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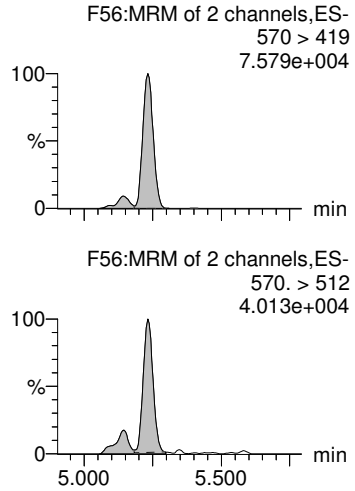
Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-31.qld

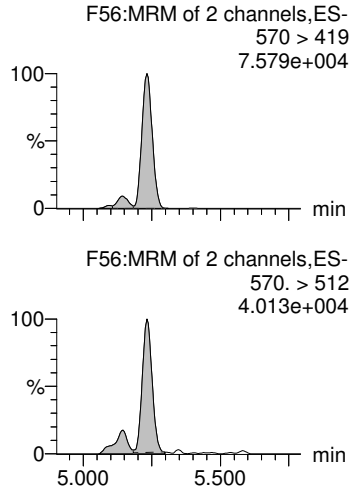
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Name: 200220P1-31, Date: 20-Feb-2020, Time: 22:39:11, ID: B0B0118-BS1 OPR 0.25, Description: OPR

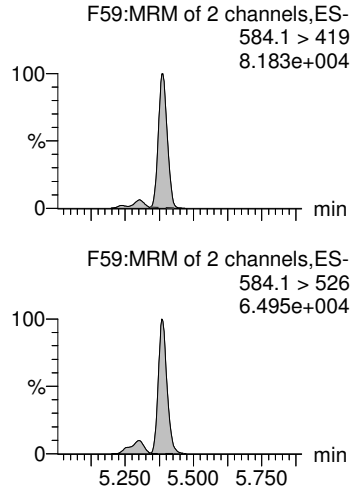
L-MeFOSAA



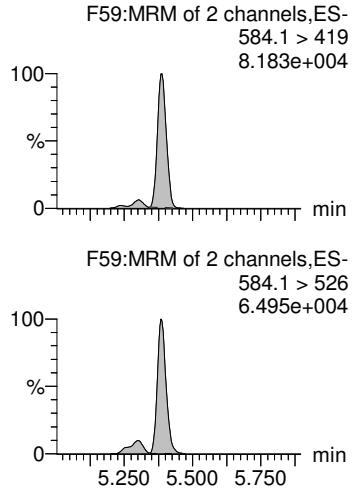
Total N-MeFOSAA



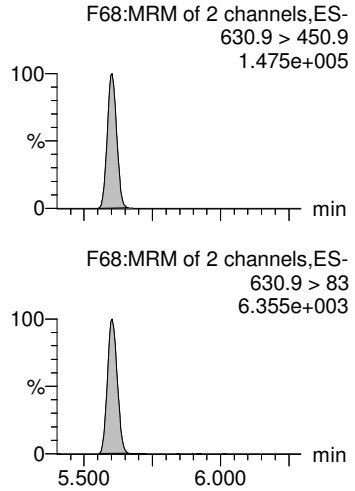
L-EtFOSAA



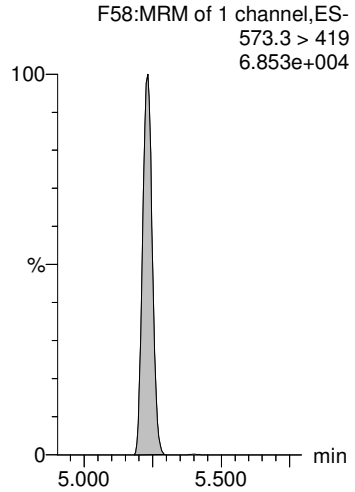
Total N-EtFOSAA



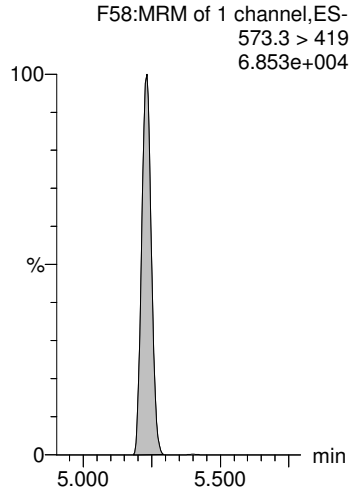
11Cl-PF30UdS



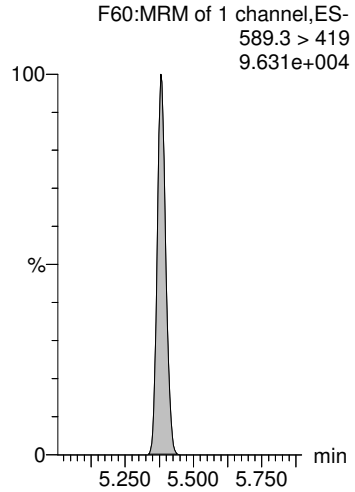
d3-N-MeFOSAA-EIS



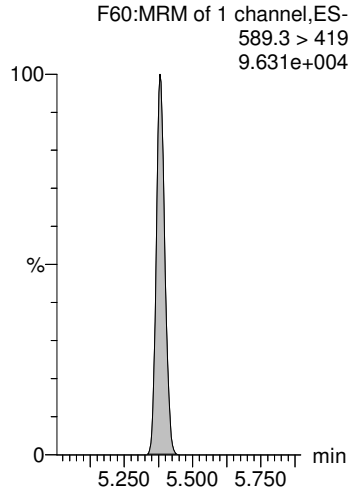
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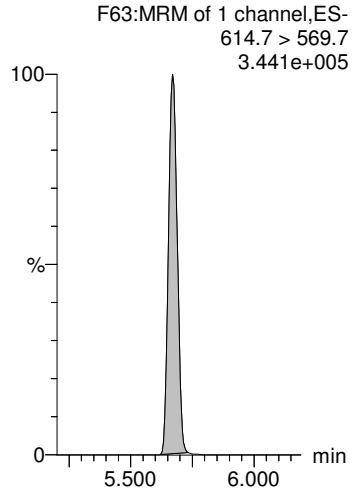
d5-N-EtFOSAA-EIS



d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS



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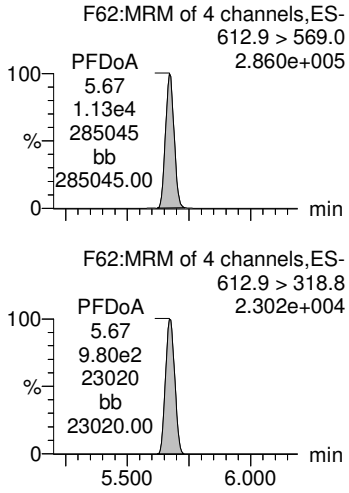
Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-31.qld

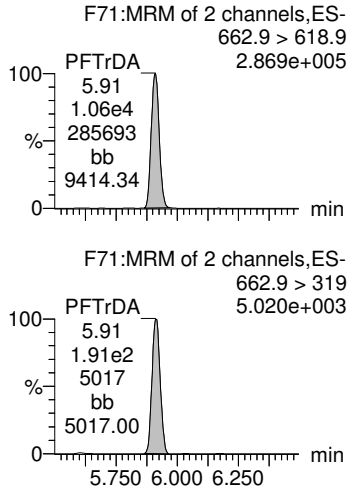
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Name: 200220P1-31, Date: 20-Feb-2020, Time: 22:39:11, ID: B0B0118-BS1 OPR 0.25, Description: OPR

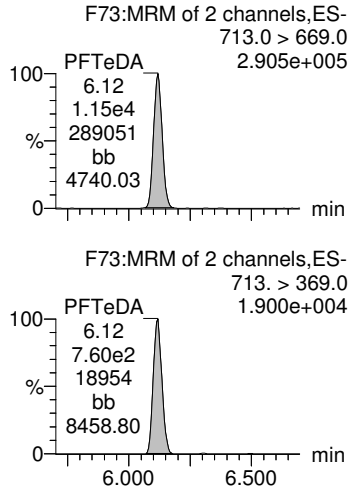
PFDoA



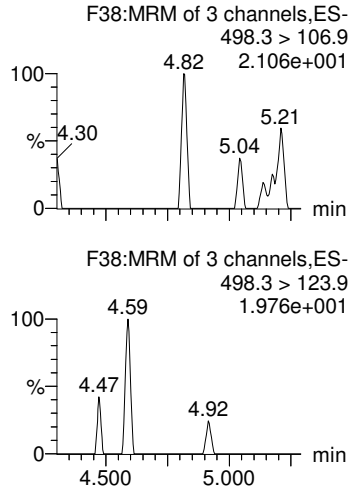
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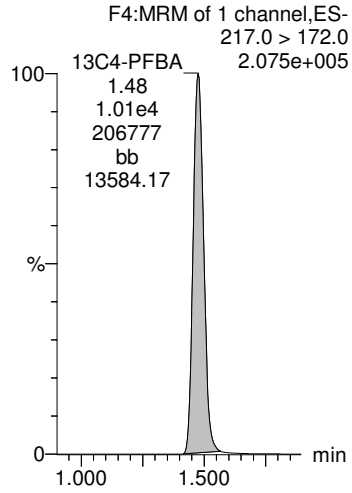
PFTeDA



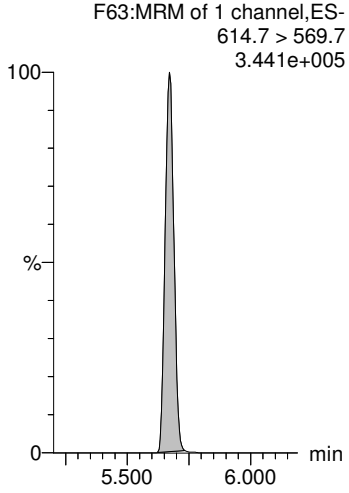
TDCA



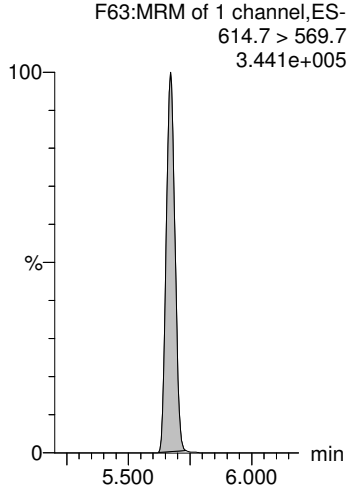
13C4-PFBA



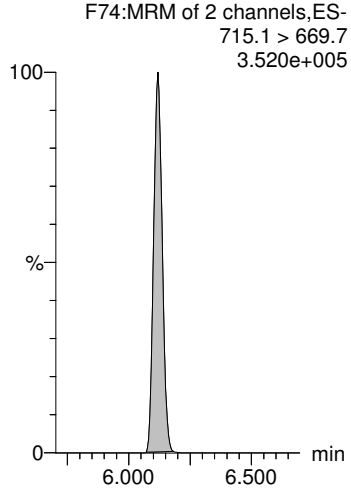
13C2-PFDoA-EIS



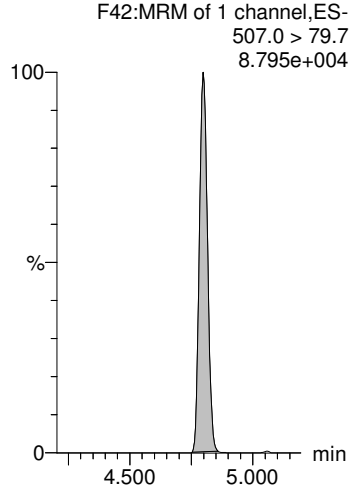
13C2-PFDoA-EIS



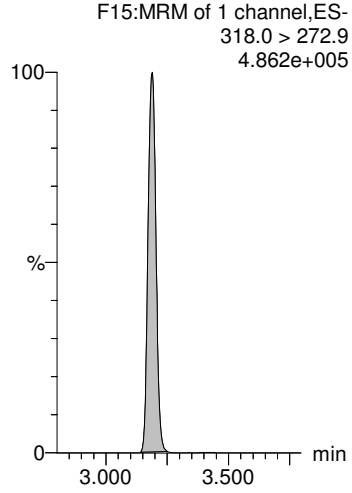
13C2-PFTeDA-EIS



13C8-PFOS-EIS



13C5-PFHxA



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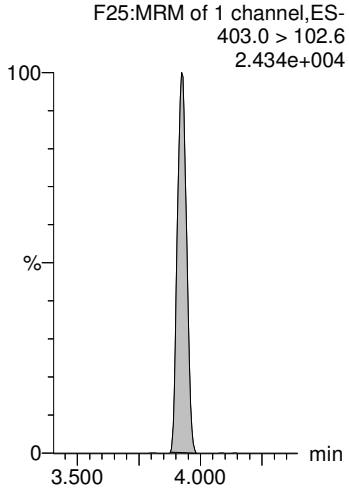
Review: AMR 2/28/2020

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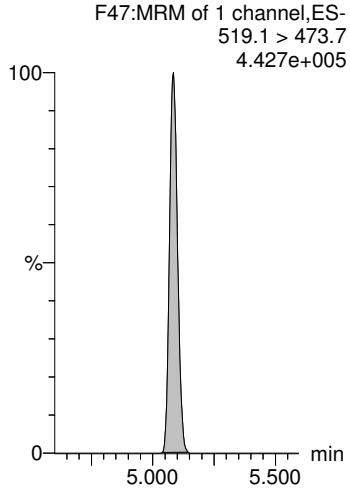
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Printed: Friday, February 28, 2020 14:39:21 Pacific Standard Time

Name: 200220P1-31, Date: 20-Feb-2020, Time: 22:39:11, ID: B0B0118-BS1 OPR 0.25, Description: OPR

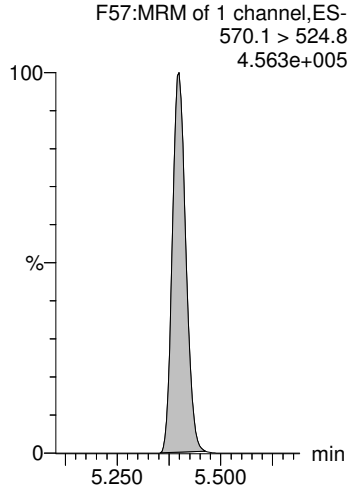
18O2-PFHxS



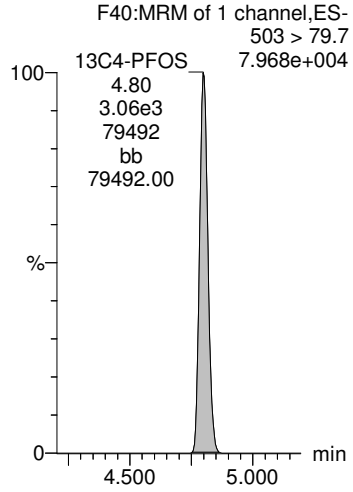
13C6-PFDA



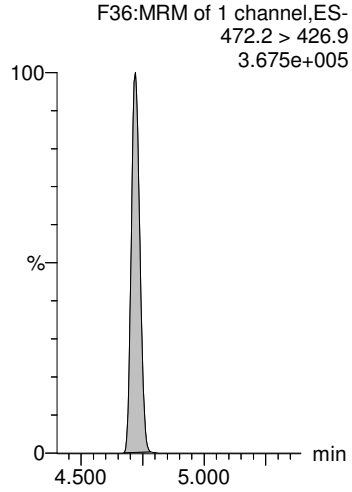
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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Review: AMR 2/25/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-34.qld

Last Altered: Monday, February 24, 2020 09:05:55 Pacific Standard Time
Printed: Monday, February 24, 2020 12:26:49 Pacific Standard Time

Name: 200220P1-34, Date: 20-Feb-2020, Time: 23:10:42, ID: 2000314-01 SB01-20200212 0.24382, Description: SB01-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7		1.37e3	0.244		2.68						
2	7	PFHxA	313.0 > 269.0		1.89e4	0.244		3.19						
3	9	HFPO-DA	285.1 > 168.9		3.39e3	0.244		3.40						
4	11	PFHpA	363.0 > 318.9		1.21e4	0.244		3.78						
5	12	ADONA	376.8 > 250.9		1.21e4	0.244		3.88						
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.37e3		0.244	114.516	2.70	2.68	1370	49.0995	95.8		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.89e4		0.244	1636.234	3.19	3.19	18900	47.2845	92.2		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.39e3		0.244	293.118	3.43	3.40	3390	47.4896	92.6		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.21e4		0.244	1106.802	3.79	3.78	12100	44.8717	87.5		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.21e4		0.244	1106.802	3.79	3.78	12100	44.8717	87.5		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	1.72e0	2.76e3	0.244		3.92	3.94	0.00777			0.211	YES
13	1...	Total PFHxS	398.9 > 79.7	1.72e0	2.76e3	0.244		3.93		0.000				
14	16	L-PFOA	412.8 > 368.9		1.75e4	0.244		4.29						
15	1...	Total PFOA	412.8 > 368.9	0.00e0	1.75e4	0.244		4.60		0.000				
16	21	PFNA	463.0 > 418.8		1.43e4	0.244		4.72						
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.76e3		0.244	252.668	3.92	3.92	2760	44.8098	87.4		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.76e3		0.244	252.668	3.92	3.92	2760	44.8098	87.4		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.75e4		0.244	1527.160	4.29	4.29	17500	46.8845	91.5		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.75e4		0.244	1527.160	4.29	4.29	17500	46.8845	91.5		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.43e4		0.244	1373.362	4.72	4.72	14300	42.8420	83.6		
22	-1													
23	23	L-PFOS	498.9 > 79.7		3.07e3	0.244		4.80						
24	1...	Total PFOS	498.9 > 79.7	0.00e0	3.07e3	0.244		5.13		0.000				
25	25	9Cl-PF30NS	530.7 > 350.8		3.07e3	0.244		5.01						
26	26	PFDA	513 > 468.8		1.62e4	0.244		5.08						
27	33	PFUdA	563.0 > 518.9	4.42e1	1.80e4	0.244		5.40	5.39	0.0306	0.1678		121.442	YES
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.07e3		0.244	295.805	4.80	4.80	3070	42.5187	82.9		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.07e3		0.244	295.805	4.80	4.80	3070	42.5187	82.9		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.07e3		0.244	295.805	4.80	4.80	3070	42.5187	82.9		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.62e4		0.244	1356.410	5.08	5.08	16200	49.1068	95.8		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.80e4		0.244	1416.449	5.40	5.40	18000	52.2168	101.9		
33	-1													
34	29	L-MeFOSAA	570 > 419		2.90e3	0.244		5.23						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	2.90e3	0.244		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		3.86e3	0.244		5.38						

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Review: AMR 2/25/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-34.qld

Last Altered: Monday, February 24, 2020 09:05:55 Pacific Standard Time
Printed: Monday, February 24, 2020 12:26:49 Pacific Standard Time

Name: 200220P1-34, Date: 20-Feb-2020, Time: 23:10:42, ID: 2000314-01 SB01-20200212 0.24382, Description: SB01-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	3.86e3	0.244		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.49e4	0.244		5.60						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.90e3		0.244	262.877	5.22	5.23	2900	45.2219	88.2		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.90e3		0.244	262.877	5.22	5.23	2900	45.2219	88.2		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.86e3		0.244	360.983	5.37	5.38	3860	43.8940	85.6		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.86e3		0.244	360.983	5.37	5.38	3860	43.8940	85.6		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.49e4		0.244	1573.093	5.67	5.67	14900	38.8202	75.7		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.49e4	0.244		5.67						
46	39	PFTrDA	662.9 > 618.9		1.49e4	0.244		5.93						
47	41	PFTeDA	713.0 > 669.0		1.46e4	0.244		6.12						
48	1...	TDCA	498.3>106.9			0.244		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.11e4	1.11e4	0.244	1.000	1.48	1.48	12.5	51.2673	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.49e4		0.244	1573.093	5.67	5.67	14900	38.8202	75.7		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.49e4		0.244	1573.093	5.67	5.67	14900	38.8202	75.7		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.46e4		0.244	1440.513	6.10	6.12	14600	41.4738	80.9		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.07e3		0.244	295.805	4.80	4.80	3070	42.5187	82.9		
54	1...	13C5-PFHxA	318.0 > 272.9	1.99e4	1.99e4	0.244	1.000	3.18	3.19	12.5	51.2673	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.32e3	1.32e3	0.244	1.000	3.92	3.92	12.5	51.2673	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.68e4	1.68e4	0.244	1.000	5.08	5.08	12.5	51.2673	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.94e4	1.94e4	0.244	1.000	5.40	5.40	12.5	51.2673	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.09e3	3.09e3	0.244	1.000	4.79	4.80	12.5	51.2673	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.58e4	1.58e4	0.244	1.000	4.72	4.72	12.5	51.2673	100.0		

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Review: AMR 2/25/2020

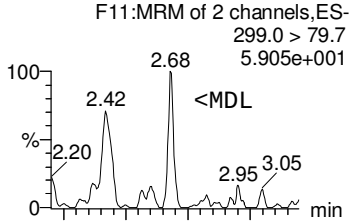
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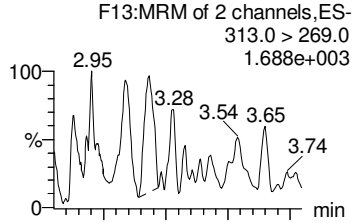
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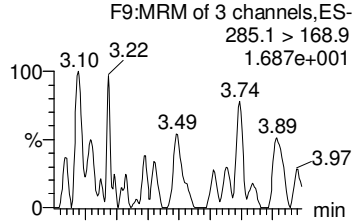
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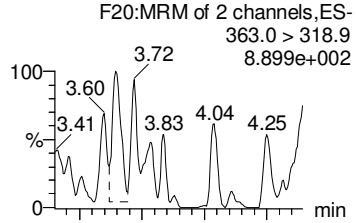
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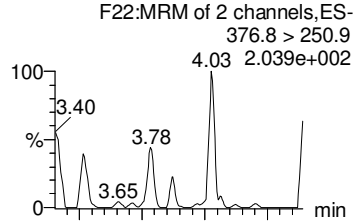
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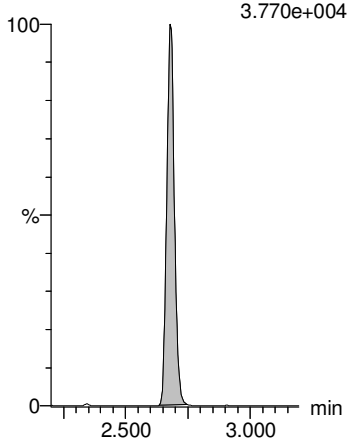
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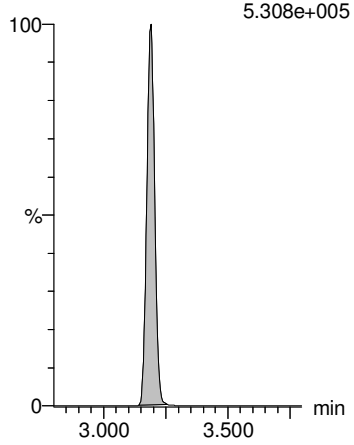
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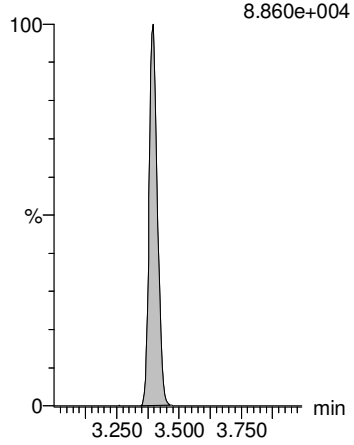
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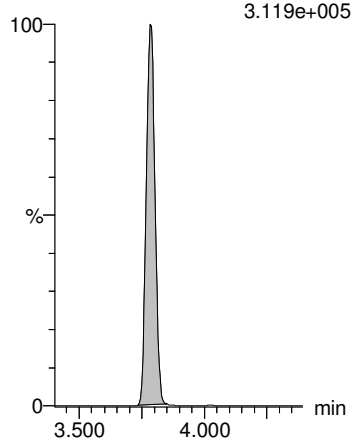
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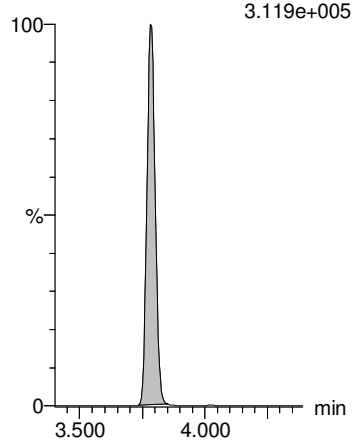
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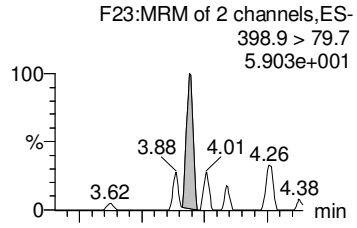
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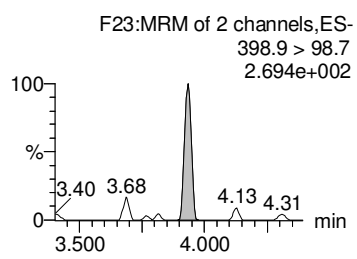
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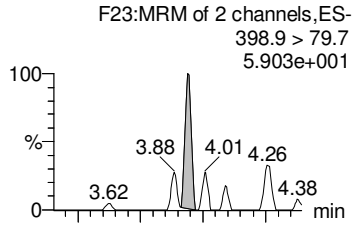
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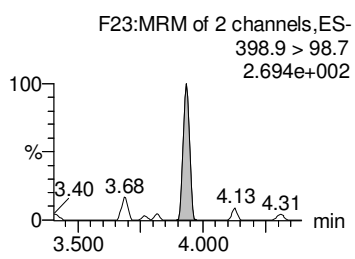
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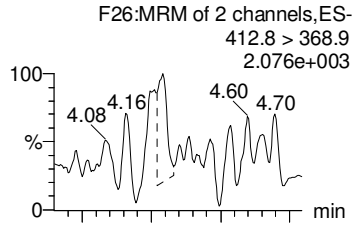


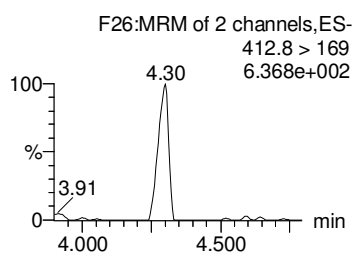
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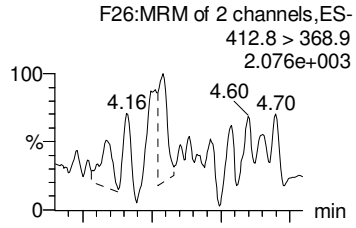


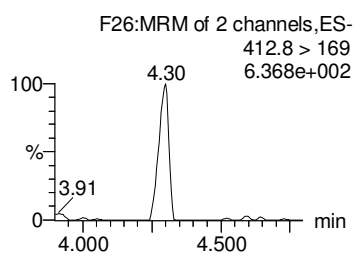
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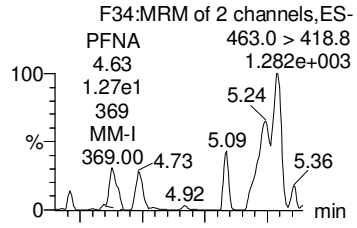


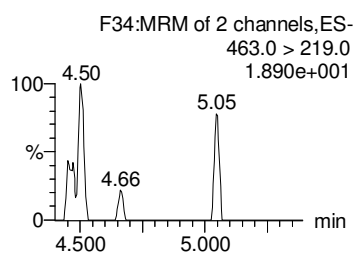
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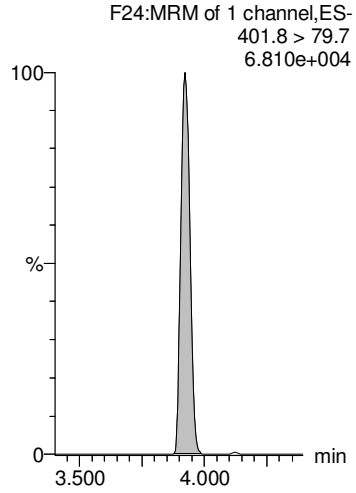


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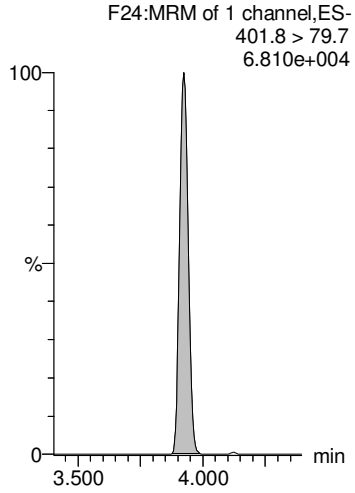




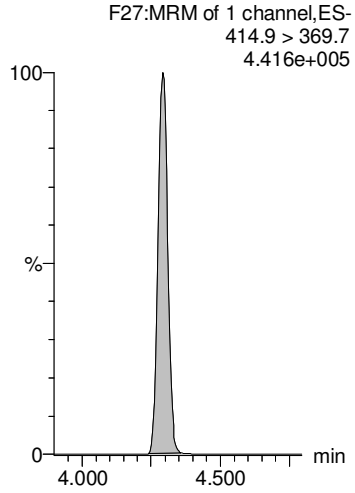
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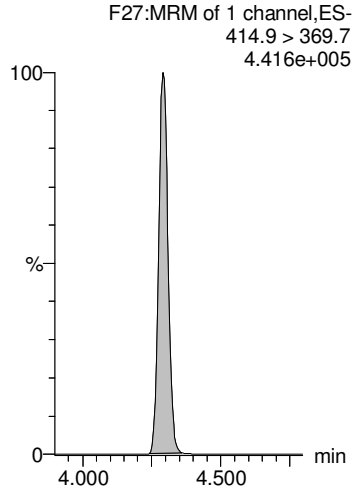
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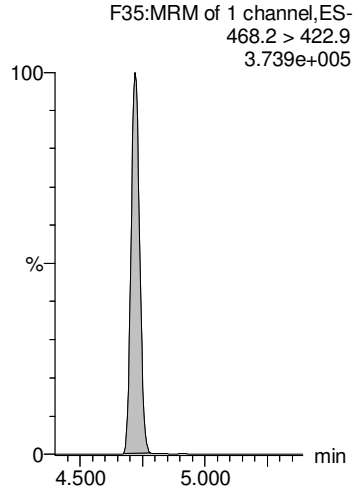
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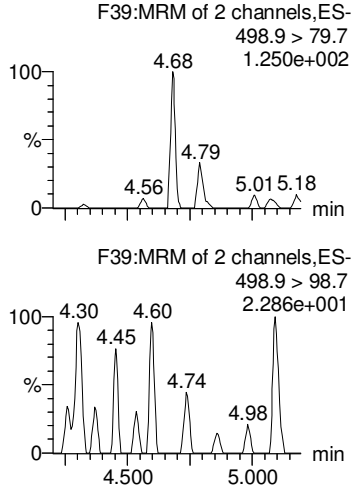
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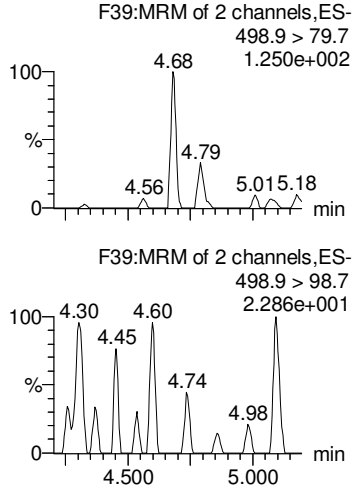
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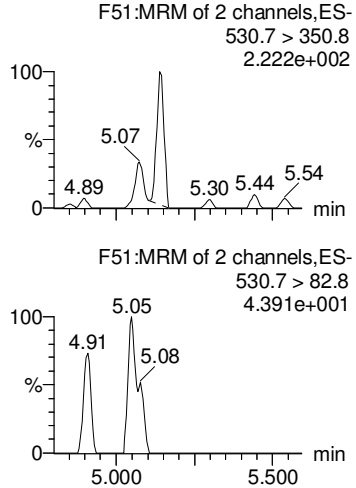
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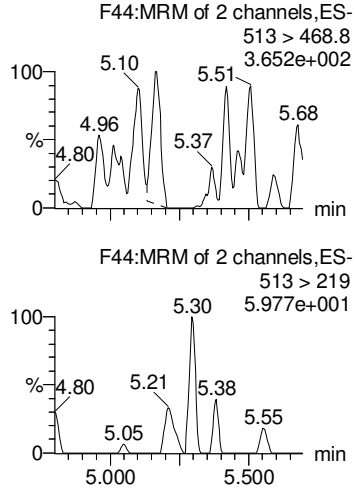
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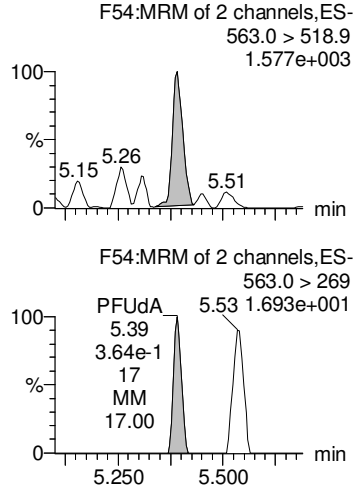
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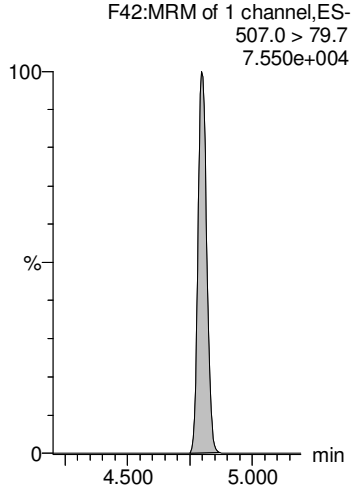
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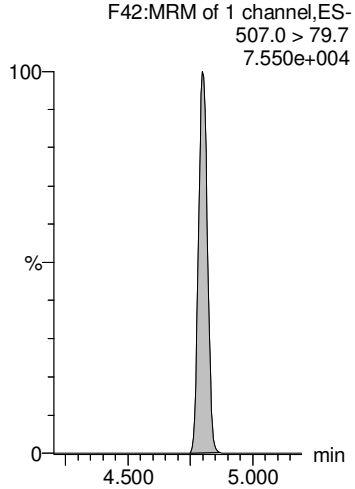
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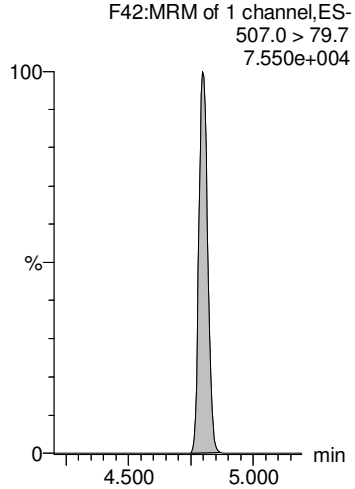
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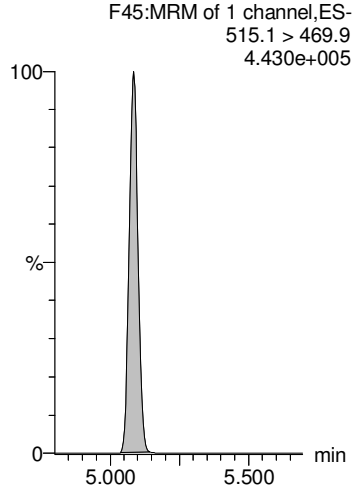
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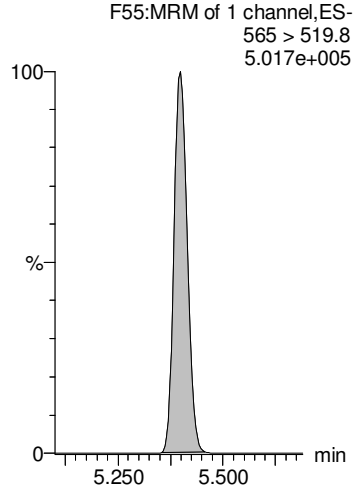
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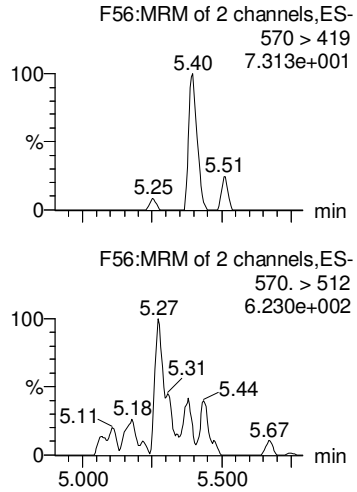


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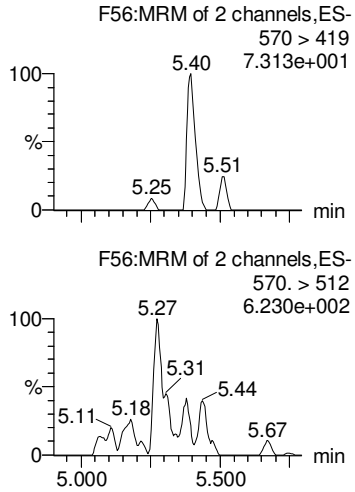
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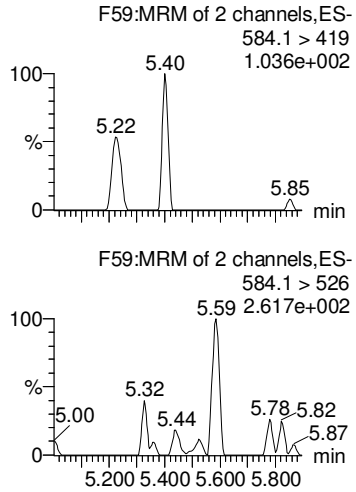
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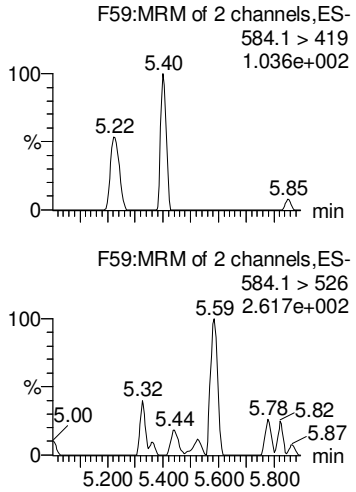
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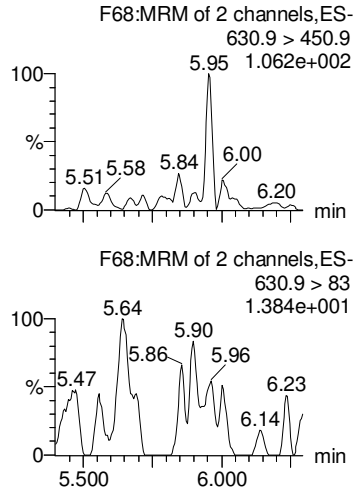
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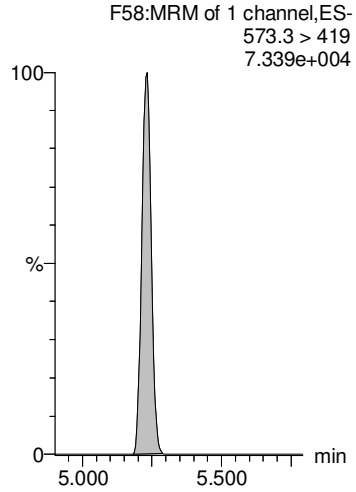
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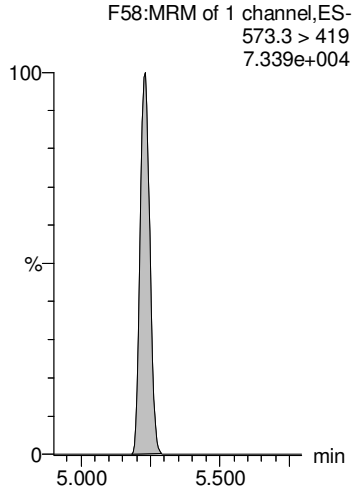
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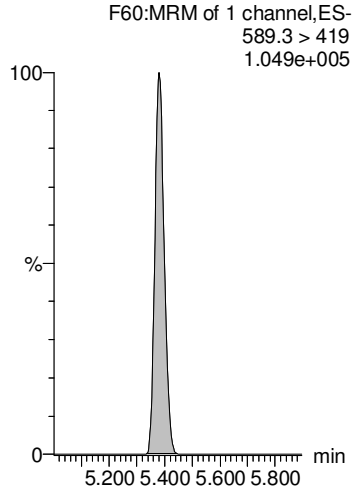
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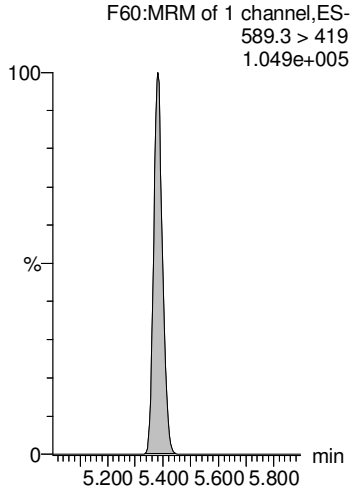
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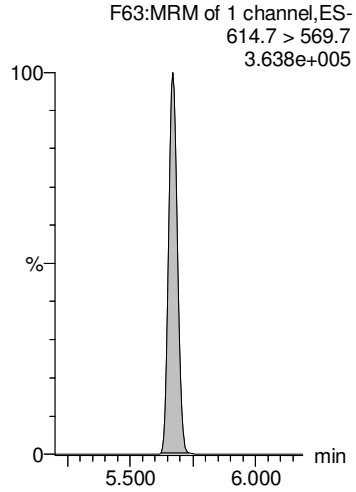
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d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS



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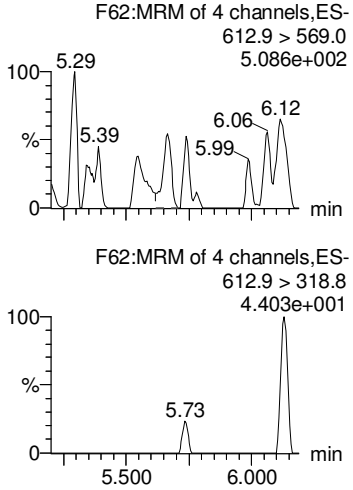
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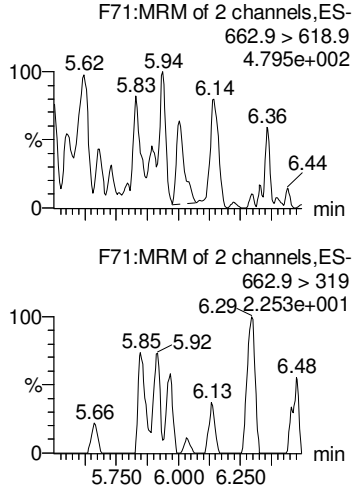
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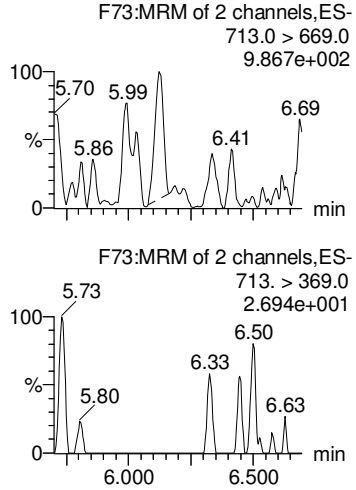
PFDoA



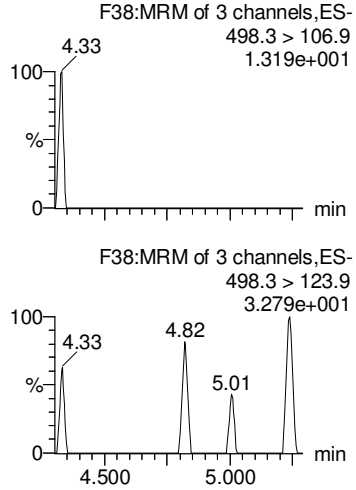
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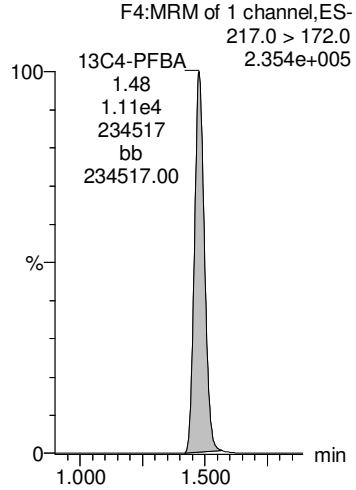
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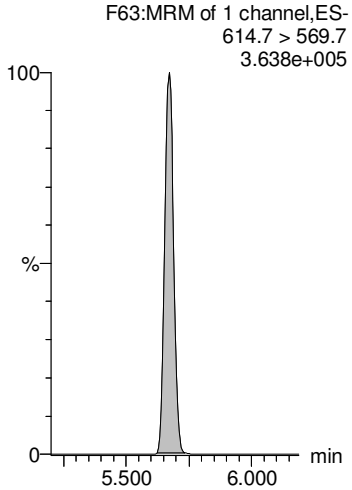
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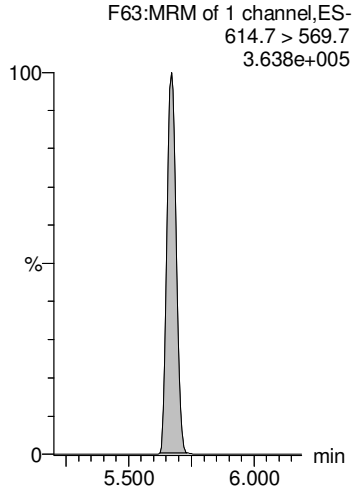
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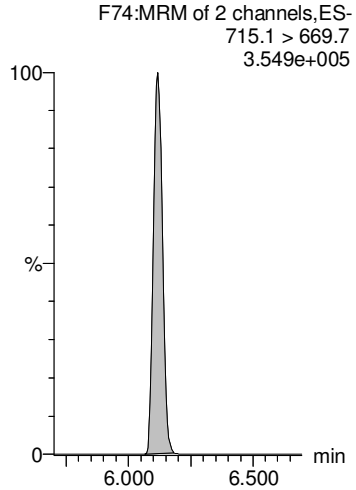
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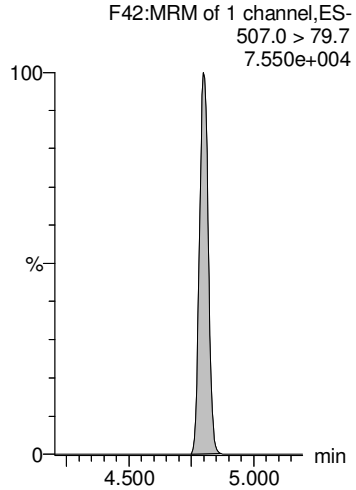
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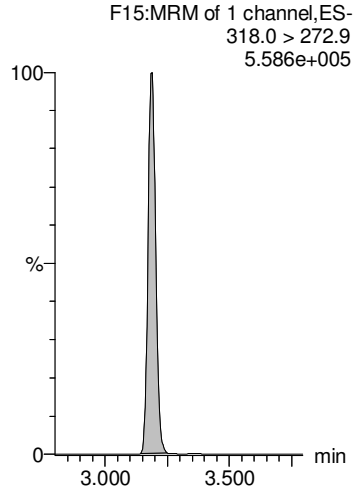
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13C8-PFOS-EIS



13C5-PFHxA

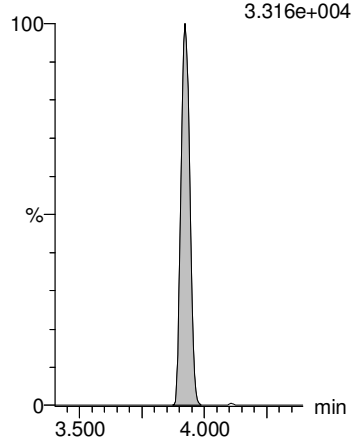


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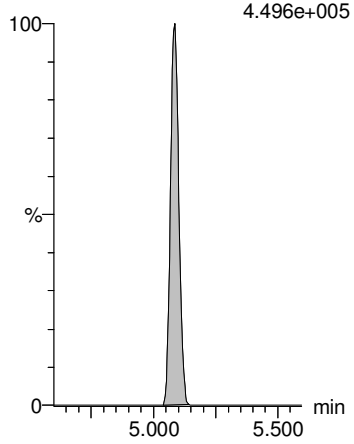
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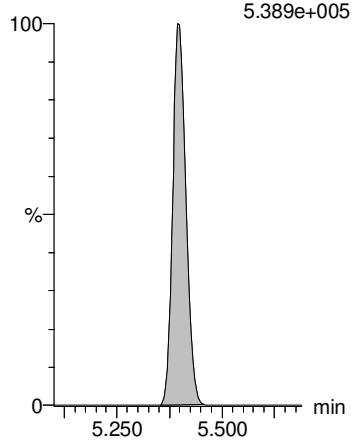
18O2-PFHxS



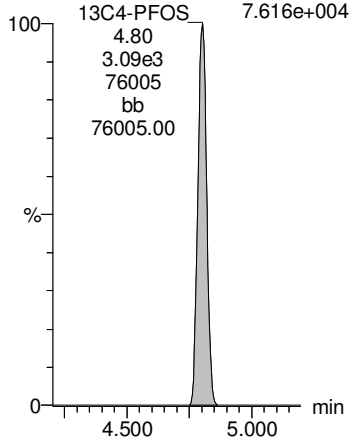
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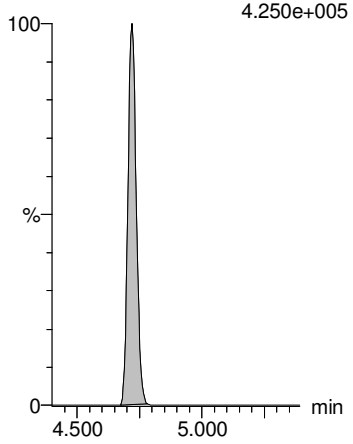
13C7-PFUdA



13C4-PFOS



13C9-PFNA



Review: AMR 2/28/2020

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	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7		1.32e3	0.246		2.68						
2	7	PFHxA	313.0 > 269.0		1.92e4	0.246		3.19						
3	9	HFPO-DA	285.1 > 168.9		3.42e3	0.246		3.40						
4	11	PFHpA	363.0 > 318.9		1.20e4	0.246		3.78						
5	12	ADONA	376.8 > 250.9		1.20e4	0.246		3.88						
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.32e3		0.246	114.516	2.70	2.68	1320	46.7471	92.1		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.92e4		0.246	1636.234	3.19	3.19	19200	47.5729	93.7		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.42e3		0.246	293.118	3.43	3.40	3420	47.4193	93.4		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.20e4		0.246	1106.802	3.79	3.78	12000	44.0255	86.7		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.20e4		0.246	1106.802	3.79	3.78	12000	44.0255	86.7		
11	-1													
12	13	L-PFHxS	398.9 > 79.7		2.79e3	0.246		3.92						
13	1...	Total PFHxS	398.9 > 79.7	0.00e0	2.79e3	0.246		3.93		0.000				
14	16	L-PFOA	412.8 > 368.9		1.64e4	0.246		4.29						
15	1...	Total PFOA	412.8 > 368.9	0.00e0	1.64e4	0.246		4.60		0.000				
16	21	PFNA	463.0 > 418.8		1.48e4	0.246		4.72						
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.79e3		0.246	252.668	3.92	3.92	2790	44.8287	88.3		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.79e3		0.246	252.668	3.92	3.92	2790	44.8287	88.3		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.64e4		0.246	1527.160	4.29	4.29	16400	43.5870	85.8		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.64e4		0.246	1527.160	4.29	4.29	16400	43.5870	85.8		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.48e4		0.246	1373.362	4.72	4.72	14800	43.6560	86.0		
22	-1													
23	23	L-PFOS	498.9 > 79.7		3.42e3	0.246		4.80						
24	1...	Total PFOS	498.9 > 79.7	0.00e0	3.42e3	0.246		5.13		0.000				
25	25	9Cl-PF30NS	530.7 > 350.8		3.42e3	0.246		5.01						
26	26	PFDA	513 > 468.8		1.76e4	0.246		5.08						
27	33	PFUdA	563.0 > 518.9	7.05e1	1.67e4	0.246		5.39	5.41	0.0528	0.2517		87.194	YES
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.42e3		0.246	295.805	4.80	4.80	3420	46.9524	92.5		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.42e3		0.246	295.805	4.80	4.80	3420	46.9524	92.5		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.42e3		0.246	295.805	4.80	4.80	3420	46.9524	92.5		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.76e4		0.246	1356.410	5.08	5.08	17600	52.6873	103.8		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.67e4		0.246	1416.449	5.40	5.39	16700	47.8741	94.3		
33	-1													
34	29	L-MeFOSAA	570 > 419		3.16e3	0.246		5.23						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	3.16e3	0.246		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		3.77e3	0.246		5.38						

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Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-35.qld

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Name: 200220P1-35, Date: 20-Feb-2020, Time: 23:21:13, ID: 2000314-02 EB01-20200212 0.24618, Description: EB01-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	3.77e3	0.246		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.56e4	0.246		5.60						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.16e3		0.246	262.877	5.22	5.23	3160	48.8154	96.1		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.16e3		0.246	262.877	5.22	5.23	3160	48.8154	96.1		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.77e3		0.246	360.983	5.37	5.38	3770	42.4747	83.7		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.77e3		0.246	360.983	5.37	5.38	3770	42.4747	83.7		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.56e4		0.246	1573.093	5.67	5.67	15600	40.3529	79.5		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.56e4	0.246		5.67						
46	39	PFTrDA	662.9 > 618.9		1.56e4	0.246		5.93						
47	41	PFTeDA	713.0 > 669.0		1.60e4	0.246		6.12						
48	1...	TDCA	498.3>106.9			0.246		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.15e4	1.15e4	0.246	1.000	1.48	1.48	12.5	50.7759	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.56e4		0.246	1573.093	5.67	5.67	15600	40.3529	79.5		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.56e4		0.246	1573.093	5.67	5.67	15600	40.3529	79.5		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.60e4		0.246	1440.513	6.10	6.12	16000	44.9926	88.6		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.42e3		0.246	295.805	4.80	4.80	3420	46.9524	92.5		
54	1...	13C5-PFHxA	318.0 > 272.9	1.91e4	1.91e4	0.246	1.000	3.18	3.19	12.5	50.7759	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.12e3	1.12e3	0.246	1.000	3.92	3.92	12.5	50.7759	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.80e4	1.80e4	0.246	1.000	5.08	5.08	12.5	50.7759	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.79e4	1.79e4	0.246	1.000	5.40	5.40	12.5	50.7759	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.53e3	3.53e3	0.246	1.000	4.79	4.80	12.5	50.7759	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.64e4	1.64e4	0.246	1.000	4.72	4.72	12.5	50.7759	100.0		

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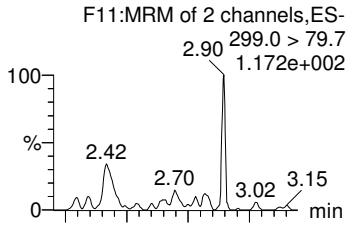
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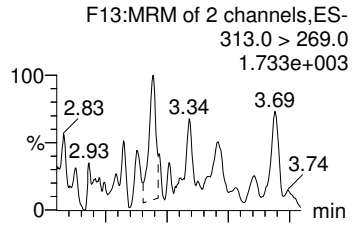
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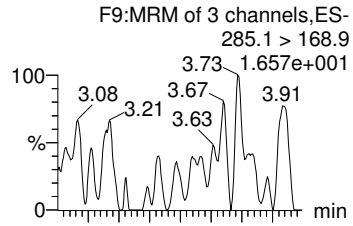
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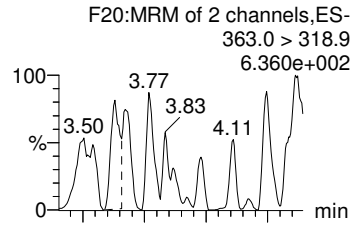
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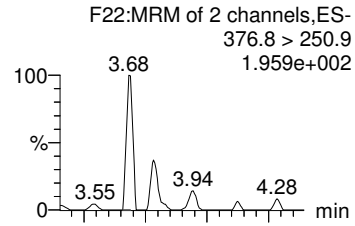
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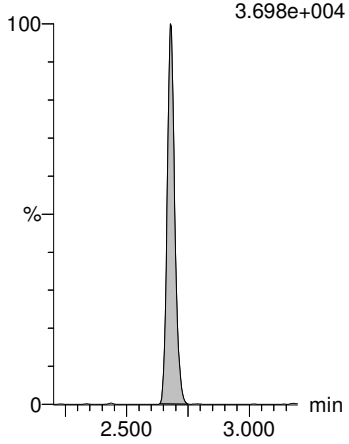
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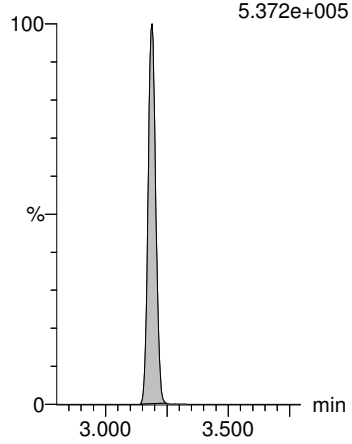
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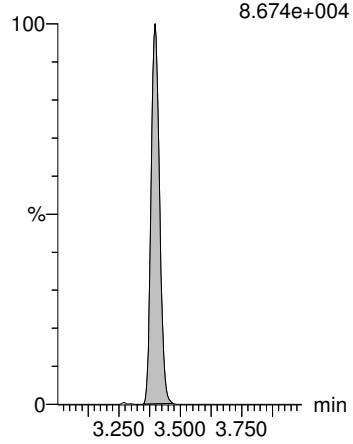
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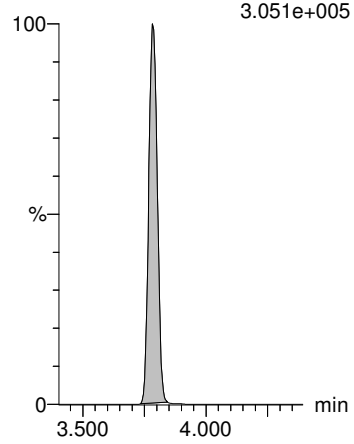
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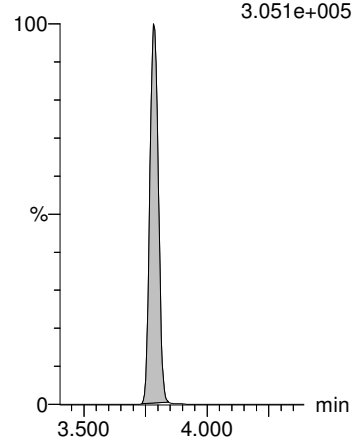
13C3-HFPO-DA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS



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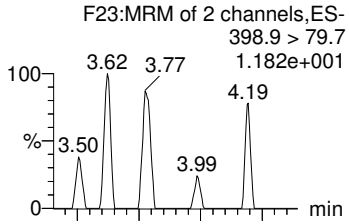
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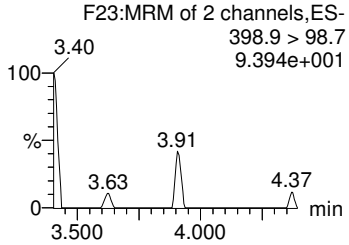
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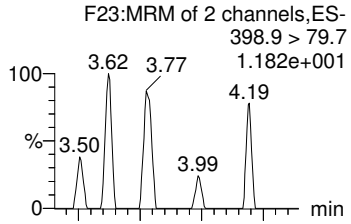
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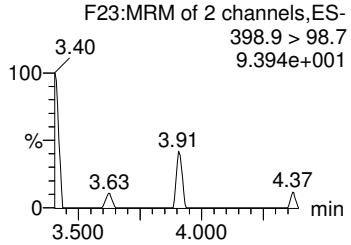
L-PFHxS



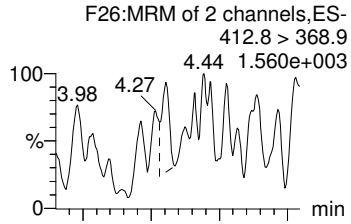


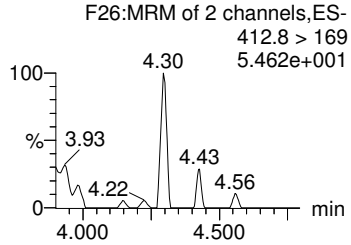
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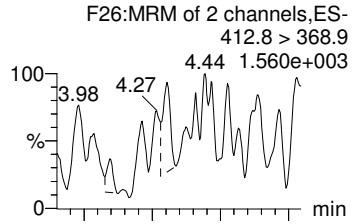


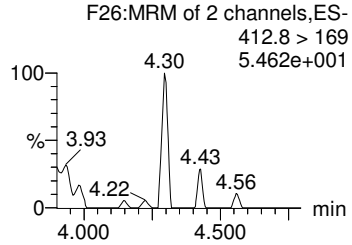
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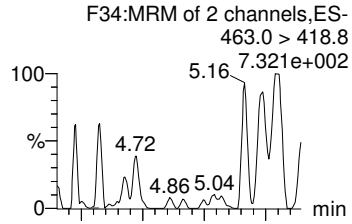


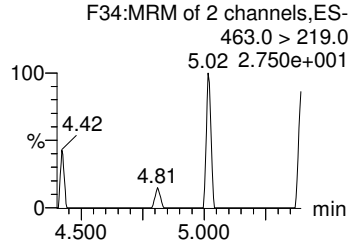
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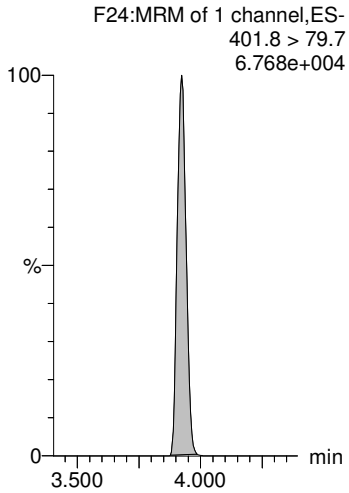


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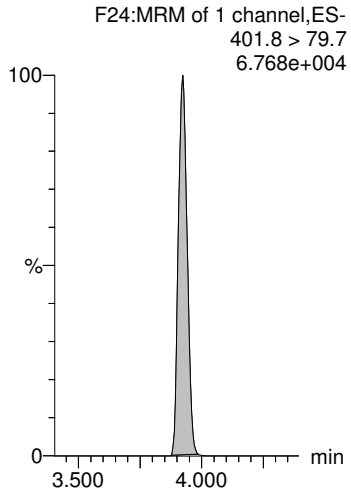




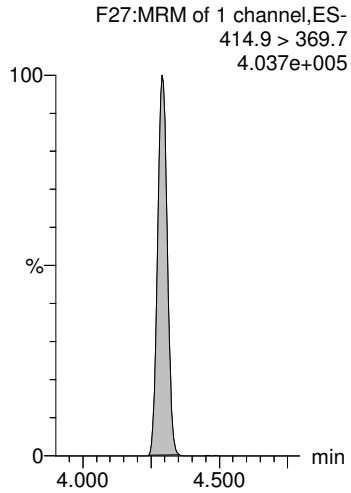
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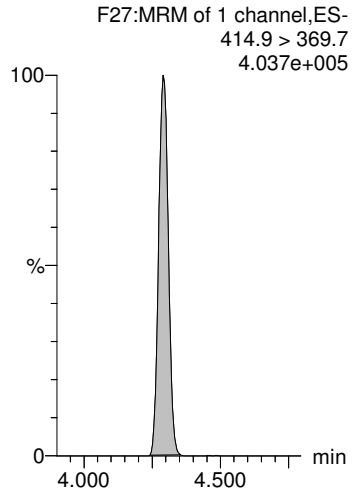
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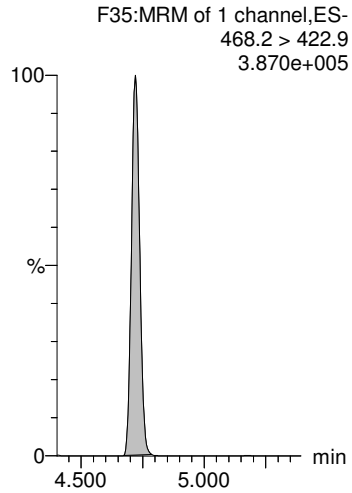
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13C2-PFOA-EIS



13C5-PFNA-EIS



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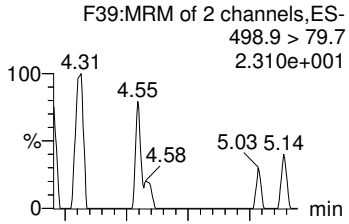
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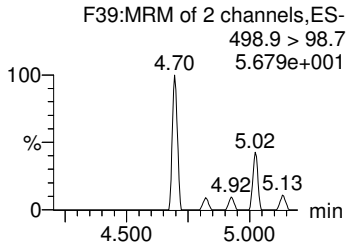
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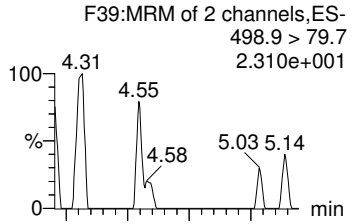
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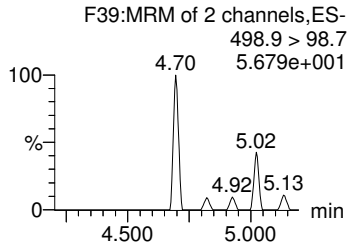
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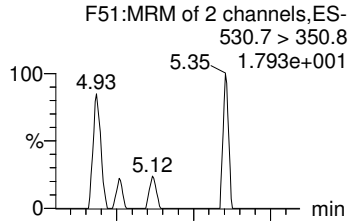


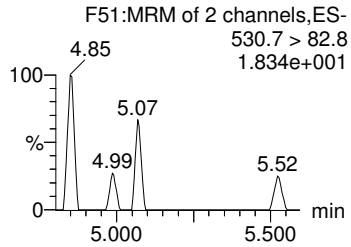
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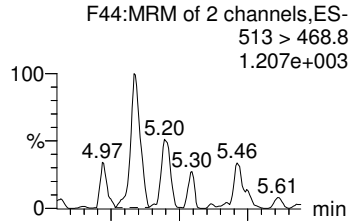


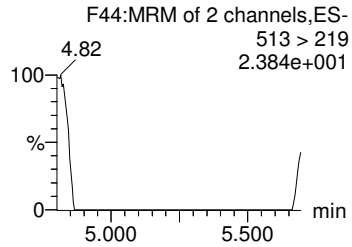
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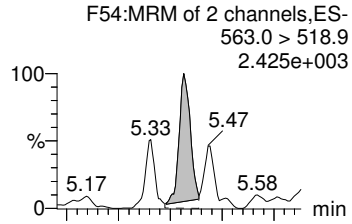


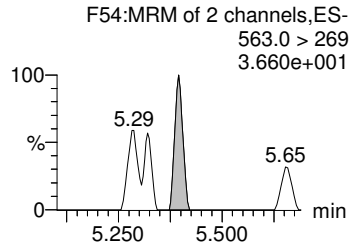
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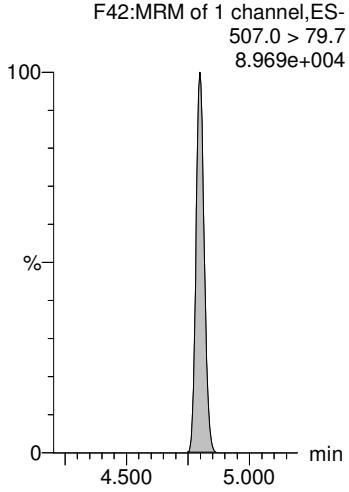


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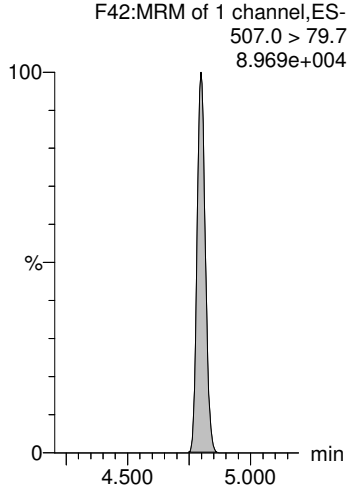




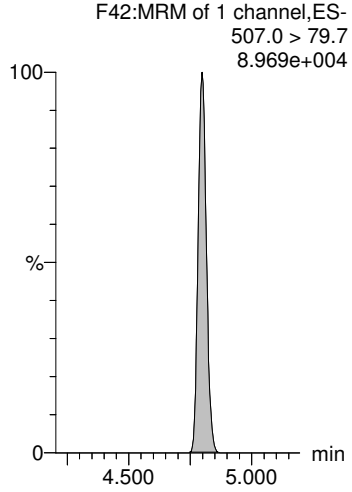
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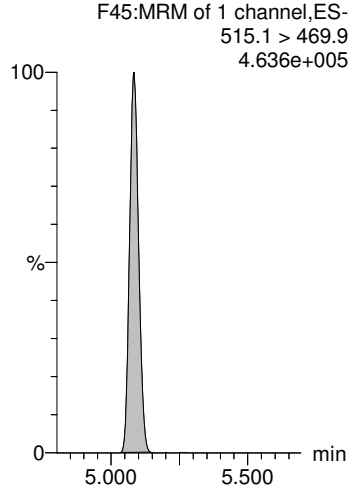
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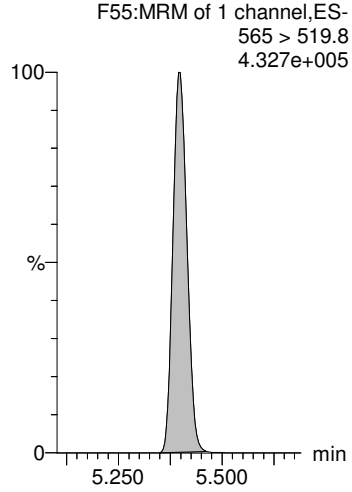
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13C2-PFDA-EIS



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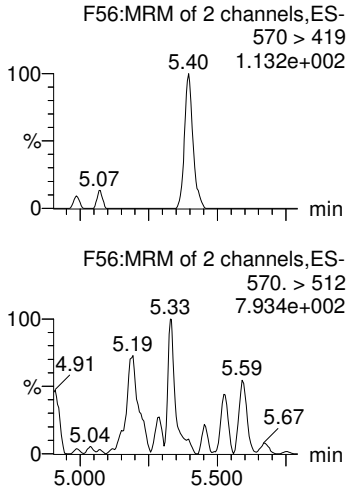
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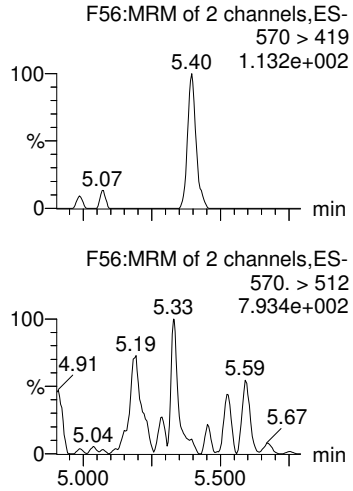
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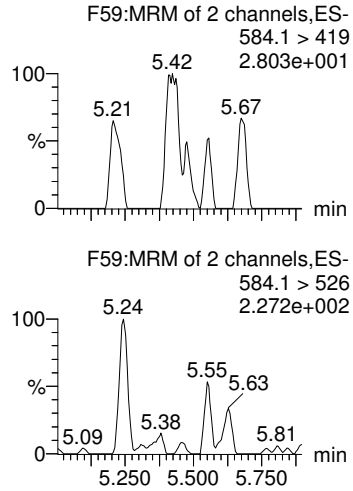
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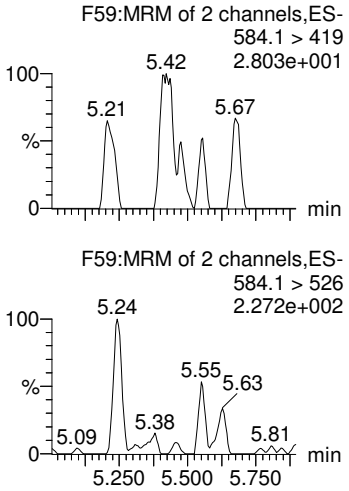
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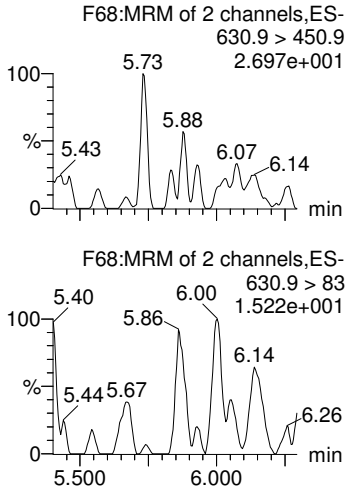
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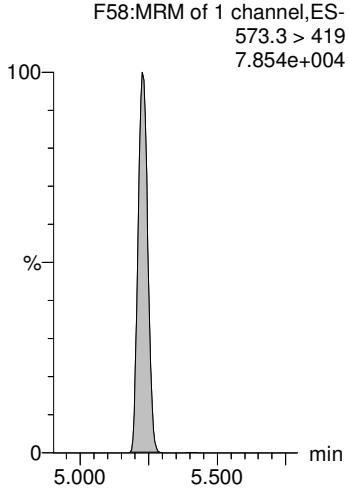
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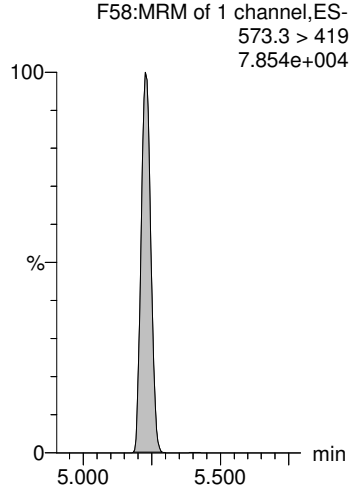
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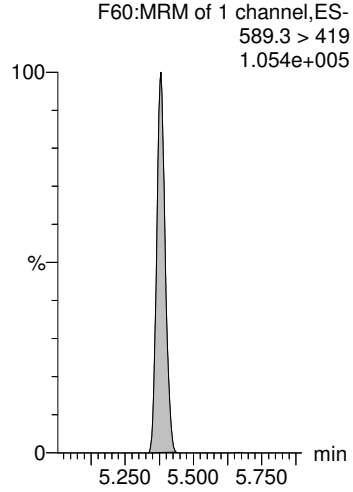
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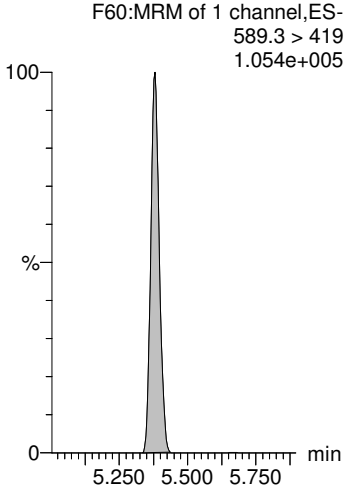
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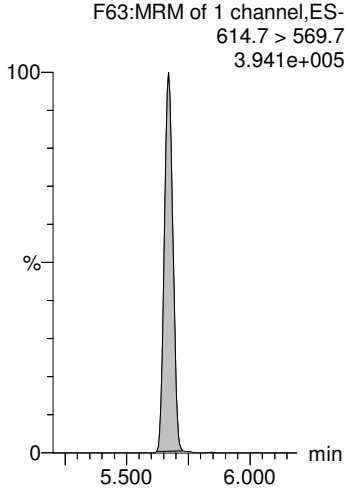
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d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS



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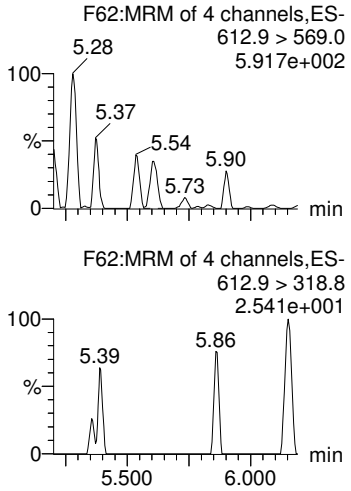
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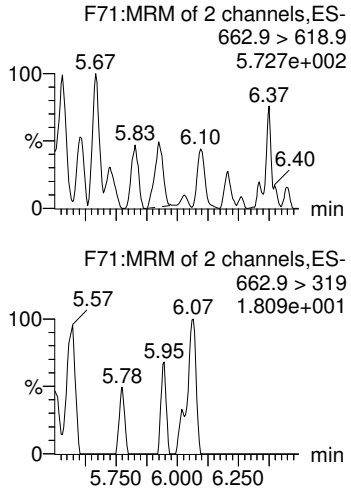
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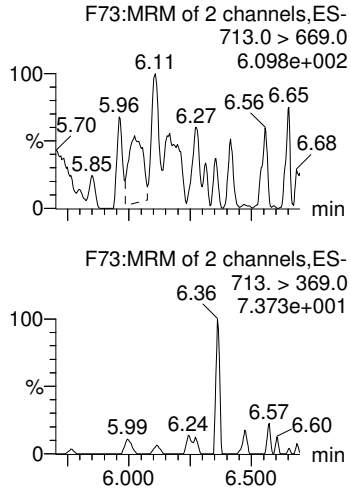
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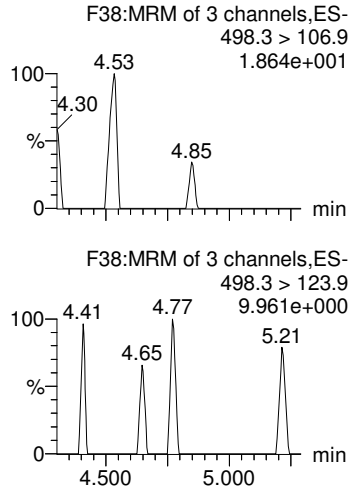
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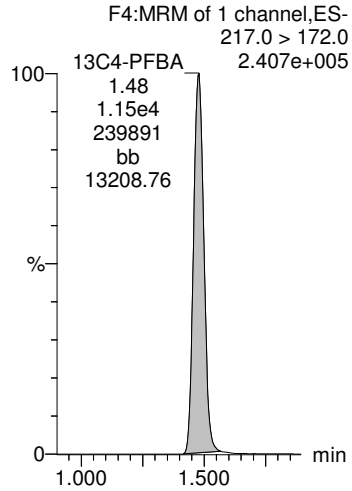
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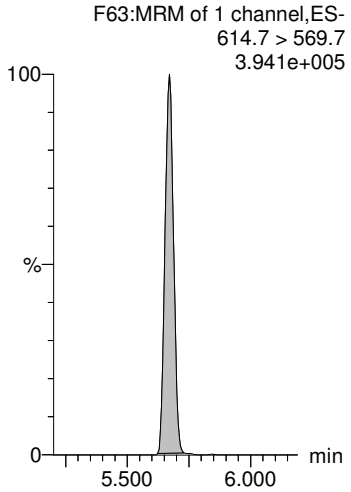
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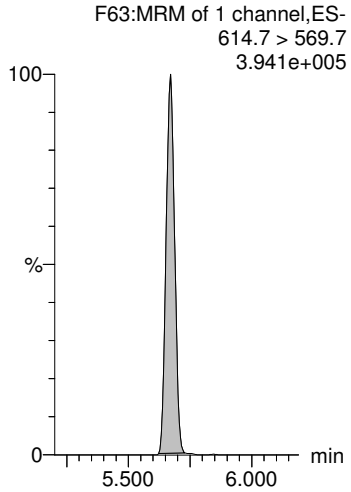
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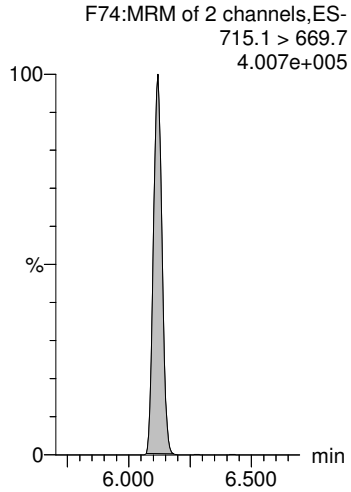
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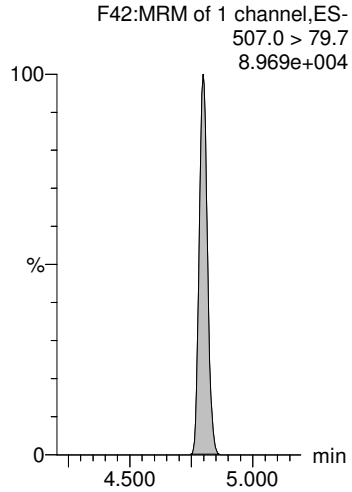
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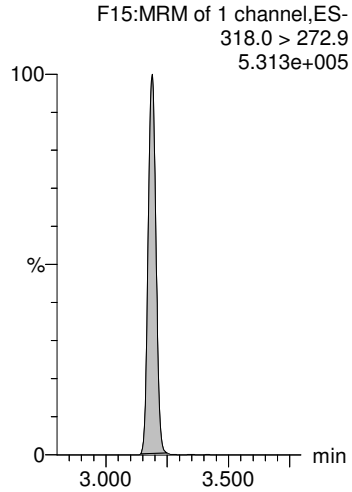
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13C8-PFOS-EIS



13C5-PFHxA



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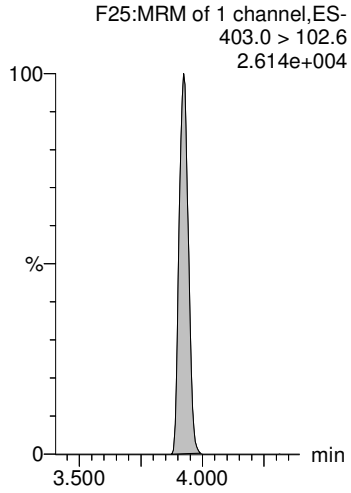
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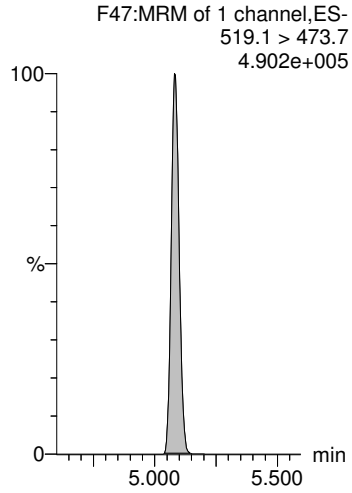
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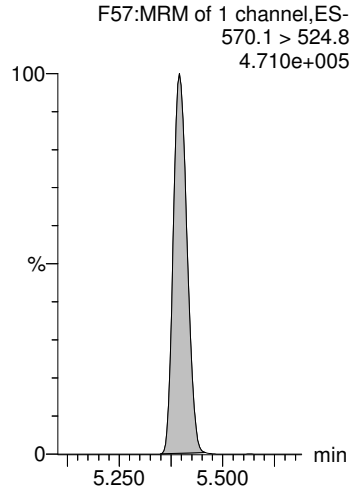
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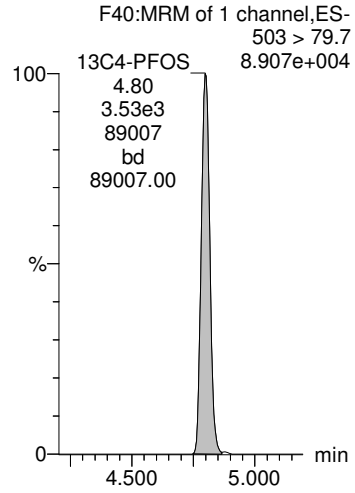
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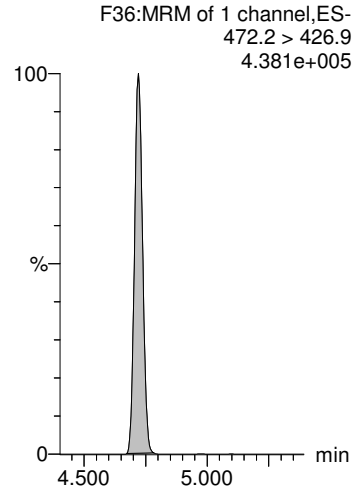
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13C4-PFOS



13C9-PFNA



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Last Altered: Tuesday, February 25, 2020 11:44:06 Pacific Standard Time
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Name: 200220P1-39, Date: 21-Feb-2020, Time: 00:03:13, ID: 2000314-03 I006MW03SR-20200212 0.25406, Description: I006MW03SR-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7	3.57e3	1.49e3	0.254		2.68	2.68	30.0	51.2948		3.039	NO
2	7	PFHxA	313.0 > 269.0	2.30e5	2.04e4	0.254		3.19	3.19	141	627.7104		16.423	NO
3	9	HFPO-DA	285.1 > 168.9		3.97e3	0.254		3.39						
4	11	PFHpA	363.0 > 318.9	7.58e4	1.34e4	0.254		3.78	3.78	70.9	226.4521		21.922	NO
5	12	ADONA	376.8 > 250.9		1.34e4	0.254		3.88						
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.49e3		0.254	114.516	2.70	2.68	1490	51.1405	103.9		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	2.04e4		0.254	1636.234	3.19	3.19	20400	48.9814	99.6		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.97e3		0.254	293.118	3.43	3.39	3970	53.2488	108.2		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.34e4		0.254	1106.802	3.79	3.78	13400	47.5519	96.6		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.34e4		0.254	1106.802	3.79	3.78	13400	47.5519	96.6		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	2.39e4	3.29e3	0.254		3.92	3.92	90.7	333.0631		2.371	NO
13	1...	Total PFHxS	398.9 > 79.7	2.39e4	3.29e3	0.254		3.93		90.7	333.0631			
14	16	L-PFOA	412.8 > 368.9	1.39e5	1.90e4	0.254		4.29	4.29	91.2	303.0653		2.944	NO
15	1...	Total PFOA	412.8 > 368.9	1.39e5	1.90e4	0.254		4.60		91.2	303.0653			
16	21	PFNA	463.0 > 418.8	6.27e2	1.58e4	0.254		4.72	4.72	0.497	1.3971		7.080	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	3.29e3		0.254	252.668	3.92	3.92	3290	51.2077	104.1		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	3.29e3		0.254	252.668	3.92	3.92	3290	51.2077	104.1		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.90e4		0.254	1527.160	4.29	4.29	19000	48.9202	99.4		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.90e4		0.254	1527.160	4.29	4.29	19000	48.9202	99.4		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.58e4		0.254	1373.362	4.72	4.72	15800	45.1824	91.8		
22	-1													
23	23	L-PFOS	498.9 > 79.7	6.46e2	3.47e3	0.254		4.80	4.65	2.33	9.9255		3.153	NO
24	1...	Total PFOS	498.9 > 79.7	6.46e2	3.47e3	0.254		5.13		2.33	9.9255			
25	25	9Cl-PF30NS	530.7 > 350.8		3.47e3	0.254		5.01						
26	26	PFDA	513 > 468.8		1.59e4	0.254		5.08						
27	33	PFUdA	563.0 > 518.9		1.72e4	0.254		5.40						
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.47e3		0.254	295.805	4.80	4.80	3470	46.1347	93.8		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.47e3		0.254	295.805	4.80	4.80	3470	46.1347	93.8		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.47e3		0.254	295.805	4.80	4.80	3470	46.1347	93.8		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.59e4		0.254	1356.410	5.08	5.08	15900	46.0921	93.7		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.72e4		0.254	1416.449	5.40	5.40	17200	47.8234	97.2		
33	-1													
34	29	L-MeFOSAA	570 > 419		3.26e3	0.254		5.23						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	3.26e3	0.254		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		4.20e3	0.254		5.38						

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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-39.qld

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Name: 200220P1-39, Date: 21-Feb-2020, Time: 00:03:13, ID: 2000314-03 I006MW03SR-20200212 0.25406, Description: I006MW03SR-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	4.20e3	0.254		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.60e4	0.254		5.60						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.26e3		0.254	262.877	5.22	5.23	3260	48.7869	99.2		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.26e3		0.254	262.877	5.22	5.23	3260	48.7869	99.2		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	4.20e3		0.254	360.983	5.37	5.38	4200	45.7601	93.0		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	4.20e3		0.254	360.983	5.37	5.38	4200	45.7601	93.0		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.60e4		0.254	1573.093	5.67	5.67	16000	40.0954	81.5		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.60e4	0.254		5.67						
46	39	PFTrDA	662.9 > 618.9		1.60e4	0.254		5.93						
47	41	PFTeDA	713.0 > 669.0		1.53e4	0.254		6.12						
48	1...	TDCA	498.3>106.9			0.254		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.22e4	1.22e4	0.254	1.000	1.48	1.48	12.5	49.2010	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.60e4		0.254	1573.093	5.67	5.67	16000	40.0954	81.5		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.60e4		0.254	1573.093	5.67	5.67	16000	40.0954	81.5		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.53e4		0.254	1440.513	6.10	6.12	15300	41.8978	85.2		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.47e3		0.254	295.805	4.80	4.80	3470	46.1347	93.8		
54	1...	13C5-PFHxA	318.0 > 272.9	2.05e4	2.05e4	0.254	1.000	3.18	3.19	12.5	49.2010	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.28e3	1.28e3	0.254	1.000	3.92	3.92	12.5	49.2010	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	2.00e4	2.00e4	0.254	1.000	5.08	5.08	12.5	49.2010	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.97e4	1.97e4	0.254	1.000	5.40	5.40	12.5	49.2010	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.97e3	3.97e3	0.254	1.000	4.79	4.80	12.5	49.2010	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.74e4	1.74e4	0.254	1.000	4.72	4.72	12.5	49.2010	100.0		

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Review: AMR 2/28/2020

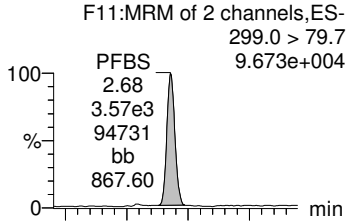
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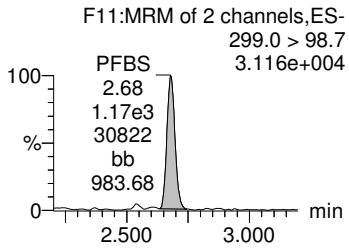
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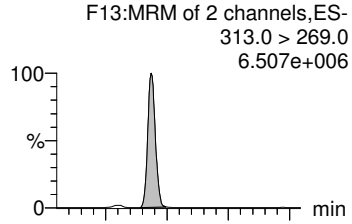
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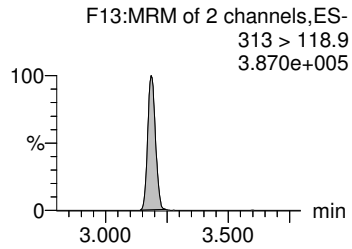
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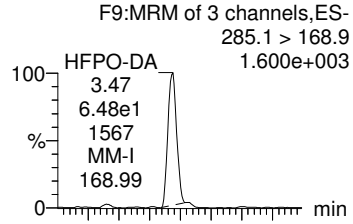


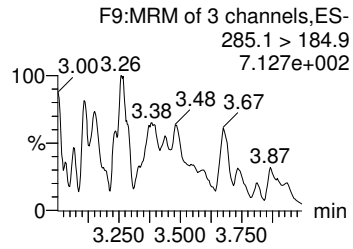
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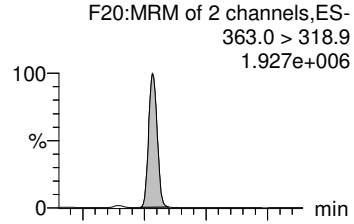


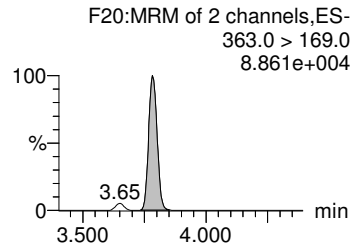
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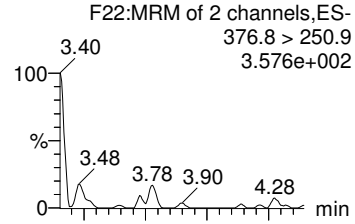


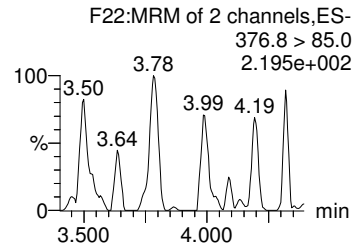
PFHpA



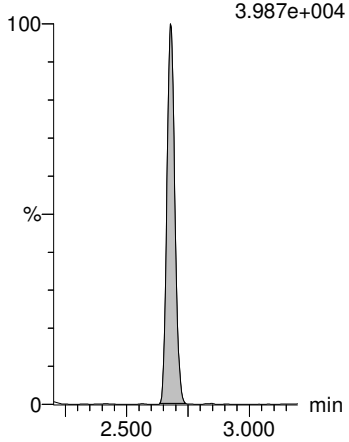


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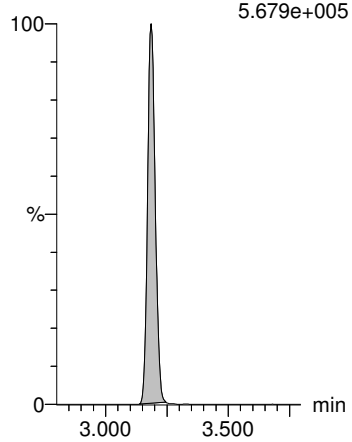




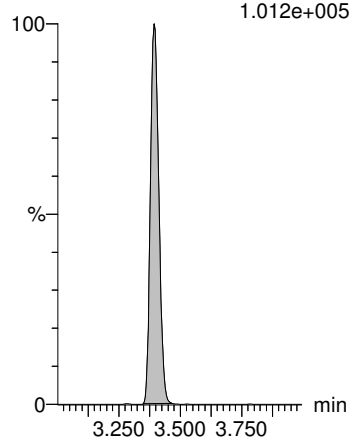
13C3-PFBS-EIS



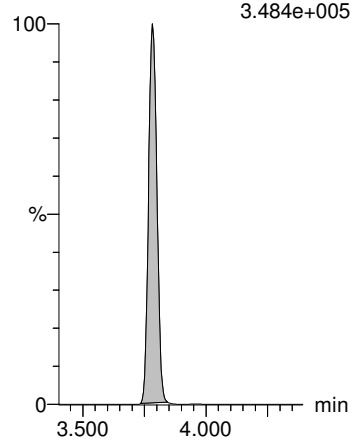
13C2-PFHxA-EIS



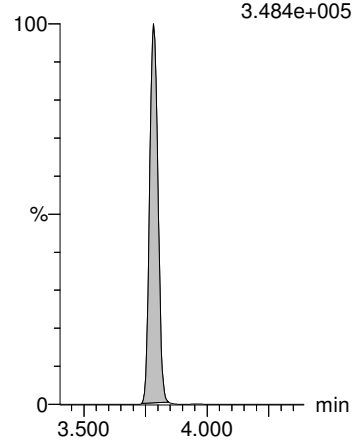
13C3-HFPO-DA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS



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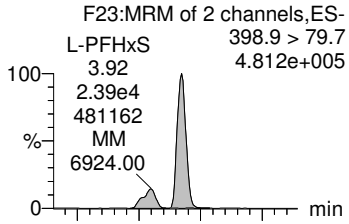
Review: AMR 2/28/2020

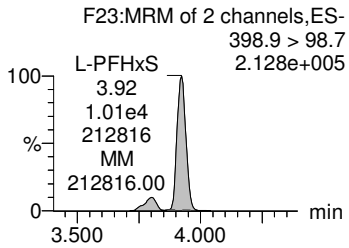
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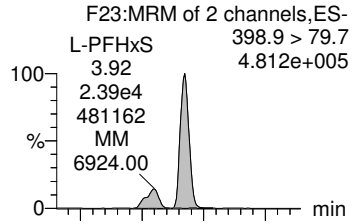
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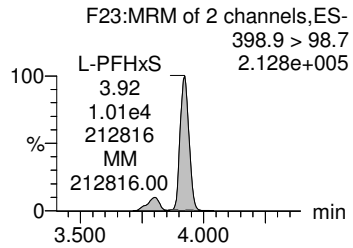
L-PFHxS



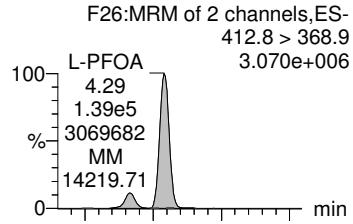


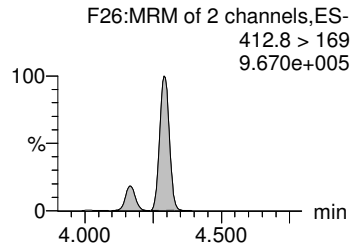
Total PFHxS



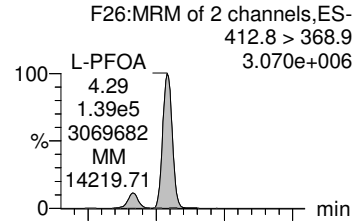


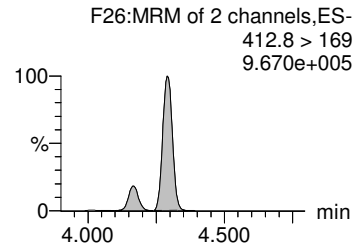
L-PFOA



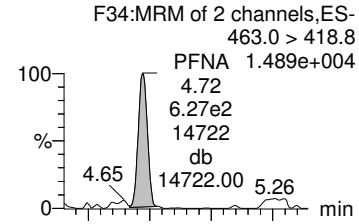


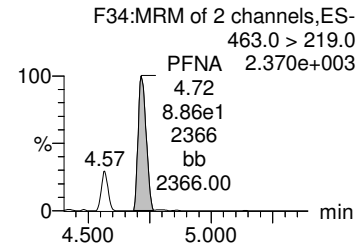
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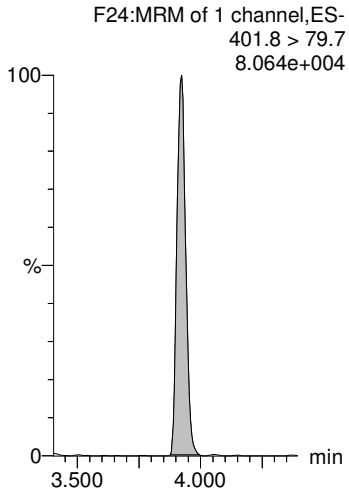


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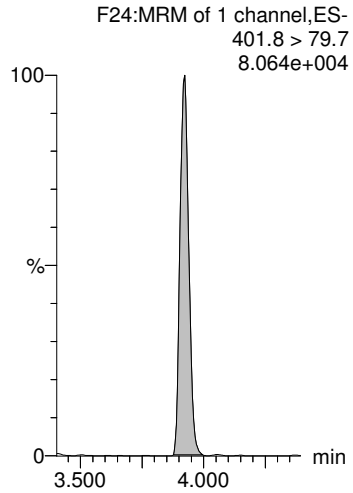




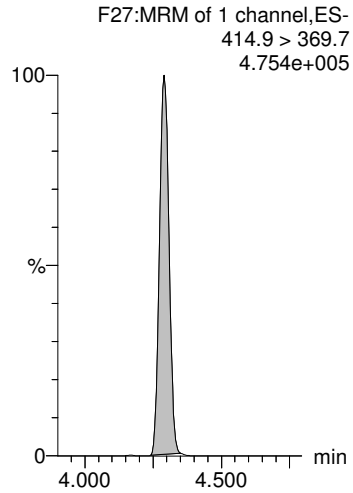
13C3-PFHxS-EIS



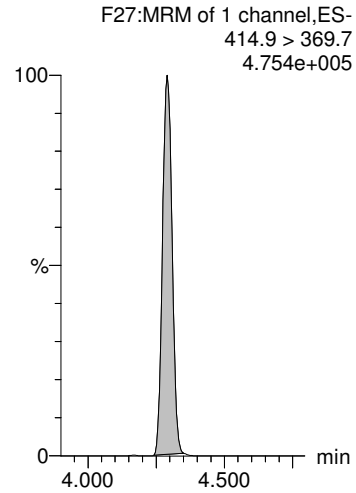
13C3-PFHxS-EIS



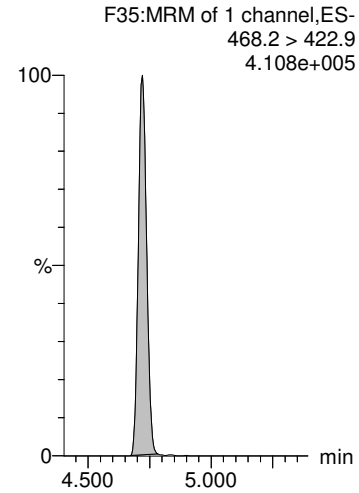
13C2-PFOA-EIS



13C2-PFOA-EIS



13C5-PFNA-EIS



 RK 2/25/2020

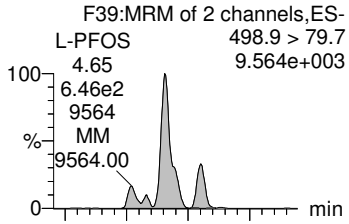
Review: AMR 2/28/2020

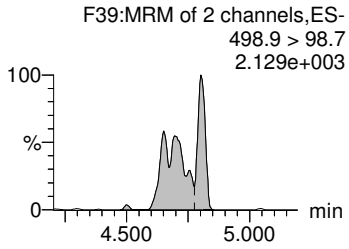
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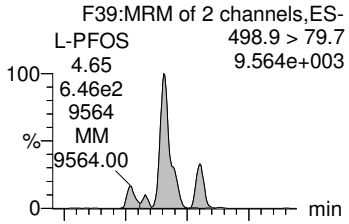
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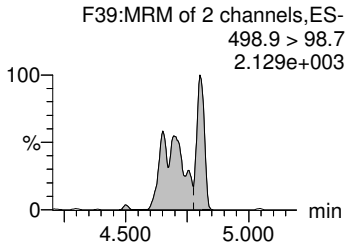
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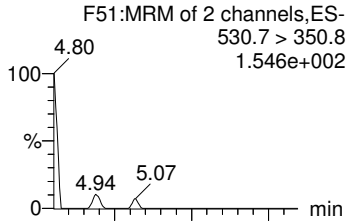


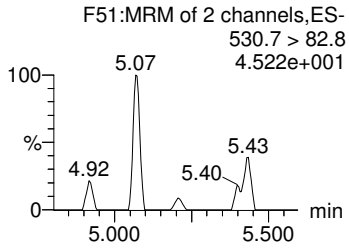
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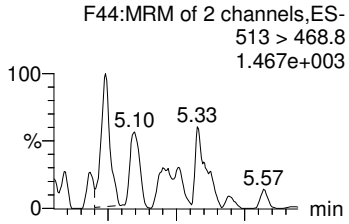


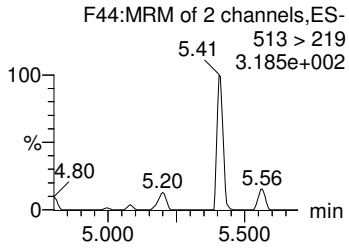
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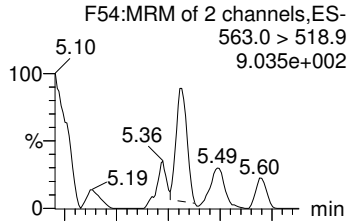


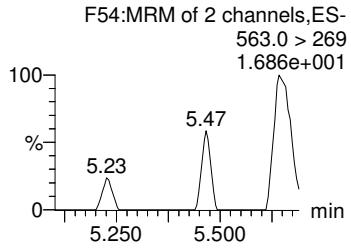
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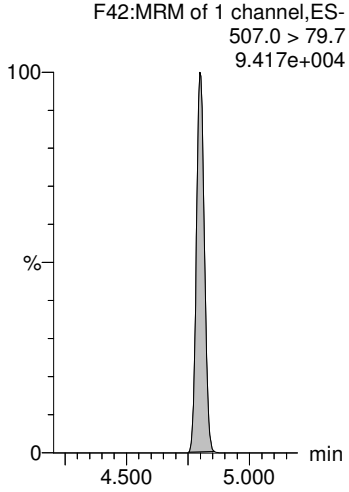


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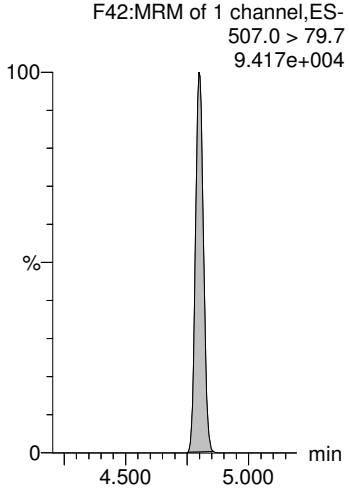




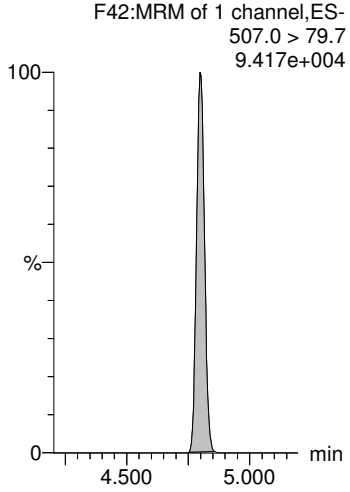
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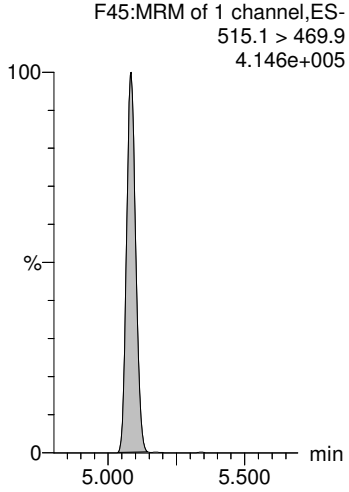
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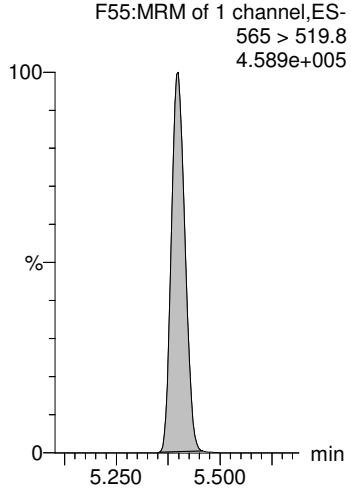
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-PFUdA-EIS



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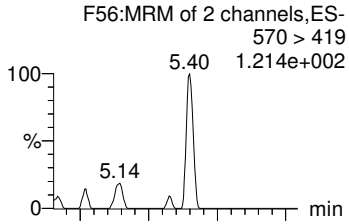
Review: AMR 2/28/2020

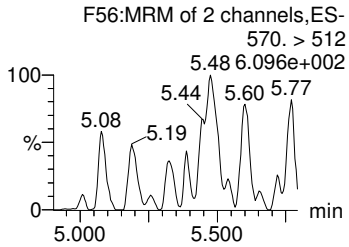
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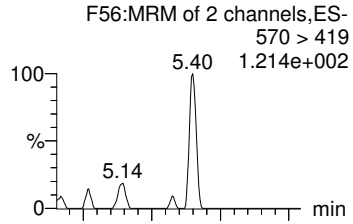
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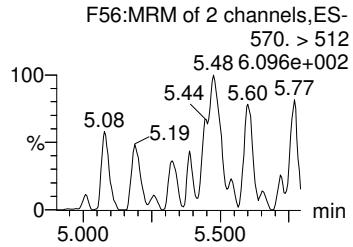
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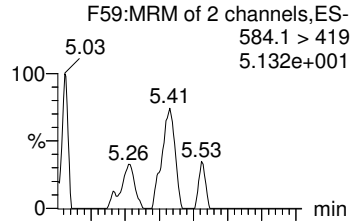


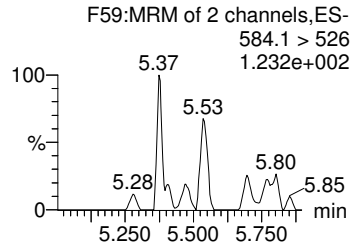
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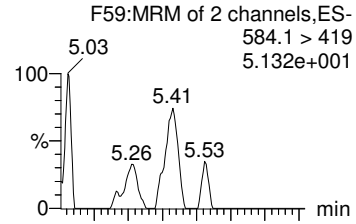


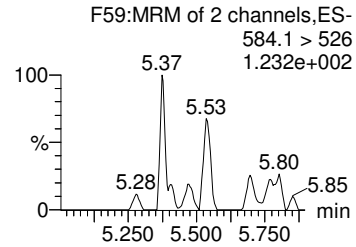
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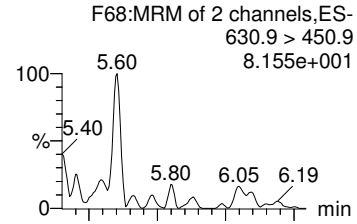


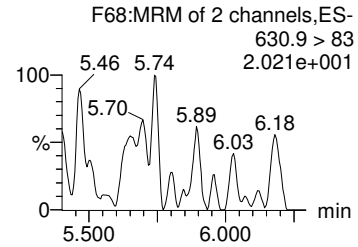
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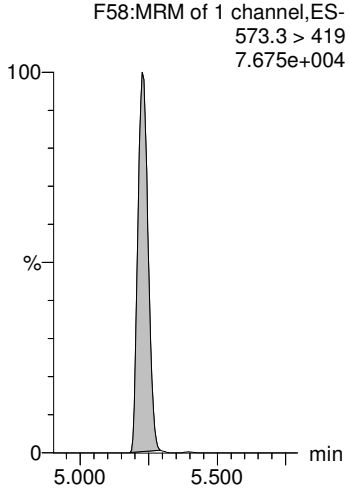


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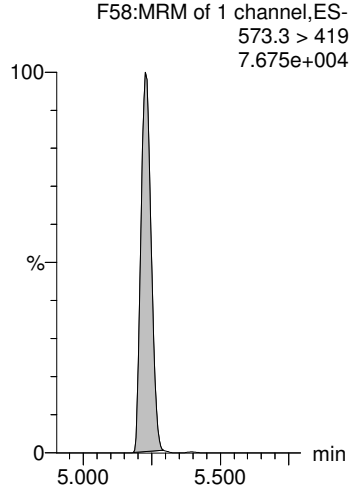




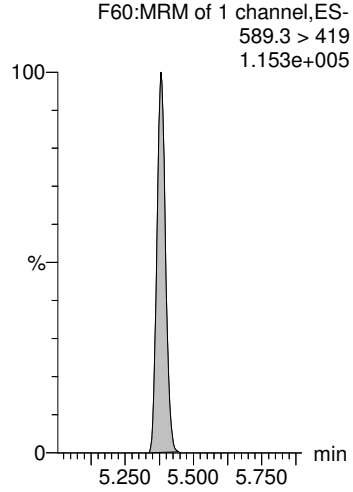
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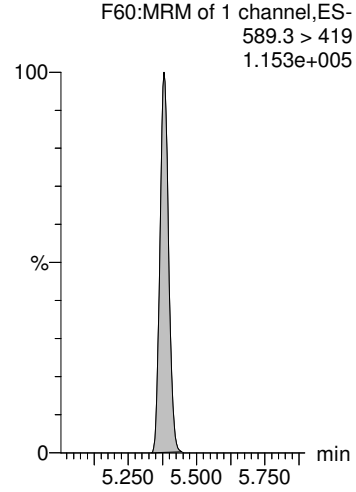
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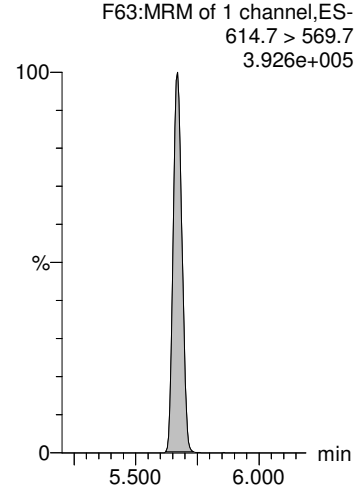
d5-N-EtFOSAA-EIS



d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS



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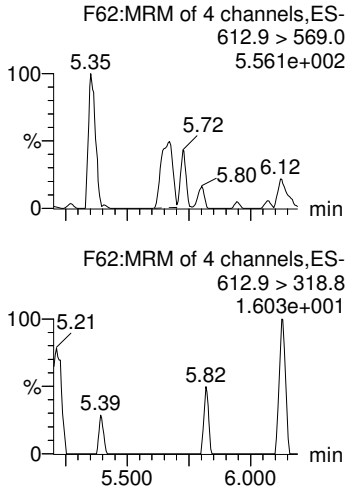
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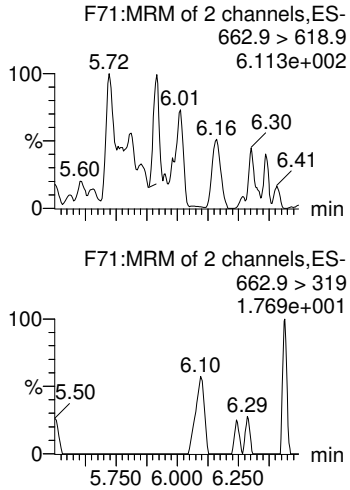
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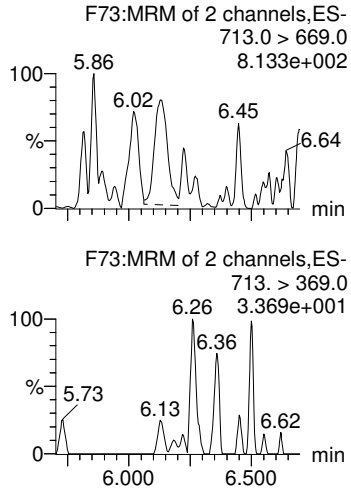
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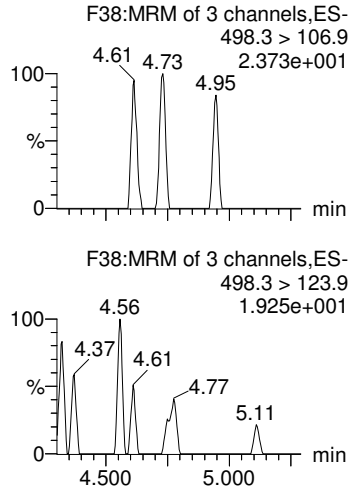
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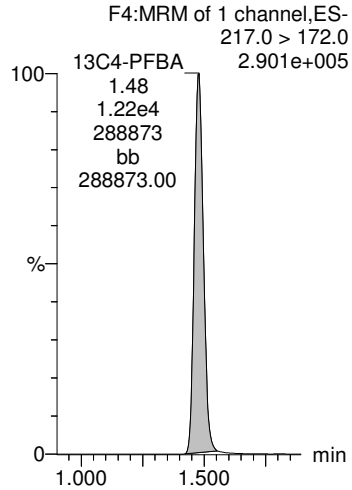
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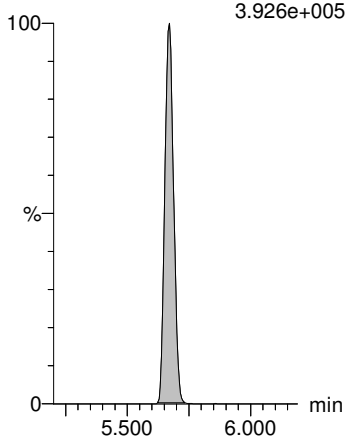
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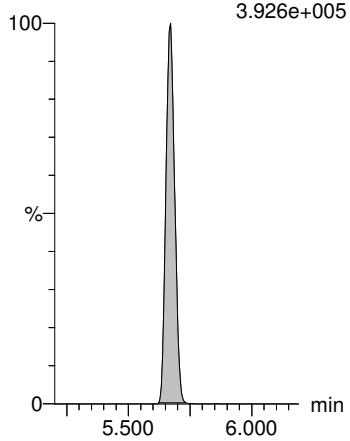
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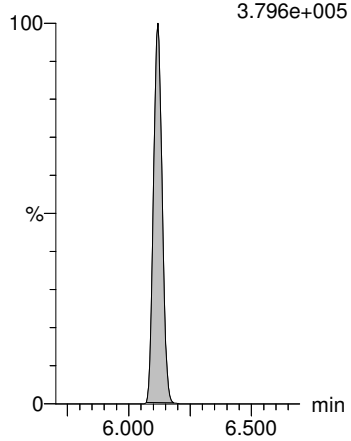
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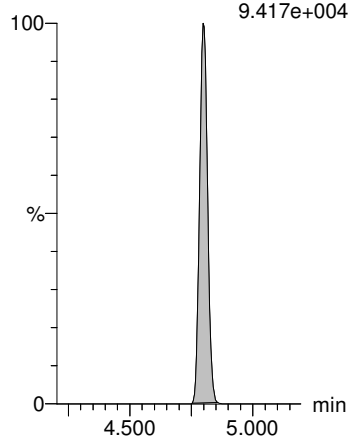
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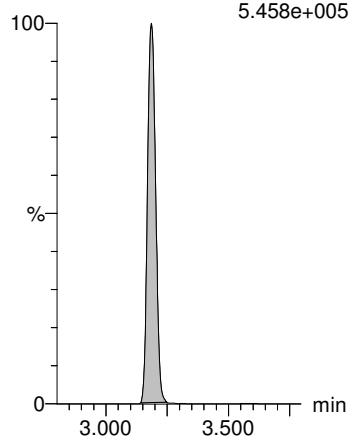
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13C8-PFOS-EIS



13C5-PFHxA



 RK 2/25/2020

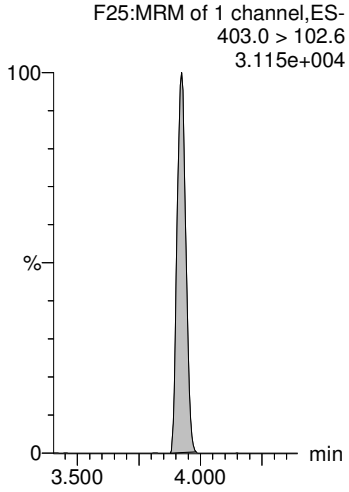
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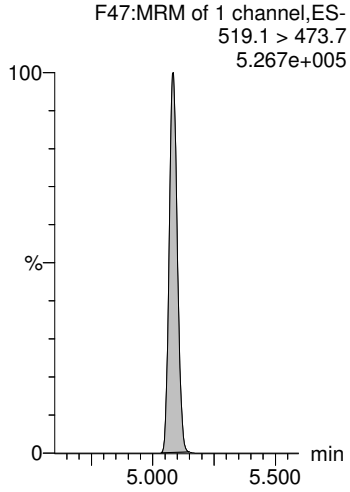
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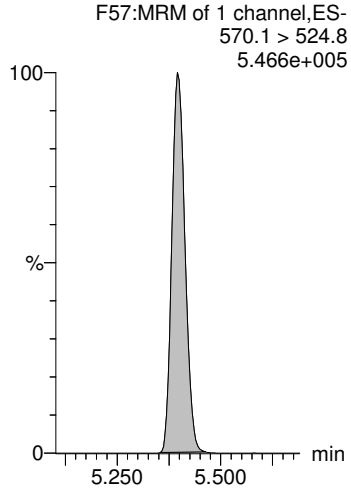
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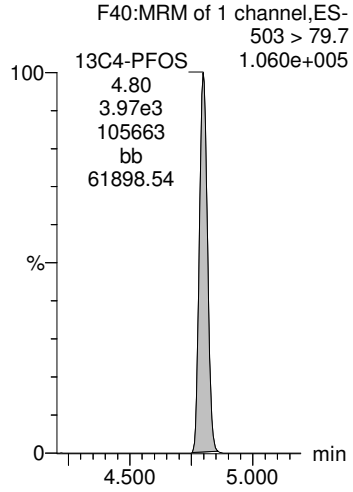
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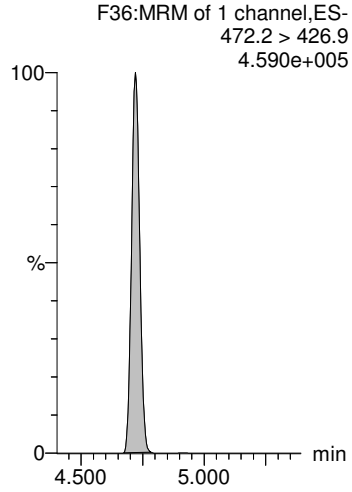
13C7-PFUdA



13C4-PFOS



13C9-PFNA



 RK 2/25/2020

Vista Analytical Laboratory L18

Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-32.qld

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	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7	6.01e3	1.27e3	0.258		2.68	2.68	59.2	100.0062		3.276	NO
2	7	PFHxA	313.0 > 269.0	2.34e5	1.90e4	0.258		3.19	3.19	154	670.4940		17.481	NO
3	9	HFPO-DA	285.1 > 168.9	2.94e3	3.55e3	0.258		3.40	3.40	10.4	38.6254		2.757	NO
4	11	PFHpA	363.0 > 318.9	7.88e4	1.14e4	0.258		3.78	3.78	86.6	272.6295		23.723	NO
5	12	ADONA	376.8 > 250.9	2.78e4	1.14e4	0.258		3.88	3.89	30.5	38.0822		3.911	NO
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.27e3		0.258	114.516	2.70	2.68	1270	42.9077	88.6		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.90e4		0.258	1636.234	3.19	3.19	19000	45.0016	93.0		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.55e3		0.258	293.118	3.43	3.40	3550	46.9554	97.0		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.14e4		0.258	1106.802	3.79	3.78	11400	39.8086	82.2		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.14e4		0.258	1106.802	3.79	3.78	11400	39.8086	82.2		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	2.35e4	2.66e3	0.258		3.92	3.92	111	400.5775		2.303	NO
13	1...	Total PFHxS	398.9 > 79.7	2.35e4	2.66e3	0.258		3.93		111	400.5775			
14	16	L-PFOA	412.8 > 368.9	1.41e5	1.64e4	0.258		4.29	4.29	107	350.4983		2.983	NO
15	1...	Total PFOA	412.8 > 368.9	1.41e5	1.64e4	0.258		4.60		107	350.4983			
16	21	PFNA	463.0 > 418.8	1.47e4	1.43e4	0.258		4.72	4.72	12.8	40.1665		7.422	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.66e3		0.258	252.668	3.92	3.92	2660	40.6982	84.1		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.66e3		0.258	252.668	3.92	3.92	2660	40.6982	84.1		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.64e4		0.258	1527.160	4.29	4.29	16400	41.6816	86.1		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.64e4		0.258	1527.160	4.29	4.29	16400	41.6816	86.1		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.43e4		0.258	1373.362	4.72	4.72	14300	40.2633	83.2		
22	-1													
23	23	L-PFOS	498.9 > 79.7	2.84e3	2.98e3	0.258		4.80	4.80	11.9	49.7995		2.505	NO
24	1...	Total PFOS	498.9 > 79.7	2.84e3	2.98e3	0.258		5.13		11.9	49.7995			
25	25	9Cl-PF30NS	530.7 > 350.8	2.55e3	2.98e3	0.258		5.01	5.01	10.7	35.6785		16.263	NO
26	26	PFDA	513 > 468.8	1.47e4	1.45e4	0.258		5.08	5.08	12.7	39.8796		10.190	NO
27	33	PFUdA	563.0 > 518.9	1.12e4	1.47e4	0.258		5.40	5.40	9.48	34.9904		20.235	NO
28	71	13C8-PFOS-EIS	507.0 > 79.7	2.98e3		0.258	295.805	4.80	4.80	2980	39.0611	80.7		
29	71	13C8-PFOS-EIS	507.0 > 79.7	2.98e3		0.258	295.805	4.80	4.80	2980	39.0611	80.7		
30	71	13C8-PFOS-EIS	507.0 > 79.7	2.98e3		0.258	295.805	4.80	4.80	2980	39.0611	80.7		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.45e4		0.258	1356.410	5.08	5.08	14500	41.4116	85.5		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.47e4		0.258	1416.449	5.40	5.40	14700	40.2601	83.2		
33	-1													
34	29	L-MeFOSAA	570 > 419	3.87e3	2.76e3	0.258		5.23	5.23	17.5	35.6919		1.815	NO
35	1...	Total N-MeFOSAA	570. > 419	3.87e3	2.76e3	0.258		5.19		17.5	35.6919			
36	31	L-EtFOSAA	584.1 > 419	3.40e3	3.45e3	0.258		5.38	5.38	12.3	37.9162		1.152	NO

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Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-32.qld

Last Altered: Monday, February 24, 2020 08:39:17 Pacific Standard Time
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Name: 200220P1-32, Date: 20-Feb-2020, Time: 22:49:40, ID: B0B0118-MS1 Matrix Spike 0.25822, Description: Matrix Spike

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	3.40e3	3.45e3	0.258		5.37		12.3	37.9162			
38	35	11Cl-PF30UdS	630.9 > 450.9	5.34e3	1.28e4	0.258		5.60	5.60	5.20	44.2974		23.998	NO
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.76e3		0.258	262.877	5.22	5.23	2760	40.6198	83.9		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.76e3		0.258	262.877	5.22	5.23	2760	40.6198	83.9		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.45e3		0.258	360.983	5.37	5.38	3450	36.9607	76.4		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.45e3		0.258	360.983	5.37	5.38	3450	36.9607	76.4		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.28e4		0.258	1573.093	5.67	5.67	12800	31.5899	65.3		
44	-1													
45	37	PFDoA	612.9 > 569.0	1.09e4	1.28e4	0.258		5.67	5.67	10.7	42.8556		10.759	NO
46	39	PFTrDA	662.9 > 618.9	9.99e3	1.28e4	0.258		5.93	5.91	9.73	38.0024		54.023	NO
47	41	PFTeDA	713.0 > 669.0	9.01e3	1.23e4	0.258		6.12	6.12	9.15	33.7515		15.079	NO
48	1...	TDCA	498.3>106.9			0.258		4.59						NO
49	99	13C4-PFBA	217.0 > 172.0	1.13e4	1.13e4	0.258	1.000	1.48	1.48	12.5	48.4083	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.28e4		0.258	1573.093	5.67	5.67	12800	31.5899	65.3		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.28e4		0.258	1573.093	5.67	5.67	12800	31.5899	65.3		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.23e4		0.258	1440.513	6.11	6.12	12300	33.0917	68.4		
53	71	13C8-PFOS-EIS	507.0 > 79.7	2.98e3		0.258	295.805	4.80	4.80	2980	39.0611	80.7		
54	1...	13C5-PFHxA	318.0 > 272.9	1.91e4	1.91e4	0.258	1.000	3.18	3.19	12.5	48.4083	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.23e3	1.23e3	0.258	1.000	3.92	3.92	12.5	48.4083	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.78e4	1.78e4	0.258	1.000	5.08	5.08	12.5	48.4083	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.90e4	1.90e4	0.258	1.000	5.40	5.40	12.5	48.4083	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.53e3	3.53e3	0.258	1.000	4.79	4.80	12.5	48.4083	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.60e4	1.60e4	0.258	1.000	4.72	4.72	12.5	48.4083	100.0		

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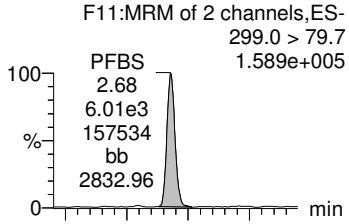
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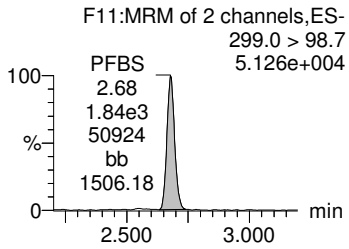
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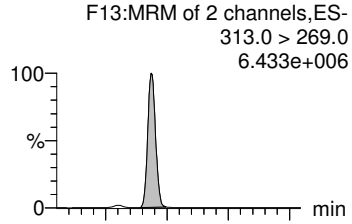
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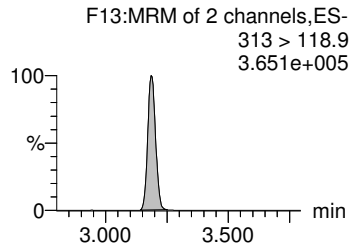
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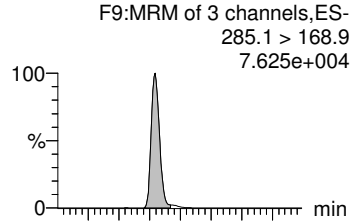


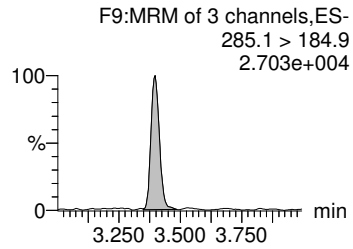
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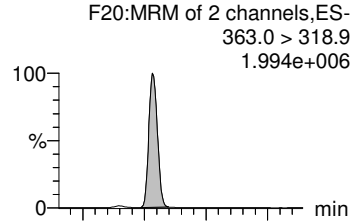


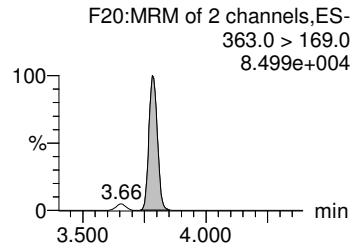
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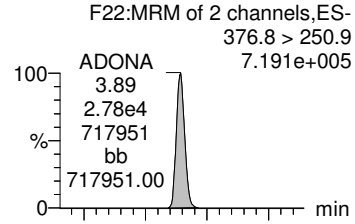


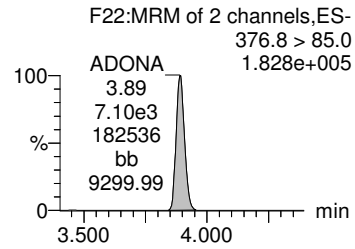
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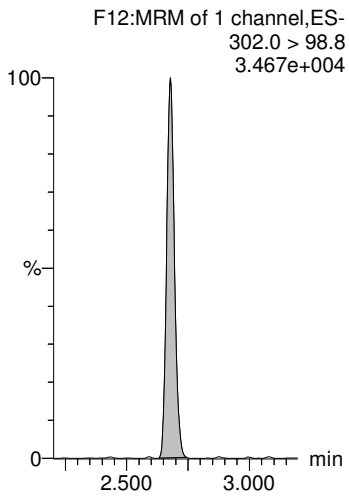


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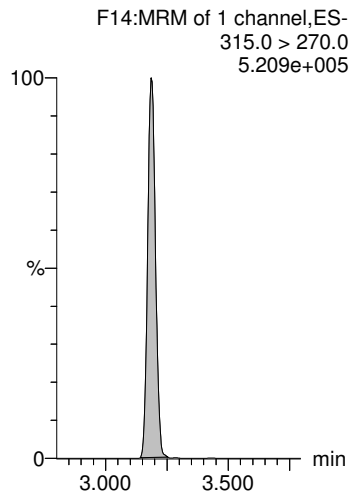




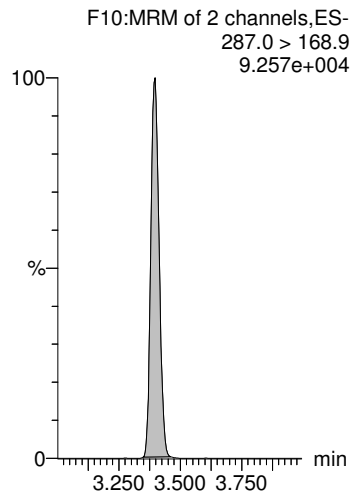
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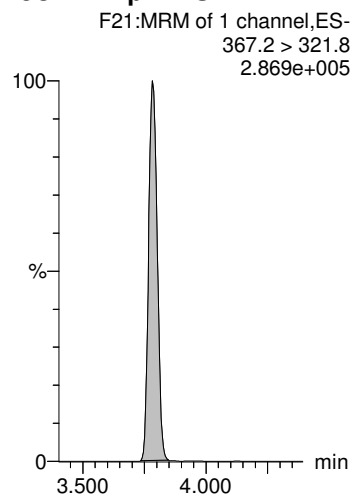
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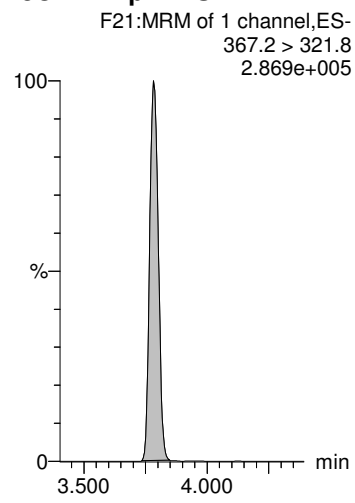
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13C4-PFHpA-EIS



13C4-PFHpA-EIS



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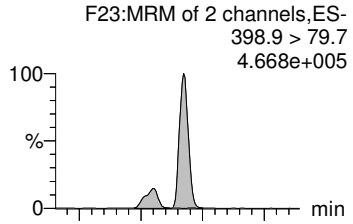
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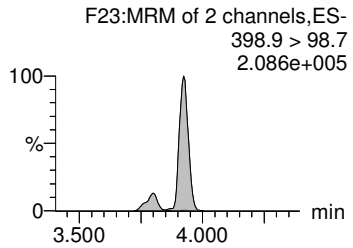
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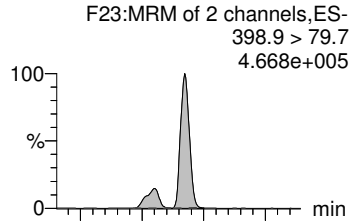
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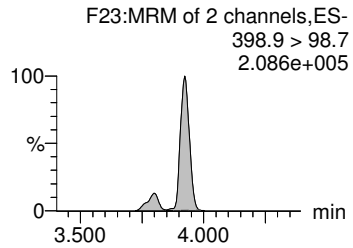
L-PFHxS



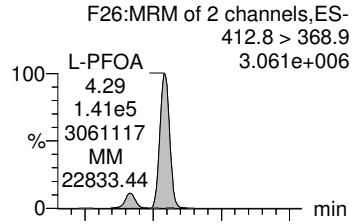


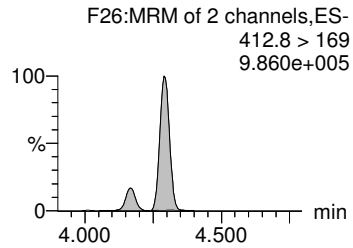
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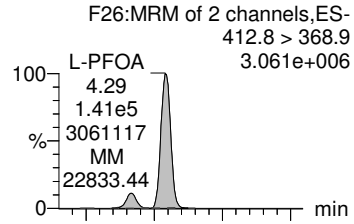


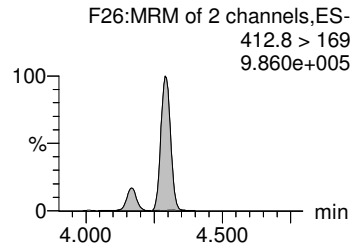
L-PFOA



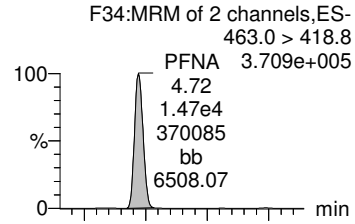


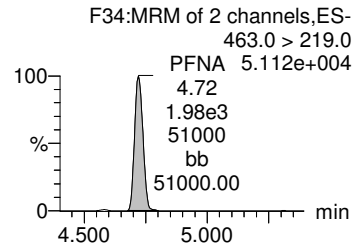
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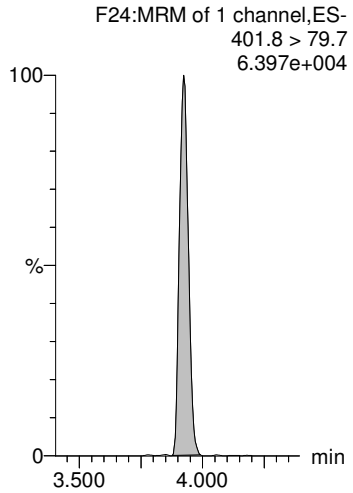


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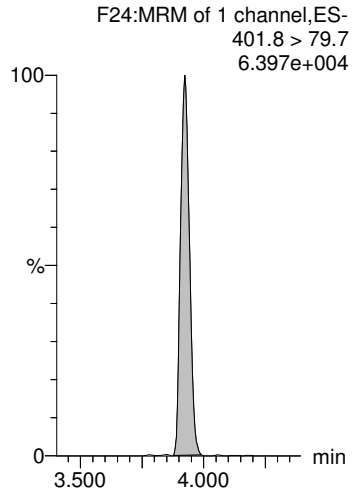




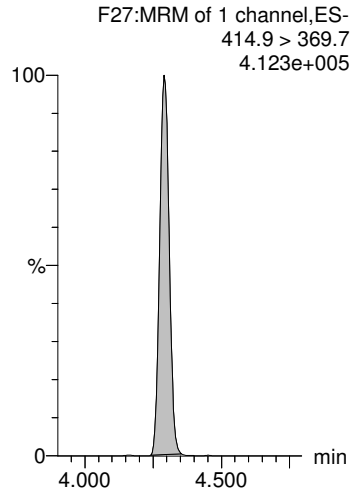
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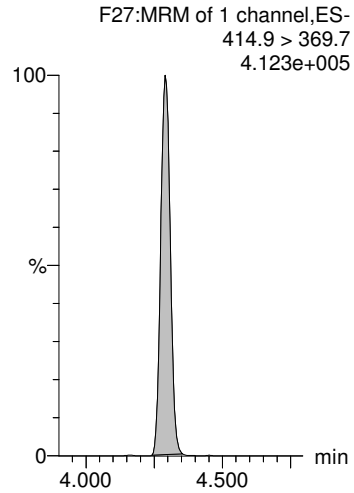
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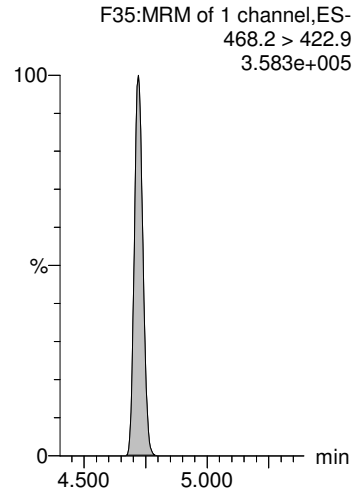
13C2-PFOA-EIS



13C2-PFOA-EIS



13C5-PFNA-EIS



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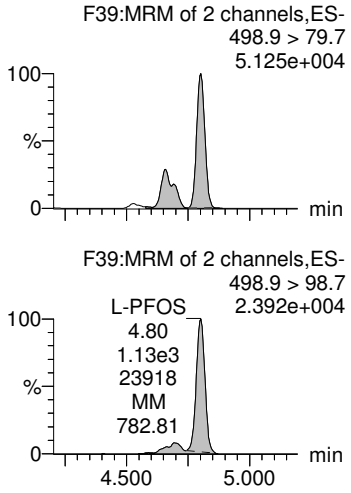
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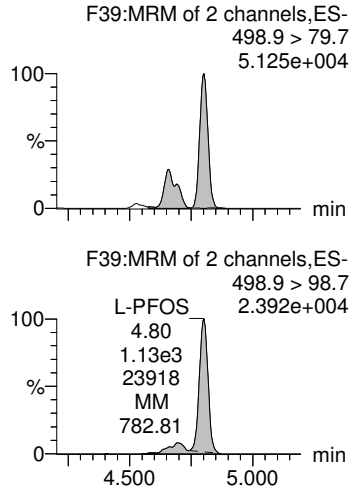
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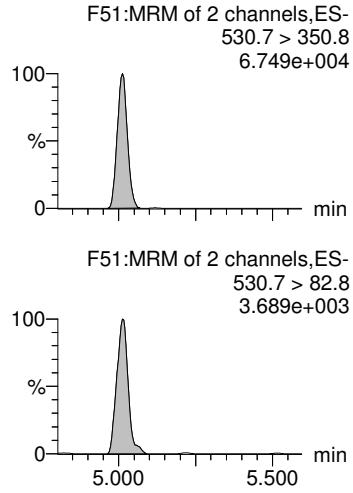
L-PFOS



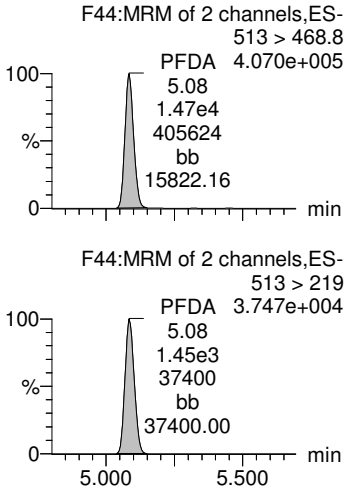
Total PFOS



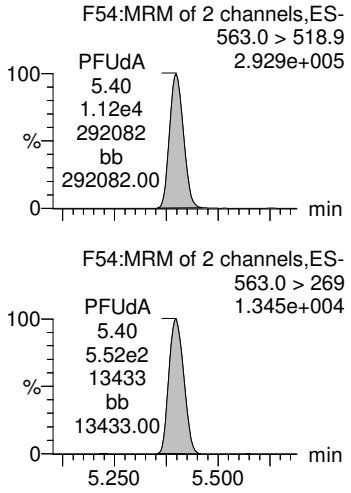
9Cl-PF30NS



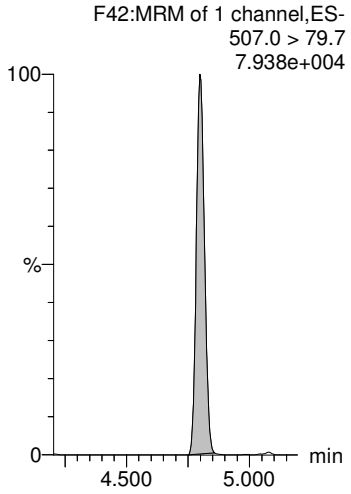
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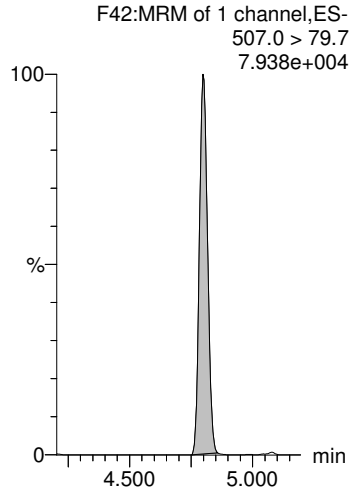
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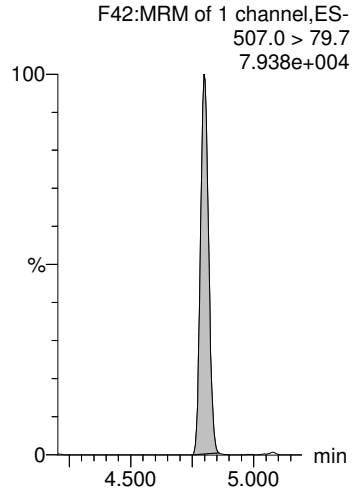
13C8-PFOS-EIS



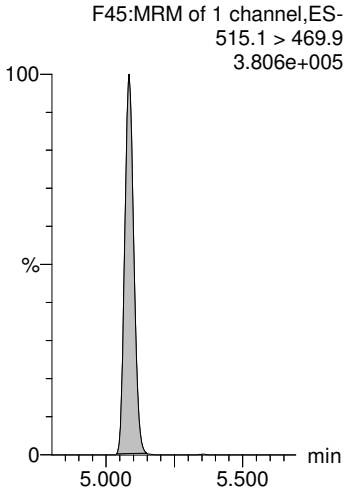
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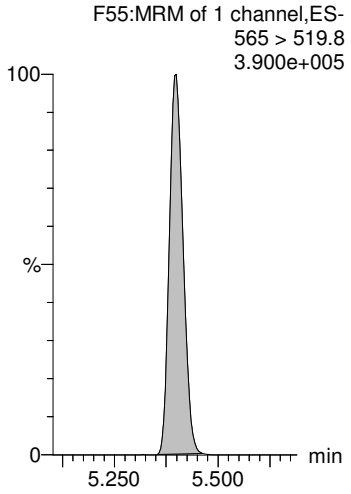
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-PFUdA-EIS



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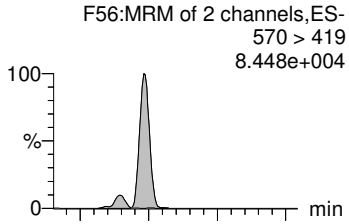
Review: AMR 2/28/2020

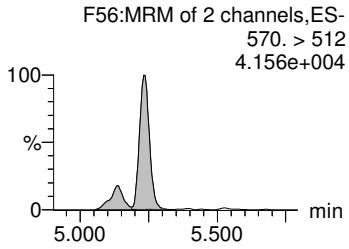
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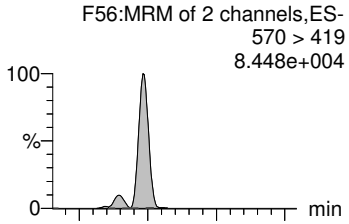
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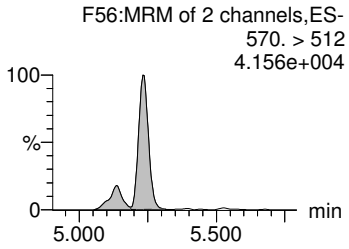
L-MeFOSAA



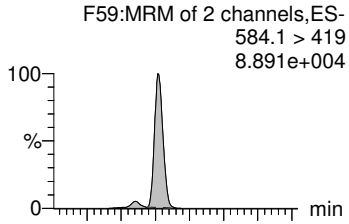


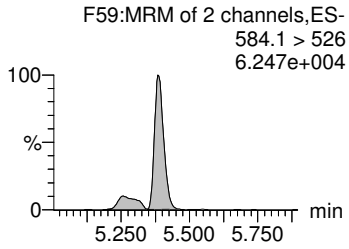
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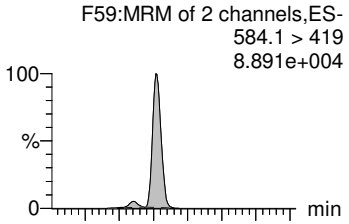


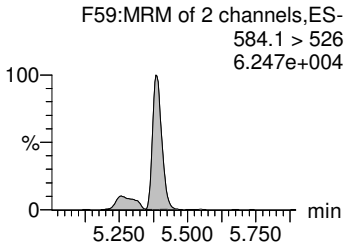
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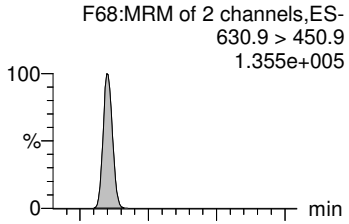


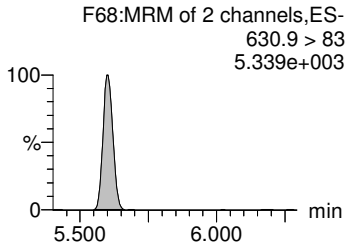
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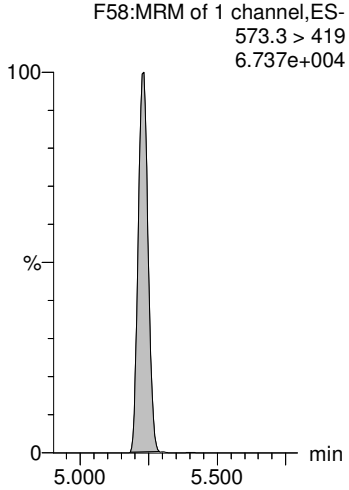


11Cl-PF30UdS

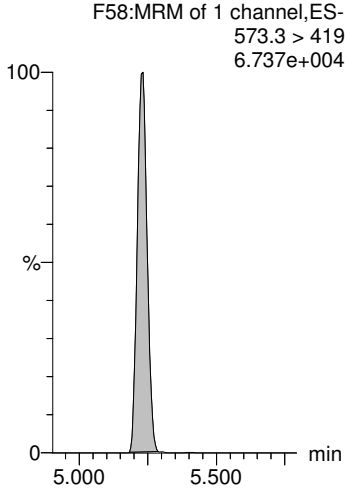




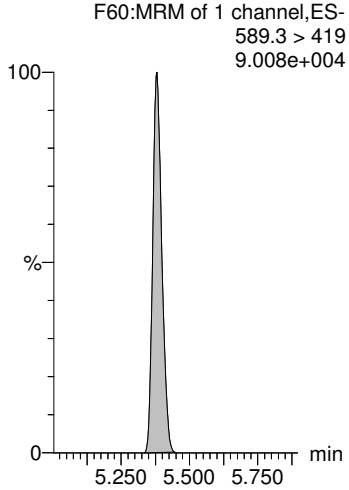
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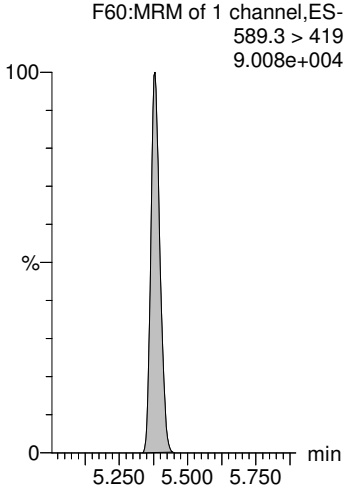
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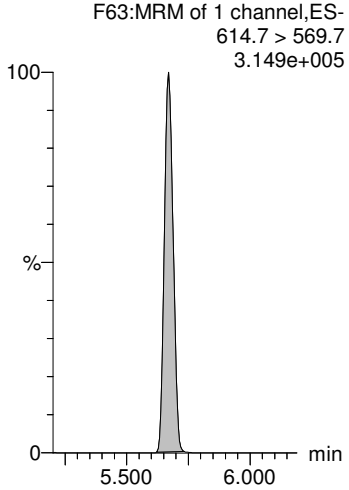
d5-N-EtFOSAA-EIS



d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS



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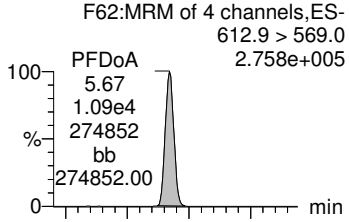
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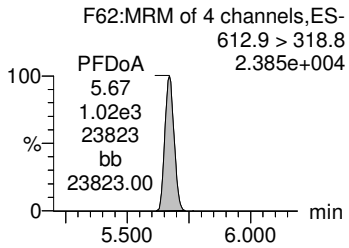
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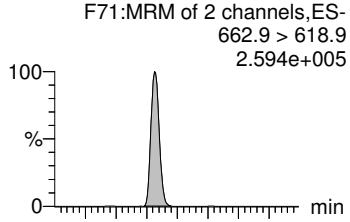
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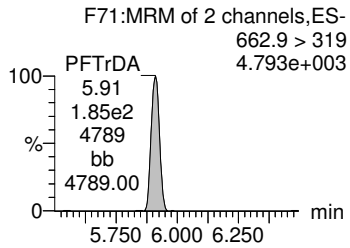
PFDoA



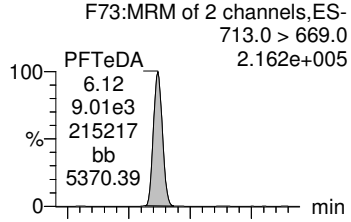


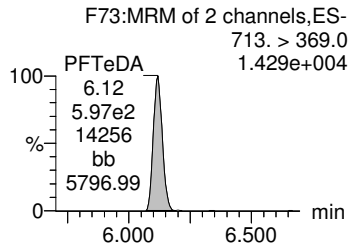
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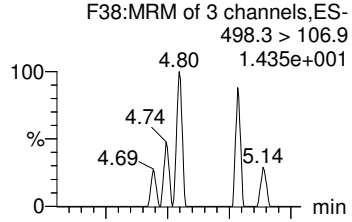


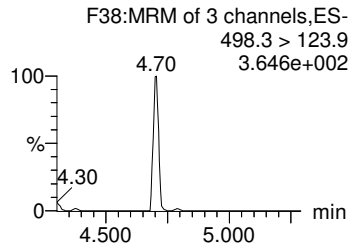
PFTeDA



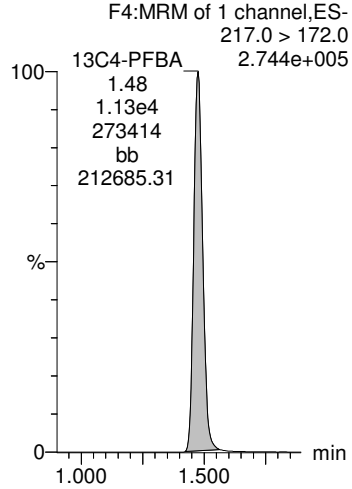


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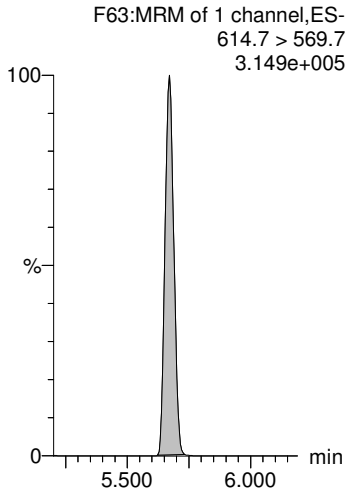




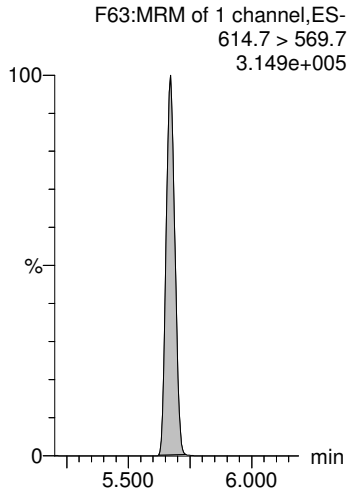
13C4-PFBA



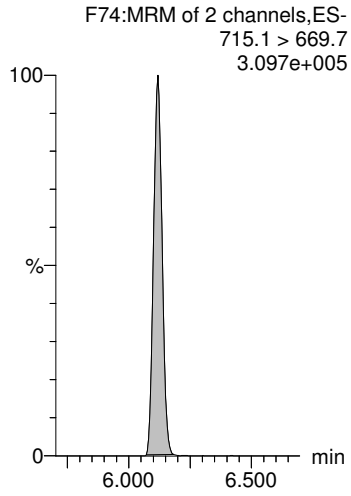
13C2-PFDoA-EIS



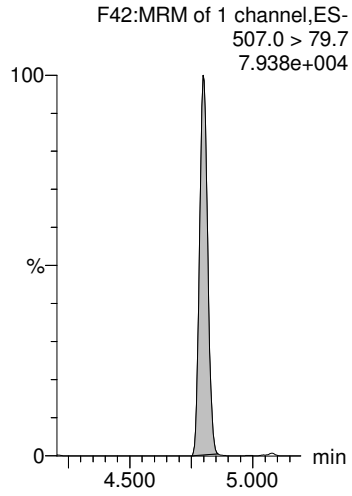
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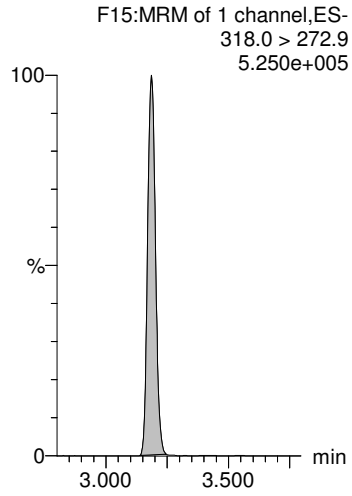
13C2-PFTeDA-EIS



13C8-PFOS-EIS



13C5-PFHxA



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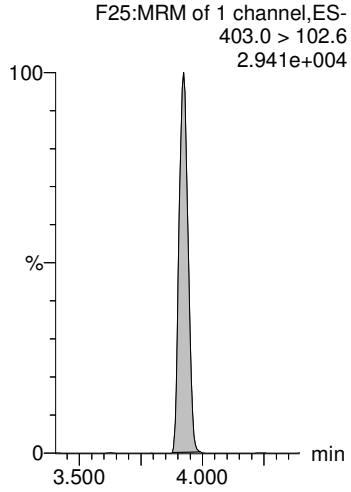
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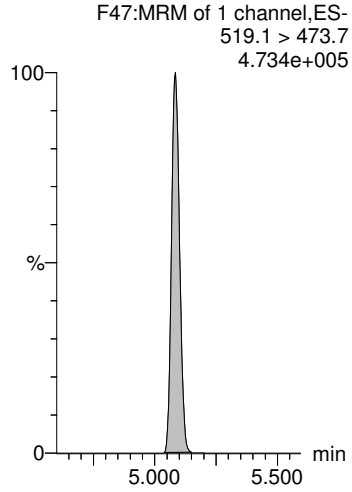
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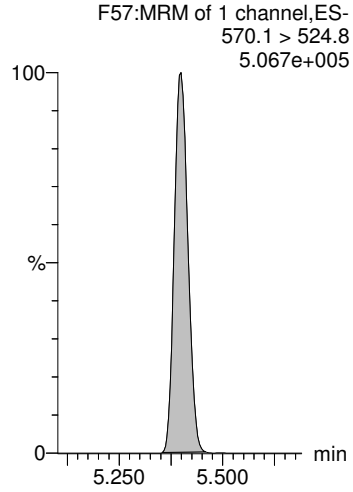
18O2-PFHxS



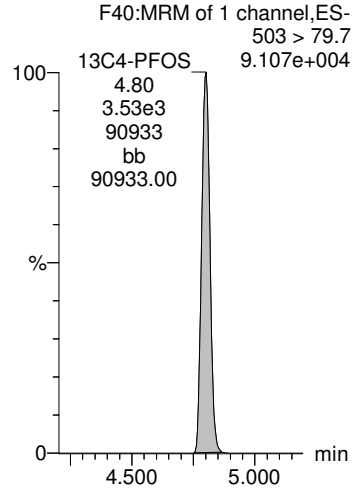
13C6-PFDA



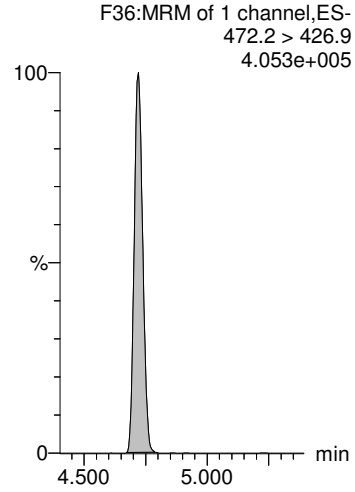
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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Review: AMR 2/28/2020

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Name: 200220P1-33, Date: 20-Feb-2020, Time: 23:00:11, ID: B0B0118-MSD1 Matrix Spike Dup 0.2531, Description: Matrix Spike Dup

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7	6.18e3	1.35e3	0.253		2.68	2.68	57.2	98.5704		3.034	NO
2	7	PFHxA	313.0 > 269.0	2.50e5	2.13e4	0.253		3.19	3.19	147	655.0627		16.998	NO
3	9	HFPO-DA	285.1 > 168.9	3.13e3	3.94e3	0.253		3.39	3.39	9.94	37.8184		2.667	NO
4	11	PFHpA	363.0 > 318.9	8.66e4	1.35e4	0.253		3.78	3.78	80.1	257.2207		23.412	NO
5	12	ADONA	376.8 > 250.9	3.02e4	1.35e4	0.253		3.88	3.89	28.0	35.5828		4.052	NO
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.35e3		0.253	114.516	2.70	2.68	1350	46.5808	94.3		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	2.13e4		0.253	1636.234	3.19	3.19	21300	51.3948	104.1		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.94e3		0.253	293.118	3.43	3.39	3940	53.0457	107.4		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.35e4		0.253	1106.802	3.79	3.78	13500	48.2074	97.6		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.35e4		0.253	1106.802	3.79	3.78	13500	48.2074	97.6		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	2.47e4	2.96e3	0.253		3.92	3.92	104	385.3907		2.404	NO
13	1...	Total PFHxS	398.9 > 79.7	2.47e4	2.96e3	0.253		3.93		104	385.3907			
14	16	L-PFOA	412.8 > 368.9	1.55e5	1.86e4	0.253		4.29	4.29	104	348.7207		3.026	NO
15	1...	Total PFOA	412.8 > 368.9	1.55e5	1.86e4	0.253		4.60		104	348.7207			
16	21	PFNA	463.0 > 418.8	1.48e4	1.55e4	0.253		4.72	4.72	11.9	37.9319		8.463	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.96e3		0.253	252.668	3.92	3.92	2960	46.3221	93.8		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.96e3		0.253	252.668	3.92	3.92	2960	46.3221	93.8		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.86e4		0.253	1527.160	4.29	4.29	18600	48.1509	97.5		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.86e4		0.253	1527.160	4.29	4.29	18600	48.1509	97.5		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.55e4		0.253	1373.362	4.72	4.72	15500	44.7167	90.5		
22	-1													
23	23	L-PFOS	498.9 > 79.7	2.80e3	3.34e3	0.253		4.80	4.80	10.5	44.7438		2.330	NO
24	1...	Total PFOS	498.9 > 79.7	2.80e3	3.34e3	0.253		5.13		10.5	44.7438			
25	25	9Cl-PF30NS	530.7 > 350.8	2.73e3	3.34e3	0.253		5.01	5.01	10.2	34.8827		13.899	NO
26	26	PFDA	513 > 468.8	1.55e4	1.57e4	0.253		5.08	5.08	12.3	39.3865		9.791	NO
27	33	PFUdA	563.0 > 518.9	1.22e4	1.63e4	0.253		5.40	5.40	9.34	35.1961		21.849	NO
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.34e3		0.253	295.805	4.80	4.80	3340	44.5698	90.2		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.34e3		0.253	295.805	4.80	4.80	3340	44.5698	90.2		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.34e3		0.253	295.805	4.80	4.80	3340	44.5698	90.2		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.57e4		0.253	1356.410	5.08	5.08	15700	45.8130	92.8		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.63e4		0.253	1416.449	5.40	5.40	16300	45.5654	92.3		
33	-1													
34	29	L-MeFOSAA	570 > 419	4.23e3	3.15e3	0.253		5.23	5.23	16.8	34.9123		1.975	NO
35	1...	Total N-MeFOSAA	570. > 419	4.23e3	3.15e3	0.253		5.19		16.8	34.9123			
36	31	L-EtFOSAA	584.1 > 419	3.81e3	4.08e3	0.253		5.38	5.38	11.7	36.6299		1.207	NO

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Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-33.qld

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Name: 200220P1-33, Date: 20-Feb-2020, Time: 23:00:11, ID: B0B0118-MSD1 Matrix Spike Dup 0.2531, Description: Matrix Spike Dup

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	3.81e3	4.08e3	0.253		5.37		11.7	36.6299			
38	35	11Cl-PF30UdS	630.9 > 450.9	5.37e3	1.40e4	0.253		5.60	5.60	4.79	41.6005		20.701	NO
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.15e3		0.253	262.877	5.22	5.23	3150	47.2814	95.7		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.15e3		0.253	262.877	5.22	5.23	3150	47.2814	95.7		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	4.08e3		0.253	360.983	5.37	5.38	4080	44.6083	90.3		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	4.08e3		0.253	360.983	5.37	5.38	4080	44.6083	90.3		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.40e4		0.253	1573.093	5.67	5.67	14000	35.1927	71.3		
44	-1													
45	37	PFDoA	612.9 > 569.0	1.12e4	1.40e4	0.253		5.67	5.67	10.0	41.0088		10.071	NO
46	39	PFTrDA	662.9 > 618.9	1.10e4	1.40e4	0.253		5.93	5.91	9.83	39.1811		70.460	NO
47	41	PFTeDA	713.0 > 669.0	1.21e4	1.47e4	0.253		6.12	6.12	10.3	38.9227		15.986	NO
48	1...	TDCA	498.3>106.9			0.253		4.59						NO
49	99	13C4-PFBA	217.0 > 172.0	1.22e4	1.22e4	0.253	1.000	1.48	1.48	12.5	49.3876	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.40e4		0.253	1573.093	5.67	5.67	14000	35.1927	71.3		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.40e4		0.253	1573.093	5.67	5.67	14000	35.1927	71.3		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.47e4		0.253	1440.513	6.11	6.12	14700	40.2974	81.6		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.34e3		0.253	295.805	4.80	4.80	3340	44.5698	90.2		
54	1...	13C5-PFHxA	318.0 > 272.9	2.03e4	2.03e4	0.253	1.000	3.18	3.19	12.5	49.3876	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.32e3	1.32e3	0.253	1.000	3.92	3.92	12.5	49.3876	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.91e4	1.91e4	0.253	1.000	5.08	5.08	12.5	49.3876	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.84e4	1.84e4	0.253	1.000	5.40	5.40	12.5	49.3876	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.57e3	3.57e3	0.253	1.000	4.79	4.80	12.5	49.3876	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.68e4	1.68e4	0.253	1.000	4.72	4.72	12.5	49.3876	100.0		

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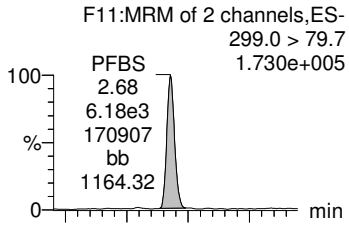
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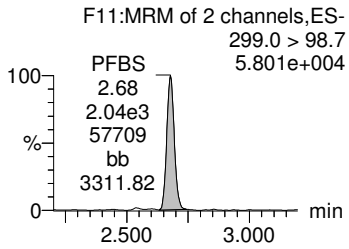
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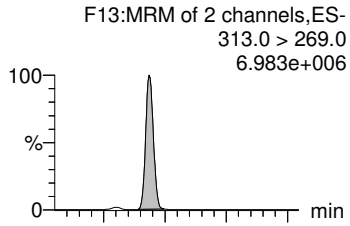
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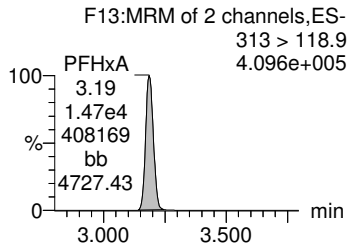
PFBS



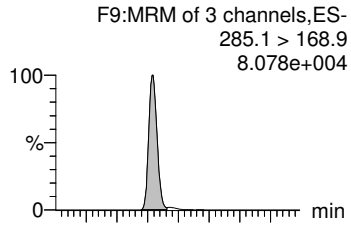


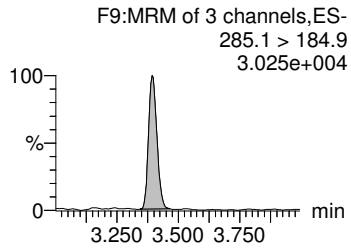
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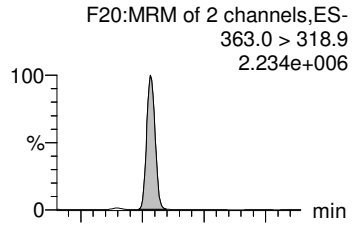


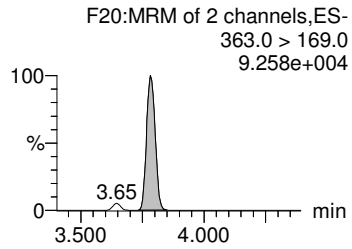
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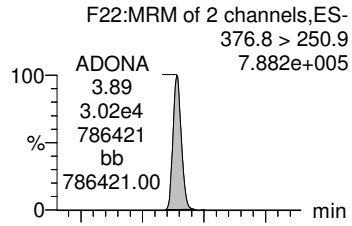


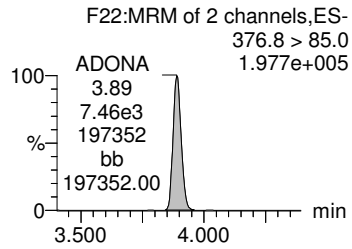
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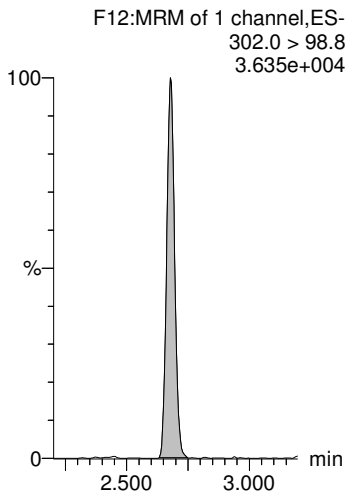


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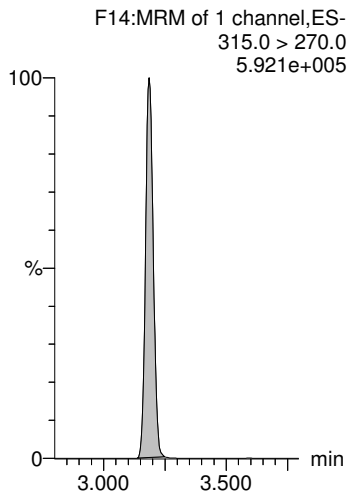




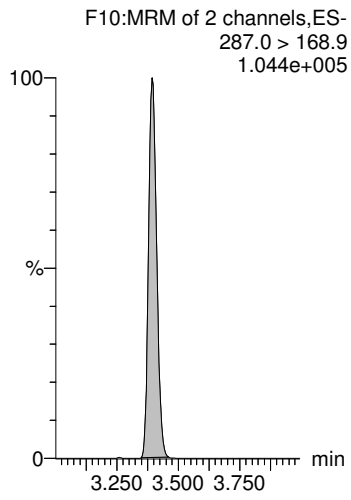
13C3-PFBS-EIS



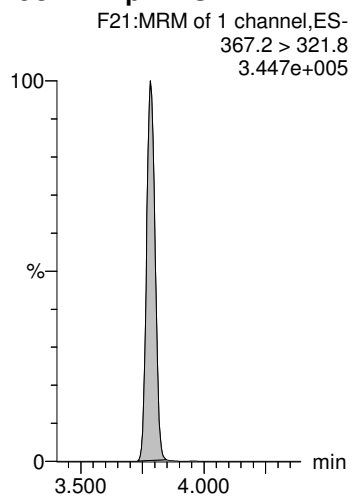
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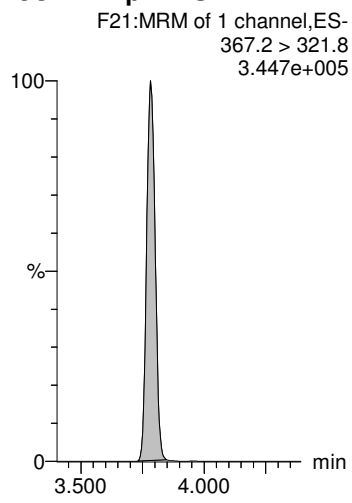
13C3-HFPO-DA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS



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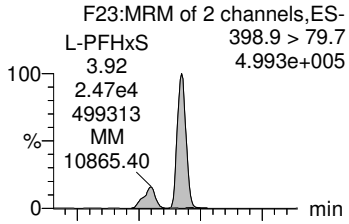
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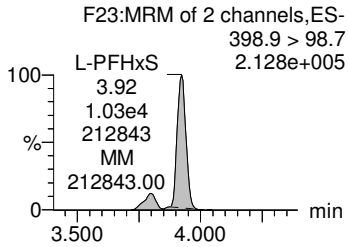
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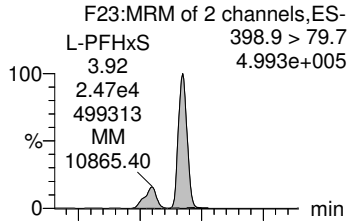
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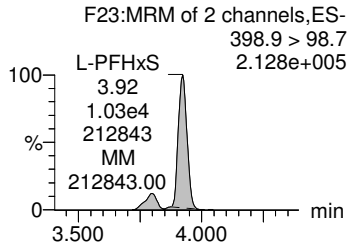
L-PFHxS



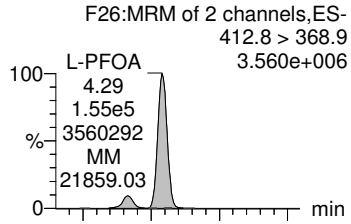


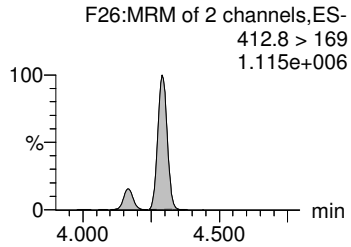
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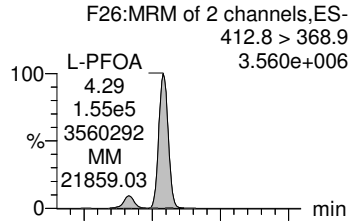


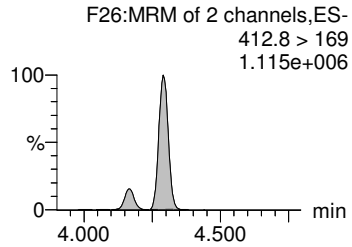
L-PFOA



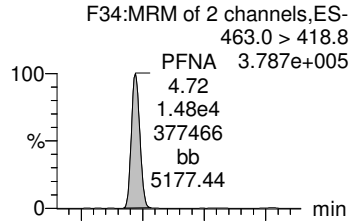


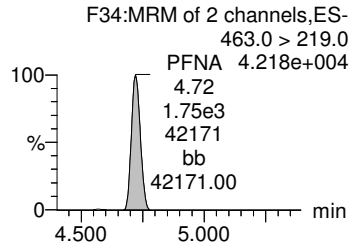
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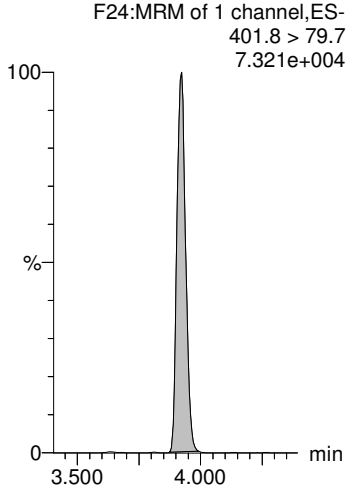


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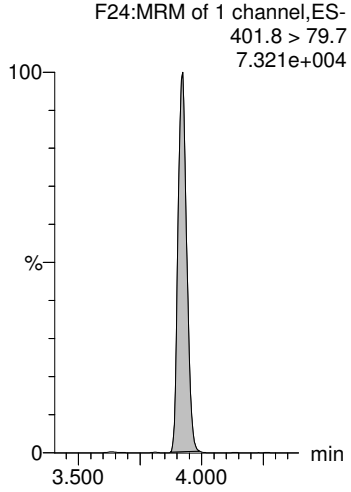




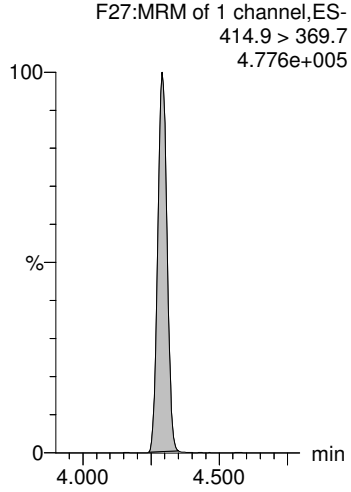
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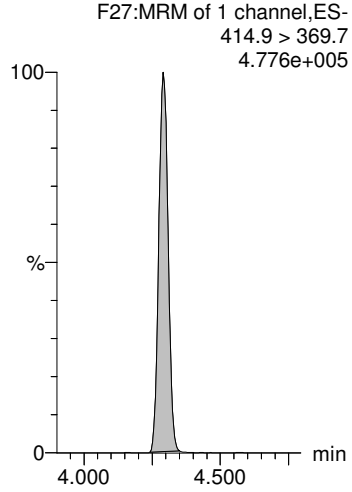
13C3-PFHxS-EIS



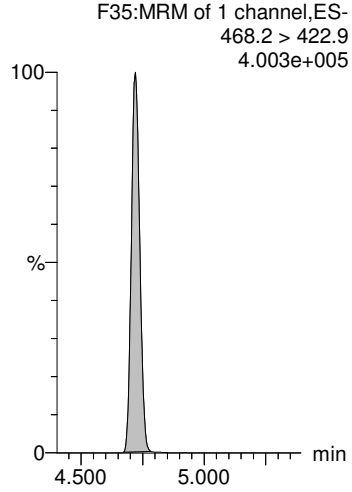
13C2-PFOA-EIS



13C2-PFOA-EIS



13C5-PFNA-EIS



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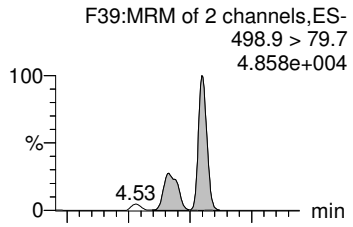
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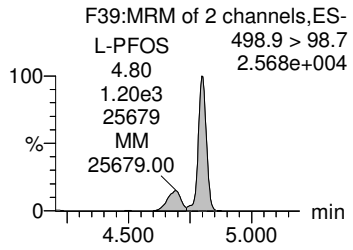
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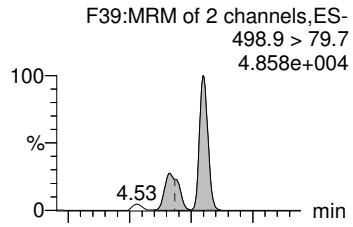
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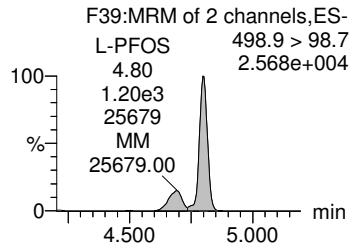
L-PFOS



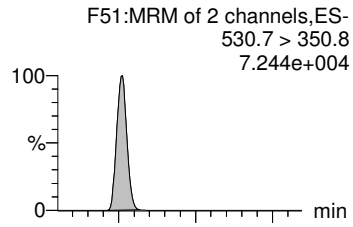


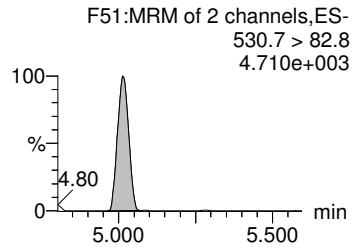
Total PFOS



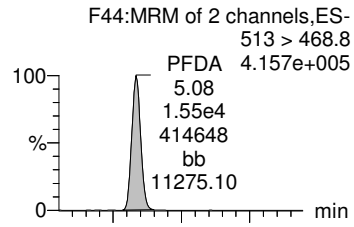


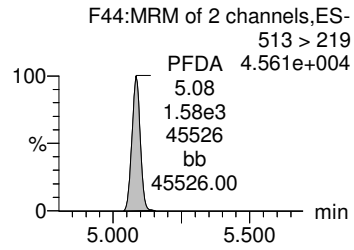
9Cl-PF30NS



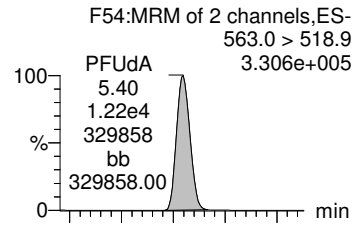


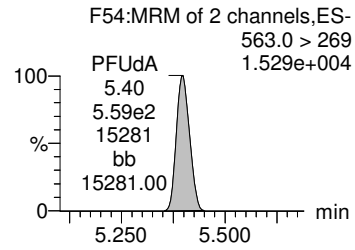
PFDA



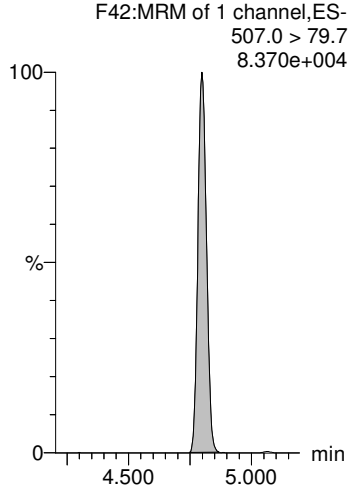


PFUdA

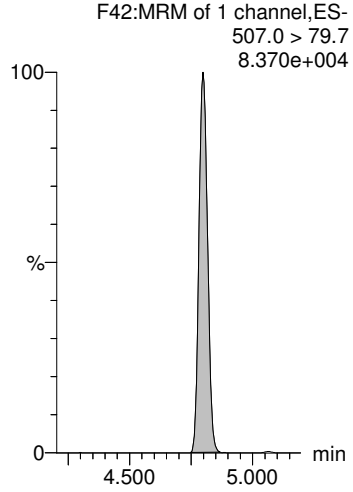




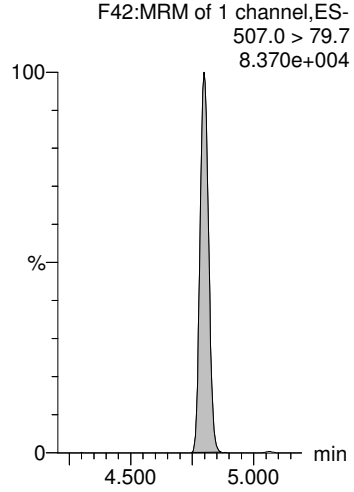
13C8-PFOS-EIS



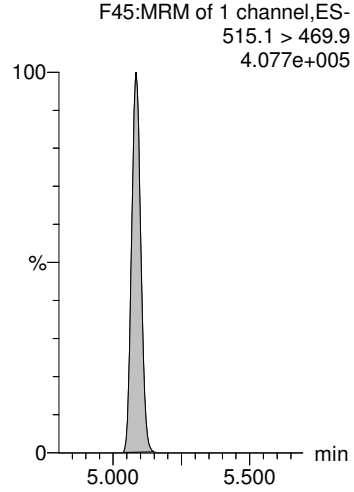
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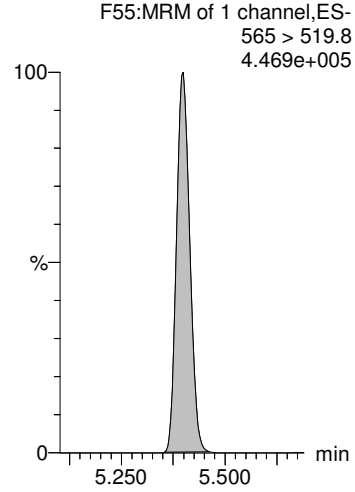
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13C2-PFDA-EIS



13C2-PFUdA-EIS



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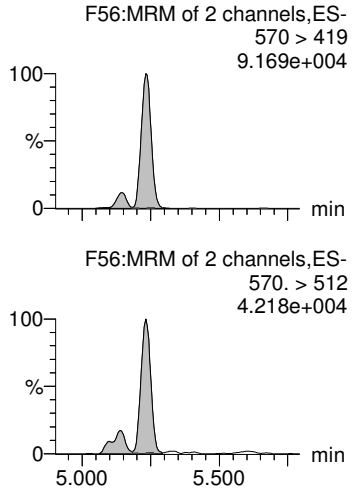
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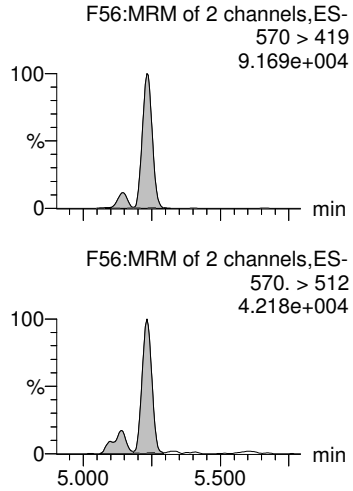
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Printed: Friday, February 28, 2020 14:38:07 Pacific Standard Time

Name: 200220P1-33, Date: 20-Feb-2020, Time: 23:00:11, ID: B0B0118-MSD1 Matrix Spike Dup 0.2531, Description: Matrix Spike Dup

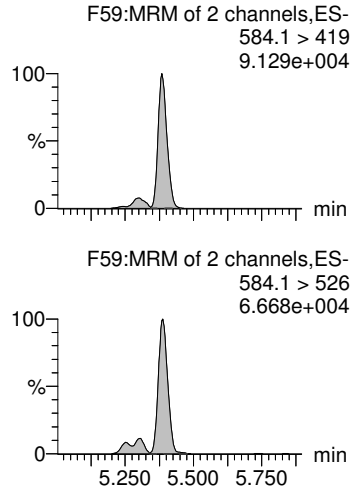
L-MeFOSAA



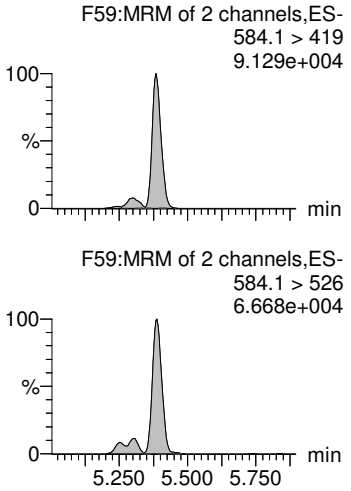
Total N-MeFOSAA



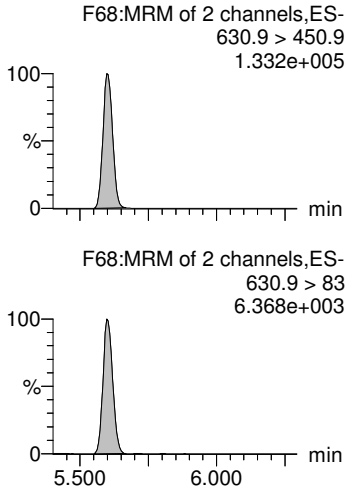
L-EtFOSAA



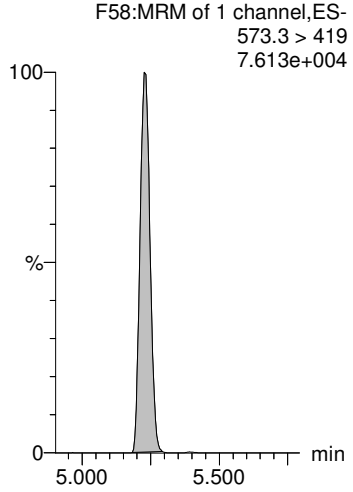
Total N-EtFOSAA



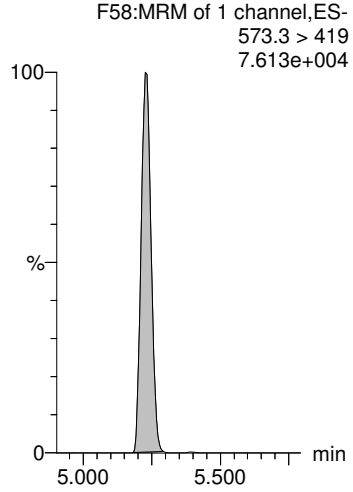
11Cl-PF30UdS



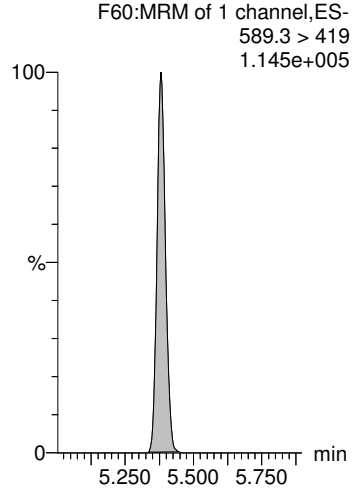
d3-N-MeFOSAA-EIS



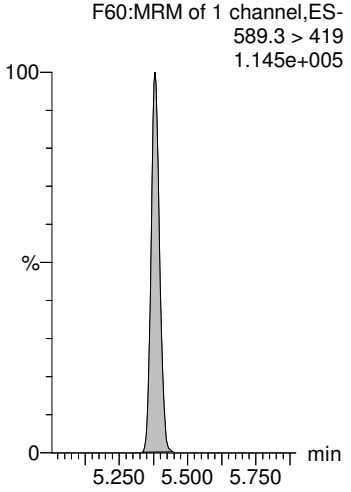
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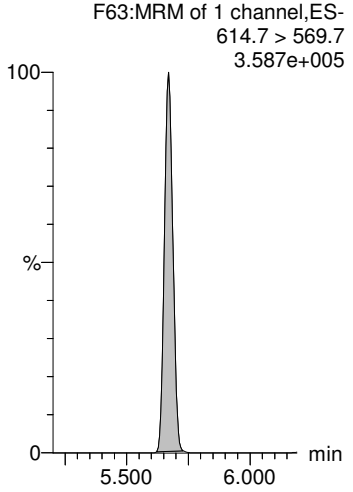
d5-N-EtFOSAA-EIS



d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS



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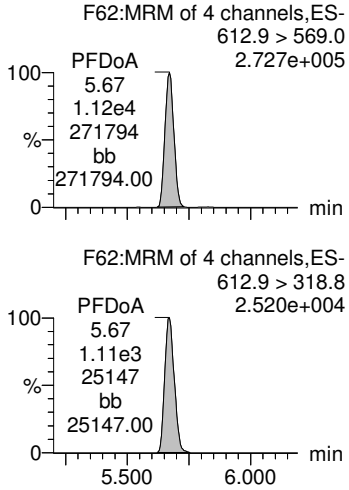
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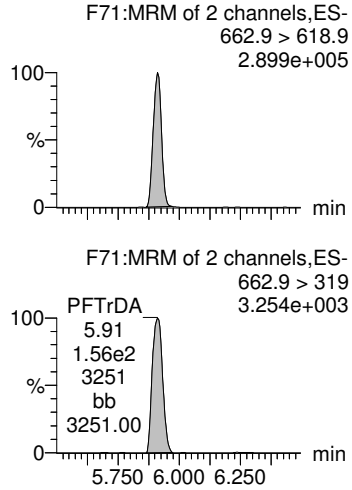
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Name: 200220P1-33, Date: 20-Feb-2020, Time: 23:00:11, ID: B0B0118-MSD1 Matrix Spike Dup 0.2531, Description: Matrix Spike Dup

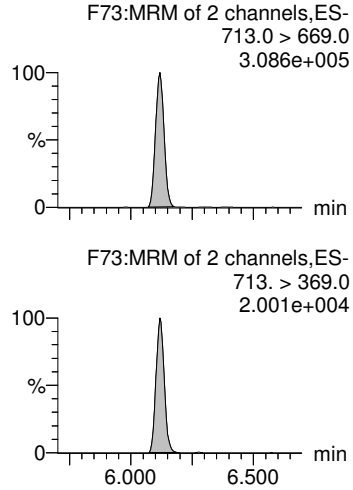
PFDoA



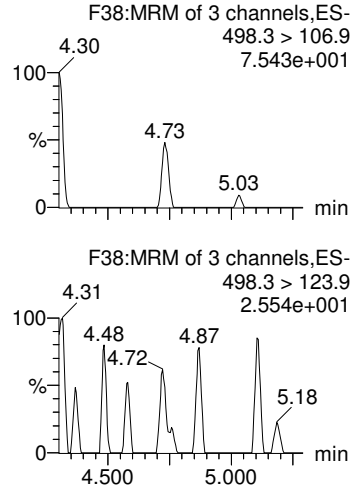
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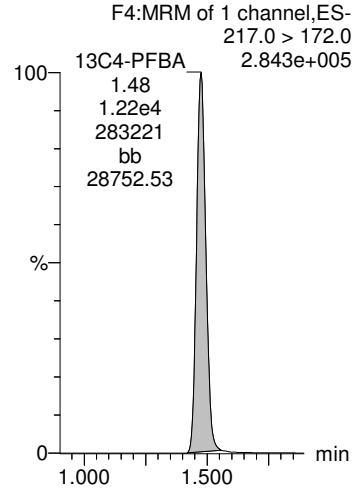
PFTeDA



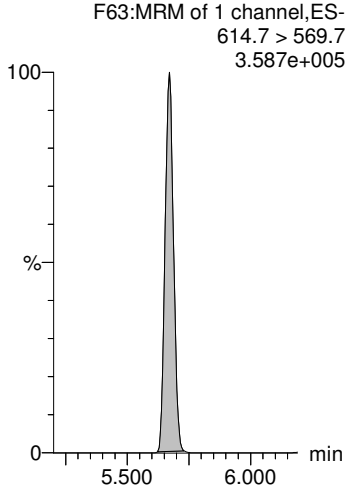
TDCA



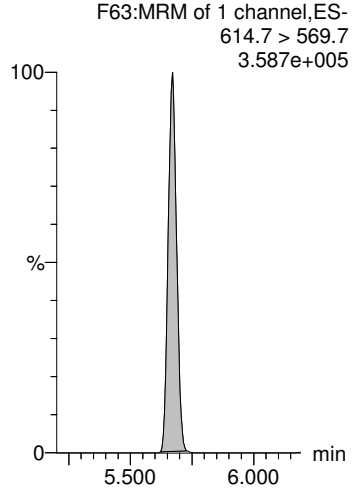
13C4-PFBA



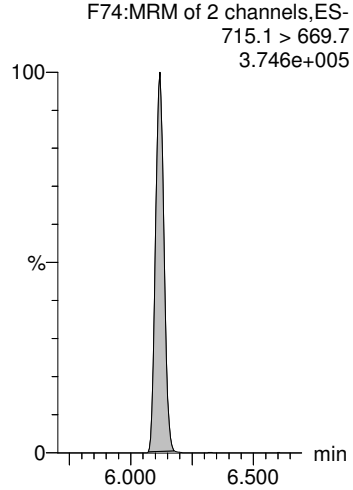
13C2-PFDoA-EIS



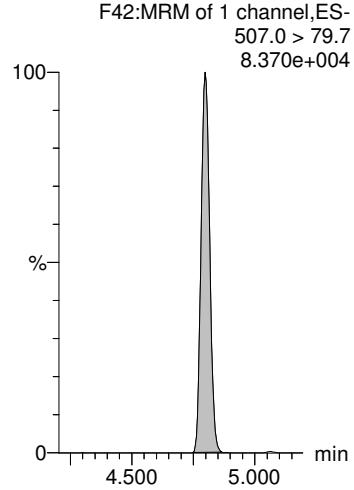
13C2-PFDoA-EIS



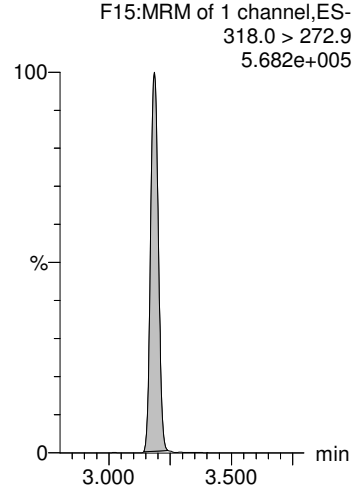
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13C8-PFOS-EIS



13C5-PFHxA



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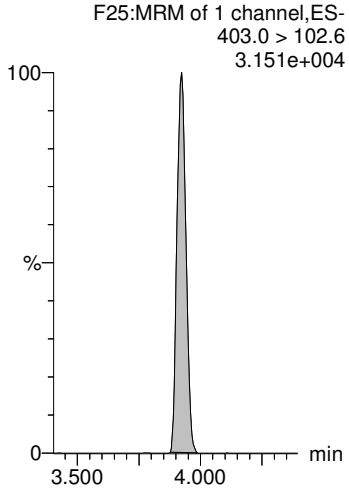
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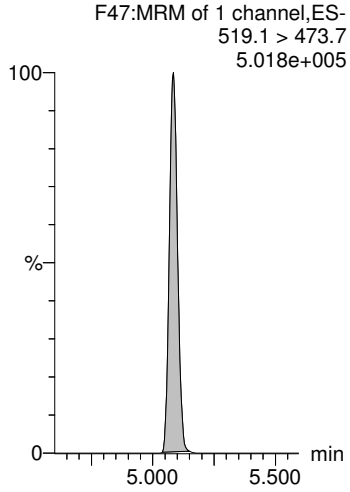
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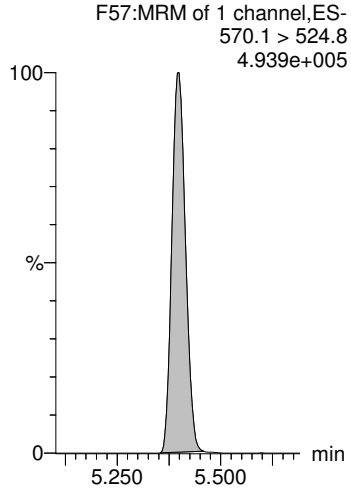
18O2-PFHxS



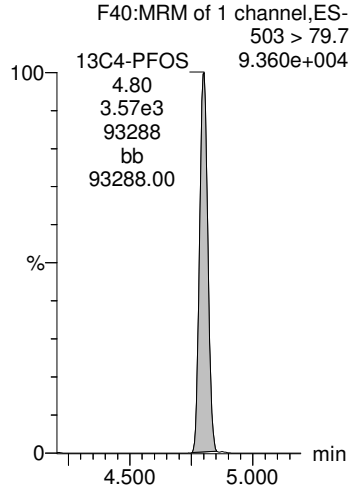
13C6-PFDA



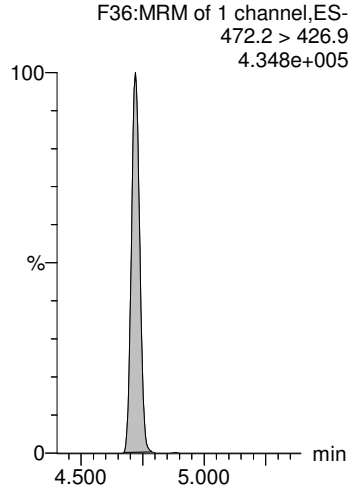
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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Review: AMR 2/25/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-40.qld

Last Altered: Monday, February 24, 2020 09:24:21 Pacific Standard Time
Printed: Monday, February 24, 2020 12:29:53 Pacific Standard Time

Name: 200220P1-40, Date: 21-Feb-2020, Time: 00:13:44, ID: 2000314-04 I006MW05SR-20200212 0.2515, Description: I006MW05SR-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7	3.36e3	1.43e3	0.252		2.68	2.68	29.5	50.9421		3.135	NO
2	7	PFHxA	313.0 > 269.0	4.60e4	1.99e4	0.252		3.19	3.19	28.9	129.2376		17.674	NO
3	9	HFPO-DA	285.1 > 168.9		3.46e3	0.252		3.40						
4	11	PFHpA	363.0 > 318.9	1.38e4	1.26e4	0.252		3.78	3.79	13.7	43.6408		29.388	NO
5	12	ADONA	376.8 > 250.9		1.26e4	0.252		3.88						
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.43e3		0.252	114.516	2.70	2.68	1430	49.4978	99.6		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.99e4		0.252	1636.234	3.19	3.19	19900	48.3323	97.2		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.46e3		0.252	293.118	3.43	3.40	3460	46.9314	94.4		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.26e4		0.252	1106.802	3.79	3.78	12600	45.3336	91.2		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.26e4		0.252	1106.802	3.79	3.78	12600	45.3336	91.2		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	1.38e4	2.95e3	0.252		3.92	3.92	58.5	215.3898		2.507	NO
13	1...	Total PFHxS	398.9 > 79.7	1.38e4	2.95e3	0.252		3.93		58.5	215.3898			
14	16	L-PFOA	412.8 > 368.9	1.93e4	1.71e4	0.252		4.29	4.29	14.1	46.4272		2.859	NO
15	1...	Total PFOA	412.8 > 368.9	1.93e4	1.71e4	0.252		4.60		14.1	46.4272			
16	21	PFNA	463.0 > 418.8	8.84e1	1.45e4	0.252		4.72	4.72	0.0764	0.0529		16.867	YES
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.95e3		0.252	252.668	3.92	3.92	2950	46.4595	93.5		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.95e3		0.252	252.668	3.92	3.92	2950	46.4595	93.5		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.71e4		0.252	1527.160	4.29	4.29	17100	44.6006	89.7		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.71e4		0.252	1527.160	4.29	4.29	17100	44.6006	89.7		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.45e4		0.252	1373.362	4.72	4.72	14500	41.9092	84.3		
22	-1													
23	23	L-PFOS	498.9 > 79.7	1.12e3	3.30e3	0.252		4.80	4.65	4.22	18.1532		2.873	NO
24	1...	Total PFOS	498.9 > 79.7	1.12e3	3.30e3	0.252		5.13		4.22	18.1532			
25	25	9Cl-PF30NS	530.7 > 350.8		3.30e3	0.252		5.01						
26	26	PFDA	513 > 468.8		1.59e4	0.252		5.08						
27	33	PFUdA	563.0 > 518.9		1.53e4	0.252		5.40						
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.30e3		0.252	295.805	4.80	4.80	3300	44.4112	89.4		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.30e3		0.252	295.805	4.80	4.80	3300	44.4112	89.4		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.30e3		0.252	295.805	4.80	4.80	3300	44.4112	89.4		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.59e4		0.252	1356.410	5.08	5.08	15900	46.7195	94.0		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.53e4		0.252	1416.449	5.40	5.40	15300	42.8096	86.1		
33	-1													
34	29	L-MeFOSAA	570 > 419		2.60e3	0.252		5.23						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	2.60e3	0.252		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		3.97e3	0.252		5.38						

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Review: AMR 2/25/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-40.qld

Last Altered: Monday, February 24, 2020 09:24:21 Pacific Standard Time
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Name: 200220P1-40, Date: 21-Feb-2020, Time: 00:13:44, ID: 2000314-04 I006MW05SR-20200212 0.2515, Description: I006MW05SR-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	3.97e3	0.252		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.44e4	0.252		5.60						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.60e3		0.252	262.877	5.22	5.23	2600	39.3391	79.2		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.60e3		0.252	262.877	5.22	5.23	2600	39.3391	79.2		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.97e3		0.252	360.983	5.37	5.38	3970	43.7265	88.0		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.97e3		0.252	360.983	5.37	5.38	3970	43.7265	88.0		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.44e4		0.252	1573.093	5.67	5.67	14400	36.4248	73.3		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.44e4	0.252		5.67						
46	39	PFTrDA	662.9 > 618.9		1.44e4	0.252		5.93						
47	41	PFTeDA	713.0 > 669.0		1.67e4	0.252		6.12						
48	1...	TDCA	498.3>106.9			0.252		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.20e4	1.20e4	0.252	1.000	1.48	1.48	12.5	49.7018	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.44e4		0.252	1573.093	5.67	5.67	14400	36.4248	73.3		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.44e4		0.252	1573.093	5.67	5.67	14400	36.4248	73.3		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.67e4		0.252	1440.513	6.10	6.12	16700	46.0200	92.6		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.30e3		0.252	295.805	4.80	4.80	3300	44.4112	89.4		
54	1...	13C5-PFHxA	318.0 > 272.9	2.02e4	2.02e4	0.252	1.000	3.18	3.19	12.5	49.7018	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.24e3	1.24e3	0.252	1.000	3.92	3.92	12.5	49.7018	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.89e4	1.89e4	0.252	1.000	5.08	5.08	12.5	49.7018	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.96e4	1.96e4	0.252	1.000	5.40	5.40	12.5	49.7018	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.81e3	3.81e3	0.252	1.000	4.79	4.80	12.5	49.7018	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.62e4	1.62e4	0.252	1.000	4.72	4.72	12.5	49.7018	100.0		

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Review: AMR 2/25/2020

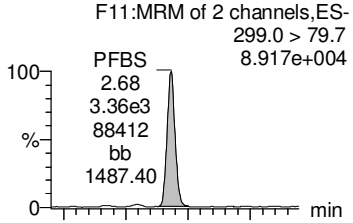
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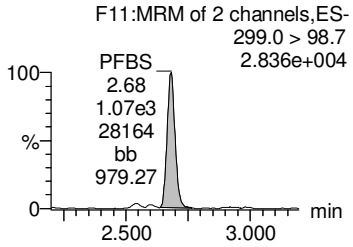
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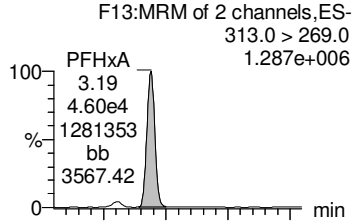
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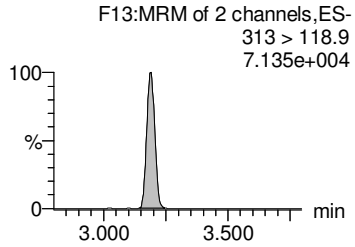
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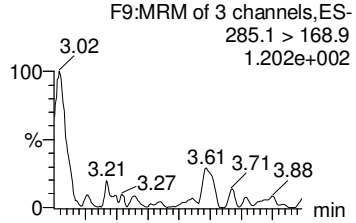


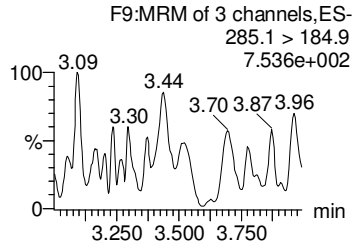
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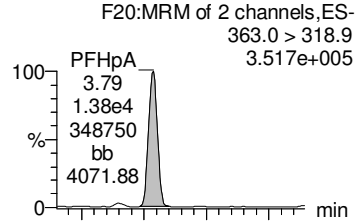


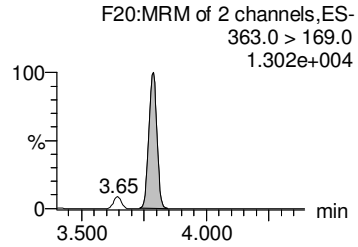
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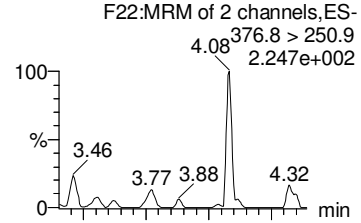


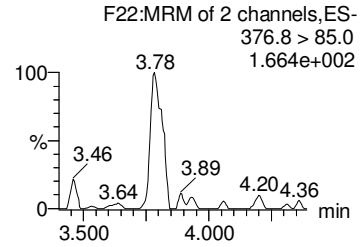
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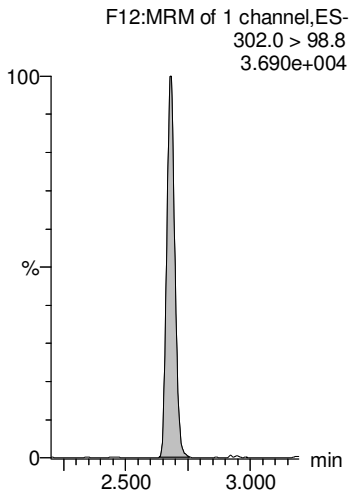


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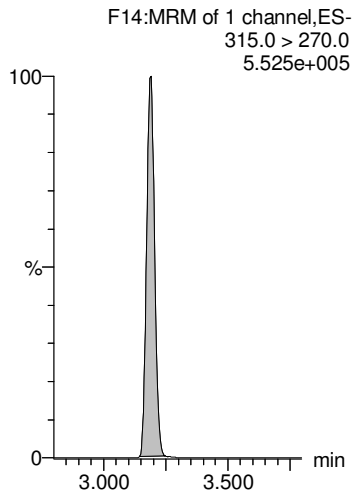




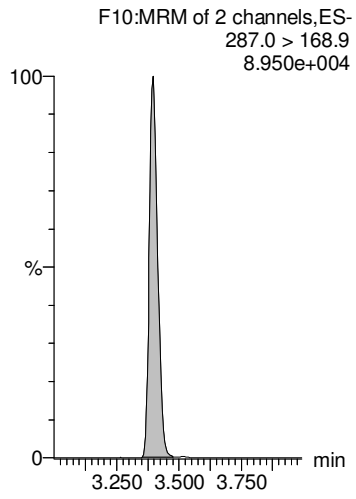
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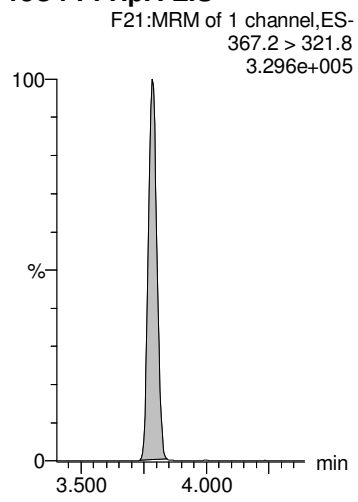
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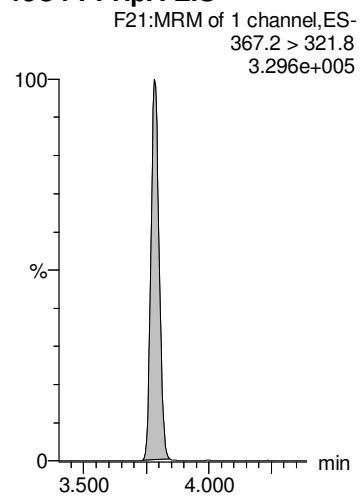
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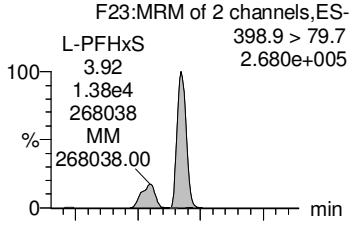
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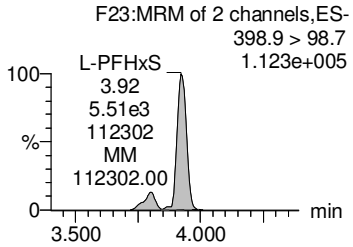
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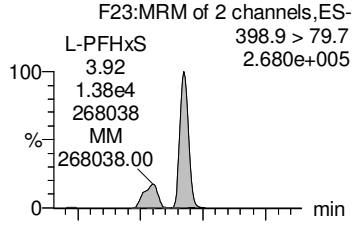
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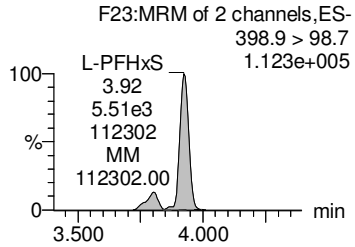
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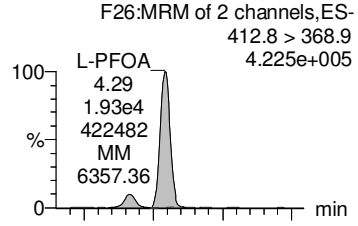


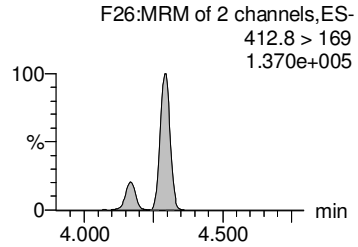
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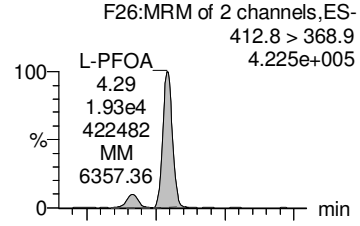


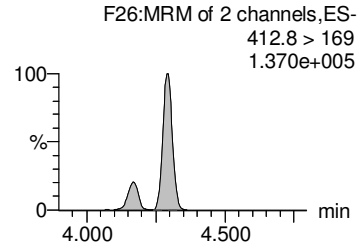
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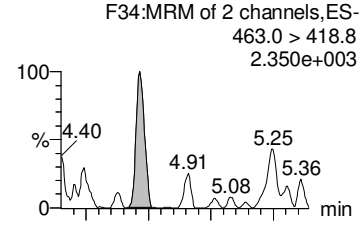


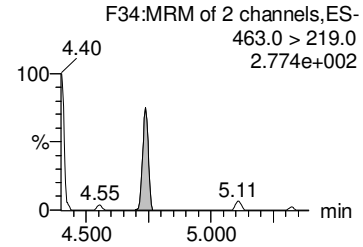
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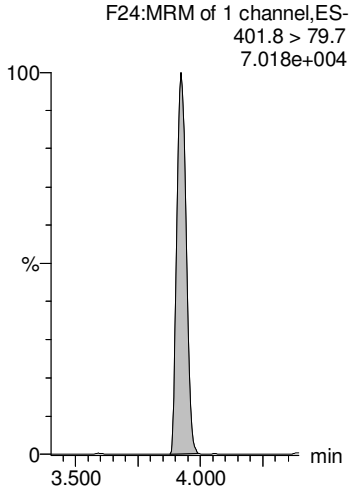


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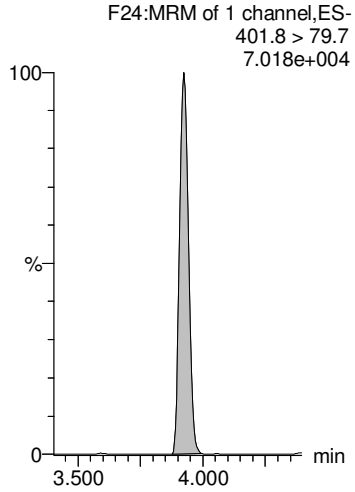




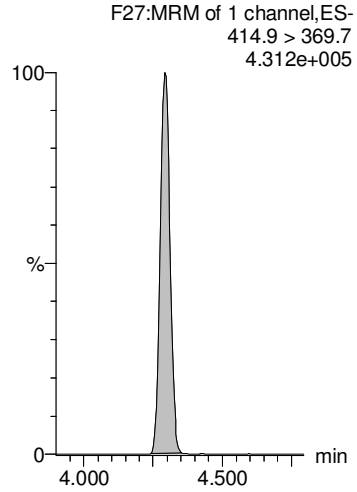
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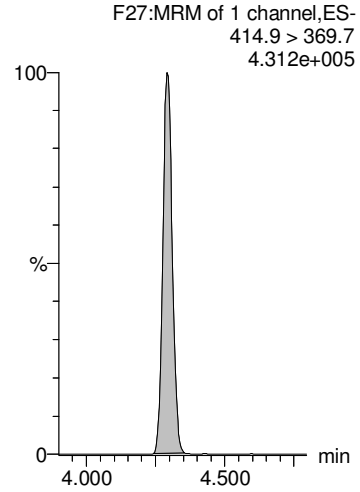
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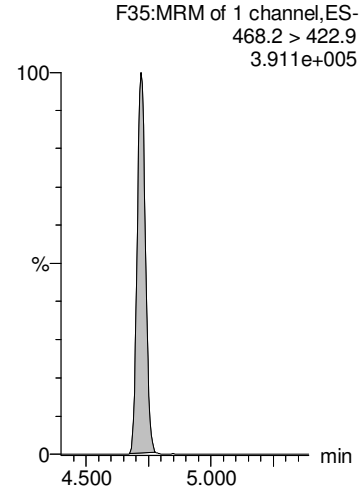
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13C2-PFOA-EIS



13C5-PFNA-EIS



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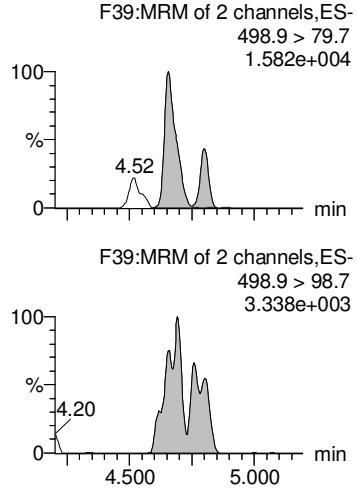
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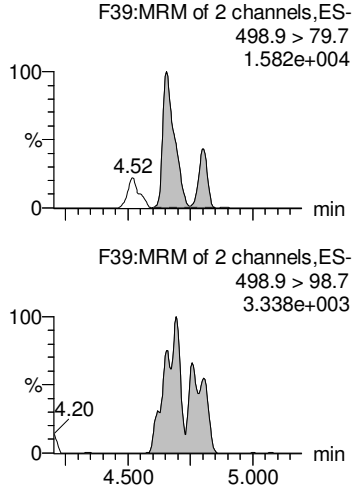
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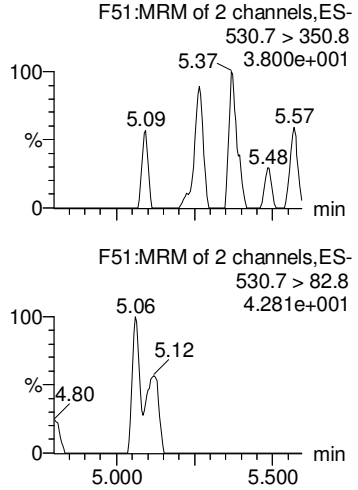
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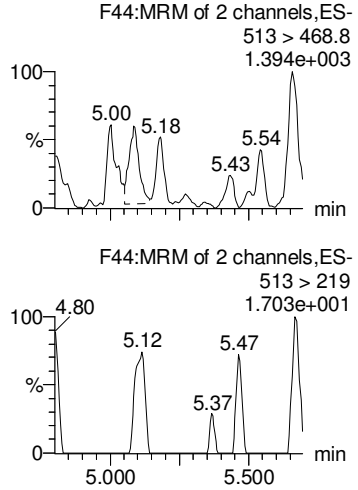
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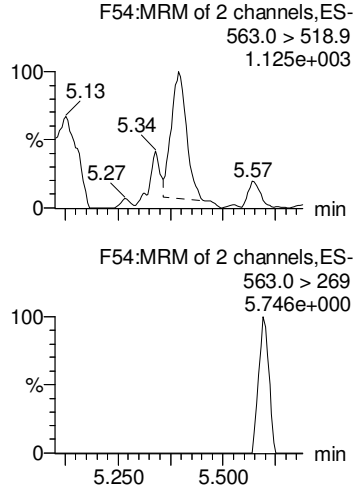
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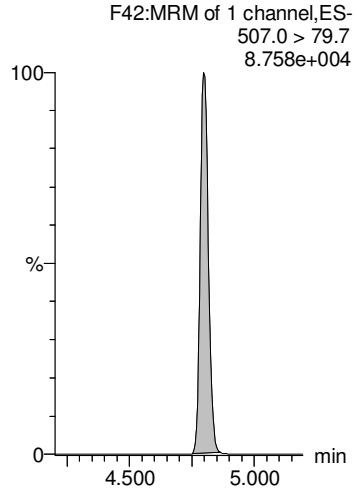
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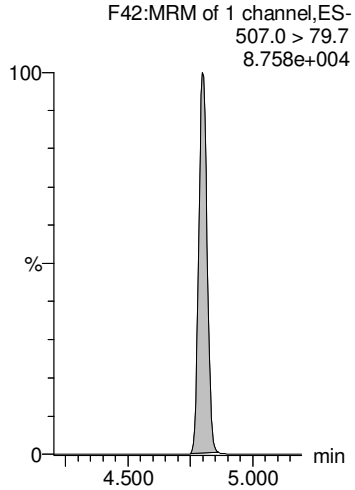
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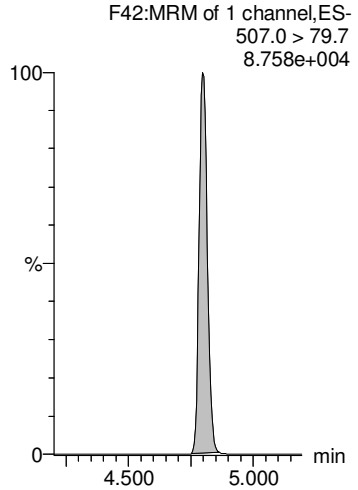
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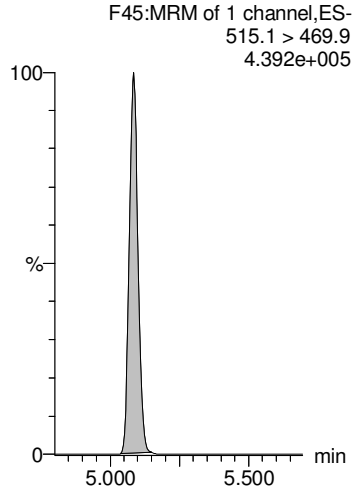
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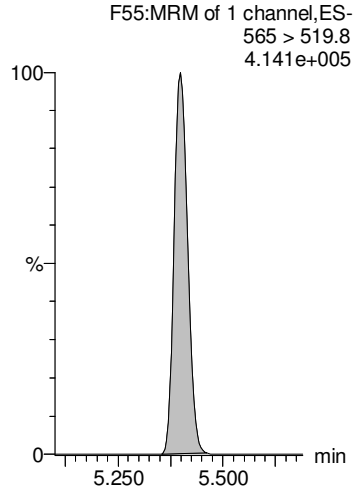
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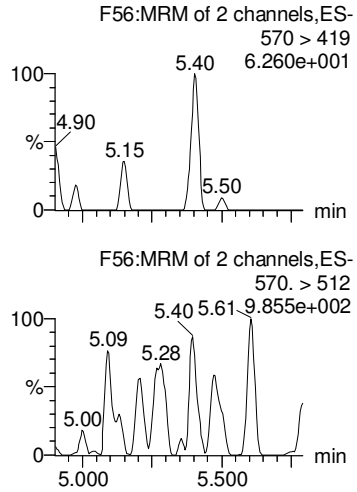
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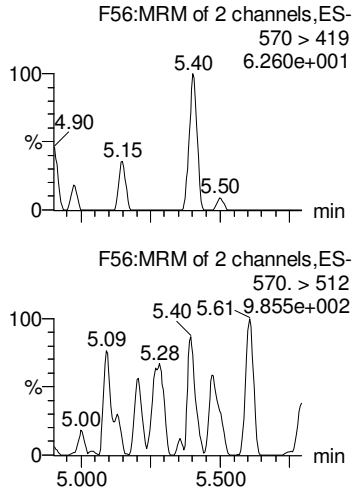
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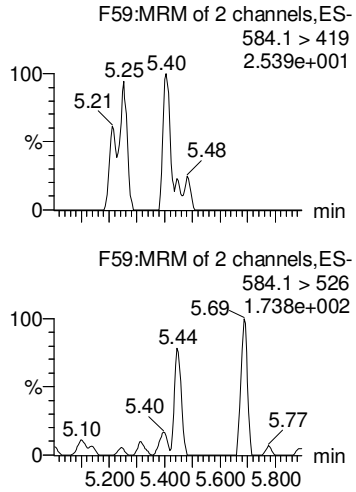
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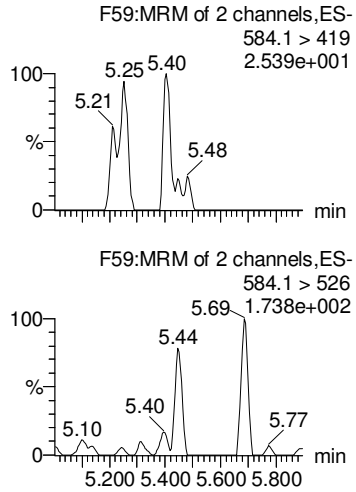
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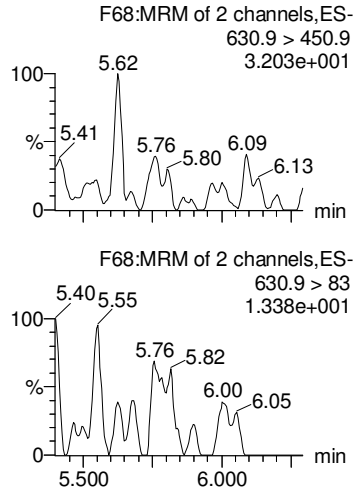
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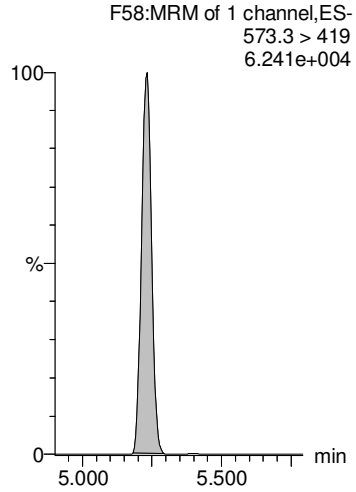
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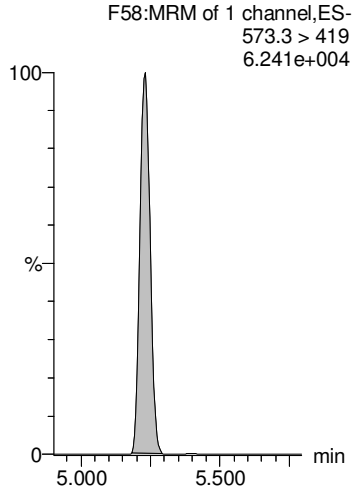
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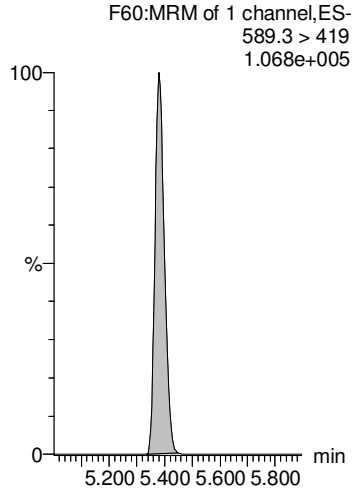
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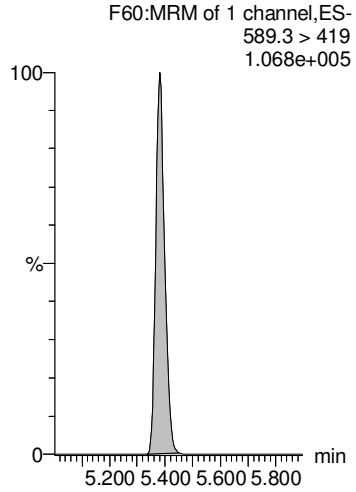
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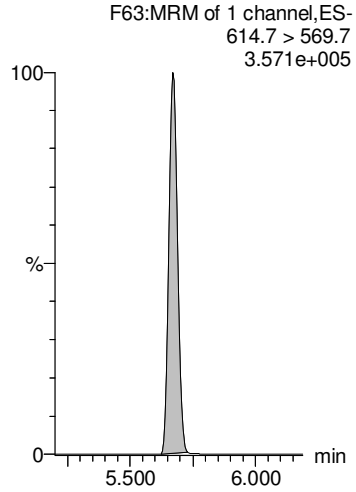
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d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS

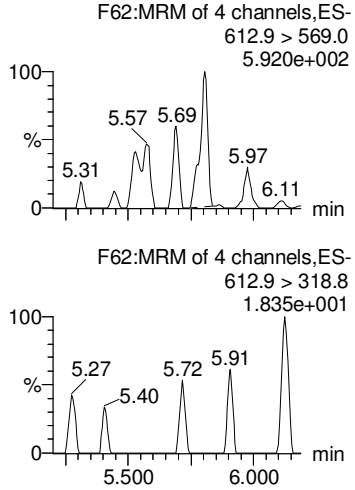


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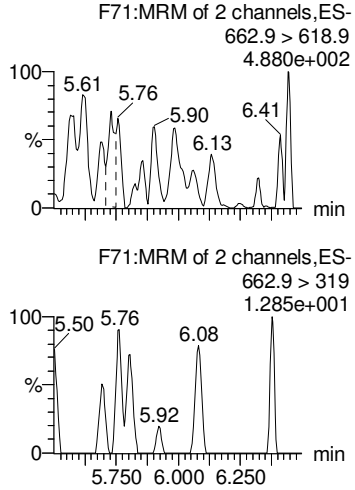
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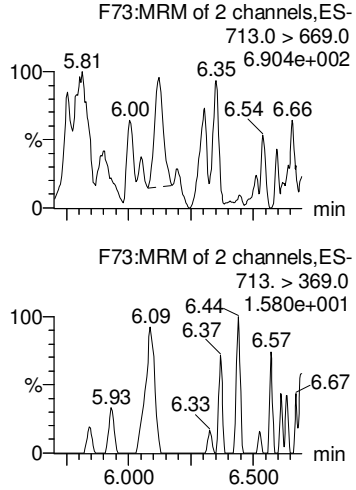
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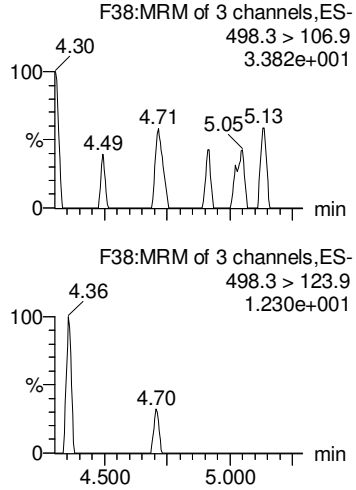
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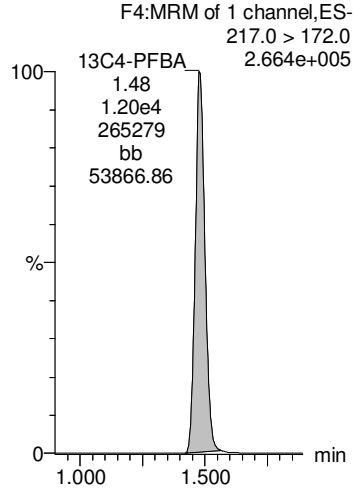
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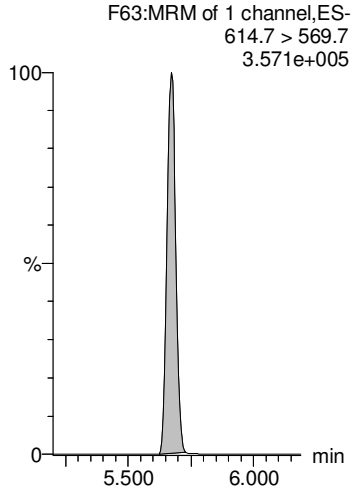
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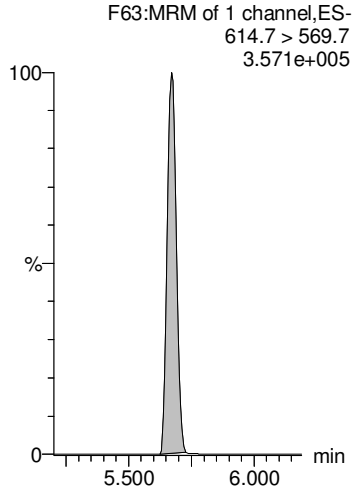
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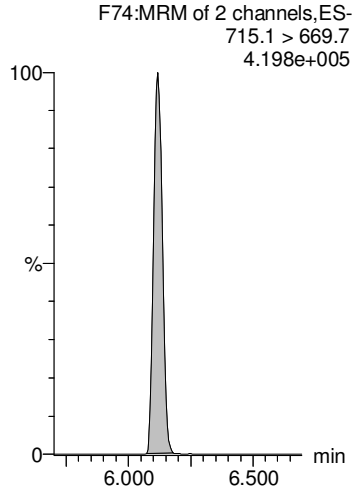
13C2-PFDoA-EIS



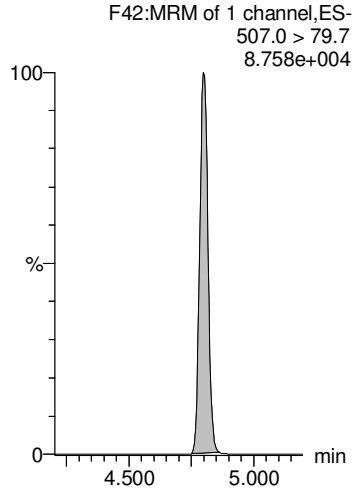
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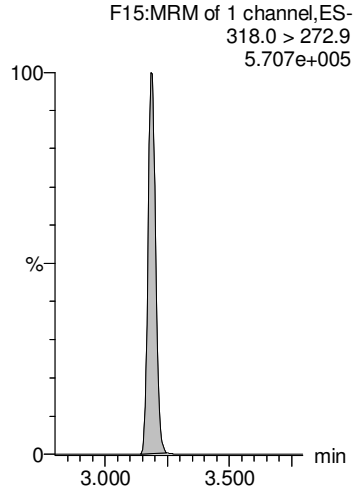
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13C8-PFOS-EIS



13C5-PFHxA



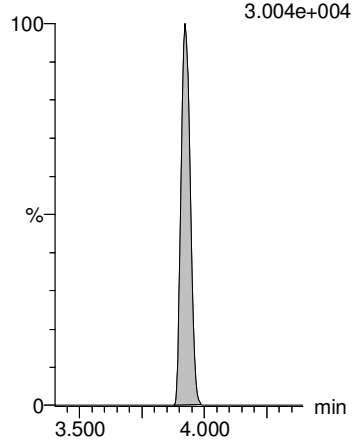
Review: AMR 2/25/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-40.qld

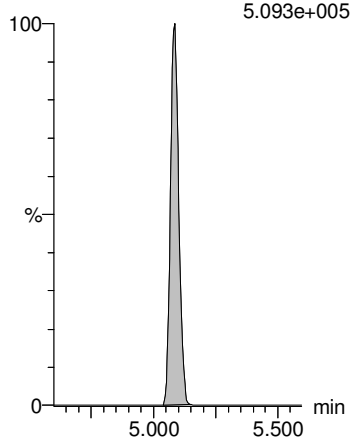
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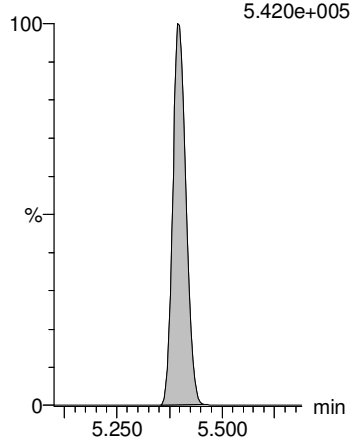
18O2-PFHxS



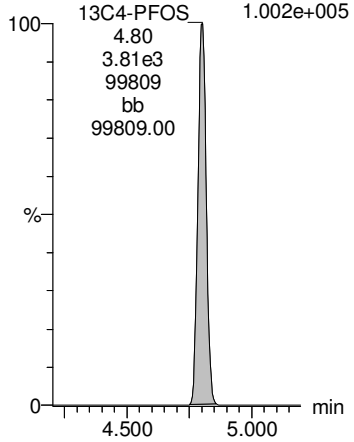
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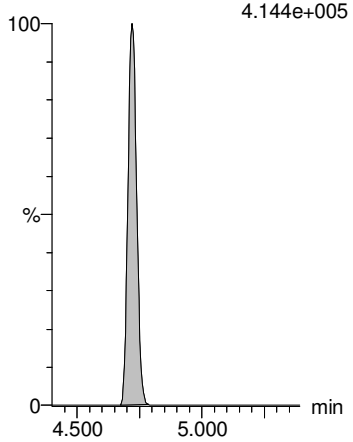
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-41.qld

Last Altered: Tuesday, February 25, 2020 11:46:15 Pacific Standard Time
Printed: Tuesday, February 25, 2020 11:46:42 Pacific Standard Time

Name: 200220P1-41, Date: 21-Feb-2020, Time: 00:24:12, ID: 2000314-05 DUP01-20200212 0.24538, Description: DUP01-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7	3.57e3	1.42e3	0.245		2.68	2.68	31.4	55.6364		3.297	NO
2	7	PFHxA	313.0 > 269.0	4.65e4	2.05e4	0.245		3.19	3.19	28.3	129.8674		17.630	NO
3	9	HFPO-DA	285.1 > 168.9		3.77e3	0.245		3.40						
4	11	PFHpA	363.0 > 318.9	1.41e4	1.23e4	0.245		3.79	3.79	14.3	46.7516		26.571	NO
5	12	ADONA	376.8 > 250.9		1.23e4	0.245		3.88						
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.42e3		0.245	114.516	2.70	2.68	1420	50.5423	99.2		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	2.05e4		0.245	1636.234	3.19	3.19	20500	51.0653	100.2		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.77e3		0.245	293.118	3.43	3.40	3770	52.4302	102.9		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.23e4		0.245	1106.802	3.79	3.79	12300	45.4589	89.2		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.23e4		0.245	1106.802	3.79	3.79	12300	45.4589	89.2		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	1.31e4	3.03e3	0.245		3.92	3.92	54.3	204.8229		2.471	NO
13	1...	Total PFHxS	398.9 > 79.7	1.31e4	3.03e3	0.245		3.93		54.3	204.8229			
14	16	L-PFOA	412.8 > 368.9	1.93e4	1.84e4	0.245		4.30	4.30	13.1	44.1383		2.714	NO
15	1...	Total PFOA	412.8 > 368.9	1.93e4	1.84e4	0.245		4.60		13.1	44.1383			
16	21	PFNA	463.0 > 418.8	1.39e2	1.54e4	0.245		4.72	4.72	0.113	0.1744		193.440	YES
17	61	13C3-PFHxS-EIS	401.8 > 79.7	3.03e3		0.245	252.668	3.93	3.92	3030	48.8041	95.8		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	3.03e3		0.245	252.668	3.93	3.92	3030	48.8041	95.8		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.84e4		0.245	1527.160	4.29	4.30	18400	49.0953	96.4		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.84e4		0.245	1527.160	4.29	4.30	18400	49.0953	96.4		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.54e4		0.245	1373.362	4.72	4.72	15400	45.7215	89.8		
22	-1													
23	23	L-PFOS	498.9 > 79.7	1.37e3	3.33e3	0.245		4.80	4.66	5.14	22.6358		2.912	NO
24	1...	Total PFOS	498.9 > 79.7	1.37e3	3.33e3	0.245		5.13		5.14	22.6358			
25	25	9Cl-PF30NS	530.7 > 350.8		3.33e3	0.245		5.01						
26	26	PFDA	513 > 468.8		1.72e4	0.245		5.08						
27	33	PFUdA	563.0 > 518.9		1.70e4	0.245		5.39						
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.33e3		0.245	295.805	4.80	4.80	3330	45.8804	90.1		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.33e3		0.245	295.805	4.80	4.80	3330	45.8804	90.1		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.33e3		0.245	295.805	4.80	4.80	3330	45.8804	90.1		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.72e4		0.245	1356.410	5.08	5.08	17200	51.5442	101.2		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.70e4		0.245	1416.449	5.40	5.39	17000	48.9161	96.0		
33	-1													
34	29	L-MeFOSAA	570 > 419		3.05e3	0.245		5.23						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	3.05e3	0.245		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		3.56e3	0.245		5.38						

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Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-41.qld

Last Altered: Tuesday, February 25, 2020 11:46:15 Pacific Standard Time
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Name: 200220P1-41, Date: 21-Feb-2020, Time: 00:24:12, ID: 2000314-05 DUP01-20200212 0.24538, Description: DUP01-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	3.56e3	0.245		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.35e4	0.245		5.60						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.05e3		0.245	262.877	5.22	5.23	3050	47.2168	92.7		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.05e3		0.245	262.877	5.22	5.23	3050	47.2168	92.7		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.56e3		0.245	360.983	5.37	5.38	3560	40.1354	78.8		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.56e3		0.245	360.983	5.37	5.38	3560	40.1354	78.8		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.35e4		0.245	1573.093	5.67	5.67	13500	34.8874	68.5		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.35e4	0.245		5.67						
46	39	PFTrDA	662.9 > 618.9		1.35e4	0.245		5.93						
47	41	PFTeDA	713.0 > 669.0		1.74e4	0.245		6.12						
48	1...	TDCA	498.3>106.9			0.245		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.20e4	1.20e4	0.245	1.000	1.48	1.48	12.5	50.9414	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.35e4		0.245	1573.093	5.67	5.67	13500	34.8874	68.5		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.35e4		0.245	1573.093	5.67	5.67	13500	34.8874	68.5		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.74e4		0.245	1440.513	6.10	6.12	17400	49.1643	96.5		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.33e3		0.245	295.805	4.80	4.80	3330	45.8804	90.1		
54	1...	13C5-PFHxA	318.0 > 272.9	2.17e4	2.17e4	0.245	1.000	3.18	3.19	12.5	50.9414	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.25e3	1.25e3	0.245	1.000	3.92	3.93	12.5	50.9414	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.90e4	1.90e4	0.245	1.000	5.08	5.08	12.5	50.9414	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.98e4	1.98e4	0.245	1.000	5.40	5.40	12.5	50.9414	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.60e3	3.60e3	0.245	1.000	4.79	4.80	12.5	50.9414	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.67e4	1.67e4	0.245	1.000	4.72	4.72	12.5	50.9414	100.0		

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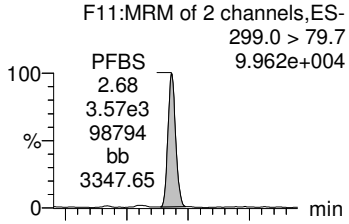
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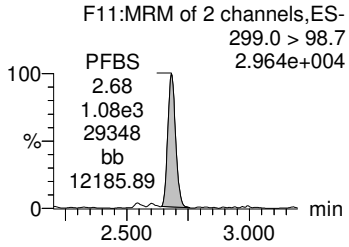
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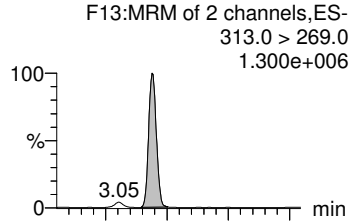
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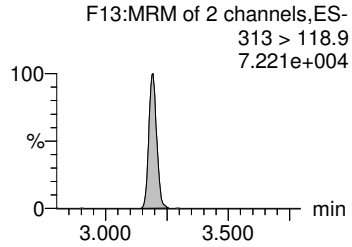
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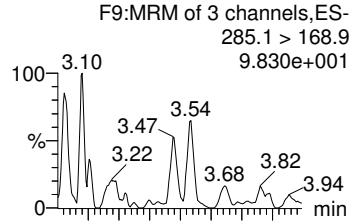


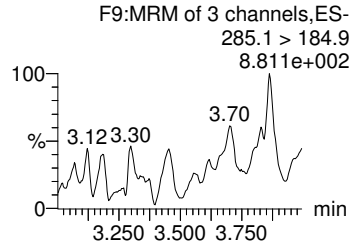
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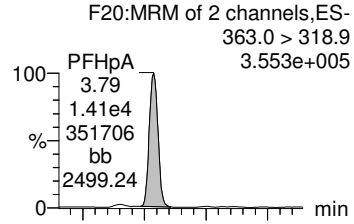


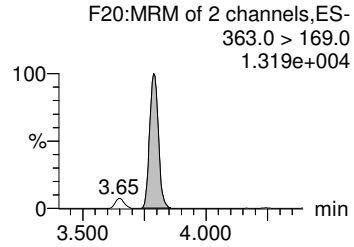
HFPO-DA



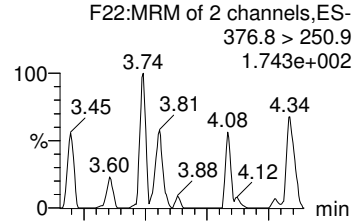


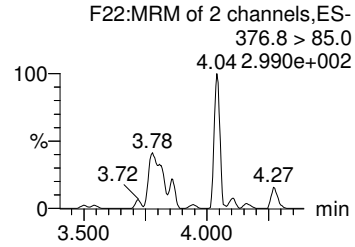
PFHpA



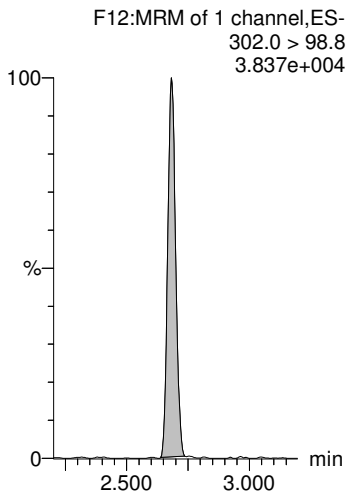


ADONA

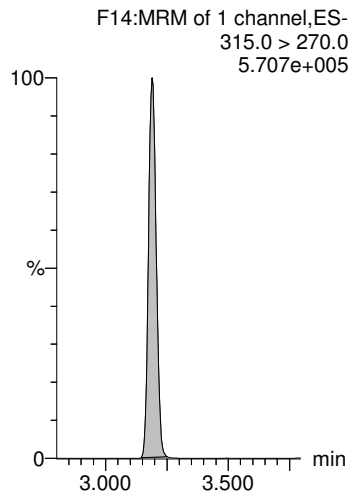




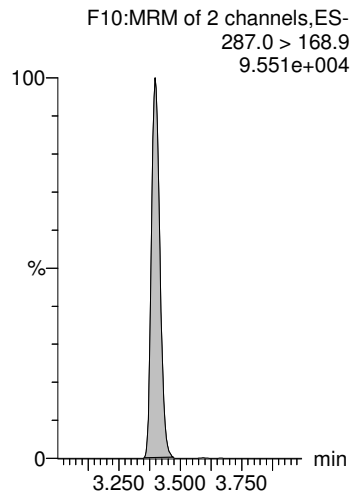
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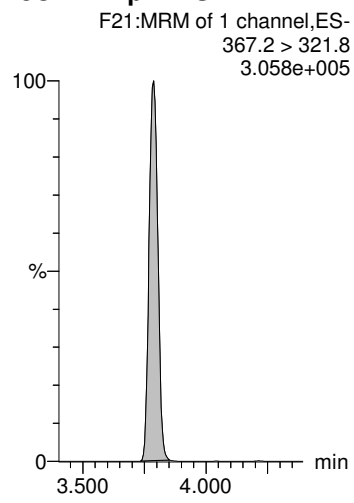
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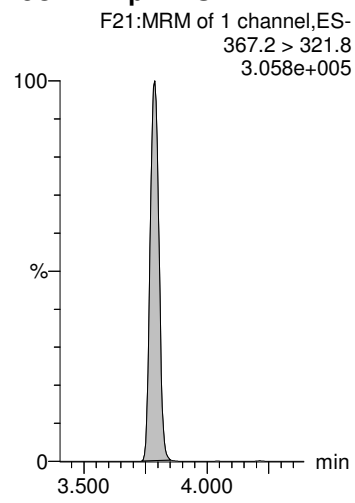
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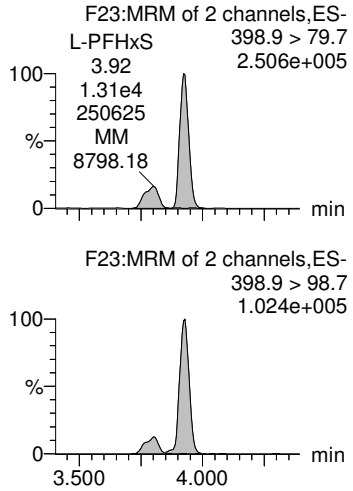
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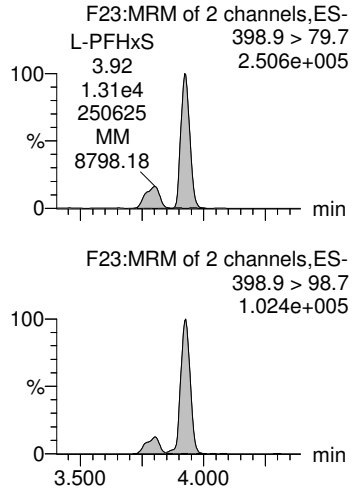
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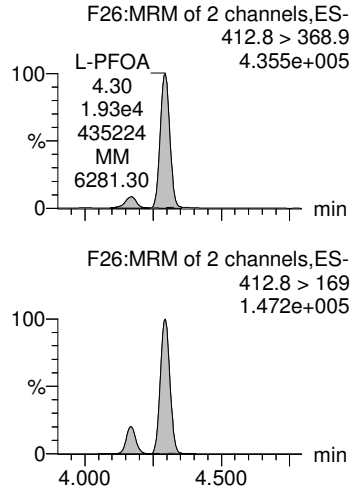
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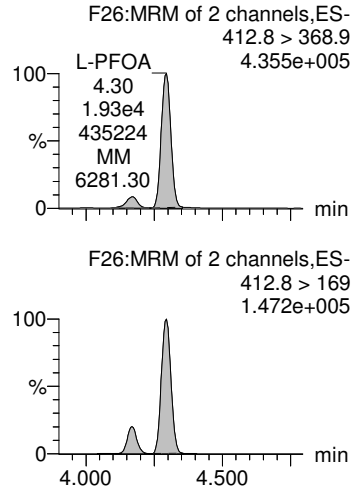
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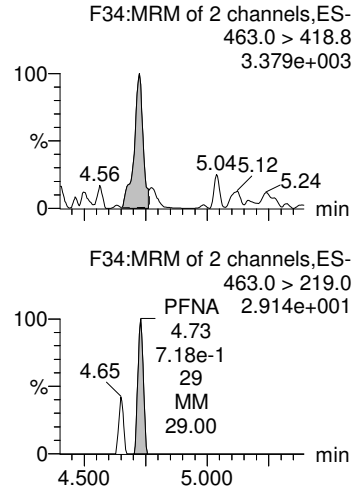
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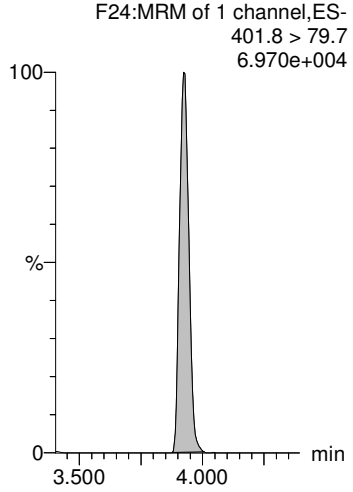
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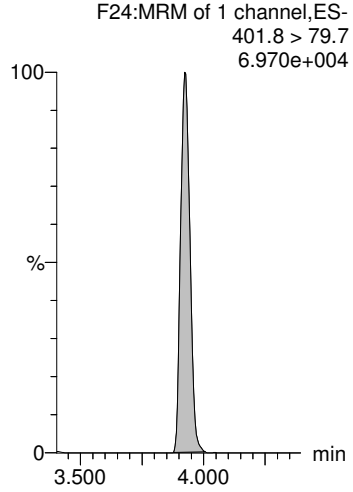
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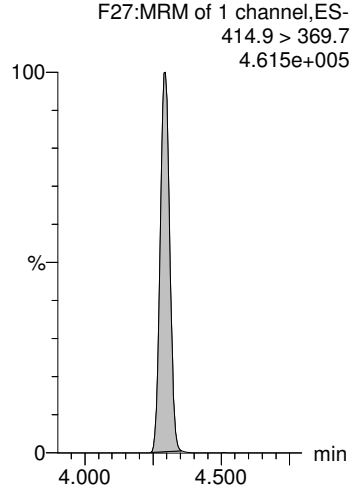
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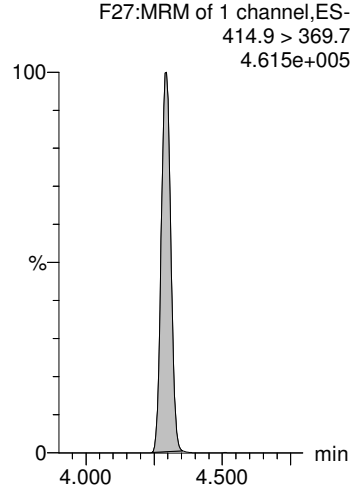
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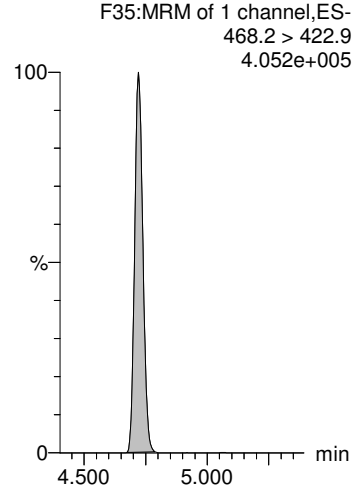
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13C2-PFOA-EIS



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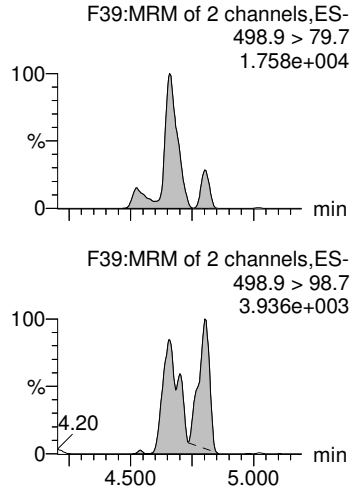
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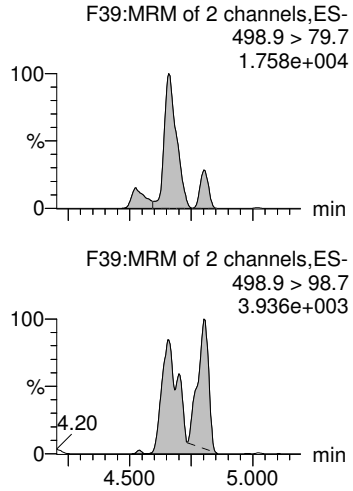
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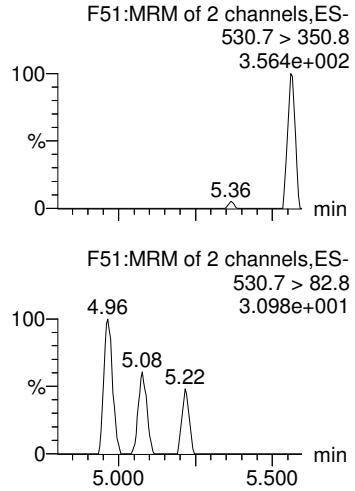
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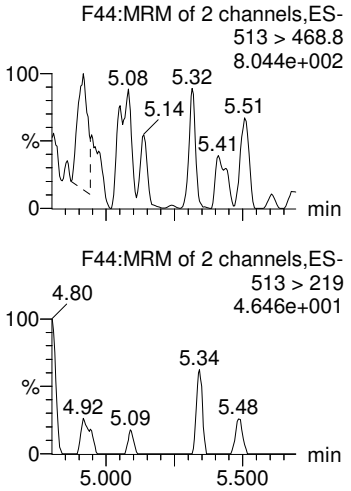
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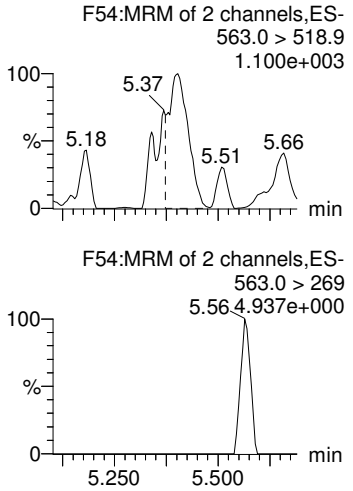
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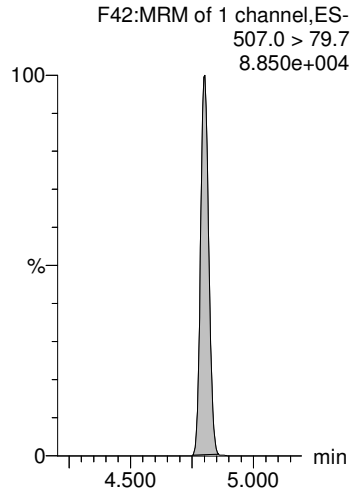
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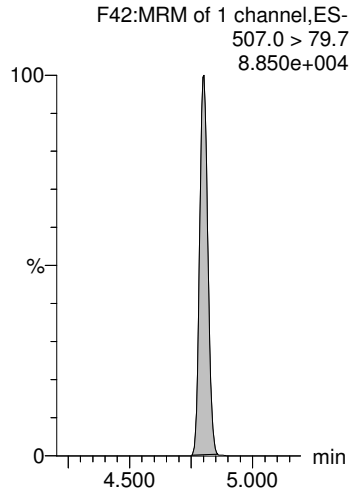
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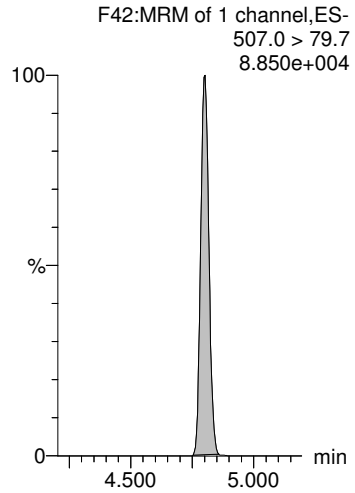
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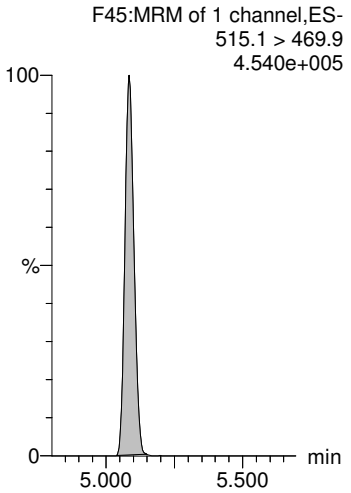
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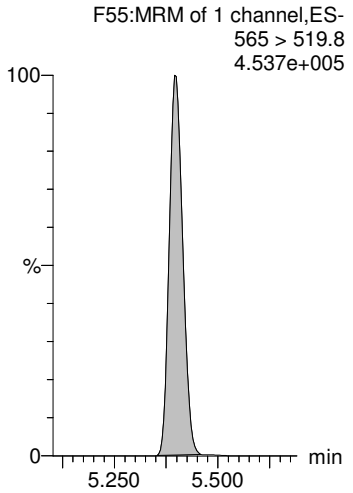
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Vista Analytical Laboratory L18

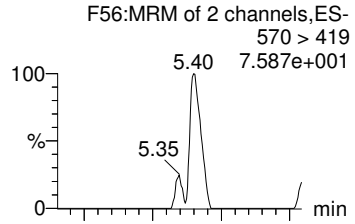
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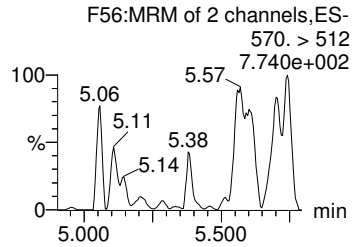
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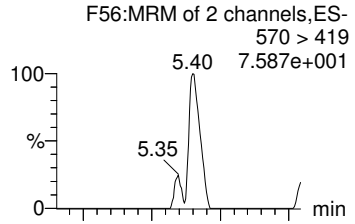
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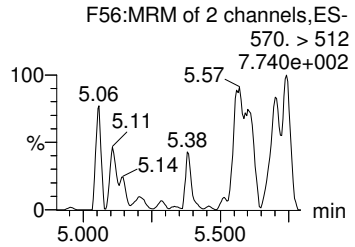
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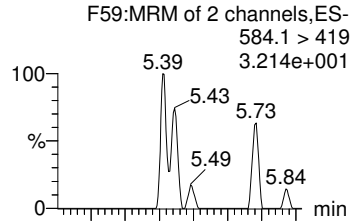


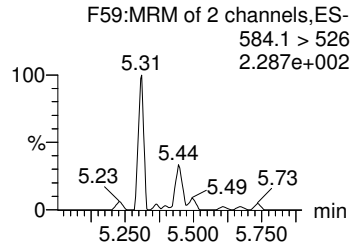
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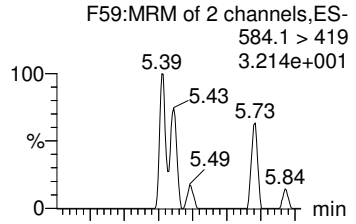


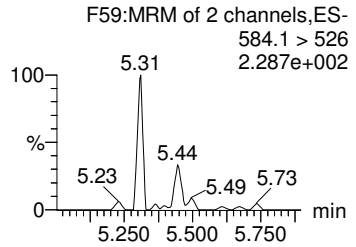
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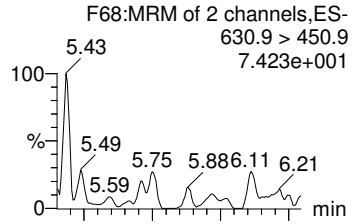


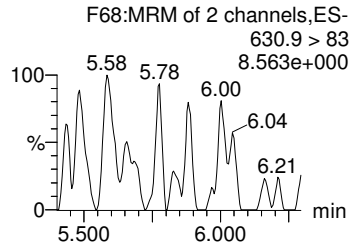
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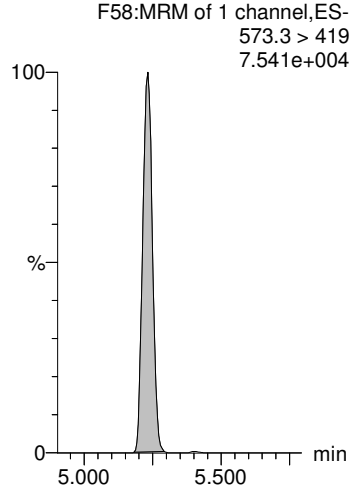


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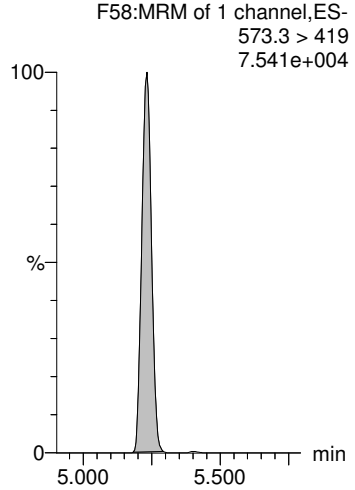




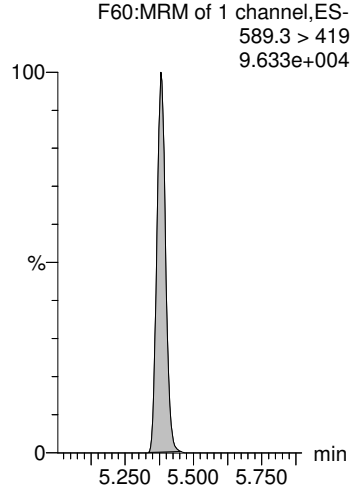
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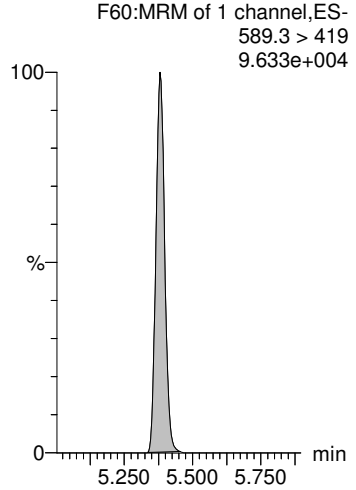
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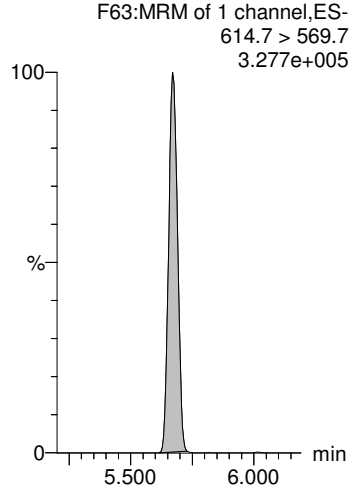
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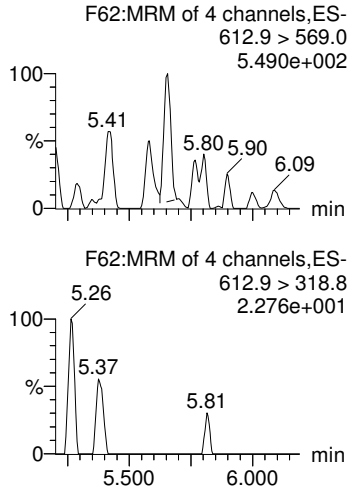
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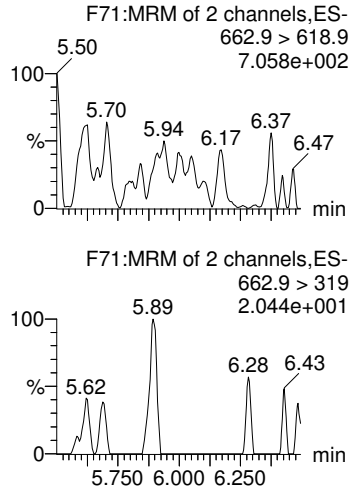
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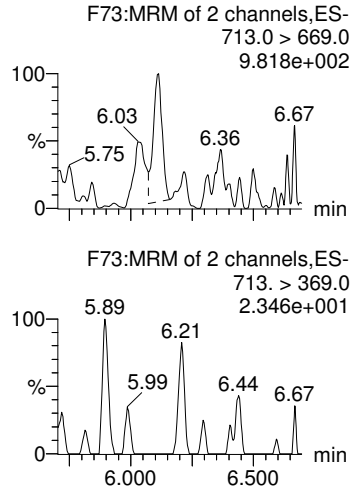
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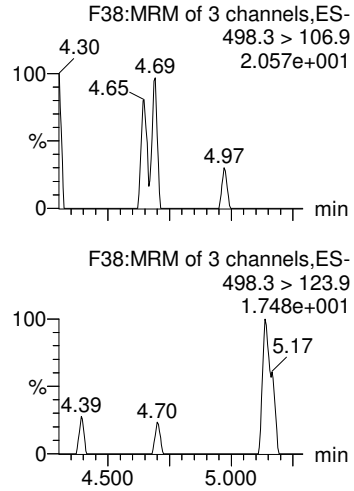
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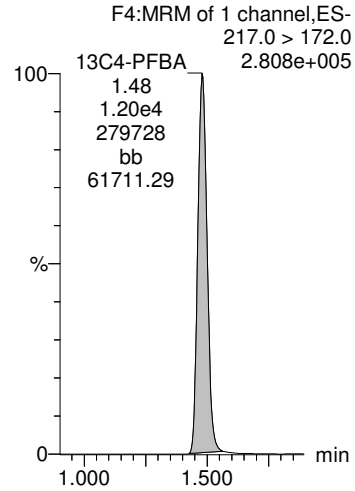
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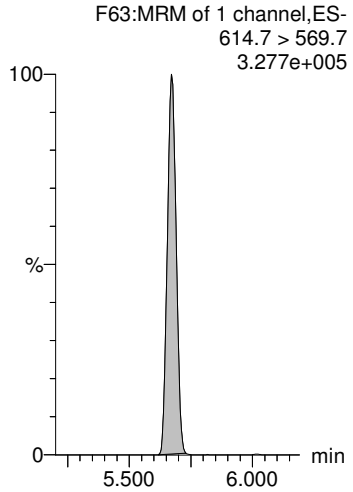
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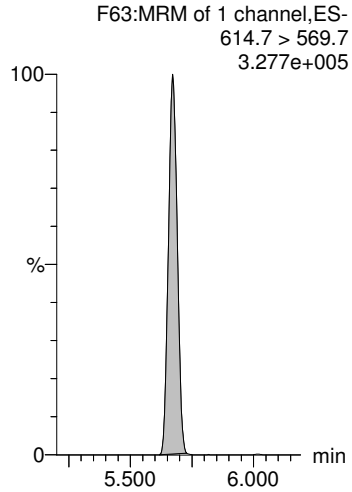
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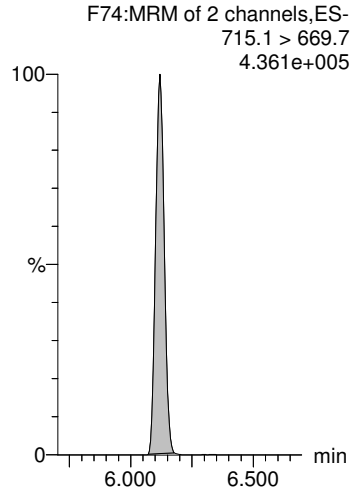
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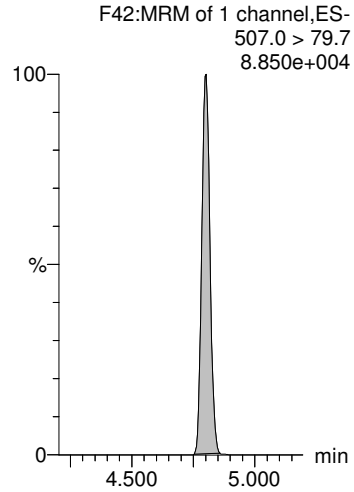
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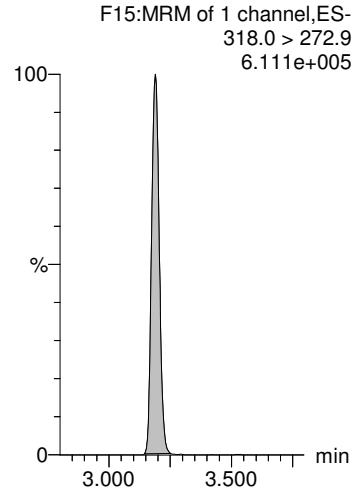
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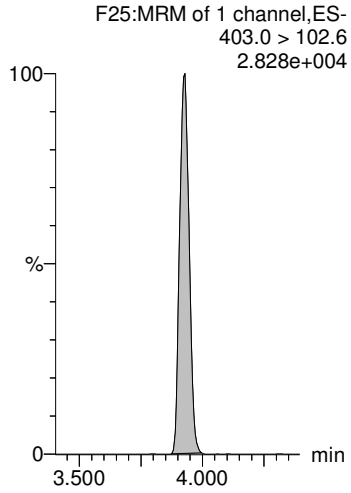
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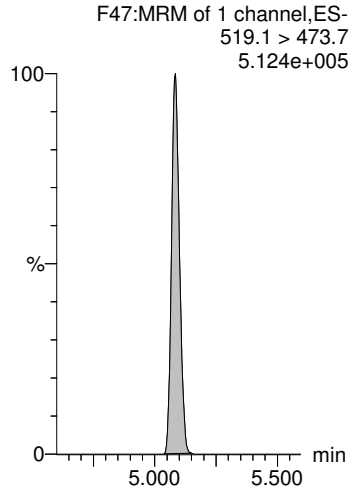
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Name: 200220P1-41, Date: 21-Feb-2020, Time: 00:24:12, ID: 2000314-05 DUP01-20200212 0.24538, Description: DUP01-20200212

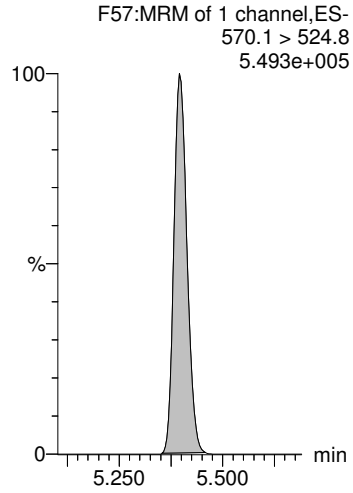
18O2-PFHxS



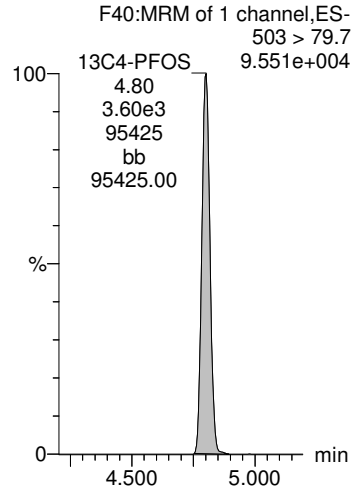
13C6-PFDA



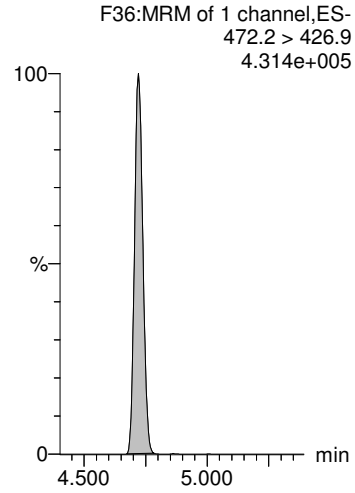
13C7-PFUdA



13C4-PFOS



13C9-PFNA



 RK 2/25/2020

Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-42.qld

Last Altered: Tuesday, February 25, 2020 11:48:33 Pacific Standard Time
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***See dilution**

Name: 200220P1-42, Date: 21-Feb-2020, Time: 00:34:45, ID: 2000314-06 I006MW01S-20200212 0.2551, Description: I006MW01S-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.		%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7	1.47e4	1.45e3	0.255		2.68	2.68	127	216.6131			3.129	NO
2	7	PFHxA	313.0 > 269.0	1.02e6	1.82e4	0.255		3.19	3.19	700	3092.7677	E*		17.041	NO
3	9	HFPO-DA	285.1 > 168.9		3.66e3	0.255		3.39							
4	11	PFHpA	363.0 > 318.9	7.90e5	1.13e4	0.255		3.78	3.78	873	3108.2978	E*		24.318	NO
5	12	ADONA	376.8 > 250.9		1.13e4	0.255		3.88							
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.45e3		0.255	114.516	2.70	2.68	1450	49.6882		101.4		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.82e4		0.255	1636.234	3.19	3.19	18200	43.5722		88.9		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.66e3		0.255	293.118	3.43	3.39	3660	48.8961		99.8		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.13e4		0.255	1106.802	3.79	3.78	11300	40.0593		81.8		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.13e4		0.255	1106.802	3.79	3.78	11300	40.0593		81.8		
11	-1														
12	13	L-PFHxS	398.9 > 79.7	6.49e4	2.88e3	0.255		3.92	3.92	282	1062.6979			2.337	NO
13	1...	Total PFHxS	398.9 > 79.7	6.49e4	2.88e3	0.255		3.93		282	1062.6979				
14	16	L-PFOA	412.8 > 368.9	6.55e5	1.72e4	0.255		4.29	4.29	475	1696.0408			3.001	NO
15	1...	Total PFOA	412.8 > 368.9	6.55e5	1.72e4	0.255		4.60		475	1696.0408				
16	21	PFNA	463.0 > 418.8	1.64e4	1.58e4	0.255		4.72	4.72	13.0	41.2340			8.248	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.88e3		0.255	252.668	3.92	3.92	2880	44.6258		91.1		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.88e3		0.255	252.668	3.92	3.92	2880	44.6258		91.1		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.72e4		0.255	1527.160	4.29	4.29	17200	44.1932		90.2		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.72e4		0.255	1527.160	4.29	4.29	17200	44.1932		90.2		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.58e4		0.255	1373.362	4.72	4.72	15800	44.9636		91.8		
22	-1														
23	23	L-PFOS	498.9 > 79.7	1.32e4	3.50e3	0.255		4.80	4.80	47.2	199.3191			2.503	NO
24	1...	Total PFOS	498.9 > 79.7	1.32e4	3.50e3	0.255		5.13		47.2	199.3191				
25	25	9Cl-PF30NS	530.7 > 350.8		3.50e3	0.255		5.01							
26	26	PFDA	513 > 468.8	8.01e2	1.49e4	0.255		5.08	5.08	0.672	1.9148			12.178	NO
27	33	PFUdA	563.0 > 518.9		1.57e4	0.255		5.40							
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.50e3		0.255	295.805	4.80	4.80	3500	46.3335		94.6		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.50e3		0.255	295.805	4.80	4.80	3500	46.3335		94.6		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.50e3		0.255	295.805	4.80	4.80	3500	46.3335		94.6		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.49e4		0.255	1356.410	5.08	5.08	14900	43.0257		87.8		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.57e4		0.255	1416.449	5.40	5.40	15700	43.4996		88.8		
33	-1														
34	29	L-MeFOSAA	570 > 419		3.07e3	0.255		5.23							
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	3.07e3	0.255		5.19		0.000					
36	31	L-EtFOSAA	584.1 > 419		3.57e3	0.255		5.38							

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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-42.qld

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Name: 200220P1-42, Date: 21-Feb-2020, Time: 00:34:45, ID: 2000314-06 I006MW01S-20200212 0.2551, Description: I006MW01S-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	3.57e3	0.255		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.28e4	0.255		5.60						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.07e3		0.255	262.877	5.22	5.23	3070	45.7307	93.3		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.07e3		0.255	262.877	5.22	5.23	3070	45.7307	93.3		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.57e3		0.255	360.983	5.37	5.38	3570	38.7565	79.1		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.57e3		0.255	360.983	5.37	5.38	3570	38.7565	79.1		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.28e4		0.255	1573.093	5.67	5.67	12800	31.9679	65.2		
44	-1													
45	37	PFDoA	612.9 > 569.0	3.77e1	1.28e4	0.255		5.67	5.67	0.0367			13.701	NO
46	39	PFTrDA	662.9 > 618.9		1.28e4	0.255		5.93						
47	41	PFTeDA	713.0 > 669.0		1.43e4	0.255		6.12						
48	1...	TDCA	498.3>106.9			0.255		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.10e4	1.10e4	0.255	1.000	1.48	1.47	12.5	49.0004	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.28e4		0.255	1573.093	5.67	5.67	12800	31.9679	65.2		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.28e4		0.255	1573.093	5.67	5.67	12800	31.9679	65.2		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.43e4		0.255	1440.513	6.11	6.12	14300	38.9990	79.6		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.50e3		0.255	295.805	4.80	4.80	3500	46.3335	94.6		
54	1...	13C5-PFHxA	318.0 > 272.9	1.70e4	1.70e4	0.255	1.000	3.18	3.19	12.5	49.0004	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.22e3	1.22e3	0.255	1.000	3.92	3.92	12.5	49.0004	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.85e4	1.85e4	0.255	1.000	5.08	5.08	12.5	49.0004	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.91e4	1.91e4	0.255	1.000	5.40	5.40	12.5	49.0004	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.78e3	3.78e3	0.255	1.000	4.79	4.80	12.5	49.0004	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.65e4	1.65e4	0.255	1.000	4.72	4.72	12.5	49.0004	100.0		

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Review: AMR 2/28/2020

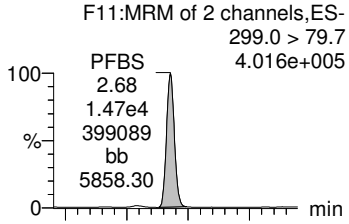
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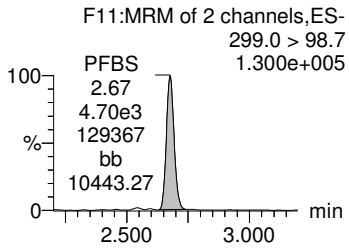
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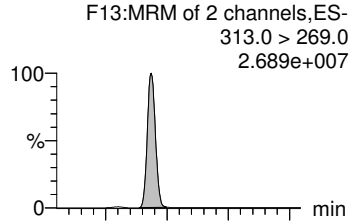
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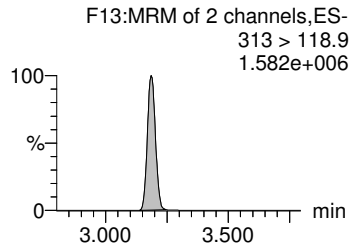
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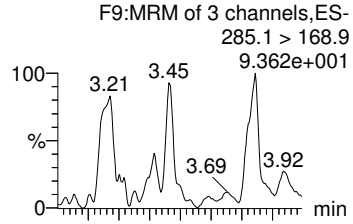


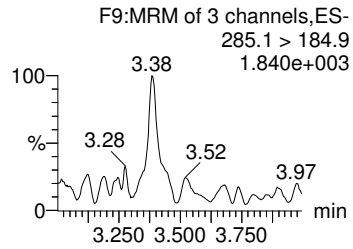
PFHxA



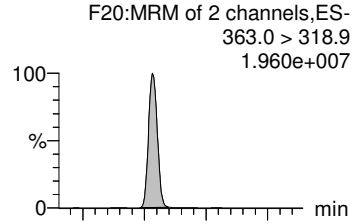


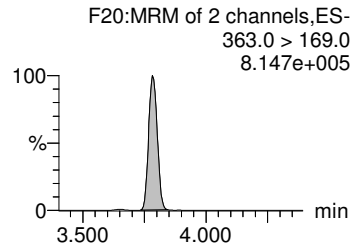
HFPO-DA



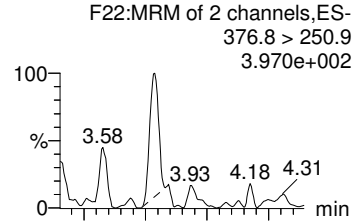


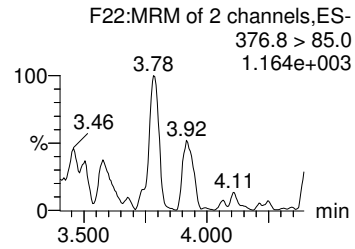
PFHpA



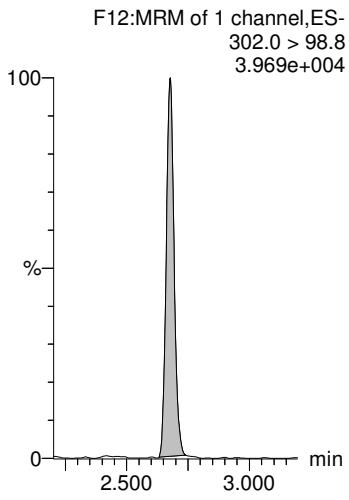


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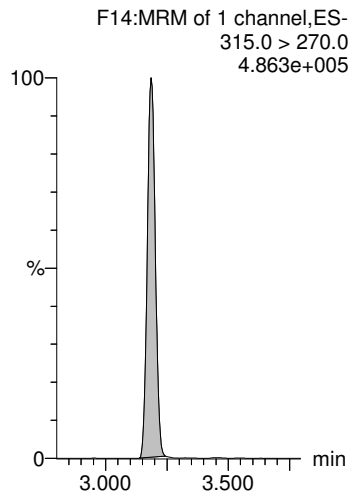




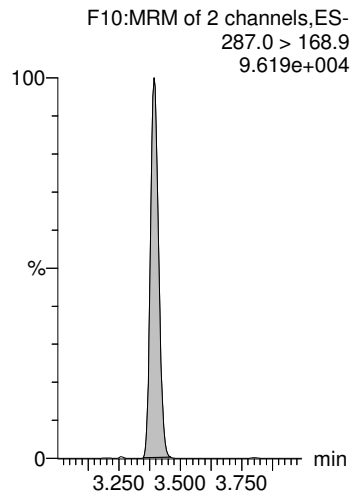
13C3-PFBS-EIS



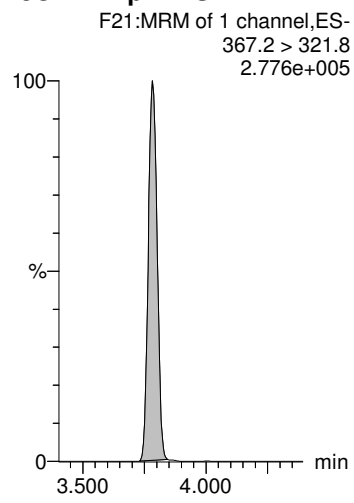
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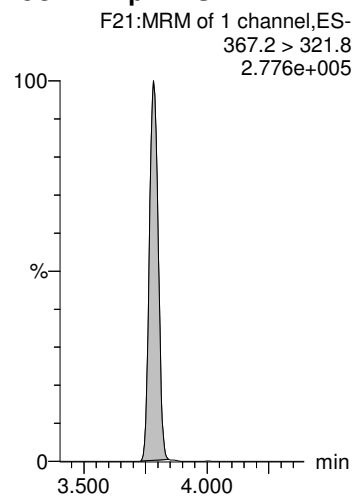
13C3-HFPO-DA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS



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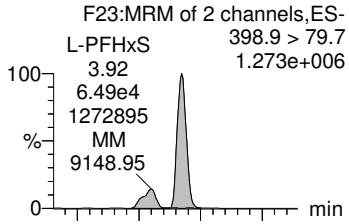
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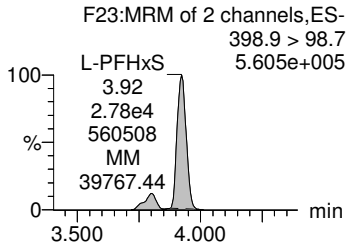
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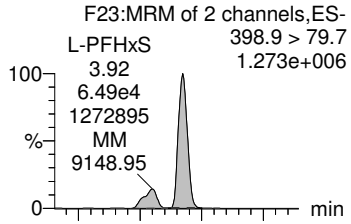
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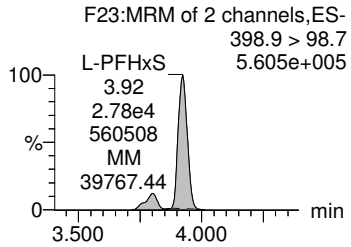
L-PFHxS



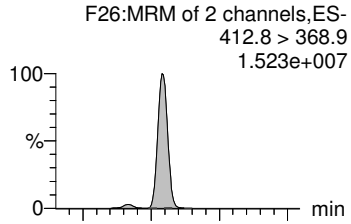


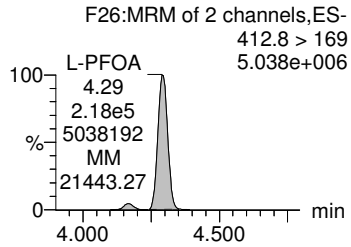
Total PFHxS



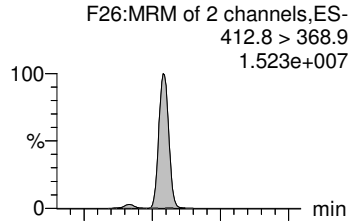


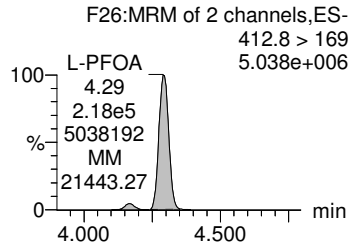
L-PFOA



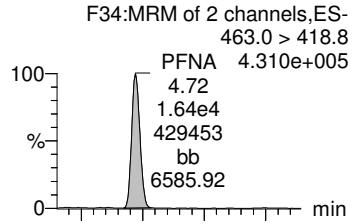


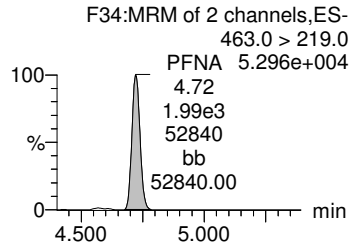
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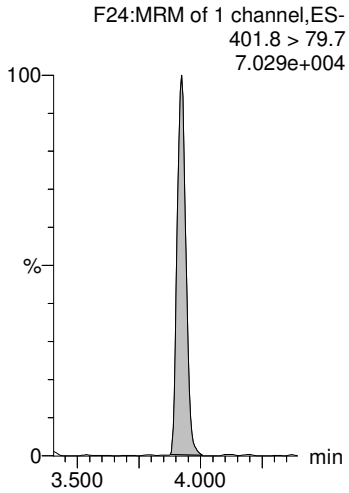


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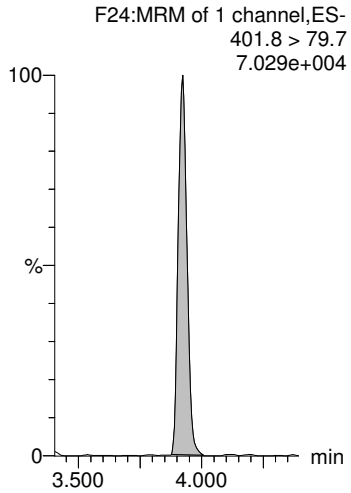




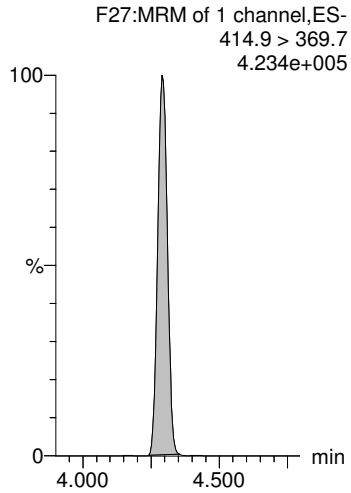
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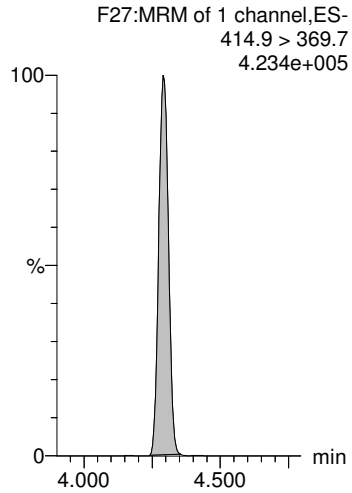
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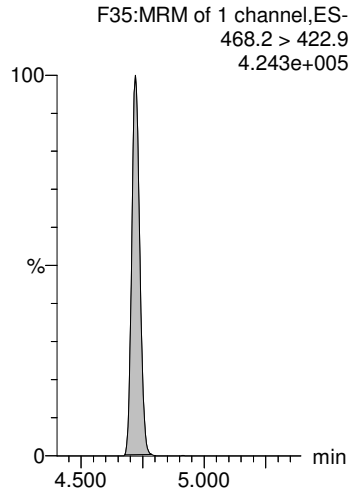
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13C2-PFOA-EIS



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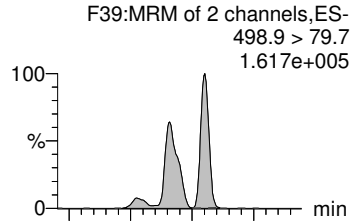
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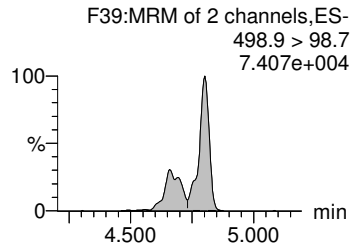
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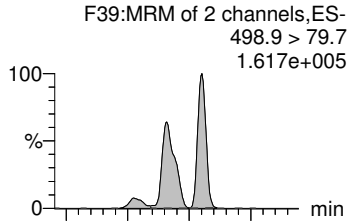
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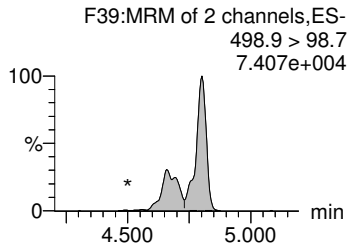
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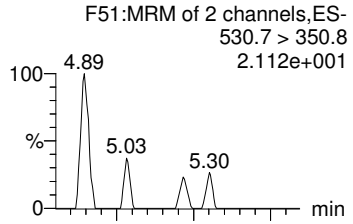


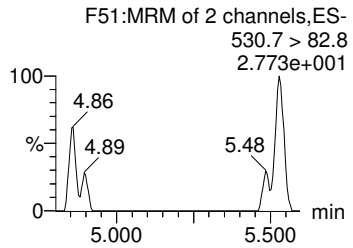
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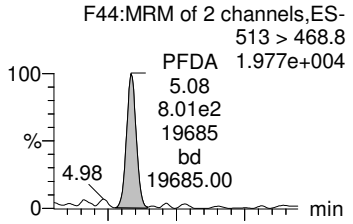


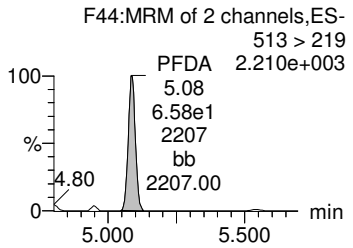
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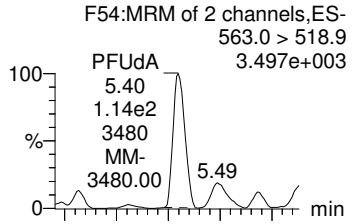


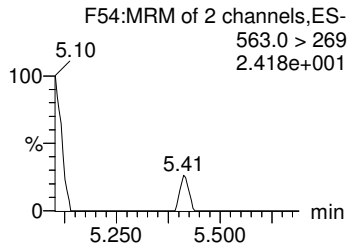
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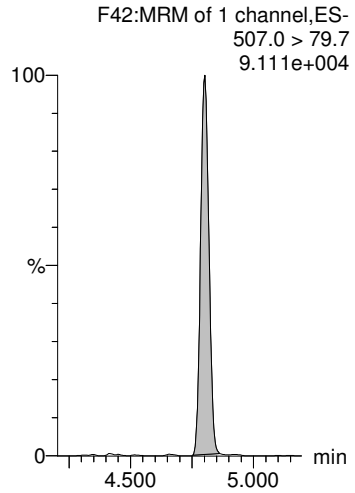


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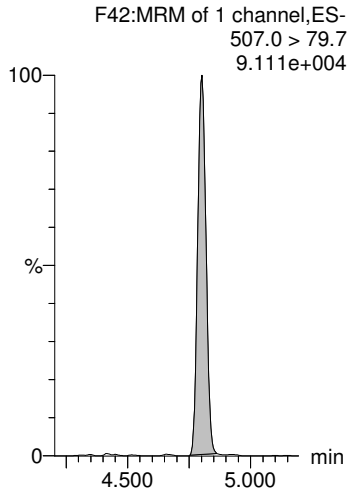




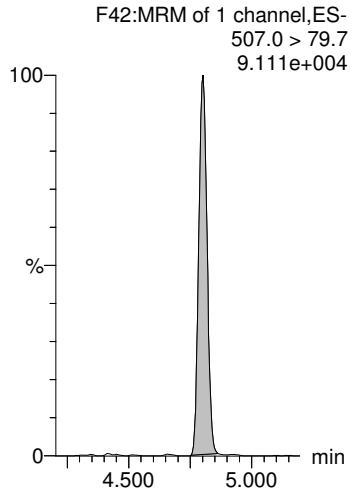
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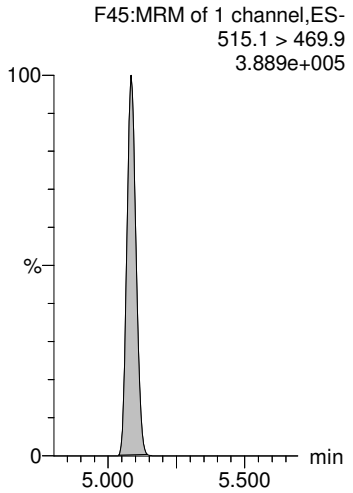
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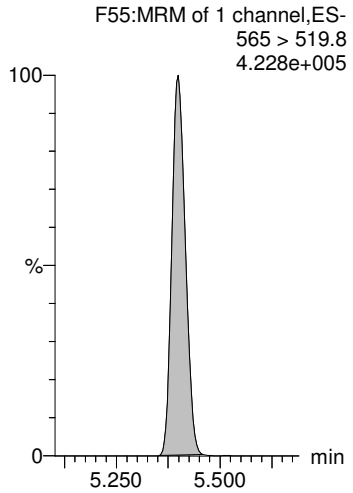
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13C2-PFDA-EIS



13C2-PFUdA-EIS



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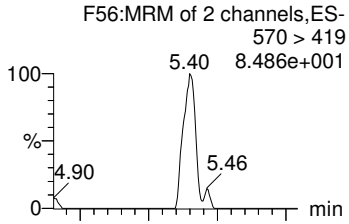
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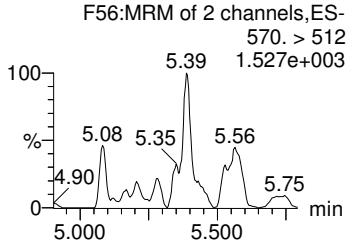
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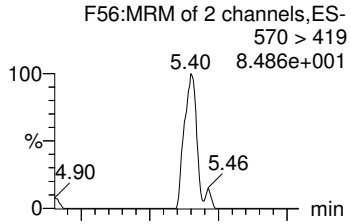
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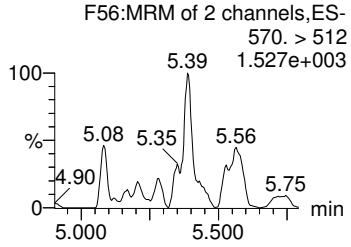
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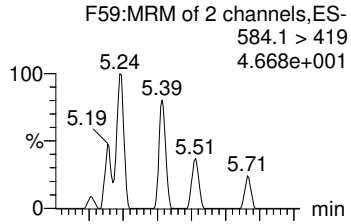


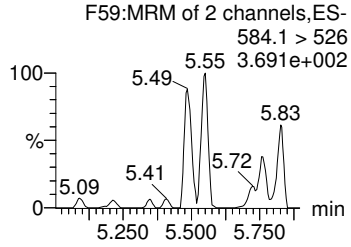
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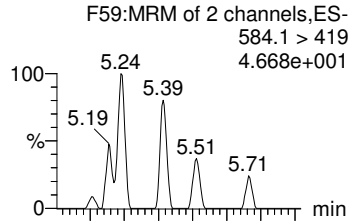


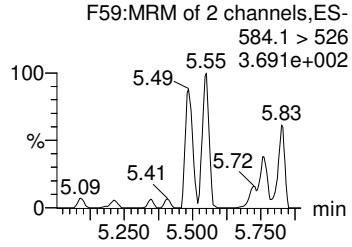
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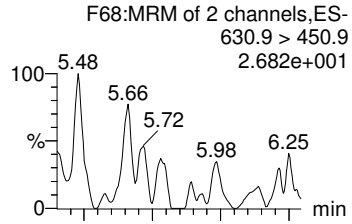


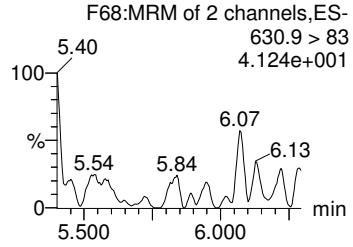
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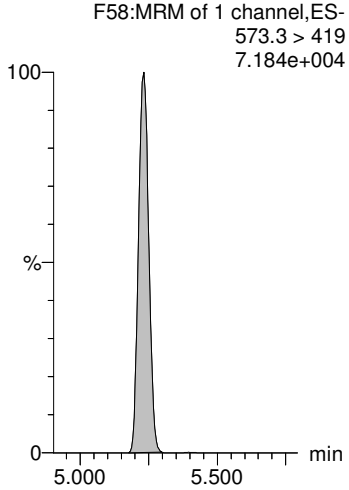


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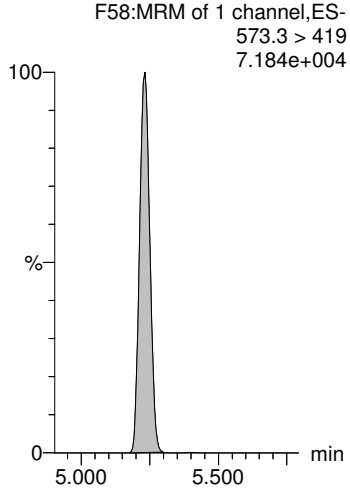




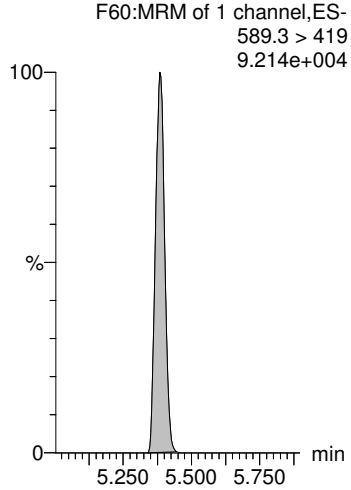
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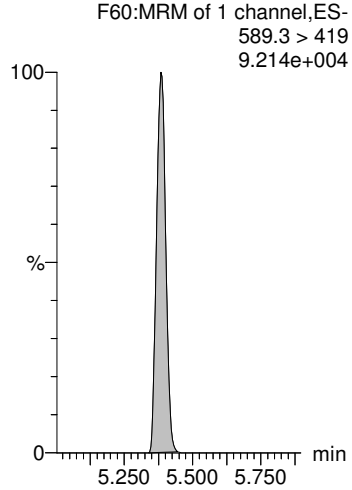
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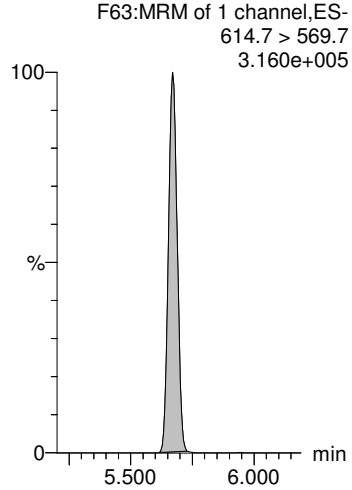
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13C2-PFDoA-EIS



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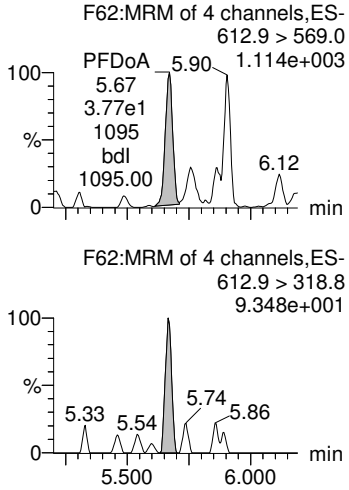
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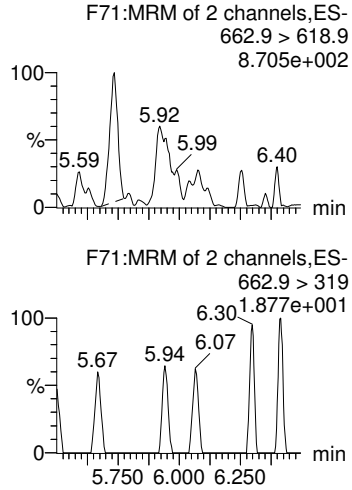
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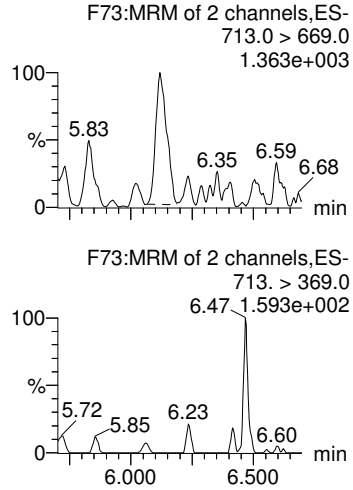
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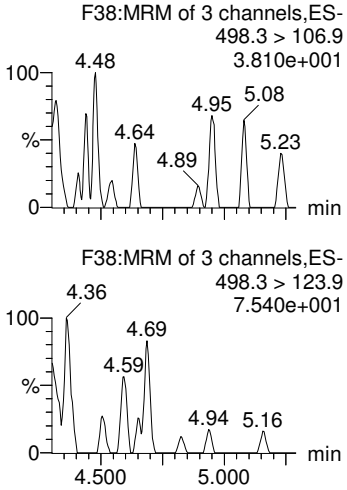
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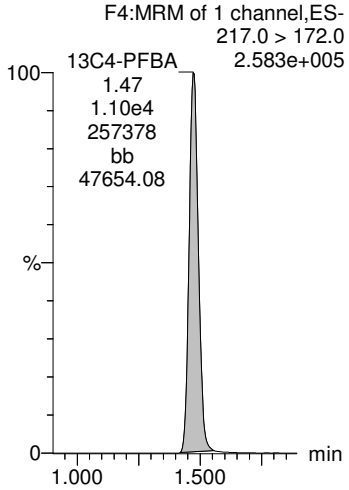
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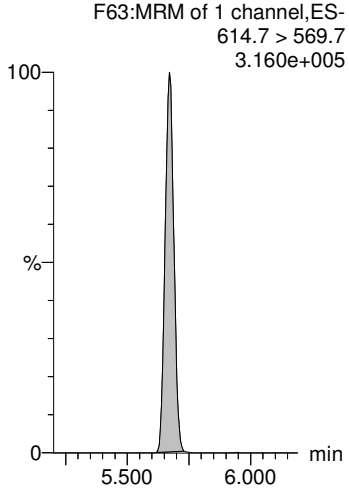
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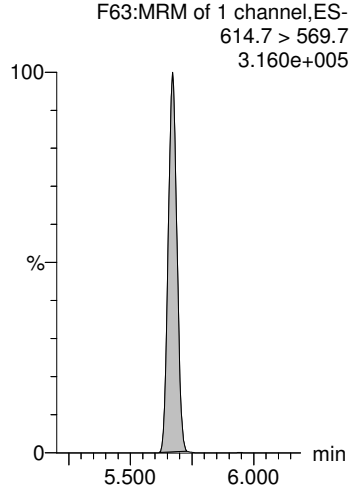
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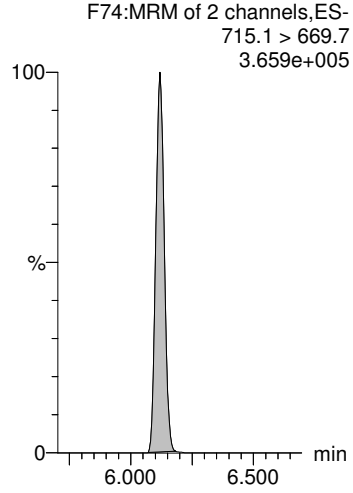
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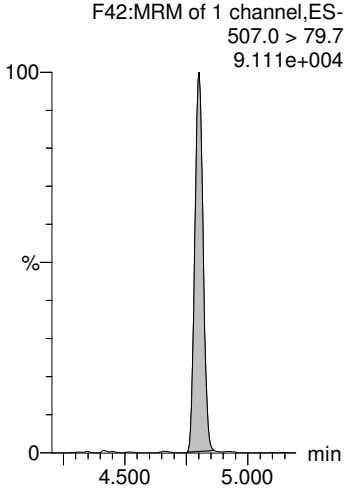
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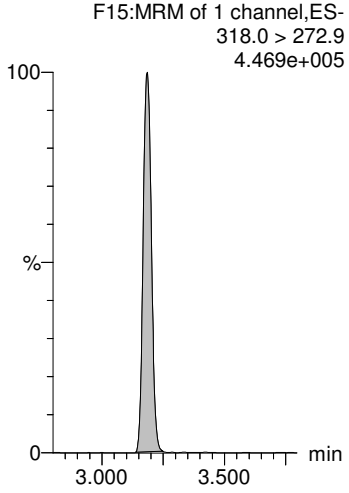
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13C8-PFOS-EIS



13C5-PFHxA



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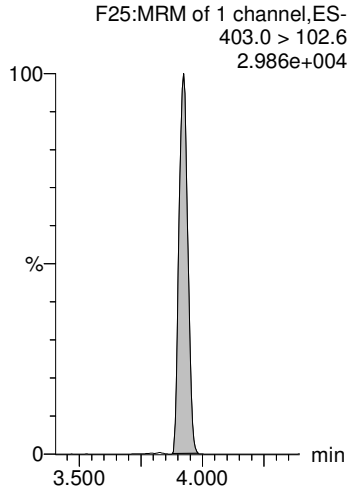
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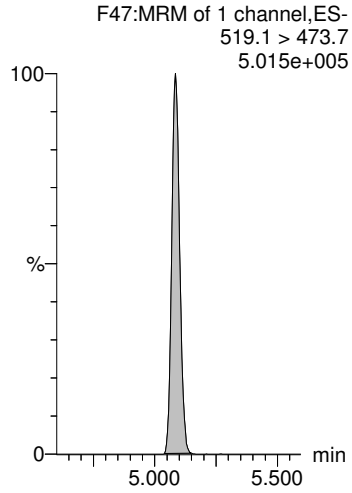
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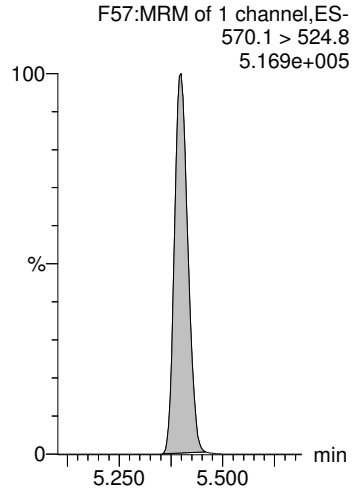
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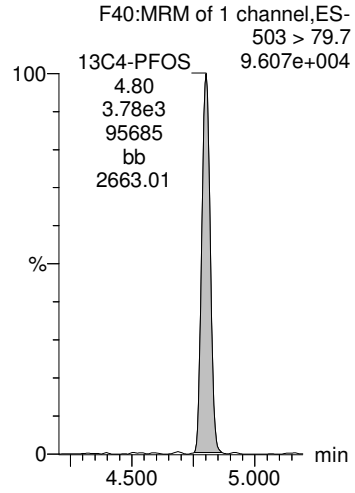
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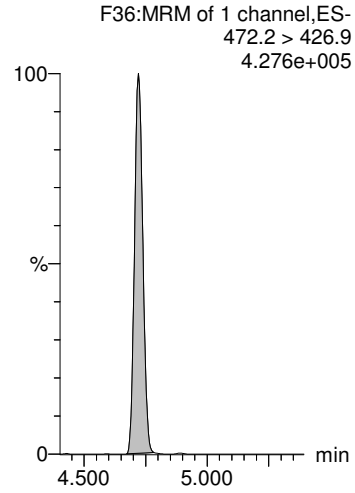
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Name: 200225P1-57, Date: 26-Feb-2020, Time: 03:46:59, ID: 2000314-06@5X I006MW01S-20200212 0.2551, Description: I006MW01S-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	7	PFHxA	313.0 > 269.0	231848.984	4121.923	0.255		3.13	703.097	3085.6		NO	16.310	NO
2	11	PFHpA	363.0 > 318.9	185539.094	2617.150	0.255		3.72	886.170	3276.1		NO	31.171	NO
3	1...	13C5-PFHxA	318.0 > 272.9	4063.925	4063.925	0.255	1.000	3.13	12.500	49.0	100.0	NO		
4	57	13C2-PFHxA-EIS	315.0 > 270.0	4121.923		0.255	1794.782	3.13	4121.923	9.0	18.4	YES		
5	59	13C4-PFHpA-EIS	367.2 > 321.8	2617.150		0.255	1233.447	3.72	2617.150	8.3	17.0	YES		
6	-1													

BR 2/28/2020

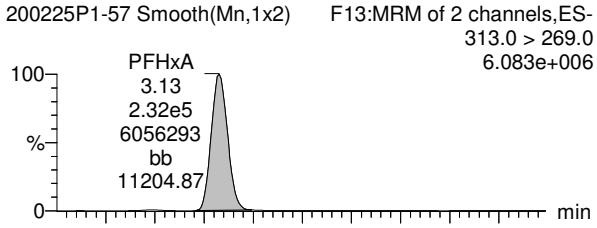
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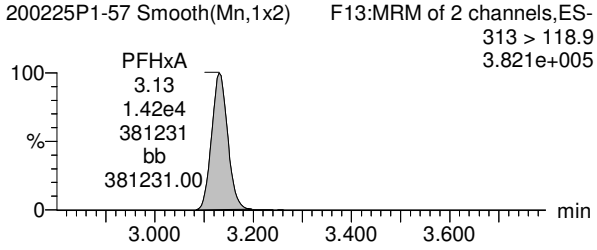
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Printed: Friday, February 28, 2020 12:13:21 Pacific Standard Time

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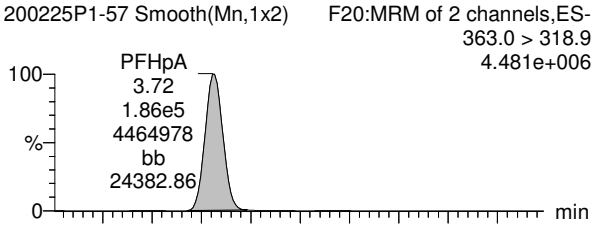
Name: 200225P1-57, Date: 26-Feb-2020, Time: 03:46:59, ID: 2000314-06@5X I006MW01S-20200212 0.2551, Description: I006MW01S-20200212

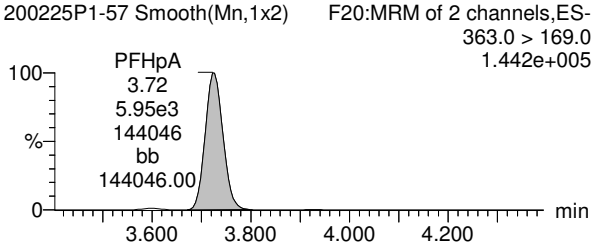
PFHxA



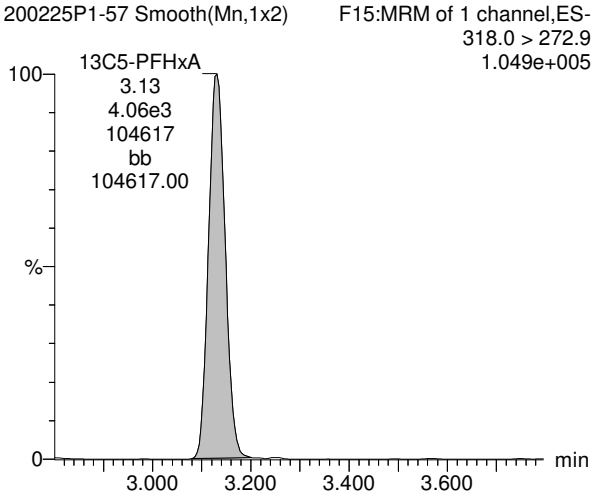


PFHpA

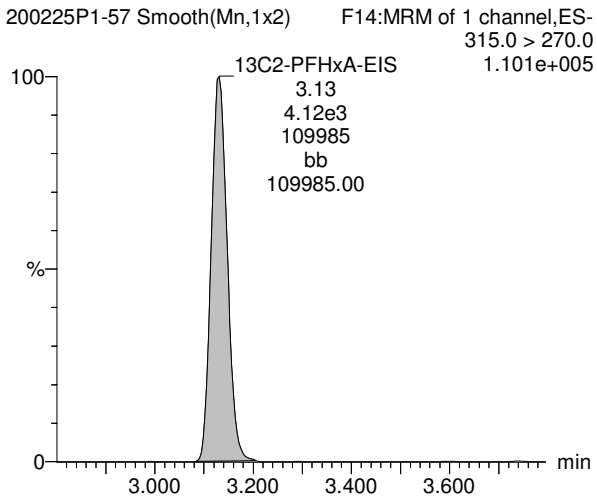




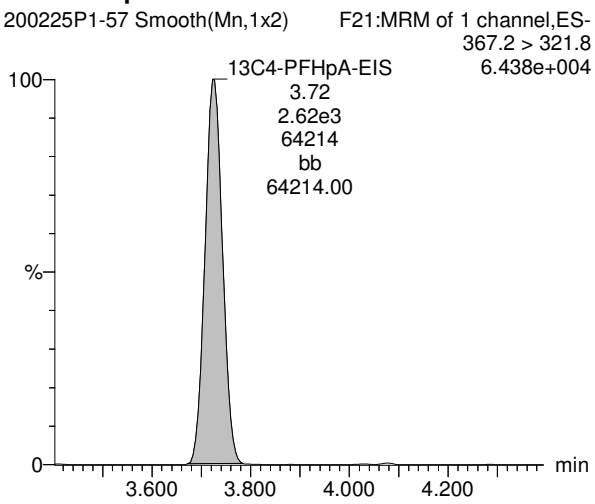
13C5-PFHxA



13C2-PFHxA-EIS



13C4-PFHpA-EIS



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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-57-59.qld

Last Altered: Friday, February 28, 2020 12:17:10 Pacific Standard Time
Printed: Friday, February 28, 2020 12:18:53 Pacific Standard Time

Name: 200225P1-59, Date: 26-Feb-2020, Time: 04:07:59, ID: 2000314-07 I006MW08S-20200212 0.25052, Description: I006MW08S-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7	3.56e4	1.38e3	0.251		2.62	2.62	322	556.7756		3.242	NO
2	7	PFHxA	313.0 > 269.0	2.30e5	2.04e4	0.251		3.13	3.13	141	629.7592		16.383	NO
3	9	HFPO-DA	285.1 > 168.9		3.61e3	0.251		3.34						YES
4	11	PFHpA	363.0 > 318.9	4.21e4	1.52e4	0.251		3.73	3.73	34.5	111.6694		32.650	NO
5	12	ADONA	376.8 > 250.9		1.52e4	0.251		3.82						YES
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.38e3		0.251	120.043	2.66	2.62	1380	45.9898	92.2		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	2.04e4		0.251	1794.782	3.13	3.13	20400	45.2783	90.7		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.61e3		0.251	314.205	3.39	3.34	3610	45.8247	91.8		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.52e4		0.251	1233.447	3.74	3.73	15200	49.3491	98.9		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.52e4		0.251	1233.447	3.74	3.73	15200	49.3491	98.9		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	1.03e5	2.63e3	0.251		3.86	3.86	490	1920.0323		2.189	NO
13	1...	Total PFHxS	398.9 > 79.7	1.03e5	2.63e3	0.251		3.93		490	1920.0323			
14	16	L-PFOA	412.8 > 368.9	8.58e4	1.96e4	0.251		4.23	4.23	54.7	194.0455		2.746	NO
15	1...	Total PFOA	412.8 > 368.9	8.58e4	1.96e4	0.251		4.60		54.7	194.0455			
16	21	PFNA	463.0 > 418.8	9.82e2	1.82e4	0.251		4.67	4.67	0.673	1.7521		8.686	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.63e3		0.251	273.316	3.86	3.86	2630	38.3773	76.9		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.63e3		0.251	273.316	3.86	3.86	2630	38.3773	76.9		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.96e4		0.251	1593.567	4.23	4.23	19600	49.1029	98.4		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.96e4		0.251	1593.567	4.23	4.23	19600	49.1029	98.4		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.82e4		0.251	1492.001	4.67	4.67	18200	48.7914	97.8		
22	-1													
23	23	L-PFOS	498.9 > 79.7	4.83e4	3.31e3	0.251		4.75	4.61	182	778.5254		2.575	NO
24	1...	Total PFOS	498.9 > 79.7	4.83e4	3.31e3	0.251		5.13		182	778.5254			
25	25	9Cl-PF30NS	530.7 > 350.8		3.31e3	0.251		4.96						YES
26	26	PFDA	513 > 468.8		1.95e4	0.251		5.04						YES
27	33	PFUdA	563.0 > 518.9		1.76e4	0.251		5.35						YES
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.31e3		0.251	291.759	4.75	4.75	3310	45.3235	90.8		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.31e3		0.251	291.759	4.75	4.75	3310	45.3235	90.8		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.31e3		0.251	291.759	4.75	4.75	3310	45.3235	90.8		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.95e4		0.251	1635.176	5.04	5.04	19500	47.5577	95.3		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.76e4		0.251	1617.090	5.35	5.35	17600	43.3562	86.9		
33	-1													
34	29	L-MeFOSAA	570 > 419		3.70e3	0.251		5.18						YES
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	3.70e3	0.251		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		4.41e3	0.251		5.33						YES

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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-57-59.qld

Last Altered: Friday, February 28, 2020 12:17:10 Pacific Standard Time
Printed: Friday, February 28, 2020 12:18:53 Pacific Standard Time

Name: 200225P1-59, Date: 26-Feb-2020, Time: 04:07:59, ID: 2000314-07 I006MW08S-20200212 0.25052, Description: I006MW08S-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	4.41e3	0.251		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.44e4	0.251		5.56						YES
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.70e3		0.251	330.310	5.18	5.18	3700	44.7527	89.7		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.70e3		0.251	330.310	5.18	5.18	3700	44.7527	89.7		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	4.41e3		0.251	395.337	5.32	5.33	4410	44.5383	89.3		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	4.41e3		0.251	395.337	5.32	5.33	4410	44.5383	89.3		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.44e4		0.251	1686.253	5.62	5.62	14400	34.0878	68.3		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.44e4	0.251		5.62						YES
46	39	PFTrDA	662.9 > 618.9		1.44e4	0.251		5.88						YES
47	41	PFTeDA	713.0 > 669.0		1.55e4	0.251		6.07						YES
48	1...	TDCA	498.3>106.9			0.251		4.59						YES
49	99	13C4-PFBA	217.0 > 172.0	1.30e4	1.30e4	0.251	1.000	1.42	1.41	12.5	49.8962	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.44e4		0.251	1686.253	5.62	5.62	14400	34.0878	68.3		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.44e4		0.251	1686.253	5.62	5.62	14400	34.0878	68.3		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.55e4		0.251	1896.410	6.05	6.07	15500	32.6295	65.4		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.31e3		0.251	291.759	4.75	4.75	3310	45.3235	90.8		
54	1...	13C5-PFHxA	318.0 > 272.9	2.12e4	2.12e4	0.251	1.000	3.13	3.13	12.5	49.8962	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.27e3	1.27e3	0.251	1.000	3.86	3.86	12.5	49.8962	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	2.14e4	2.14e4	0.251	1.000	5.04	5.04	12.5	49.8962	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.91e4	1.91e4	0.251	1.000	5.35	5.35	12.5	49.8962	100.0		
59	1...	13C4-PFOS	503 > 79.7	4.04e3	4.04e3	0.251	1.000	4.75	4.75	12.5	49.8962	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.95e4	1.95e4	0.251	1.000	4.67	4.67	12.5	49.8962	100.0		

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Review: AMR 2/28/2020

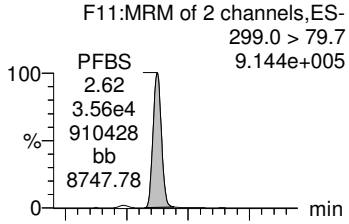
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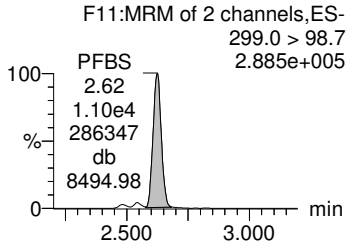
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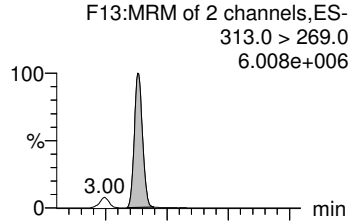
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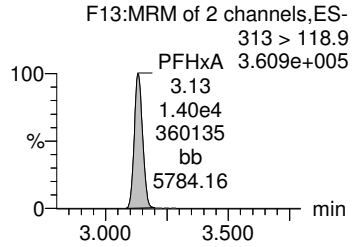
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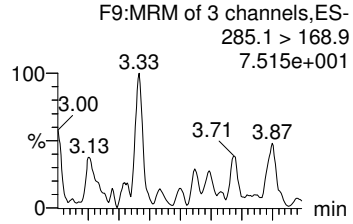


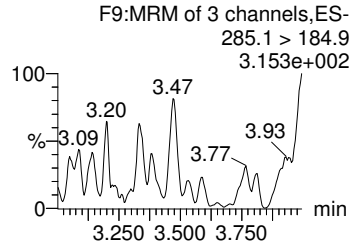
PFHxA



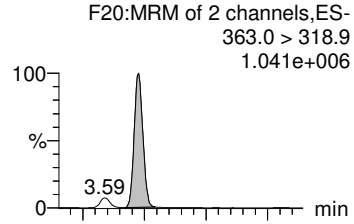


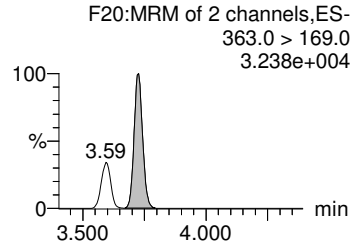
HFPO-DA



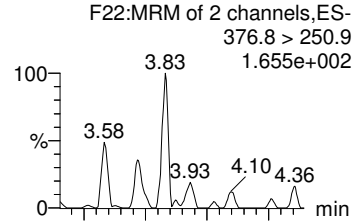


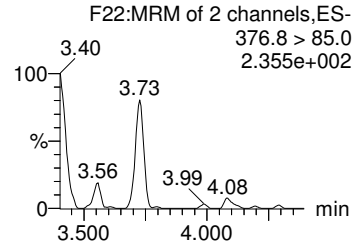
PFHpA



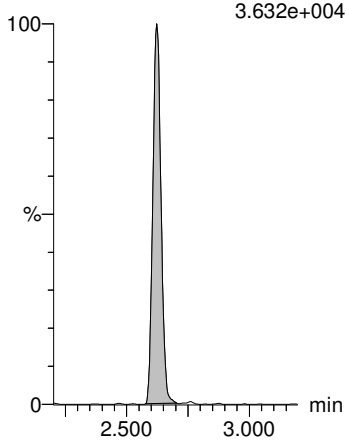


ADONA

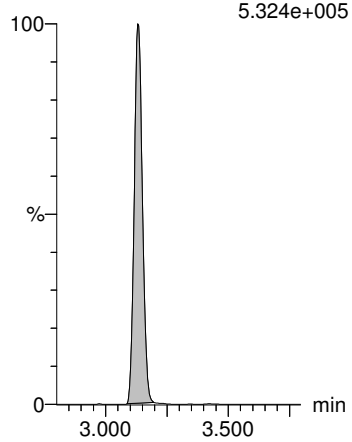




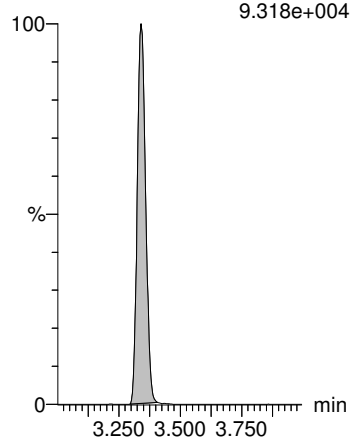
13C3-PFBS-EIS



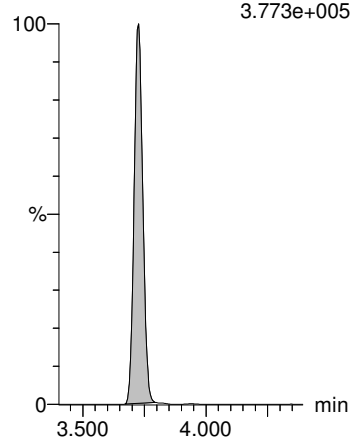
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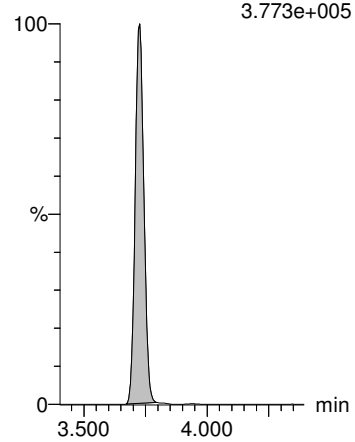
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13C4-PFHpA-EIS



13C4-PFHpA-EIS



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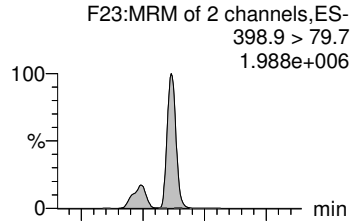
Review: AMR 2/28/2020

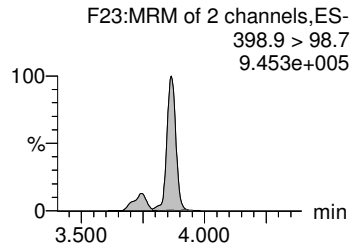
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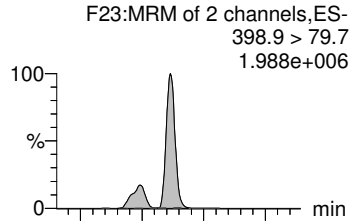
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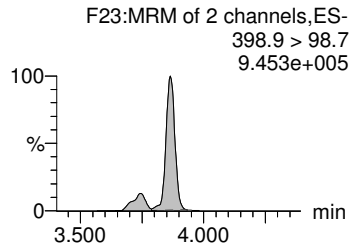
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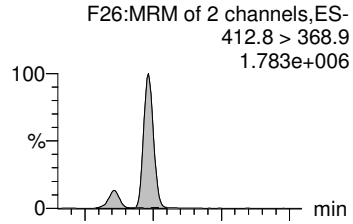


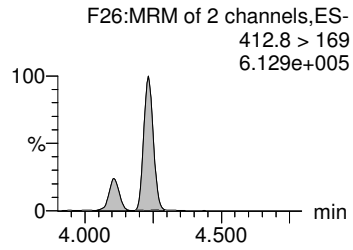
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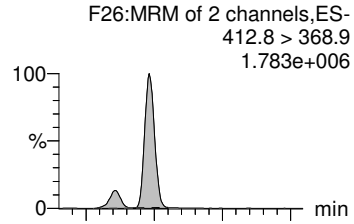


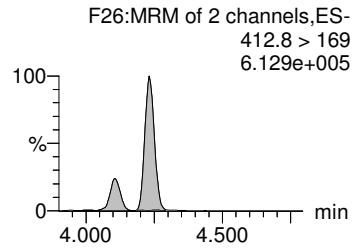
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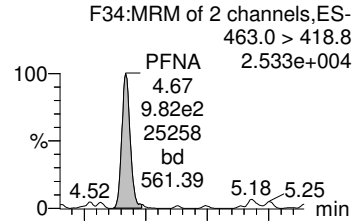


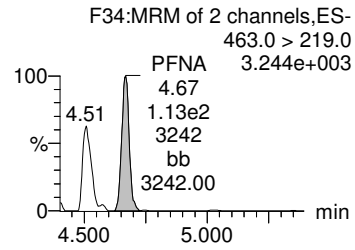
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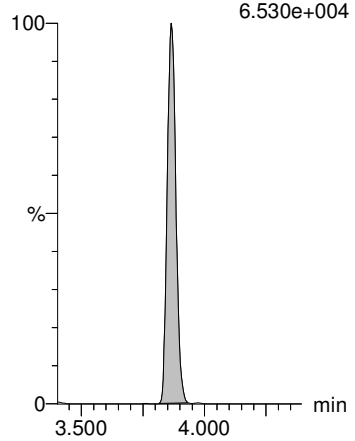


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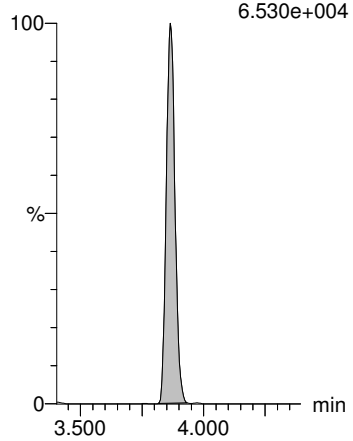




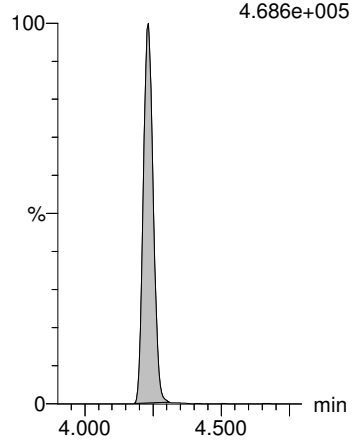
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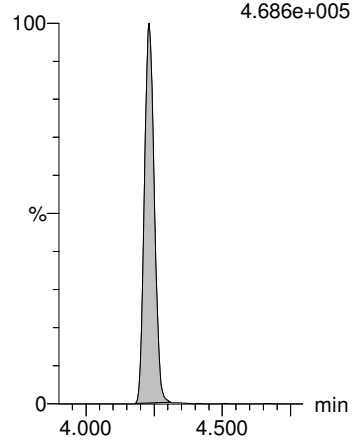
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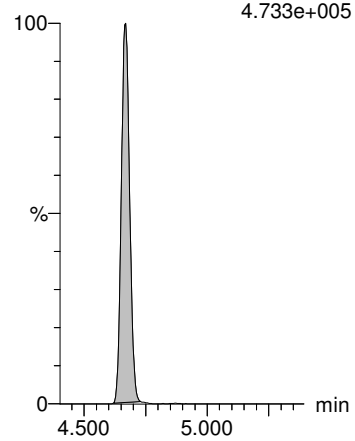
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13C2-PFOA-EIS



13C5-PFNA-EIS



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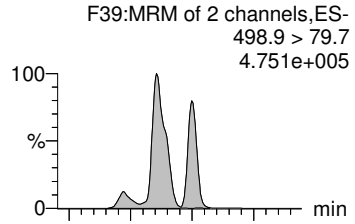
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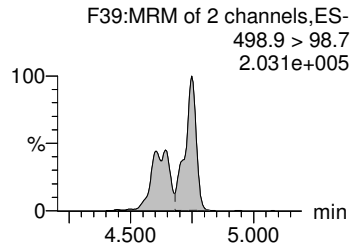
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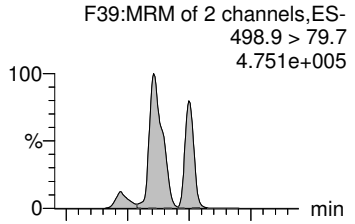
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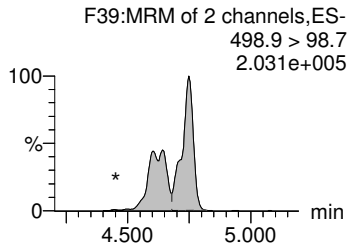
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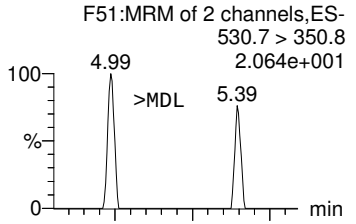


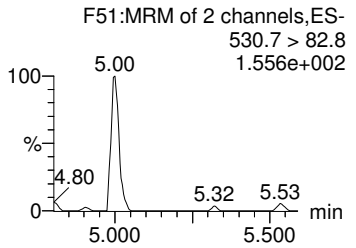
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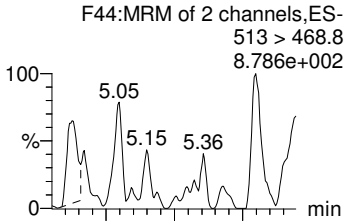


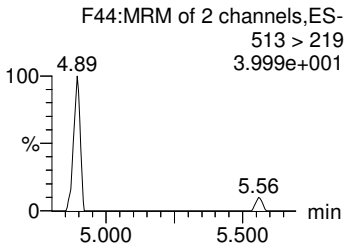
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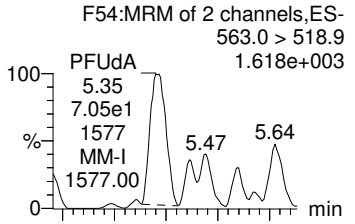


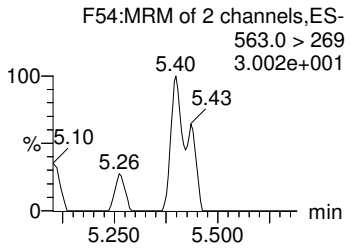
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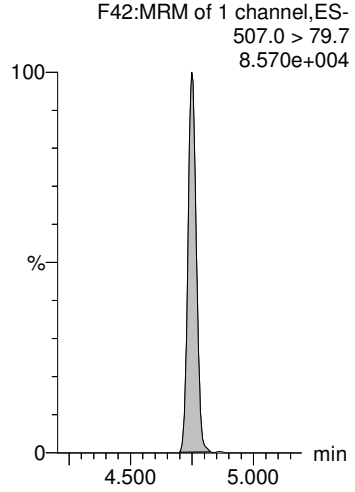


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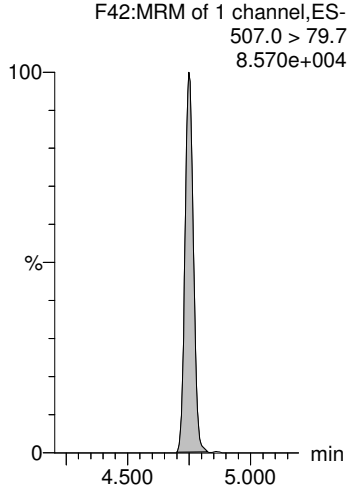




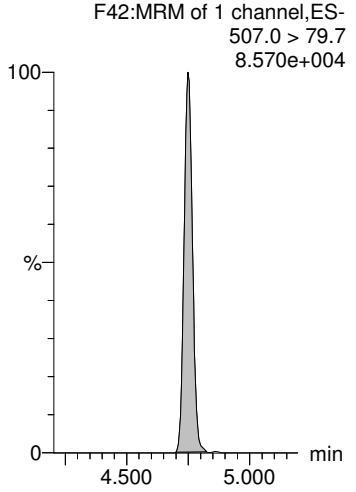
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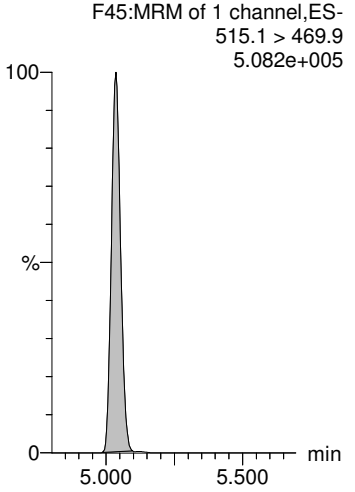
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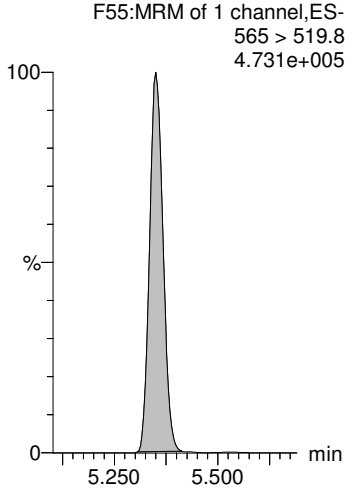
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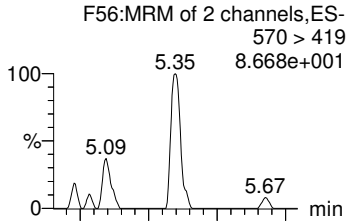
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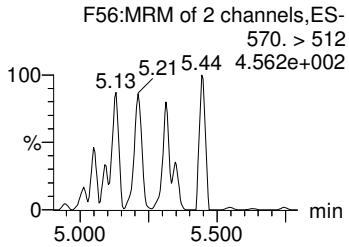
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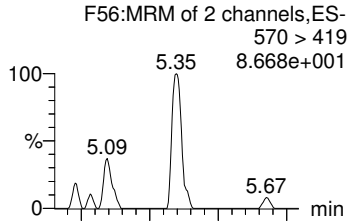
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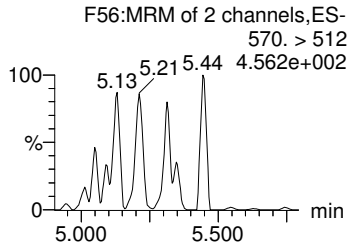
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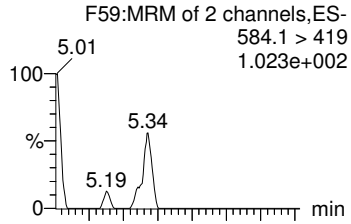


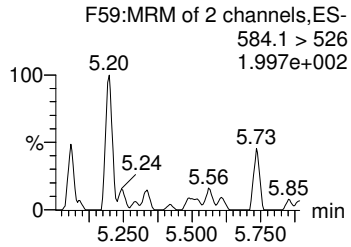
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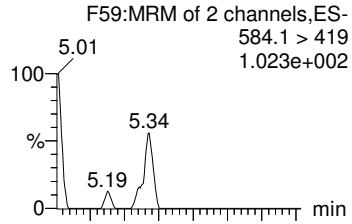


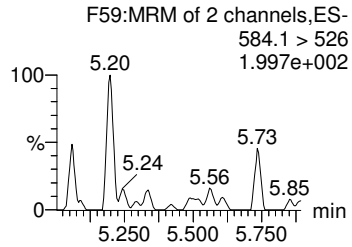
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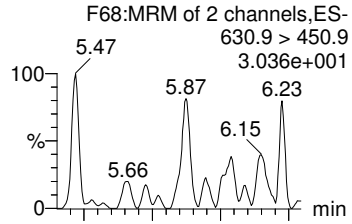


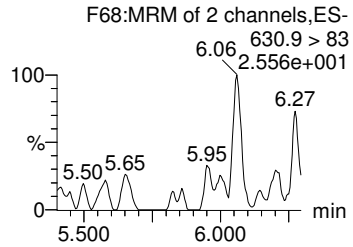
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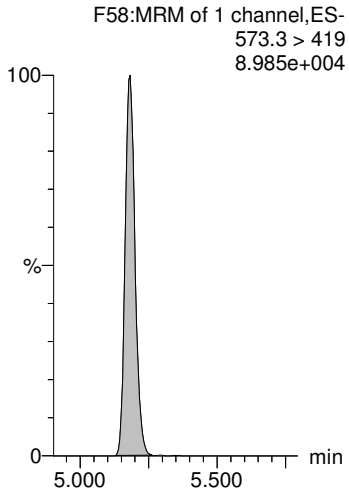


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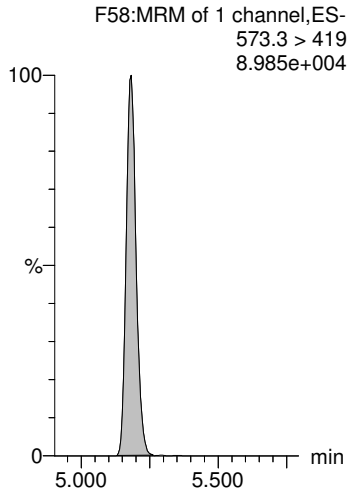




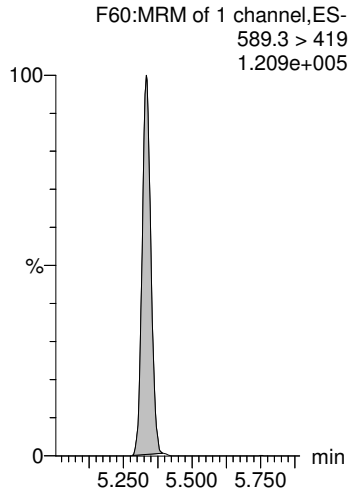
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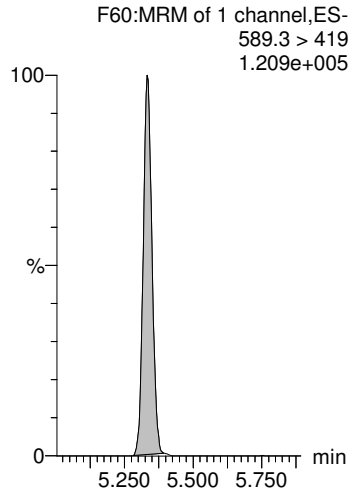
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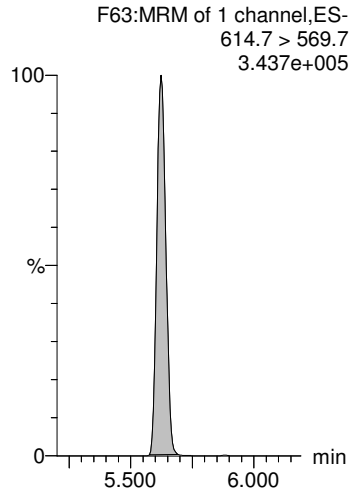
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13C2-PFDoA-EIS



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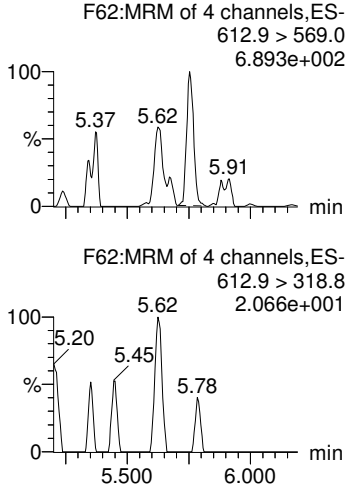
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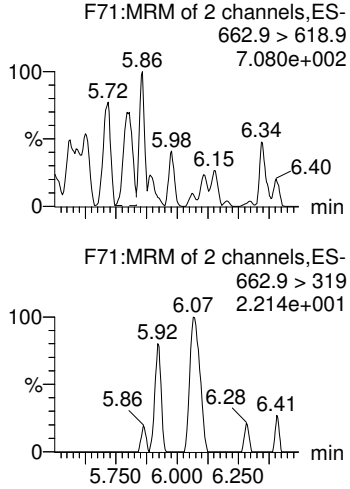
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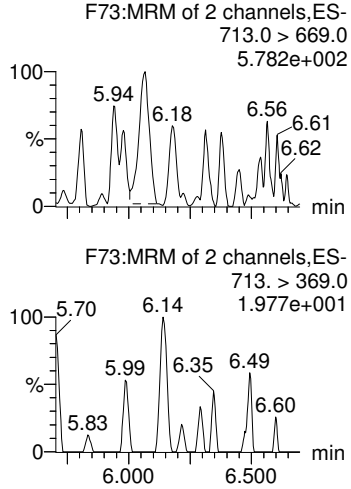
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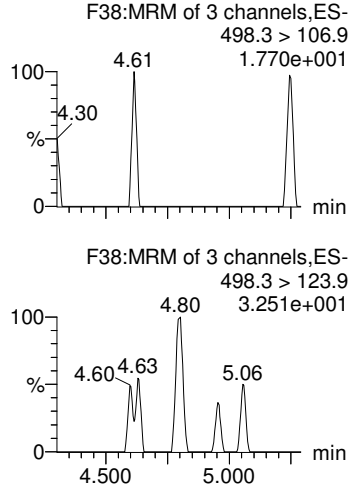
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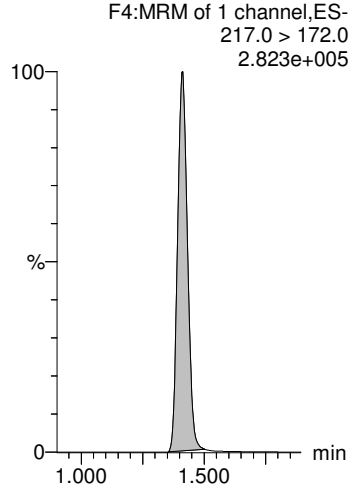
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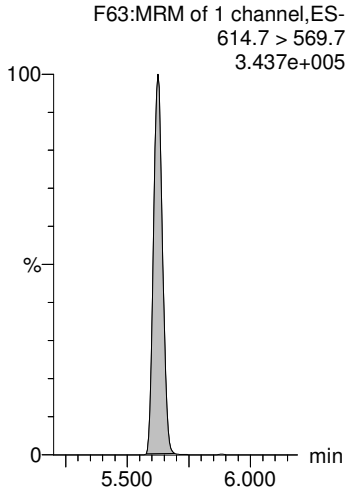
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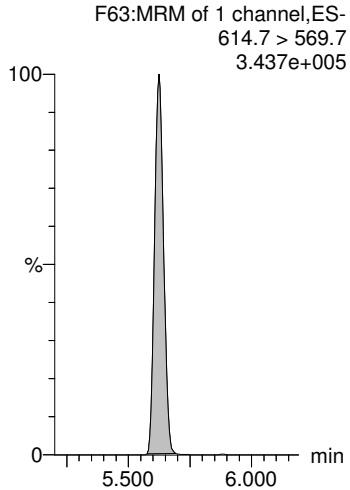
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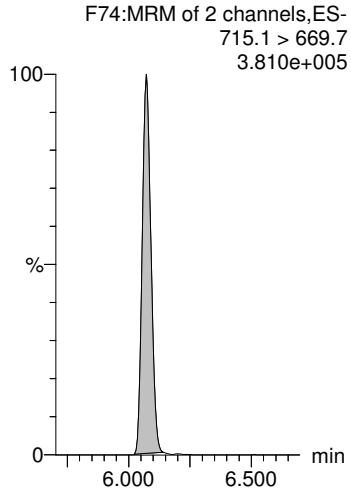
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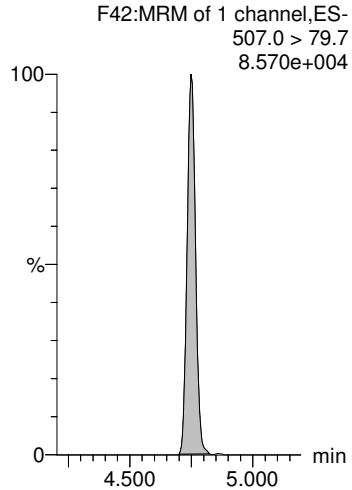
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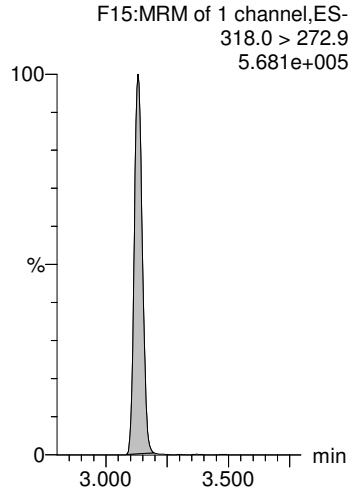
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13C8-PFOS-EIS



13C5-PFHxA



BR 2/28/2020

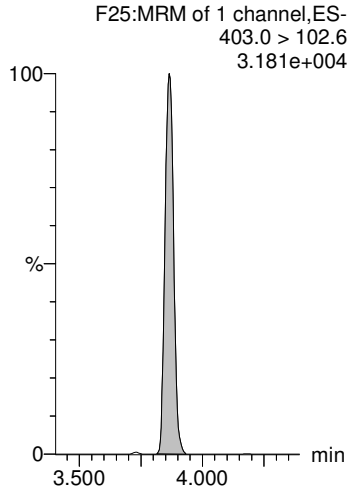
Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-57-59.qld

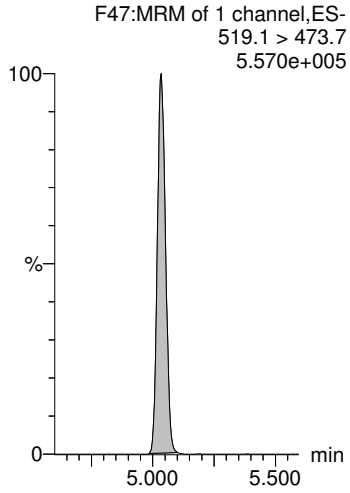
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Printed: Friday, February 28, 2020 12:18:53 Pacific Standard Time

Name: 200225P1-59, Date: 26-Feb-2020, Time: 04:07:59, ID: 2000314-07 I006MW08S-20200212 0.25052, Description: I006MW08S-20200212

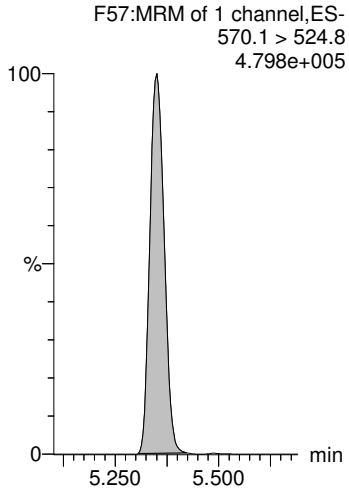
18O2-PFHxS



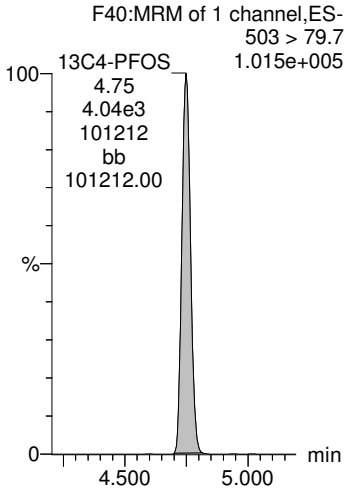
13C6-PFDA



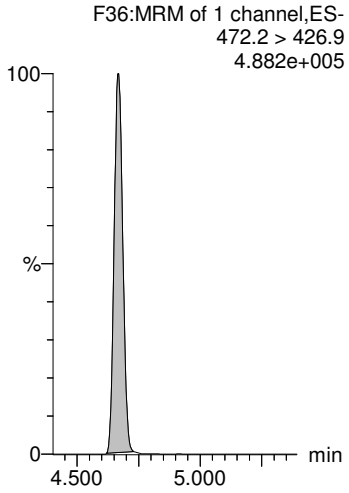
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-44.qld

Last Altered: Friday, February 28, 2020 15:13:53 Pacific Standard Time *See Dilution
Printed: Friday, February 28, 2020 15:15:37 Pacific Standard Time

Name: 200220P1-44, Date: 21-Feb-2020, Time: 00:55:45, ID: 2000314-08 BMW07S-20200212 0.2539, Description: BMW07S-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?	
1	5	PFBS	299.0 > 79.7	3.32e4	1.39e3	0.254		2.68	2.68	300	515.4625		3.180	NO	
2	7	PFHxA	313.0 > 269.0	7.64e5	2.06e4	0.254		3.19	3.19	463	2056.8462		16.809	NO	E*
3	9	HFPO-DA	285.1 > 168.9		4.03e3	0.254		3.40							
4	11	PFHpA	363.0 > 318.9	1.96e5	1.27e4	0.254		3.78	3.79	192	624.6137		22.792	NO	
5	12	ADONA	376.8 > 250.9		1.27e4	0.254		3.88							
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.39e3		0.254	114.516	2.70	2.68	1390	47.6526	96.8			
7	57	13C2-PFHxA-EIS	315.0 > 270.0	2.06e4		0.254	1636.234	3.19	3.19	20600	49.6330	100.8			
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	4.03e3		0.254	293.118	3.43	3.40	4030	54.0967	109.9			
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.27e4		0.254	1106.802	3.79	3.78	12700	45.2842	92.0			
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.27e4		0.254	1106.802	3.79	3.78	12700	45.2842	92.0			
11	-1														
12	13	L-PFHxS	398.9 > 79.7	1.90e5	2.88e3	0.254		3.92	3.92	823	3435.9057		2.381	NO	E*
13	1...	Total PFHxS	398.9 > 79.7	1.90e5	2.88e3	0.254		3.93		823	3435.9057				
14	16	L-PFOA	412.8 > 368.9	2.68e6	1.61e4	0.254		4.29	4.29	2080			2.773	NO	
15	1...	Total PFOA	412.8 > 368.9	2.68e6	1.61e4	0.254		4.60		0.000					
16	21	PFNA	463.0 > 418.8	9.80e3	1.56e4	0.254		4.72	4.72	7.87	24.9685		7.816	NO	
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.88e3		0.254	252.668	3.92	3.92	2880	44.9660	91.3			
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.88e3		0.254	252.668	3.92	3.92	2880	44.9660	91.3			
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.61e4		0.254	1527.160	4.29	4.29	16100	41.6047	84.5			
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.61e4		0.254	1527.160	4.29	4.29	16100	41.6047	84.5			
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.56e4		0.254	1373.362	4.72	4.72	15600	44.6684	90.7			
22	-1														
23	23	L-PFOS	498.9 > 79.7	7.65e4	3.64e3	0.254		4.80	4.80	263	1099.4192		2.389	NO	
24	1...	Total PFOS	498.9 > 79.7	7.65e4	3.64e3	0.254		5.13		263	1099.4192				
25	25	9Cl-PF30NS	530.7 > 350.8		3.64e3	0.254		5.01							
26	26	PFDA	513 > 468.8	8.34e2	1.93e4	0.254		5.08	5.08	0.540	1.5002		50.946	YES	
27	33	PFUdA	563.0 > 518.9		1.90e4	0.254		5.40							
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.64e3		0.254	295.805	4.80	4.80	3640	48.4524	98.4			
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.64e3		0.254	295.805	4.80	4.80	3640	48.4524	98.4			
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.64e3		0.254	295.805	4.80	4.80	3640	48.4524	98.4			
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.93e4		0.254	1356.410	5.08	5.08	19300	56.0325	113.8			
32	79	13C2-PFUdA-EIS	565 > 519.8	1.90e4		0.254	1416.449	5.40	5.40	19000	52.7180	107.1			
33	-1														
34	29	L-MeFOSAA	570 > 419		3.50e3	0.254		5.23							
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	3.50e3	0.254		5.19		0.000					
36	31	L-EtFOSAA	584.1 > 419		4.29e3	0.254		5.38							

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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-44.qld

Last Altered: Friday, February 28, 2020 15:13:53 Pacific Standard Time
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Name: 200220P1-44, Date: 21-Feb-2020, Time: 00:55:45, ID: 2000314-08 BMW07S-20200212 0.2539, Description: BMW07S-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	4.29e3	0.254		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.70e4	0.254		5.60						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.50e3		0.254	262.877	5.22	5.23	3500	52.3970	106.4		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.50e3		0.254	262.877	5.22	5.23	3500	52.3970	106.4		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	4.29e3		0.254	360.983	5.37	5.38	4290	46.8418	95.1		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	4.29e3		0.254	360.983	5.37	5.38	4290	46.8418	95.1		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.70e4		0.254	1573.093	5.67	5.67	17000	42.5650	86.5		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.70e4	0.254		5.67						
46	39	PFTrDA	662.9 > 618.9		1.70e4	0.254		5.93						
47	41	PFTeDA	713.0 > 669.0		1.84e4	0.254		6.12						
48	1...	TDCA	498.3>106.9			0.254		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.31e4	1.31e4	0.254	1.000	1.48	1.48	12.5	49.2320	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.70e4		0.254	1573.093	5.67	5.67	17000	42.5650	86.5		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.70e4		0.254	1573.093	5.67	5.67	17000	42.5650	86.5		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.84e4		0.254	1440.513	6.11	6.12	18400	50.3480	102.3		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.64e3		0.254	295.805	4.80	4.80	3640	48.4524	98.4		
54	1...	13C5-PFHxA	318.0 > 272.9	1.99e4	1.99e4	0.254	1.000	3.18	3.19	12.5	49.2320	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.20e3	1.20e3	0.254	1.000	3.92	3.92	12.5	49.2320	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	2.03e4	2.03e4	0.254	1.000	5.08	5.08	12.5	49.2320	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.97e4	1.97e4	0.254	1.000	5.40	5.40	12.5	49.2320	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.69e3	3.69e3	0.254	1.000	4.79	4.80	12.5	49.2320	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.78e4	1.78e4	0.254	1.000	4.72	4.72	12.5	49.2320	100.0		

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Review: AMR 2/28/2020

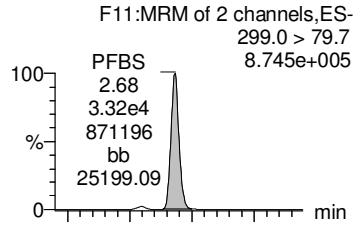
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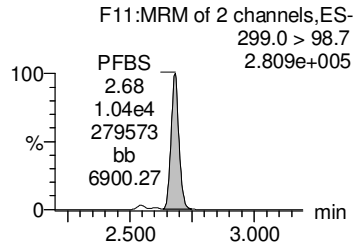
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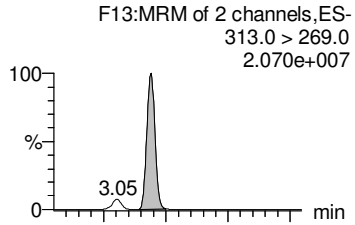
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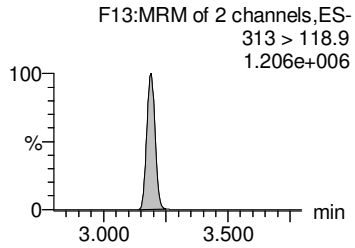
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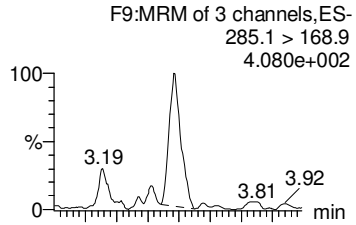


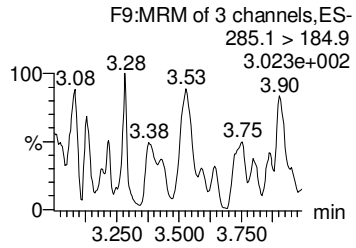
PFHxA



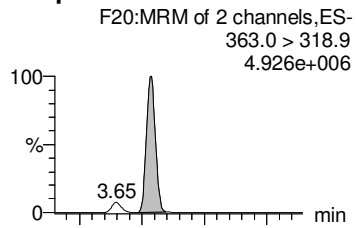


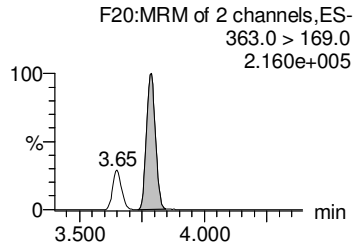
HFPO-DA



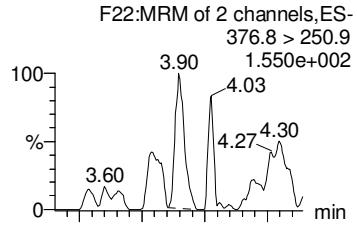


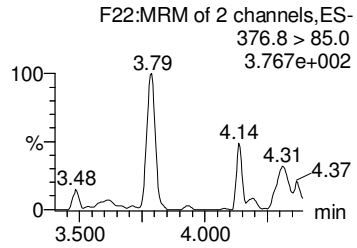
PFHpA



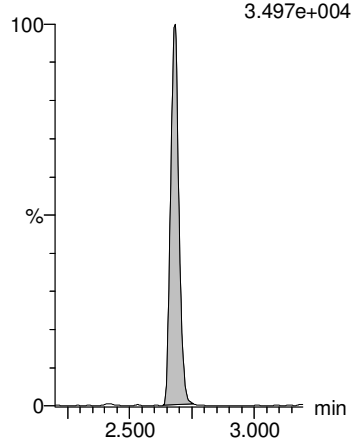


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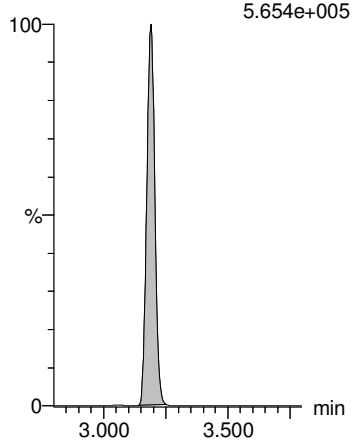




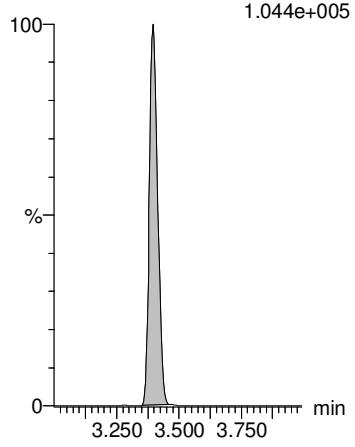
13C3-PFBS-EIS



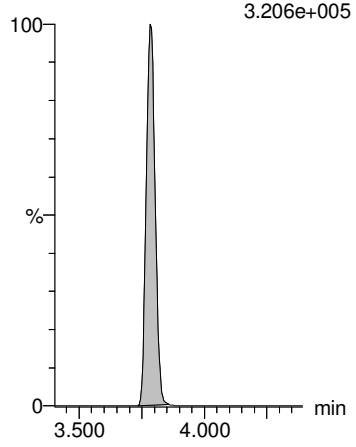
13C2-PFHxA-EIS



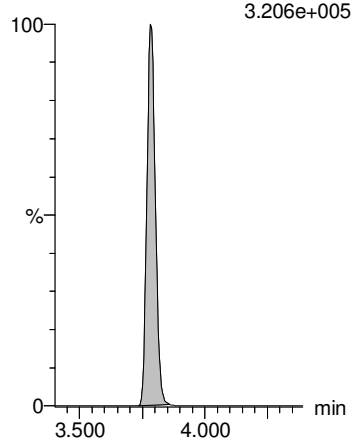
13C3-HFPO-DA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS



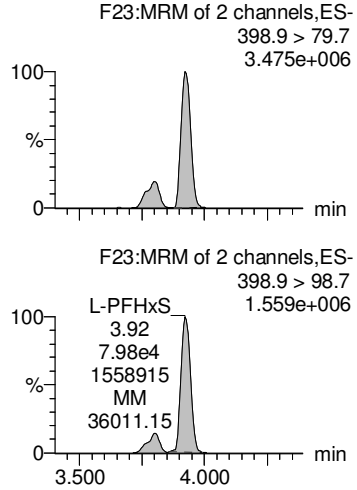
Review: AMR 2/28/2020

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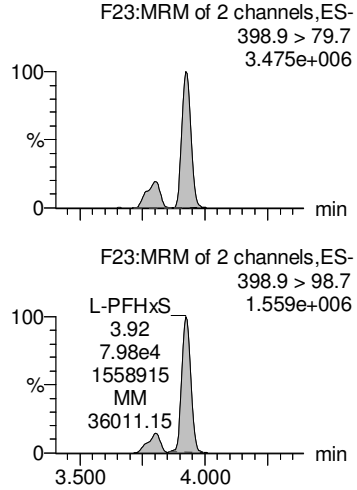
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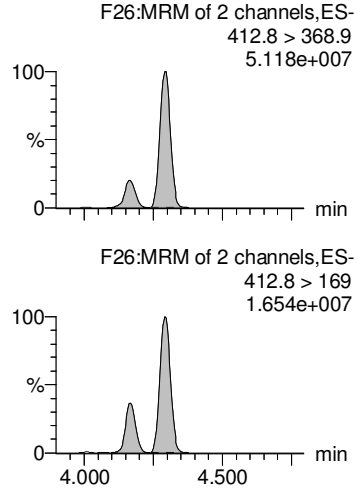
L-PFHxS



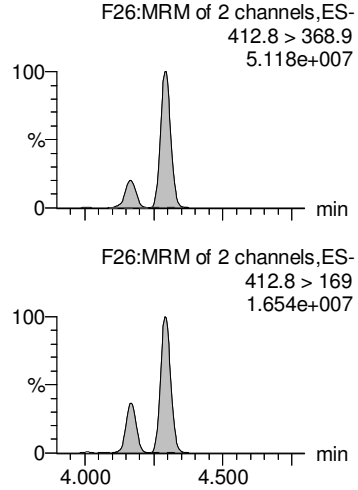
Total PFHxS



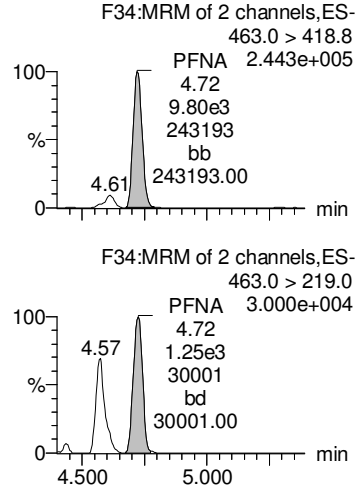
L-PFOA



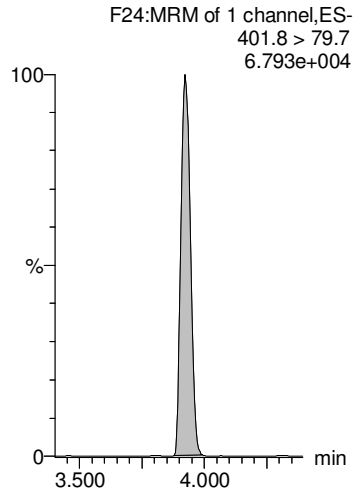
Total PFOA



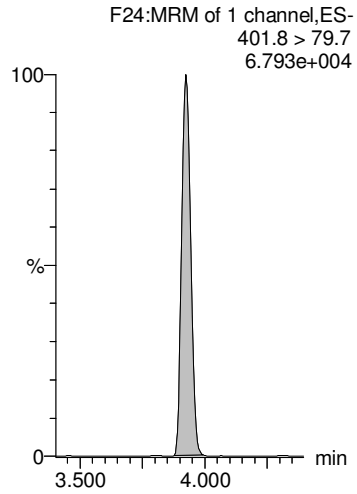
PFNA



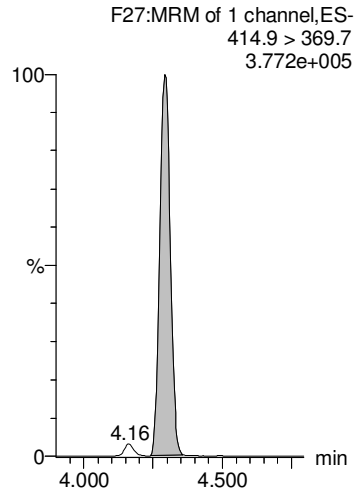
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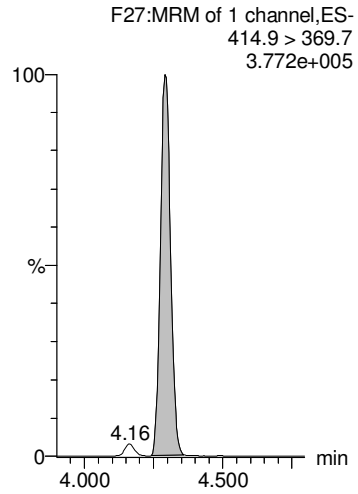
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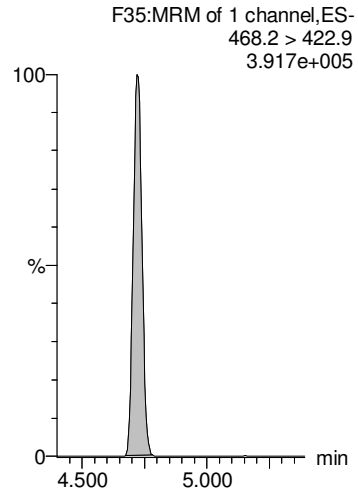
13C2-PFOA-EIS



13C2-PFOA-EIS



13C5-PFNA-EIS



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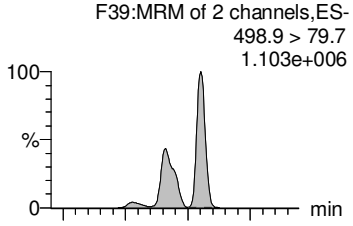
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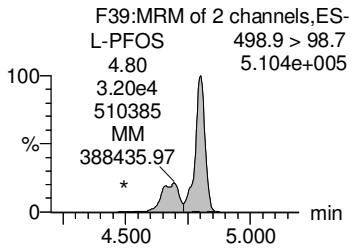
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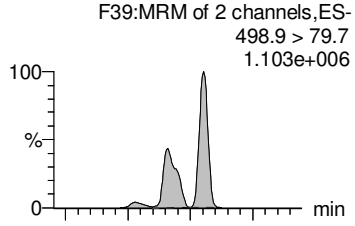
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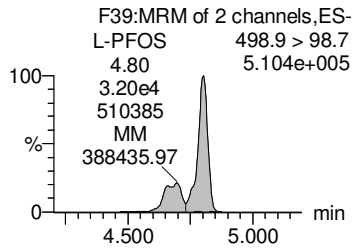
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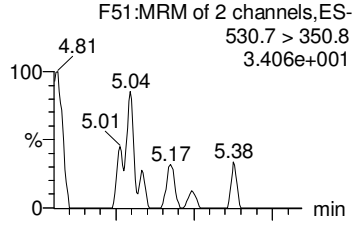


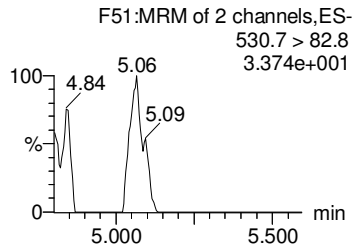
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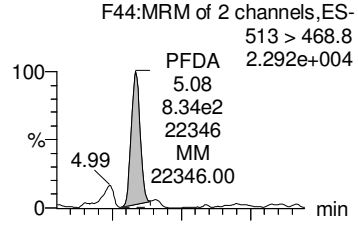


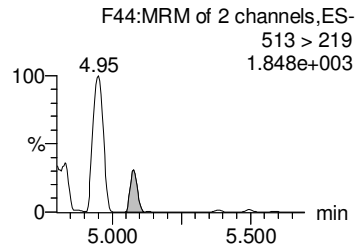
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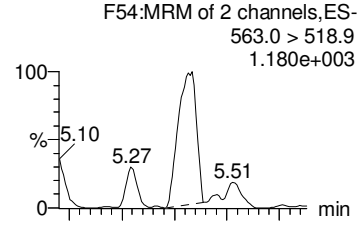


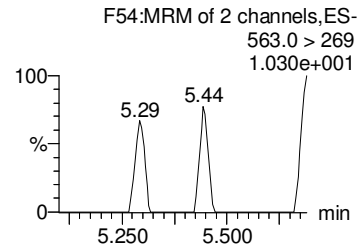
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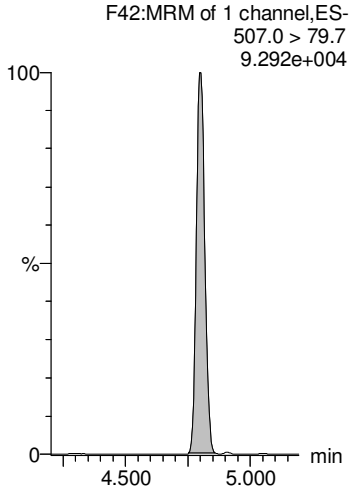


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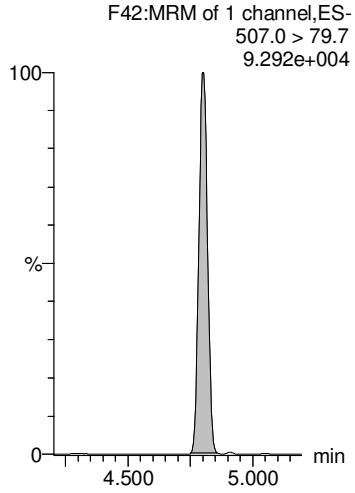




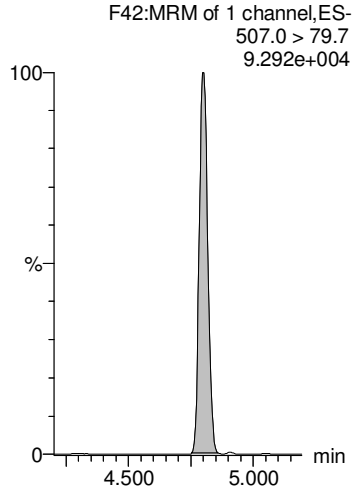
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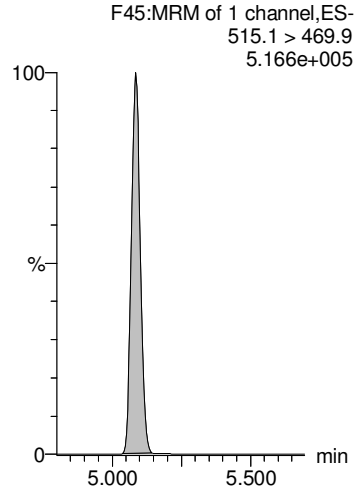
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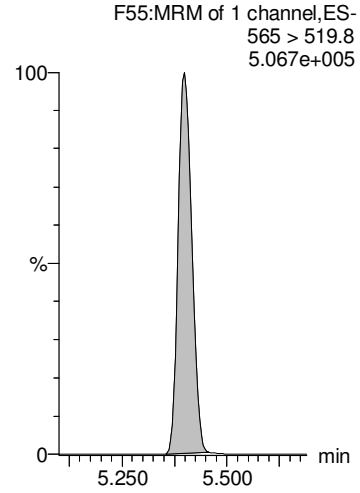
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13C2-PFDA-EIS



13C2-PFUdA-EIS



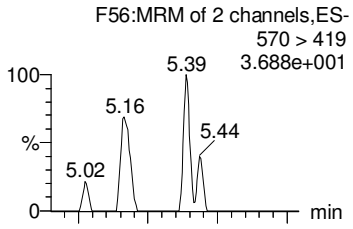
Review: AMR 2/28/2020

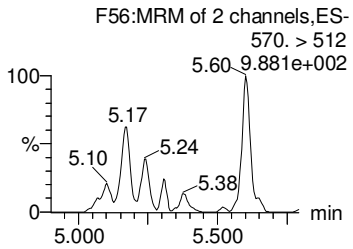
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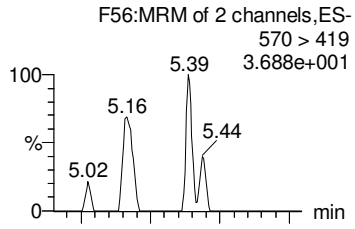
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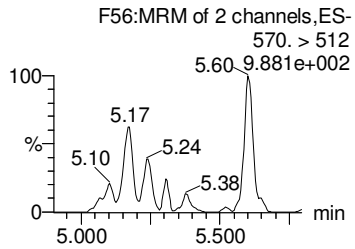
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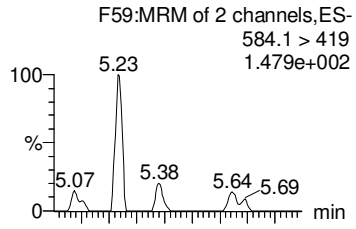


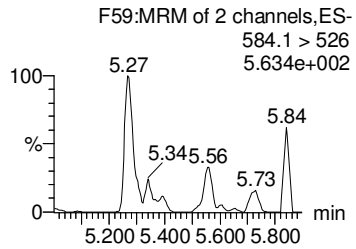
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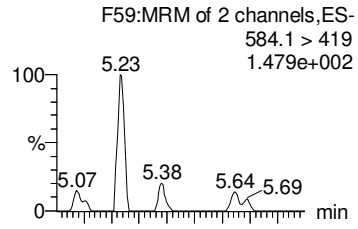


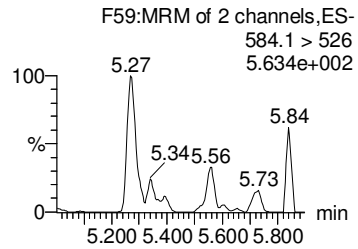
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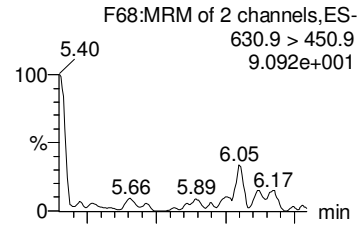


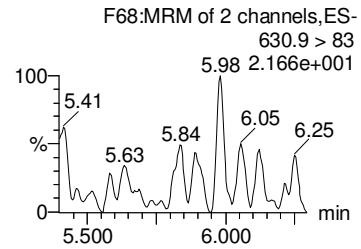
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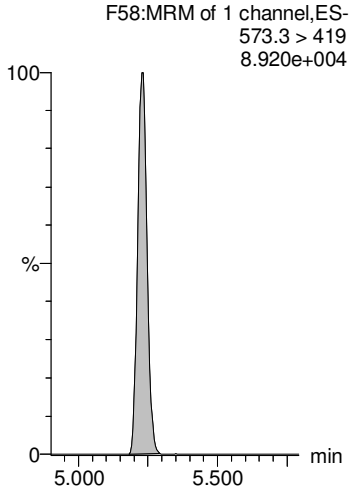


11Cl-PF30UdS

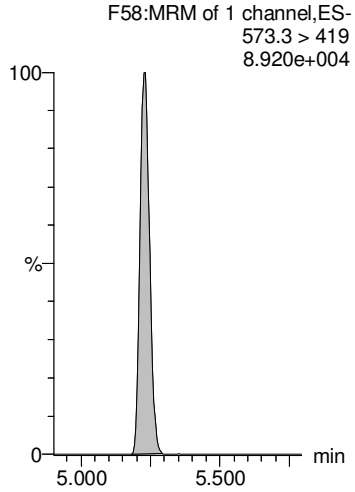




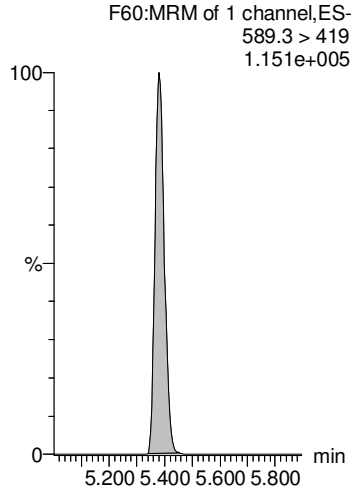
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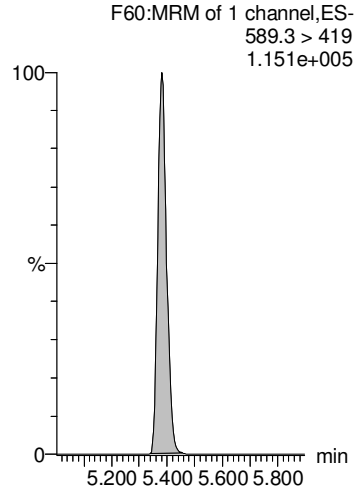
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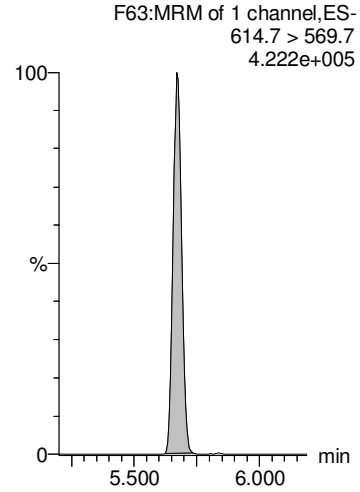
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d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS



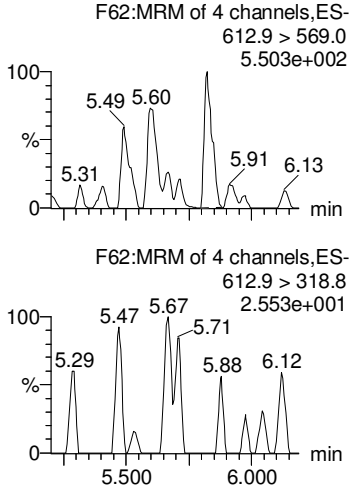
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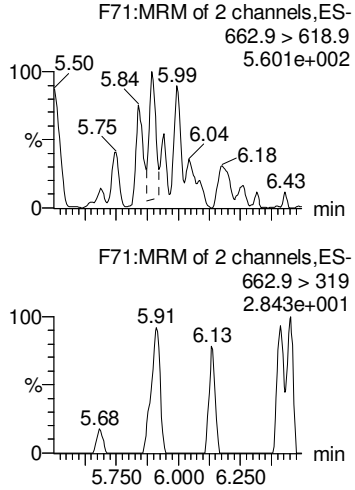
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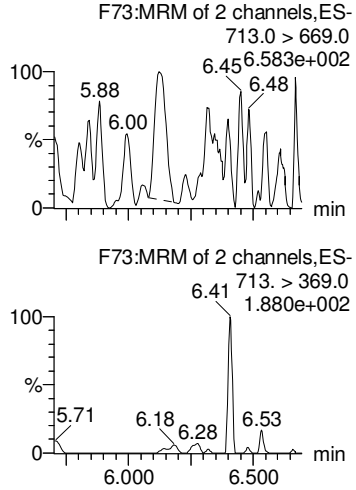
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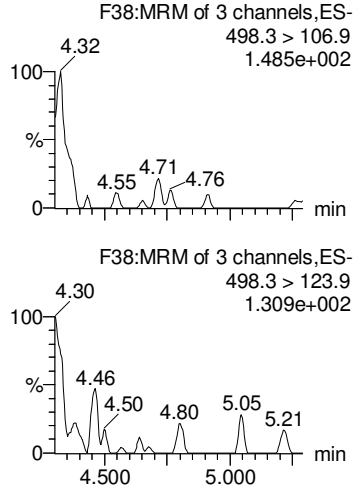
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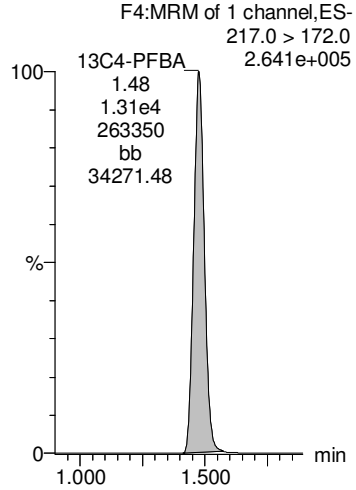
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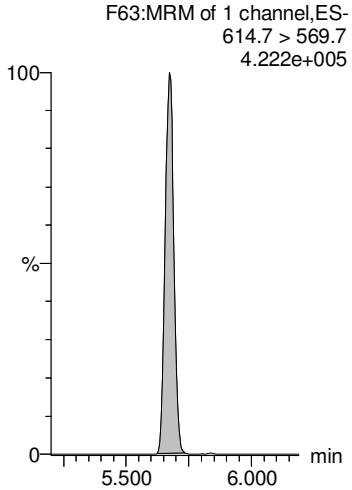
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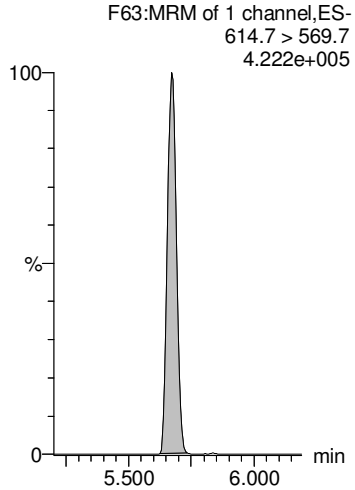
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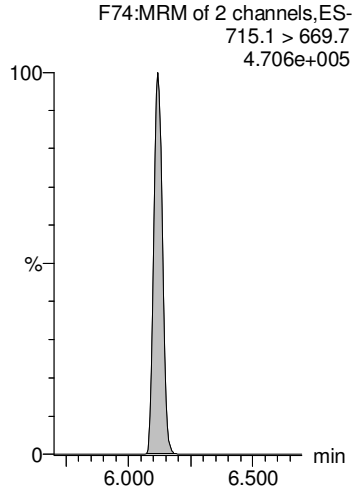
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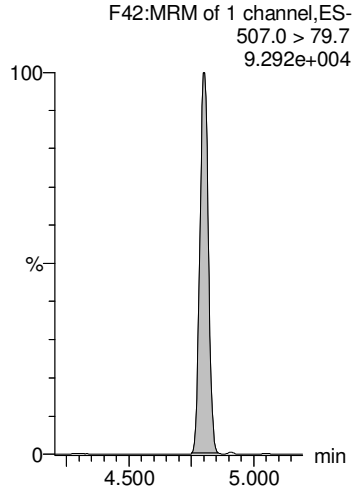
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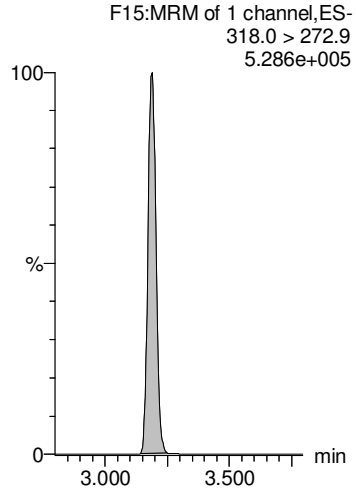
13C2-PFTeDA-EIS



13C8-PFOS-EIS



13C5-PFHxA



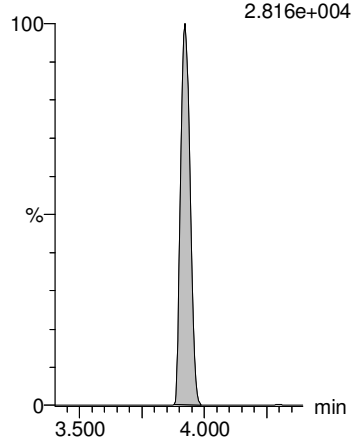
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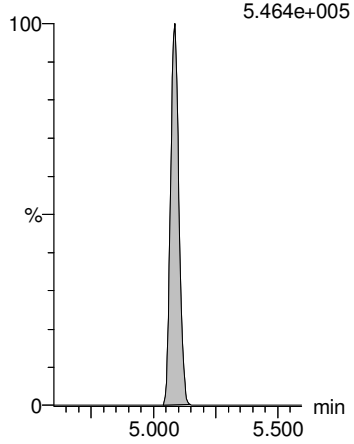
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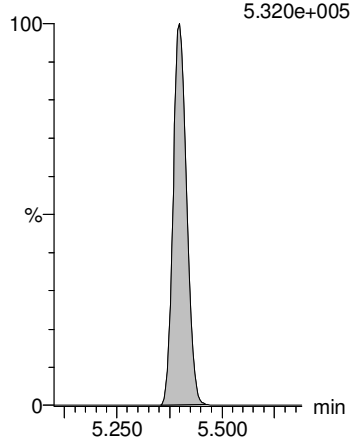
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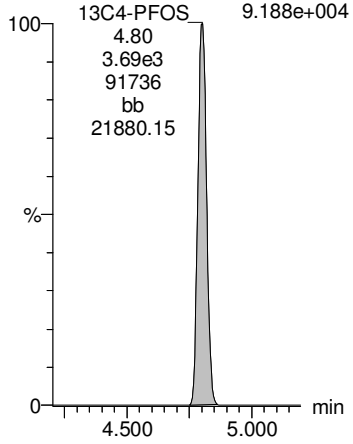
13C6-PFDA



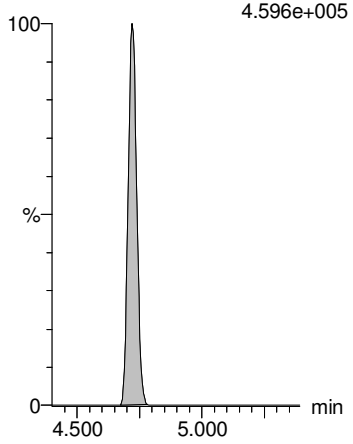
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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Review: AMR 2/28/2020

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	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	7	PFHxA	313.0 > 269.0	187282.922	4961.587	0.254		3.13	471.832	2080.3		NO	17.081	NO
2	13	L-PFHxS	398.9 > 79.7	47261.031	741.137	0.254		3.86	797.103	3081.2		NO	2.376	NO
3	1...	Total PFHxS	398.9 > 79.7	47261.031	741.137	0.254			797.103	3081.2		NO		
4	1...	13C5-PFHxA	318.0 > 272.9	5007.460	5007.460	0.254	1.000	3.13	12.500	49.2	100.0	NO		
5	1...	18O2-PFHxS	403.0 > 102.6	279.106	279.106	0.254	1.000	3.86	12.500	49.2	100.0	NO		
6	57	13C2-PFHxA-EIS	315.0 > 270.0	4961.587		0.254	1794.782	3.13	4961.587	10.9	22.1	YES		
7	61	13C3-PFHxS-EIS	401.8 > 79.7	741.137		0.254	273.316	3.86	741.137	10.7	21.7	YES		
8	61	13C3-PFHxS-EIS	401.8 > 79.7	741.137		0.254	273.316	3.86	741.137	10.7	21.7	YES		
9	-1													

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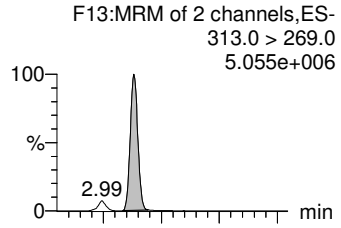
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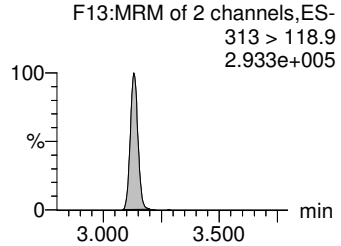
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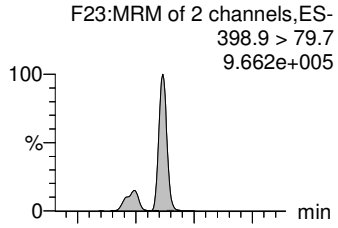
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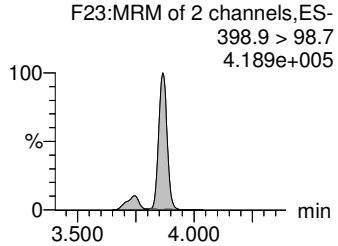
PFHxA



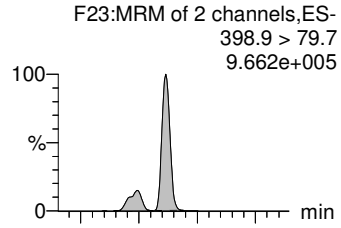


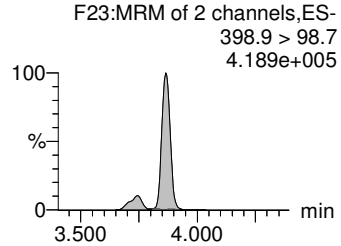
L-PFHxS



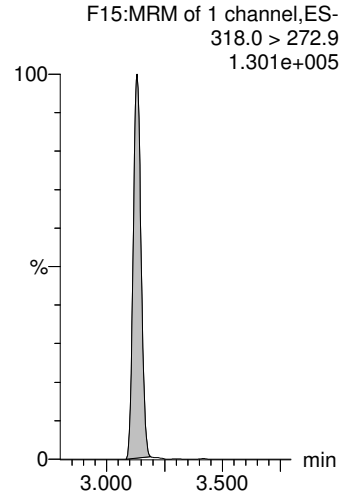


Total PFHxS

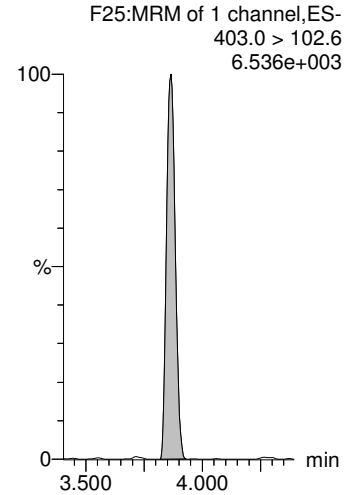




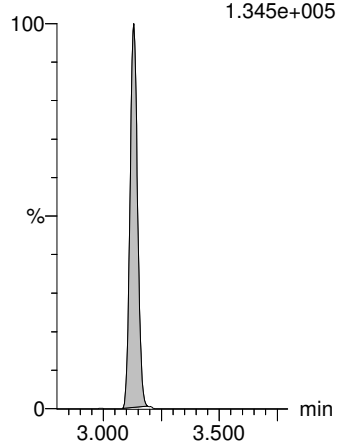
13C5-PFHxA



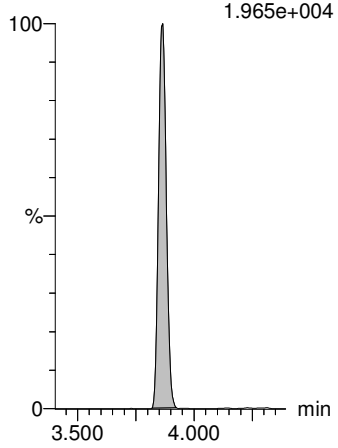
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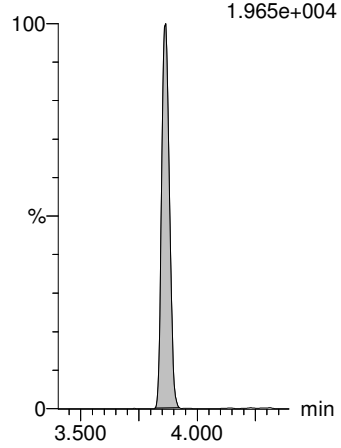
13C2-PFHxA-EIS



13C3-PFHxS-EIS



13C3-PFHxS-EIS



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Dataset: P:\PFAS5.PRO\RESULTS\200227P1\200227P1-89.qld

Last Altered: Friday, February 28, 2020 12:50:40 Pacific Standard Time
Printed: Friday, February 28, 2020 12:51:59 Pacific Standard Time

*ug/L **Concentration = (9212.6/1000)*10 = 92.1%

Name: 200227P1-89, Date: 28-Feb-2020, Time: 06:55:34, ID: 2000314-08@10X BMW07S-20200212 0.2539, Description: BMW07S-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	RT	Response	Conc. *	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	16	L-PFOA	412.8 > 368.9	330244.469	2052.650	0.254		4.18	2.011	6.29		NO	2.929	NO
2	1...	Total PFOA	412.8 > 368.9	330244.469	2052.650	0.254			2.011	6.29		NO		
3	1...	13C8-PFOA	420.9 > 376.0	1954.885	1954.885	0.254	1.000	4.18	0.013	0.0492	100.0	NO		
4	69	13C2-PFOA-EIS	414.9 > 369.7	2052.650		0.254	1782.464	4.18	2052.650	4.54	9212.6 **	YES		
5	69	13C2-PFOA-EIS	414.9 > 369.7	2052.650		0.254	1782.464	4.18	2052.650	4.54	9212.6	YES		

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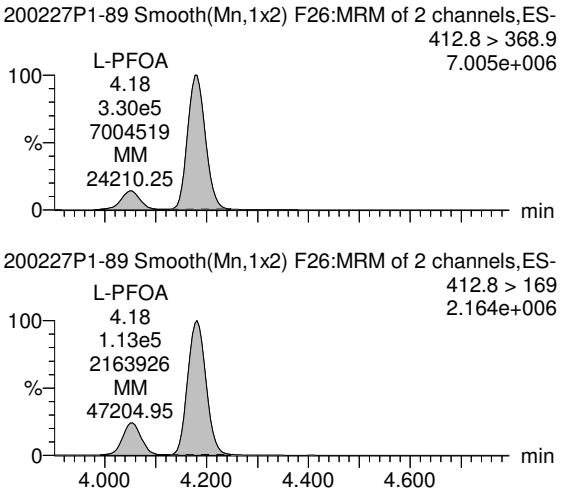
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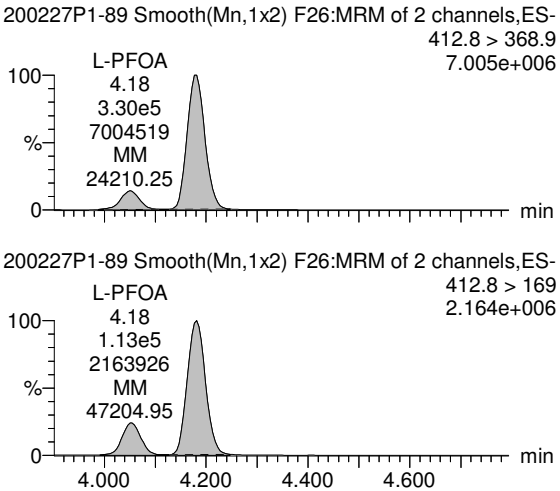
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Name: 200227P1-89, Date: 28-Feb-2020, Time: 06:55:34, ID: 2000314-08@10X BMW07S-20200212 0.2539, Description: BMW07S-20200212

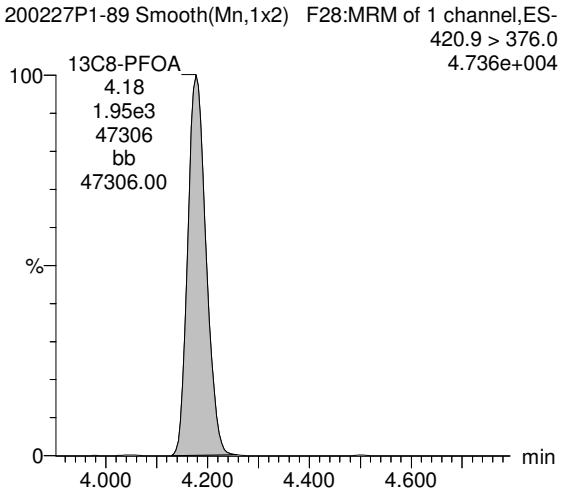
L-PFOA



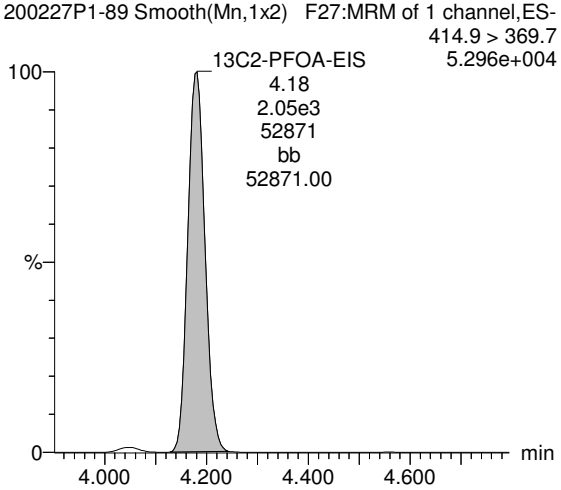
Total PFOA



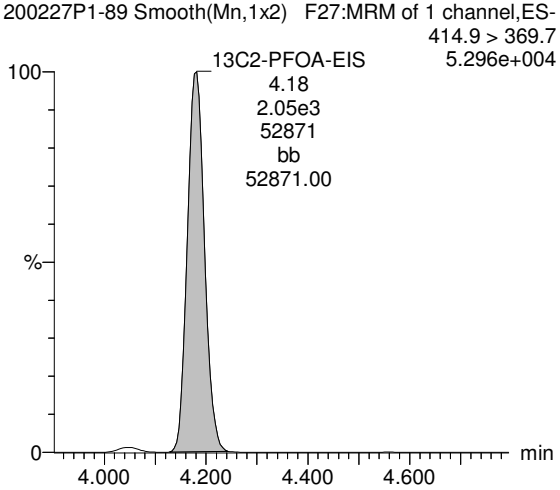
13C8-PFOA



13C2-PFOA-EIS



13C2-PFOA-EIS



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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-61-63.qld

*See Dilution

Last Altered: Friday, February 28, 2020 12:29:02 Pacific Standard Time
Printed: Friday, February 28, 2020 12:31:25 Pacific Standard Time

Name: 200225P1-63, Date: 26-Feb-2020, Time: 04:50:01, ID: 2000314-09 I005MW01SR-20200212 0.25498, Description: I005MW01SR-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.		%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7	3.65e4	1.55e3	0.255		2.62	2.62	295	501.3893			3.211	NO
2	7	PFHxA	313.0 > 269.0	5.81e5	2.10e4	0.255		3.13	3.13	345	1516.0696			17.085	NO
3	9	HFPO-DA	285.1 > 168.9		3.71e3	0.255		3.34							YES
4	11	PFHpA	363.0 > 318.9	1.48e5	1.50e4	0.255		3.73	3.73	123	395.1474			30.976	NO
5	12	ADONA	376.8 > 250.9		1.50e4	0.255		3.82							YES
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.55e3		0.255	120.043	2.66	2.62	1550	50.5275		103.1		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	2.10e4		0.255	1794.782	3.13	3.13	21000	45.9532		93.7		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.71e3		0.255	314.205	3.39	3.34	3710	46.2958		94.4		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.50e4		0.255	1233.447	3.74	3.73	15000	47.8140		97.5		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.50e4		0.255	1233.447	3.74	3.73	15000	47.8140		97.5		
11	-1														
12	13	L-PFHxS	398.9 > 79.7	1.56e5	3.06e3	0.255		3.86	3.86	639	2457.8202	*E		2.288	NO
13	1...	Total PFHxS	398.9 > 79.7	1.56e5	3.06e3	0.255		3.93		639	2457.8202				
14	16	L-PFOA	412.8 > 368.9	1.46e6	1.95e4	0.255		4.23	4.23	933	3727.4133	*E		2.850	NO
15	1...	Total PFOA	412.8 > 368.9	1.46e6	1.95e4	0.255		4.60		933	3727.4133				
16	21	PFNA	463.0 > 418.8	1.14e4	1.88e4	0.255		4.67	4.67	7.54	24.5348			7.492	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	3.06e3		0.255	273.316	3.86	3.86	3060	43.9445		89.6		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	3.06e3		0.255	273.316	3.86	3.86	3060	43.9445		89.6		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.95e4		0.255	1593.567	4.23	4.23	19500	47.9907		97.9		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.95e4		0.255	1593.567	4.23	4.23	19500	47.9907		97.9		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.88e4		0.255	1492.001	4.67	4.67	18800	49.5106		101.0		
22	-1														
23	23	L-PFOS	498.9 > 79.7	7.20e4	3.52e3	0.255		4.75	4.75	256	1075.8743			2.392	NO
24	1...	Total PFOS	498.9 > 79.7	7.20e4	3.52e3	0.255		5.13		256	1075.8743				
25	25	9Cl-PF30NS	530.7 > 350.8		3.52e3	0.255		4.96							YES
26	26	PFDA	513 > 468.8	6.72e2	2.00e4	0.255		5.04	5.04	0.419	1.1793			13.612	NO
27	33	PFUdA	563.0 > 518.9		1.97e4	0.255		5.35							YES
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.52e3		0.255	291.759	4.75	4.75	3520	47.3011		96.5		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.52e3		0.255	291.759	4.75	4.75	3520	47.3011		96.5		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.52e3		0.255	291.759	4.75	4.75	3520	47.3011		96.5		
31	73	13C2-PFDA-EIS	515.1 > 469.9	2.00e4		0.255	1635.176	5.04	5.04	20000	48.0293		98.0		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.97e4		0.255	1617.090	5.35	5.35	19700	47.7312		97.4		
33	-1														
34	29	L-MeFOSAA	570 > 419		4.17e3	0.255		5.18							YES
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	4.17e3	0.255		5.19		0.000					
36	31	L-EtFOSAA	584.1 > 419		5.16e3	0.255		5.33							YES

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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-61-63.qld

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Name: 200225P1-63, Date: 26-Feb-2020, Time: 04:50:01, ID: 2000314-09 I005MW01SR-20200212 0.25498, Description: I005MW01SR-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	5.16e3	0.255		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.49e4	0.255		5.56						YES
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	4.17e3		0.255	330.310	5.18	5.18	4170	49.5283	101.0		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	4.17e3		0.255	330.310	5.18	5.18	4170	49.5283	101.0		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	5.16e3		0.255	395.337	5.32	5.33	5160	51.2094	104.5		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	5.16e3		0.255	395.337	5.32	5.33	5160	51.2094	104.5		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.49e4		0.255	1686.253	5.62	5.62	14900	34.6942	70.8		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.49e4	0.255		5.62						YES
46	39	PFTrDA	662.9 > 618.9		1.49e4	0.255		5.88						YES
47	41	PFTeDA	713.0 > 669.0		1.86e4	0.255		6.07						YES
48	1...	TDCA	498.3>106.9			0.255		4.59						YES
49	99	13C4-PFBA	217.0 > 172.0	1.27e4	1.27e4	0.255	1.000	1.42	1.40	12.5	49.0235	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.49e4		0.255	1686.253	5.62	5.62	14900	34.6942	70.8		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.49e4		0.255	1686.253	5.62	5.62	14900	34.6942	70.8		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.86e4		0.255	1896.410	6.05	6.07	18600	38.5194	78.6		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.52e3		0.255	291.759	4.75	4.75	3520	47.3011	96.5		
54	1...	13C5-PFHxA	318.0 > 272.9	2.09e4	2.09e4	0.255	1.000	3.13	3.13	12.5	49.0235	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.30e3	1.30e3	0.255	1.000	3.86	3.86	12.5	49.0235	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	2.03e4	2.03e4	0.255	1.000	5.04	5.04	12.5	49.0235	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	2.09e4	2.09e4	0.255	1.000	5.35	5.35	12.5	49.0235	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.72e3	3.72e3	0.255	1.000	4.75	4.75	12.5	49.0235	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.89e4	1.89e4	0.255	1.000	4.67	4.67	12.5	49.0235	100.0		

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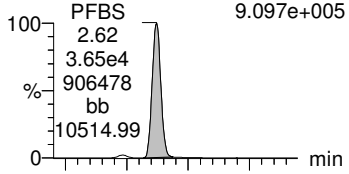
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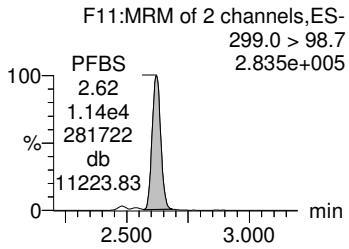
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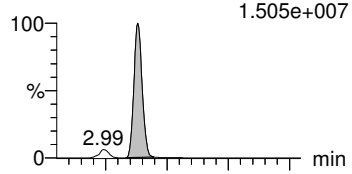
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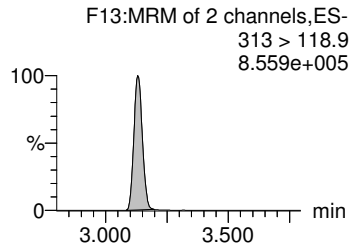
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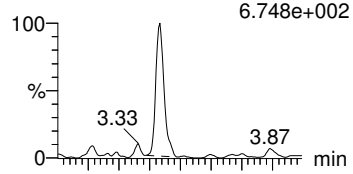


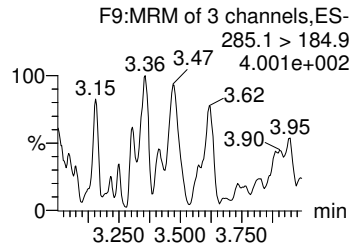
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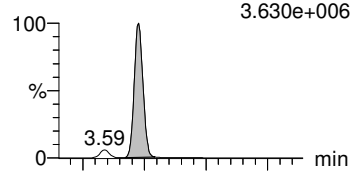


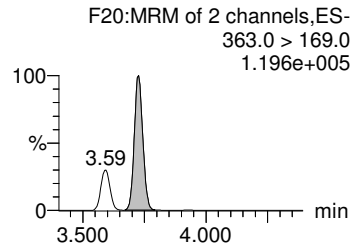
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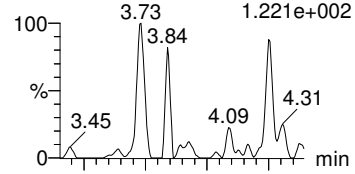


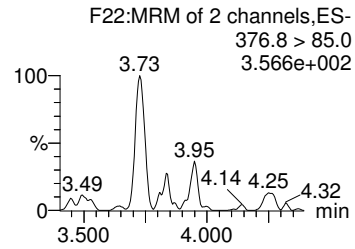
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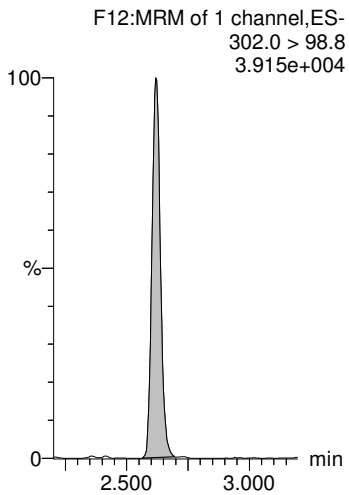


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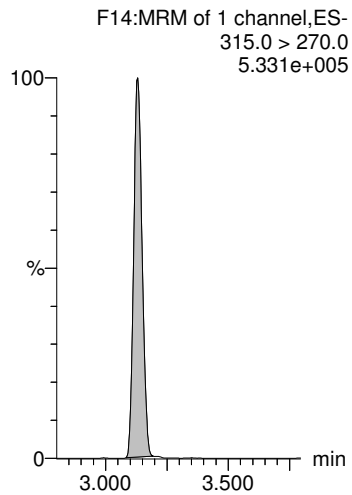




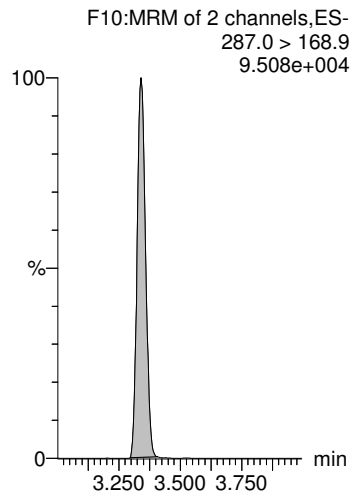
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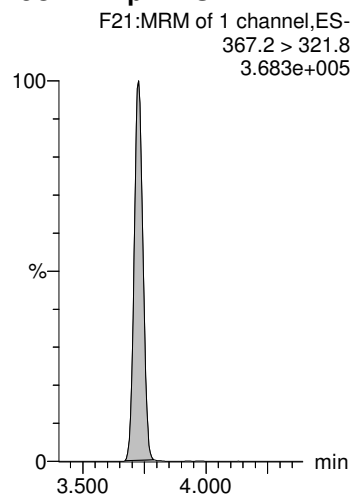
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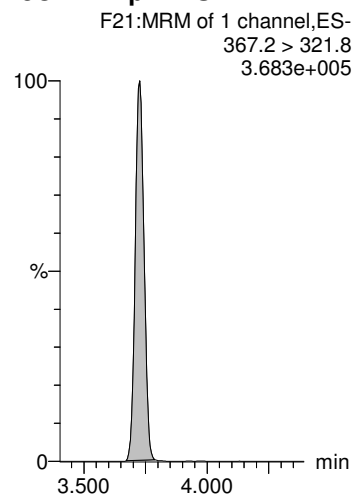
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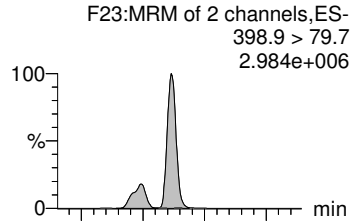
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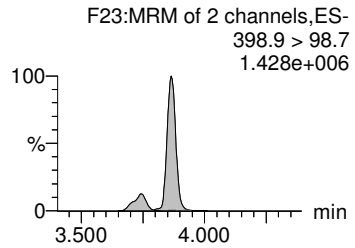
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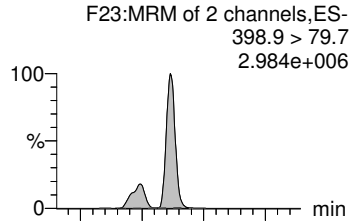
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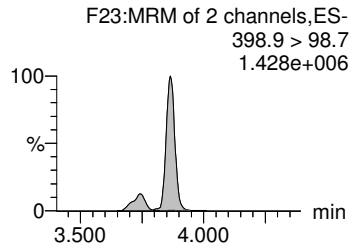
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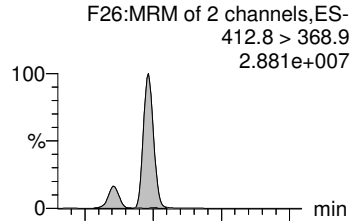


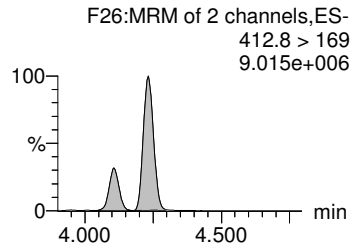
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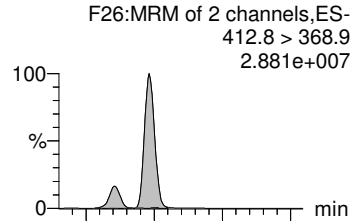


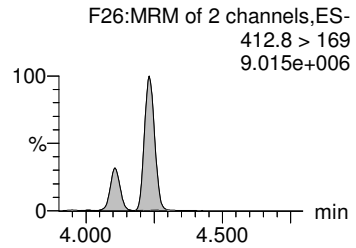
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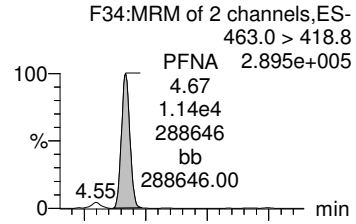


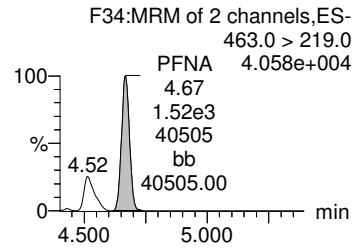
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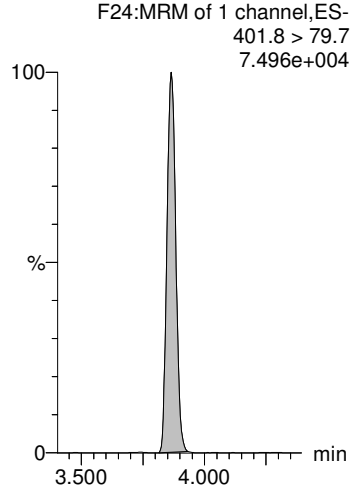


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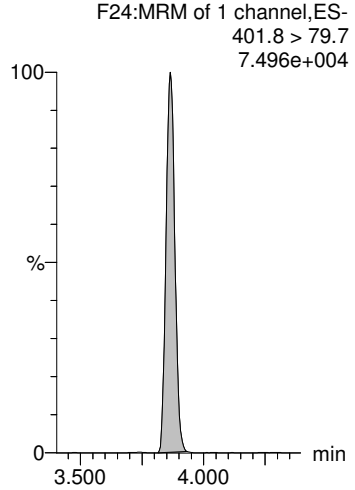




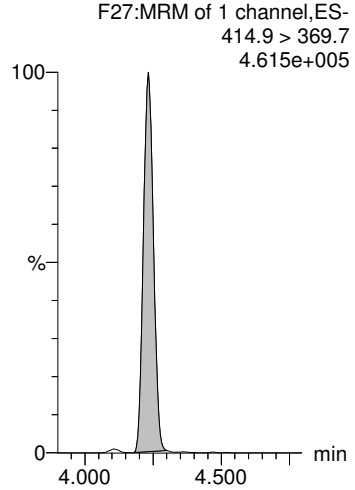
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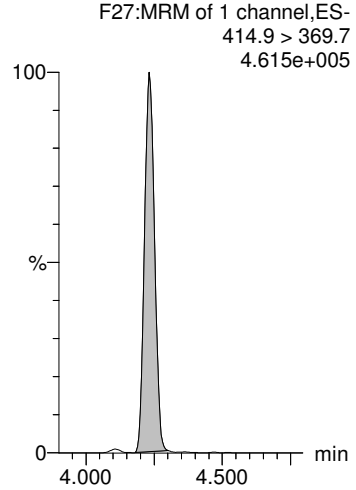
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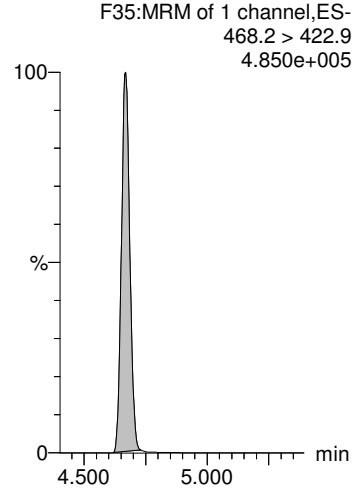
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13C2-PFOA-EIS



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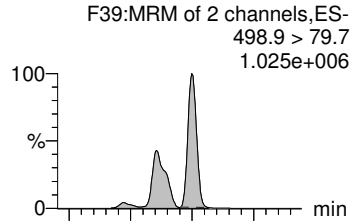
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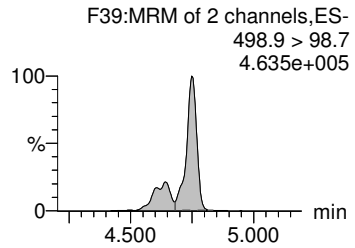
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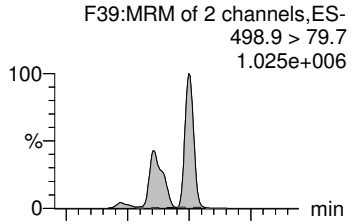
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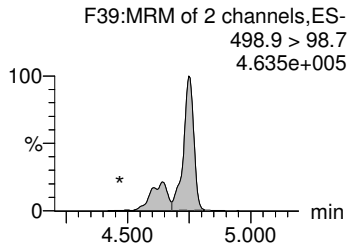
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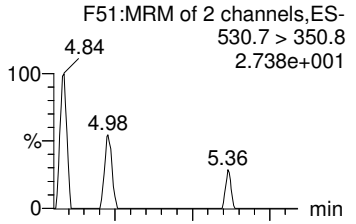


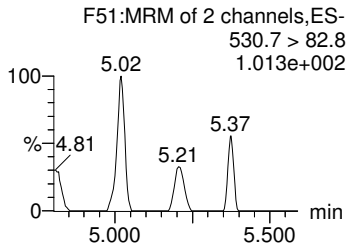
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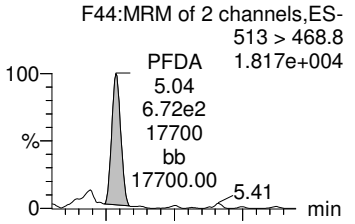


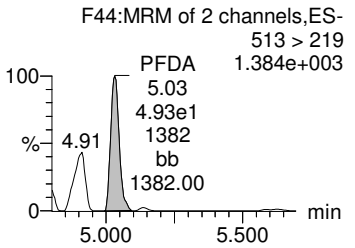
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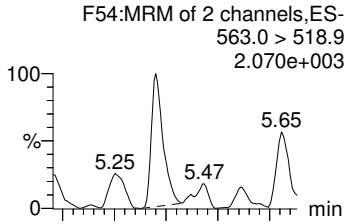


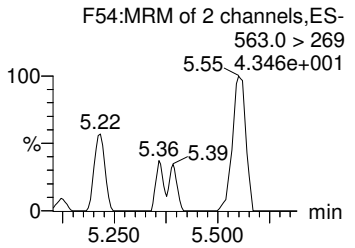
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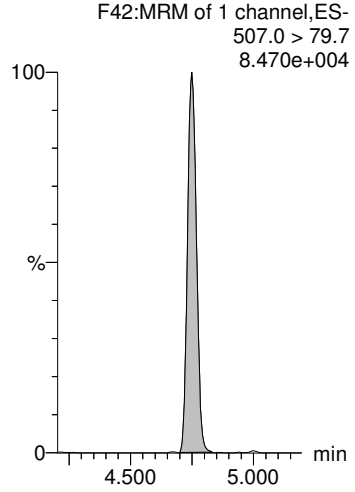


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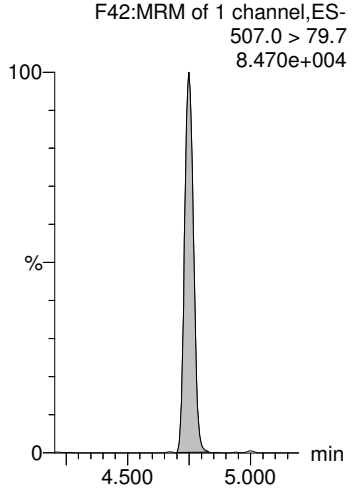




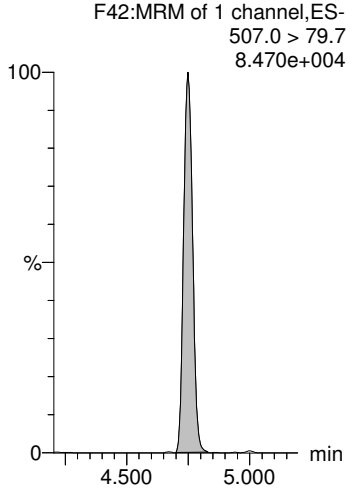
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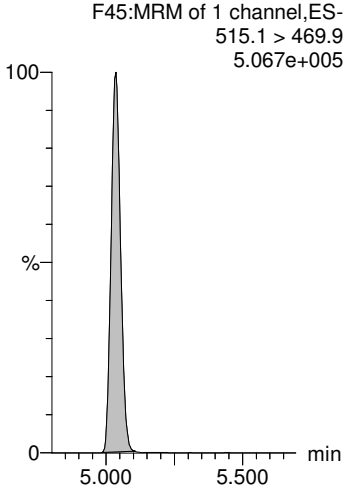
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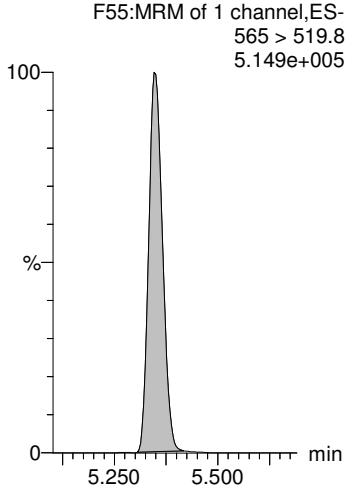
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13C2-PFDA-EIS



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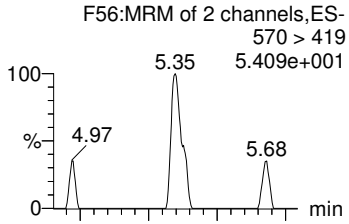
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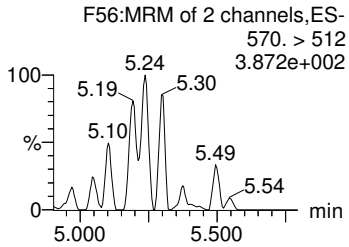
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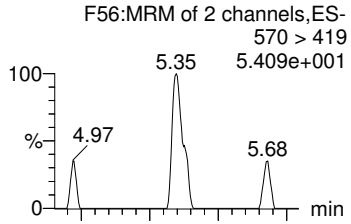
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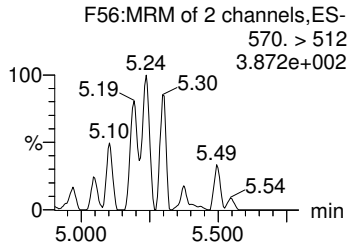
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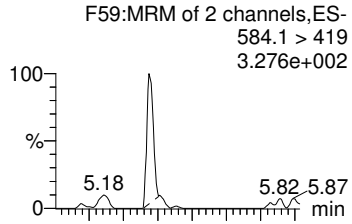


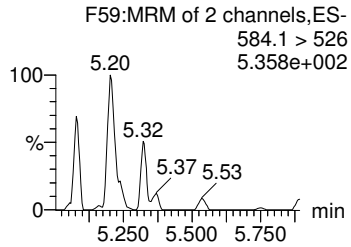
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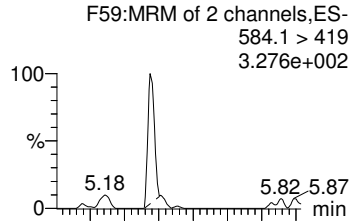


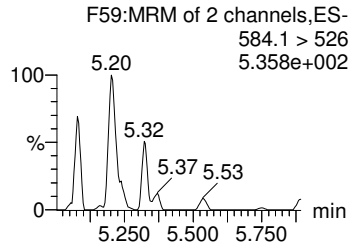
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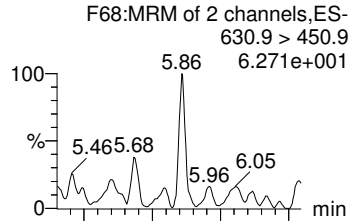


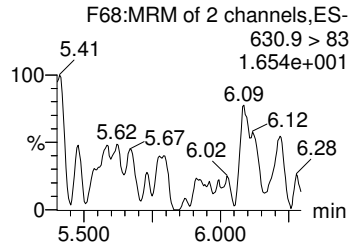
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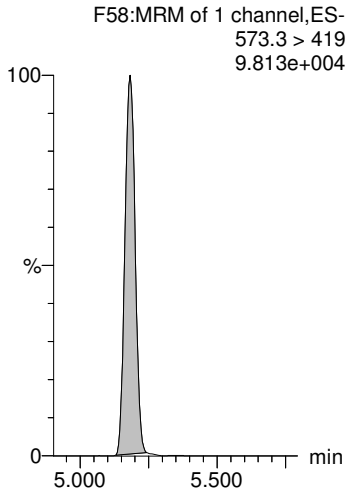


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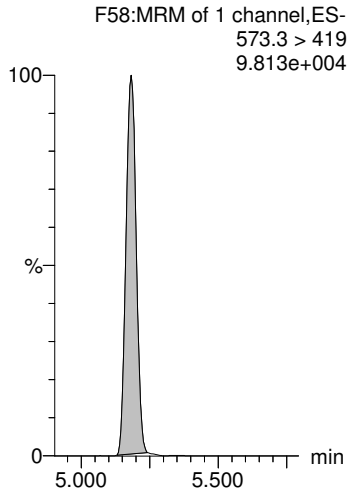




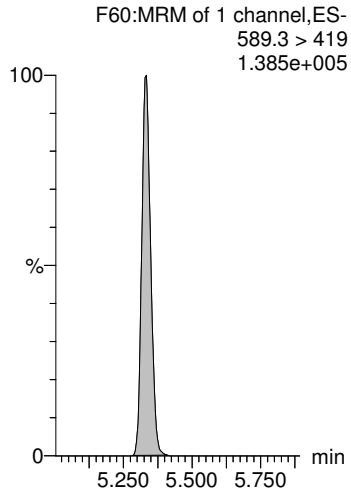
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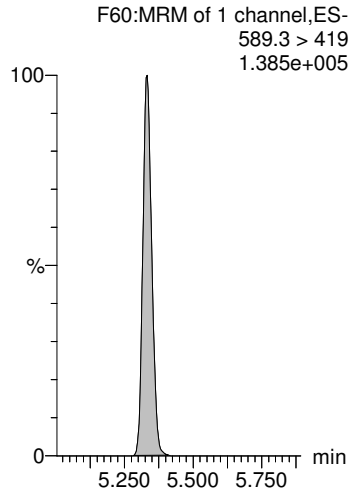
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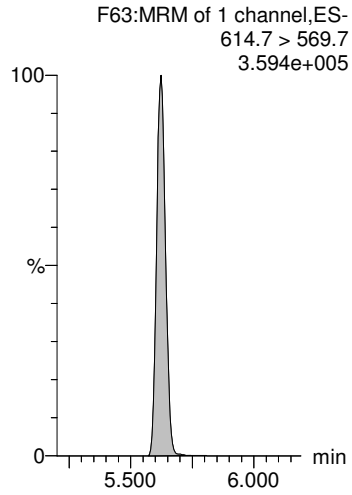
d5-N-EtFOSAA-EIS



d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS



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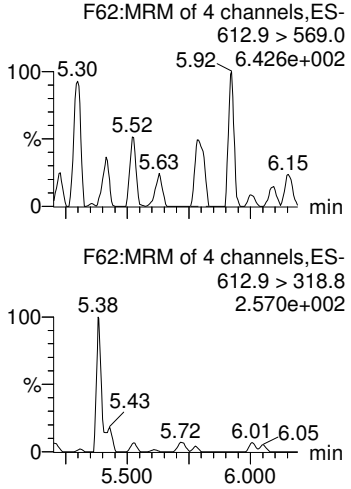
Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-61-63.qld

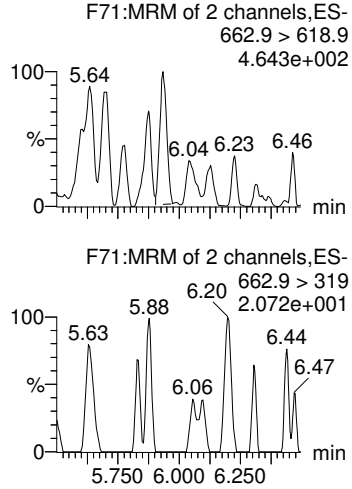
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Name: 200225P1-63, Date: 26-Feb-2020, Time: 04:50:01, ID: 2000314-09 I005MW01SR-20200212 0.25498, Description: I005MW01SR-20200212

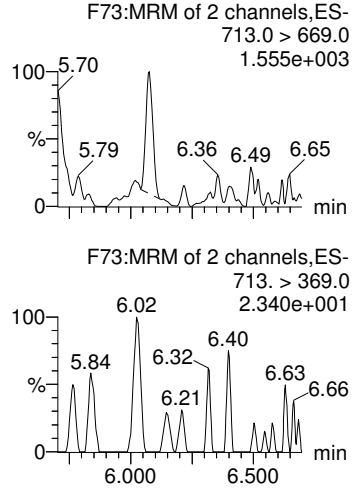
PFDoA



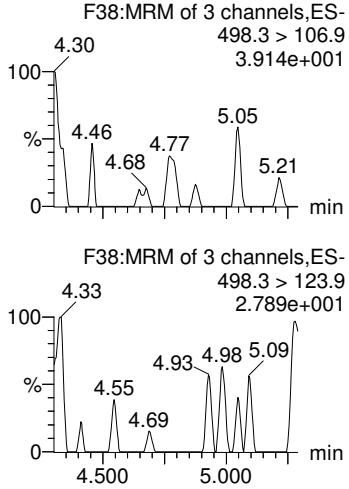
PFTrDA



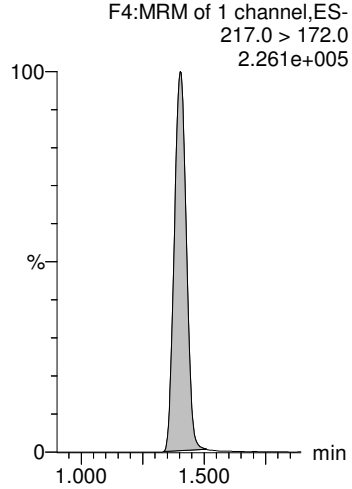
PFTeDA



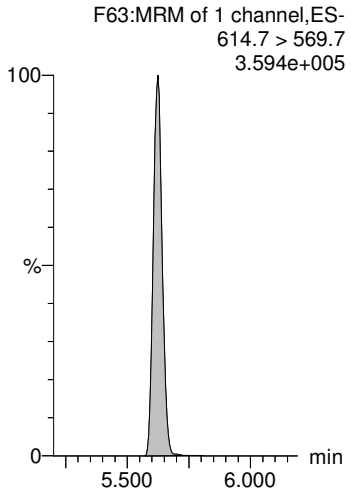
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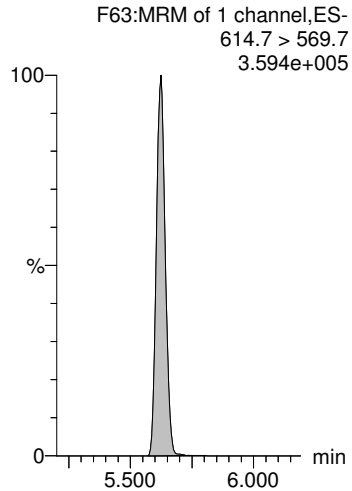
13C4-PFBA



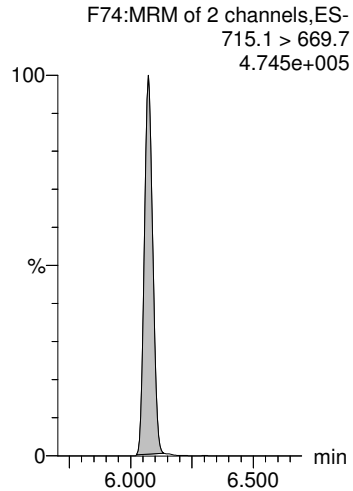
13C2-PFDoA-EIS



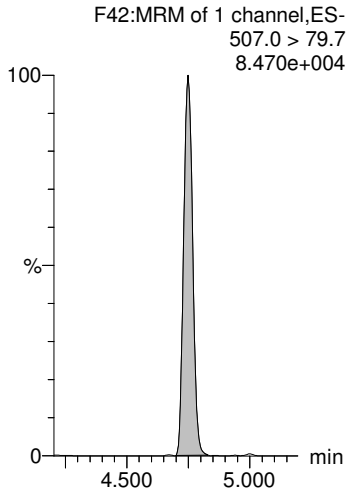
13C2-PFDoA-EIS



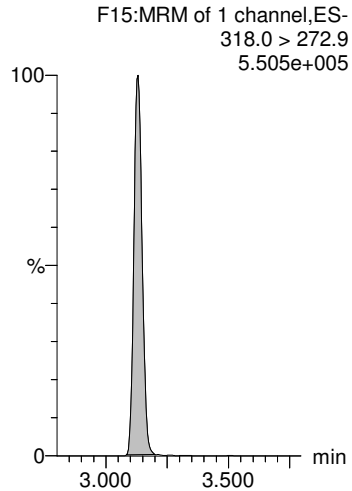
13C2-PFTeDA-EIS



13C8-PFOS-EIS



13C5-PFHxA



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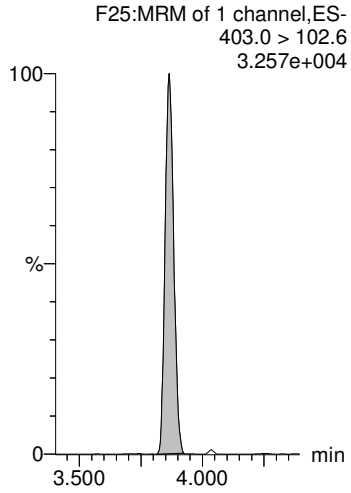
Review: AMR 2/28/2020

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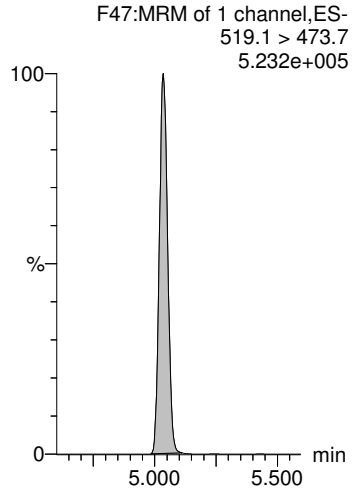
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Name: 200225P1-63, Date: 26-Feb-2020, Time: 04:50:01, ID: 2000314-09 I005MW01SR-20200212 0.25498, Description: I005MW01SR-20200212

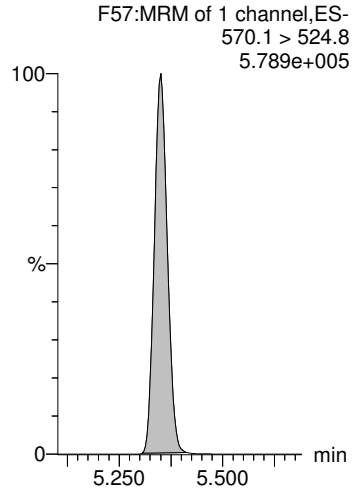
18O2-PFHxS



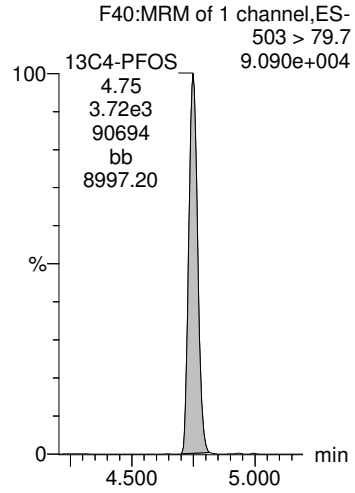
13C6-PFDA



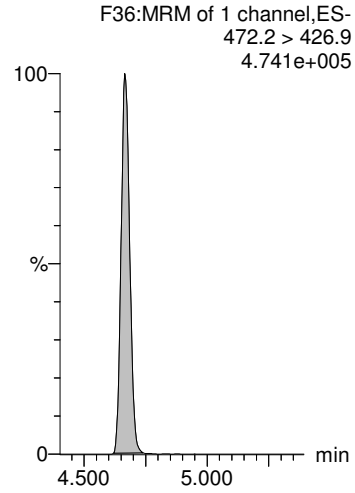
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-61-63.qld

Last Altered: Friday, February 28, 2020 12:33:31 Pacific Standard Time
Printed: Friday, February 28, 2020 15:33:09 Pacific Standard Time

Name: 200225P1-62, Date: 26-Feb-2020, Time: 04:39:30, ID: 2000314-09@5X I005MW01SR-20200212 0.25498, Description: I005MW01SR-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	13	L-PFHxS	398.9 > 79.7	45188.215	830.057	0.255		3.86	680.499	2619.3		NO	2.309	NO
2	1...	Total PFHxS	398.9 > 79.7	45188.215	830.057	0.255			680.499	2619.3		NO		
3	16	L-PFOA	412.8 > 368.9	400517.031	5321.654	0.255		4.23	940.772	3764.6		NO	2.793	NO
4	1...	Total PFOA	412.8 > 368.9	400517.031	5321.654	0.255			940.772	3764.6		NO		
5	61	13C3-PFHxS-EIS	401.8 > 79.7	830.057		0.255	273.316	3.86	830.057	11.9	24.3	YES		
6	61	13C3-PFHxS-EIS	401.8 > 79.7	830.057		0.255	273.316	3.86	830.057	11.9	24.3	YES		
7	69	13C2-PFOA-EIS	414.9 > 369.7	5321.654		0.255	1593.567	4.23	5321.654	13.1	26.7	YES		
8	69	13C2-PFOA-EIS	414.9 > 369.7	5321.654		0.255	1593.567	4.23	5321.654	13.1	26.7	YES		
9	-1													
10	99	13C4-PFBA	217.0 > 172.0	3314.165	3314.165	0.255	1.000	1.41	12.500	49.0	100.0	NO		
11	1...	18O2-PFHxS	403.0 > 102.6	274.499	274.499	0.255	1.000	3.87	12.500	49.0	100.0	NO		
12	1...	13C8-PFOA	420.9 > 376.0	5463.105	5463.105	0.255	1.000	4.23	12.500	49.0	100.0	NO		
13	-1													

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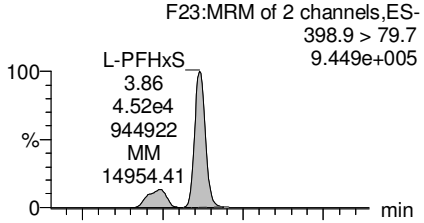
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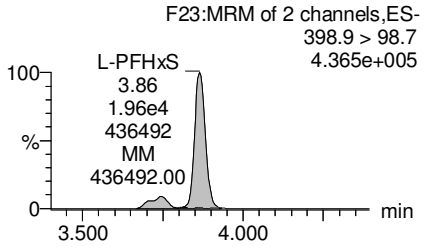
Last Altered: Friday, February 28, 2020 12:33:31 Pacific Standard Time
Printed: Friday, February 28, 2020 15:33:09 Pacific Standard Time

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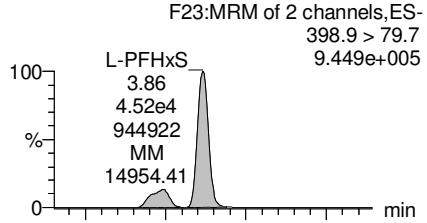
Name: 200225P1-62, Date: 26-Feb-2020, Time: 04:39:30, ID: 2000314-09@5X I005MW01SR-20200212 0.25498, Description: I005MW01SR-20200212

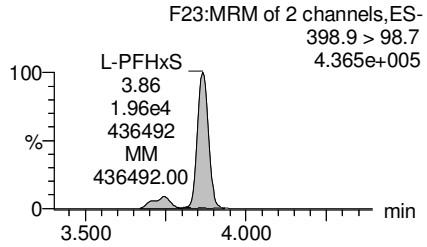
L-PFHxS



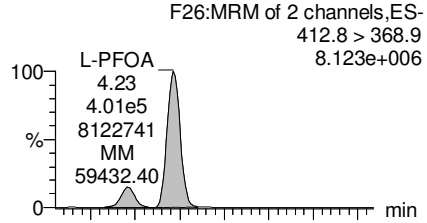


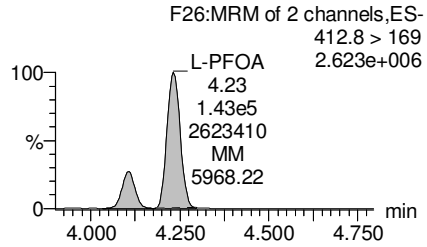
Total PFHxS



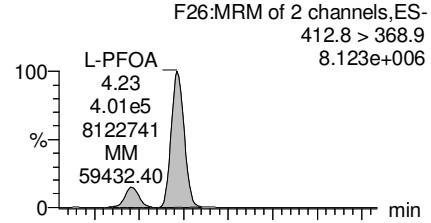


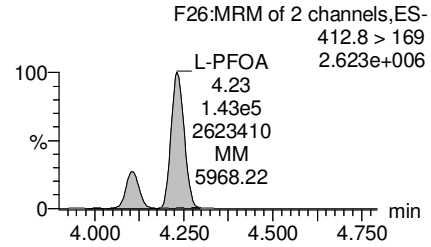
L-PFOA



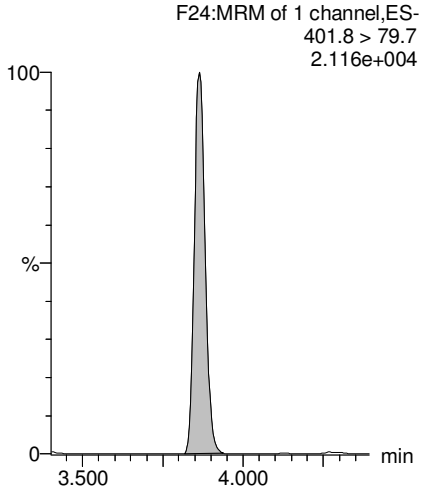


Total PFOA

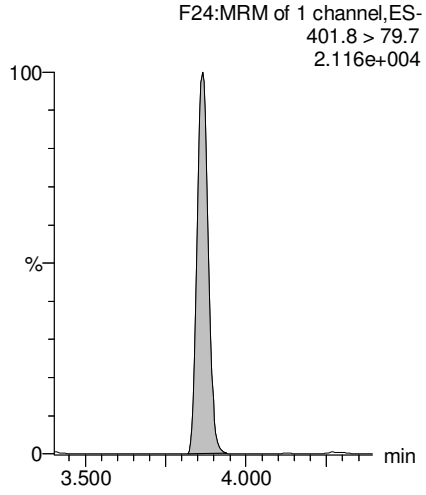




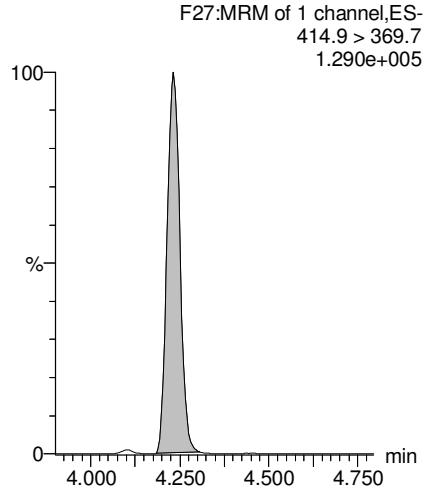
13C3-PFHxS-EIS



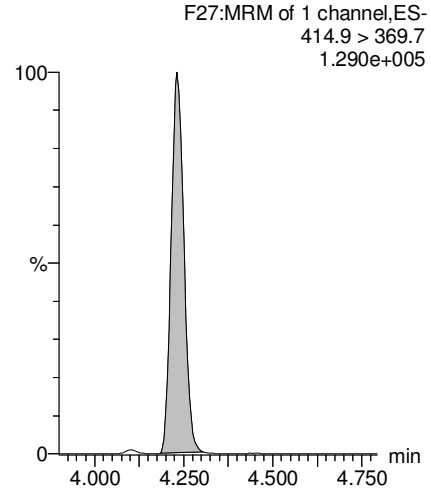
13C3-PFHxS-EIS



13C2-PFOA-EIS



13C2-PFOA-EIS



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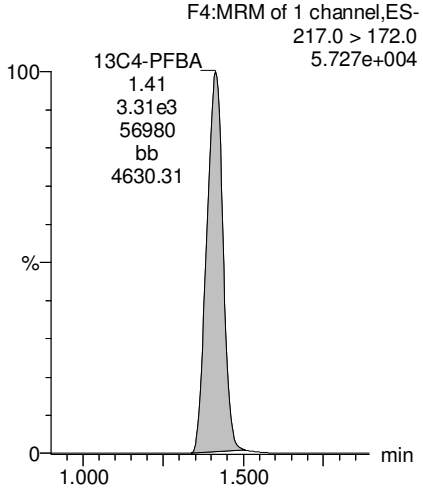
Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-61-63.qld

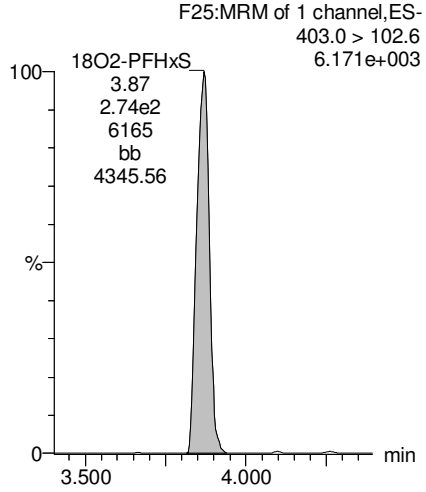
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Printed: Friday, February 28, 2020 15:33:09 Pacific Standard Time

Name: 200225P1-62, Date: 26-Feb-2020, Time: 04:39:30, ID: 2000314-09@5X I005MW01SR-20200212 0.25498, Description: I005MW01SR-20200212

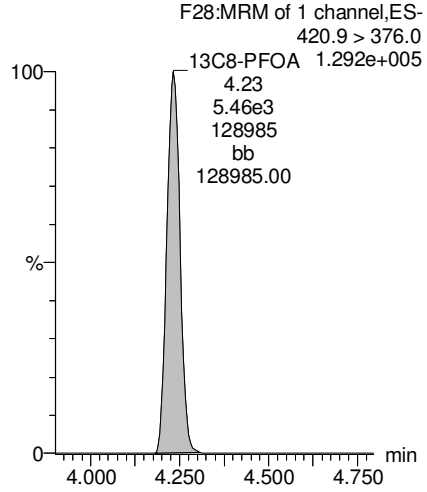
13C4-PFBA



18O2-PFHxS



13C8-PFOA



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***SEE DILUTION**

Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-46.qld

Last Altered: Tuesday, February 25, 2020 11:55:02 Pacific Standard Time
Printed: Tuesday, February 25, 2020 11:56:21 Pacific Standard Time

Name: 200220P1-46, Date: 21-Feb-2020, Time: 01:16:46, ID: 2000314-10 DUP05-20200212 0.25284, Description: DUP05-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.		%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7	3.03e4	1.25e3	0.253		2.68	2.68	304	524.7640			3.113	NO
2	7	PFHxA	313.0 > 269.0	4.80e5	1.77e4	0.253		3.19	3.19	338	1506.8598			16.557	NO
3	9	HFPO-DA	285.1 > 168.9		3.38e3	0.253		3.40							
4	11	PFHpA	363.0 > 318.9	1.19e5	1.17e4	0.253		3.78	3.79	127	411.4527			24.131	NO
5	12	ADONA	376.8 > 250.9		1.17e4	0.253		3.88							
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.25e3		0.253	114.516	2.70	2.68	1250	43.1076		87.2		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.77e4		0.253	1636.234	3.19	3.19	17700	42.8908		86.8		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.38e3		0.253	293.118	3.43	3.40	3380	45.5790		92.2		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.17e4		0.253	1106.802	3.79	3.78	11700	41.9270		84.8		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.17e4		0.253	1106.802	3.79	3.78	11700	41.9270		84.8		
11	-1														
12	13	L-PFHxS	398.9 > 79.7	1.37e5	2.38e3	0.253		3.92	3.92	720	2957.4769	E*		2.383	NO
13	1...	Total PFHxS	398.9 > 79.7	1.37e5	2.38e3	0.253		3.93		720	2957.4769				
14	16	L-PFOA	412.8 > 368.9	1.23e6	1.46e4	0.253		4.29	4.29	1060	4499.3415	E*		2.821	NO
15	1...	Total PFOA	412.8 > 368.9	1.23e6	1.46e4	0.253		4.60		1060	4499.3415				
16	21	PFNA	463.0 > 418.8	9.87e3	1.47e4	0.253		4.72	4.72	8.36	26.6634			7.568	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.38e3		0.253	252.668	3.92	3.92	2380	37.2924		75.4		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.38e3		0.253	252.668	3.92	3.92	2380	37.2924		75.4		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.46e4		0.253	1527.160	4.29	4.29	14600	37.7530		76.4		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.46e4		0.253	1527.160	4.29	4.29	14600	37.7530		76.4		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.47e4		0.253	1373.362	4.72	4.72	14700	42.4742		85.9		
22	-1														
23	23	L-PFOS	498.9 > 79.7	6.30e4	2.98e3	0.253		4.80	4.80	264	1110.5456			2.342	NO
24	1...	Total PFOS	498.9 > 79.7	6.30e4	2.98e3	0.253		5.13		264	1110.5456				
25	25	9Cl-PF30NS	530.7 > 350.8		2.98e3	0.253		5.01							
26	26	PFDA	513 > 468.8	7.40e2	1.49e4	0.253		5.08	5.08	0.619	1.7593			14.922	YES
27	33	PFUdA	563.0 > 518.9	1.02e2	1.66e4	0.253		5.39	5.39	0.0765	0.3340			409.919	YES
28	71	13C8-PFOS-EIS	507.0 > 79.7	2.98e3		0.253	295.805	4.80	4.80	2980	39.8370		80.6		
29	71	13C8-PFOS-EIS	507.0 > 79.7	2.98e3		0.253	295.805	4.80	4.80	2980	39.8370		80.6		
30	71	13C8-PFOS-EIS	507.0 > 79.7	2.98e3		0.253	295.805	4.80	4.80	2980	39.8370		80.6		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.49e4		0.253	1356.410	5.08	5.08	14900	43.5879		88.2		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.66e4		0.253	1416.449	5.40	5.39	16600	46.3934		93.8		
33	-1														
34	29	L-MeFOSAA	570 > 419		3.19e3	0.253		5.23							
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	3.19e3	0.253		5.19		0.000					
36	31	L-EtFOSAA	584.1 > 419		3.59e3	0.253		5.38							

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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-46.qld

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Name: 200220P1-46, Date: 21-Feb-2020, Time: 01:16:46, ID: 2000314-10 DUP05-20200212 0.25284, Description: DUP05-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	3.59e3	0.253		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.45e4	0.253		5.60						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.19e3		0.253	262.877	5.22	5.23	3190	47.9236	96.9		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.19e3		0.253	262.877	5.22	5.23	3190	47.9236	96.9		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.59e3		0.253	360.983	5.37	5.38	3590	39.3332	79.6		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.59e3		0.253	360.983	5.37	5.38	3590	39.3332	79.6		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.45e4		0.253	1573.093	5.67	5.67	14500	36.4159	73.7		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.45e4	0.253		5.67						
46	39	PFTrDA	662.9 > 618.9		1.45e4	0.253		5.93						
47	41	PFTeDA	713.0 > 669.0		1.49e4	0.253		6.12						
48	1...	TDCA	498.3>106.9			0.253		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.14e4	1.14e4	0.253	1.000	1.48	1.48	12.5	49.4384	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.45e4		0.253	1573.093	5.67	5.67	14500	36.4159	73.7		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.45e4		0.253	1573.093	5.67	5.67	14500	36.4159	73.7		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.49e4		0.253	1440.513	6.10	6.12	14900	41.0115	83.0		
53	71	13C8-PFOS-EIS	507.0 > 79.7	2.98e3		0.253	295.805	4.80	4.80	2980	39.8370	80.6		
54	1...	13C5-PFHxA	318.0 > 272.9	1.77e4	1.77e4	0.253	1.000	3.18	3.19	12.5	49.4384	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.12e3	1.12e3	0.253	1.000	3.92	3.92	12.5	49.4384	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.76e4	1.76e4	0.253	1.000	5.08	5.08	12.5	49.4384	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.83e4	1.83e4	0.253	1.000	5.40	5.40	12.5	49.4384	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.31e3	3.31e3	0.253	1.000	4.79	4.80	12.5	49.4384	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.67e4	1.67e4	0.253	1.000	4.72	4.72	12.5	49.4384	100.0		

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Review: AMR 2/28/2020

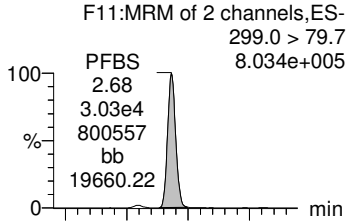
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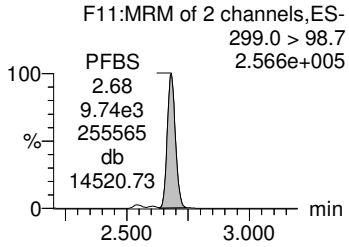
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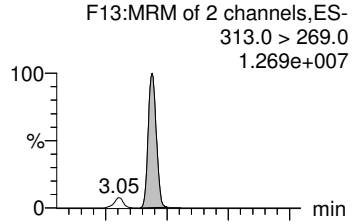
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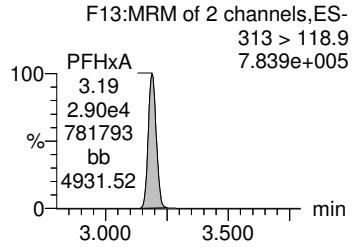
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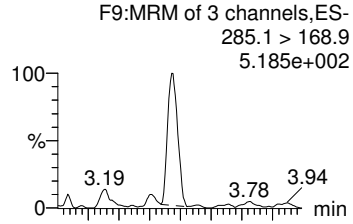


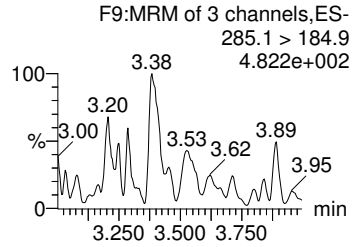
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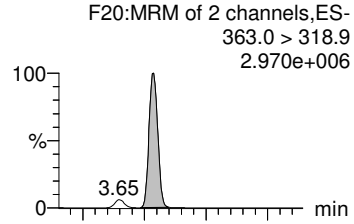


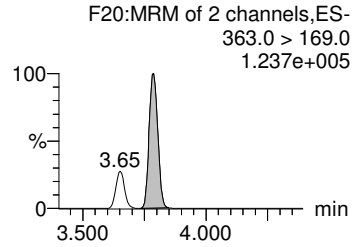
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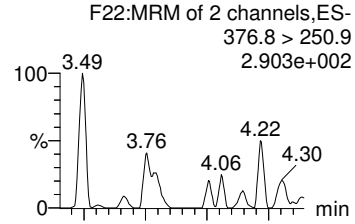


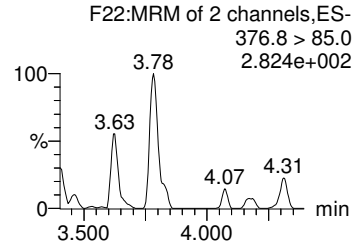
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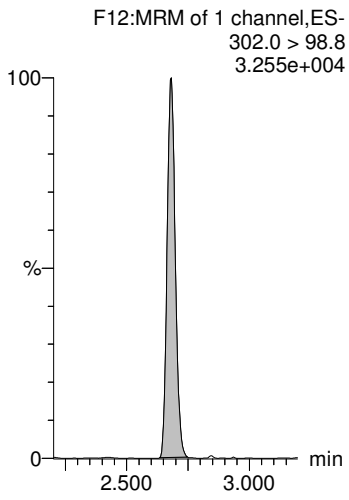


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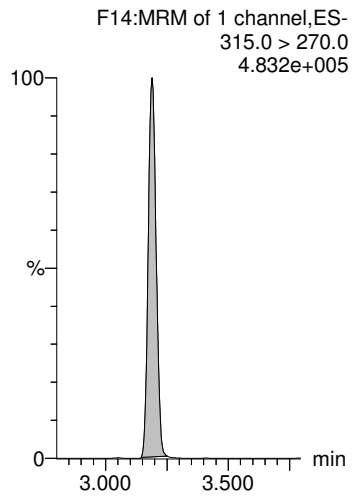




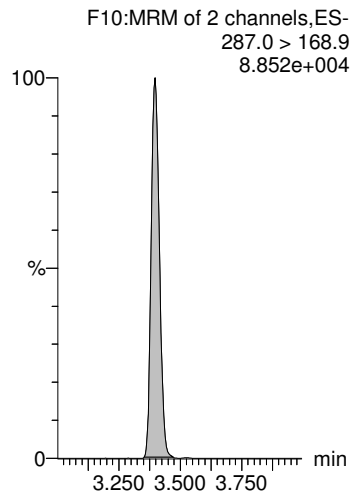
13C3-PFBS-EIS



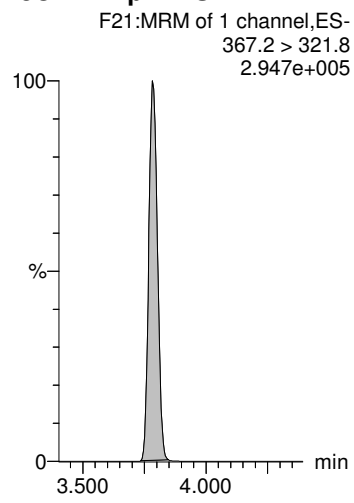
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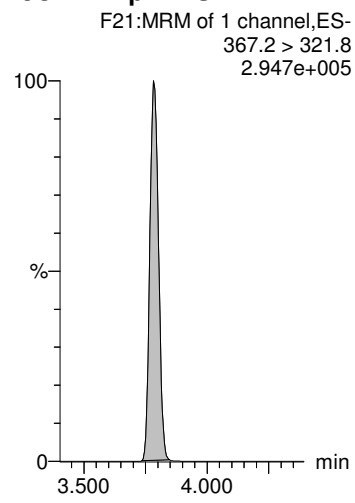
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13C4-PFHpA-EIS



13C4-PFHpA-EIS



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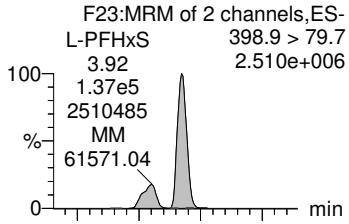
Review: AMR 2/28/2020

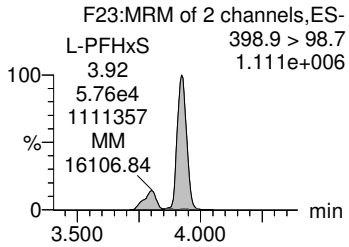
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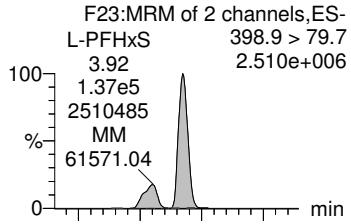
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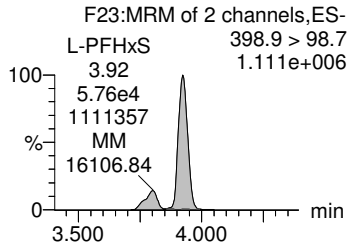
L-PFHxS



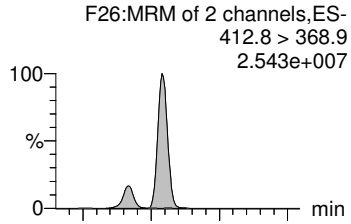


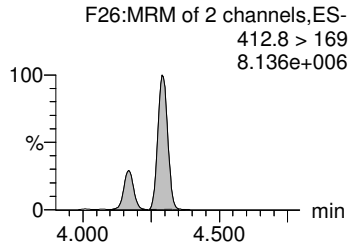
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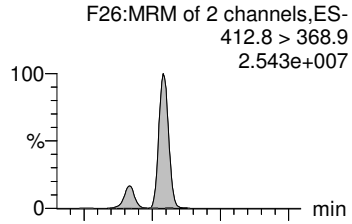


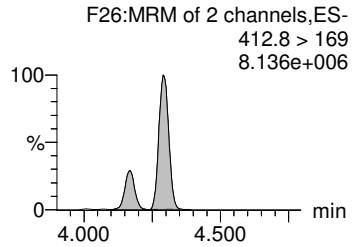
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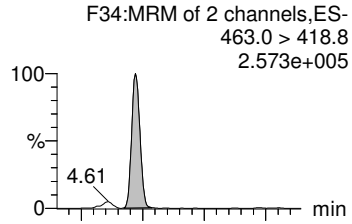


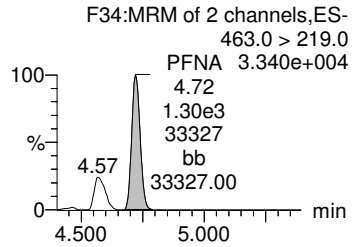
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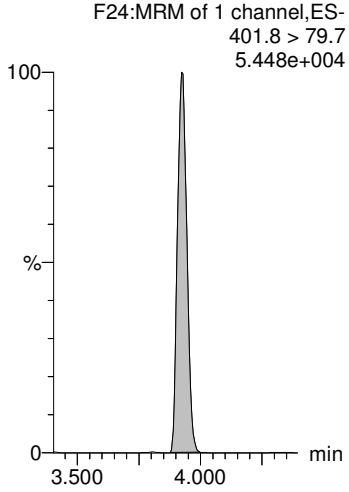


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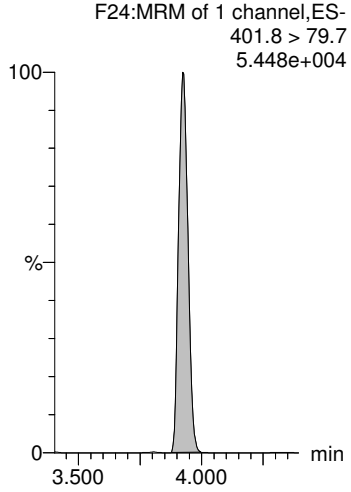




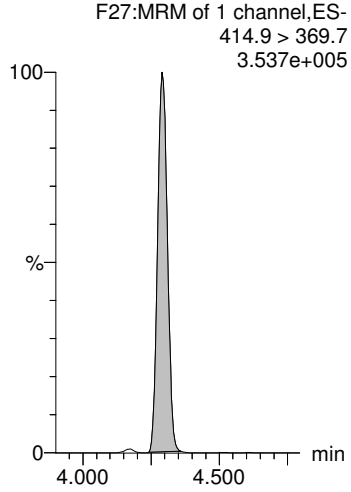
13C3-PFHxS-EIS



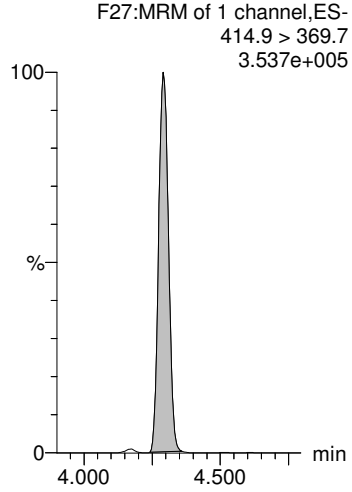
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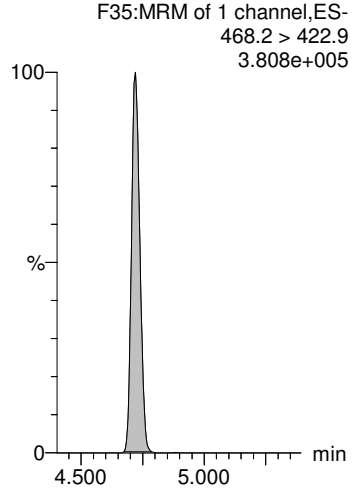
13C2-PFOA-EIS



13C2-PFOA-EIS



13C5-PFNA-EIS



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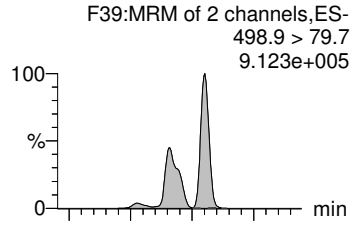
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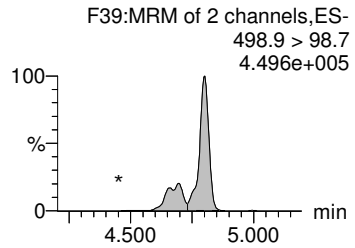
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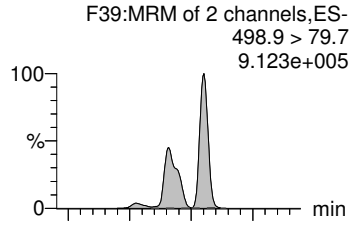
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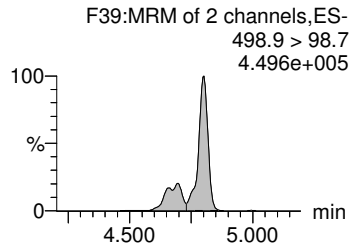
L-PFOS



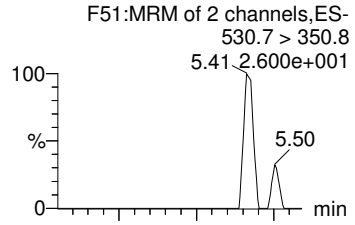


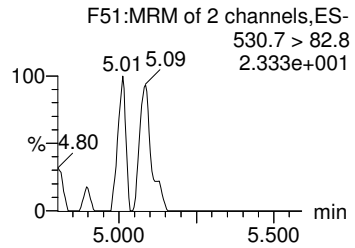
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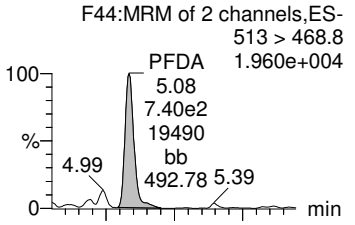


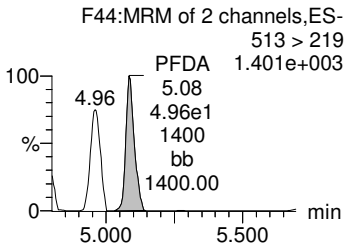
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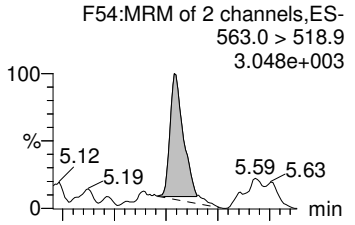


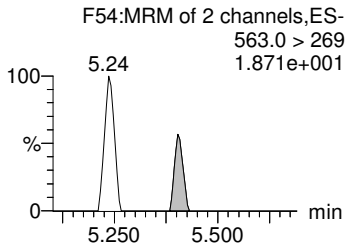
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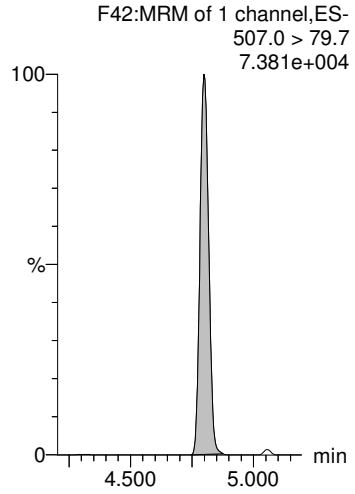


PFUdA

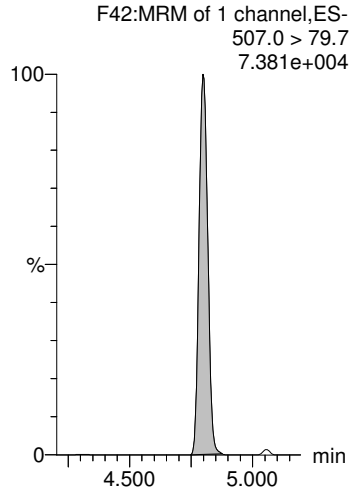




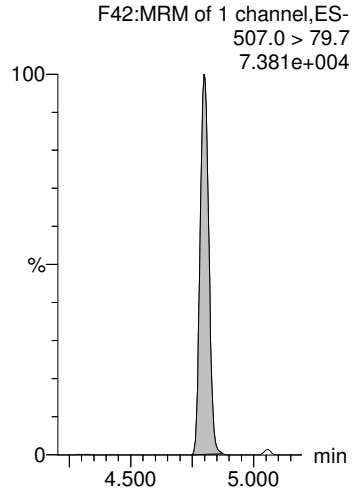
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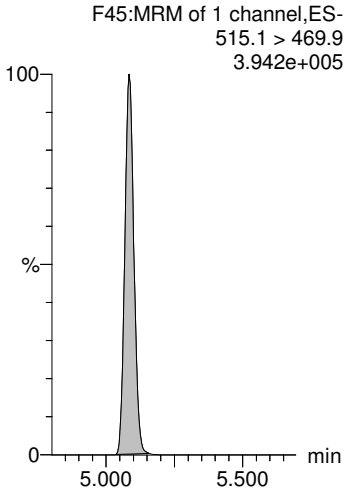
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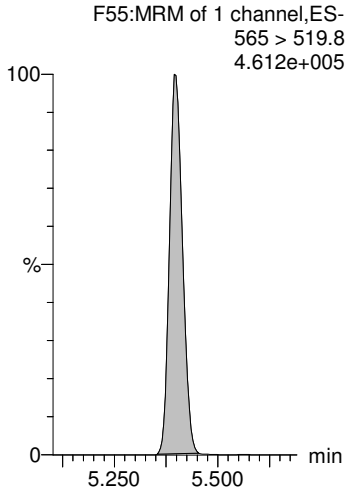
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13C2-PFDA-EIS



13C2-PFUdA-EIS



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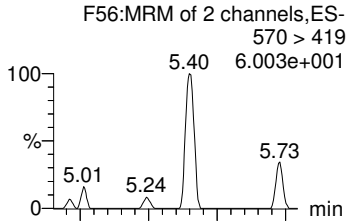
Review: AMR 2/28/2020

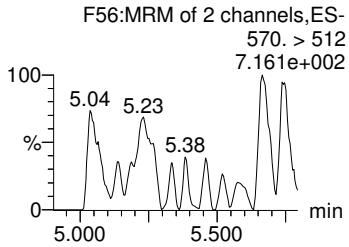
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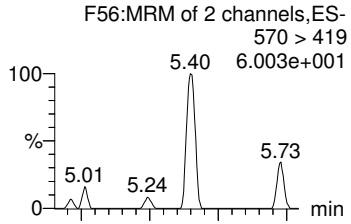
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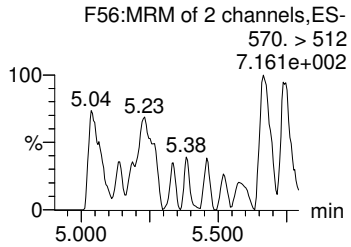
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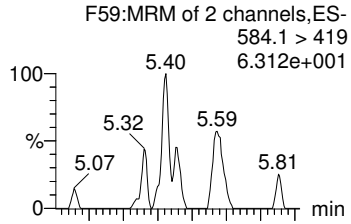


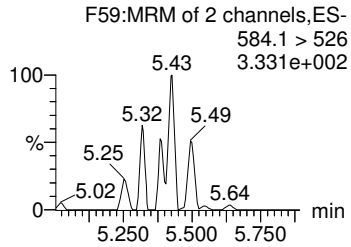
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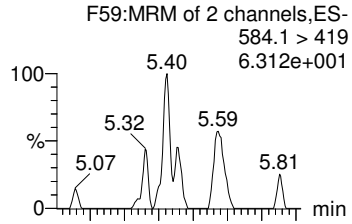


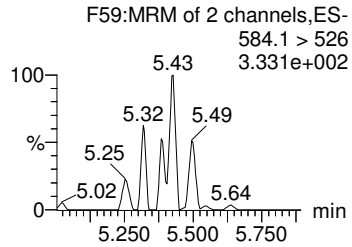
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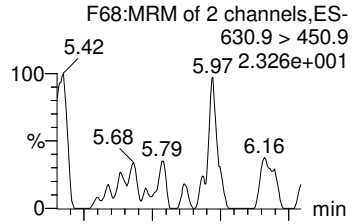


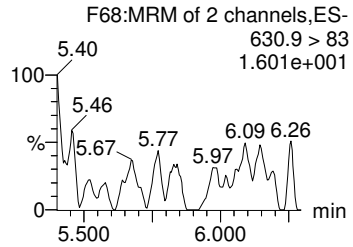
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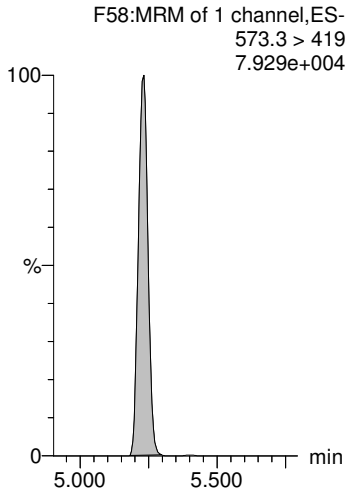


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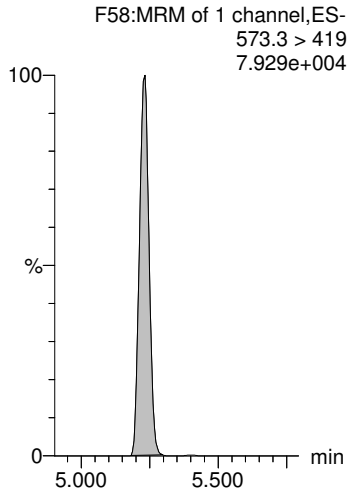




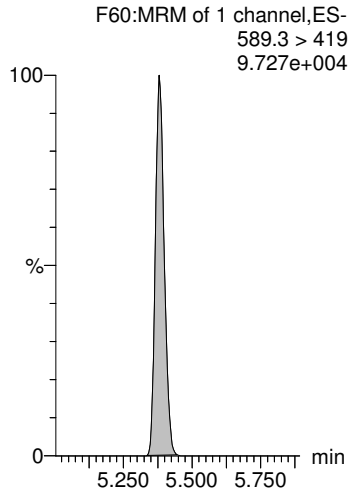
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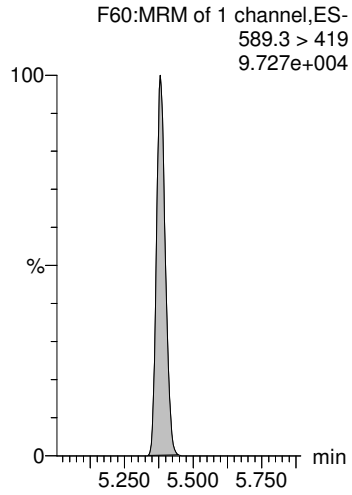
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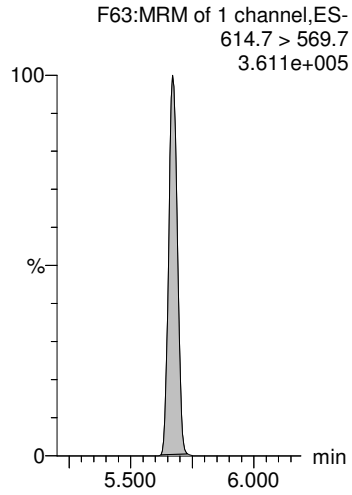
d5-N-EtFOSAA-EIS



d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS



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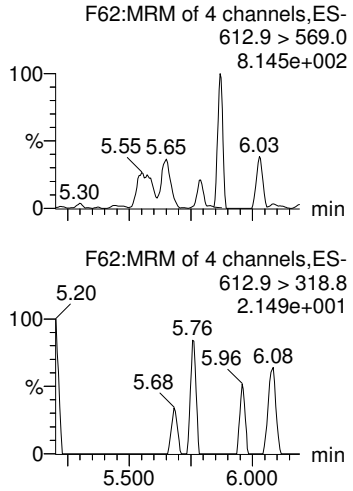
Review: AMR 2/28/2020

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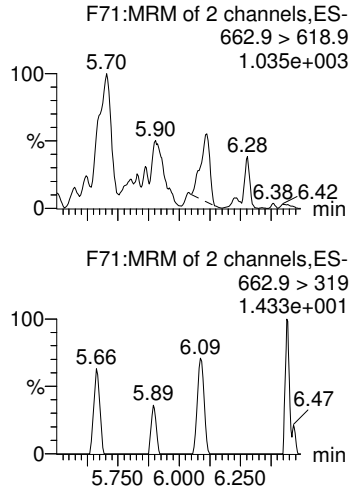
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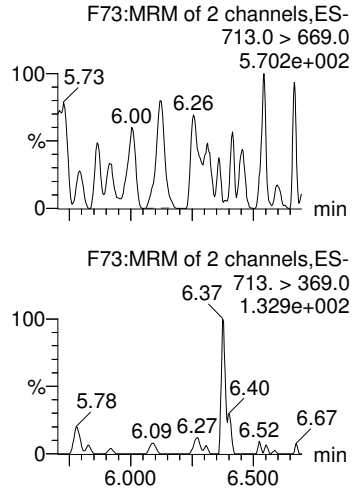
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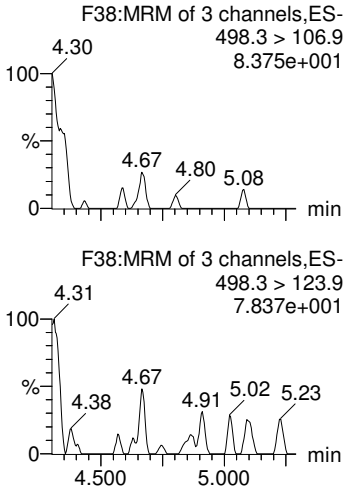
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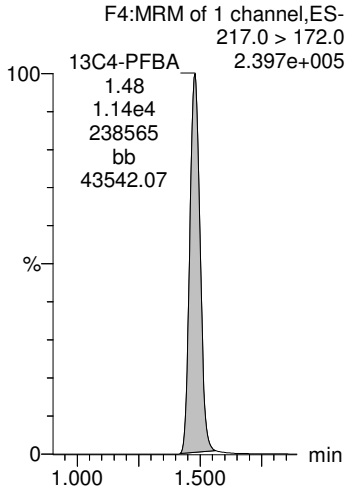
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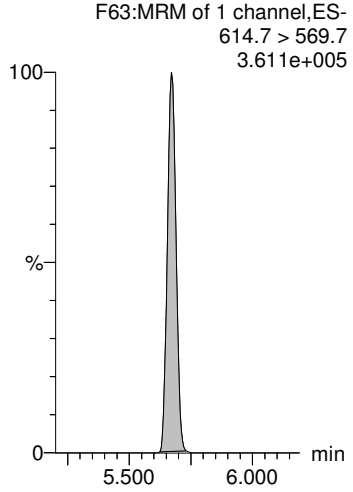
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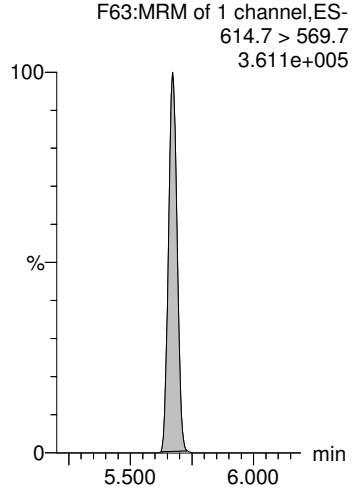
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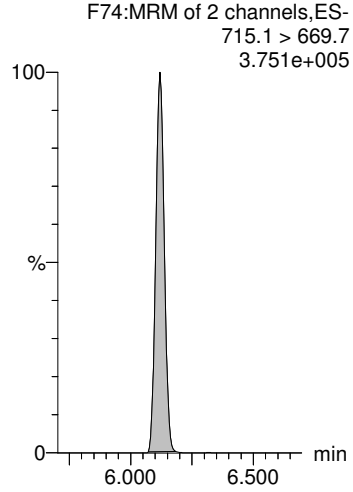
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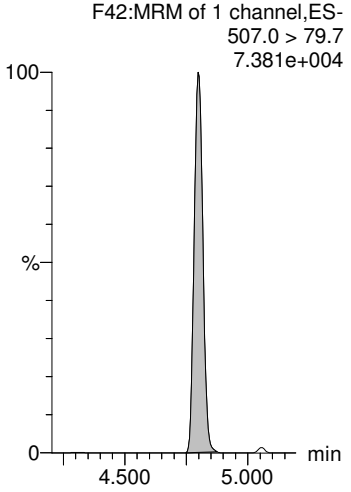
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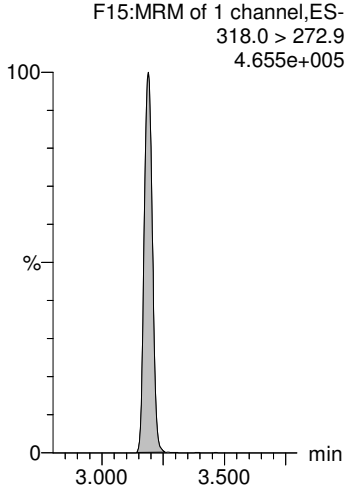
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13C8-PFOS-EIS



13C5-PFHxA



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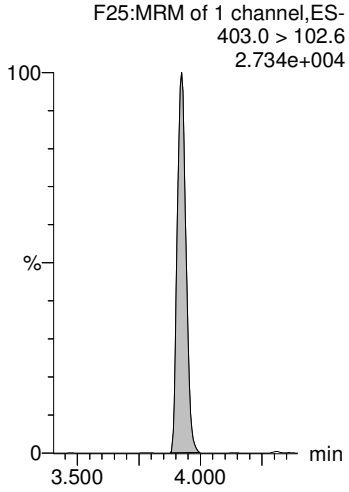
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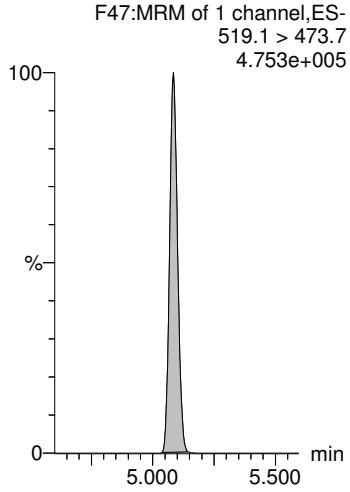
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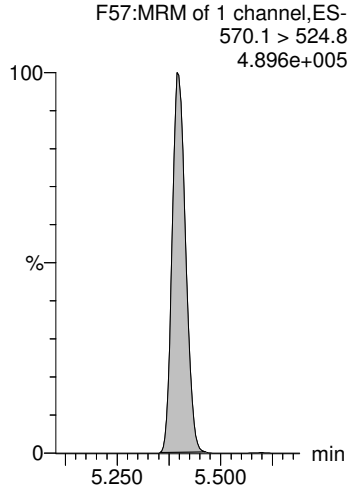
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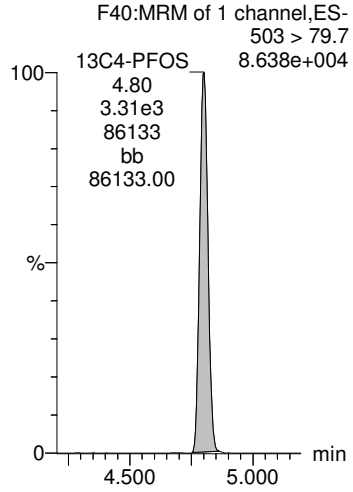
13C6-PFDA



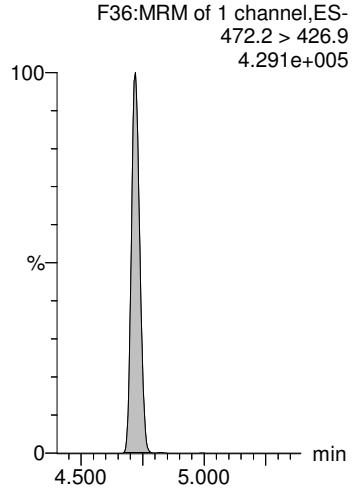
13C7-PFUdA



13C4-PFOS



13C9-PFNA



RK 2/25/2020

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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-65-66.qld

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Name: 200225P1-65, Date: 26-Feb-2020, Time: 05:11:00, ID: 2000314-10@5X DUP05-20200212 0.25284, Description: DUP05-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	13	L-PFHxS	398.9 > 79.7	42002.715	717.976	0.253		3.86	731.269	2838.5		NO	2.474	NO
2	1...	Total PFHxS	398.9 > 79.7	42002.715	717.976	0.253			731.269	2838.5		NO		
3	16	L-PFOA	412.8 > 368.9	362507.469	4469.997	0.253		4.23	1013.724	4150.7		NO	2.875	NO
4	1...	Total PFOA	412.8 > 368.9	362507.469	4469.997	0.253			1013.724	4150.7		NO		
5	61	13C3-PFHxS-EIS	401.8 > 79.7	717.976		0.253	273.316	3.86	717.976	10.4	21.0	YES		
6	61	13C3-PFHxS-EIS	401.8 > 79.7	717.976		0.253	273.316	3.86	717.976	10.4	21.0	YES		
7	69	13C2-PFOA-EIS	414.9 > 369.7	4469.997		0.253	1593.567	4.23	4469.997	11.1	22.4	YES		
8	69	13C2-PFOA-EIS	414.9 > 369.7	4469.997		0.253	1593.567	4.23	4469.997	11.1	22.4	YES		
9	-1													
10	99	13C4-PFBA	217.0 > 172.0	2982.276	2982.276	0.253	1.000	1.41	12.500	49.4	100.0	NO		
11	1...	18O2-PFHxS	403.0 > 102.6	332.566	332.566	0.253	1.000	3.86	12.500	49.4	100.0	NO		
12	1...	13C8-PFOA	420.9 > 376.0	4991.945	4991.945	0.253	1.000	4.23	12.500	49.4	100.0	NO		
13	-1													

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Review: AMR 2/28/2020

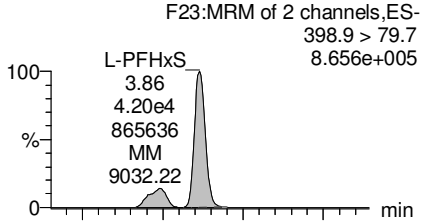
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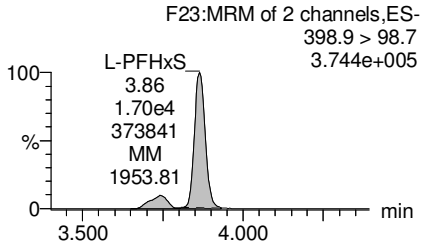
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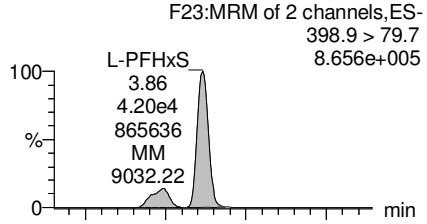
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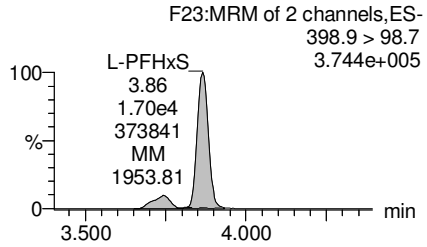
L-PFHxS



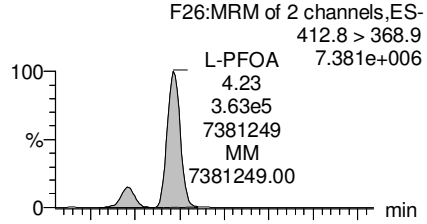


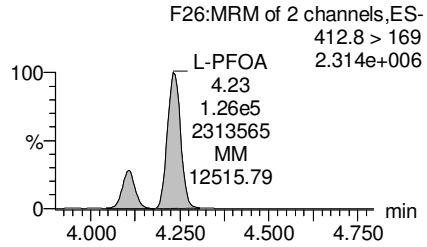
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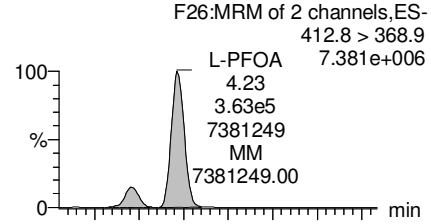


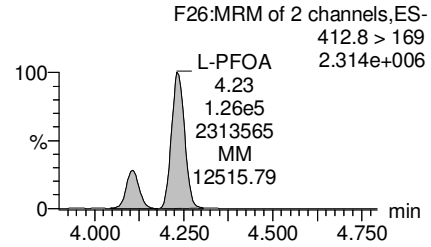
L-PFOA



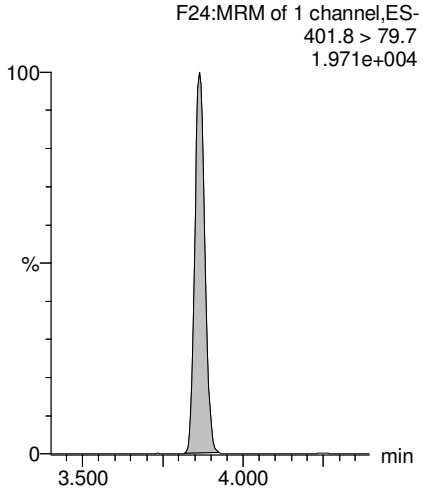


Total PFOA

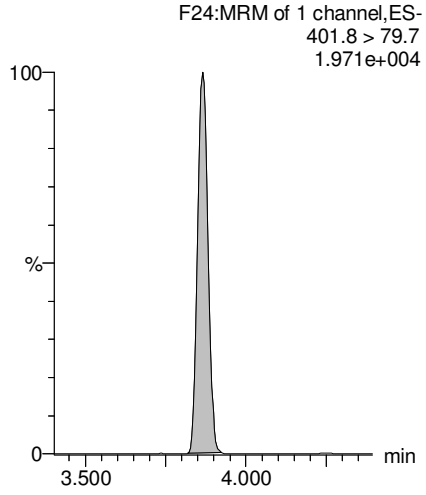




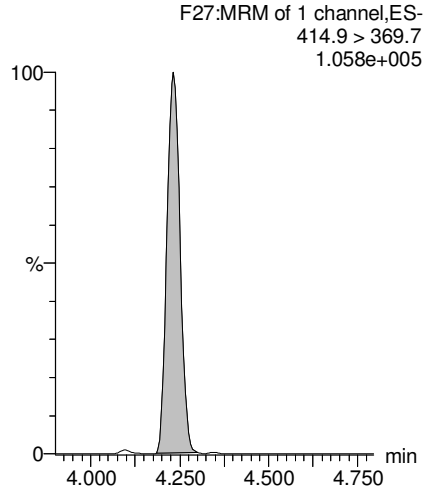
13C3-PFHxS-EIS



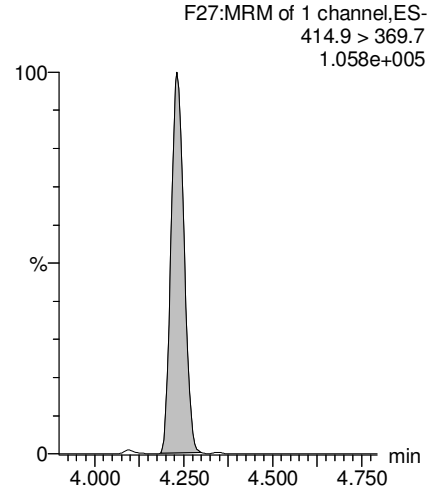
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13C2-PFOA-EIS



13C2-PFOA-EIS



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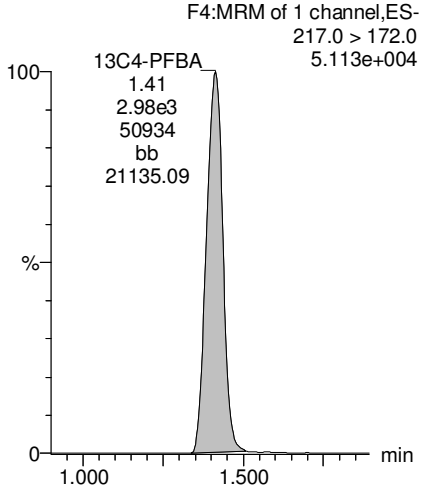
Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-65-66.qld

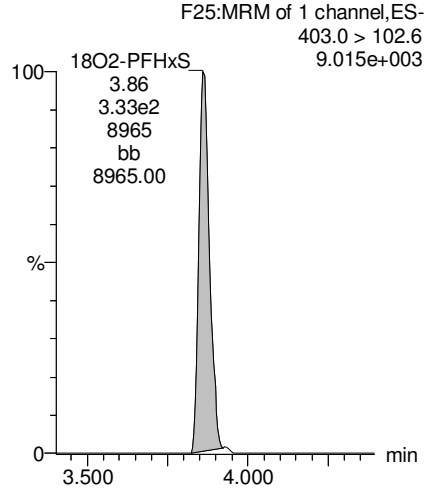
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Name: 200225P1-65, Date: 26-Feb-2020, Time: 05:11:00, ID: 2000314-10@5X DUP05-20200212 0.25284, Description: DUP05-20200212

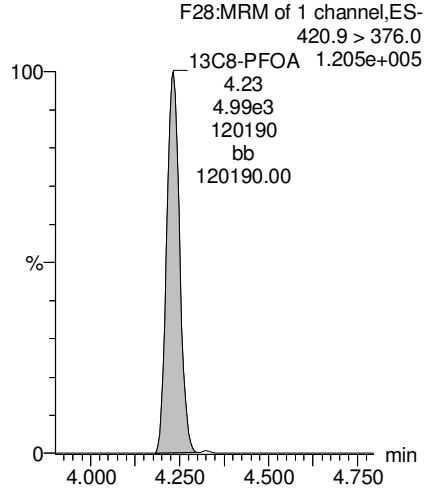
13C4-PFBA



18O2-PFHxS



13C8-PFOA



Review: AMR 2/28/2020

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Name: 200225P1-66, Date: 26-Feb-2020, Time: 05:21:31, ID: 2000314-11 IS72MW15S-20200212 0.25446, Description: IS72MW15S-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7	6.48e3	1.39e3	0.254		2.62	2.62	58.4	99.3462		3.190	NO
2	7	PFHxA	313.0 > 269.0	9.00e4	1.92e4	0.254		3.13	3.13	58.6	257.5105		17.123	NO
3	9	HFPO-DA	285.1 > 168.9		3.46e3	0.254		3.34						YES
4	11	PFHpA	363.0 > 318.9	2.41e4	1.31e4	0.254		3.72	3.72	23.0	72.9998		33.056	NO
5	12	ADONA	376.8 > 250.9		1.31e4	0.254		3.81						YES
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.39e3		0.254	120.043	2.66	2.62	1390	45.3500	92.3		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.92e4		0.254	1794.782	3.13	3.13	19200	42.0274	85.6		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.46e3		0.254	314.205	3.39	3.34	3460	43.2424	88.0		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.31e4		0.254	1233.447	3.74	3.72	13100	41.7380	85.0		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.31e4		0.254	1233.447	3.74	3.72	13100	41.7380	85.0		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	4.69e4	2.73e3	0.254		3.86	3.86	215	828.8234		2.483	NO
13	1...	Total PFHxS	398.9 > 79.7	4.69e4	2.73e3	0.254		3.93		215	828.8234			
14	16	L-PFOA	412.8 > 368.9	1.71e5	1.79e4	0.254		4.23	4.23	119	419.5015		2.795	NO
15	1...	Total PFOA	412.8 > 368.9	1.71e5	1.79e4	0.254		4.60		119	419.5015			
16	21	PFNA	463.0 > 418.8	7.91e3	1.49e4	0.254		4.67	4.67	6.65	21.6204		7.279	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.73e3		0.254	273.316	3.86	3.86	2730	39.2573	79.9		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.73e3		0.254	273.316	3.86	3.86	2730	39.2573	79.9		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.79e4		0.254	1593.567	4.23	4.23	17900	44.2279	90.0		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.79e4		0.254	1593.567	4.23	4.23	17900	44.2279	90.0		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.49e4		0.254	1492.001	4.67	4.67	14900	39.1706	79.7		
22	-1													
23	23	L-PFOS	498.9 > 79.7	9.77e4	3.01e3	0.254		4.75	4.75	405	1710.9113		2.353	NO
24	1...	Total PFOS	498.9 > 79.7	9.77e4	3.01e3	0.254		5.13		405	1710.9113			
25	25	9Cl-PF30NS	530.7 > 350.8		3.01e3	0.254		4.96						YES
26	26	PFDA	513 > 468.8	3.37e2	1.66e4	0.254		5.03	5.03	0.253	0.6249		36.862	YES
27	33	PFUdA	563.0 > 518.9		1.53e4	0.254		5.35						YES
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.01e3		0.254	291.759	4.75	4.75	3010	40.6044	82.7		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.01e3		0.254	291.759	4.75	4.75	3010	40.6044	82.7		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.01e3		0.254	291.759	4.75	4.75	3010	40.6044	82.7		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.66e4		0.254	1635.176	5.04	5.03	16600	39.9700	81.4		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.53e4		0.254	1617.090	5.35	5.35	15300	37.2648	75.9		
33	-1													
34	29	L-MeFOSAA	570 > 419		2.92e3	0.254		5.18						YES
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	2.92e3	0.254		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		3.93e3	0.254		5.33						YES

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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-65-66.qld

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Name: 200225P1-66, Date: 26-Feb-2020, Time: 05:21:31, ID: 2000314-11 IS72MW15S-20200212 0.25446, Description: IS72MW15S-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	3.93e3	0.254		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.12e4	0.254		5.56						YES
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.92e3		0.254	330.310	5.18	5.18	2920	34.7032	70.6		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.92e3		0.254	330.310	5.18	5.18	2920	34.7032	70.6		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.93e3		0.254	395.337	5.32	5.33	3930	39.0899	79.6		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.93e3		0.254	395.337	5.32	5.33	3930	39.0899	79.6		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.12e4		0.254	1686.253	5.62	5.62	11200	26.1193	53.2		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.12e4	0.254		5.62						YES
46	39	PFTrDA	662.9 > 618.9		1.12e4	0.254		5.88						YES
47	41	PFTeDA	713.0 > 669.0		8.16e3	0.254		6.07						YES
48	1...	TDCA	498.3>106.9			0.254		4.59						YES
49	99	13C4-PFBA	217.0 > 172.0	1.17e4	1.17e4	0.254	1.000	1.42	1.41	12.5	49.1236	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.12e4		0.254	1686.253	5.62	5.62	11200	26.1193	53.2		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.12e4		0.254	1686.253	5.62	5.62	11200	26.1193	53.2		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	8.16e3		0.254	1896.410	6.05	6.07	8160	16.9054	34.4		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.01e3		0.254	291.759	4.75	4.75	3010	40.6044	82.7		
54	1...	13C5-PFHxA	318.0 > 272.9	1.95e4	1.95e4	0.254	1.000	3.13	3.13	12.5	49.1236	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.22e3	1.22e3	0.254	1.000	3.86	3.86	12.5	49.1236	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.73e4	1.73e4	0.254	1.000	5.04	5.04	12.5	49.1236	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.63e4	1.63e4	0.254	1.000	5.35	5.35	12.5	49.1236	100.0		
59	1...	13C4-PFOS	503 > 79.7	2.97e3	2.97e3	0.254	1.000	4.75	4.75	12.5	49.1236	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.67e4	1.67e4	0.254	1.000	4.67	4.67	12.5	49.1236	100.0		

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Review: AMR 2/28/2020

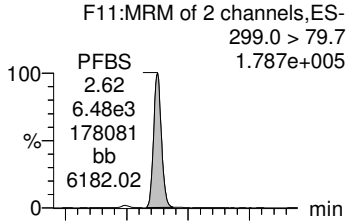
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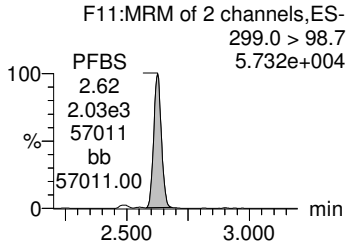
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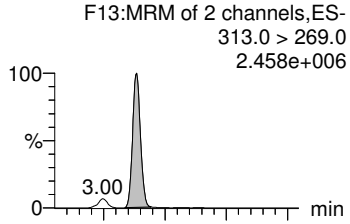
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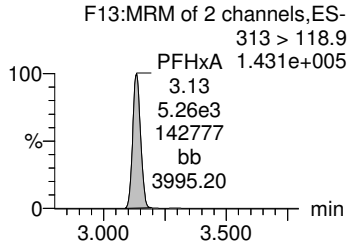
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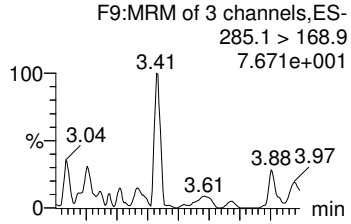


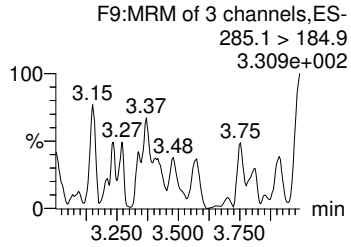
PFHxA



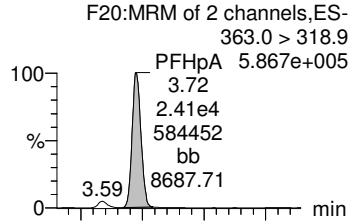


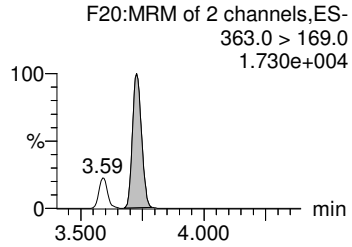
HFPO-DA



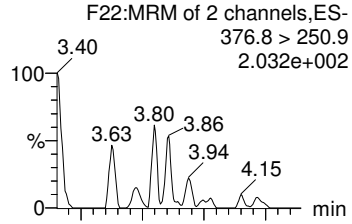


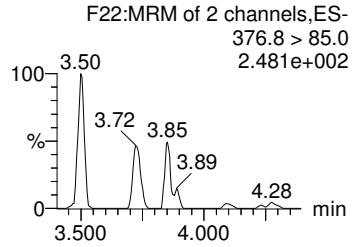
PFHpA



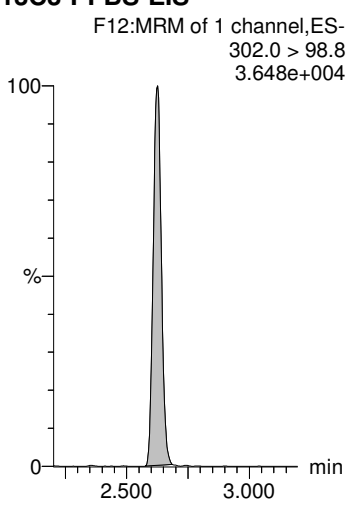


ADONA

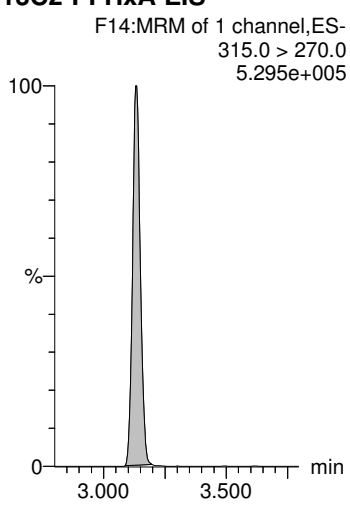




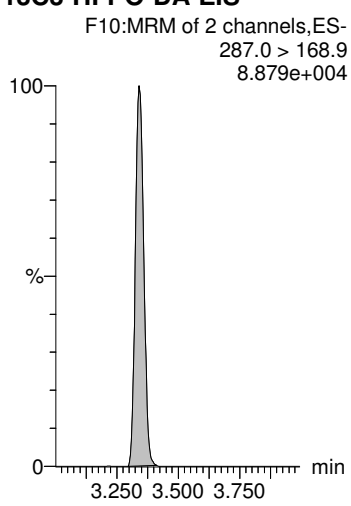
13C3-PFBS-EIS



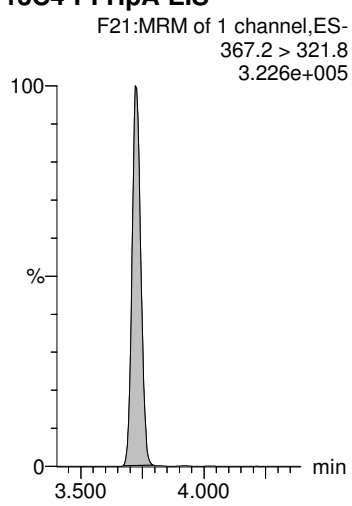
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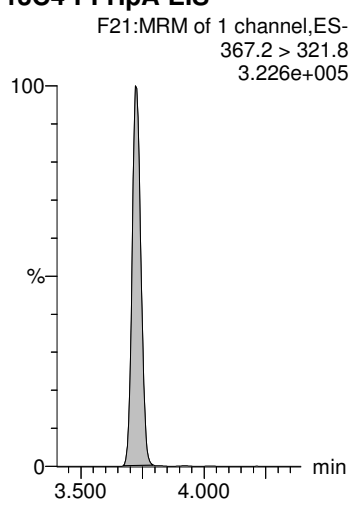
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13C4-PFHpA-EIS



13C4-PFHpA-EIS



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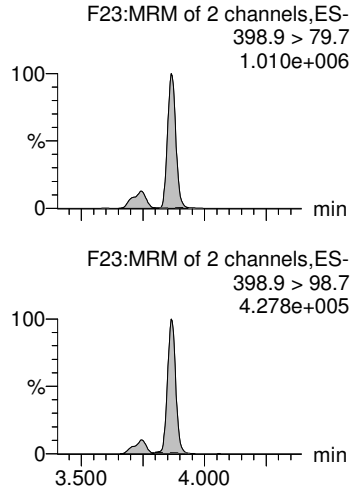
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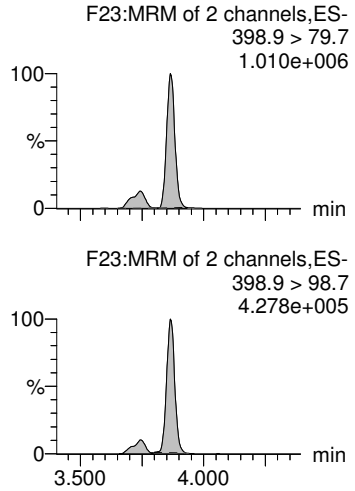
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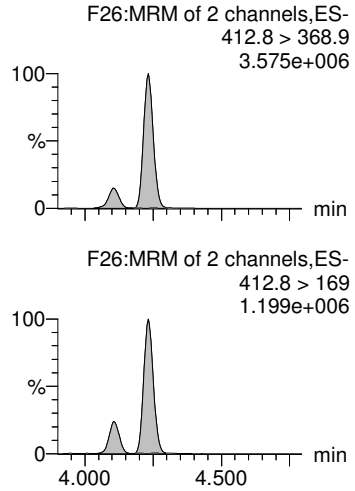
L-PFHxS



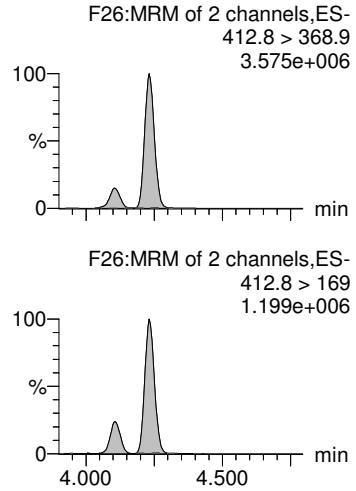
Total PFHxS



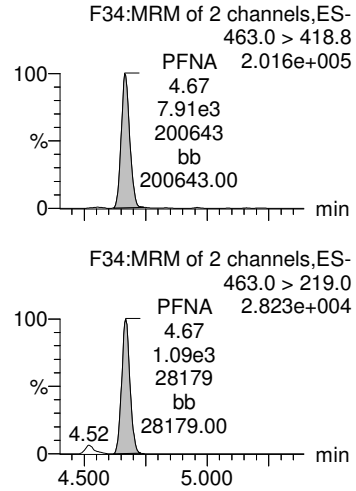
L-PFOA



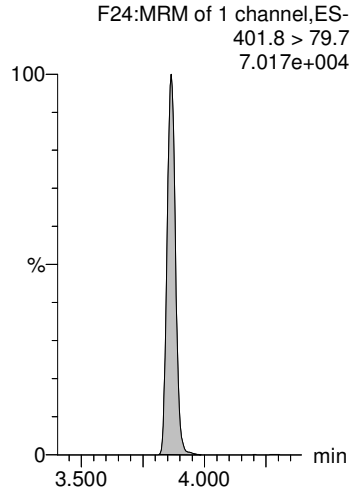
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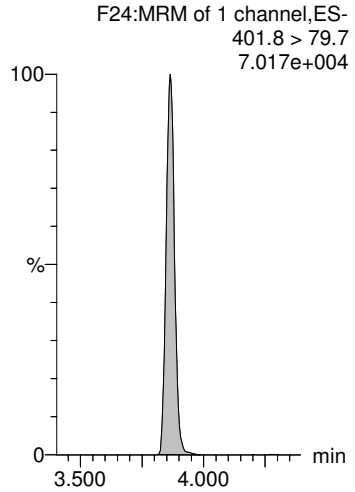
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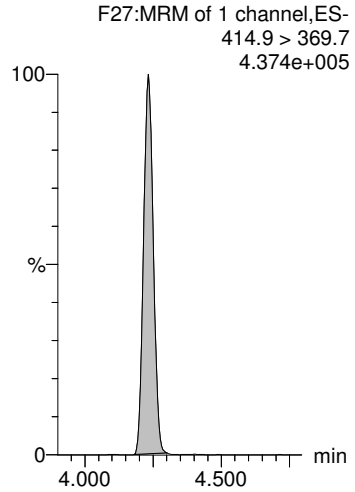
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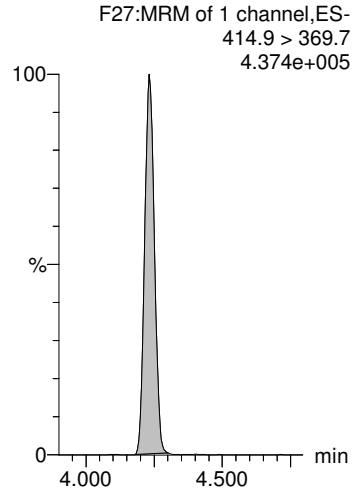
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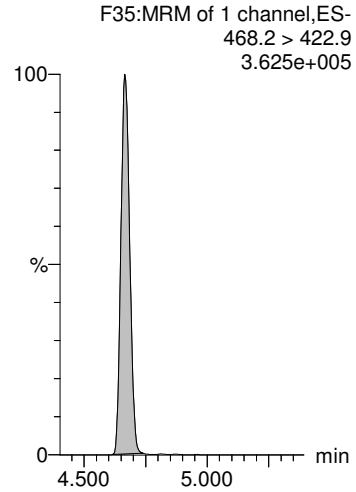
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13C2-PFOA-EIS



13C5-PFNA-EIS



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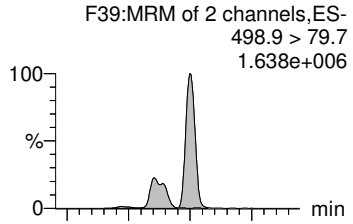
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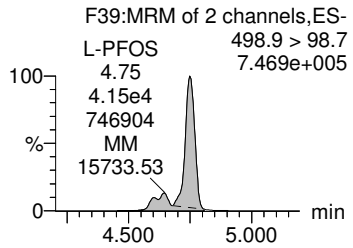
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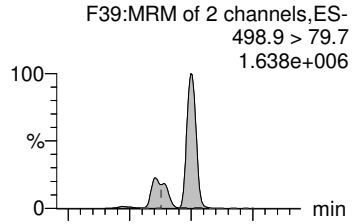
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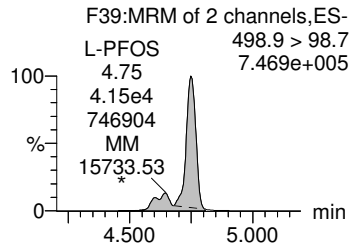
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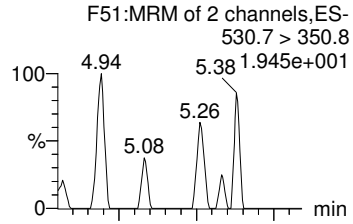


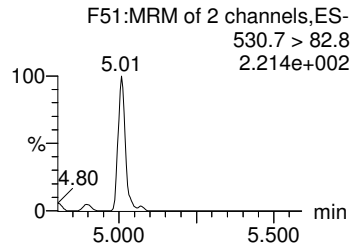
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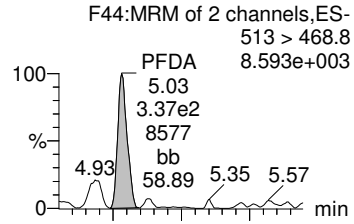


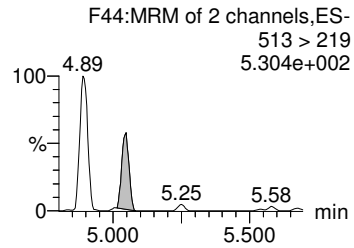
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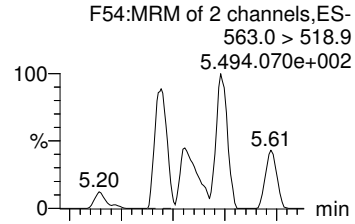


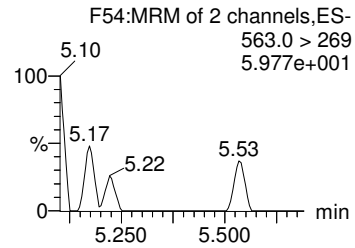
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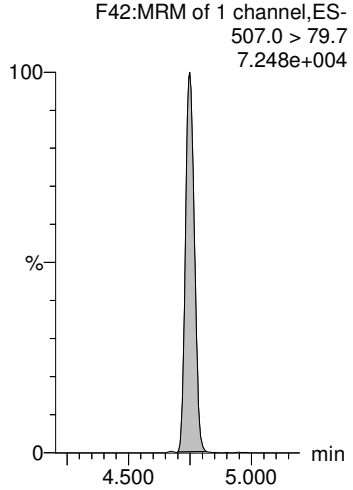


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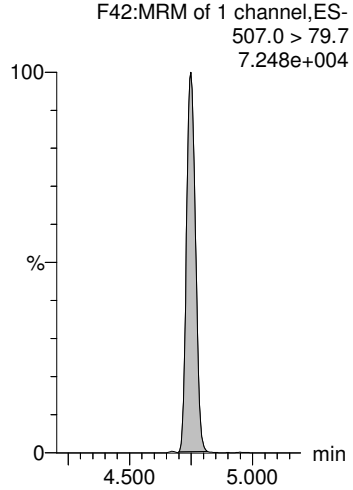




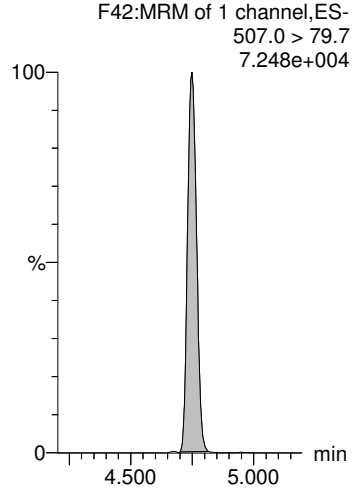
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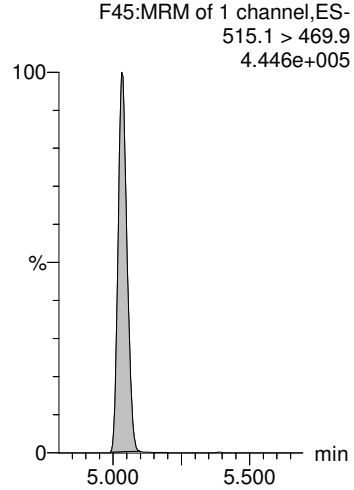
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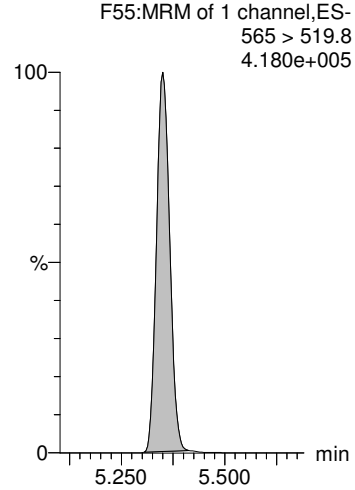
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13C2-PFDA-EIS



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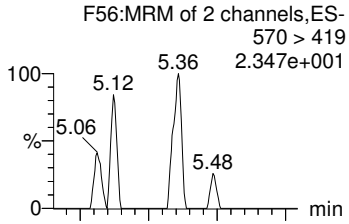
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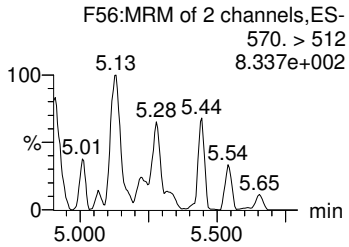
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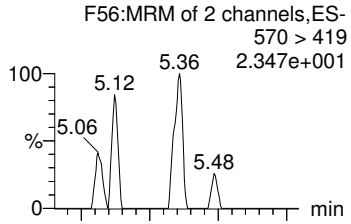
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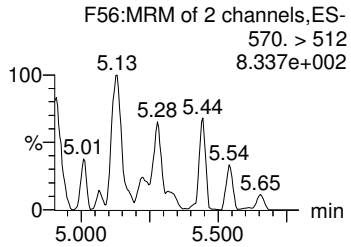
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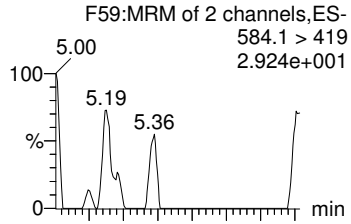


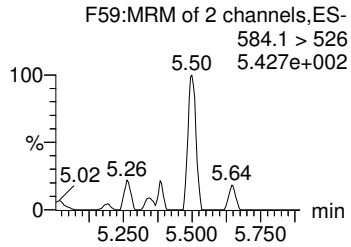
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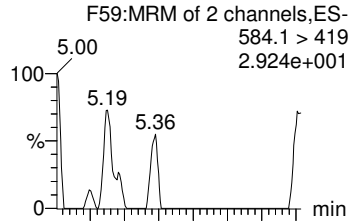


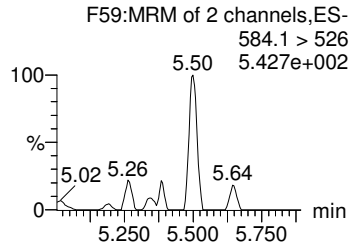
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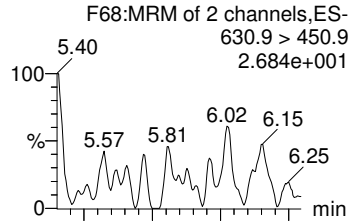


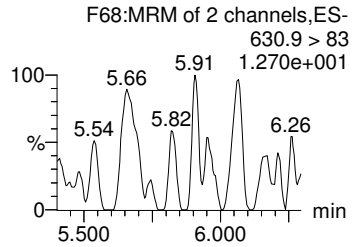
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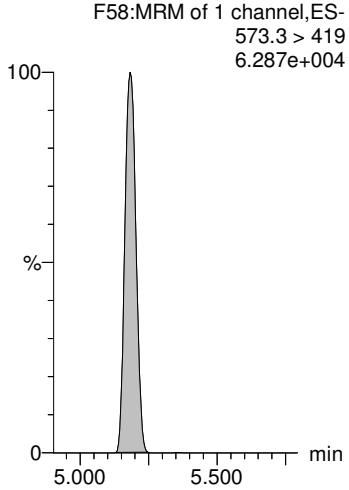


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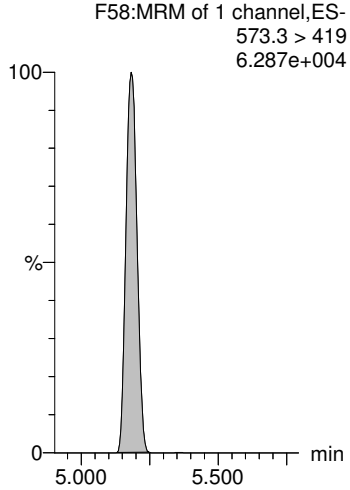




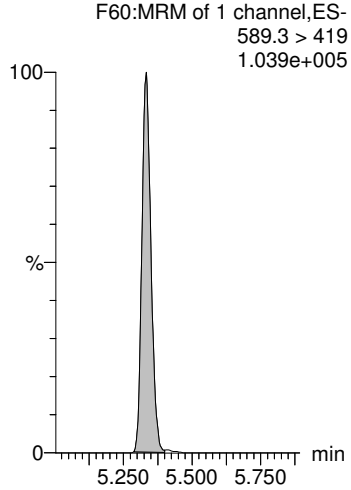
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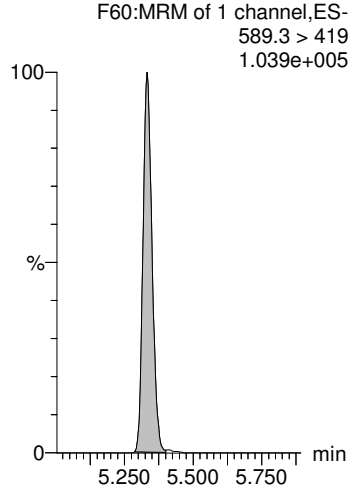
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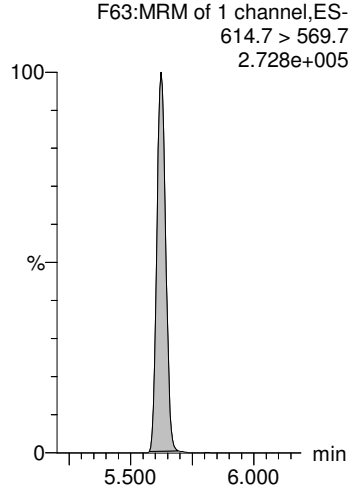
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d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS



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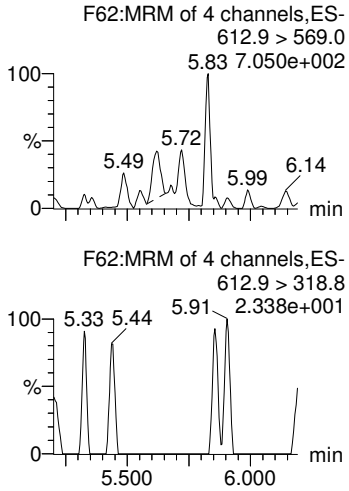
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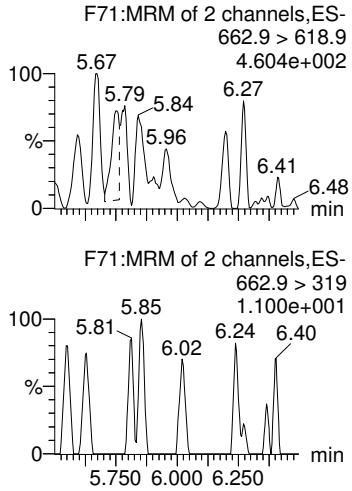
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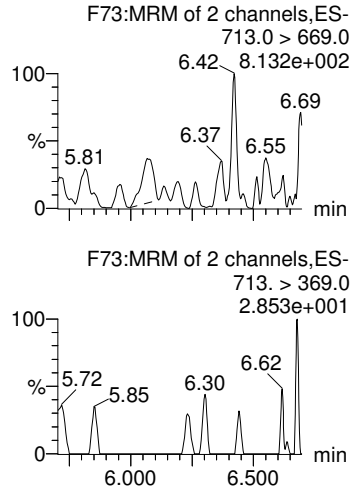
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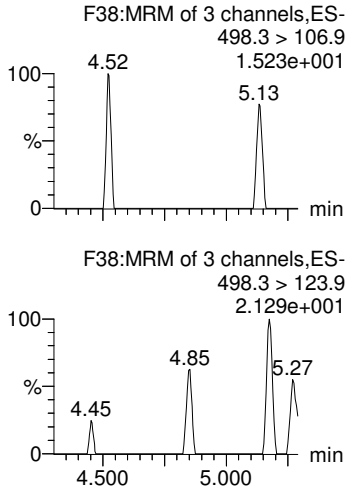
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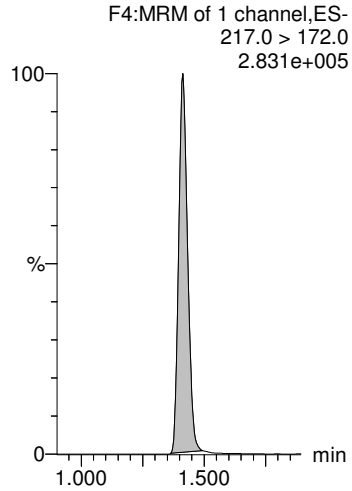
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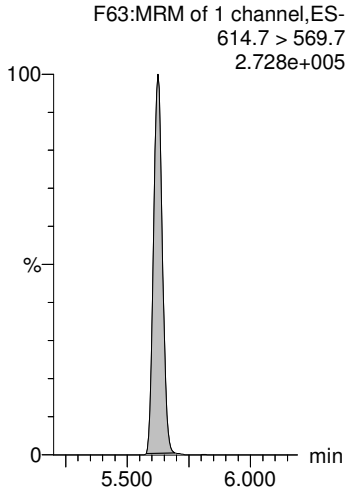
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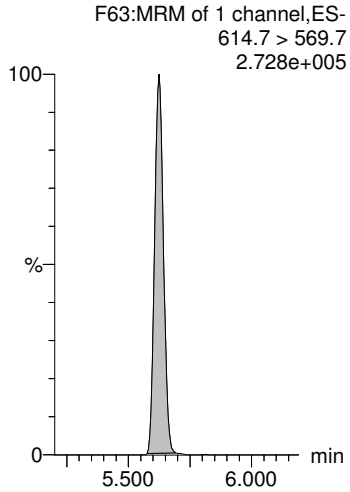
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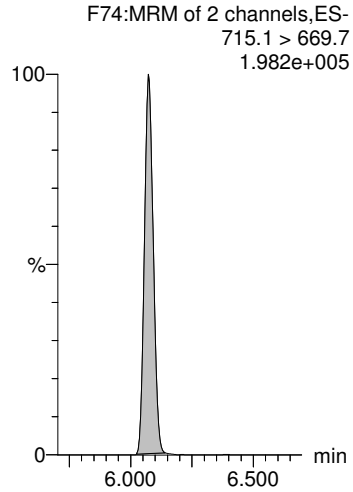
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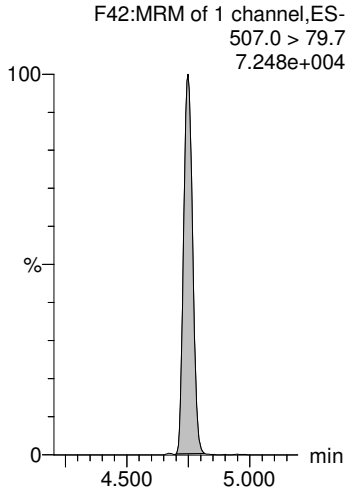
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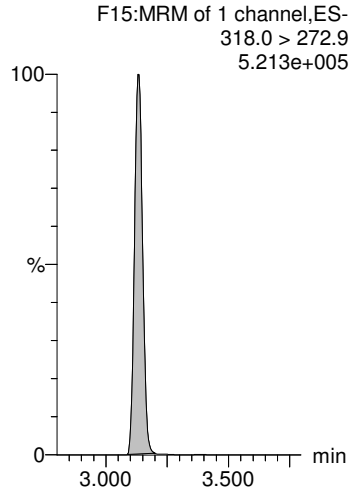
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13C8-PFOS-EIS



13C5-PFHxA



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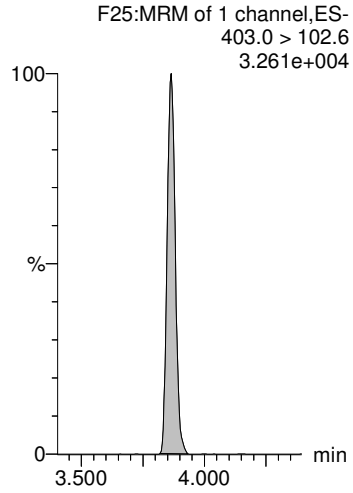
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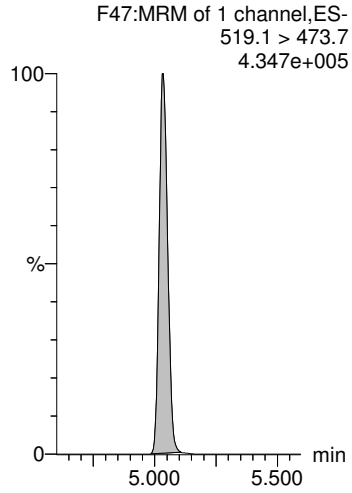
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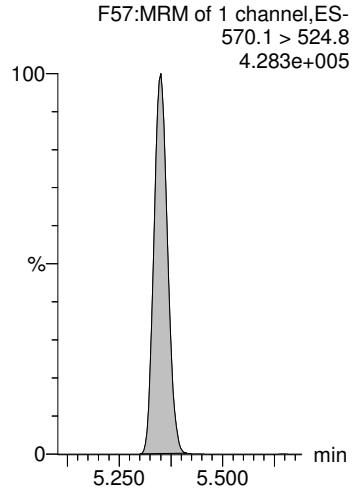
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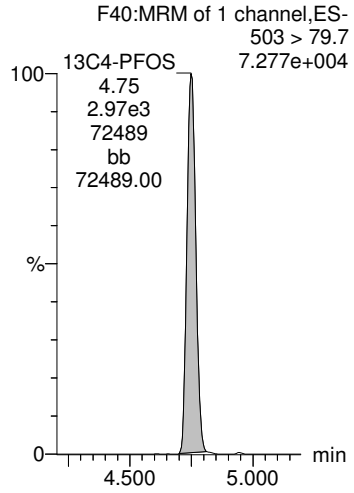
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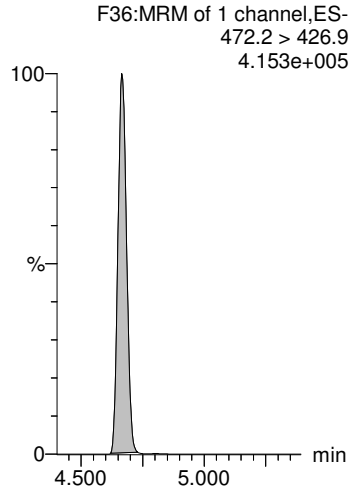
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13C4-PFOS



13C9-PFNA



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Review: AMR 2/25/2020

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Name: 200220P1-48, Date: 21-Feb-2020, Time: 01:37:46, ID: 2000314-12 IS72MW18SR-20200212 0.24458, Description: IS72MW18SR-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7	2.89e3	1.42e3	0.245		2.68	2.68	25.4	45.1325		3.273	NO
2	7	PFHxA	313.0 > 269.0	3.18e4	1.83e4	0.245		3.19	3.19	21.7	99.8016		16.414	NO
3	9	HFPO-DA	285.1 > 168.9		3.39e3	0.245		3.40						
4	11	PFHpA	363.0 > 318.9	1.09e4	1.18e4	0.245		3.79	3.79	11.5	37.8393		19.950	NO
5	12	ADONA	376.8 > 250.9		1.18e4	0.245		3.88						
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.42e3		0.245	114.516	2.70	2.68	1420	50.7214	99.2		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.83e4		0.245	1636.234	3.19	3.19	18300	45.8130	89.6		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.39e3		0.245	293.118	3.43	3.40	3390	47.3490	92.6		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.18e4		0.245	1106.802	3.79	3.79	11800	43.5759	85.3		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.18e4		0.245	1106.802	3.79	3.79	11800	43.5759	85.3		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	1.94e4	2.86e3	0.245		3.92	3.93	84.7	322.6226		2.415	NO
13	1...	Total PFHxS	398.9 > 79.7	1.94e4	2.86e3	0.245		3.93		84.7	322.6226			
14	16	L-PFOA	412.8 > 368.9	1.31e5	1.75e4	0.245		4.30	4.30	94.1	324.7809		2.963	NO
15	1...	Total PFOA	412.8 > 368.9	1.31e5	1.75e4	0.245		4.60		94.1	324.7809			
16	21	PFNA	463.0 > 418.8	1.65e3	1.55e4	0.245		4.72	4.72	1.33	4.2172		10.549	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.86e3		0.245	252.668	3.93	3.92	2860	46.3069	90.6		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.86e3		0.245	252.668	3.93	3.92	2860	46.3069	90.6		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.75e4		0.245	1527.160	4.29	4.30	17500	46.7209	91.4		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.75e4		0.245	1527.160	4.29	4.30	17500	46.7209	91.4		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.55e4		0.245	1373.362	4.72	4.72	15500	46.0842	90.2		
22	-1													
23	23	L-PFOS	498.9 > 79.7	1.43e4	3.12e3	0.245		4.80	4.80	57.2	251.8325		2.175	NO
24	1...	Total PFOS	498.9 > 79.7	1.43e4	3.12e3	0.245		5.13		57.2	251.8325			
25	25	9Cl-PF30NS	530.7 > 350.8		3.12e3	0.245		5.01						
26	26	PFDA	513 > 468.8		1.61e4	0.245		5.08						
27	33	PFUdA	563.0 > 518.9		1.70e4	0.245		5.39						
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.12e3		0.245	295.805	4.80	4.80	3120	43.1884	84.5		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.12e3		0.245	295.805	4.80	4.80	3120	43.1884	84.5		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.12e3		0.245	295.805	4.80	4.80	3120	43.1884	84.5		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.61e4		0.245	1356.410	5.08	5.08	16100	48.4706	94.8		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.70e4		0.245	1416.449	5.40	5.39	17000	49.0700	96.0		
33	-1													
34	29	L-MeFOSAA	570 > 419		2.44e3	0.245		5.23						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	2.44e3	0.245		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		3.63e3	0.245		5.38						

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Review: AMR 2/25/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-48.qld

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Name: 200220P1-48, Date: 21-Feb-2020, Time: 01:37:46, ID: 2000314-12 IS72MW18SR-20200212 0.24458, Description: IS72MW18SR-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	3.63e3	0.245		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.32e4	0.245		5.60						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.44e3		0.245	262.877	5.22	5.23	2440	37.9391	74.2		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.44e3		0.245	262.877	5.22	5.23	2440	37.9391	74.2		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.63e3		0.245	360.983	5.37	5.38	3630	41.1245	80.5		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.63e3		0.245	360.983	5.37	5.38	3630	41.1245	80.5		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.32e4		0.245	1573.093	5.67	5.67	13200	34.3878	67.3		
44	-1													
45	37	PFDoA	612.9 > 569.0	1.89e1	1.32e4	0.245		5.67	5.68	0.0178			53.940	YES
46	39	PFTrDA	662.9 > 618.9		1.32e4	0.245		5.93						
47	41	PFTeDA	713.0 > 669.0		1.55e4	0.245		6.12						
48	1...	TDCA	498.3>106.9			0.245		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.17e4	1.17e4	0.245	1.000	1.48	1.48	12.5	51.1080	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.32e4		0.245	1573.093	5.67	5.67	13200	34.3878	67.3		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.32e4		0.245	1573.093	5.67	5.67	13200	34.3878	67.3		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.55e4		0.245	1440.513	6.10	6.12	15500	43.9844	86.1		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.12e3		0.245	295.805	4.80	4.80	3120	43.1884	84.5		
54	1...	13C5-PFHxA	318.0 > 272.9	1.83e4	1.83e4	0.245	1.000	3.18	3.19	12.5	51.1080	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.11e3	1.11e3	0.245	1.000	3.92	3.93	12.5	51.1080	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.77e4	1.77e4	0.245	1.000	5.08	5.08	12.5	51.1080	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.98e4	1.98e4	0.245	1.000	5.40	5.40	12.5	51.1080	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.57e3	3.57e3	0.245	1.000	4.79	4.80	12.5	51.1080	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.62e4	1.62e4	0.245	1.000	4.72	4.72	12.5	51.1080	100.0		

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Review: AMR 2/25/2020

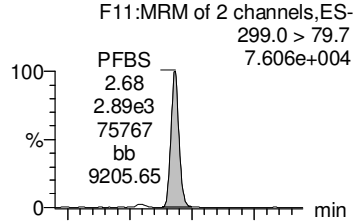
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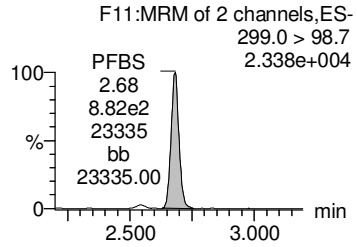
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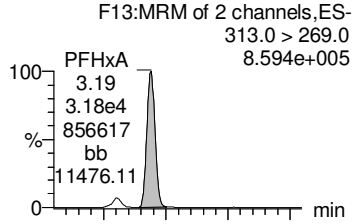
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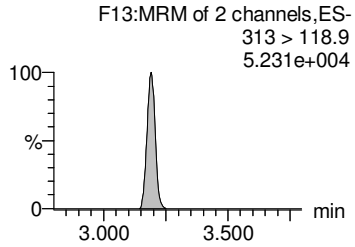
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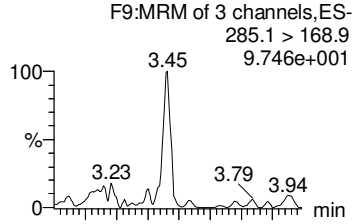


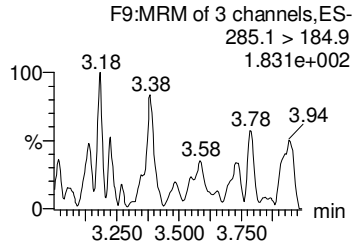
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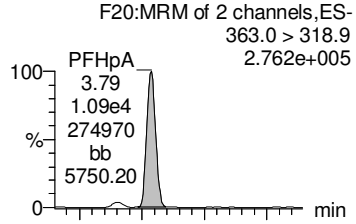


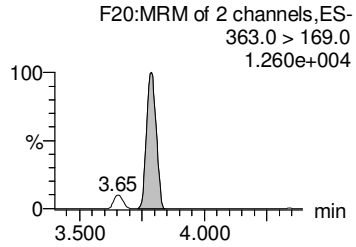
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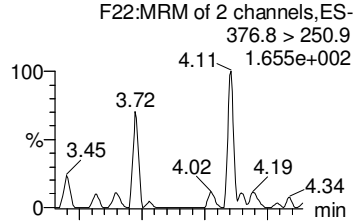


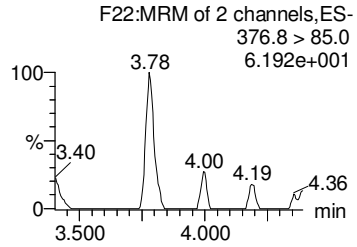
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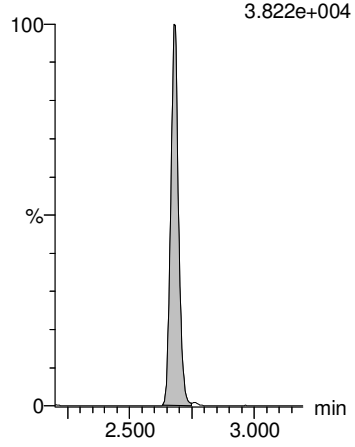


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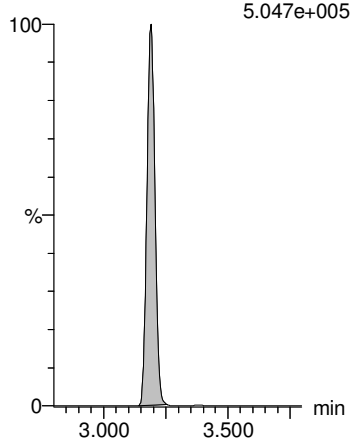




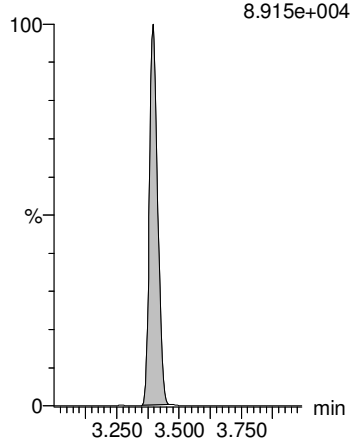
13C3-PFBS-EIS



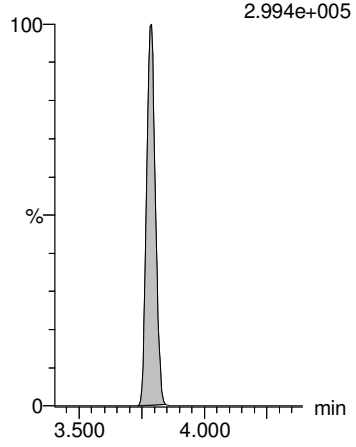
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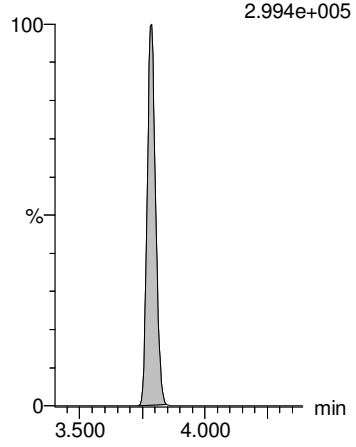
13C3-HFPO-DA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS



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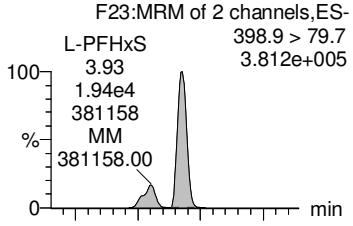
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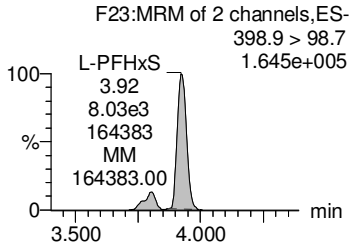
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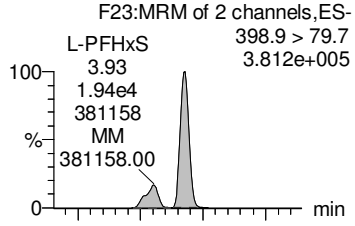
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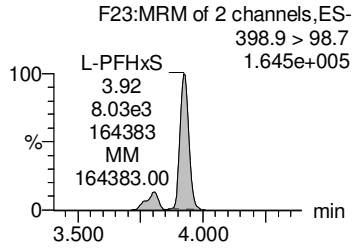
L-PFHxS



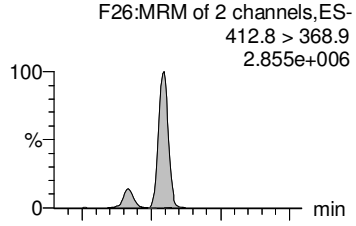


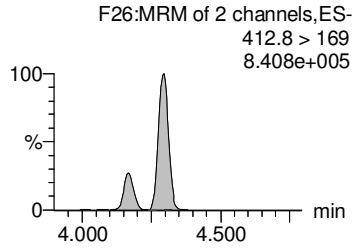
Total PFHxS



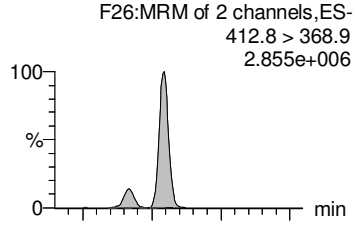


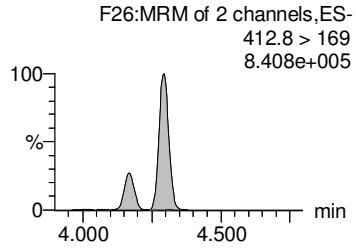
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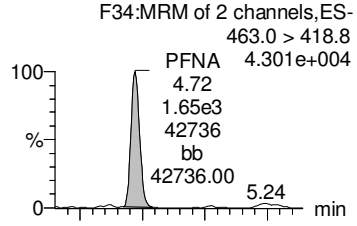


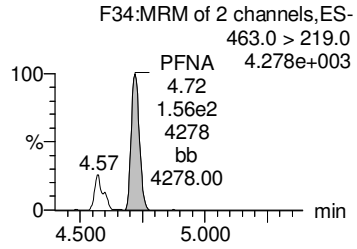
Total PFOA



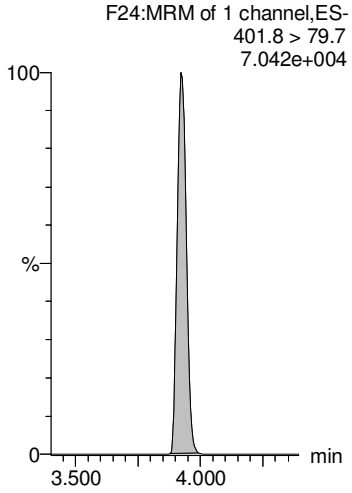


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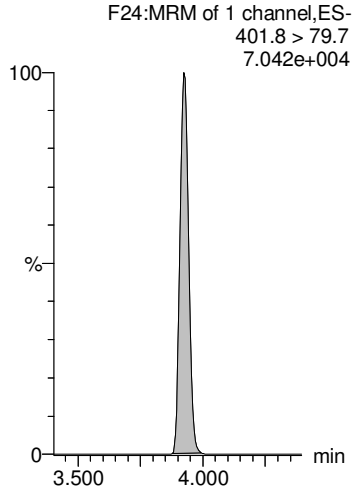




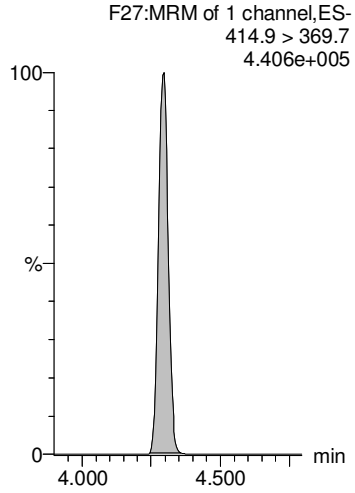
13C3-PFHxS-EIS



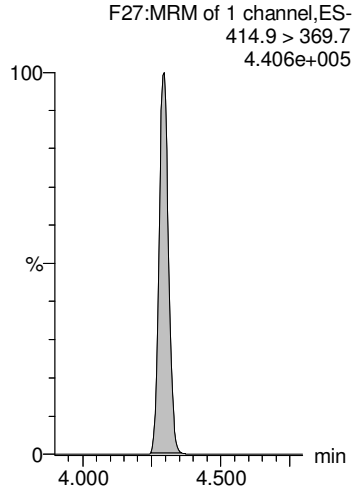
13C3-PFHxS-EIS



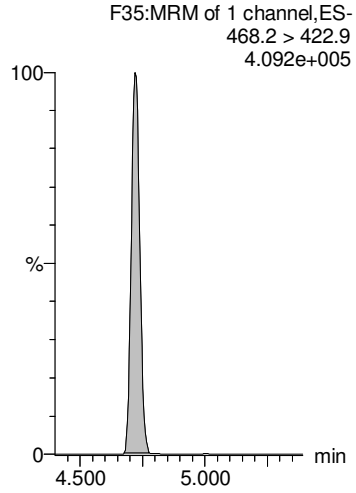
13C2-PFOA-EIS



13C2-PFOA-EIS



13C5-PFNA-EIS



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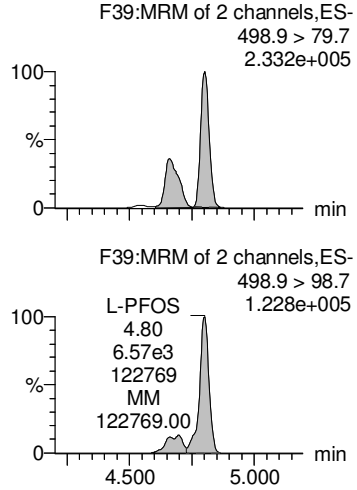
Review: AMR 2/25/2020

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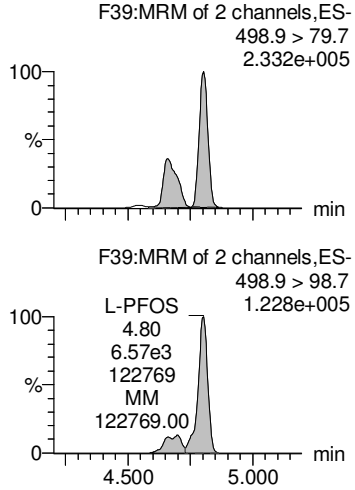
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Name: 200220P1-48, Date: 21-Feb-2020, Time: 01:37:46, ID: 2000314-12 IS72MW18SR-20200212 0.24458, Description: IS72MW18SR-20200212

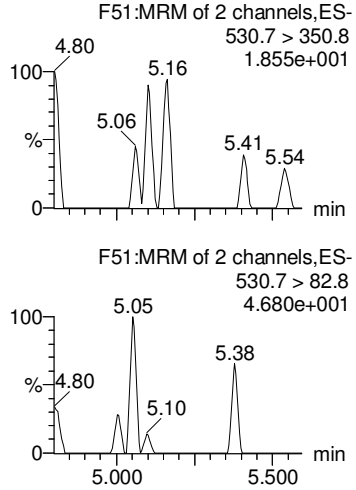
L-PFOS



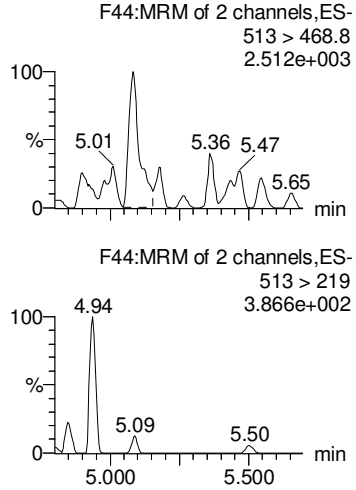
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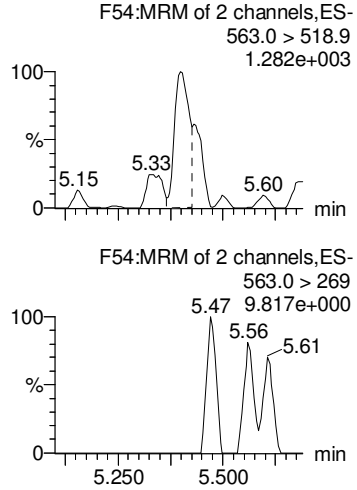
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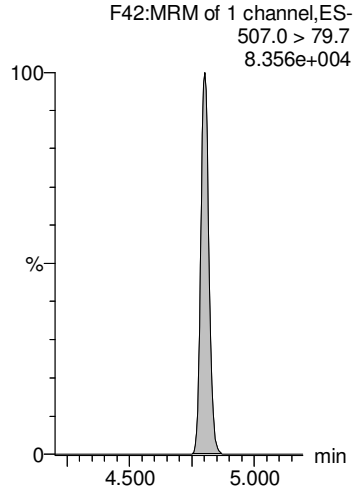
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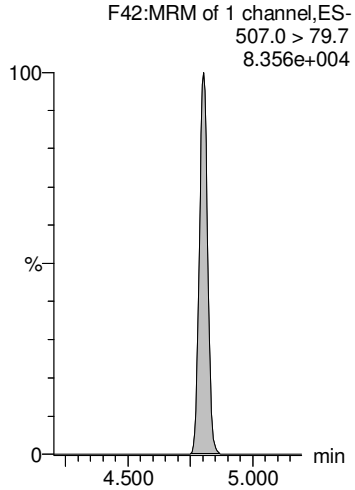
PFUdA



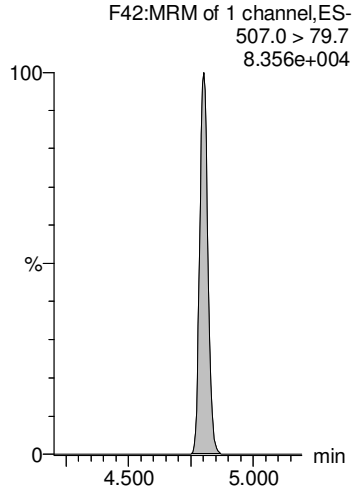
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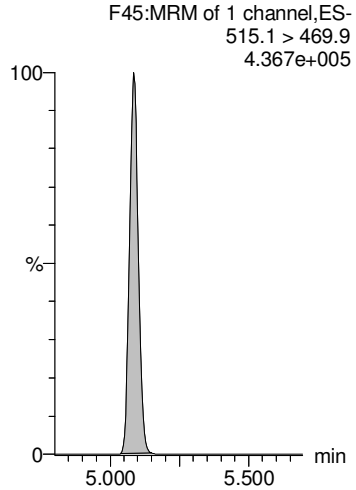
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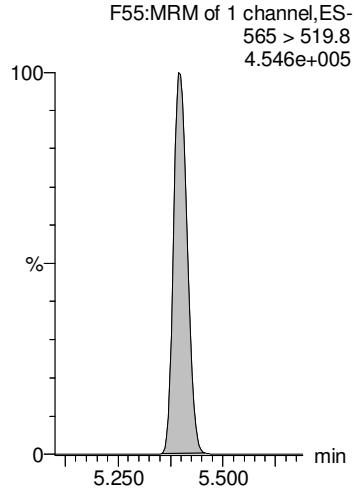
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-PFUdA-EIS



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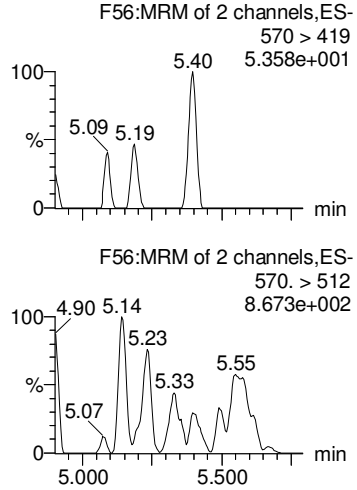
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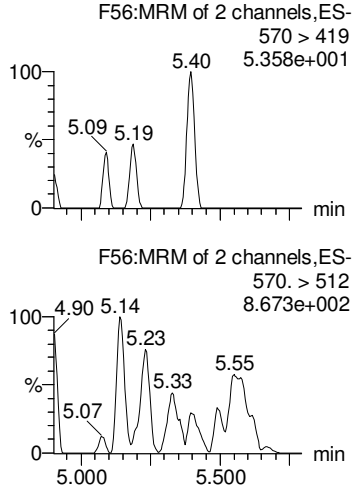
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Name: 200220P1-48, Date: 21-Feb-2020, Time: 01:37:46, ID: 2000314-12 IS72MW18SR-20200212 0.24458, Description: IS72MW18SR-20200212

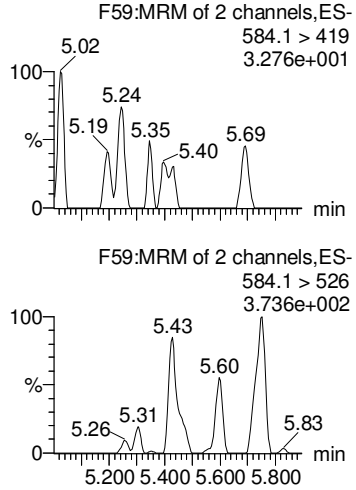
L-MeFOSAA



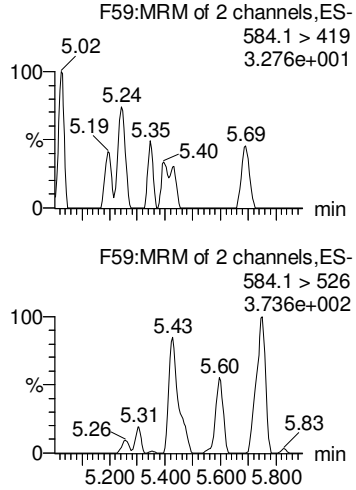
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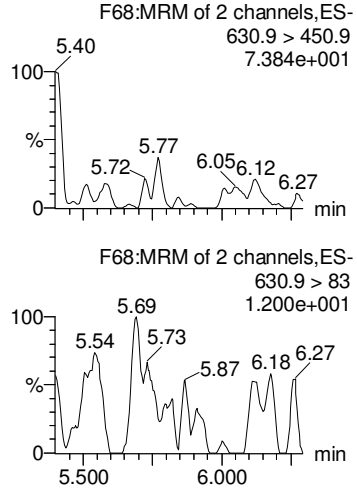
L-EtFOSAA



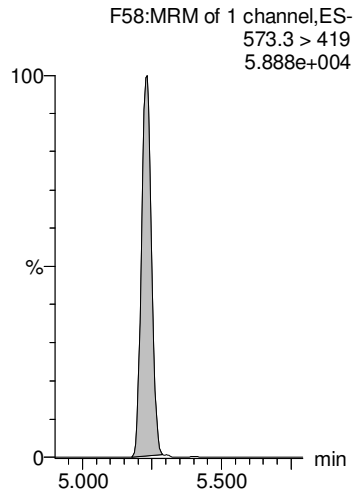
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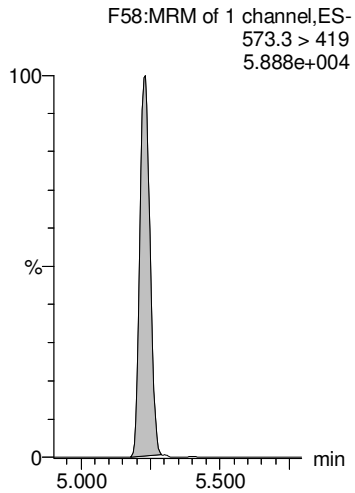
11Cl-PF30UdS



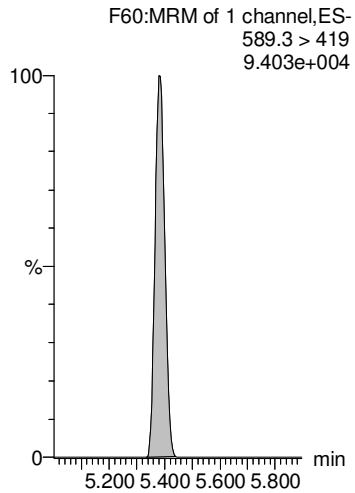
d3-N-MeFOSAA-EIS



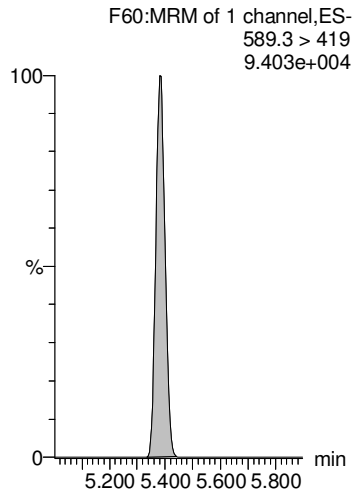
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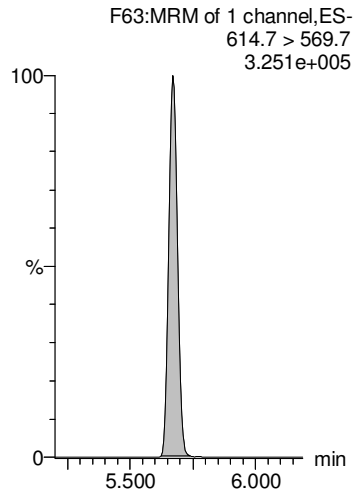
d5-N-EtFOSAA-EIS



d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS

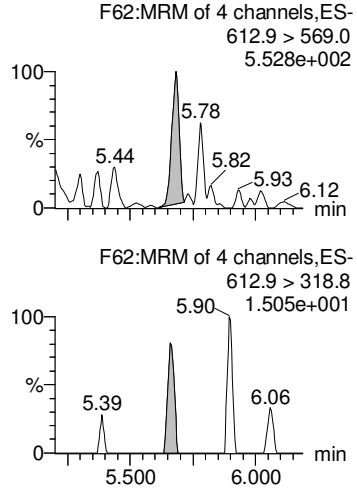


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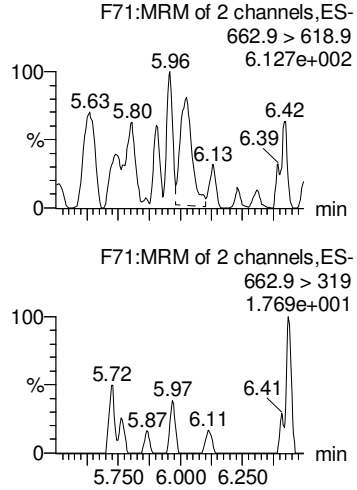
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Name: 200220P1-48, Date: 21-Feb-2020, Time: 01:37:46, ID: 2000314-12 IS72MW18SR-20200212 0.24458, Description: IS72MW18SR-20200212

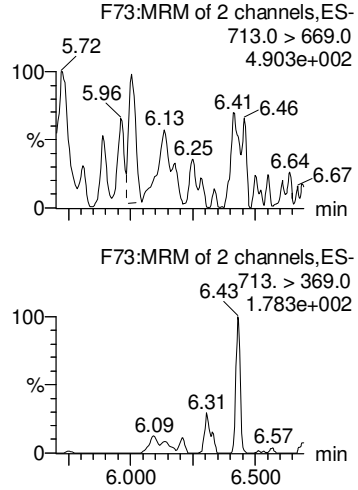
PFDoA



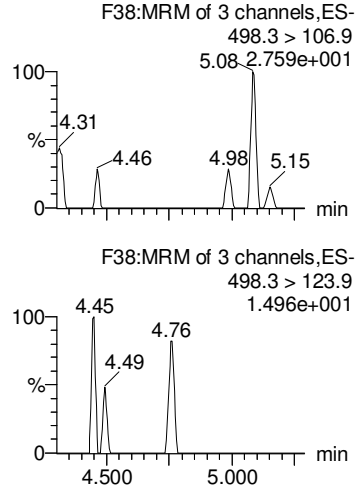
PFTrDA



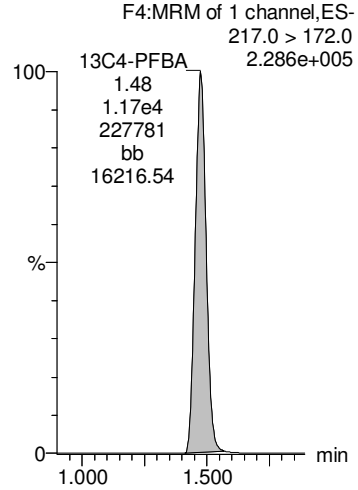
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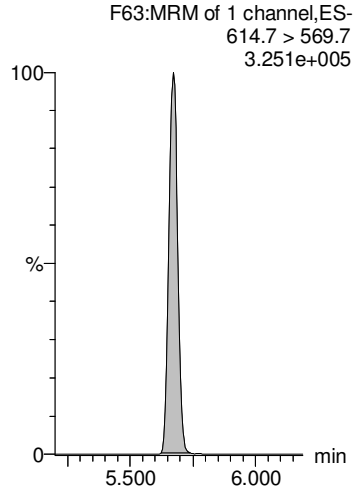
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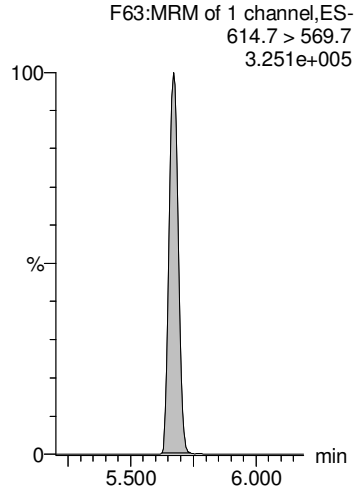
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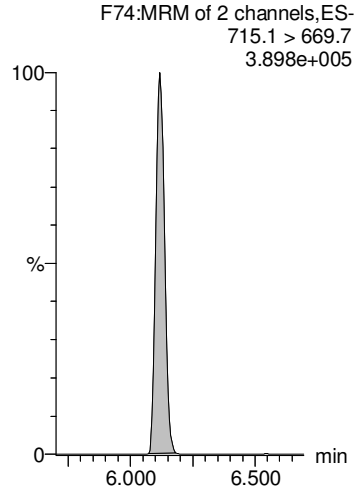
13C2-PFDoA-EIS



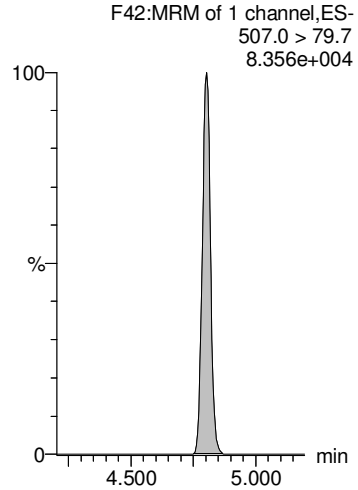
13C2-PFDoA-EIS



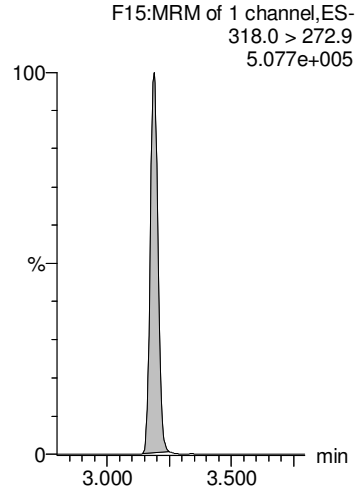
13C2-PFTeDA-EIS



13C8-PFOS-EIS



13C5-PFHxA

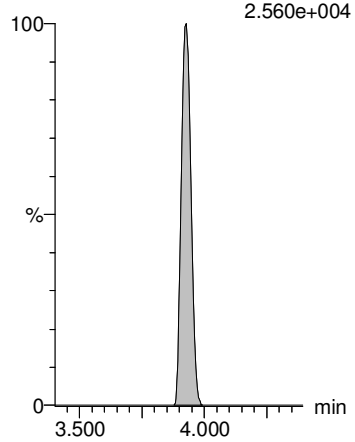


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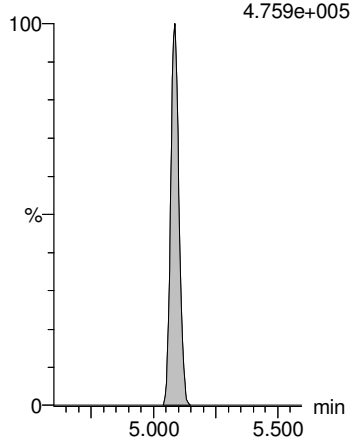
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Name: 200220P1-48, Date: 21-Feb-2020, Time: 01:37:46, ID: 2000314-12 IS72MW18SR-20200212 0.24458, Description: IS72MW18SR-20200212

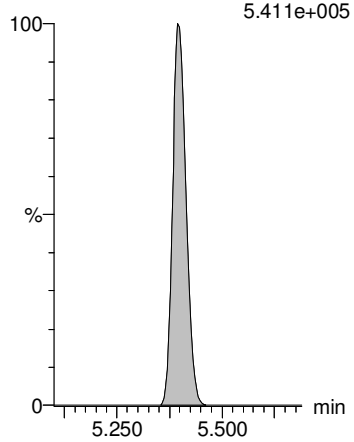
18O2-PFHxS



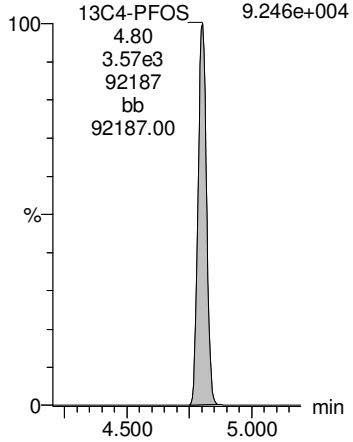
13C6-PFDA



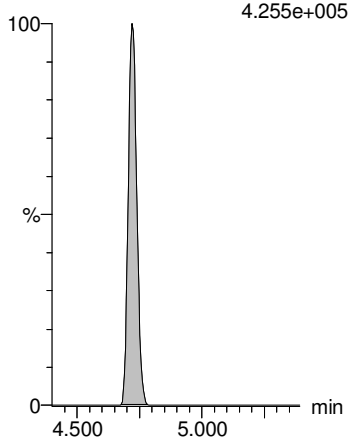
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-52.qld

Last Altered: Monday, February 24, 2020 11:12:59 Pacific Standard Time
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Name: 200220P1-52, Date: 21-Feb-2020, Time: 02:19:47, ID: 2000314-13 222MW02S-20200212 0.25234, Description: 222MW02S-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7	3.02e2	1.35e3	0.252		2.68	2.68	2.79	4.5584		2.739	NO
2	7	PFHxA	313.0 > 269.0		1.78e4	0.252		3.19						
3	9	HFPO-DA	285.1 > 168.9		3.54e3	0.252		3.40						
4	11	PFHpA	363.0 > 318.9		1.15e4	0.252		3.79						
5	12	ADONA	376.8 > 250.9		1.15e4	0.252		3.88						
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.35e3		0.252	114.516	2.70	2.68	1350	46.7052	94.3		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.78e4		0.252	1636.234	3.19	3.19	17800	43.2273	87.3		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.54e3		0.252	293.118	3.43	3.40	3540	47.8685	96.6		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.15e4		0.252	1106.802	3.79	3.79	11500	41.2788	83.3		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.15e4		0.252	1106.802	3.79	3.79	11500	41.2788	83.3		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	9.54e2	2.79e3	0.252		3.92	3.92	4.28	14.5230		2.740	NO
13	1...	Total PFHxS	398.9 > 79.7	9.54e2	2.79e3	0.252		3.93		4.28	14.5230			
14	16	L-PFOA	412.8 > 368.9	2.61e2	1.73e4	0.252		4.29	4.30	0.189	0.3167		5.566	YES
15	1...	Total PFOA	412.8 > 368.9	2.61e2	1.73e4	0.252		4.60		0.189	0.3167			
16	21	PFNA	463.0 > 418.8		1.45e4	0.252		4.72						
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.79e3		0.252	252.668	3.92	3.92	2790	43.7137	88.2		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.79e3		0.252	252.668	3.92	3.92	2790	43.7137	88.2		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.73e4		0.252	1527.160	4.29	4.29	17300	44.7750	90.4		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.73e4		0.252	1527.160	4.29	4.29	17300	44.7750	90.4		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.45e4		0.252	1373.362	4.72	4.72	14500	41.9565	84.7		
22	-1													
23	23	L-PFOS	498.9 > 79.7	3.85e2	3.31e3	0.252		4.80	4.66	1.45	6.2375		2.796	NO
24	1...	Total PFOS	498.9 > 79.7	3.85e2	3.31e3	0.252		5.13		1.45	6.2375			
25	25	9Cl-PF30NS	530.7 > 350.8		3.31e3	0.252		5.01						
26	26	PFDA	513 > 468.8	3.50e1	1.49e4	0.252		5.08	5.12	0.0293			43.160	YES
27	33	PFUdA	563.0 > 518.9	6.22e1	1.63e4	0.252		5.40	5.40	0.0477	0.2263		95.213	YES
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.31e3		0.252	295.805	4.80	4.80	3310	44.3970	89.6		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.31e3		0.252	295.805	4.80	4.80	3310	44.3970	89.6		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.31e3		0.252	295.805	4.80	4.80	3310	44.3970	89.6		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.49e4		0.252	1356.410	5.08	5.08	14900	43.6193	88.1		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.63e4		0.252	1416.449	5.40	5.40	16300	45.5961	92.0		
33	-1													
34	29	L-MeFOSAA	570 > 419		2.92e3	0.252		5.23						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	2.92e3	0.252		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		3.74e3	0.252		5.38						

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Name: 200220P1-52, Date: 21-Feb-2020, Time: 02:19:47, ID: 2000314-13 222MW02S-20200212 0.25234, Description: 222MW02S-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	3.74e3	0.252		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.33e4	0.252		5.60						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.92e3		0.252	262.877	5.22	5.23	2920	43.9568	88.7		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.92e3		0.252	262.877	5.22	5.23	2920	43.9568	88.7		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.74e3		0.252	360.983	5.37	5.38	3740	41.1125	83.0		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.74e3		0.252	360.983	5.37	5.38	3740	41.1125	83.0		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.33e4		0.252	1573.093	5.67	5.67	13300	33.4410	67.5		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.33e4	0.252		5.67						
46	39	PFTrDA	662.9 > 618.9		1.33e4	0.252		5.93						
47	41	PFTeDA	713.0 > 669.0		1.58e4	0.252		6.12						
48	1...	TDCA	498.3>106.9			0.252		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.15e4	1.15e4	0.252	1.000	1.48	1.48	12.5	49.5363	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.33e4		0.252	1573.093	5.67	5.67	13300	33.4410	67.5		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.33e4		0.252	1573.093	5.67	5.67	13300	33.4410	67.5		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.58e4		0.252	1440.513	6.11	6.12	15800	43.3518	87.5		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.31e3		0.252	295.805	4.80	4.80	3310	44.3970	89.6		
54	1...	13C5-PFHxA	318.0 > 272.9	1.88e4	1.88e4	0.252	1.000	3.18	3.19	12.5	49.5363	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.16e3	1.16e3	0.252	1.000	3.92	3.92	12.5	49.5363	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.76e4	1.76e4	0.252	1.000	5.08	5.08	12.5	49.5363	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.94e4	1.94e4	0.252	1.000	5.40	5.40	12.5	49.5363	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.44e3	3.44e3	0.252	1.000	4.79	4.80	12.5	49.5363	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.58e4	1.58e4	0.252	1.000	4.72	4.72	12.5	49.5363	100.0		

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Review: AMR 2/25/2020

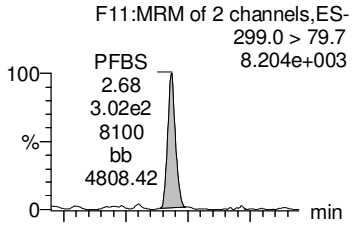
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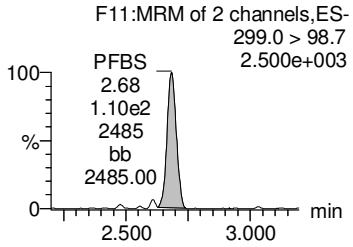
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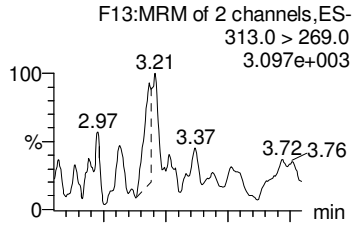
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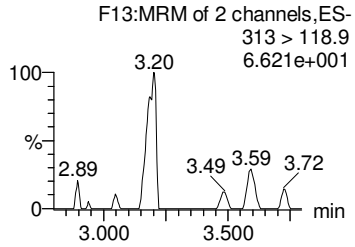
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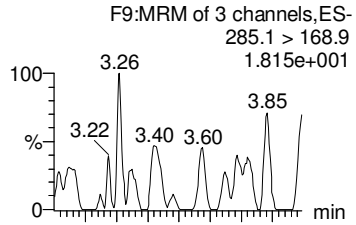


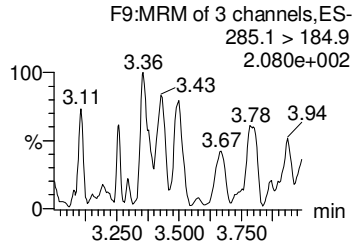
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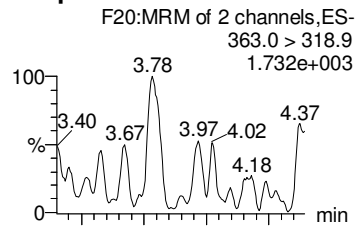


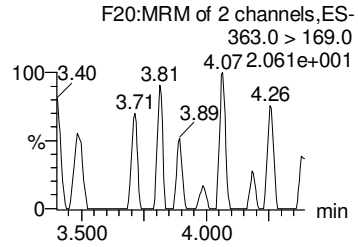
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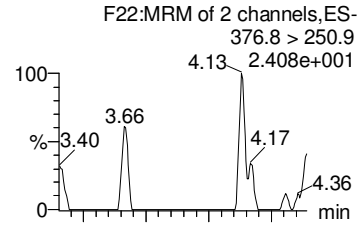


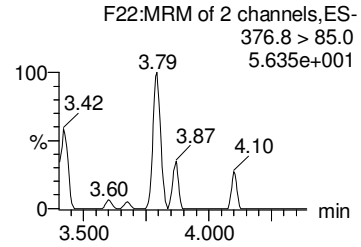
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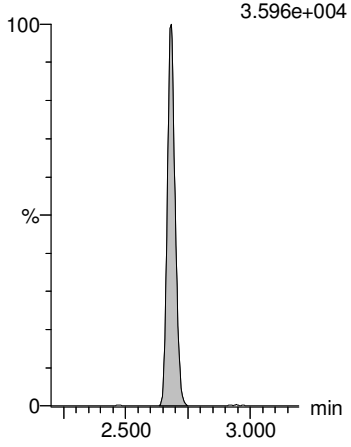


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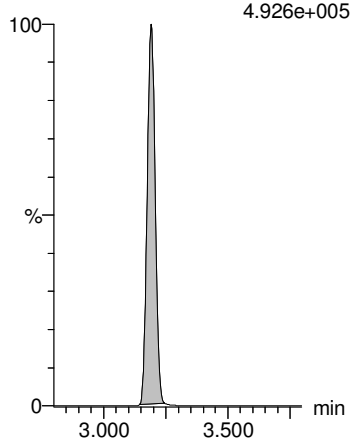




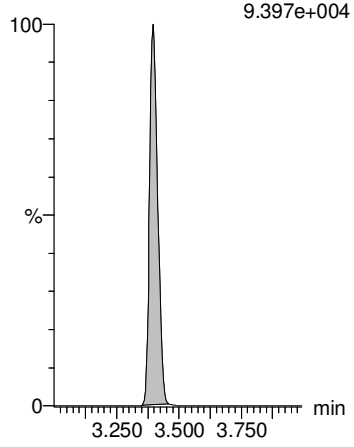
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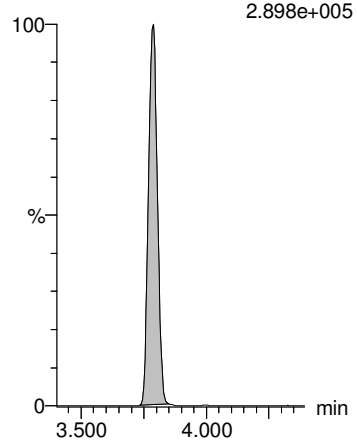
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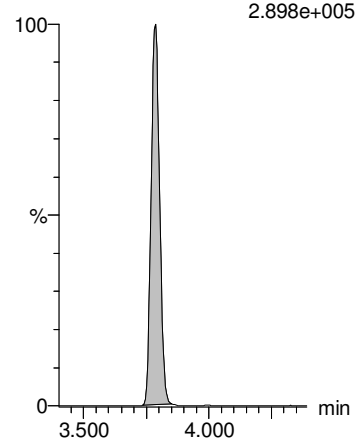
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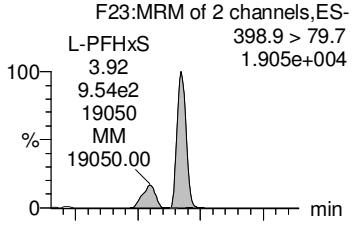
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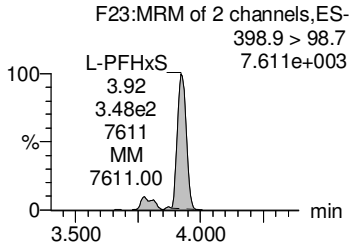
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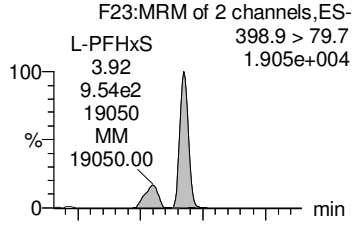
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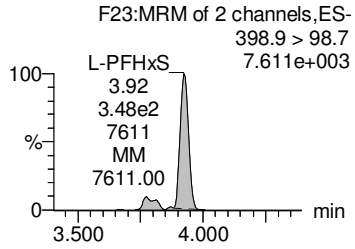
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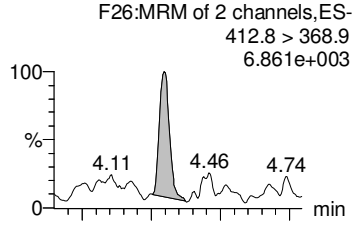


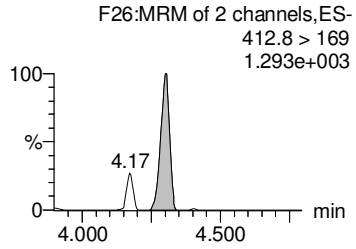
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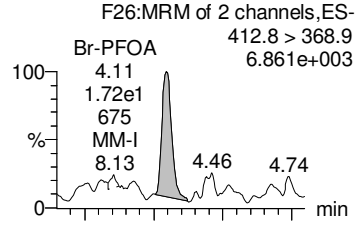


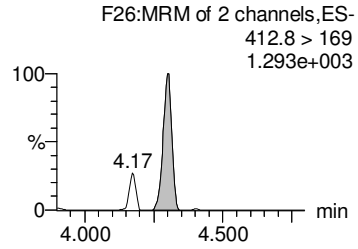
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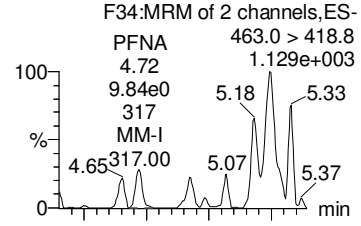


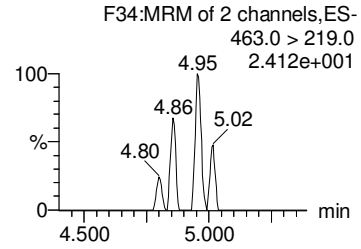
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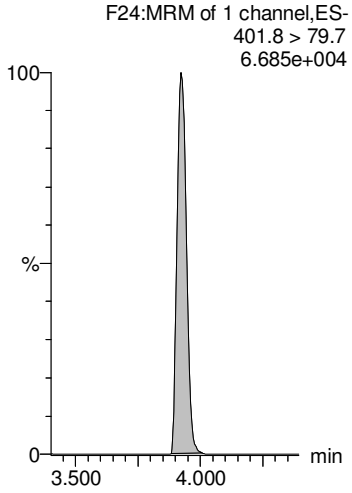


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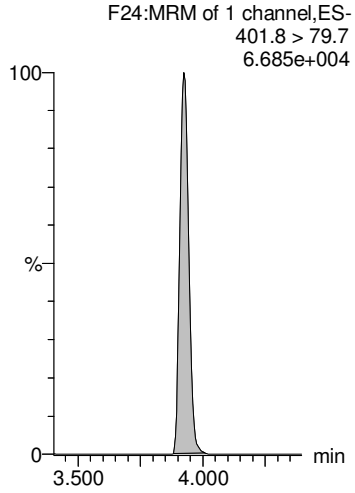




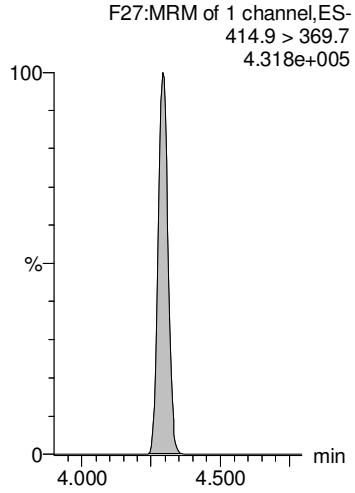
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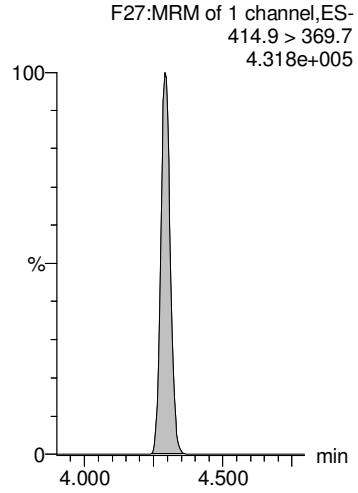
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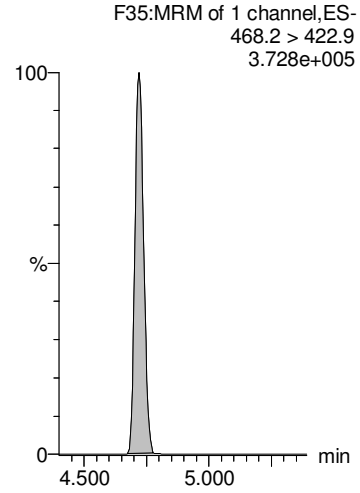
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13C2-PFOA-EIS



13C5-PFNA-EIS



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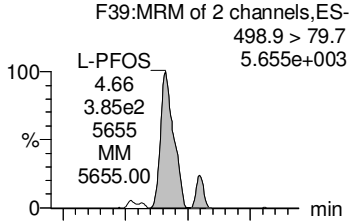
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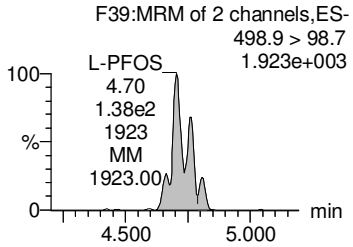
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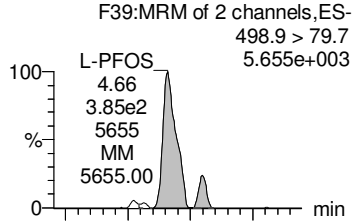
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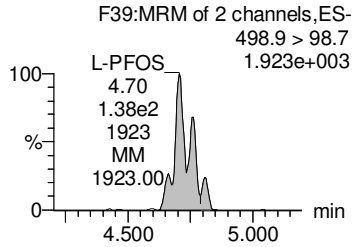
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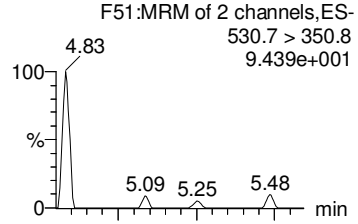


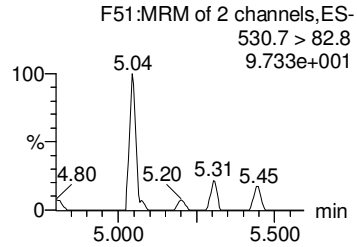
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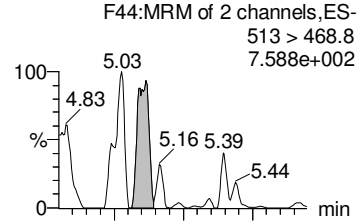


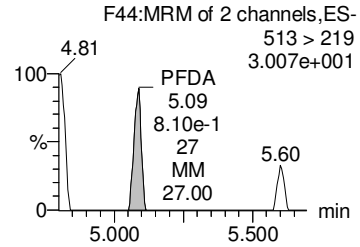
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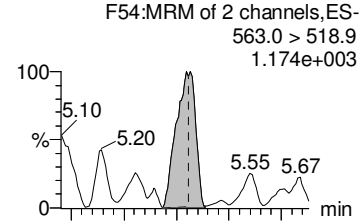


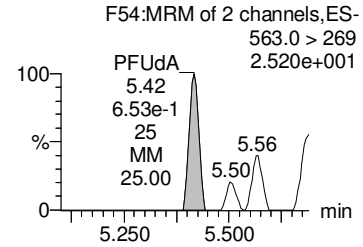
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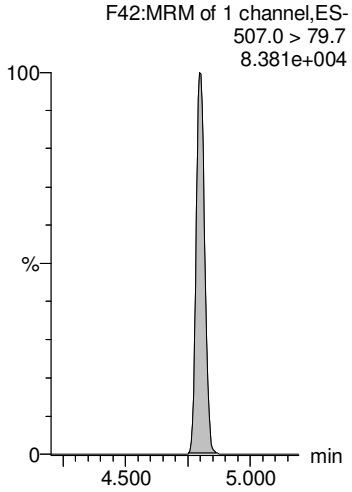


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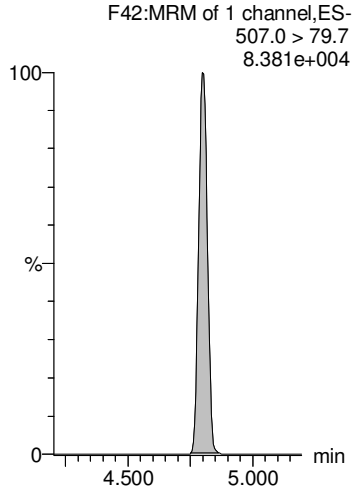




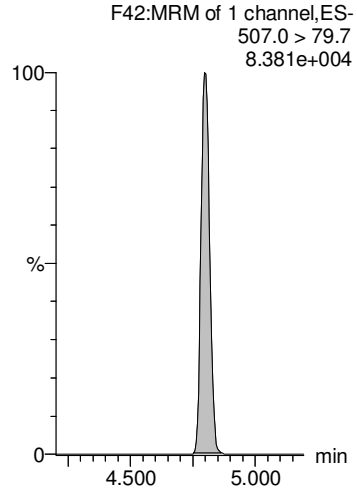
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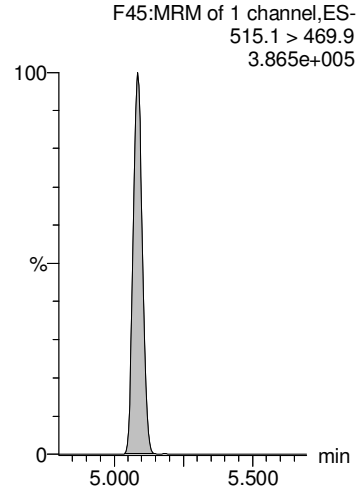
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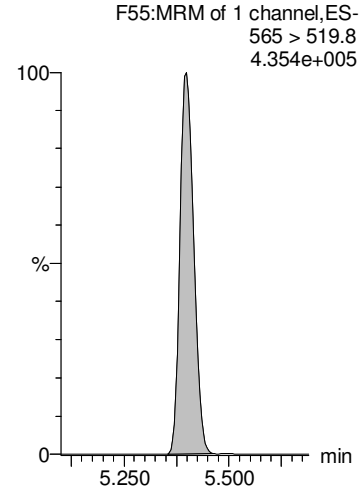
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13C2-PFDA-EIS



13C2-PFUdA-EIS

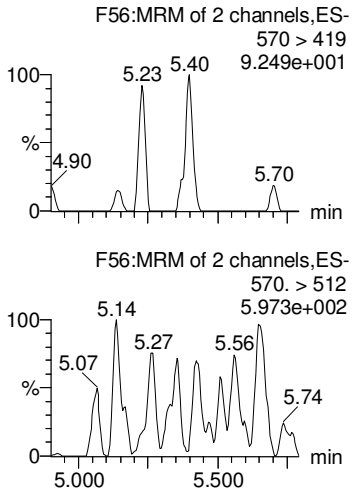


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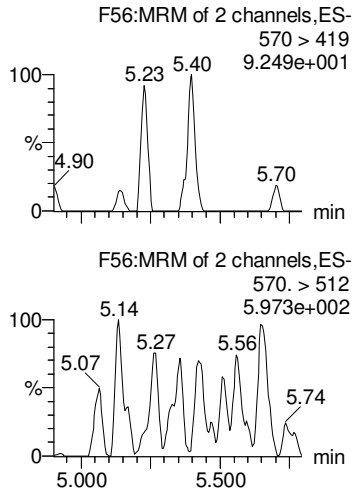
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Name: 200220P1-52, Date: 21-Feb-2020, Time: 02:19:47, ID: 2000314-13 222MW02S-20200212 0.25234, Description: 222MW02S-20200212

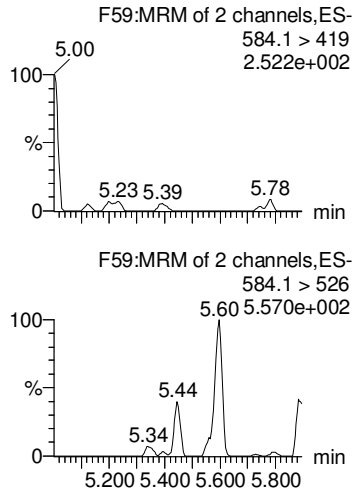
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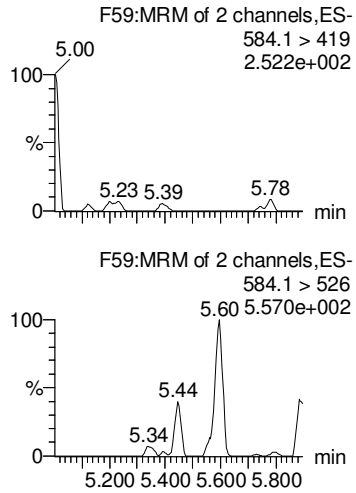
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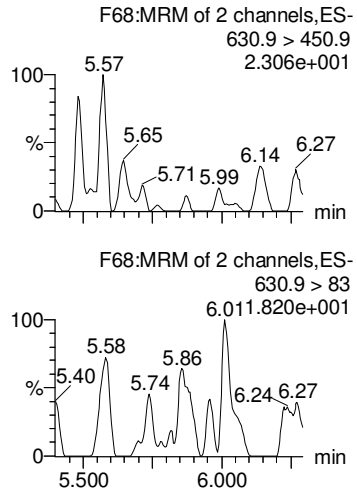
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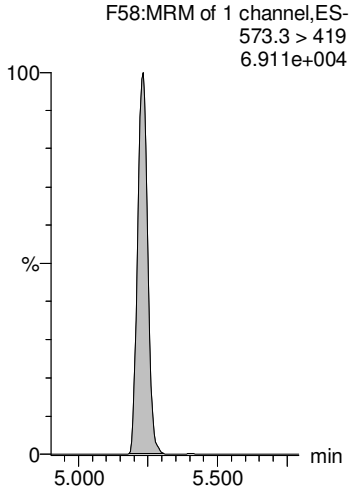
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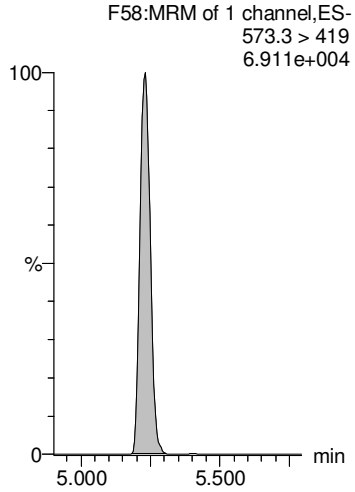
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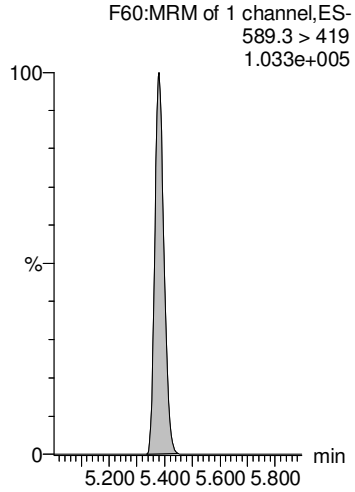
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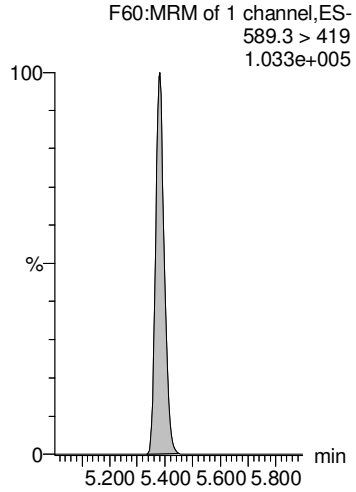
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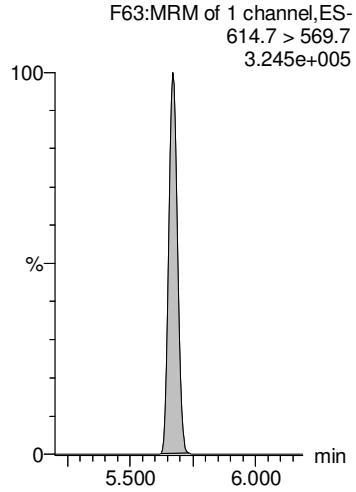
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d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS

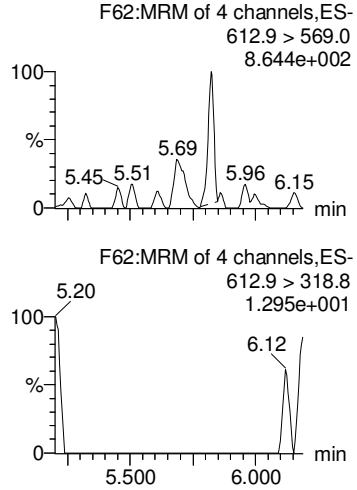


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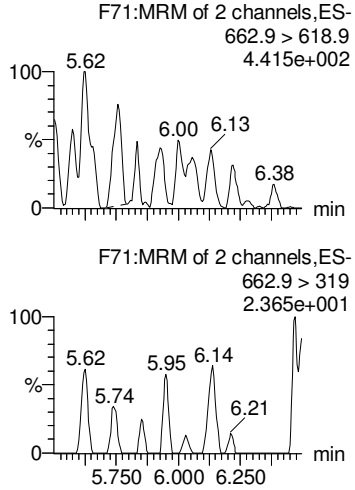
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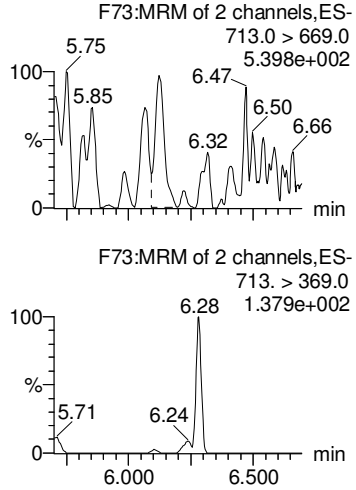
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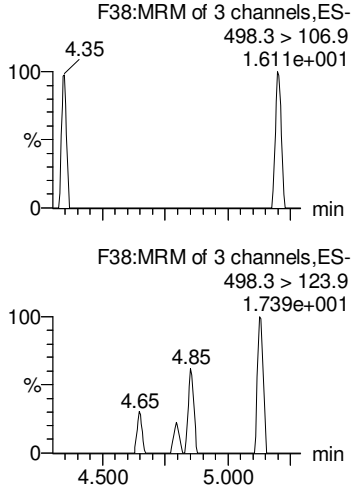
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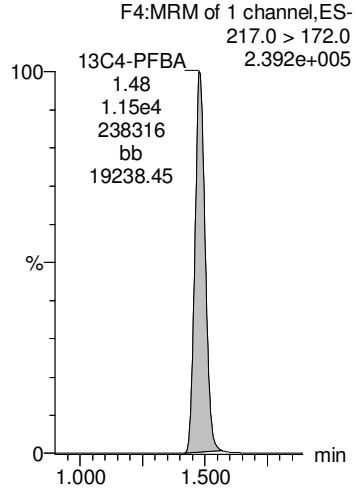
PFTeDA



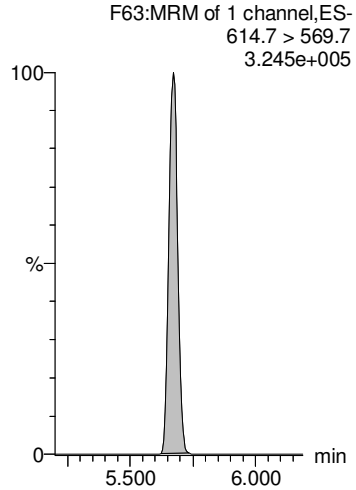
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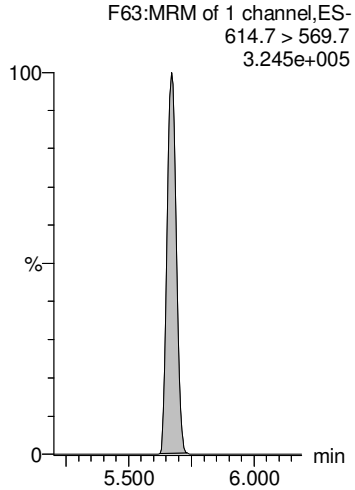
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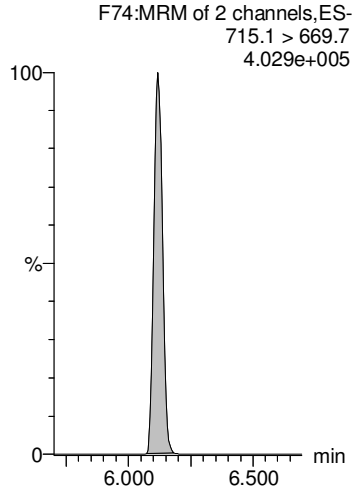
13C2-PFDoA-EIS



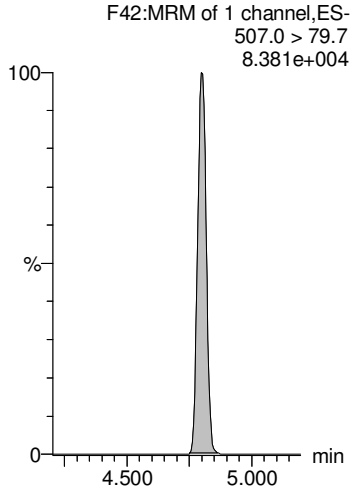
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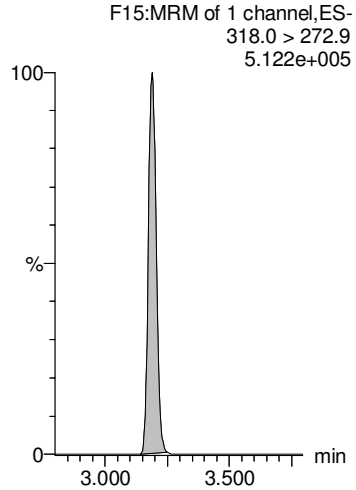
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13C8-PFOS-EIS



13C5-PFHxA

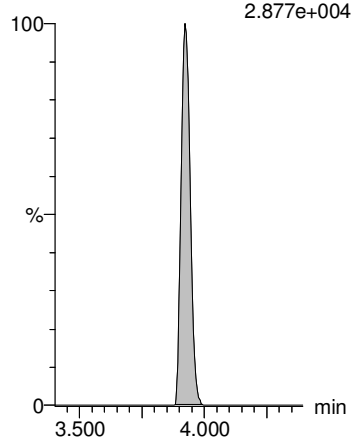


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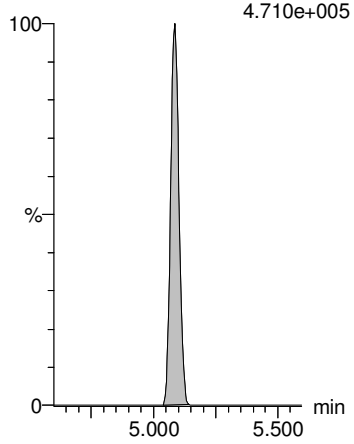
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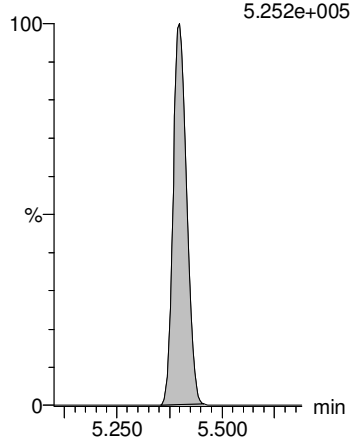
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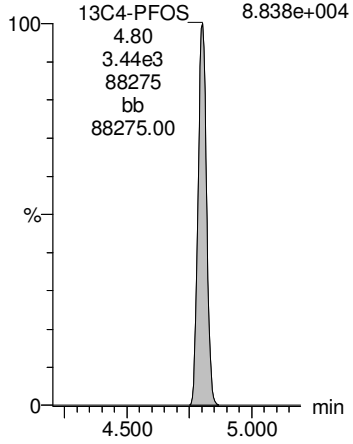
13C6-PFDA



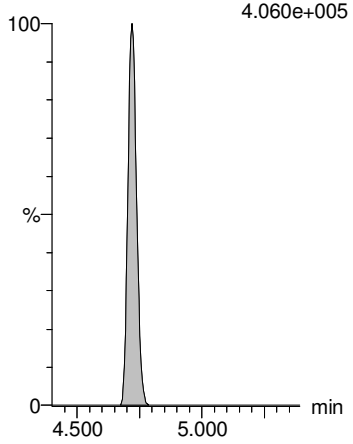
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-53.qld

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	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7	3.78e2	1.37e3	0.244		2.68	2.68	3.45	5.8726		3.184	NO
2	7	PFHxA	313.0 > 269.0	1.27e2	1.93e4	0.244		3.19	3.19	0.0820	0.0693		30.515	YES
3	9	HFPO-DA	285.1 > 168.9		3.43e3	0.244		3.40						
4	11	PFHpA	363.0 > 318.9		1.25e4	0.244		3.79						
5	12	ADONA	376.8 > 250.9		1.25e4	0.244		3.88						
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.37e3		0.244	114.516	2.70	2.68	1370	48.9281	95.7		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.93e4		0.244	1636.234	3.19	3.19	19300	48.2455	94.4		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.43e3		0.244	293.118	3.44	3.40	3430	47.8833	93.6		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.25e4		0.244	1106.802	3.79	3.79	12500	46.3490	90.6		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.25e4		0.244	1106.802	3.79	3.79	12500	46.3490	90.6		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	1.08e3	2.88e3	0.244		3.92	3.92	4.71	16.6243		2.619	NO
13	1...	Total PFHxS	398.9 > 79.7	1.08e3	2.88e3	0.244		3.93		4.71	16.6243			
14	16	L-PFOA	412.8 > 368.9	3.58e2	1.74e4	0.244		4.30	4.30	0.258	0.5608		3.024	NO
15	1...	Total PFOA	412.8 > 368.9	3.58e2	1.74e4	0.244		4.60		0.258	0.5608			
16	21	PFNA	463.0 > 418.8		1.42e4	0.244		4.72						
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.88e3		0.244	252.668	3.93	3.92	2880	46.6013	91.1		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.88e3		0.244	252.668	3.93	3.92	2880	46.6013	91.1		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.74e4		0.244	1527.160	4.30	4.30	17400	46.5266	91.0		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.74e4		0.244	1527.160	4.30	4.30	17400	46.5266	91.0		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.42e4		0.244	1373.362	4.72	4.72	14200	42.3040	82.7		
22	-1													
23	23	L-PFOS	498.9 > 79.7	3.36e2	3.42e3	0.244		4.80	4.66	1.23	5.4420		3.412	YES
24	1...	Total PFOS	498.9 > 79.7	3.36e2	3.42e3	0.244		5.13		1.23	5.4420			
25	25	9Cl-PF30NS	530.7 > 350.8		3.42e3	0.244		5.01						
26	26	PFDA	513 > 468.8		1.57e4	0.244		5.08						
27	33	PFUdA	563.0 > 518.9		1.63e4	0.244		5.40						
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.42e3		0.244	295.805	4.80	4.80	3420	47.3274	92.6		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.42e3		0.244	295.805	4.80	4.80	3420	47.3274	92.6		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.42e3		0.244	295.805	4.80	4.80	3420	47.3274	92.6		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.57e4		0.244	1356.410	5.08	5.08	15700	47.2409	92.4		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.63e4		0.244	1416.449	5.40	5.40	16300	46.9311	91.8		
33	-1													
34	29	L-MeFOSAA	570 > 419		2.95e3	0.244		5.23						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	2.95e3	0.244		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		3.60e3	0.244		5.38						

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Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-53.qld

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Name: 200220P1-53, Date: 21-Feb-2020, Time: 02:30:18, ID: 2000314-14 DUP03-20200212 0.24446, Description: DUP03-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	3.60e3	0.244		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.58e4	0.244		5.60						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.95e3		0.244	262.877	5.22	5.23	2950	45.9114	89.8		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.95e3		0.244	262.877	5.22	5.23	2950	45.9114	89.8		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.60e3		0.244	360.983	5.37	5.38	3600	40.7828	79.8		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.60e3		0.244	360.983	5.37	5.38	3600	40.7828	79.8		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.58e4		0.244	1573.093	5.67	5.67	15800	41.0547	80.3		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.58e4	0.244		5.67						
46	39	PFTrDA	662.9 > 618.9		1.58e4	0.244		5.93						
47	41	PFTeDA	713.0 > 669.0		1.43e4	0.244		6.12						
48	1...	TDCA	498.3>106.9			0.244		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.12e4	1.12e4	0.244	1.000	1.48	1.48	12.5	51.1331	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.58e4		0.244	1573.093	5.67	5.67	15800	41.0547	80.3		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.58e4		0.244	1573.093	5.67	5.67	15800	41.0547	80.3		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.43e4		0.244	1440.513	6.11	6.12	14300	40.6479	79.5		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.42e3		0.244	295.805	4.80	4.80	3420	47.3274	92.6		
54	1...	13C5-PFHxA	318.0 > 272.9	1.95e4	1.95e4	0.244	1.000	3.18	3.19	12.5	51.1331	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.25e3	1.25e3	0.244	1.000	3.92	3.93	12.5	51.1331	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.83e4	1.83e4	0.244	1.000	5.08	5.08	12.5	51.1331	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.81e4	1.81e4	0.244	1.000	5.40	5.40	12.5	51.1331	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.52e3	3.52e3	0.244	1.000	4.79	4.80	12.5	51.1331	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.48e4	1.48e4	0.244	1.000	4.72	4.72	12.5	51.1331	100.0		

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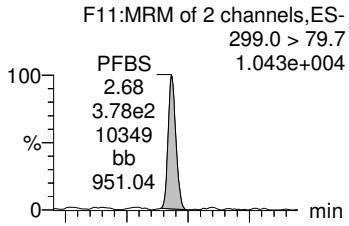
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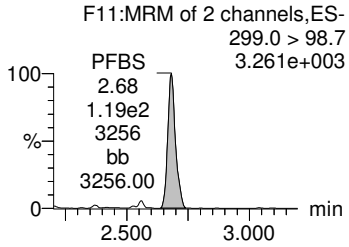
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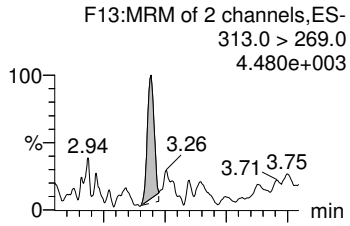
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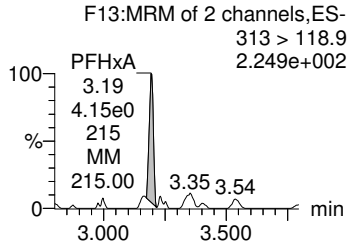
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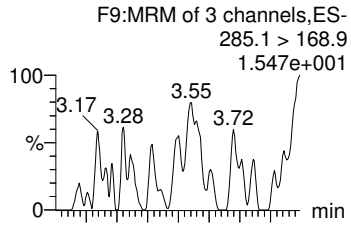


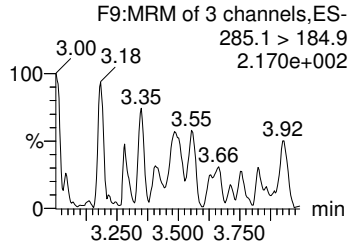
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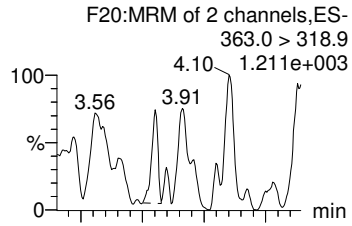


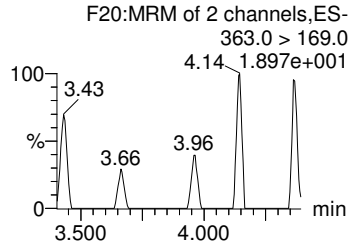
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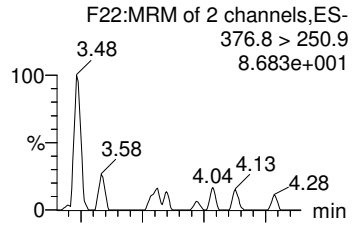


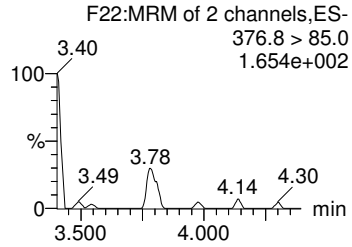
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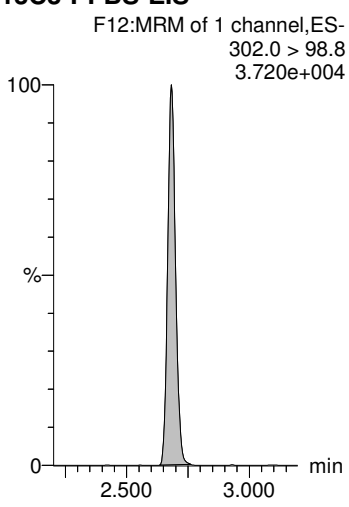


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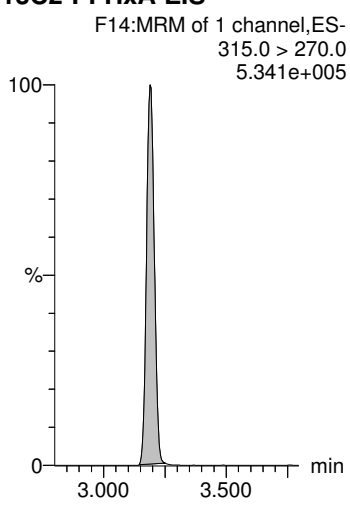




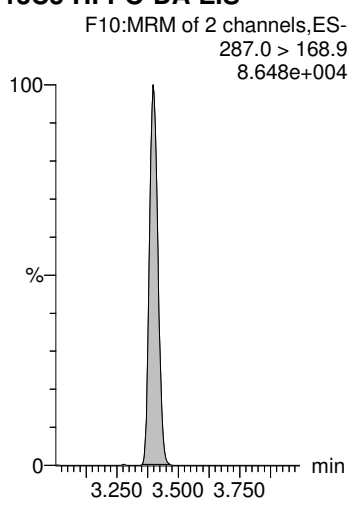
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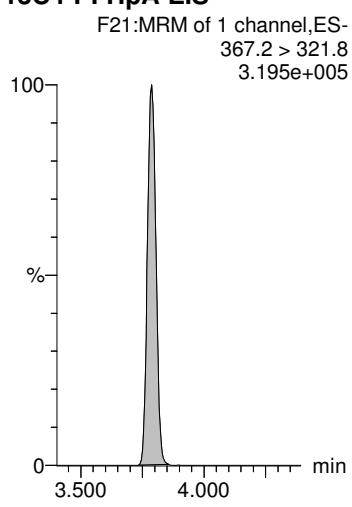
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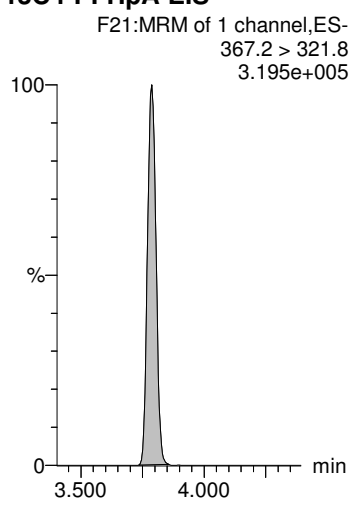
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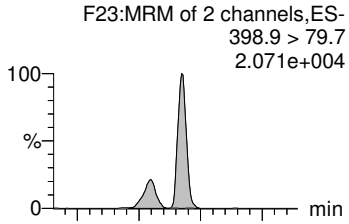
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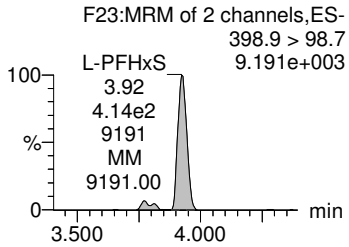
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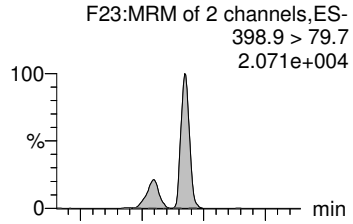
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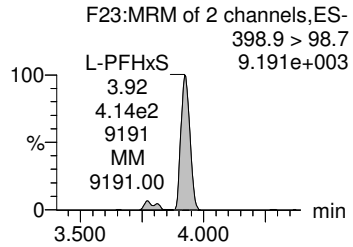
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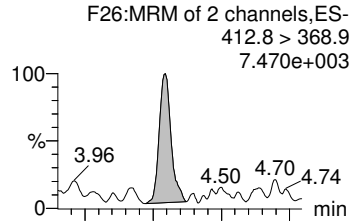


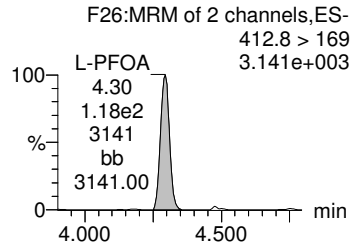
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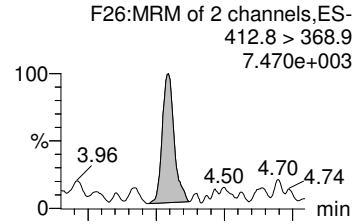


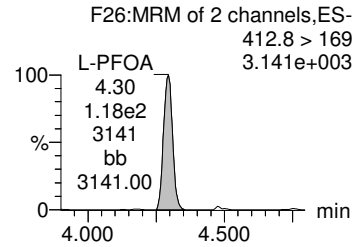
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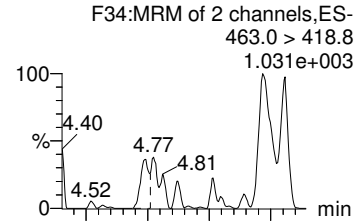


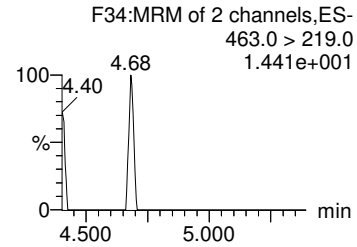
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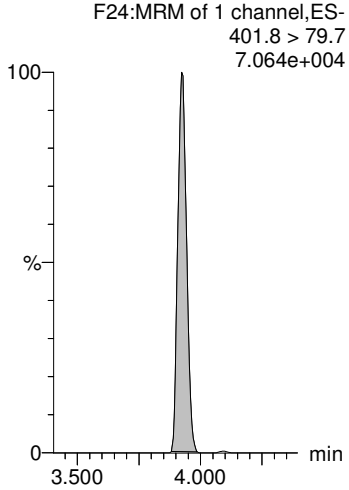


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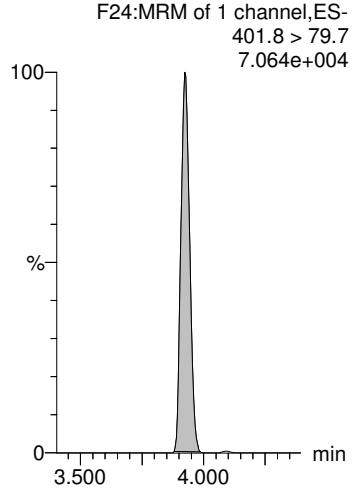




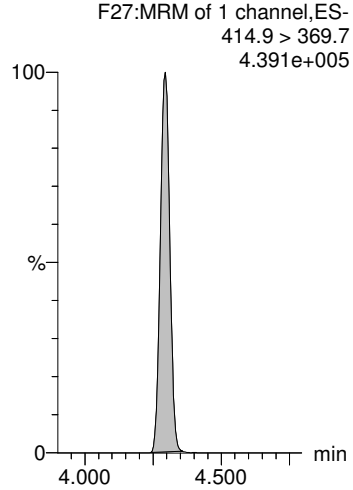
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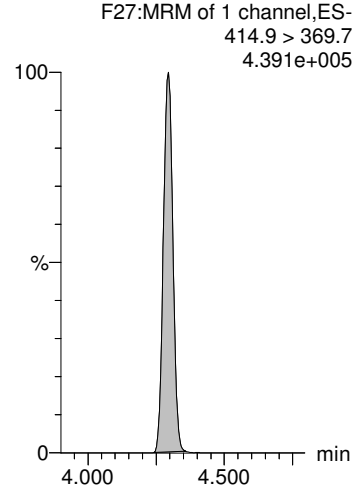
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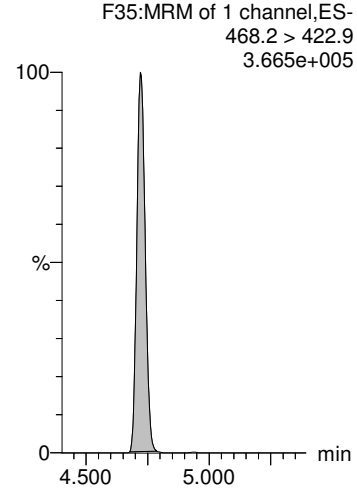
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13C2-PFOA-EIS



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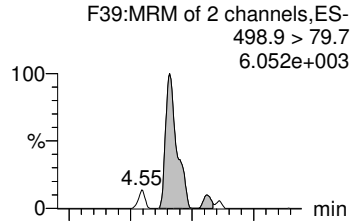
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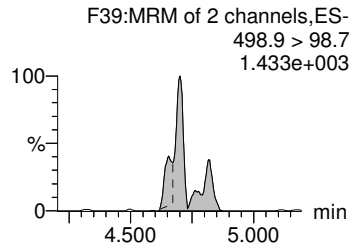
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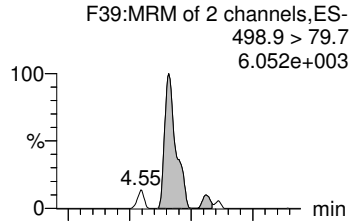
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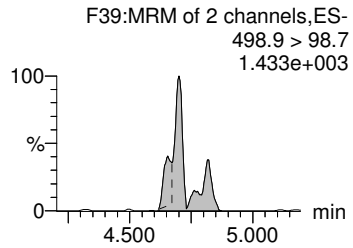
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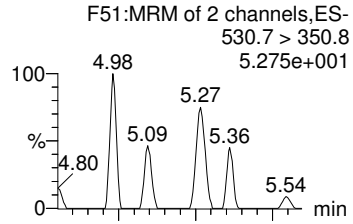


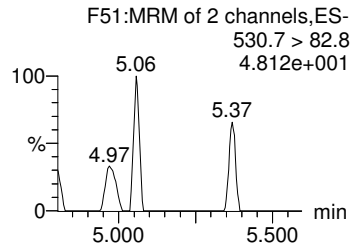
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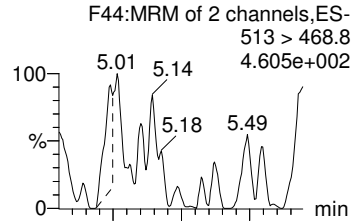


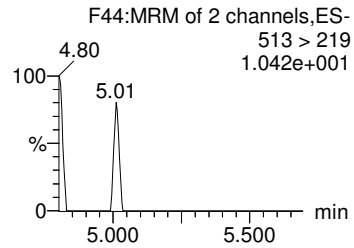
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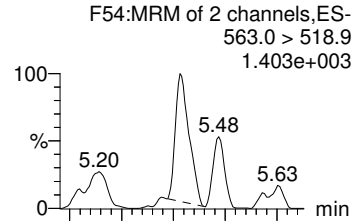


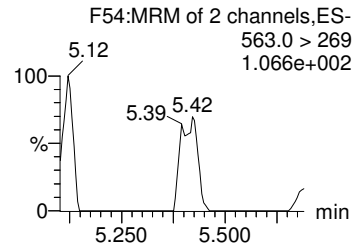
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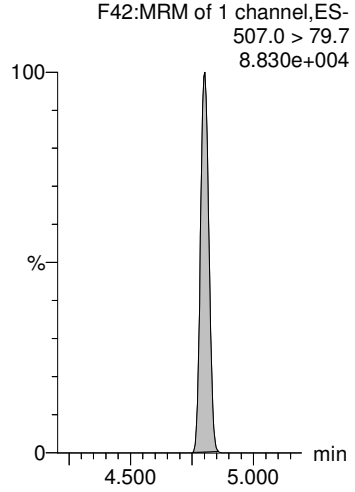


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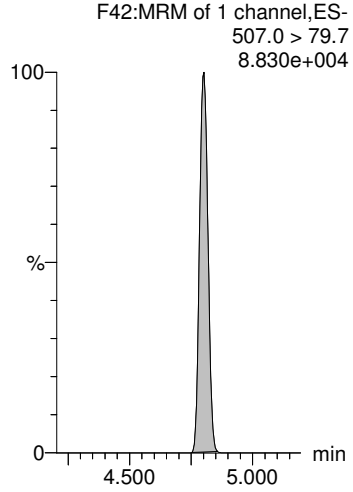




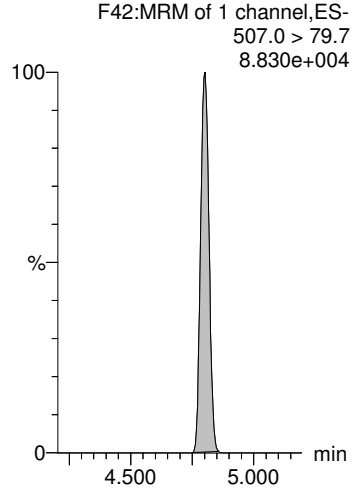
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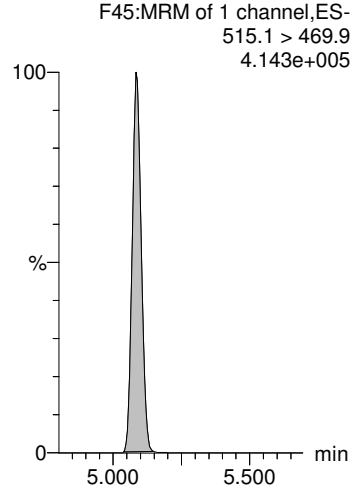
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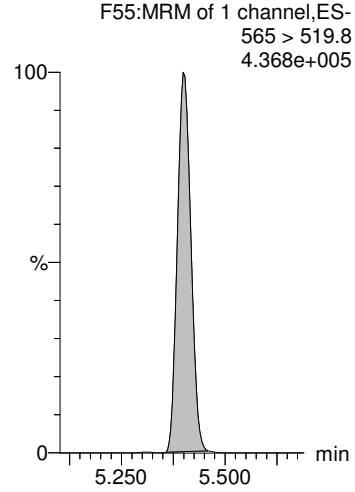
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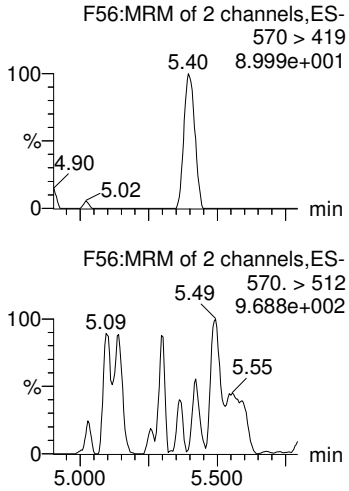
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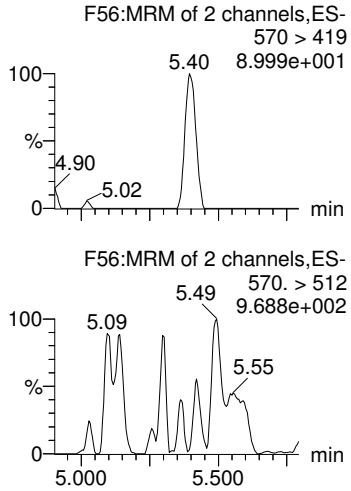
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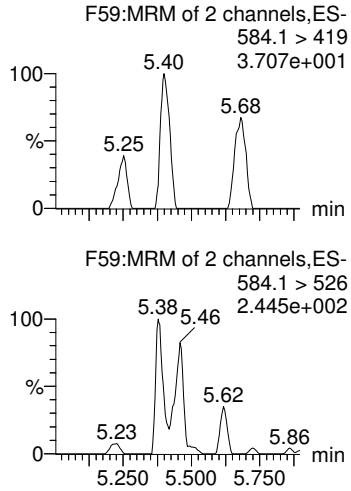
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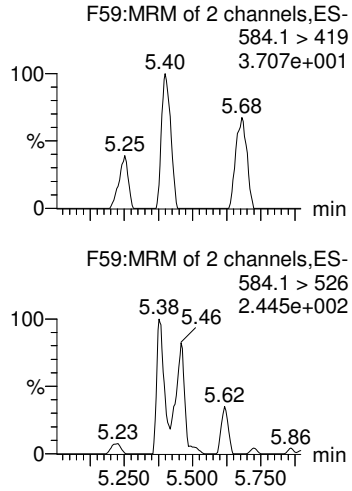
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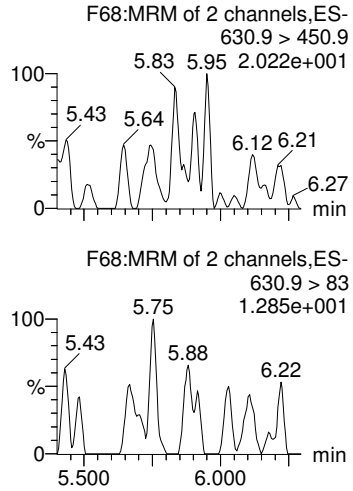
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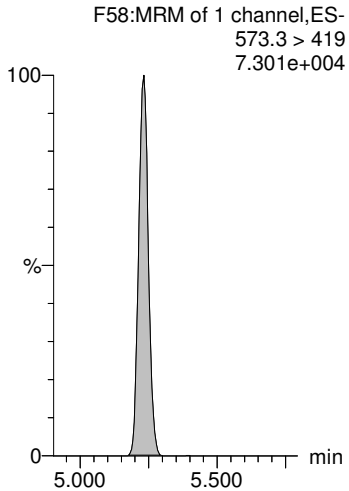
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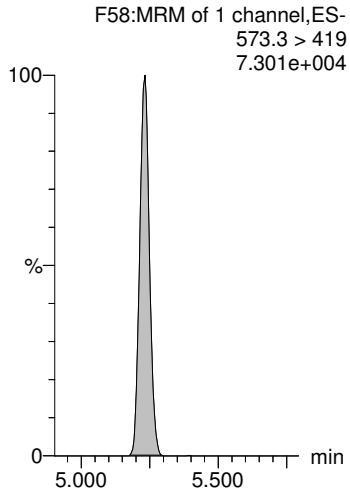
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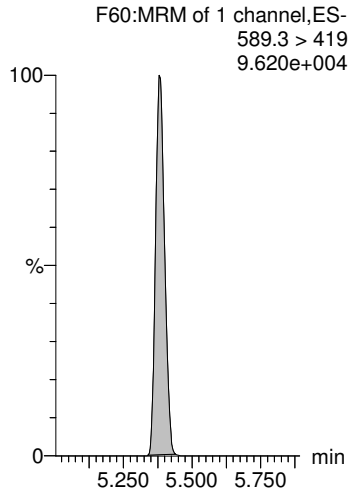
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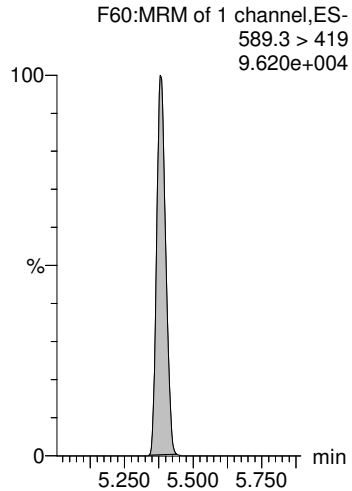
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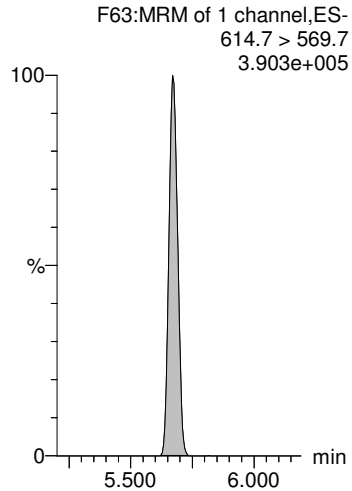
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d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS



 RK 2/25/2020

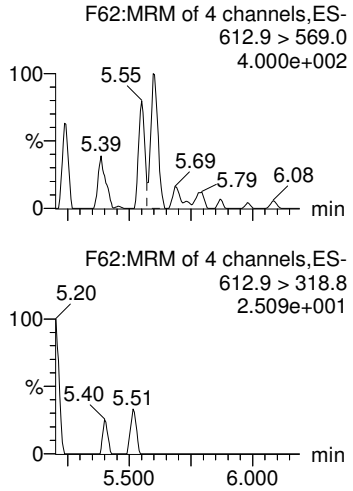
Review: AMR 2/28/2020

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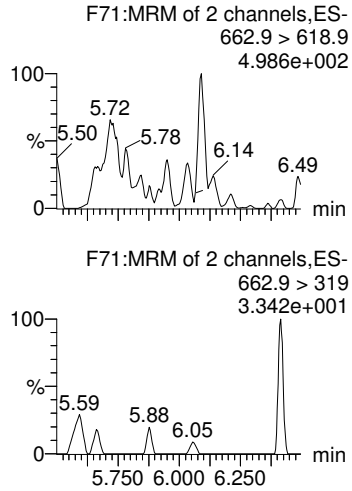
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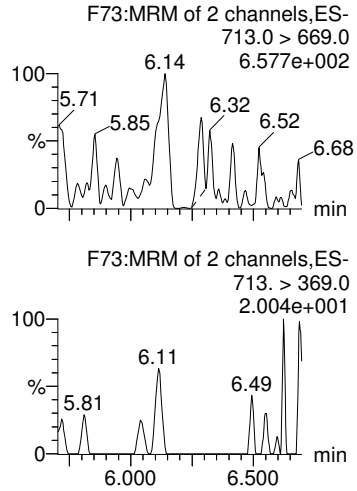
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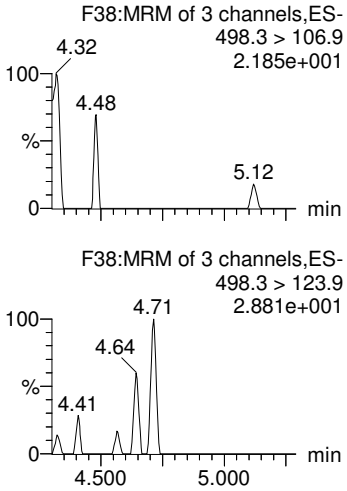
PFTrDA



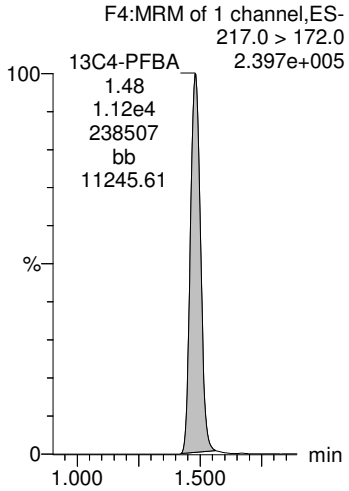
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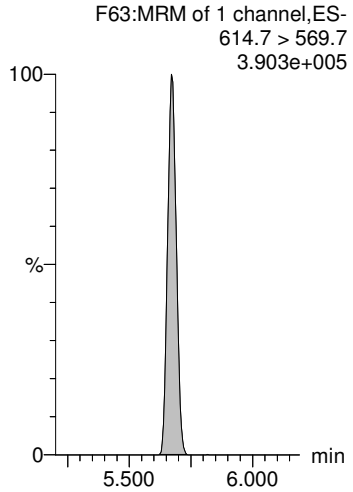
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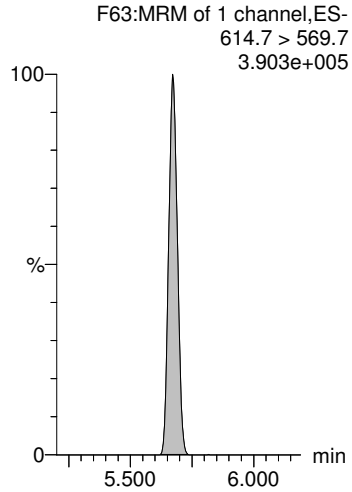
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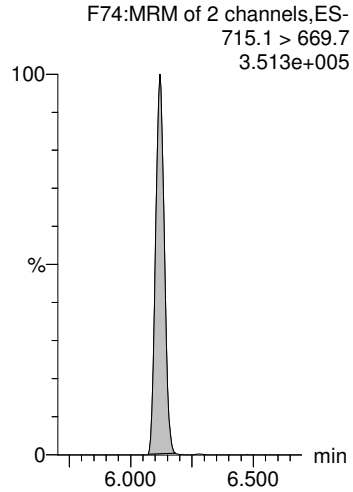
13C2-PFDoA-EIS



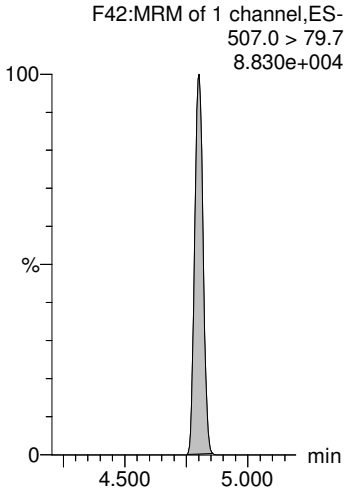
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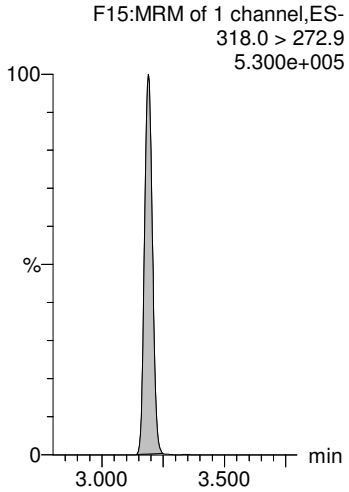
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13C8-PFOS-EIS



13C5-PFHxA



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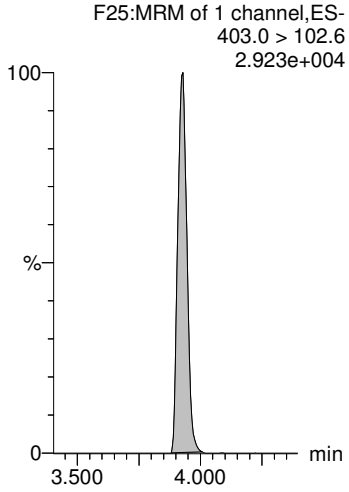
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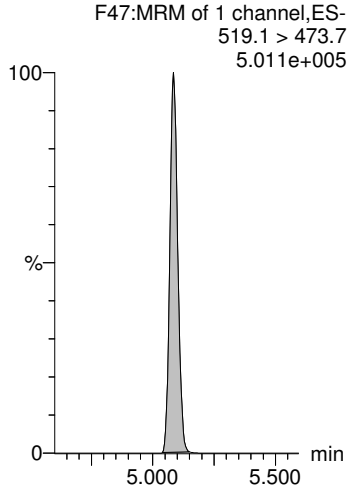
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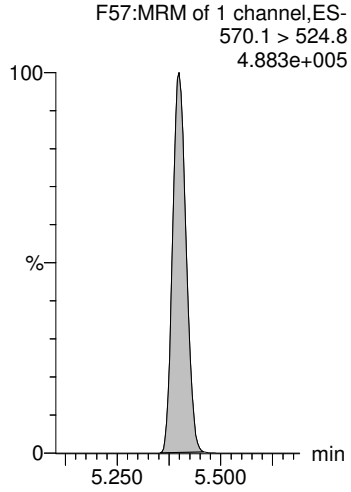
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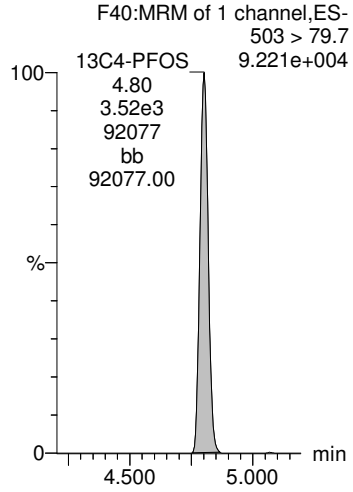
13C6-PFDA



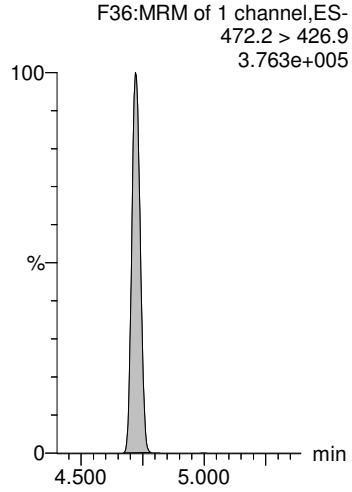
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13C4-PFOS



13C9-PFNA



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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-54.qld

Last Altered: Tuesday, February 25, 2020 12:05:07 Pacific Standard Time
Printed: Tuesday, February 25, 2020 12:05:31 Pacific Standard Time

Name: 200220P1-54, Date: 21-Feb-2020, Time: 02:40:47, ID: 2000314-15 A000MW42S-20200212 0.25324, Description: A000MW42S-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7	9.30e2	1.47e3	0.253		2.68	2.68	7.90	13.3525		3.429	NO
2	7	PFHxA	313.0 > 269.0	2.57e2	2.16e4	0.253		3.19	3.20	0.148	0.3621		50.318	YES
3	9	HFPO-DA	285.1 > 168.9		3.85e3	0.253		3.40						
4	11	PFHpA	363.0 > 318.9		1.32e4	0.253		3.79						
5	12	ADONA	376.8 > 250.9		1.32e4	0.253		3.88						
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.47e3		0.253	114.516	2.70	2.68	1470	50.7680	102.9		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	2.16e4		0.253	1636.234	3.19	3.19	21600	52.2079	105.8		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.85e3		0.253	293.118	3.44	3.40	3850	51.8824	105.1		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.32e4		0.253	1106.802	3.79	3.79	13200	47.1377	95.5		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.32e4		0.253	1106.802	3.79	3.79	13200	47.1377	95.5		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	2.25e3	3.29e3	0.253		3.92	3.93	8.57	30.1667		2.323	NO
13	1...	Total PFHxS	398.9 > 79.7	2.25e3	3.29e3	0.253		3.93		8.57	30.1667			
14	16	L-PFOA	412.8 > 368.9	1.83e3	1.90e4	0.253		4.30	4.30	1.21	3.6593		2.855	NO
15	1...	Total PFOA	412.8 > 368.9	1.83e3	1.90e4	0.253		4.60		1.21	3.6593			
16	21	PFNA	463.0 > 418.8		1.55e4	0.253		4.73						
17	61	13C3-PFHxS-EIS	401.8 > 79.7	3.29e3		0.253	252.668	3.93	3.92	3290	51.3615	104.1		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	3.29e3		0.253	252.668	3.93	3.92	3290	51.3615	104.1		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.90e4		0.253	1527.160	4.30	4.30	19000	49.0053	99.3		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.90e4		0.253	1527.160	4.30	4.30	19000	49.0053	99.3		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.55e4		0.253	1373.362	4.72	4.73	15500	44.4726	90.1		
22	-1													
23	23	L-PFOS	498.9 > 79.7	2.27e2	3.64e3	0.253		4.80	4.65	0.778	3.3349		9.108	YES
24	1...	Total PFOS	498.9 > 79.7	2.27e2	3.64e3	0.253		5.13		0.778	3.3349			
25	25	9Cl-PF30NS	530.7 > 350.8		3.64e3	0.253		5.01						
26	26	PFDA	513 > 468.8		1.81e4	0.253		5.08						
27	33	PFUdA	563.0 > 518.9	2.55e1	1.81e4	0.253		5.40	5.39	0.0176	0.1126		83.314	YES
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.64e3		0.253	295.805	4.80	4.80	3640	48.6095	98.5		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.64e3		0.253	295.805	4.80	4.80	3640	48.6095	98.5		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.64e3		0.253	295.805	4.80	4.80	3640	48.6095	98.5		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.81e4		0.253	1356.410	5.08	5.08	18100	52.8043	107.0		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.81e4		0.253	1416.449	5.40	5.40	18100	50.5066	102.3		
33	-1													
34	29	L-MeFOSAA	570 > 419		3.17e3	0.253		5.23						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	3.17e3	0.253		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		4.04e3	0.253		5.38						

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Review: AMR 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200220P1\200220P1-54.qld

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Name: 200220P1-54, Date: 21-Feb-2020, Time: 02:40:47, ID: 2000314-15 A000MW42S-20200212 0.25324, Description: A000MW42S-20200212

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	1...	Total N-EtFOSAA	584.1 > 419	0.00e0	4.04e3	0.253		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.43e4	0.253		5.60						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.17e3		0.253	262.877	5.22	5.23	3170	47.5522	96.3		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.17e3		0.253	262.877	5.22	5.23	3170	47.5522	96.3		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	4.04e3		0.253	360.983	5.37	5.38	4040	44.1616	89.5		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	4.04e3		0.253	360.983	5.37	5.38	4040	44.1616	89.5		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.43e4		0.253	1573.093	5.67	5.67	14300	35.9443	72.8		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.43e4	0.253		5.67						
46	39	PFTrDA	662.9 > 618.9		1.43e4	0.253		5.93						
47	41	PFTeDA	713.0 > 669.0		1.62e4	0.253		6.12						
48	1...	TDCA	498.3>106.9			0.253		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.19e4	1.19e4	0.253	1.000	1.48	1.48	12.5	49.3603	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.43e4		0.253	1573.093	5.67	5.67	14300	35.9443	72.8		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.43e4		0.253	1573.093	5.67	5.67	14300	35.9443	72.8		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.62e4		0.253	1440.513	6.11	6.12	16200	44.4466	90.0		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.64e3		0.253	295.805	4.80	4.80	3640	48.6095	98.5		
54	1...	13C5-PFHxA	318.0 > 272.9	2.06e4	2.06e4	0.253	1.000	3.18	3.19	12.5	49.3603	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.07e3	1.07e3	0.253	1.000	3.92	3.93	12.5	49.3603	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.93e4	1.93e4	0.253	1.000	5.08	5.08	12.5	49.3603	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.87e4	1.87e4	0.253	1.000	5.40	5.40	12.5	49.3603	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.78e3	3.78e3	0.253	1.000	4.79	4.80	12.5	49.3603	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.62e4	1.62e4	0.253	1.000	4.72	4.72	12.5	49.3603	100.0		

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Review: AMR 2/28/2020

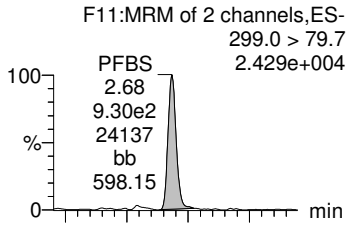
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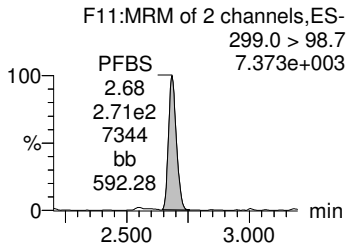
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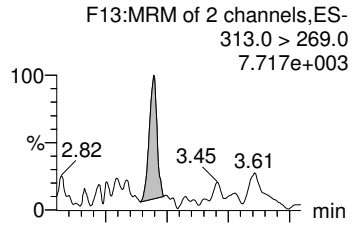
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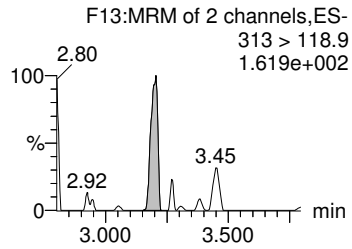
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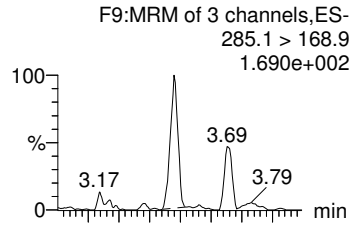


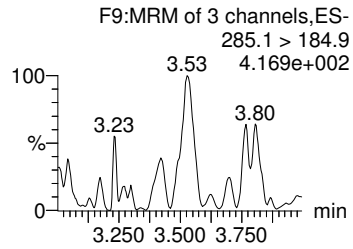
PFHxA



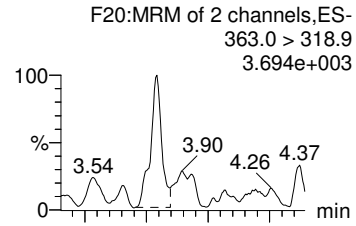


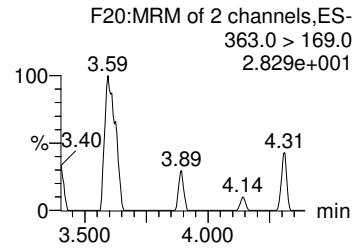
HFPO-DA



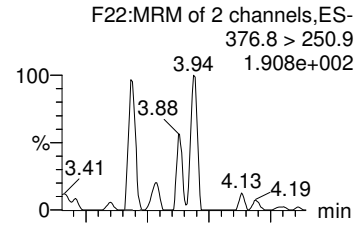


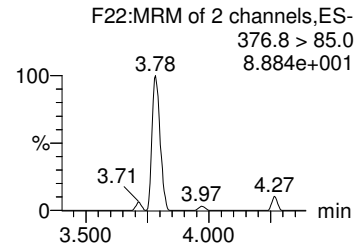
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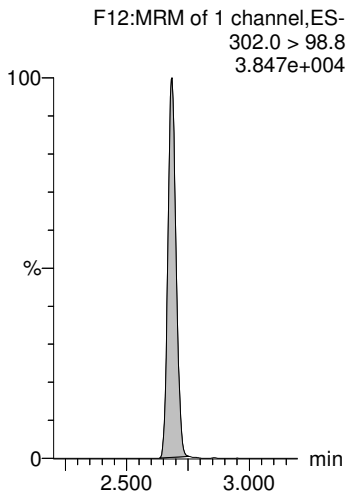


ADONA

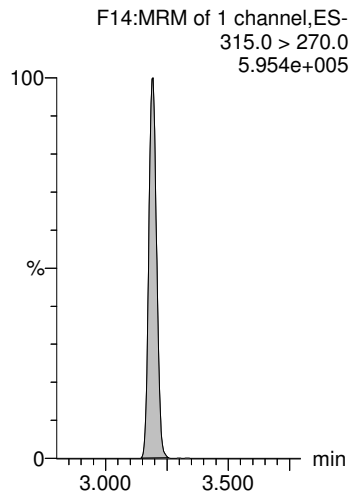




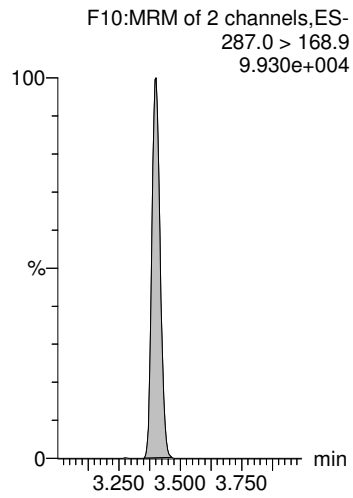
13C3-PFBS-EIS



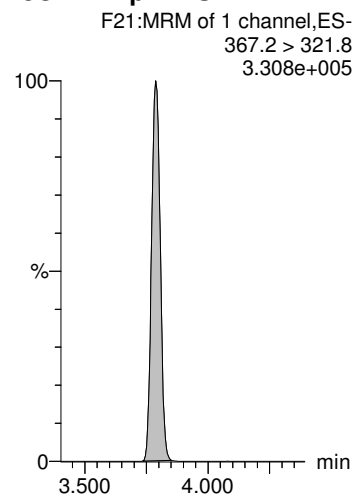
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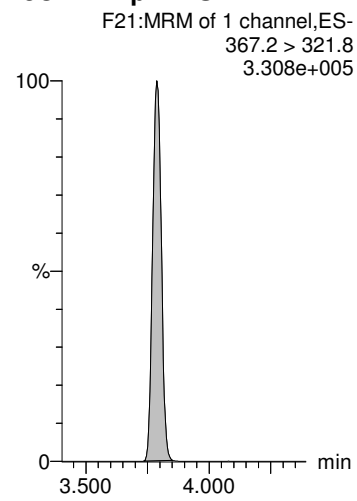
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Vista Analytical Laboratory L18

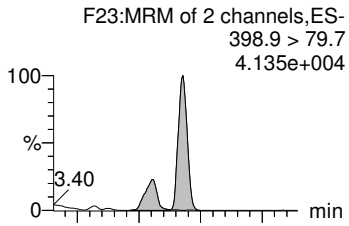
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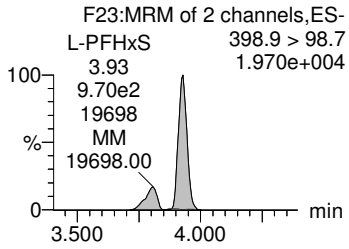
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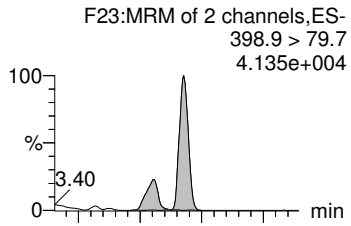
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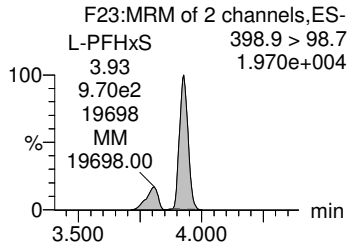
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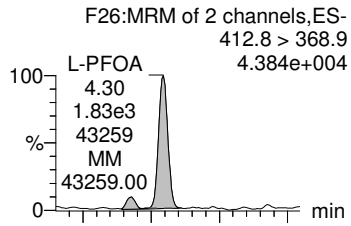


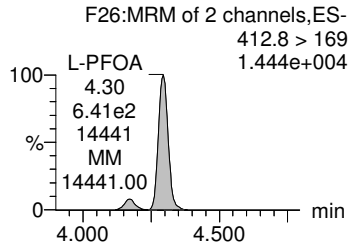
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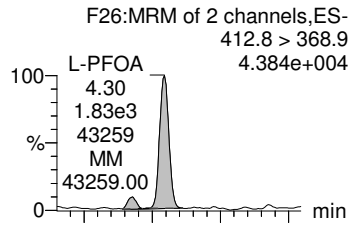


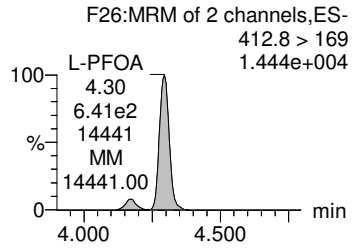
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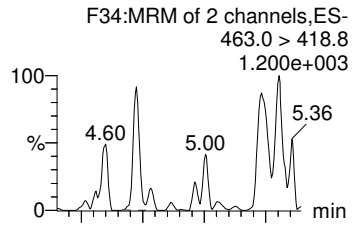


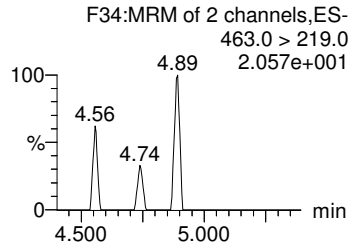
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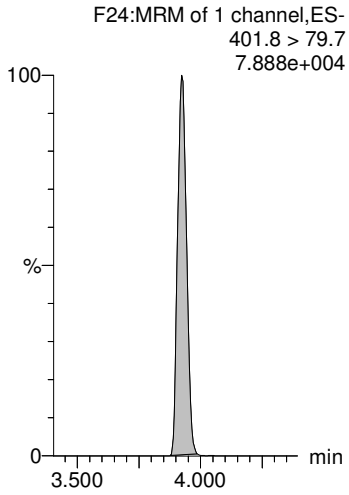


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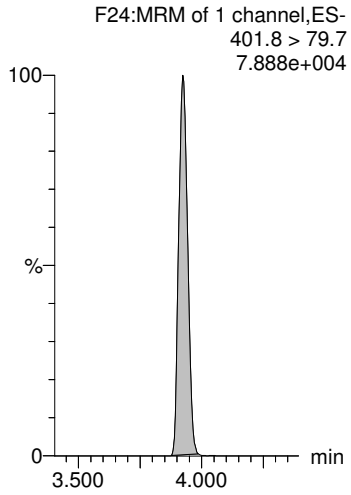




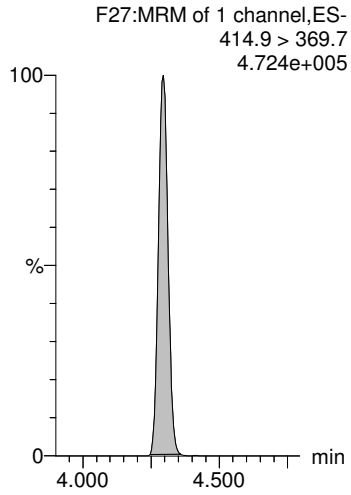
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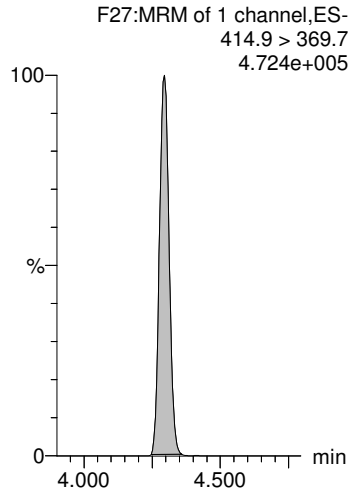
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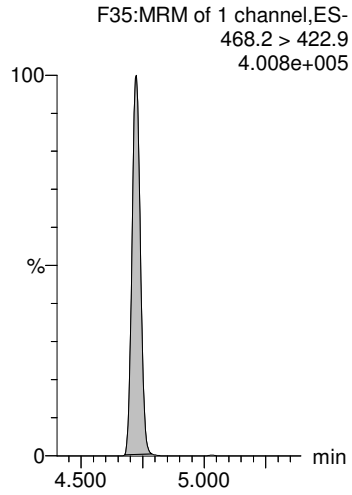
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13C2-PFOA-EIS



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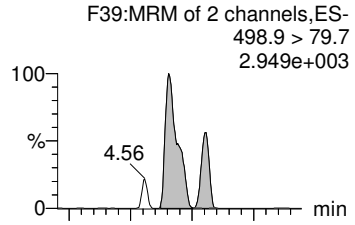
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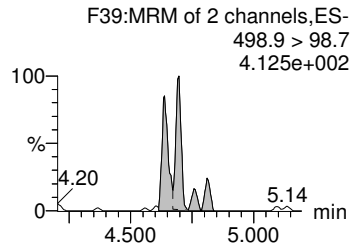
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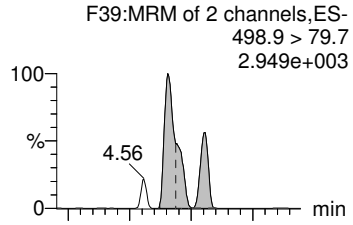
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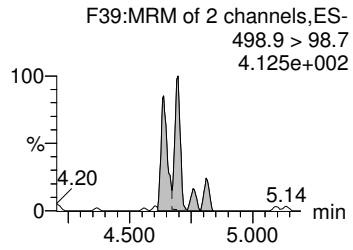
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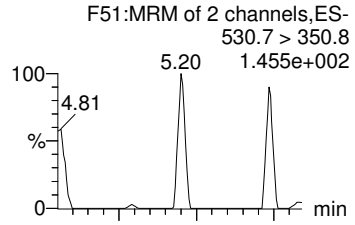


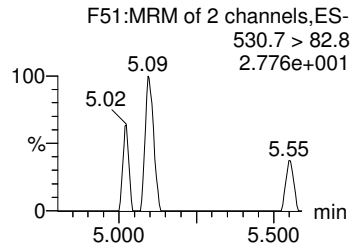
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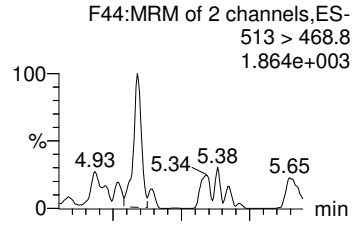


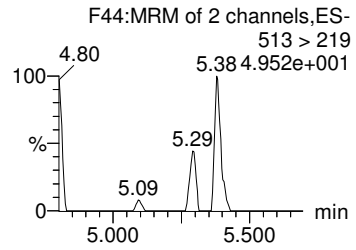
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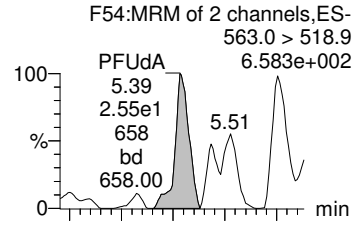


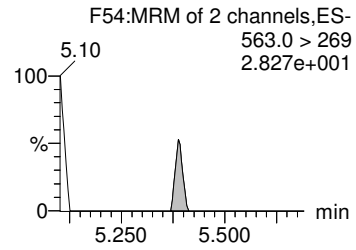
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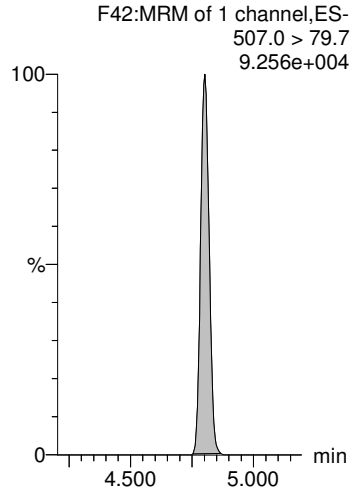


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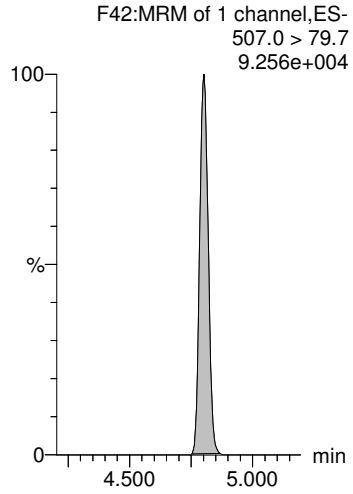




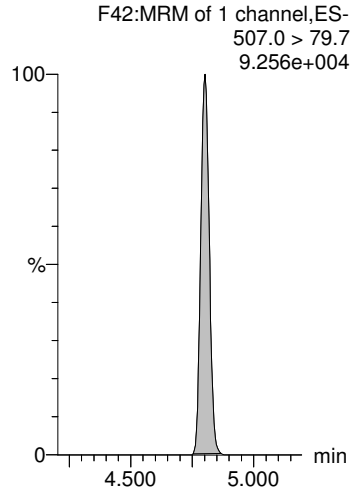
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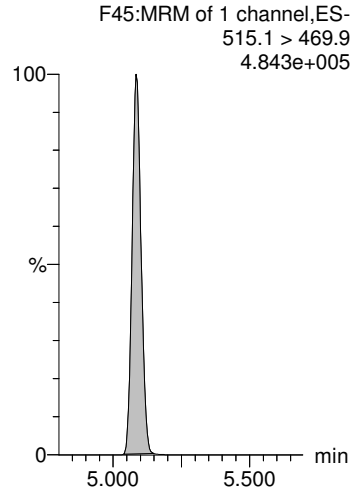
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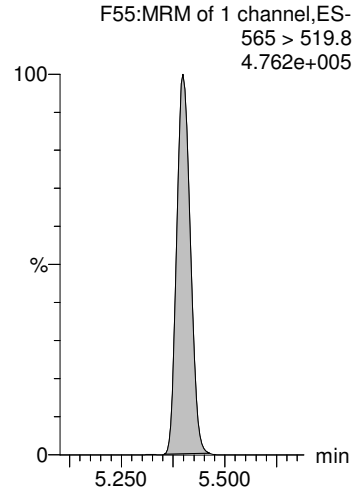
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13C2-PFDA-EIS



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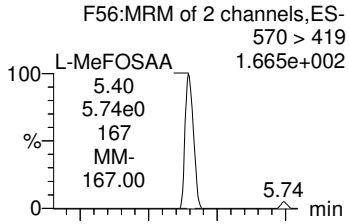
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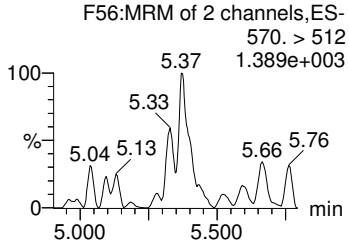
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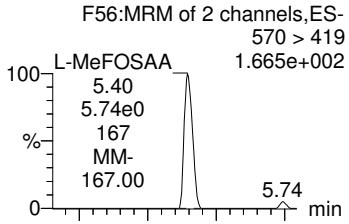
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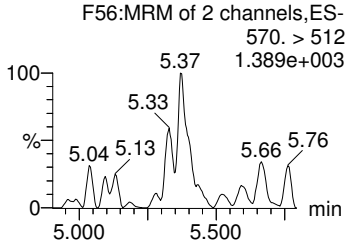
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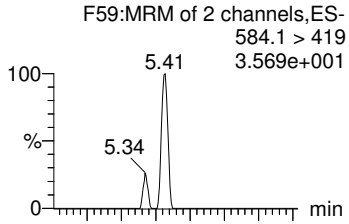


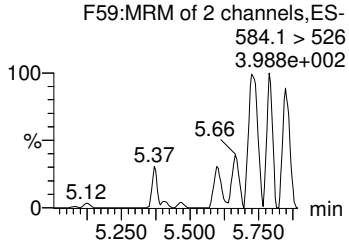
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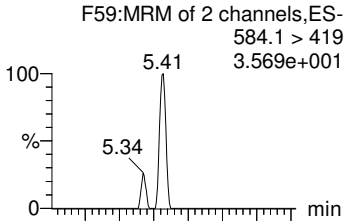


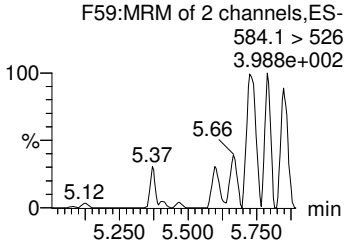
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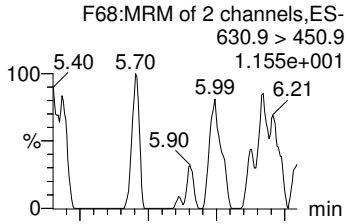


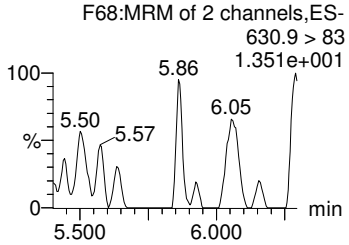
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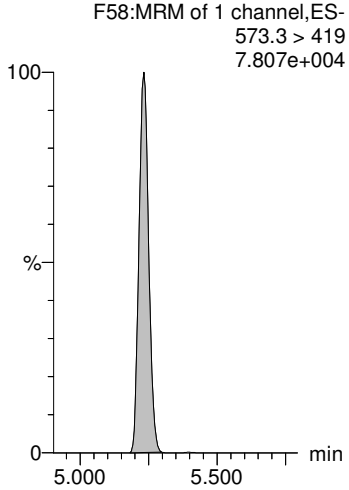


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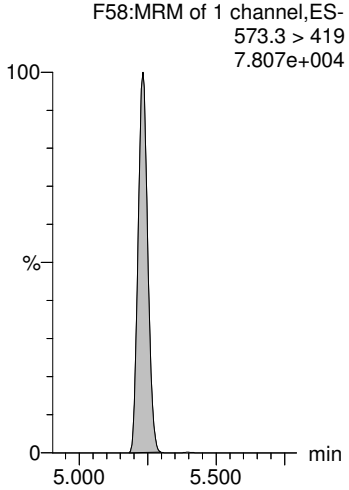




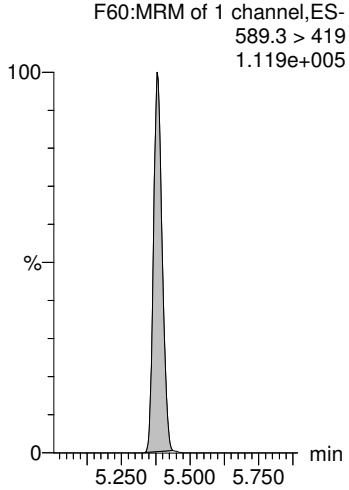
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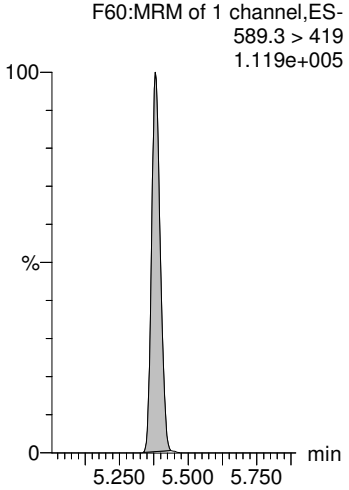
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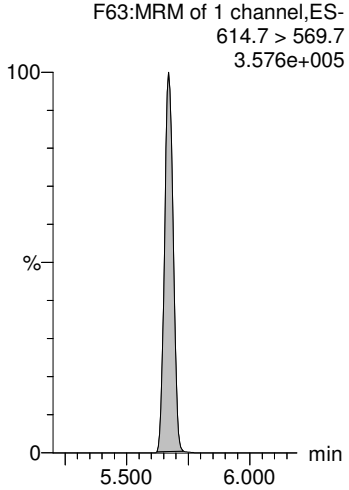
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13C2-PFDoA-EIS



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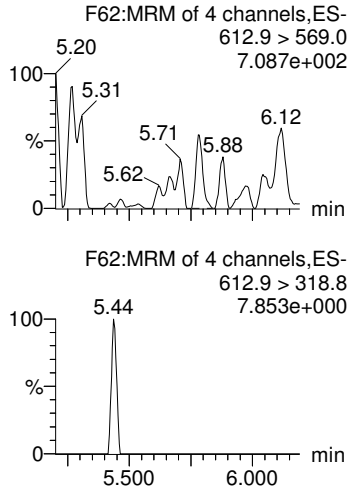
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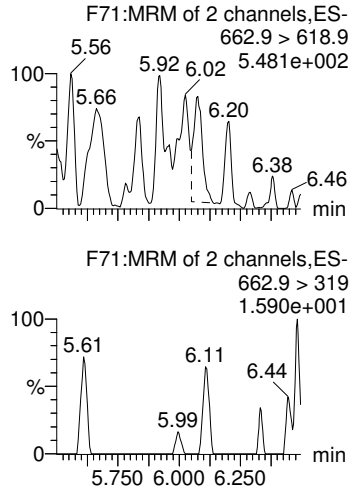
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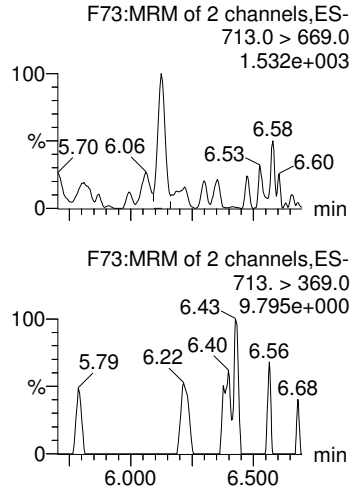
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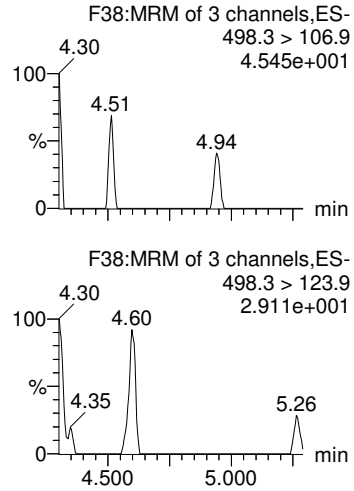
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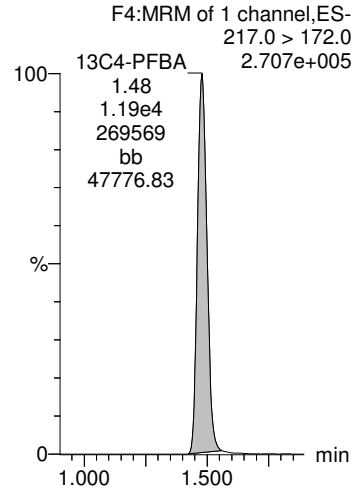
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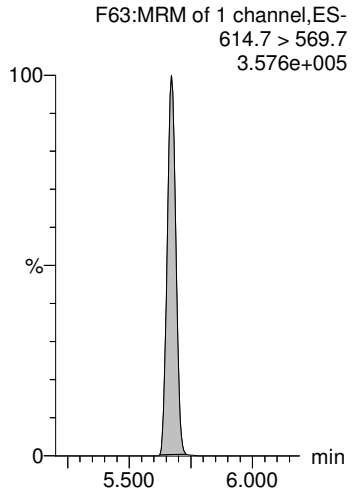
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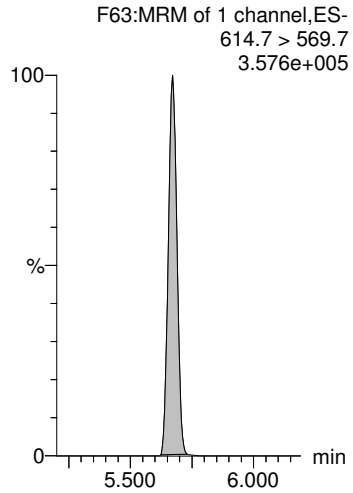
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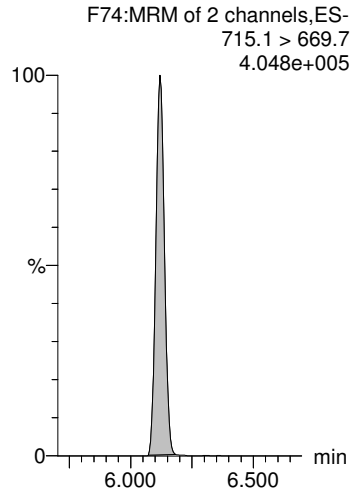
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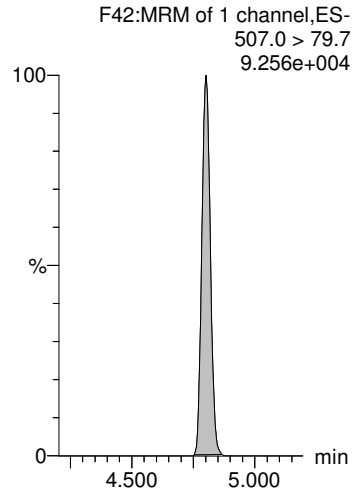
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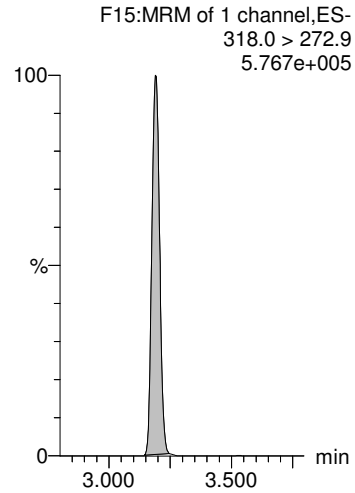
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13C8-PFOS-EIS



13C5-PFHxA



RK 2/25/2020

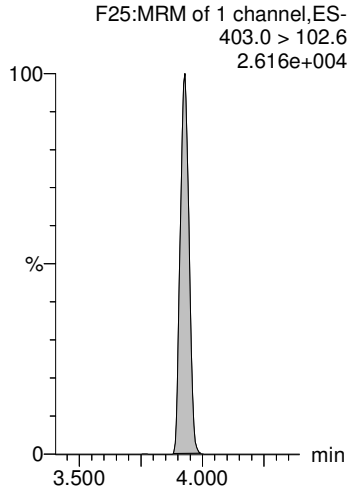
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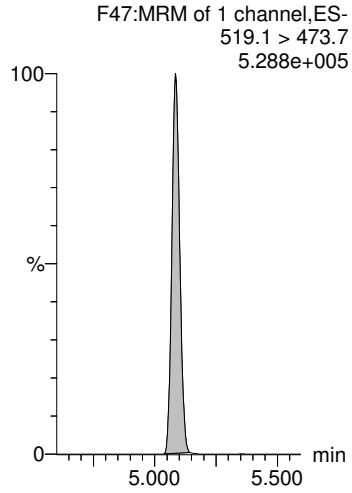
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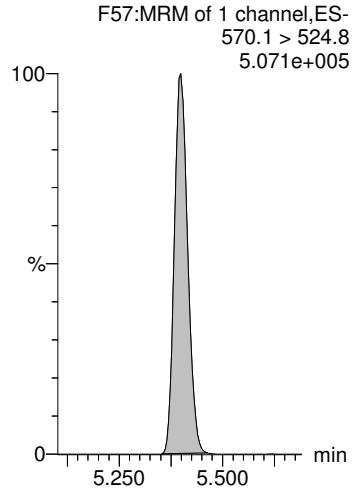
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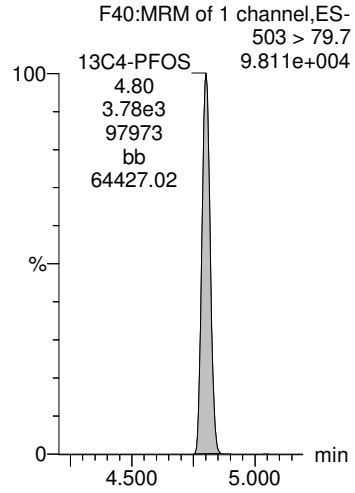
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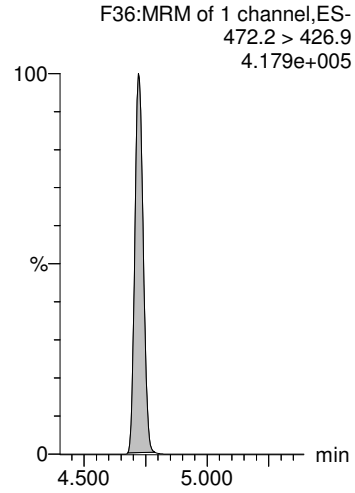
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13C4-PFOS



13C9-PFNA



RK 2/25/2020

INSTRUMENT BLANKS (IB)

AND

CONTINUTING CALIBRATION VERIFICATIONS (CCV)

Vista Analytical Laboratory

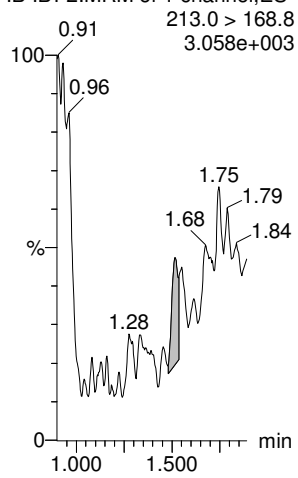
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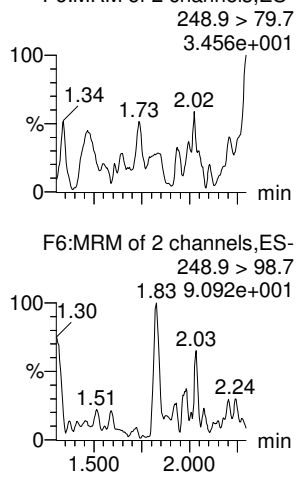
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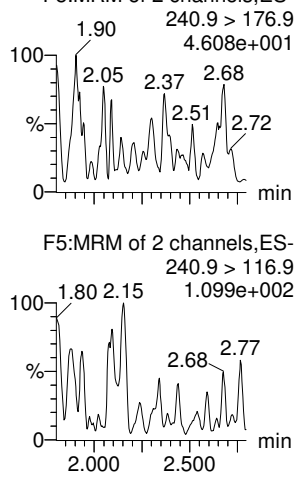
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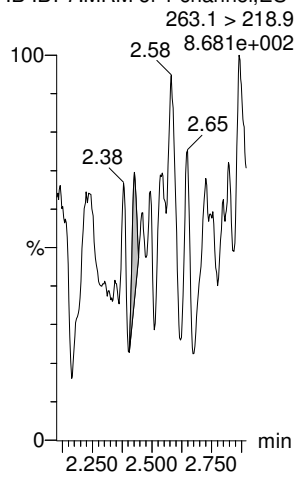
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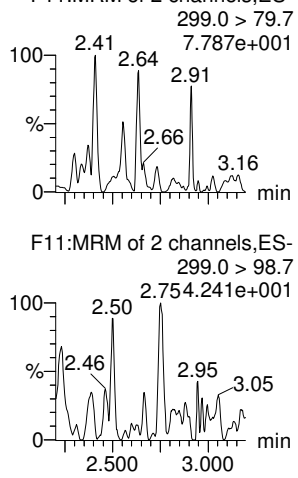
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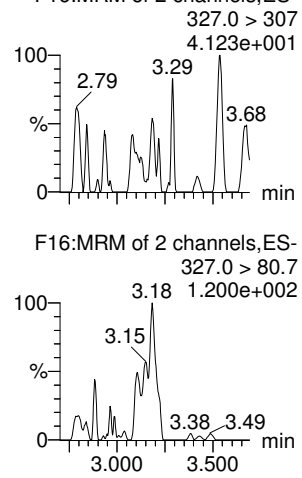
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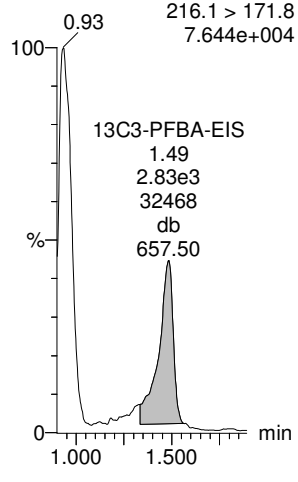
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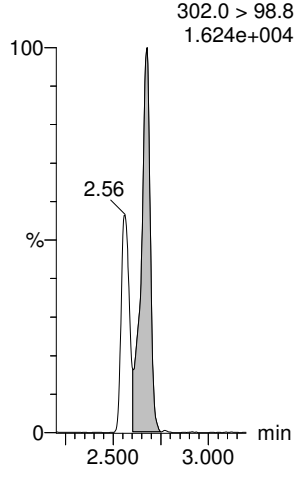
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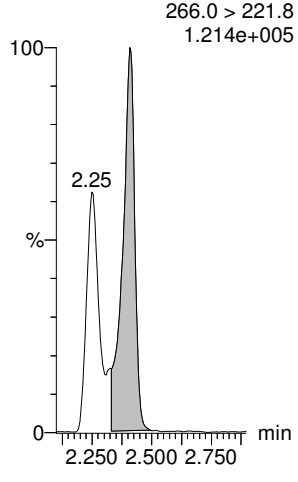
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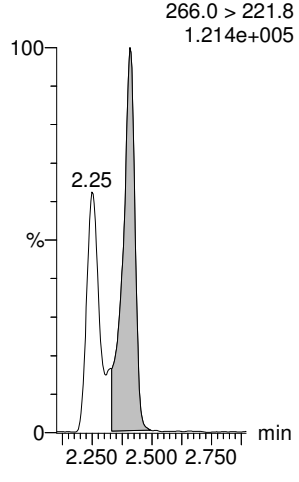
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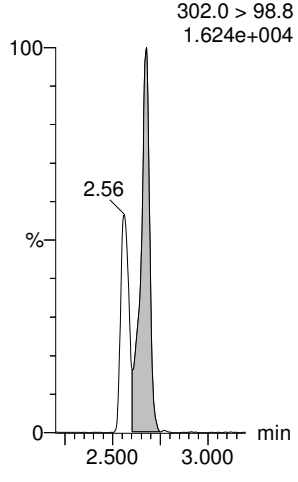
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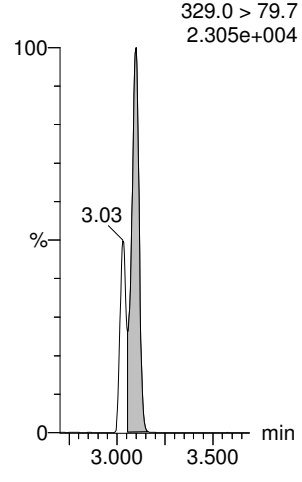
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13C2-4:2 FTS-EIS

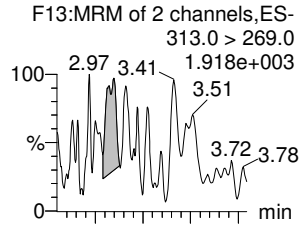


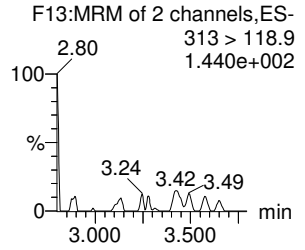
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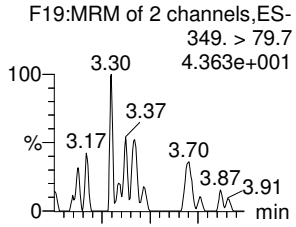
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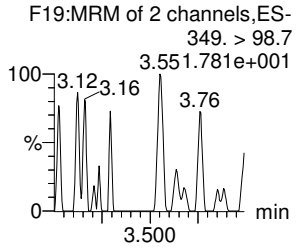
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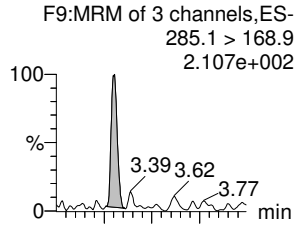


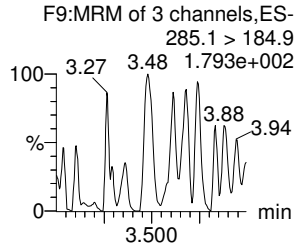
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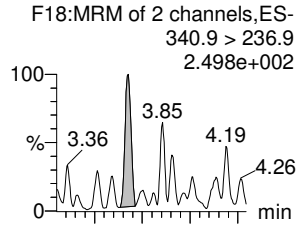


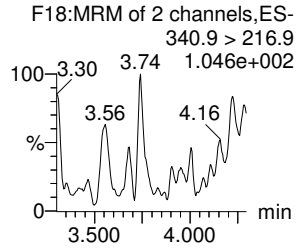
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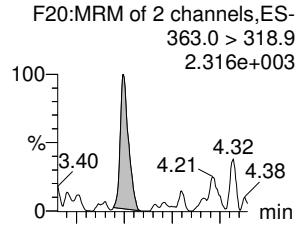


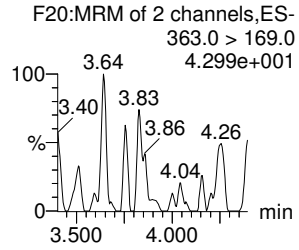
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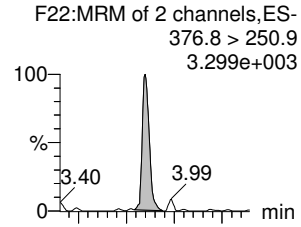


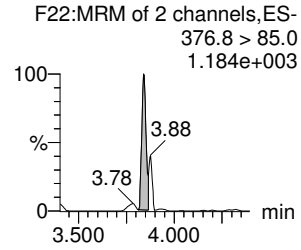
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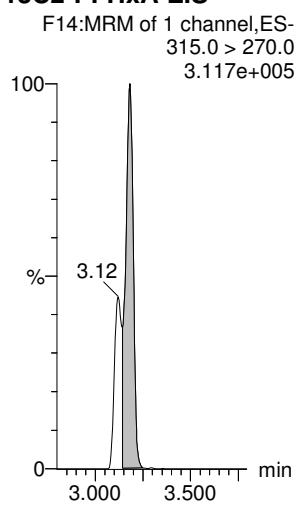


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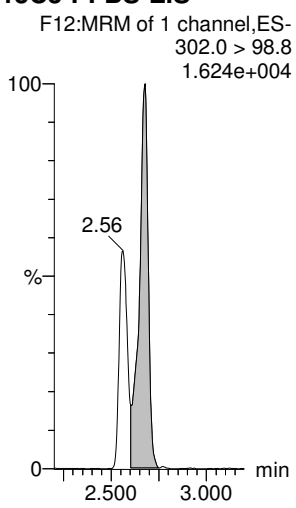




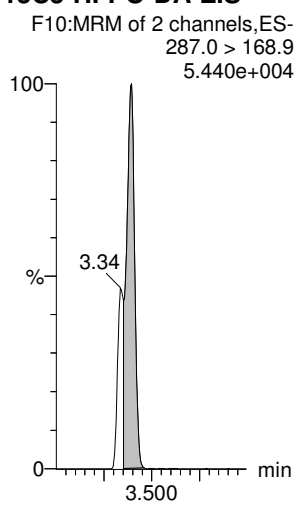
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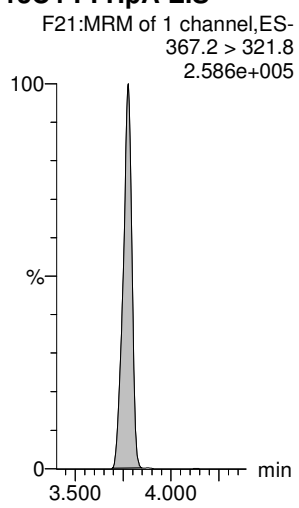
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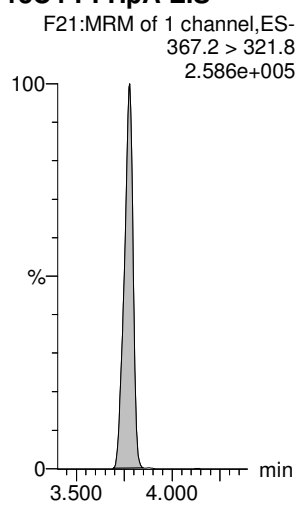
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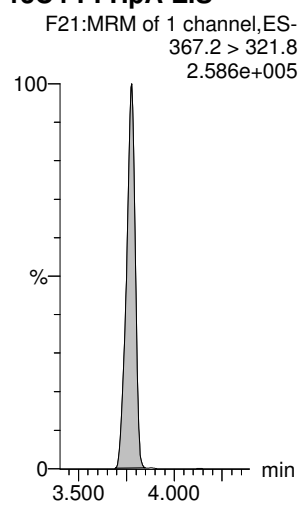
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13C4-PFHpA-EIS



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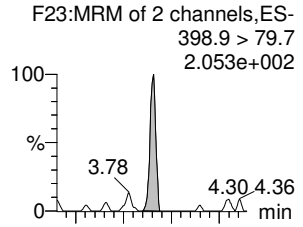


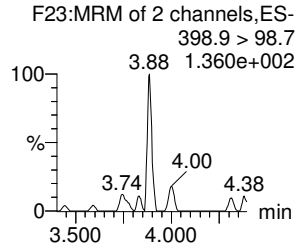
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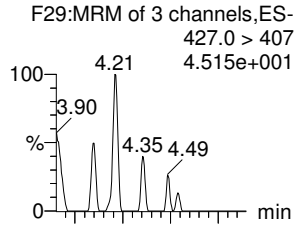
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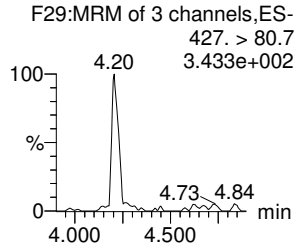
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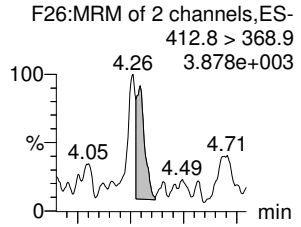


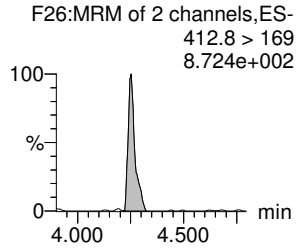
6:2 FTS



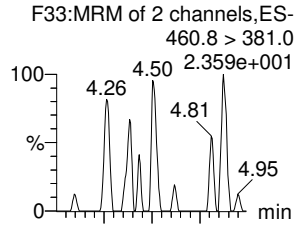


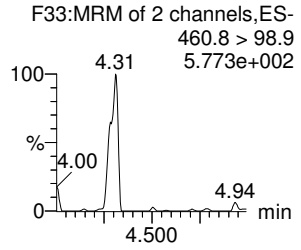
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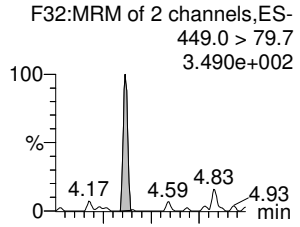


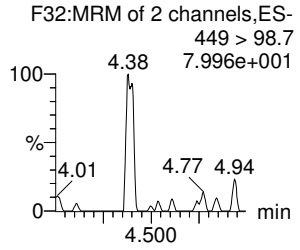
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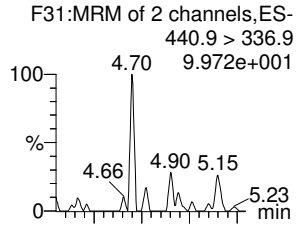


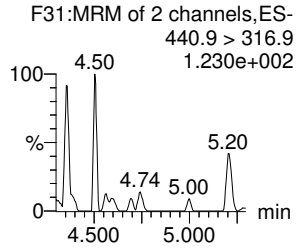
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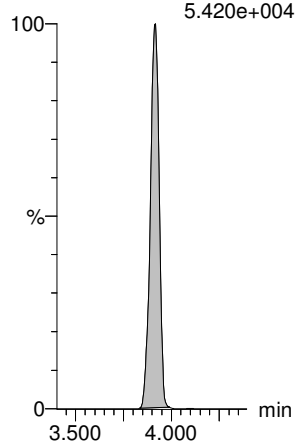


7:3 FTCA

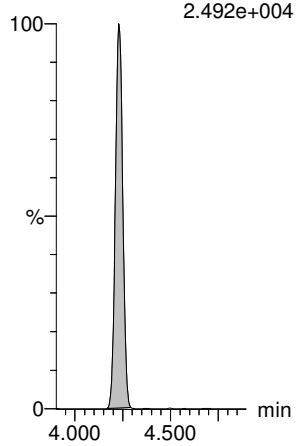




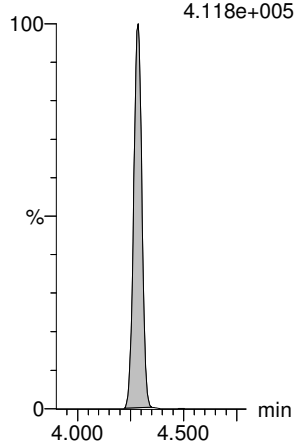
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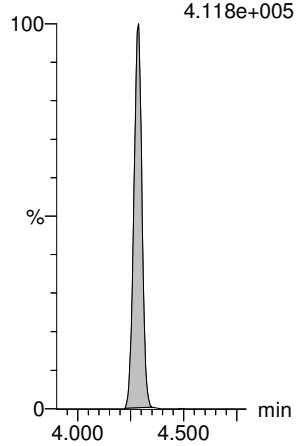
13C2-6:2 FTS-EIS



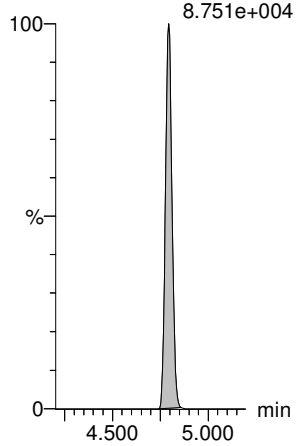
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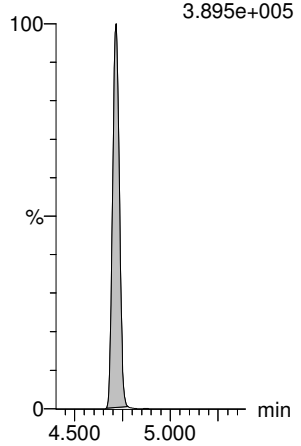
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

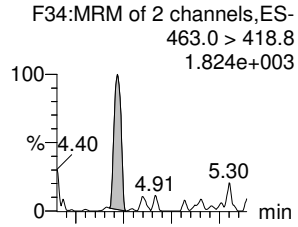


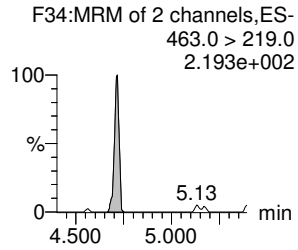
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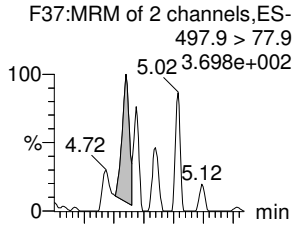
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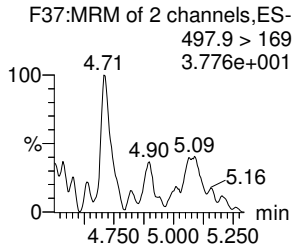
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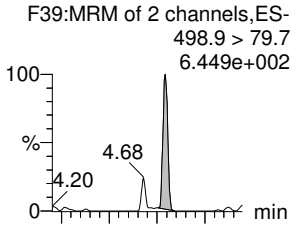


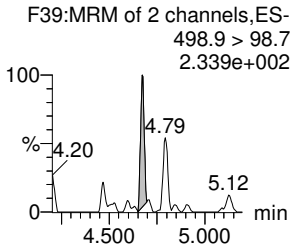
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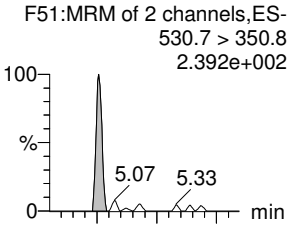


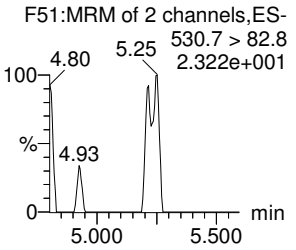
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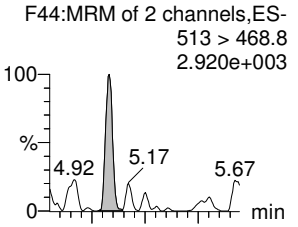


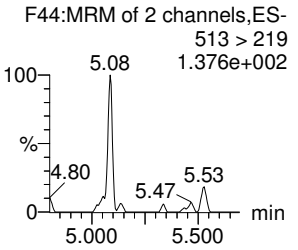
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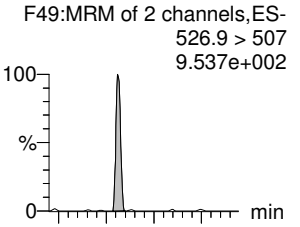


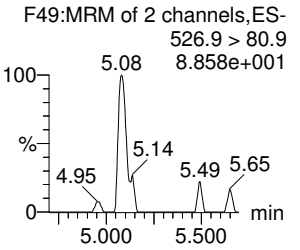
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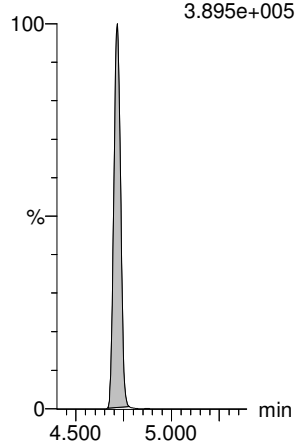


8:2 FTS

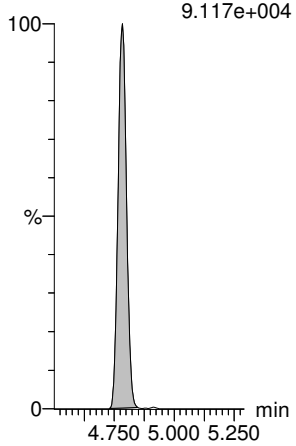




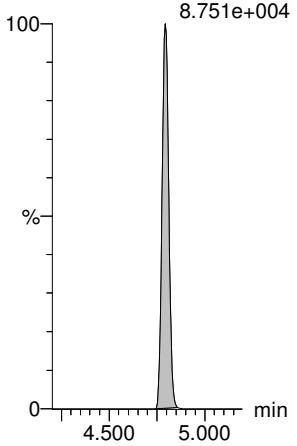
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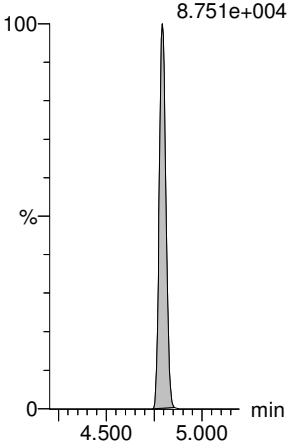
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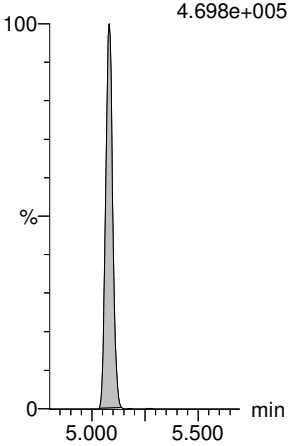
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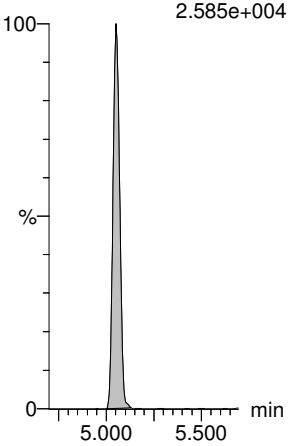
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

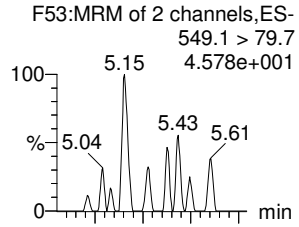


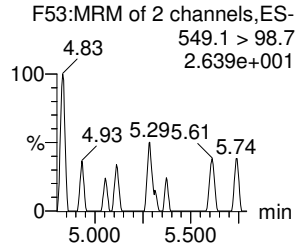
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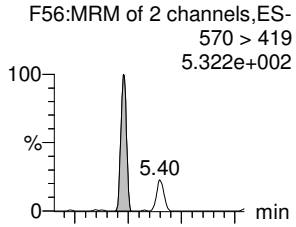
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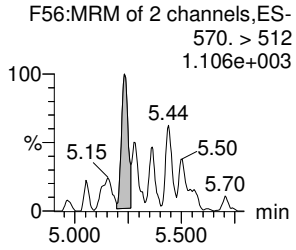
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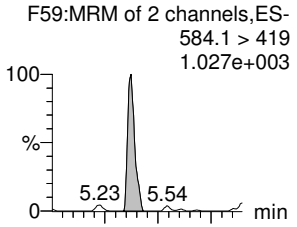


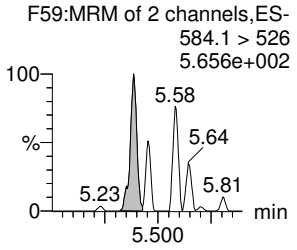
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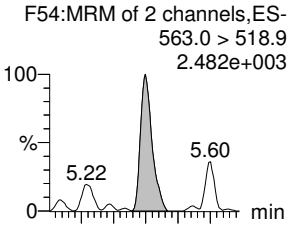


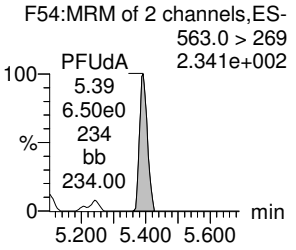
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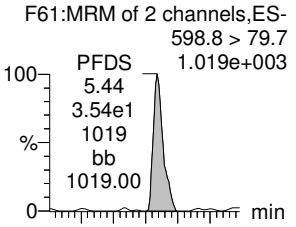


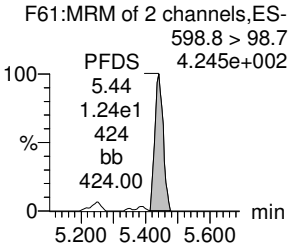
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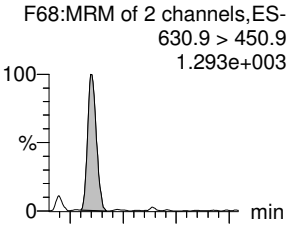


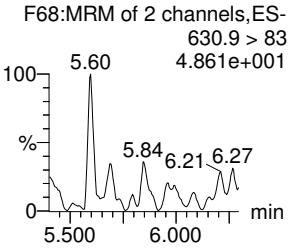
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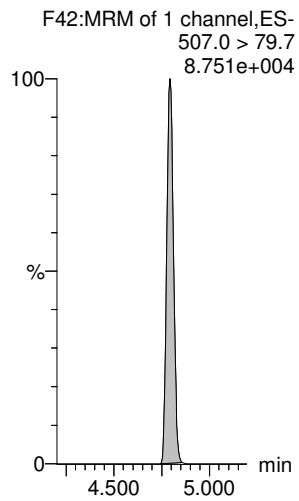


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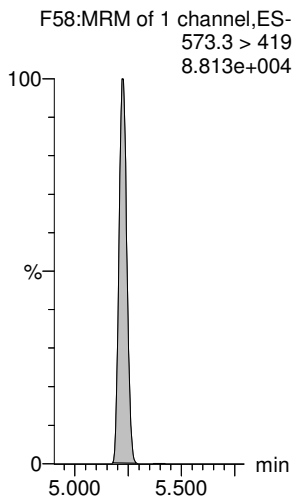




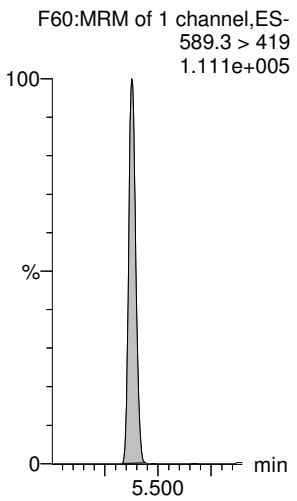
13C8-PFOS-EIS



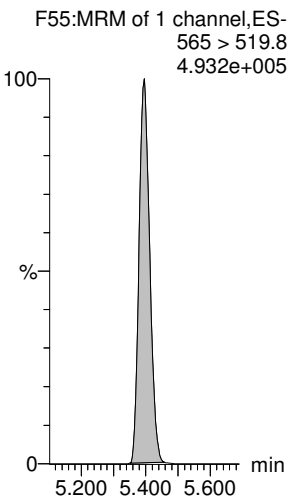
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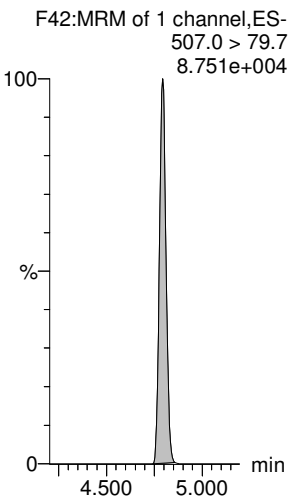
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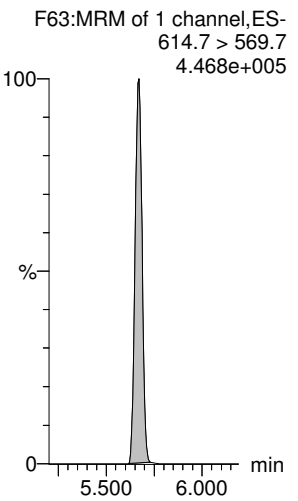
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13C8-PFOS-EIS



13C2-PFDoA-EIS

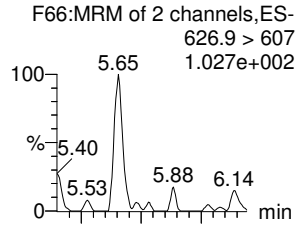


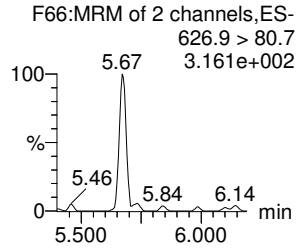
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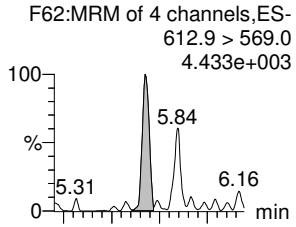
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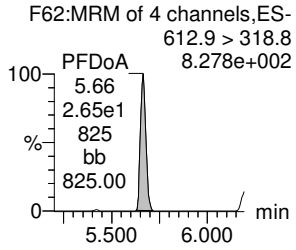
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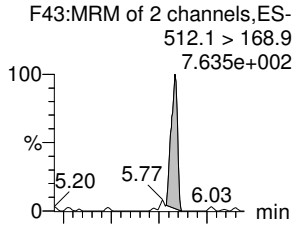


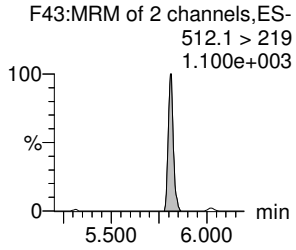
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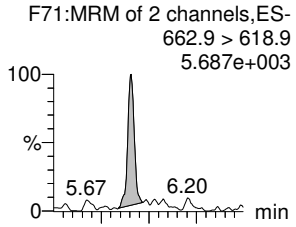


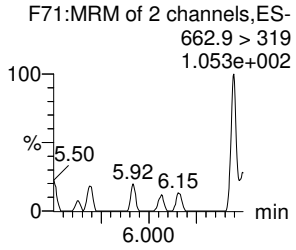
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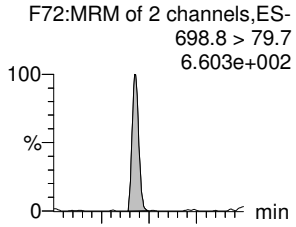


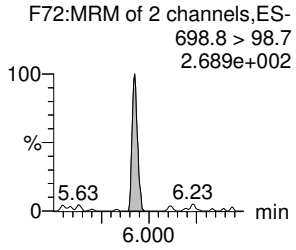
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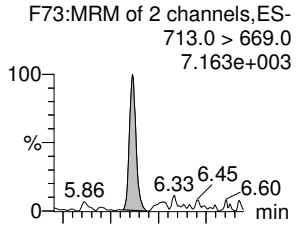


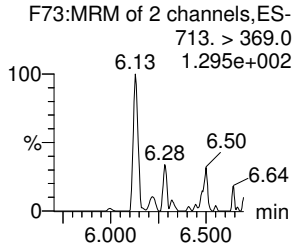
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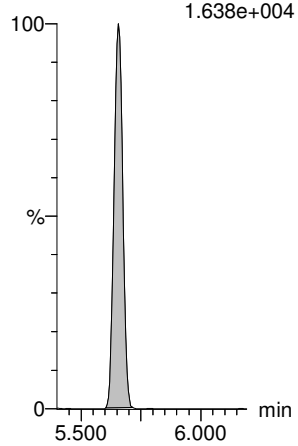


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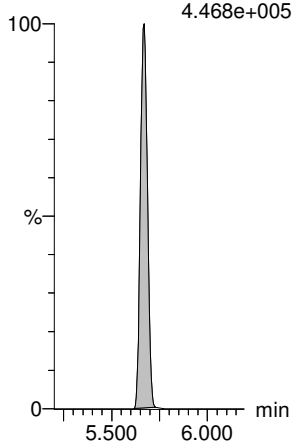




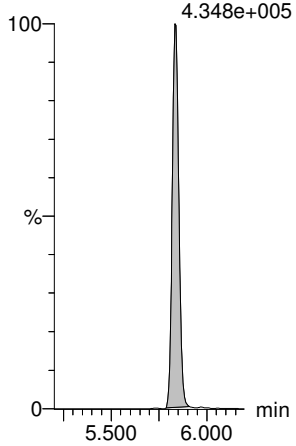
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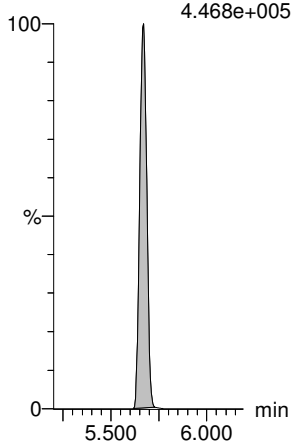
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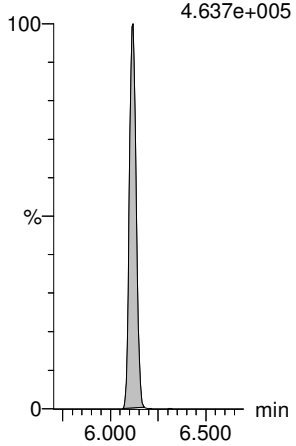
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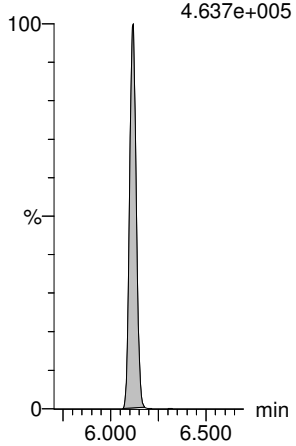
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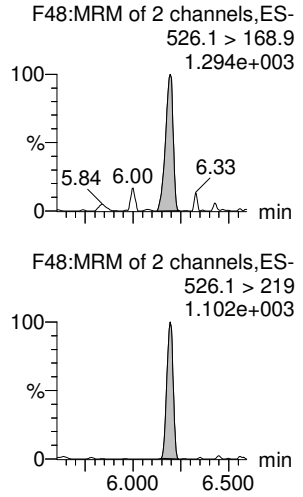


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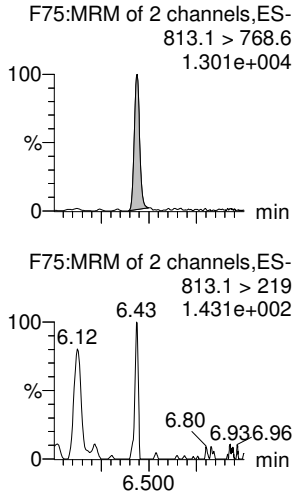
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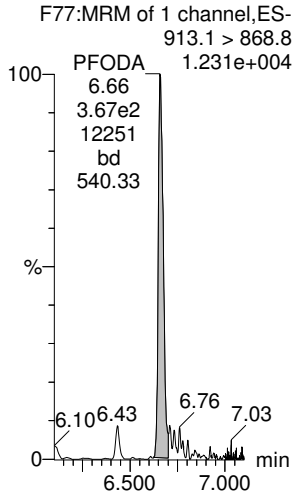
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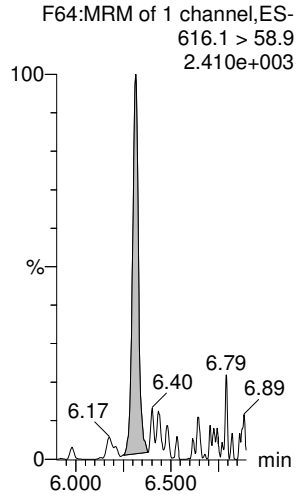
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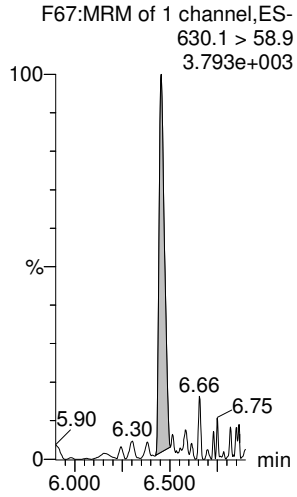
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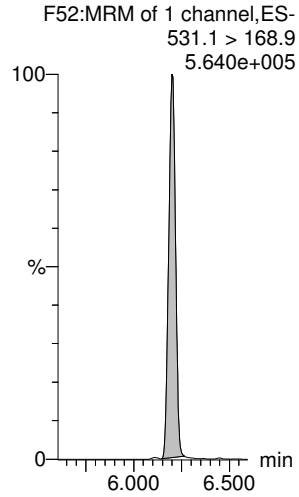
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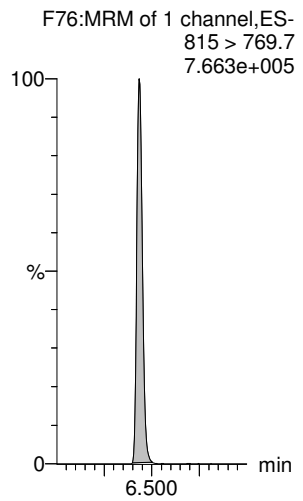
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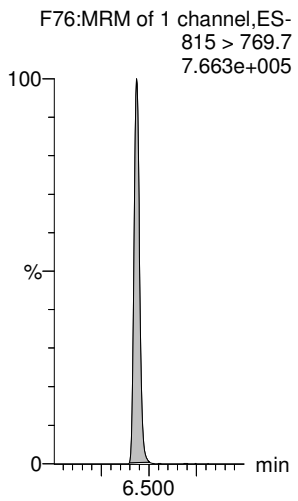
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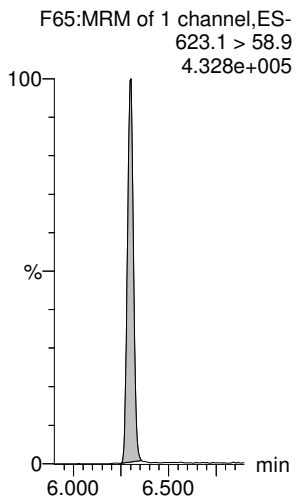
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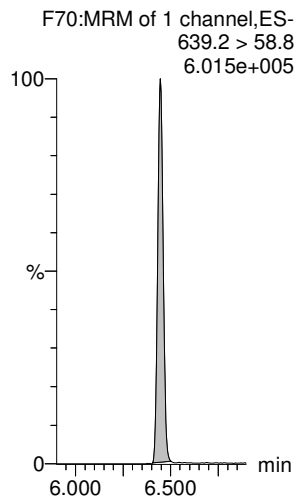
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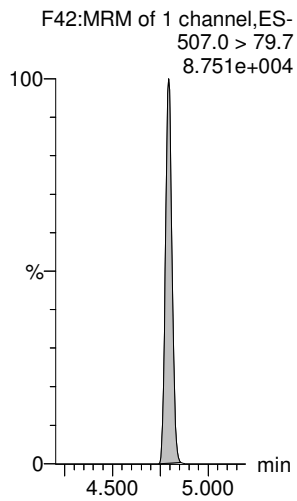
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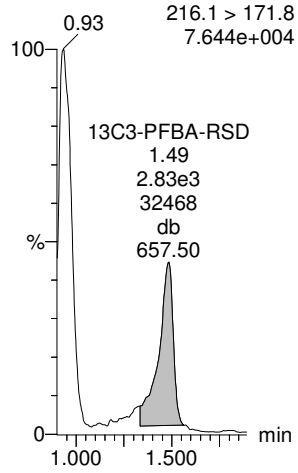


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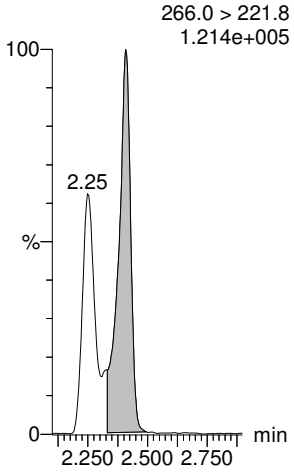
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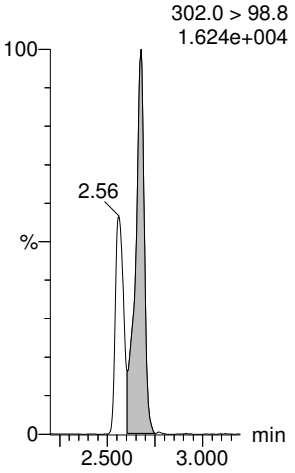
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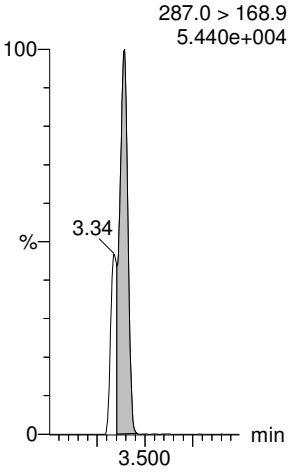
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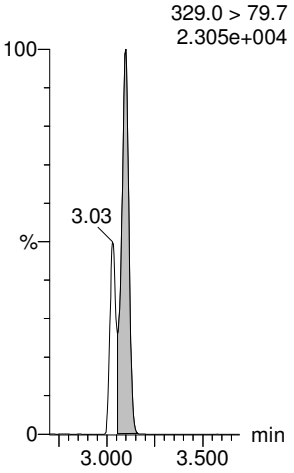
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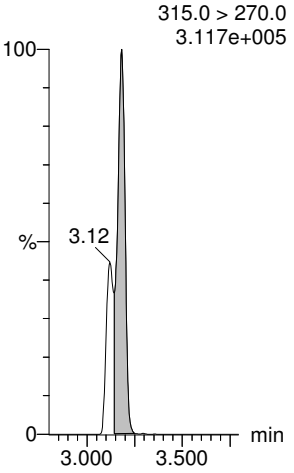
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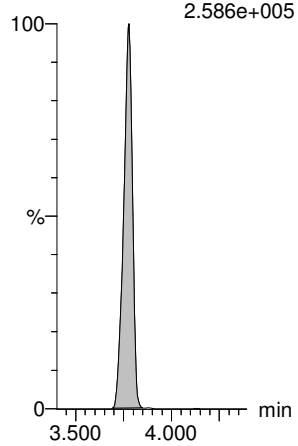
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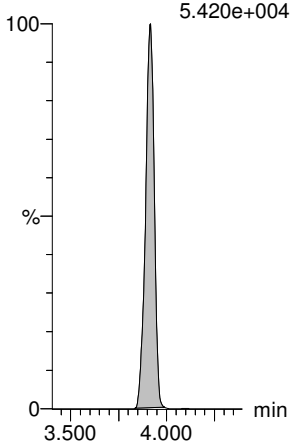
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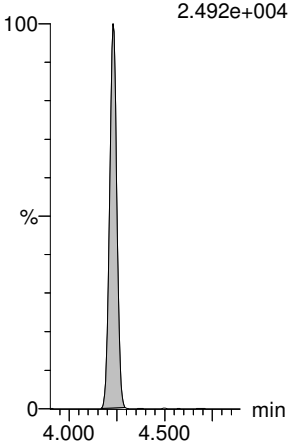
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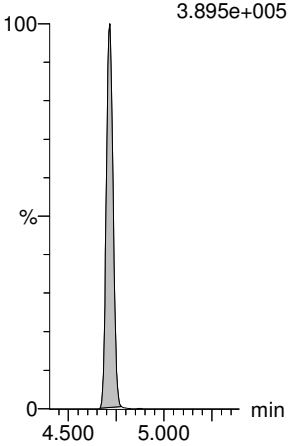
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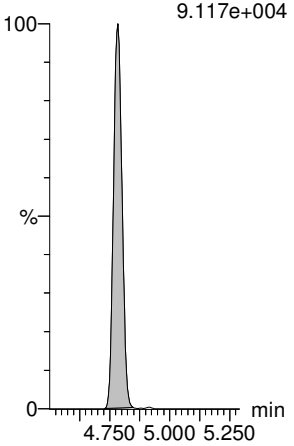
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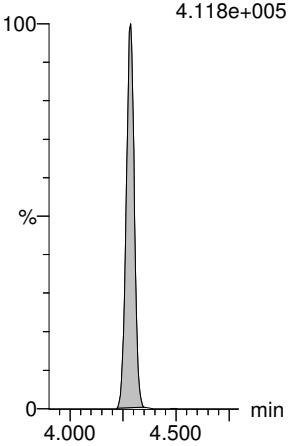
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13C8-PFOSA-RSD



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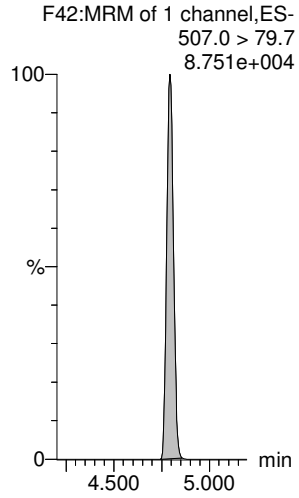


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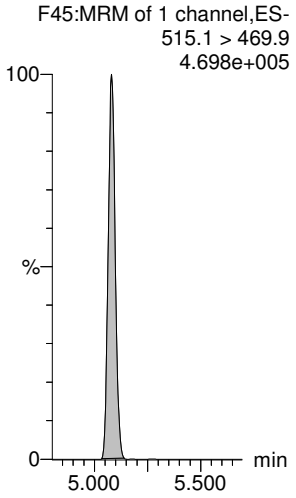
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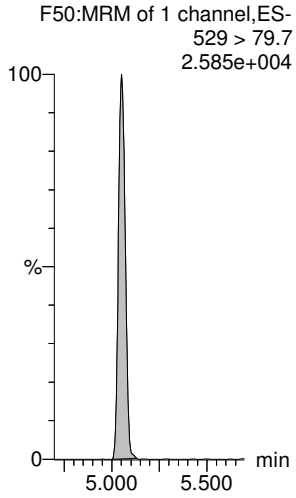
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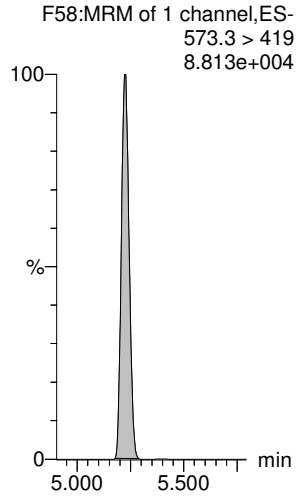
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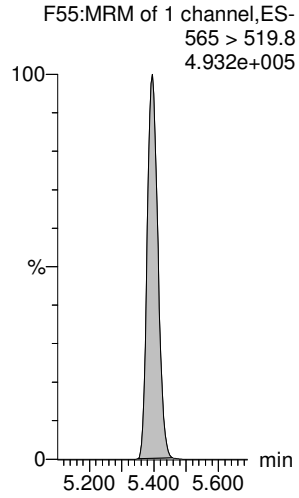
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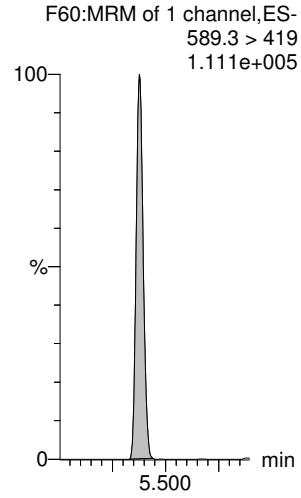
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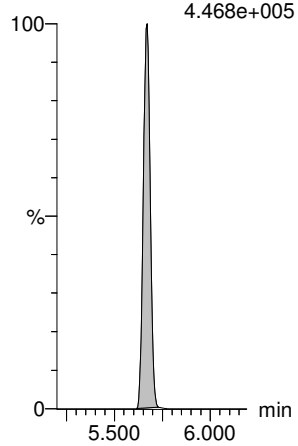
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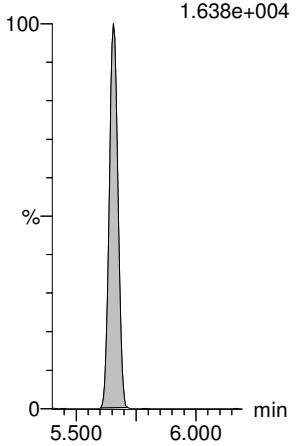
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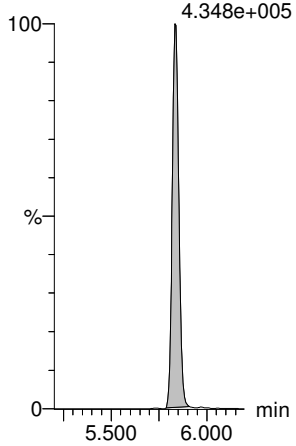
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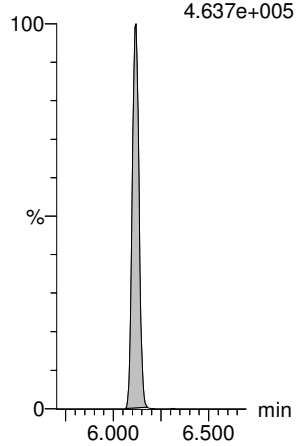
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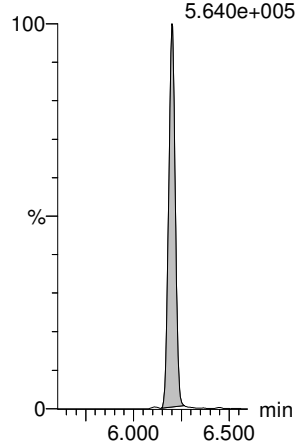
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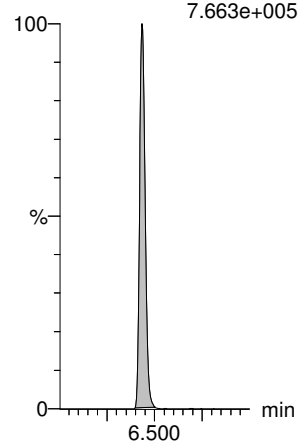
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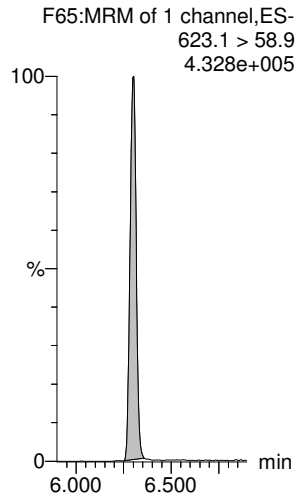


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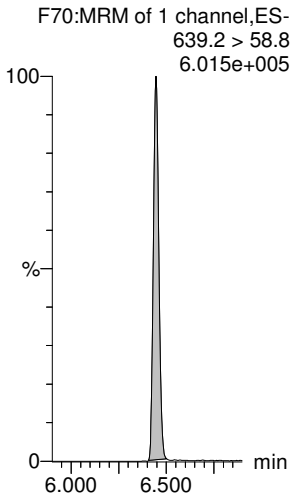
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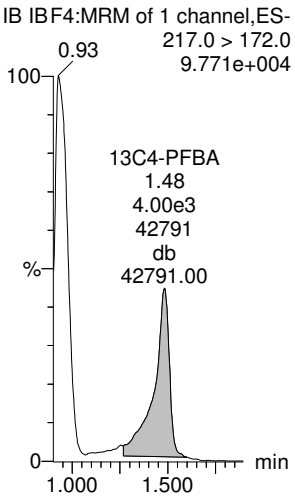
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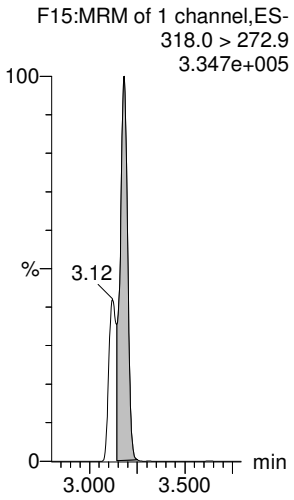
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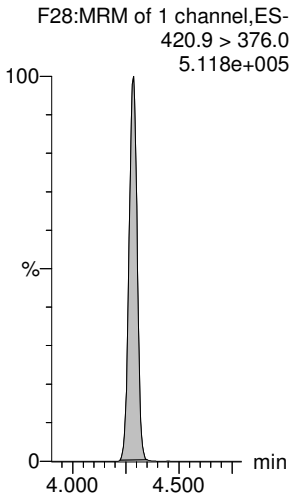
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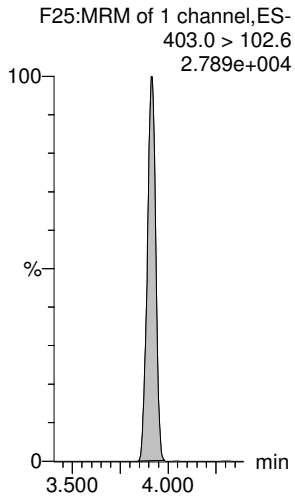
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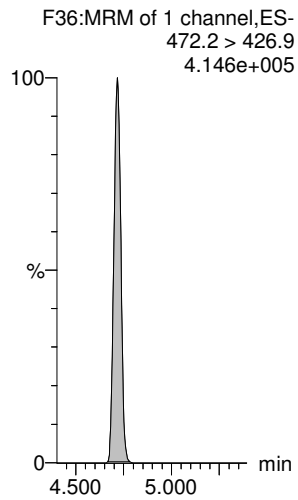
13C8-PFOA



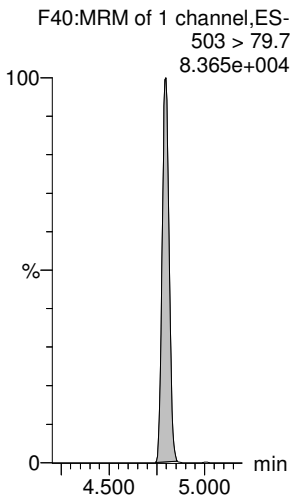
18O2-PFHxS



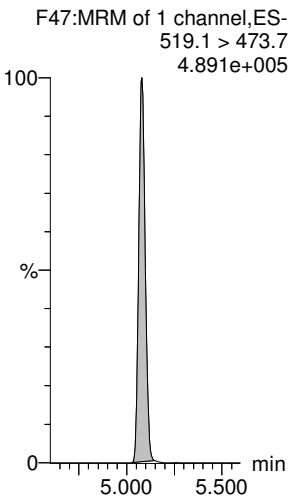
13C9-PFNA



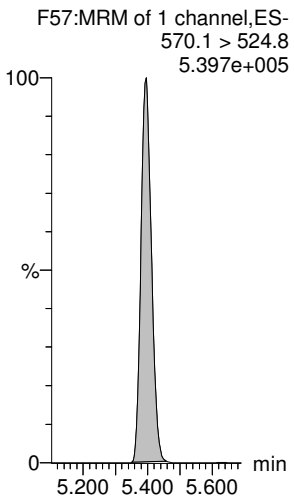
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Dataset: Untitled

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Name: 200220P1-13, Date: 20-Feb-2020, Time: 19:30:05, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	31.824	2834.986	1.00	1.51	0.140		0.248		NO		
2	2	PFPrS	248.9 > 79.7		864.655	1.00						NO		YES
3	3	3:3 FTCA	240.9 > 176.9		7024.297	1.00						NO		YES
4	4	PFPeA	263.1 > 218.9	5.847	7024.297	1.00	2.43	0.010				NO		
5	5	PFBS	299.0 > 79.7		864.655	1.00						NO		YES
6	6	4:2 FTS	327.0 > 307		1025.108	1.00						NO		YES
7	47	13C3-PFBA-EIS	216.1 > 171.8	2834.986		1.00	1.49	2834.986	12.500	3.44	27.5	YES		
8	51	13C3-PFBS-EIS	302.0 > 98.8	864.655		1.00	2.68	864.655	12.500	7.55	60.4	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	7024.297		1.00	2.41	7024.297	12.500	7.45	59.6	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	7024.297		1.00	2.41	7024.297	12.500	7.45	59.6	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	864.655		1.00	2.68	864.655	12.500	7.55	60.4	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1025.108		1.00	3.10	1025.108	12.500	9.43	75.4	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	77.982	14203.249	1.00	3.10	0.069		0.00188		NO		YES
15	8	PFPeS	349.>79.7		864.655	1.00						NO		YES
16	9	HFPO-DA	285.1 > 168.9	7.289	2636.307	1.00	3.30	0.035				NO		YES
17	10	5:3 FTCA	340.9 > 236.9	8.709	13500.765	1.00	3.68	0.008		0.0752		NO		YES
18	11	PFHpA	363.0 > 318.9	112.199	13500.765	1.00	3.75	0.104		0.0217		NO		YES
19	12	ADONA	376.8 > 250.9	135.600	13500.765	1.00	3.85	0.126				NO	4.593	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	14203.249		1.00	3.18	14203.249	12.500	8.68	69.4	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	864.655		1.00	2.68	864.655	12.500	7.55	60.4	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	2636.307		1.00	3.39	2636.307	12.500	8.99	72.0	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	13500.765		1.00	3.78	13500.765	12.500	12.2	97.6	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	13500.765		1.00	3.78	13500.765	12.500	12.2	97.6	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	13500.765		1.00	3.78	13500.765	12.500	12.2	97.6	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	6.979	2838.588	1.00	3.91	0.031				NO		YES
28	15	6:2 FTS	427.0 > 407		1102.104	1.00						NO		YES
29	16	L-PFOA	412.8 > 368.9	138.428	18027.979	1.00	4.30	0.096		0.00266		NO	4.310	NO
30	18	PFecHS	460.8 > 381.0		18027.979	1.00						NO		YES
31	19	PFHpS	449.0 > 79.7	9.055	3475.157	1.00	4.36	0.033		0.0837		NO		YES
32	20	7:3 FTCA	440.9 > 336.9		15570.243	1.00						NO		YES
33	61	13C3-PFHxS-EIS	401.8 > 79.7	2838.588		1.00	3.92	2838.588	12.500	11.2	89.9	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1102.104		1.00	4.23	1102.104	12.500	9.07	72.6	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	18027.979		1.00	4.29	18027.979	12.500	11.8	94.4	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	18027.979		1.00	4.29	18027.979	12.500	11.8	94.4	NO		

Dataset: Untitled

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Name: 200220P1-13, Date: 20-Feb-2020, Time: 19:30:05, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	71	13C8-PFOS-EIS	507.0 > 79.7	3475.157		1.00	4.79	3475.157	12.500	11.7	94.0	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	15570.243		1.00	4.72	15570.243	12.500	11.3	90.7	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	75.063	15570.243	1.00	4.72	0.060		0.0002...		NO	12.521	YES
41	22	PFOSA	497.9 > 77.9	11.899	3678.810	1.00	4.80	0.040		0.0637		NO		YES
42	23	L-PFOS	498.9 > 79.7	17.999	3475.157	1.00	4.79	0.065		0.0730		NO	3.563	YES
43	25	9Cl-PF30NS	530.7 > 350.8	6.496	3475.157	1.00	5.01	0.023		0.0254		NO		YES
44	26	PFDA	513 > 468.8	110.693	17857.156	1.00	5.08	0.077		0.00362		NO		YES
45	27	8:2 FTS	526.9 > 507	26.669	1054.832	1.00	5.06	0.316		0.360		NO		YES
46	65	13C5-PFNA-EIS	468.2 > 422.9	15570.243		1.00	4.72	15570.243	12.500	11.3	90.7	NO		
47	67	13C8-PFOSA-EIS	506 > 78	3678.810		1.00	4.78	3678.810	12.500	11.4	91.1	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3475.157		1.00	4.79	3475.157	12.500	11.7	94.0	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3475.157		1.00	4.79	3475.157	12.500	11.7	94.0	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	17857.156		1.00	5.08	17857.156	12.500	13.2	105.3	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1054.832		1.00	5.05	1054.832	12.500	12.3	98.2	NO		
52	-1													
53	28	PFNS	549.1 > 79.7		3475.157	1.00						NO		YES
54	29	L-MeFOSAA	570 > 419	16.108	3690.109	1.00	5.23	0.055		0.0317		NO	0.414	YES
55	31	L-EtFOSAA	584.1 > 419	39.562	4190.298	1.00	5.37	0.118		0.0345		NO	2.011	YES
56	33	PFUdA	563.0 > 518.9	103.046	18565.443	1.00	5.40	0.069		0.0777		NO	15.848	NO
57	34	PFDS	598.8 > 79.7	35.439	3475.157	1.00	5.44	0.127		0.118		NO	2.848	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	61.168	18517.162	1.00	5.60	0.041				NO		YES
59	71	13C8-PFOS-EIS	507.0 > 79.7	3475.157		1.00	4.79	3475.157	12.500	11.7	94.0	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	3690.109		1.00	5.22	3690.109	12.500	14.0	112.3	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	4190.298		1.00	5.38	4190.298	12.500	11.6	92.9	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	18565.443		1.00	5.39	18565.443	12.500	13.1	104.9	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3475.157		1.00	4.79	3475.157	12.500	11.7	94.0	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	18517.162		1.00	5.67	18517.162	12.500	11.8	94.2	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607		688.921	1.00						NO		YES
67	37	PFDoA	612.9 > 569.0	182.969	18517.162	1.00	5.68	0.124				NO	6.911	NO
68	38	N-MeFOSA	512.1 > 168.9	28.521	16860.805	1.00	5.83	0.252		0.0998		NO	0.842	NO
69	39	PFTrDA	662.9 > 618.9	210.955	18517.162	1.00	5.91	0.142		0.0333		NO		YES
70	40	PFDoS	698.8 > 79.7	25.677	18754.758	1.00	5.92	0.017		0.0889		NO	3.039	NO
71	41	PFTeDA	713.0 > 669.0	287.497	18754.758	1.00	6.11	0.192		0.127		NO		YES
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	688.921		1.00	5.66	688.921	12.500	10.3	82.6	NO		

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Name: 200220P1-13, Date: 20-Feb-2020, Time: 19:30:05, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83	13C2-PFDoA-EIS	614.7 > 569.7	18517.162		1.00	5.67	18517.162	12.500	11.8	94.2	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	16860.805		1.00	5.83	16860.805	149.200	139	93.3	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	18517.162		1.00	5.67	18517.162	12.500	11.8	94.2	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	18754.758		1.00	6.12	18754.758	12.500	13.0	104.2	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	18754.758		1.00	6.12	18754.758	12.500	13.0	104.2	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	58.120	22512.211	1.00	6.19	0.385		0.350		NO	1.427	NO
80	43	PFHxDA	813.1 > 768.6	417.085	25505.473	1.00	6.44	0.204		0.125		NO		YES
81	44	PFODA	913.1 > 868.8	366.883	25505.473	1.00	6.66	0.180		0.200		NO		
82	45	N-MeFOSE	616.1 > 58.9	83.540	15521.402	1.00	6.31	0.803		0.329		NO		
83	46	N-EtFOSE	630.1 > 58.9	119.845	19186.887	1.00	6.46	0.932		0.958		NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	22512.211		1.00	6.20	22512.211	149.200	143	96.1	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	25505.473		1.00	6.43	25505.473	12.500	10.9	86.9	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	25505.473		1.00	6.43	25505.473	12.500	10.9	86.9	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	15521.402		1.00	6.30	15521.402	149.200	138	92.8	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	19186.887		1.00	6.45	19186.887	149.200	137	91.8	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3475.157		1.00	4.79	3475.157	12.500	11.7	94.0	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	2834.986	4003.940	1.00	1.49	8.851	12.500	11.2	89.6	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	7024.297	15103.579	1.00	2.41	5.813	12.500	10.3	82.3	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	864.655	1389.390	1.00	2.68	7.779	12.500	6.93	55.4	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	2636.307	15103.579	1.00	3.39	2.182	12.500	12.2	97.6	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1025.108	1389.390	1.00	3.10	9.223	12.500	7.75	62.0	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	14203.249	15103.579	1.00	3.18	11.755	12.500	12.0	96.1	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	13500.765	15103.579	1.00	3.78	11.173	12.500	18.3	146.3	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	2838.588	1389.390	1.00	3.92	25.538	12.500	10.7	85.9	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1102.104	3518.320	1.00	4.23	3.916	12.500	10.4	83.0	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	15570.243	16952.029	1.00	4.72	11.481	12.500	12.3	98.1	NO		
101	68	13C8-PFOSA-RSD	506 > 78	3678.810	19943.203	1.00	4.78	2.306	12.500	12.1	96.6	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	18027.979	22134.828	1.00	4.29	10.181	12.500	11.1	88.8	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3475.157	3518.320	1.00	4.79	12.347	12.500	13.2	105.6	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	17857.156	19077.539	1.00	5.08	11.700	12.500	12.4	98.9	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1054.832	3518.320	1.00	5.05	3.748	12.500	12.9	103.0	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	3690.109	19943.203	1.00	5.22	2.313	12.500	13.4	107.5	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	18565.443	19943.203	1.00	5.39	11.636	12.500	11.5	92.4	NO		

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Name: 200220P1-13, Date: 20-Feb-2020, Time: 19:30:05, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82	d5-N-EtFOSAA-RSD	589.3 > 419	4190.298	19943.203	1.00	5.38	2.626	12.500	11.6	93.1	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	18517.162	19077.539	1.00	5.67	12.133	12.500	12.1	97.1	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	688.921	3518.320	1.00	5.66	2.448	12.500	10.4	83.2	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	16860.805	19943.203	1.00	5.83	10.568	149.200	139	93.2	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	18754.758	19943.203	1.00	6.12	11.755	12.500	12.1	97.1	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	22512.211	19943.203	1.00	6.20	14.110	149.200	139	93.4	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	25505.473	19943.203	1.00	6.43	15.986	12.500	10.6	85.0	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	15521.402	19943.203	1.00	6.30	9.729	149.200	131	87.8	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	19186.887	19943.203	1.00	6.45	12.026	149.200	139	93.0	NO		
119	99	13C4-PFBA	217.0 > 172.0	4003.940	4003.940	1.00	1.48	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	15103.579	15103.579	1.00	3.18	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	22134.828	22134.828	1.00	4.29	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1389.390	1389.390	1.00	3.91	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	16952.029	16952.029	1.00	4.72	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	3518.320	3518.320	1.00	4.80	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	19077.539	19077.539	1.00	5.08	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	19943.203	19943.203	1.00	5.40	12.500	12.500	12.5	100.0	NO		

LC Calibration Standards Review Checklist Q5

			ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	N/A
Calibration ID:	STZ00220 P1-11	L M H	☑	☑	☑	☑	☐	☑	☐
Calibration ID:	-12	L M H	☐	☑	☑	☐	☑	☑	☐
Calibration ID:	-13	L M H	☐	☑	☑	☐	☑	☑	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☑

Full Mass Cal. Date: 20200207

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Instrument Blank Saved ☑

All Branches in Acquisition Window ☑

IIS Area Saved ☑

Reviewed By: JM 2/21/2020
Initials/Date

Comments:

Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-37.qld

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JM 2/21/2020

Name: 200220P1-37, Date: 20-Feb-2020, Time: 23:42:13, ID: ST200220P1-11 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	9794.303	10362.233	1.00	1.49	11.815	10.000	10.6	105.5	NO		
2	2	PFPrS	248.9 > 79.7	1895.619	1411.687	1.00	1.81	16.785	10.000	10.7	107.5	NO	2.490	NO
3	3	3:3 FTCA	240.9 > 176.9	728.380	12349.781	1.00	2.27	0.737	10.000	10.1	101.1	NO	3.519	NO
4	4	PFPeA	263.1 > 218.9	9865.966	12349.781	1.00	2.41	9.986	10.000	10.2	102.4	NO		
5	5	PFBS	299.0 > 79.7	3060.002	1411.687	1.00	2.68	27.095	10.000	11.8	117.7	NO	3.236	NO
6	6	4:2 FTS	327.0 > 307	1793.750	1671.062	1.00	3.10	13.418	10.000	8.23	82.3	NO	0.929	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	10362.233		1.00	1.49	10362.233	12.500	12.6	100.6	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1411.687		1.00	2.68	1411.687	12.500	12.3	98.6	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	12349.781		1.00	2.41	12349.781	12.500	13.1	104.7	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	12349.781		1.00	2.41	12349.781	12.500	13.1	104.7	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1411.687		1.00	2.68	1411.687	12.500	12.3	98.6	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1671.062		1.00	3.10	1671.062	12.500	15.4	123.0	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	15869.582	20994.389	1.00	3.19	9.449	10.000	10.6	105.8	NO	16.765	NO
15	8	PFPeS	349.>79.7	2844.198	1411.687	1.00	3.38	25.184	10.000	12.1	121.3	NO	2.317	NO
16	9	HFPO-DA	285.1 > 168.9	3440.574	3760.070	1.00	3.39	11.438	10.000	11.0	110.3	NO	2.708	NO
17	10	5:3 FTCA	340.9 > 236.9	2018.248	13848.530	1.00	3.73	1.822	10.000	10.1	101.4	NO	1.777	NO
18	11	PFHpA	363.0 > 318.9	13958.485	13848.530	1.00	3.78	12.599	10.000	10.1	101.1	NO	24.803	NO
19	12	ADONA	376.8 > 250.9	34691.172	13848.530	1.00	3.89	31.313	10.000	10.1	100.9	NO	3.862	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	20994.389		1.00	3.19	20994.389	12.500	12.8	102.6	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1411.687		1.00	2.68	1411.687	12.500	12.3	98.6	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3760.070		1.00	3.39	3760.070	12.500	12.8	102.6	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	13848.530		1.00	3.78	13848.530	12.500	12.5	100.1	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	13848.530		1.00	3.78	13848.530	12.500	12.5	100.1	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	13848.530		1.00	3.78	13848.530	12.500	12.5	100.1	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2771.288	2998.633	1.00	3.92	11.552	10.000	10.4	104.0	NO	2.583	NO
28	15	6:2 FTS	427.0 > 407	1976.185	1299.329	1.00	4.24	19.012	10.000	11.9	119.4	NO	1.287	NO
29	16	L-PFOA	412.8 > 368.9	17558.281	18459.891	1.00	4.29	11.889	10.000	9.83	98.3	NO	2.978	NO
30	18	PFecHS	460.8 > 381.0	2509.598	18459.891	1.00	4.30	1.699	10.000	9.39	93.9	NO	0.449	NO
31	19	PFHpS	449.0 > 79.7	2693.403	3746.171	1.00	4.40	8.987	10.000	8.35	83.5	NO	1.789	NO
32	20	7:3 FTCA	440.9 > 336.9	2110.651	16656.598	1.00	4.71	1.584	10.000	10.2	102.4	NO	1.473	NO
33	61	13C3-PFHxS-EIS	401.8 > 79.7	2998.633		1.00	3.92	2998.633	12.500	11.9	94.9	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1299.329		1.00	4.24	1299.329	12.500	10.7	85.5	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	18459.891		1.00	4.29	18459.891	12.500	12.1	96.7	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	18459.891		1.00	4.29	18459.891	12.500	12.1	96.7	NO		

Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-37.qld

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Name: 200220P1-37, Date: 20-Feb-2020, Time: 23:42:13, ID: ST200220P1-11 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	71	13C8-PFOS-EIS	507.0 > 79.7	3746.171		1.00	4.80	3746.171	12.500	12.7	101.3	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	16656.598		1.00	4.72	16656.598	12.500	12.1	97.0	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	16897.064	16656.598	1.00	4.72	12.680	10.000	10.2	102.5	NO	7.126	NO
41	22	PFOSA	497.9 > 77.9	2806.631	3911.888	1.00	4.79	8.968	10.000	10.0	100.3	NO	27.647	NO
42	23	L-PFOS	498.9 > 79.7	2849.469	3746.171	1.00	4.80	9.508	10.000	10.3	102.7	NO	2.249	NO
43	25	9Cl-PF30NS	530.7 > 350.8	3756.407	3746.171	1.00	5.01	12.534	10.000	10.8	108.0	NO	18.413	NO
44	26	PFDA	513 > 468.8	18487.467	17550.414	1.00	5.08	13.167	10.000	10.7	106.9	NO	9.472	NO
45	27	8:2 FTS	526.9 > 507	1344.439	1009.051	1.00	5.06	16.655	10.000	11.4	114.4	NO	2.476	NO
46	65	13C5-PFNA-EIS	468.2 > 422.9	16656.598		1.00	4.72	16656.598	12.500	12.1	97.0	NO		
47	67	13C8-PFOSA-EIS	506 > 78	3911.888		1.00	4.79	3911.888	12.500	12.1	96.9	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3746.171		1.00	4.80	3746.171	12.500	12.7	101.3	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3746.171		1.00	4.80	3746.171	12.500	12.7	101.3	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	17550.414		1.00	5.08	17550.414	12.500	12.9	103.5	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1009.051		1.00	5.05	1009.051	12.500	11.7	93.9	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	2737.792	3746.171	1.00	5.14	9.135	10.000	9.95	99.5	NO	2.042	NO
54	29	L-MeFOSAA	570 > 419	5398.471	3870.303	1.00	5.23	17.436	10.000	9.17	91.7	NO	2.017	NO
55	31	L-EtFOSAA	584.1 > 419	5231.848	5069.472	1.00	5.38	12.900	10.000	10.2	102.4	NO	1.223	NO
56	33	PFUdA	563.0 > 518.9	17646.209	21240.578	1.00	5.40	10.385	10.000	9.90	99.0	NO	22.977	NO
57	34	PFDS	598.8 > 79.7	2577.123	3746.171	1.00	5.44	8.599	10.000	10.6	106.4	NO	2.169	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	7415.998	19152.654	1.00	5.60	4.840	10.000	10.6	106.4	NO	19.353	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3746.171		1.00	4.80	3746.171	12.500	12.7	101.3	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	3870.303		1.00	5.23	3870.303	12.500	14.7	117.8	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	5069.472		1.00	5.38	5069.472	12.500	14.0	112.3	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	21240.578		1.00	5.39	21240.578	12.500	15.0	120.0	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3746.171		1.00	4.80	3746.171	12.500	12.7	101.3	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	19152.654		1.00	5.67	19152.654	12.500	12.2	97.4	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	1227.422	914.993	1.00	5.66	16.768	10.000	7.28	72.8	NO	0.807	NO
67	37	PFDoA	612.9 > 569.0	16643.438	19152.654	1.00	5.67	10.862	10.000	11.3	112.9	NO	11.567	NO
68	38	N-MeFOSA	512.1 > 168.9	6704.824	17754.521	1.00	5.81	56.344	50.000	53.7	107.5	NO	1.700	NO
69	39	PFTrDA	662.9 > 618.9	16379.649	19152.654	1.00	5.91	10.690	10.000	10.8	107.9	NO	56.529	NO
70	40	PFDoS	698.8 > 79.7	2916.199	18753.453	1.00	5.93	1.944	10.000	10.7	106.5	NO	3.217	NO
71	41	PFTeDA	713.0 > 669.0	17967.195	18753.453	1.00	6.12	11.976	10.000	11.4	114.3	NO	19.378	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	914.993		1.00	5.66	914.993	12.500	13.7	109.6	NO		

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Name: 200220P1-37, Date: 20-Feb-2020, Time: 23:42:13, ID: ST200220P1-11 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83	13C2-PFDoA-EIS	614.7 > 569.7	19152.654		1.00	5.67	19152.654	12.500	12.2	97.4	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	17754.521		1.00	5.84	17754.521	149.200	147	98.3	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	19152.654		1.00	5.67	19152.654	12.500	12.2	97.4	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	18753.453		1.00	6.12	18753.453	12.500	13.0	104.1	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	18753.453		1.00	6.12	18753.453	12.500	13.0	104.1	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	8151.655	24884.416	1.00	6.19	48.875	50.000	51.5	103.1	NO	1.781	NO
80	43	PFHxDA	813.1 > 768.6	18523.391	29366.568	1.00	6.44	7.885	10.000	10.5	105.3	NO	142.268	NO
81	44	PFODA	913.1 > 868.8	21969.898	29366.568	1.00	6.66	9.352	10.000	10.6	106.0	NO		
82	45	N-MeFOSE	616.1 > 58.9	5989.093	16966.760	1.00	6.31	52.666	50.000	50.5	101.0	NO		
83	46	N-EtFOSE	630.1 > 58.9	7252.045	19842.234	1.00	6.46	54.530	50.000	51.8	103.6	NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	24884.416		1.00	6.20	24884.416	149.200	159	106.3	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	29366.568		1.00	6.44	29366.568	12.500	12.5	100.0	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	29366.568		1.00	6.44	29366.568	12.500	12.5	100.0	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	16966.760		1.00	6.30	16966.760	149.200	151	101.5	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	19842.234		1.00	6.45	19842.234	149.200	142	94.9	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3746.171		1.00	4.80	3746.171	12.500	12.7	101.3	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	10087.523	13094.625	1.00	1.49	9.629	12.500	12.2	97.5	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	12349.781	21767.605	1.00	2.41	7.092	12.500	12.5	100.4	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	1411.687	1296.031	1.00	2.68	13.615	12.500	12.1	97.0	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	3760.070	21767.605	1.00	3.39	2.159	12.500	12.1	96.6	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1671.062	1296.031	1.00	3.10	16.117	12.500	13.5	108.3	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	20994.389	21767.605	1.00	3.19	12.056	12.500	12.3	98.6	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	13848.530	21767.605	1.00	3.78	7.952	12.500	13.0	104.1	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	2998.633	1296.031	1.00	3.92	28.921	12.500	12.2	97.3	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1299.329	4084.057	1.00	4.24	3.977	12.500	10.5	84.3	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	16656.598	17554.193	1.00	4.72	11.861	12.500	12.7	101.3	NO		
101	68	13C8-PFOSA-RSD	506 > 78	3911.888	20480.266	1.00	4.79	2.388	12.500	12.5	100.0	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	18459.891	21347.900	1.00	4.29	10.809	12.500	11.8	94.3	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3746.171	4084.057	1.00	4.80	11.466	12.500	12.3	98.1	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	17550.414	19702.424	1.00	5.08	11.135	12.500	11.8	94.1	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1009.051	4084.057	1.00	5.05	3.088	12.500	10.6	84.8	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	3870.303	20480.266	1.00	5.23	2.362	12.500	13.7	109.8	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	21240.578	20480.266	1.00	5.39	12.964	12.500	12.9	102.9	NO		

Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-37.qld

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Name: 200220P1-37, Date: 20-Feb-2020, Time: 23:42:13, ID: ST200220P1-11 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82	d5-N-EtFOSAA-RSD	589.3 > 419	5069.472	20480.266	1.00	5.38	3.094	12.500	13.7	109.7	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	19152.654	19702.424	1.00	5.67	12.151	12.500	12.2	97.3	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	914.993	4084.057	1.00	5.66	2.801	12.500	11.9	95.2	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	17754.521	20480.266	1.00	5.84	10.836	149.200	143	95.5	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	18753.453	20480.266	1.00	6.12	11.446	12.500	11.8	94.6	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	24884.416	20480.266	1.00	6.20	15.188	149.200	150	100.6	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	29366.568	20480.266	1.00	6.44	17.924	12.500	11.9	95.3	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	16966.760	20480.266	1.00	6.30	10.356	149.200	139	93.4	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	19842.234	20480.266	1.00	6.45	12.111	149.200	140	93.7	NO		
119	99	13C4-PFBA	217.0 > 172.0	13094.625	13094.625	1.00	1.49	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	21767.605	21767.605	1.00	3.18	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	21347.900	21347.900	1.00	4.29	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1296.031	1296.031	1.00	3.92	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	17554.193	17554.193	1.00	4.72	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	4084.057	4084.057	1.00	4.80	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	19702.424	19702.424	1.00	5.08	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	20480.266	20480.266	1.00	5.40	12.500	12.500	12.5	100.0	NO		

Vista Analytical Laboratory

Dataset: Untitled

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022020.mdb 21 Feb 2020 08:56:55
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-20-20.cdb 21 Feb 2020 15:57:11

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
1	1	200220P1-1	IPA	20-Feb-20	17:23:58
2	2	200220P1-2	IPA	20-Feb-20	17:34:30
3	3	200220P1-3	ST200220P1-1 PFC CS-2 20B1102	20-Feb-20	17:45:02
4	4	200220P1-4	ST200220P1-2 PFC CS-1 20B1103	20-Feb-20	17:55:31
5	5	200220P1-5	ST200220P1-3 PFC CS0 20B1104	20-Feb-20	18:06:03
6	6	200220P1-6	ST200220P1-4 PFC CS1 20B1105	20-Feb-20	18:16:31
7	7	200220P1-7	ST200220P1-5 PFC CS2 20B1106	20-Feb-20	18:27:04
8	8	200220P1-8	ST200220P1-6 PFC CS3 20B1107	20-Feb-20	18:37:32
9	9	200220P1-9	ST200220P1-7 PFC CS4 20B1108	20-Feb-20	18:48:04
10	10	200220P1-10	ST200220P1-8 PFC CS5 20B1109	20-Feb-20	18:58:35
11	11	200220P1-11	ST200220P1-9 PFC CS6 20B1110	20-Feb-20	19:09:05
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13	13	200220P1-13	IB	20-Feb-20	19:30:05
14	14	200220P1-14	ICV200220P1-1 PFC ICV 20B1112	20-Feb-20	19:40:36
15	15	200220P1-15	IB	20-Feb-20	19:51:06
16	16	200220P1-16	B0B0088-BLK1 Method Blank 0.25	20-Feb-20	20:01:35
17	17	200220P1-17	B0B0088-BS1 OPR 0.25	20-Feb-20	20:12:06
18	18	200220P1-18	B0B0088-BSD1 LCSD 0.25	20-Feb-20	20:22:35
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20	20	200220P1-20	2000292-02 11535BFR POE Midpoint-1 0.25829	20-Feb-20	20:43:36
21	21	200220P1-21	2000292-03 11535BFR POE Effluent-1 0.25426	20-Feb-20	20:54:07
22	22	200220P1-22	2000292-04 11535BFR Field Blank 0.24726	20-Feb-20	21:04:38
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24	24	200220P1-24	B0B0117-BS1 OPR 0.125	20-Feb-20	21:25:39
25	25	200220P1-25	B0B0117-BSD1 LCSD 0.125	20-Feb-20	21:36:08
26	26	200220P1-26	2000305-01 8 Chestnut Dr 0.11658	20-Feb-20	21:46:39
27	27	200220P1-27	2000305-02 10 Chestnut Dr 0.11788	20-Feb-20	21:57:10
28	28	200220P1-28	2000307-01 Map 243 Lot 26 0.11726	20-Feb-20	22:07:39
29	29	200220P1-29	2000307-02 Map 246 Lot 5 0.11738	20-Feb-20	22:18:08
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36	36	200220P1-36	IB	20-Feb-20	23:31:42
37	37	200220P1-37	ST200220P1-11 PFC CS3 20B1107	20-Feb-20	23:42:13
38	38	200220P1-38	IB	20-Feb-20	23:52:41
39	39	200220P1-39	2000314-03 I006MW03SR-20200212 0.25406	21-Feb-20	00:03:13
40	40	200220P1-40	2000314-04 I006MW05SR-20200212 0.2515	21-Feb-20	00:13:44
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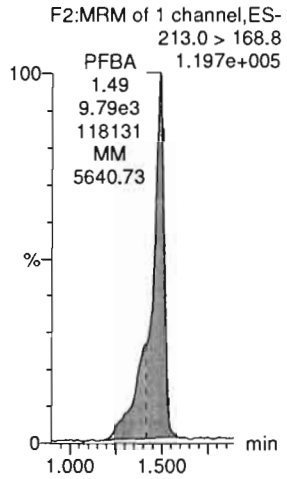
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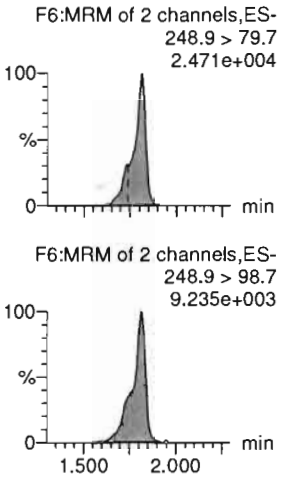
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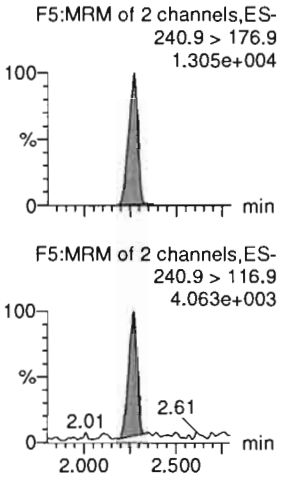
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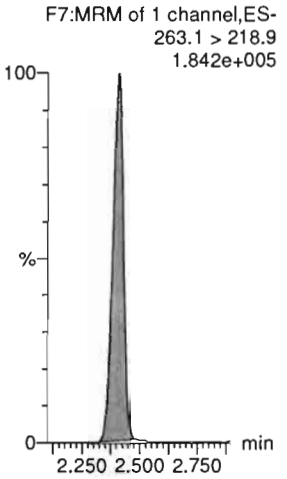
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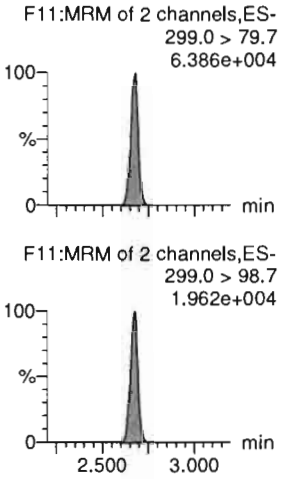
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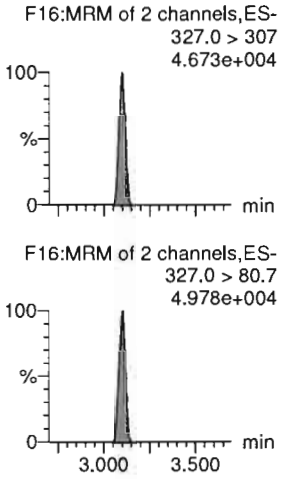
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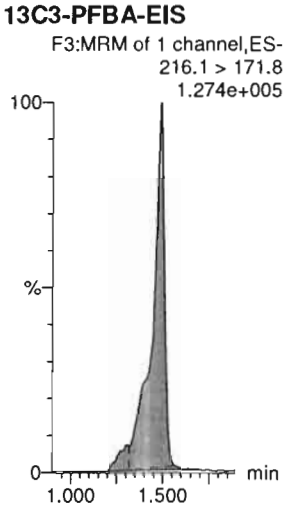
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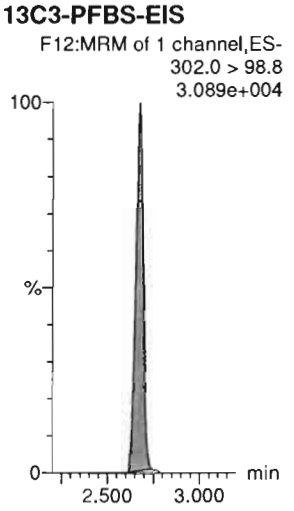
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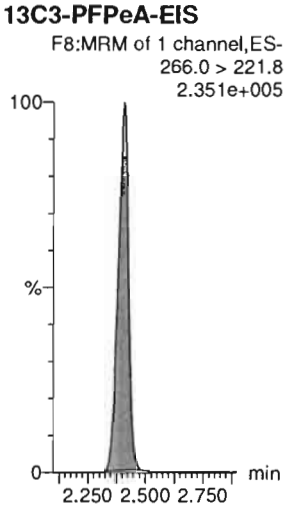
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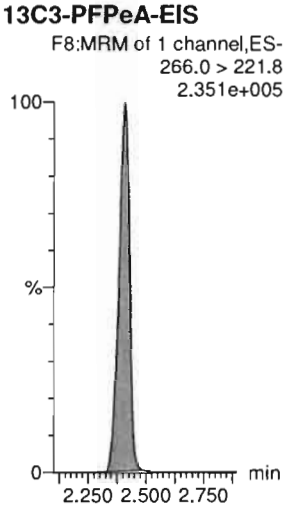
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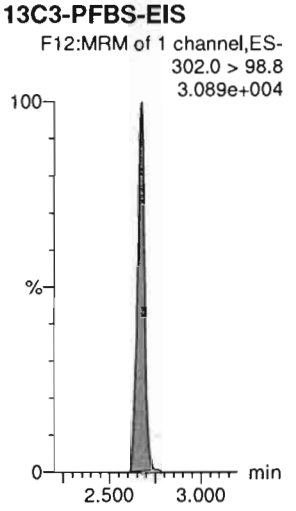
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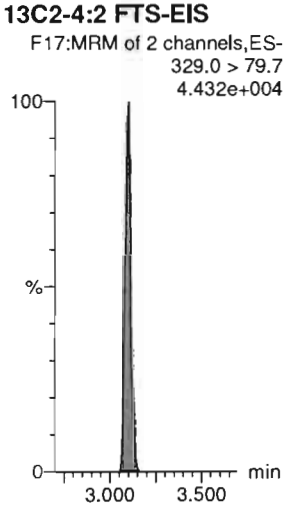
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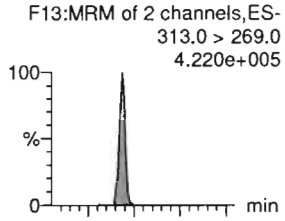


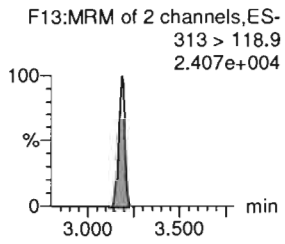
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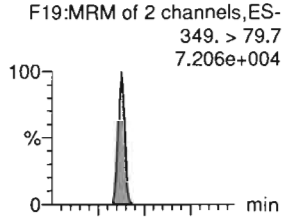
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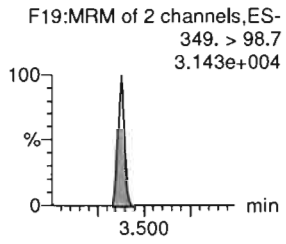
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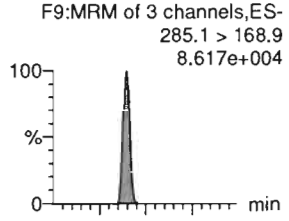


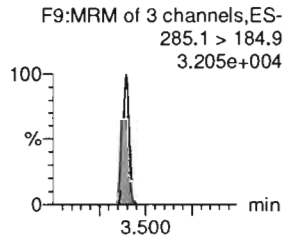
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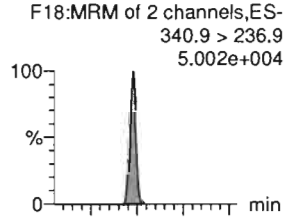


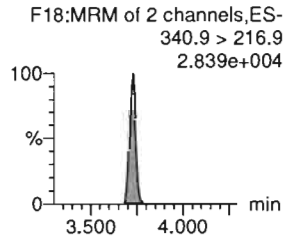
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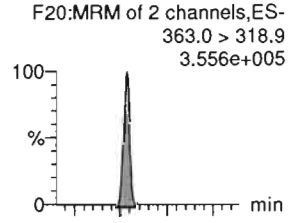


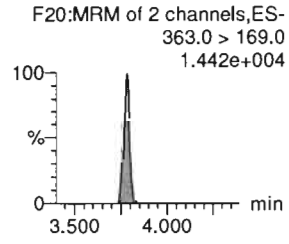
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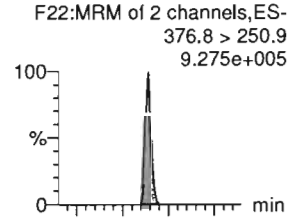


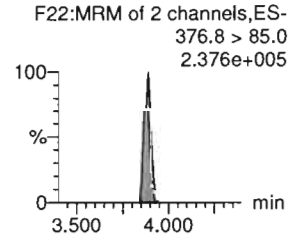
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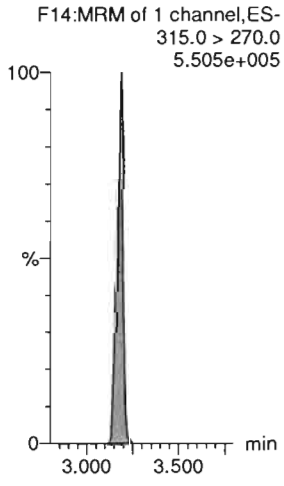


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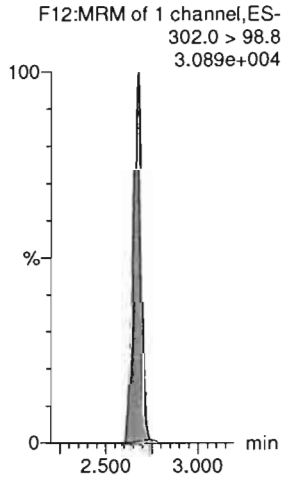




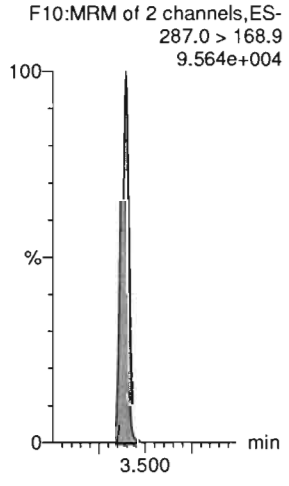
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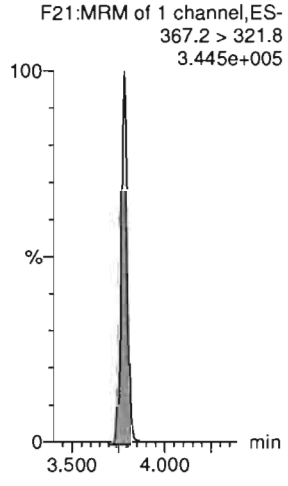
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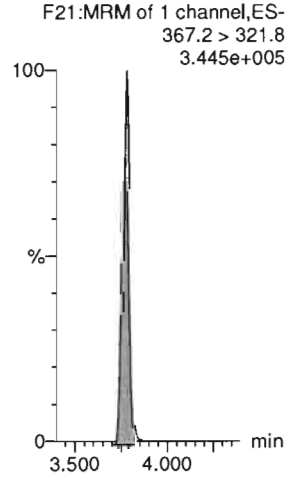
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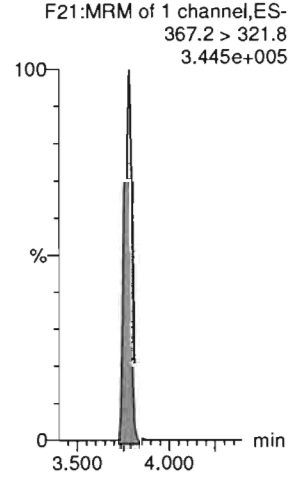
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13C4-PFHpA-EIS



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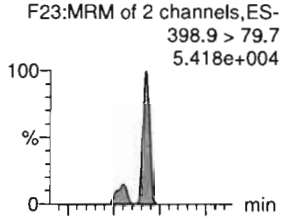


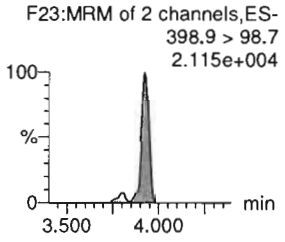
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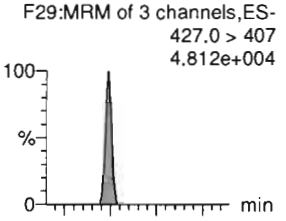
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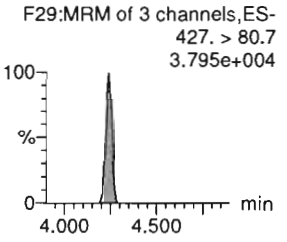
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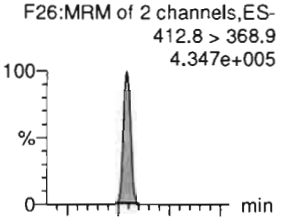


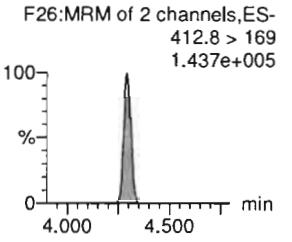
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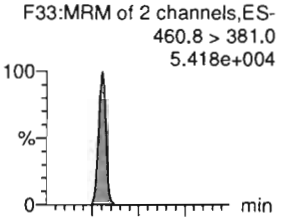


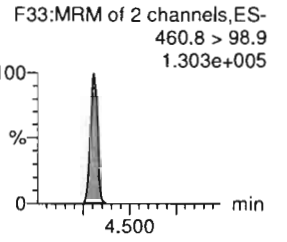
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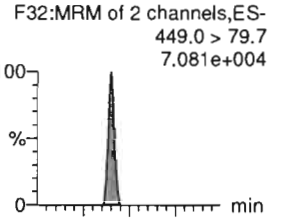


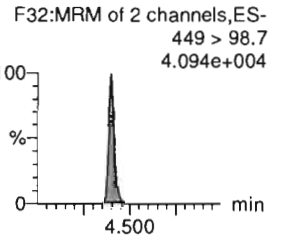
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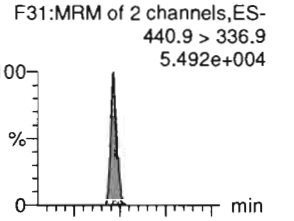


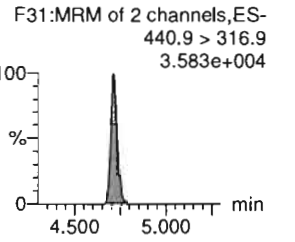
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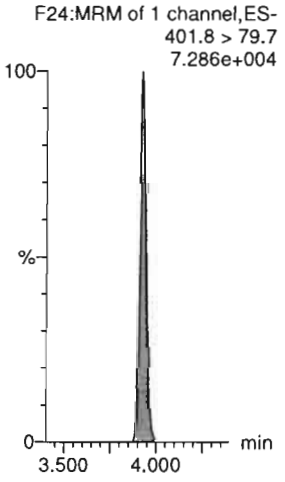


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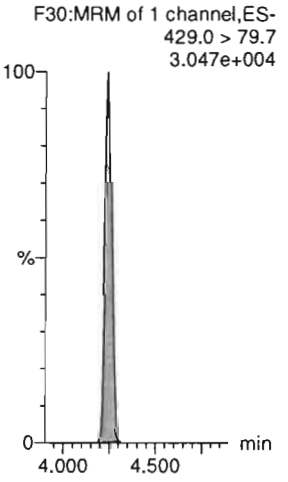




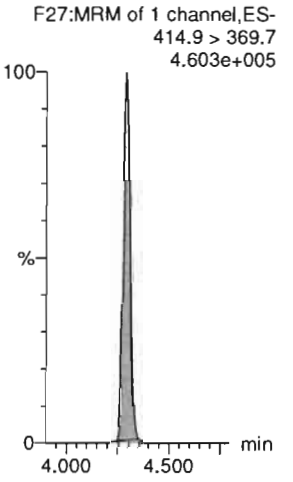
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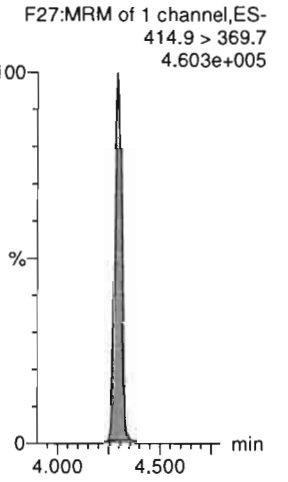
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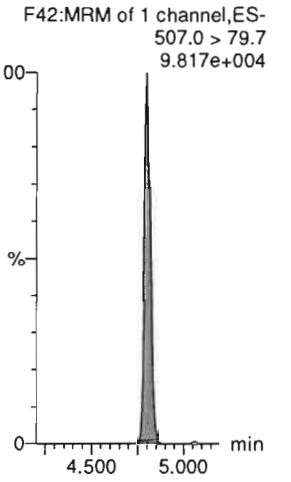
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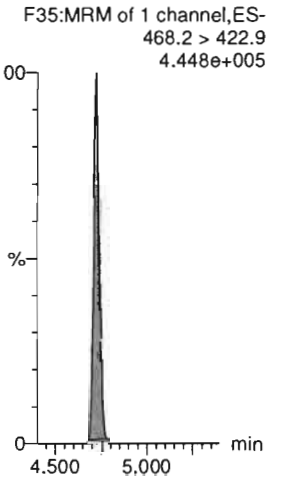
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13C8-PFOS-EIS



13C5-PFNA-EIS

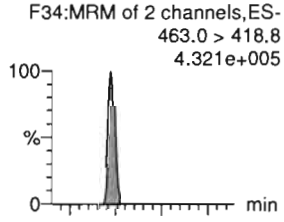


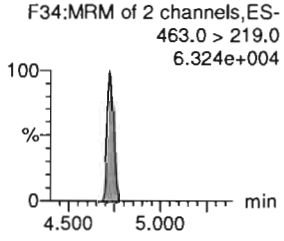
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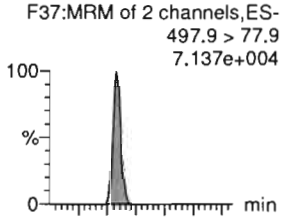
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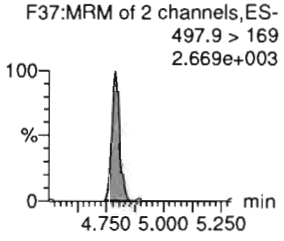
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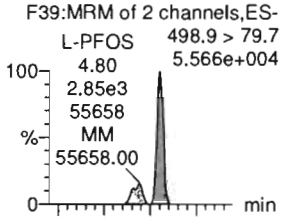


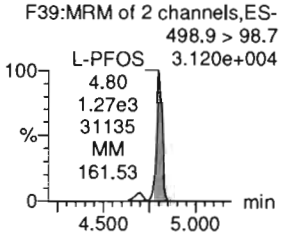
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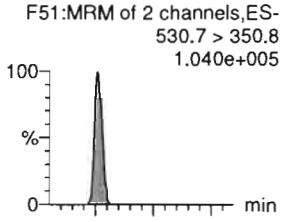


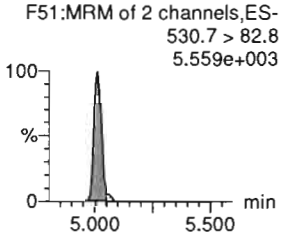
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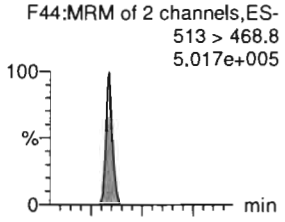


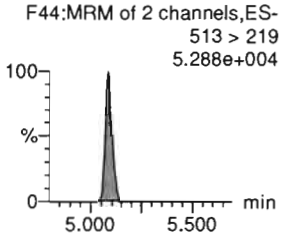
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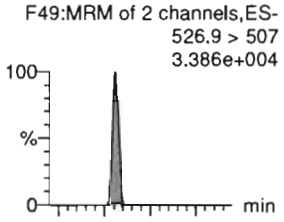


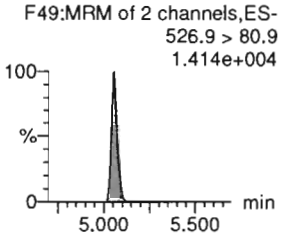
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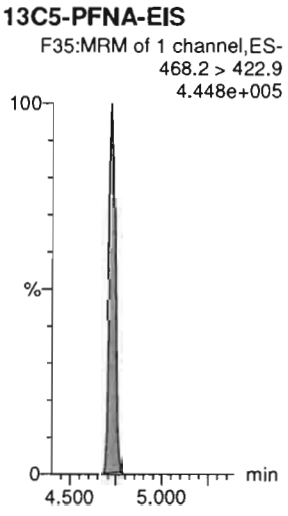


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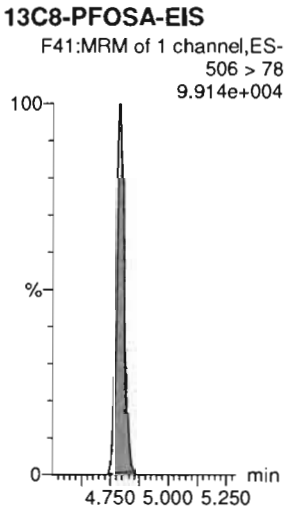




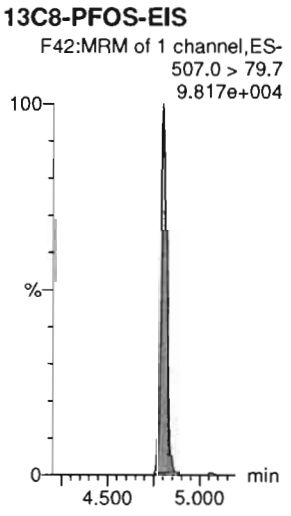
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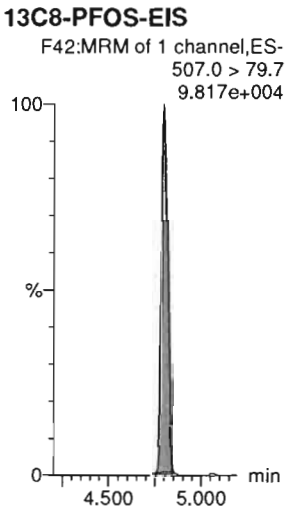
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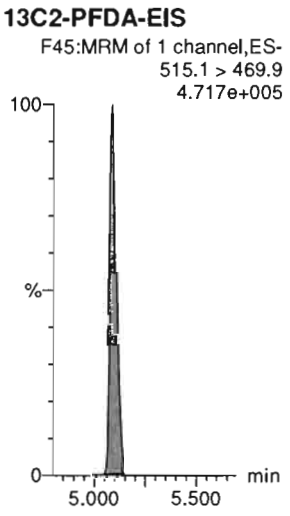
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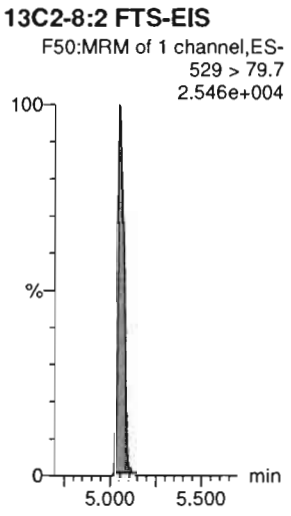
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

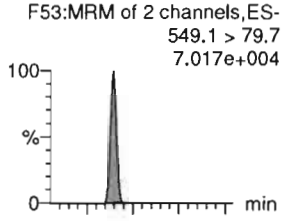


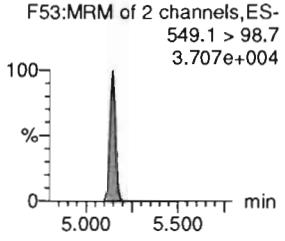
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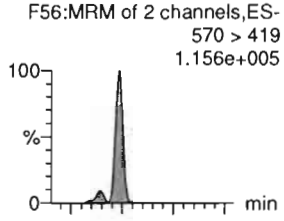
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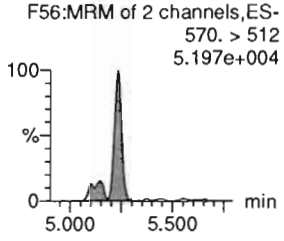
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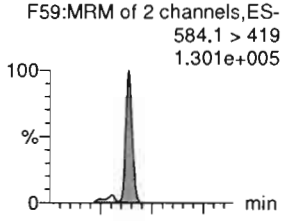


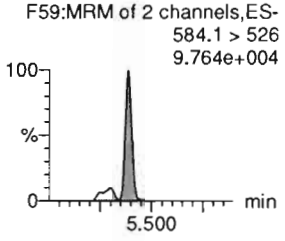
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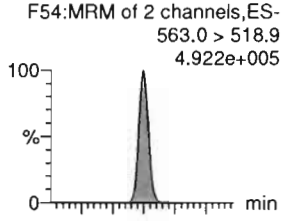


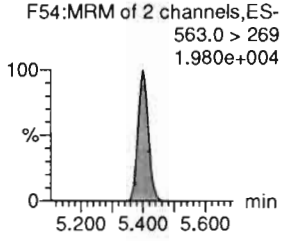
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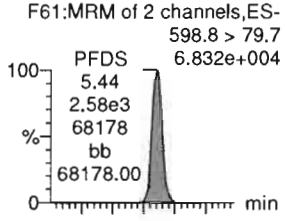


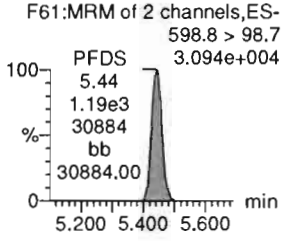
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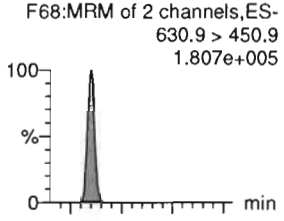


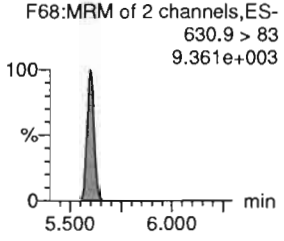
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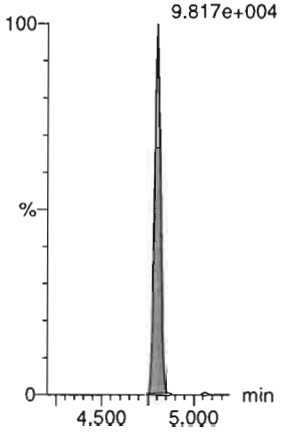


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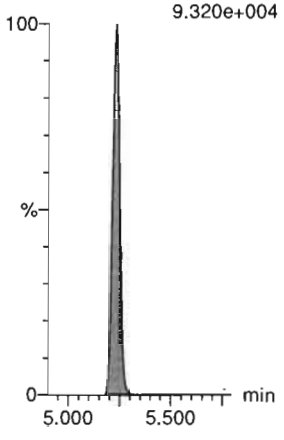




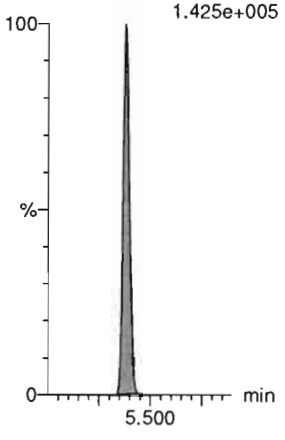
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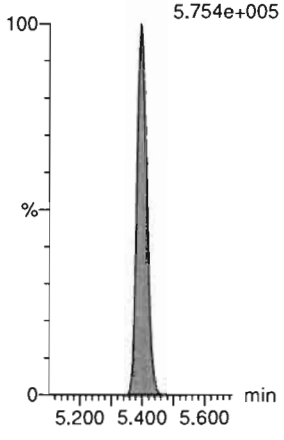
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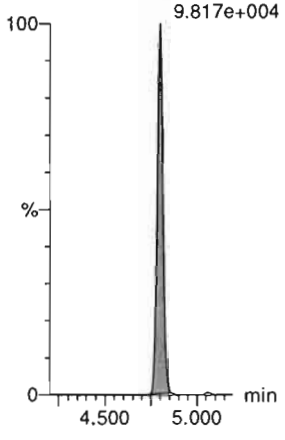
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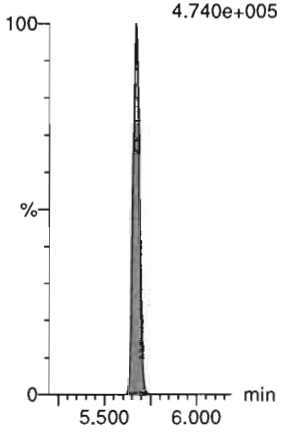
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13C8-PFOS-EIS



13C2-PFDoA-EIS

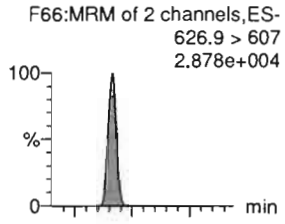


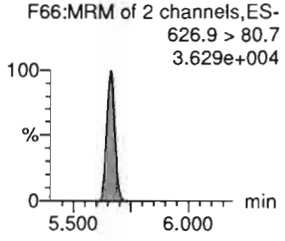
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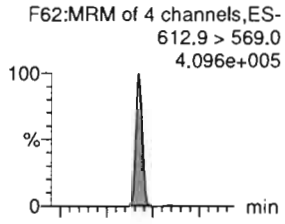
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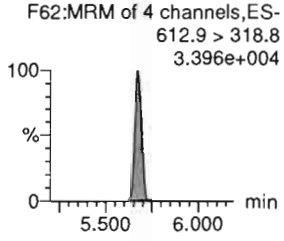
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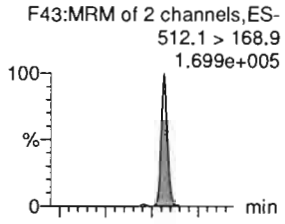


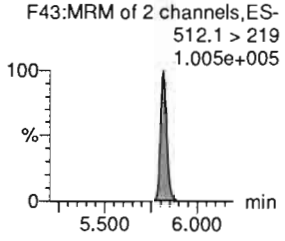
PFDoA



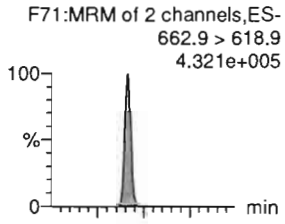


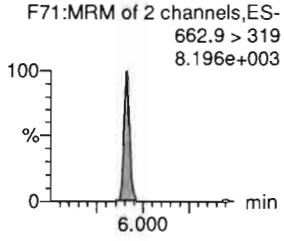
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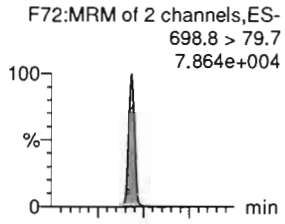


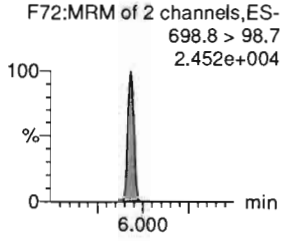
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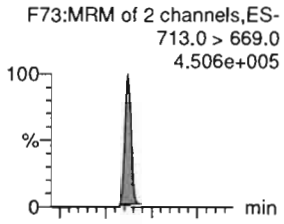


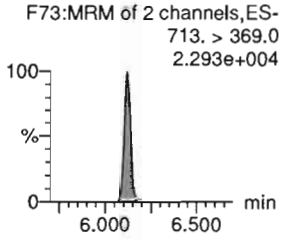
PFDoS



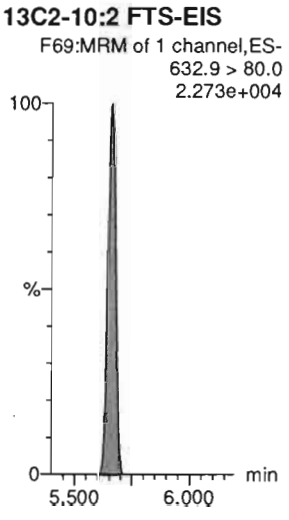


PFTeDA

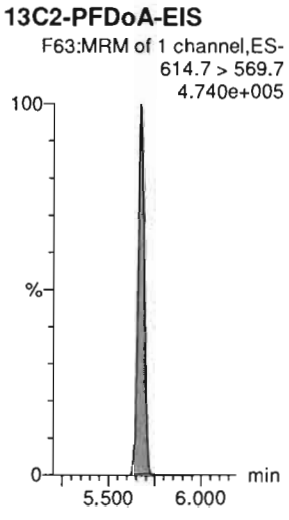




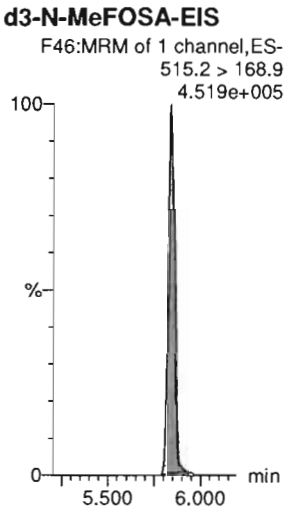
13C2-10:2 FTS-EIS



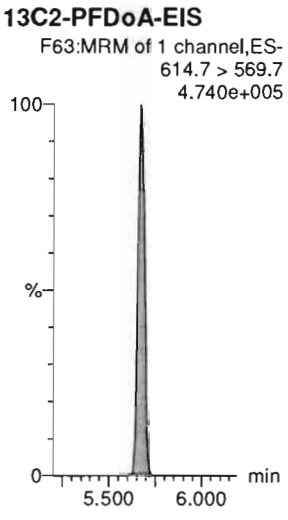
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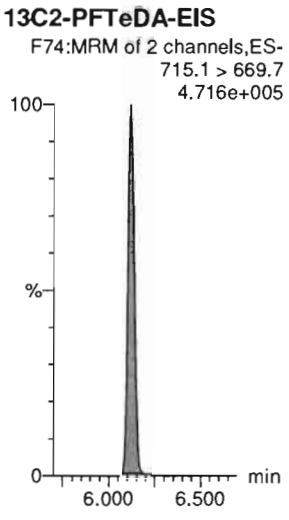
d3-N-MeFOSA-EIS



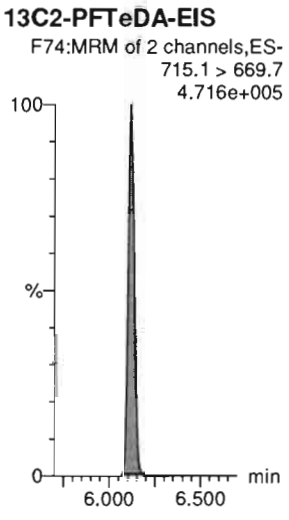
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

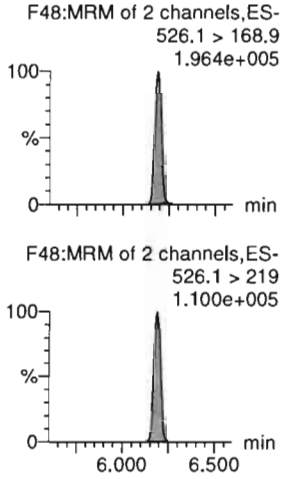


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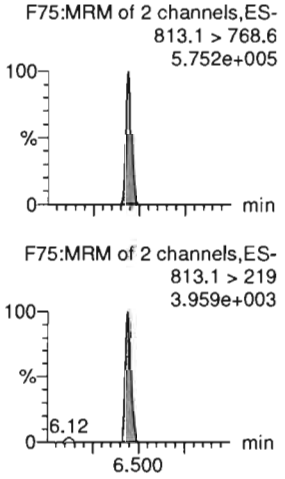
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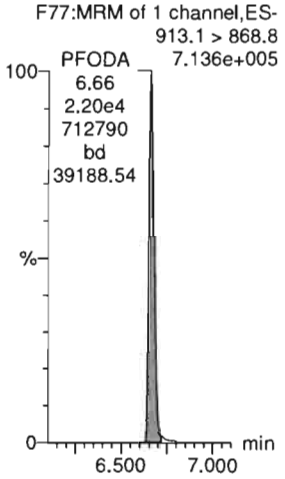
N-EtFOSA



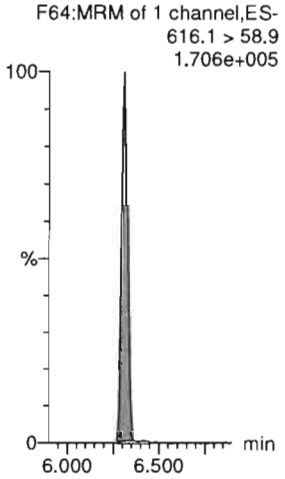
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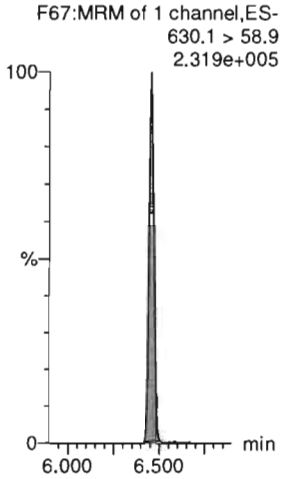
PFODA



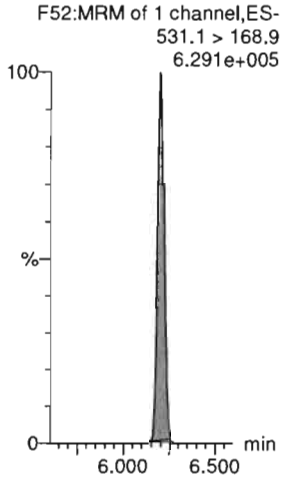
N-MeFOSE



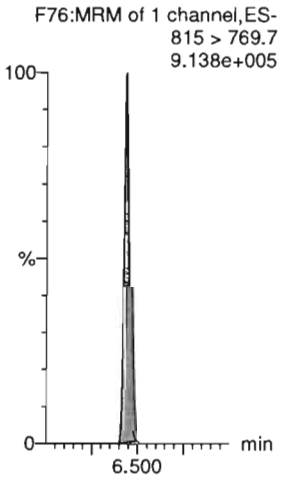
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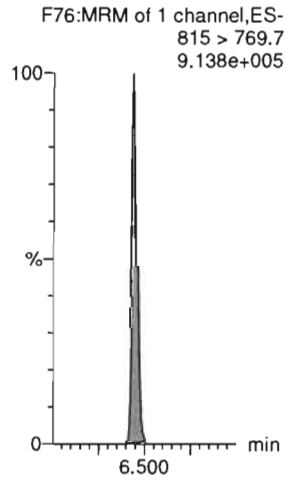
d5-N-ETFOSA-EIS



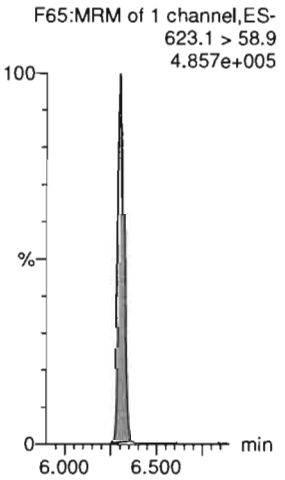
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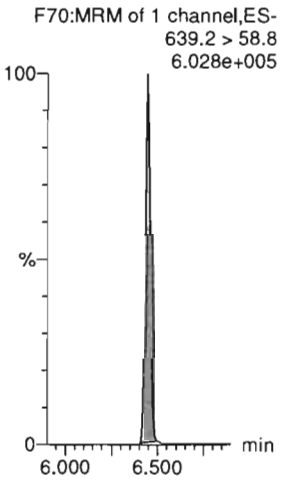
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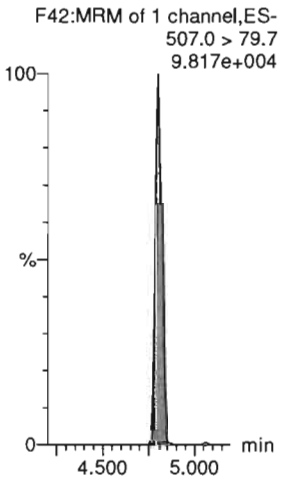
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS

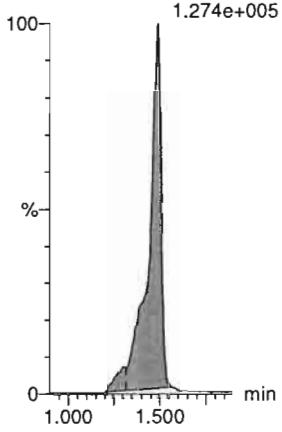


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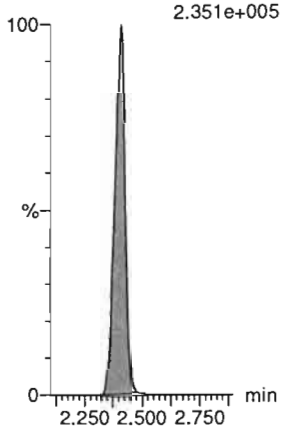
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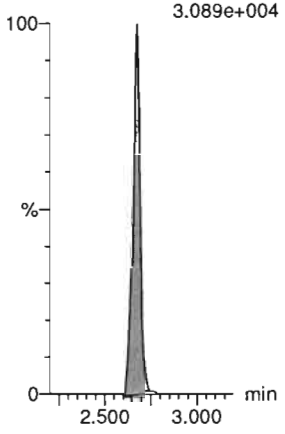
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.274e+005



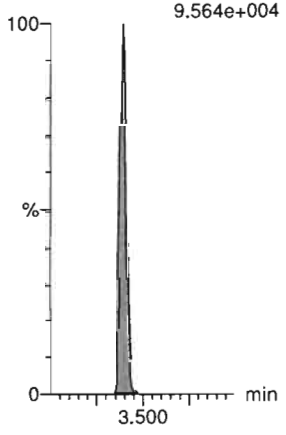
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.351e+005



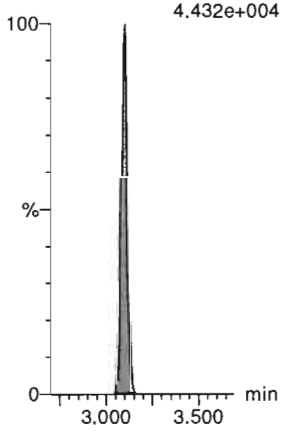
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.089e+004



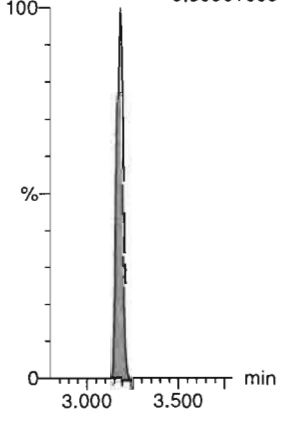
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
9.564e+004



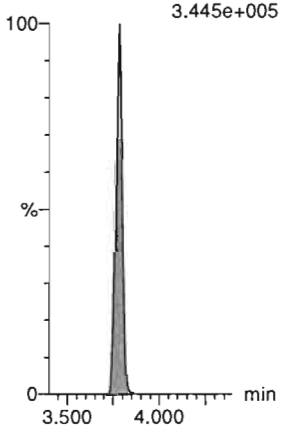
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.432e+004



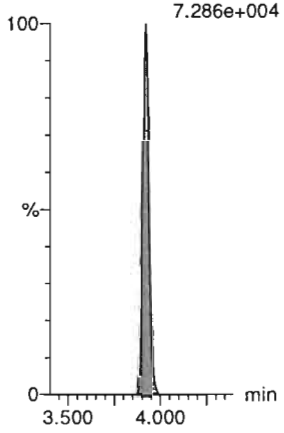
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.505e+005



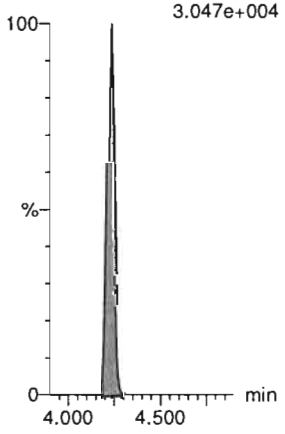
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.445e+005



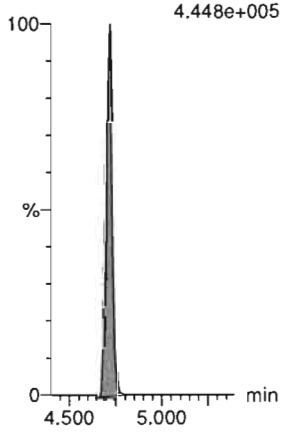
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.286e+004



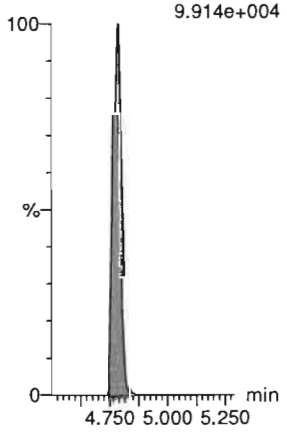
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.047e+004



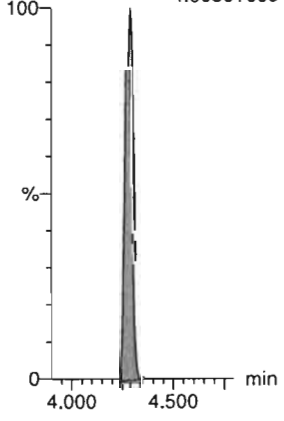
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.448e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.914e+004



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.603e+005

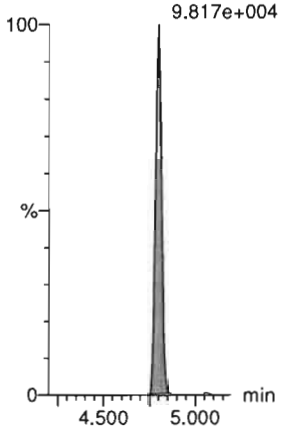


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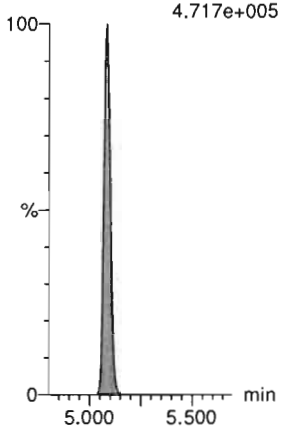
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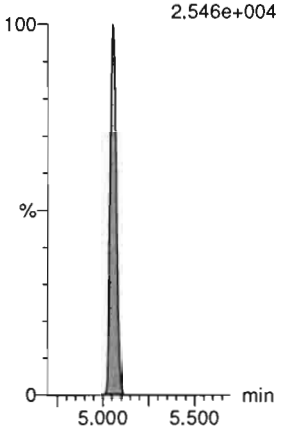
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.817e+004



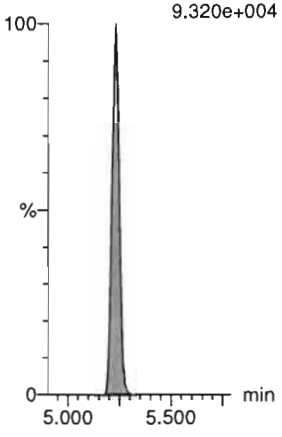
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.717e+005



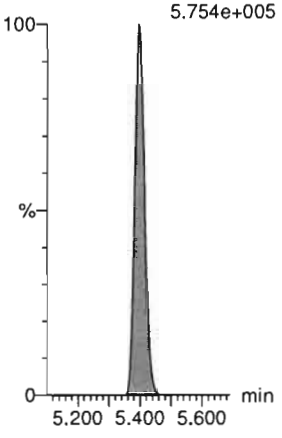
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.546e+004



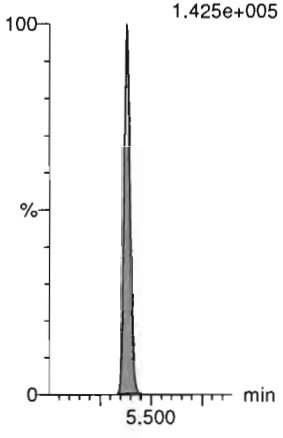
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
9.320e+004



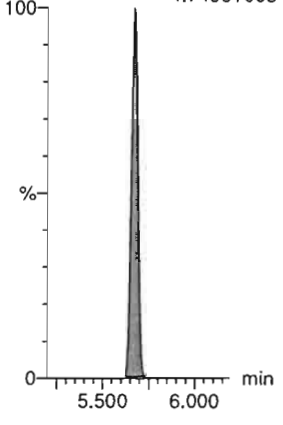
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.754e+005



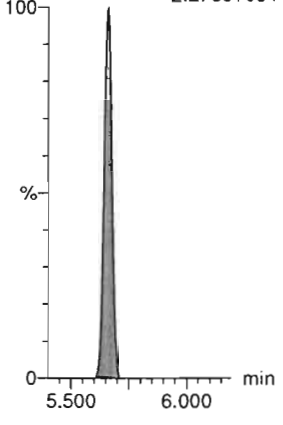
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.425e+005



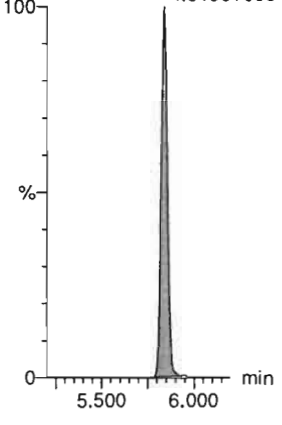
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.740e+005



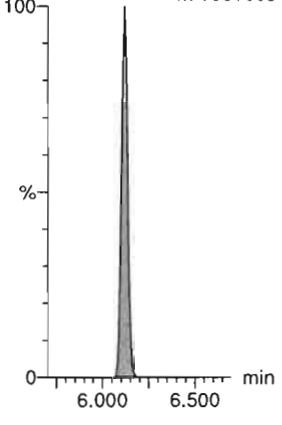
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.273e+004



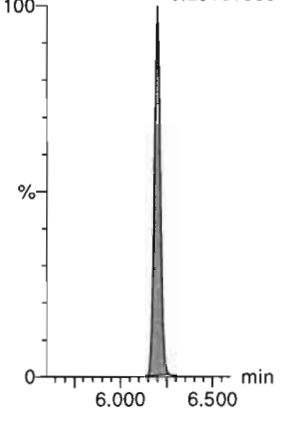
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.519e+005



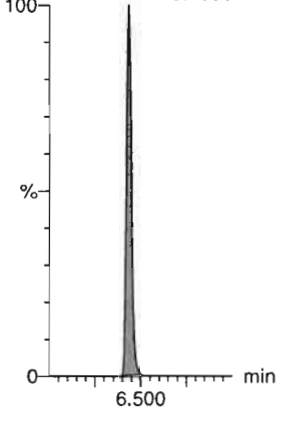
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.716e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.291e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.138e+005

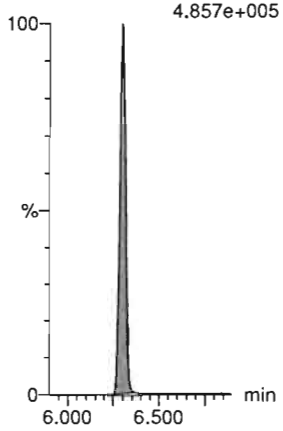


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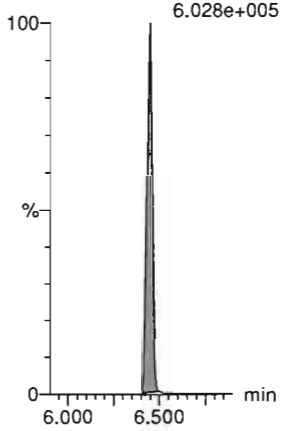
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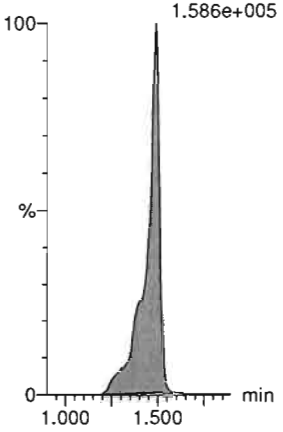
d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
4.857e+005



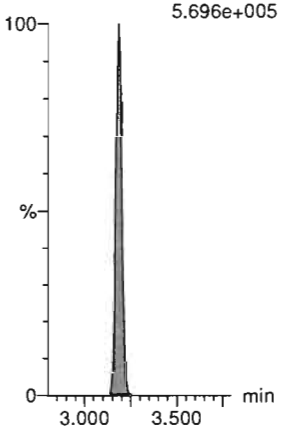
d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.028e+005



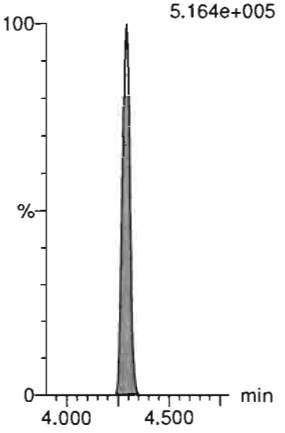
13C4-PFBA
F4:MRM of 1 channel,ES-
217.0 > 172.0
1.586e+005



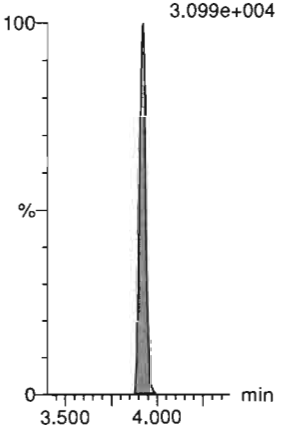
13C5-PFHxA
F15:MRM of 1 channel,ES-
318.0 > 272.9
5.696e+005



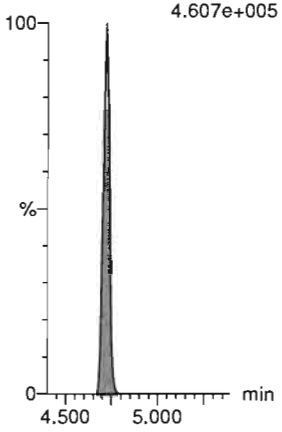
13C8-PFOA
F28:MRM of 1 channel,ES-
420.9 > 376.0
5.164e+005



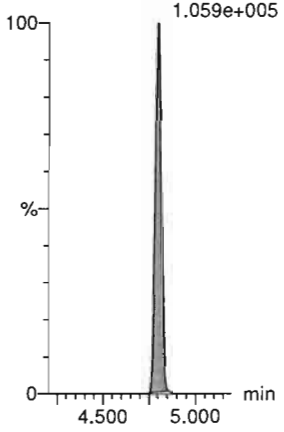
18O2-PFHxS
F25:MRM of 1 channel,ES-
403.0 > 102.6
3.099e+004



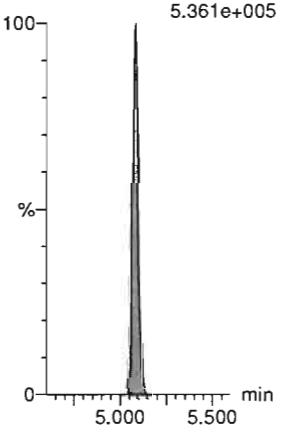
13C9-PFNA
F36:MRM of 1 channel,ES-
472.2 > 426.9
4.607e+005



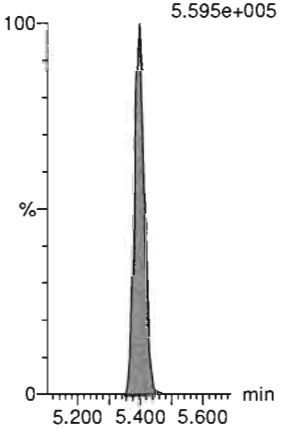
13C4-PFOS
F40:MRM of 1 channel,ES-
503 > 79.7
1.059e+005



13C6-PFDA
F47:MRM of 1 channel,ES-
519.1 > 473.7
5.361e+005



13C7-PFUdA
F57:MRM of 1 channel,ES-
570.1 > 524.8
5.595e+005



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JM 2/21/2020

Name: 200220P1-50, Date: 21-Feb-2020, Time: 01:58:46, ID: ST200220P1-12 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	9727.995	10147.118	1.00	1.49	11.984	10.000	10.7	107.0	NO		
2	2	PFPrS	248.9 > 79.7	1959.194	1427.072	1.00	1.82	17.161	10.000	11.0	109.9	NO	2.604	NO
3	3	3:3 FTCA	240.9 > 176.9	726.357	12790.130	1.00	2.27	0.710	10.000	9.73	97.3	NO	3.654	NO
4	4	PFPeA	263.1 > 218.9	10183.837	12790.130	1.00	2.41	9.953	10.000	10.2	102.1	NO		
5	5	PFBS	299.0 > 79.7	2857.228	1427.072	1.00	2.68	25.027	10.000	10.9	108.7	NO	3.166	NO
6	6	4:2 FTS	327.0 > 307	1715.384	1608.434	1.00	3.10	13.331	10.000	8.18	81.8	NO	0.881	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	10147.118		1.00	1.49	10147.118	12.500	12.3	98.5	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1427.072		1.00	2.68	1427.072	12.500	12.5	99.7	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	12790.130		1.00	2.41	12790.130	12.500	13.6	108.5	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	12790.130		1.00	2.41	12790.130	12.500	13.6	108.5	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1427.072		1.00	2.68	1427.072	12.500	12.5	99.7	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1608.434		1.00	3.10	1608.434	12.500	14.8	118.3	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	16057.769	21075.299	1.00	3.19	9.524	10.000	10.7	106.6	NO	16.937	NO
15	8	PFPeS	349.>79.7	2740.049	1427.072	1.00	3.38	24.001	10.000	11.6	115.6	NO	2.481	NO
16	9	HFPO-DA	285.1 > 168.9	3391.939	3911.447	1.00	3.40	10.840	10.000	10.4	104.5	NO	2.688	NO
17	10	5:3 FTCA	340.9 > 236.9	1947.099	14138.462	1.00	3.73	1.721	10.000	9.59	95.9	NO	1.806	NO
18	11	PFHpA	363.0 > 318.9	14038.628	14138.462	1.00	3.79	12.412	10.000	9.95	99.5	NO	22.455	NO
19	12	ADONA	376.8 > 250.9	33951.195	14138.462	1.00	3.89	30.017	10.000	9.67	96.7	NO	4.036	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	21075.299		1.00	3.19	21075.299	12.500	12.9	103.0	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1427.072		1.00	2.68	1427.072	12.500	12.5	99.7	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3911.447		1.00	3.40	3911.447	12.500	13.3	106.8	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	14138.462		1.00	3.79	14138.462	12.500	12.8	102.2	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	14138.462		1.00	3.79	14138.462	12.500	12.8	102.2	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	14138.462		1.00	3.79	14138.462	12.500	12.8	102.2	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2788.791	3236.457	1.00	3.92	10.771	10.000	9.68	96.8	NO	2.446	NO
28	15	6:2 FTS	427.0 > 407	1792.629	1322.217	1.00	4.24	16.947	10.000	10.7	107.0	NO	1.132	NO
29	16	L-PFOA	412.8 > 368.9	17425.188	18812.414	1.00	4.30	11.578	10.000	9.57	95.7	NO	2.950	NO
30	18	PFecHS	460.8 > 381.0	2627.419	18812.414	1.00	4.31	1.746	10.000	9.65	96.5	NO	0.517	NO
31	19	PFHpS	449.0 > 79.7	2957.960	3387.072	1.00	4.40	10.916	10.000	10.1	101.5	NO	1.962	NO
32	20	7:3 FTCA	440.9 > 336.9	2002.817	16649.150	1.00	4.71	1.504	10.000	9.72	97.2	NO	1.354	NO
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3236.457		1.00	3.92	3236.457	12.500	12.8	102.5	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1322.217		1.00	4.24	1322.217	12.500	10.9	87.1	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	18812.414		1.00	4.30	18812.414	12.500	12.3	98.5	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	18812.414		1.00	4.30	18812.414	12.500	12.3	98.5	NO		

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Name: 200220P1-50, Date: 21-Feb-2020, Time: 01:58:46, ID: ST200220P1-12 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	71	13C8-PFOS-EIS	507.0 > 79.7	3387.072		1.00	4.80	3387.072	12.500	11.5	91.6	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	16649.150		1.00	4.73	16649.150	12.500	12.1	97.0	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	17241.369	16649.150	1.00	4.72	12.945	10.000	10.5	104.6	NO	7.686	NO
41	22	PFOSA	497.9 > 77.9	2618.013	3746.492	1.00	4.79	8.735	10.000	9.77	97.7	NO	26.235	NO
42	23	L-PFOS	498.9 > 79.7	2646.520	3387.072	1.00	4.80	9.767	10.000	10.6	105.5	NO	2.299	NO
43	25	9Cl-PF30NS	530.7 > 350.8	3362.293	3387.072	1.00	5.01	12.409	10.000	10.7	107.0	NO	14.232	NO
44	26	PFDA	513 > 468.8	19757.063	19717.582	1.00	5.08	12.525	10.000	10.2	101.6	NO	9.808	NO
45	27	8:2 FTS	526.9 > 507	1255.322	895.290	1.00	5.06	17.527	10.000	12.0	120.4	NO	2.697	NO
46	65	13C5-PFNA-EIS	468.2 > 422.9	16649.150		1.00	4.73	16649.150	12.500	12.1	97.0	NO		
47	67	13C8-PFOSA-EIS	506 > 78	3746.492		1.00	4.79	3746.492	12.500	11.6	92.8	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3387.072		1.00	4.80	3387.072	12.500	11.5	91.6	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3387.072		1.00	4.80	3387.072	12.500	11.5	91.6	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	19717.582		1.00	5.08	19717.582	12.500	14.5	116.3	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	895.290		1.00	5.06	895.290	12.500	10.4	83.3	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	2692.498	3387.072	1.00	5.14	9.937	10.000	10.8	108.4	NO	2.651	NO
54	29	L-MeFOSAA	570 > 419	5871.856	3399.817	1.00	5.24	21.589	10.000	11.4	113.6	NO	2.098	NO
55	31	L-EtFOSAA	584.1 > 419	4819.979	4559.035	1.00	5.39	13.215	10.000	10.5	104.9	NO	1.183	NO
56	33	PFUdA	563.0 > 518.9	16530.029	19899.576	1.00	5.40	10.383	10.000	9.90	99.0	NO	18.139	NO
57	34	PFDS	598.8 > 79.7	2587.117	3387.072	1.00	5.44	9.548	10.000	11.8	118.2	NO	2.097	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	7554.816	19843.791	1.00	5.60	4.759	10.000	10.5	104.6	NO	21.784	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3387.072		1.00	4.80	3387.072	12.500	11.5	91.6	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	3399.817		1.00	5.23	3399.817	12.500	12.9	103.5	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	4559.035		1.00	5.38	4559.035	12.500	12.6	101.0	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	19899.576		1.00	5.40	19899.576	12.500	14.0	112.4	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3387.072		1.00	4.80	3387.072	12.500	11.5	91.6	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	19843.791		1.00	5.68	19843.791	12.500	12.6	100.9	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	1346.414	838.845	1.00	5.66	20.064	10.000	8.71	87.1	NO	0.923	NO
67	37	PFDoA	612.9 > 569.0	15300.497	19843.791	1.00	5.67	9.638	10.000	10.0	100.0	NO	10.067	NO
68	38	N-MeFOSA	512.1 > 168.9	6135.443	17677.318	1.00	5.82	51.784	50.000	49.4	98.7	NO	1.507	NO
69	39	PFTrDA	662.9 > 618.9	16617.980	19843.791	1.00	5.91	10.468	10.000	10.6	105.7	NO	46.015	NO
70	40	PFDoS	698.8 > 79.7	2738.608	19442.336	1.00	5.93	1.761	10.000	9.64	96.4	NO	2.739	NO
71	41	PFTeDA	713.0 > 669.0	16370.376	19442.336	1.00	6.12	10.525	10.000	10.0	100.4	NO	16.313	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	838.845		1.00	5.66	838.845	12.500	12.6	100.5	NO		

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Name: 200220P1-50, Date: 21-Feb-2020, Time: 01:58:46, ID: ST200220P1-12 PFC CS3 20B1107, Description: PFC CS3 20B1107

	# Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83 13C2-PFDoA-EIS	614.7 > 569.7	19843.791		1.00	5.68	19843.791	12.500	12.6	100.9	NO		
74	87 d3-N-MeFOSA-EIS	515.2 > 168.9	17677.318		1.00	5.84	17677.318	149.200	146	97.9	NO		
75	83 13C2-PFDoA-EIS	614.7 > 569.7	19843.791		1.00	5.68	19843.791	12.500	12.6	100.9	NO		
76	89 13C2-PFTeDA-EIS	715.1 > 669.7	19442.336		1.00	6.12	19442.336	12.500	13.5	108.0	NO		
77	89 13C2-PFTeDA-EIS	715.1 > 669.7	19442.336		1.00	6.12	19442.336	12.500	13.5	108.0	NO		
78	-1												
79	42 N-EtFOSA	526.1 > 168.9	7903.352	24223.270	1.00	6.19	48.680	50.000	51.3	102.7	NO	1.688	NO
80	43 PFHxDA	813.1 > 768.6	17420.590	27600.309	1.00	6.44	7.890	10.000	10.5	105.3	NO	136.807	NO
81	44 PFODA	913.1 > 868.8	21422.164	27600.309	1.00	6.66	9.702	10.000	11.0	110.0	NO		
82	45 N-MeFOSE	616.1 > 58.9	5942.729	16322.339	1.00	6.31	54.322	50.000	52.1	104.2	NO		
83	46 N-EtFOSE	630.1 > 58.9	6695.831	20422.422	1.00	6.46	48.918	50.000	46.4	92.9	NO		
84	91 d5-N-ETFOSA-EIS	531.1 > 168.9	24223.270		1.00	6.20	24223.270	149.200	154	103.5	NO		
85	93 13C2-PFHxDA-EIS	815 > 769.7	27600.309		1.00	6.44	27600.309	12.500	11.7	94.0	NO		
86	93 13C2-PFHxDA-EIS	815 > 769.7	27600.309		1.00	6.44	27600.309	12.500	11.7	94.0	NO		
87	95 d7-N-MeFOSE-EIS	623.1 > 58.9	16322.339		1.00	6.30	16322.339	149.200	146	97.6	NO		
88	97 d9-N-EtFOSE-EIS	639.2 > 58.8	20422.422		1.00	6.45	20422.422	149.200	146	97.7	NO		
89	71 13C8-PFOS-EIS	507.0 > 79.7	3387.072		1.00	4.80	3387.072	12.500	11.5	91.6	NO		
90	-1												
91	48 13C3-PFBA-RSD	216.1 > 171.8	10147.118	12887.850	1.00	1.49	9.842	12.500	12.5	99.7	NO		
92	50 13C3-PFPeA-RSD	266.0 > 221.8	12790.130	21712.922	1.00	2.41	7.363	12.500	13.0	104.2	NO		
93	52 13C3-PFBS-RSD	302.0 > 98.8	1427.072	1357.960	1.00	2.68	13.136	12.500	11.7	93.6	NO		
94	54 13C3-HFPO-DA-RSD	287.0 > 168.9	3911.447	21712.922	1.00	3.40	2.252	12.500	12.6	100.7	NO		
95	56 13C2-4:2 FTS-RSD	329.0 >79.7	1608.434	1357.960	1.00	3.10	14.806	12.500	12.4	99.5	NO		
96	58 13C2-PFHxA-RSD	315.0 > 270.0	21075.299	21712.922	1.00	3.19	12.133	12.500	12.4	99.2	NO		
97	60 13C4-PFHpA-RSD	367.2 > 321.8	14138.462	21712.922	1.00	3.79	8.139	12.500	13.3	106.6	NO		
98	62 13C3-PFHxS-RSD	401.8 > 79.7	3236.457	1357.960	1.00	3.92	29.792	12.500	12.5	100.2	NO		
99	64 13C2-6:2 FTS-RSD	429.0 >79.7	1322.217	4077.044	1.00	4.24	4.054	12.500	10.7	85.9	NO		
100	66 13C5-PFNA-RSD	468.2 > 422.9	16649.150	17858.607	1.00	4.73	11.653	12.500	12.4	99.5	NO		
101	68 13C8-PFOSA-RSD	506 > 78	3746.492	20761.875	1.00	4.79	2.256	12.500	11.8	94.5	NO		
102	70 13C2-PFOA-RSD	414.9 > 369.7	18812.414	20823.484	1.00	4.30	11.293	12.500	12.3	98.5	NO		
103	-1												
104	72 13C8-PFOS-RSD	507.0 > 79.7	3387.072	4077.044	1.00	4.80	10.385	12.500	11.1	88.8	NO		
105	74 13C2-PFDA-RSD	515.1 > 469.9	19717.582	20478.861	1.00	5.08	12.035	12.500	12.7	101.7	NO		
106	76 13C2-8:2 FTS-RSD	529 > 79.7	895.290	4077.044	1.00	5.06	2.745	12.500	9.43	75.4	NO		
107	78 d3-N-MeFOSAA-RSD	573.3 > 419	3399.817	20761.875	1.00	5.23	2.047	12.500	11.9	95.1	NO		
108	80 13C2-PFUdA-RSD	565 > 519.8	19899.576	20761.875	1.00	5.40	11.981	12.500	11.9	95.1	NO		

Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-50.qld

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Name: 200220P1-50, Date: 21-Feb-2020, Time: 01:58:46, ID: ST200220P1-12 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82	d5-N-EtFOSAA-RSD	589.3 > 419	4559.035	20761.875	1.00	5.38	2.745	12.500	12.2	97.3	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	19843.791	20478.861	1.00	5.68	12.112	12.500	12.1	96.9	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	838.845	4077.044	1.00	5.66	2.572	12.500	10.9	87.4	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	17677.318	20761.875	1.00	5.84	10.643	149.200	140	93.8	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	19442.336	20761.875	1.00	6.12	11.706	12.500	12.1	96.7	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	24223.270	20761.875	1.00	6.20	14.584	149.200	144	96.6	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	27600.309	20761.875	1.00	6.44	16.617	12.500	11.0	88.4	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	16322.339	20761.875	1.00	6.30	9.827	149.200	132	88.7	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	20422.422	20761.875	1.00	6.45	12.296	149.200	142	95.1	NO		
119	99	13C4-PFBA	217.0 > 172.0	12887.850	12887.850	1.00	1.49	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	21712.922	21712.922	1.00	3.19	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	20823.484	20823.484	1.00	4.29	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1357.960	1357.960	1.00	3.93	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	17858.607	17858.607	1.00	4.72	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	4077.044	4077.044	1.00	4.80	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	20478.861	20478.861	1.00	5.08	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	20761.875	20761.875	1.00	5.40	12.500	12.500	12.5	100.0	NO		

Vista Analytical Laboratory

Dataset: Untitled

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022020.mdb 21 Feb 2020 08:56:55
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-20-20.cdb 21 Feb 2020 15:57:11

Compound name: PFBA

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1	1 200220P1-1	IPA	20-Feb-20	17:23:58
2	2 200220P1-2	IPA	20-Feb-20	17:34:30
3	3 200220P1-3	ST200220P1-1 PFC CS-2 20B1102	20-Feb-20	17:45:02
4	4 200220P1-4	ST200220P1-2 PFC CS-1 20B1103	20-Feb-20	17:55:31
5	5 200220P1-5	ST200220P1-3 PFC CS0 20B1104	20-Feb-20	18:06:03
6	6 200220P1-6	ST200220P1-4 PFC CS1 20B1105	20-Feb-20	18:16:31
7	7 200220P1-7	ST200220P1-5 PFC CS2 20B1106	20-Feb-20	18:27:04
8	8 200220P1-8	ST200220P1-6 PFC CS3 20B1107	20-Feb-20	18:37:32
9	9 200220P1-9	ST200220P1-7 PFC CS4 20B1108	20-Feb-20	18:48:04
10	10 200220P1-10	ST200220P1-8 PFC CS5 20B1109	20-Feb-20	18:58:35
11	11 200220P1-11	ST200220P1-9 PFC CS6 20B1110	20-Feb-20	19:09:05
12	12 200220P1-12	ST200220P1-10 PFC CS7 20B1111	20-Feb-20	19:19:35
13	13 200220P1-13	IB	20-Feb-20	19:30:05
14	14 200220P1-14	ICV200220P1-1 PFC ICV 20B1112	20-Feb-20	19:40:36
15	15 200220P1-15	IB	20-Feb-20	19:51:06
16	16 200220P1-16	B0B0088-BLK1 Method Blank 0.25	20-Feb-20	20:01:35
17	17 200220P1-17	B0B0088-BS1 OPR 0.25	20-Feb-20	20:12:06
18	18 200220P1-18	B0B0088-BSD1 LCSD 0.25	20-Feb-20	20:22:35
19	19 200220P1-19	2000292-01 11535BFR POE Influent-1 0.25741	20-Feb-20	20:33:08
20	20 200220P1-20	2000292-02 11535BFR POE Midpoint-1 0.25829	20-Feb-20	20:43:36
21	21 200220P1-21	2000292-03 11535BFR POE Effluent-1 0.25426	20-Feb-20	20:54:07
22	22 200220P1-22	2000292-04 11535BFR Field Blank 0.24726	20-Feb-20	21:04:38
23	23 200220P1-23	B0B0117-BLK1 Method Blank 0.125	20-Feb-20	21:15:06
24	24 200220P1-24	B0B0117-BS1 OPR 0.125	20-Feb-20	21:25:39
25	25 200220P1-25	B0B0117-BSD1 LCSD 0.125	20-Feb-20	21:36:08
26	26 200220P1-26	2000305-01 8 Chestnut Dr 0.11658	20-Feb-20	21:46:39
27	27 200220P1-27	2000305-02 10 Chestnut Dr 0.11788	20-Feb-20	21:57:10
28	28 200220P1-28	2000307-01 Map 243 Lot 26 0.11726	20-Feb-20	22:07:39
29	29 200220P1-29	2000307-02 Map 246 Lot 5 0.11738	20-Feb-20	22:18:08
30	30 200220P1-30	B0B0118-BLK1 Method Blank 0.25	20-Feb-20	22:28:40
31	31 200220P1-31	B0B0118-BS1 OPR 0.25	20-Feb-20	22:39:11
32	32 200220P1-32	B0B0118-MS1 Matrix Spike 0.25822	20-Feb-20	22:49:40

Dataset: Untitled

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Compound name: PFBA

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34	34	200220P1-34	2000314-01 SB01-20200212 0.24382	20-Feb-20	23:10:42
35	35	200220P1-35	2000314-02 EB01-20200212 0.24618	20-Feb-20	23:21:13
36	36	200220P1-36	IB	20-Feb-20	23:31:42
37	37	200220P1-37	ST200220P1-11 PFC CS3 20B1107	20-Feb-20	23:42:13
38	38	200220P1-38	IB	20-Feb-20	23:52:41
39	39	200220P1-39	2000314-03 I006MW03SR-20200212 0.25406	21-Feb-20	00:03:13
40	40	200220P1-40	2000314-04 I006MW05SR-20200212 0.2515	21-Feb-20	00:13:44
41	41	200220P1-41	2000314-05 DUP01-20200212 0.24538	21-Feb-20	00:24:12
42	42	200220P1-42	2000314-06 I006MW01S-20200212 0.2551	21-Feb-20	00:34:45
43	43	200220P1-43	2000314-07 I006MW08S-20200212 0.25052	21-Feb-20	00:45:14
44	44	200220P1-44	2000314-08 BMW07S-20200212 0.2539	21-Feb-20	00:55:45
45	45	200220P1-45	2000314-09 I005MW01SR-20200212 0.25498	21-Feb-20	01:06:16
46	46	200220P1-46	2000314-10 DUP05-20200212 0.25284	21-Feb-20	01:16:46
47	47	200220P1-47	2000314-11 IS72MW15S-20200212 0.25446	21-Feb-20	01:27:15
48	48	200220P1-48	2000314-12 IS72MW18SR-20200212 0.24458	21-Feb-20	01:37:46
49	49	200220P1-49	IB	21-Feb-20	01:48:15
50	50	200220P1-50	ST200220P1-12 PFC CS3 20B1107	21-Feb-20	01:58:46
51	51	200220P1-51	IB	21-Feb-20	02:09:16
52	52	200220P1-52	2000314-13 222MW02S-20200212 0.25234	21-Feb-20	02:19:47
53	53	200220P1-53	2000314-14 DUP03-20200212 0.24446	21-Feb-20	02:30:18
54	54	200220P1-54	2000314-15 A000MW42S-20200212 0.25324	21-Feb-20	02:40:47
55	55	200220P1-55	B0B0139-BLK1 Method Blank 1	21-Feb-20	02:51:17
56	56	200220P1-56	B0B0139-BS1 OPR 1	21-Feb-20	03:01:49
57	57	200220P1-57	B0B0139-BSD1 LCSD 1	21-Feb-20	03:12:17
58	58	200220P1-58	2000306-01 KRMS Compost Pile 5.62	21-Feb-20	03:22:49
59	59	200220P1-59	2000306-02 KRMS N. Soccer Field 2.2	21-Feb-20	03:33:18
60	60	200220P1-60	B0B0053-BS1 OPR 0.125	21-Feb-20	03:43:49
61	61	200220P1-61	IB	21-Feb-20	03:54:19
62	62	200220P1-62	ST200220P1-13 PFC CS3 20B1107	21-Feb-20	04:04:50
63	63	200220P1-63	IB	21-Feb-20	04:15:21

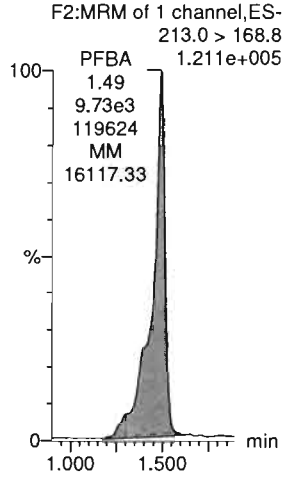
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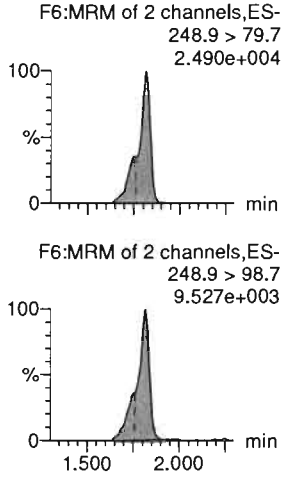
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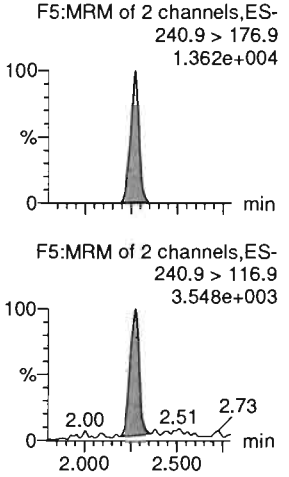
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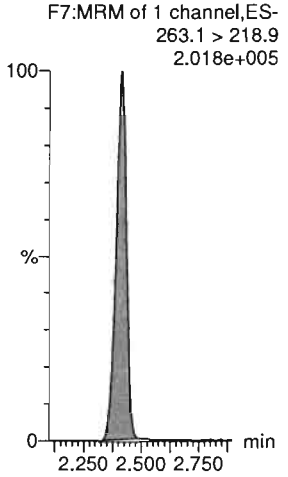
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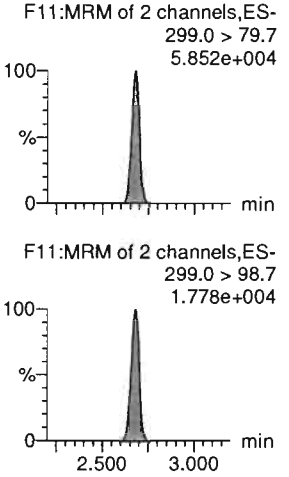
3:3 FTCA



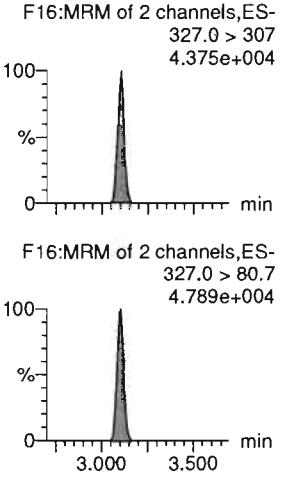
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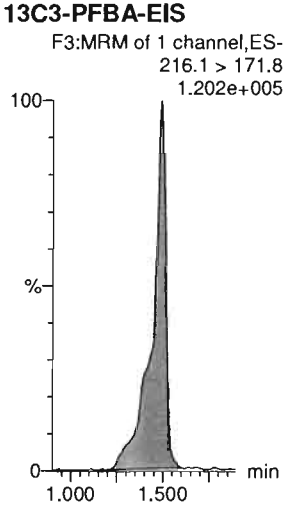
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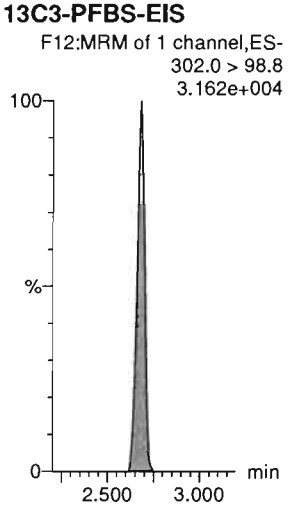
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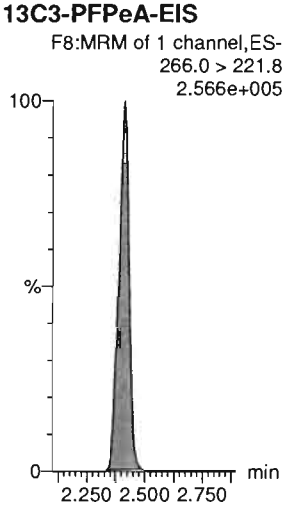
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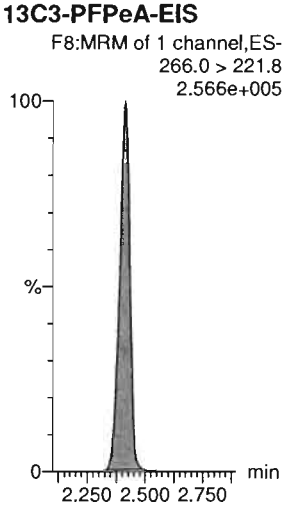
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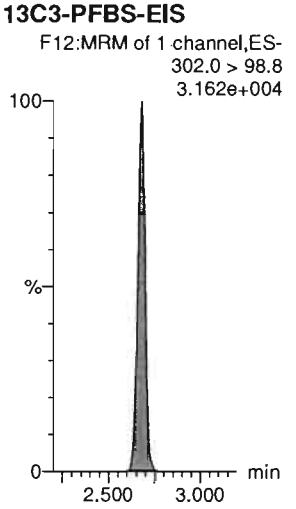
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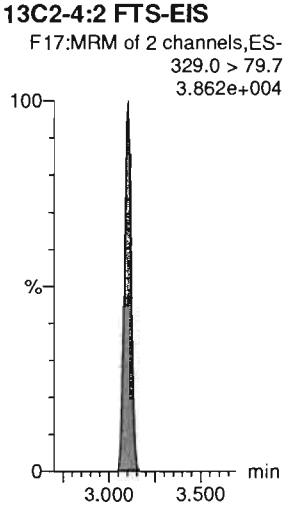
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

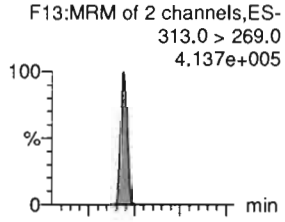


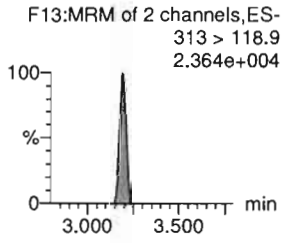
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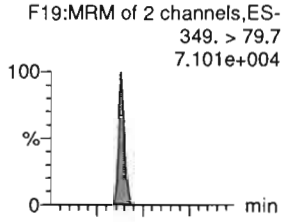
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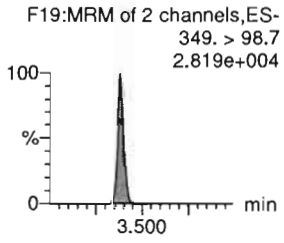
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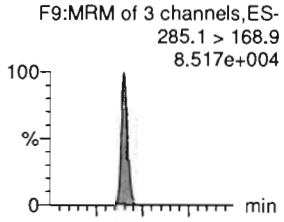


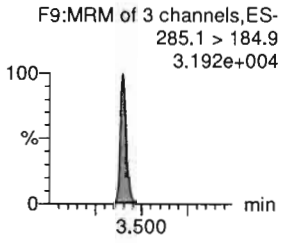
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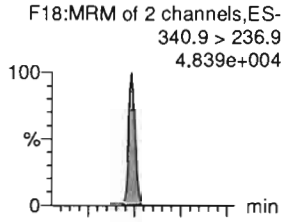


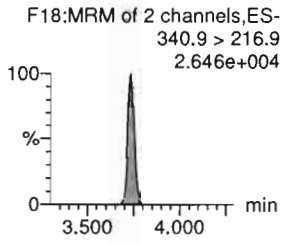
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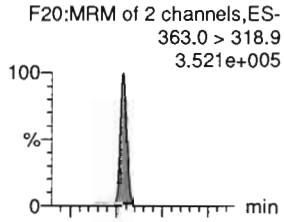


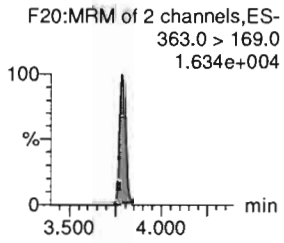
5:3 FTCA



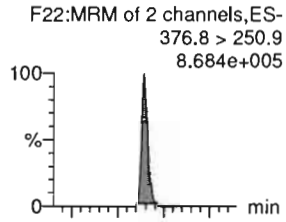


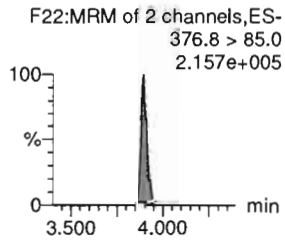
PFHpA



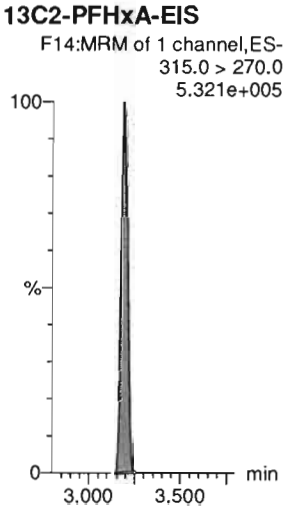


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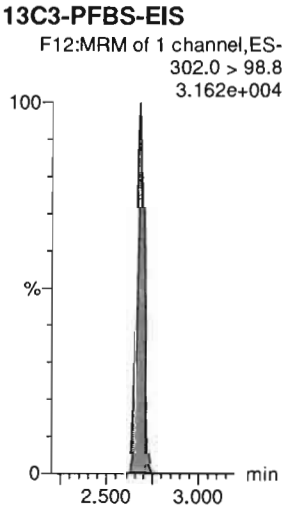




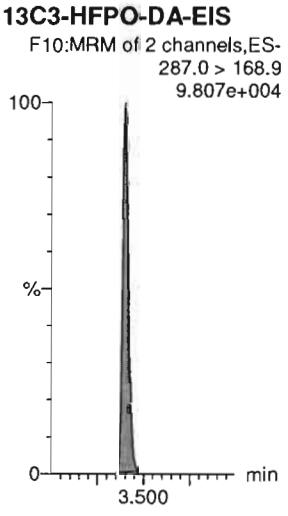
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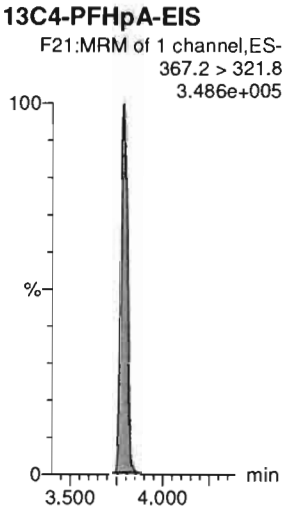
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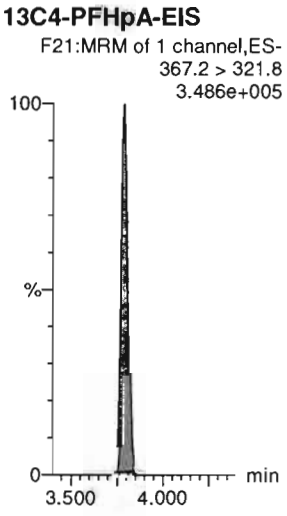
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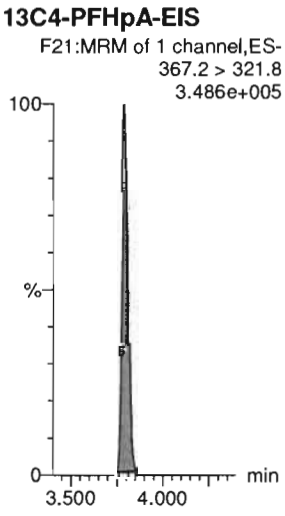
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13C4-PFHpA-EIS



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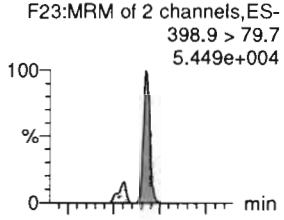


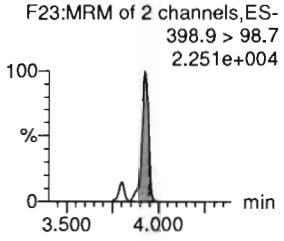
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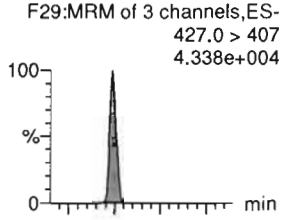
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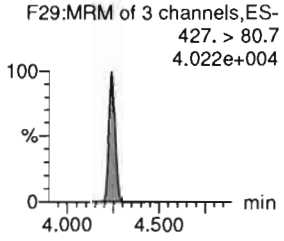
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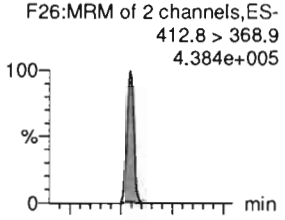


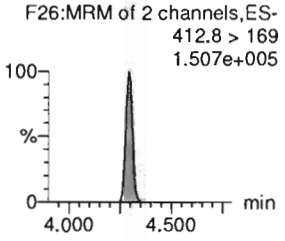
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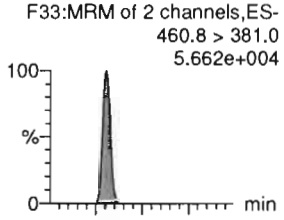


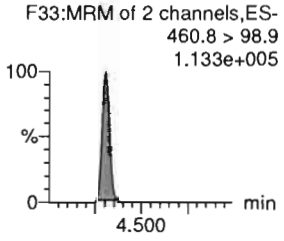
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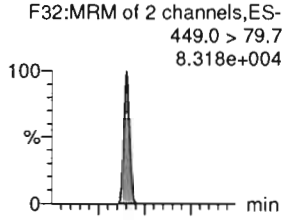


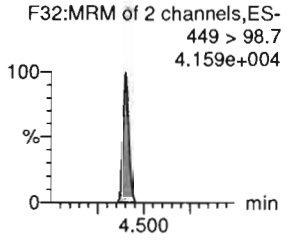
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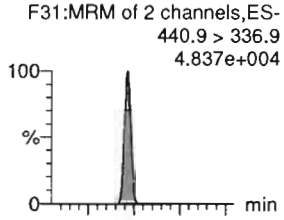


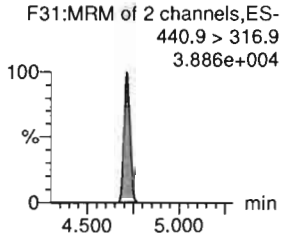
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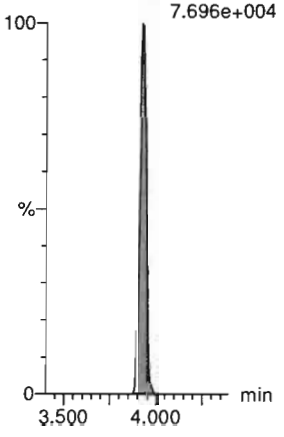


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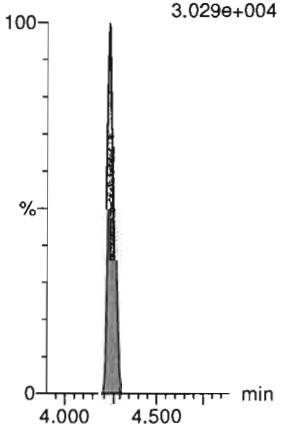




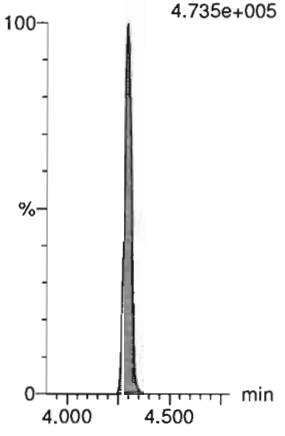
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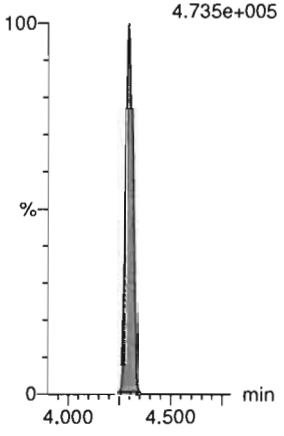
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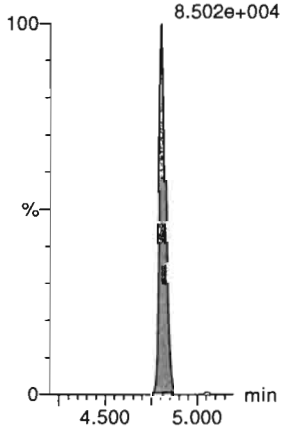
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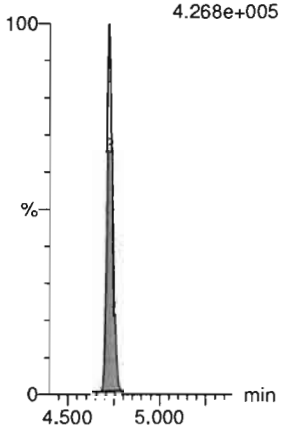
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13C8-PFOS-EIS



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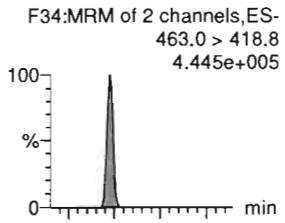


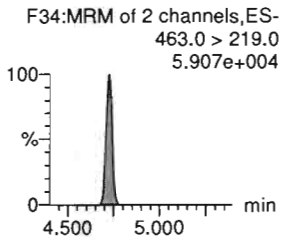
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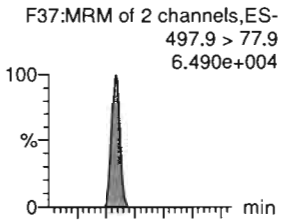
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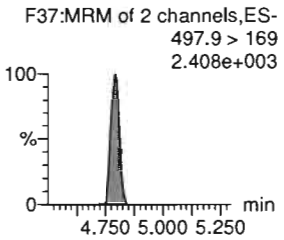
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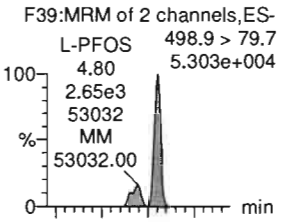


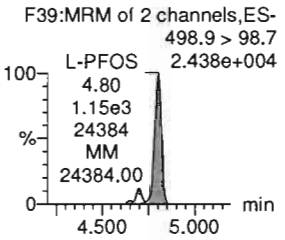
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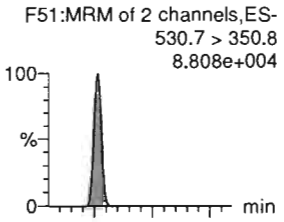


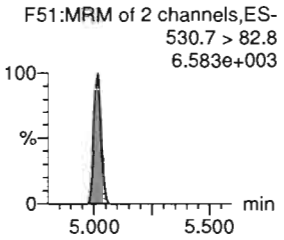
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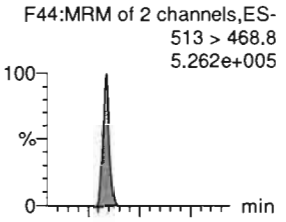


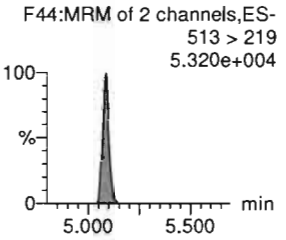
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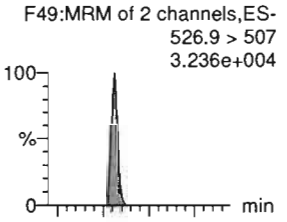


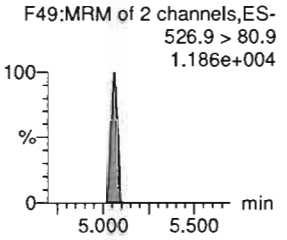
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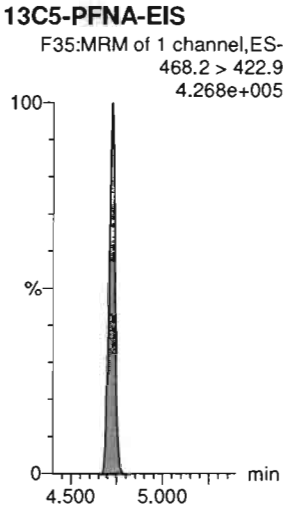


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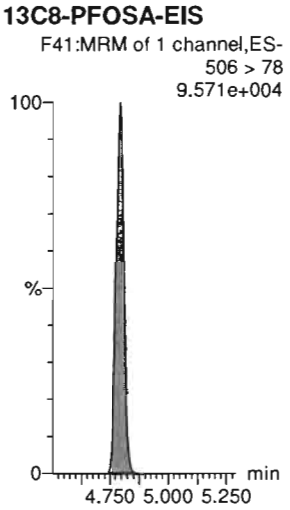




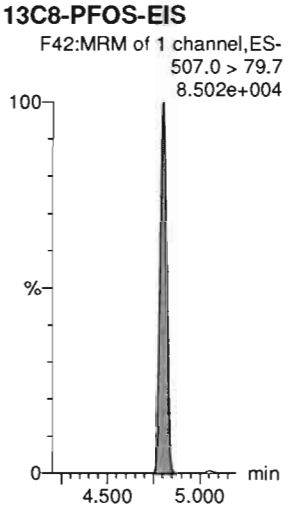
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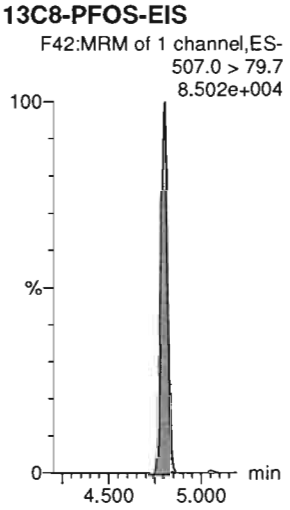
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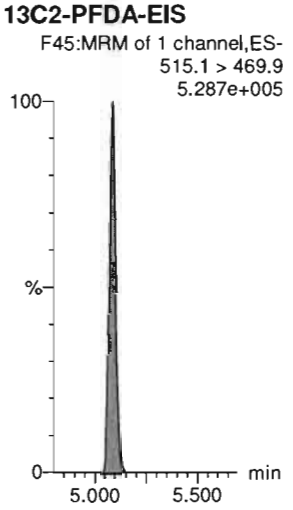
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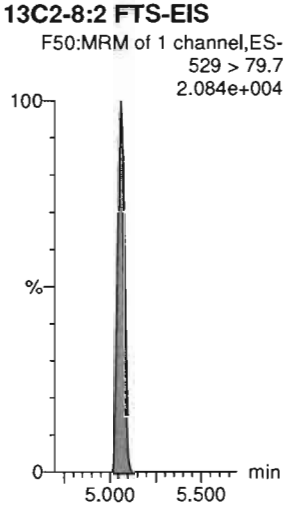
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

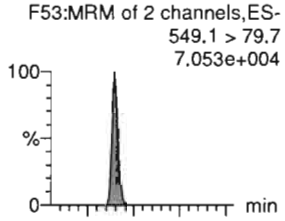


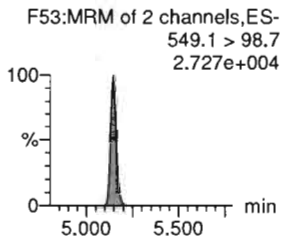
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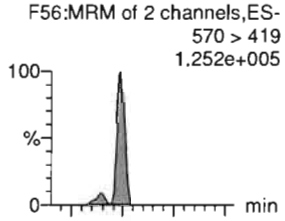
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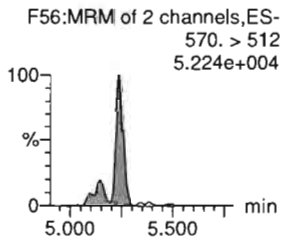
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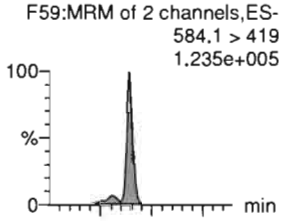


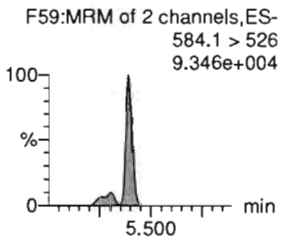
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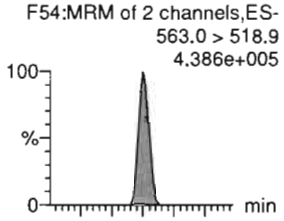


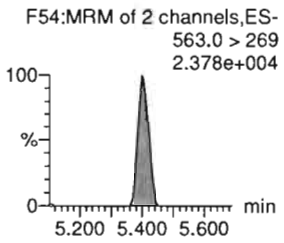
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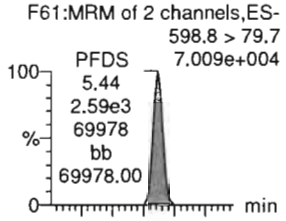


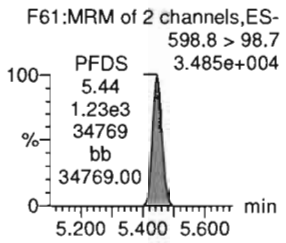
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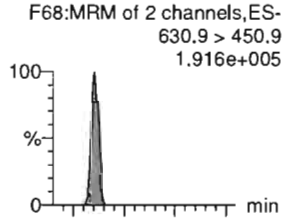


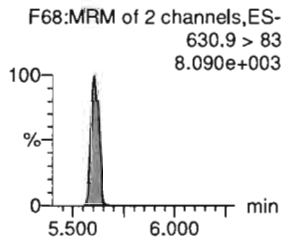
PFDS



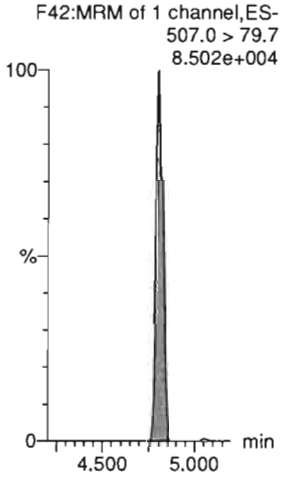


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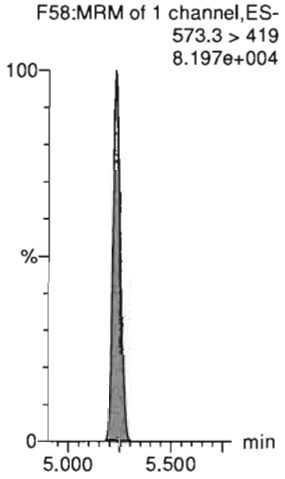




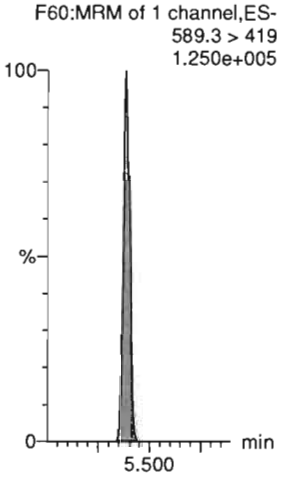
13C8-PFOS-EIS



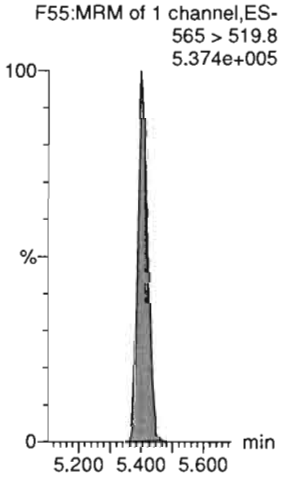
d3-N-MeFOSAA-EIS



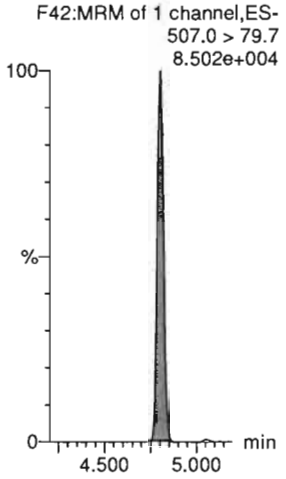
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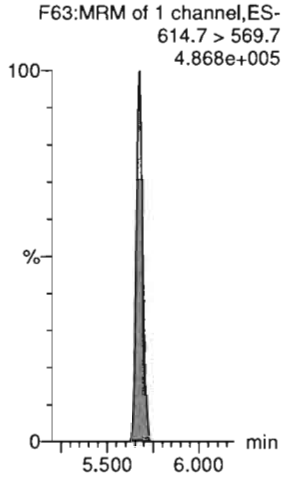
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13C8-PFOS-EIS



13C2-PFDoA-EIS

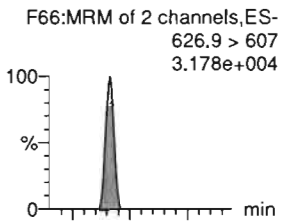


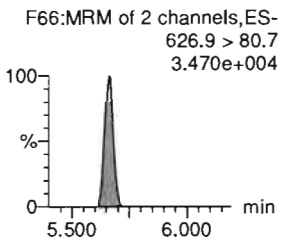
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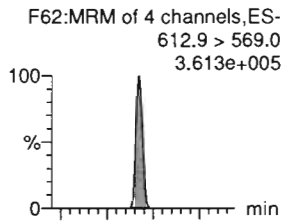
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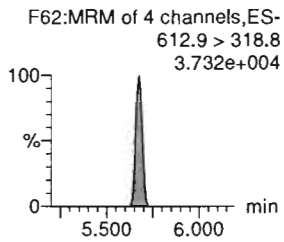
10:2 FTS



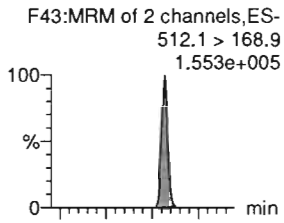


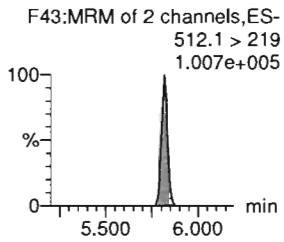
PFDoA



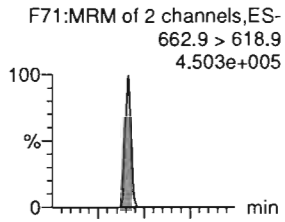


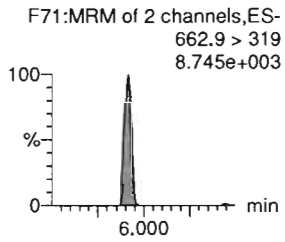
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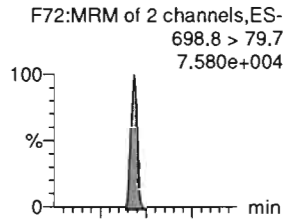


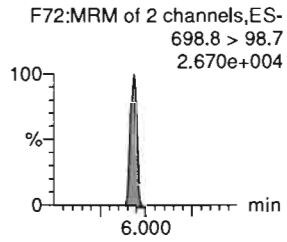
PFTrDA



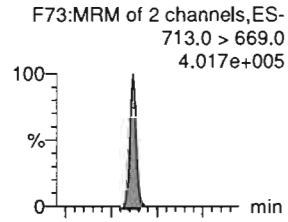


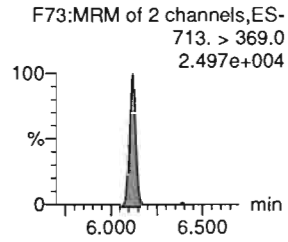
PFDoS



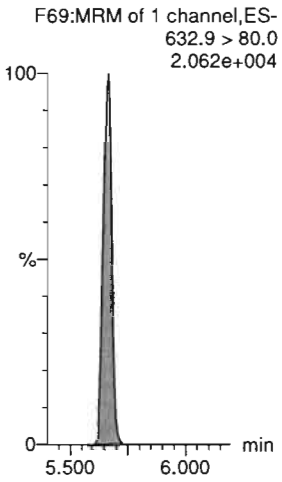


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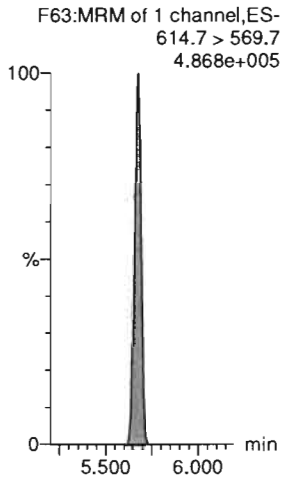




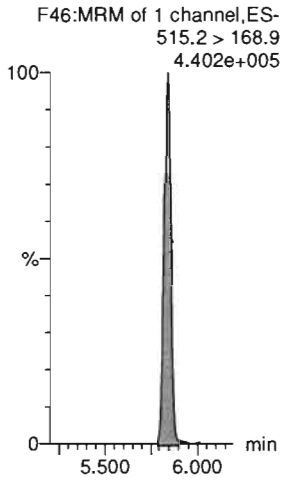
13C2-10:2 FTS-EIS



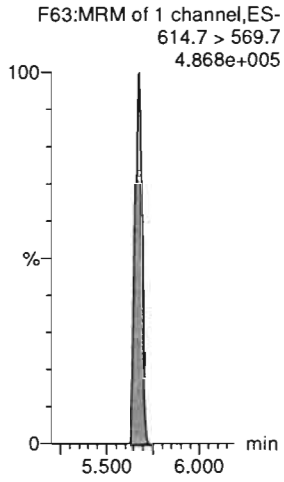
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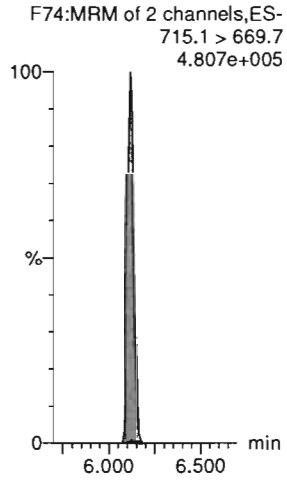
d3-N-MeFOSA-EIS



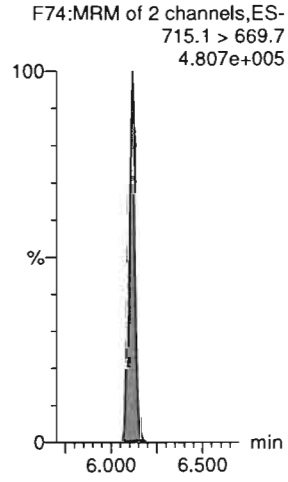
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

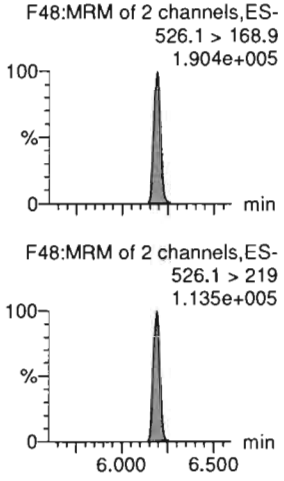


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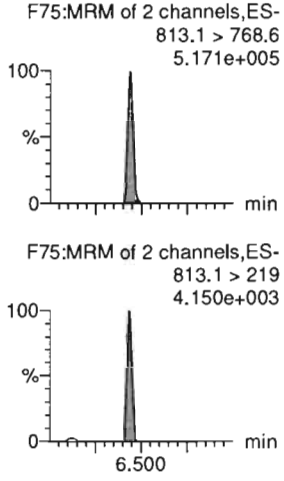
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Name: 200220P1-50, Date: 21-Feb-2020, Time: 01:58:46, ID: ST200220P1-12 PFC CS3 20B1107, Description: PFC CS3 20B1107

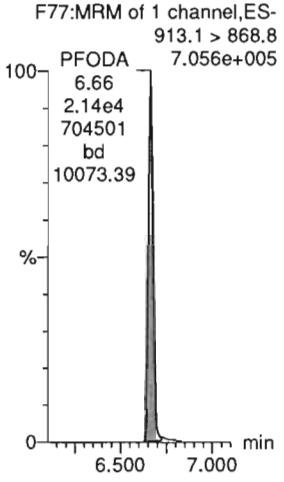
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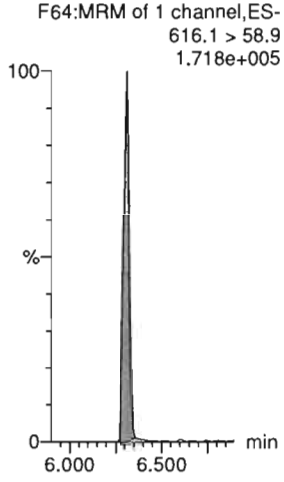
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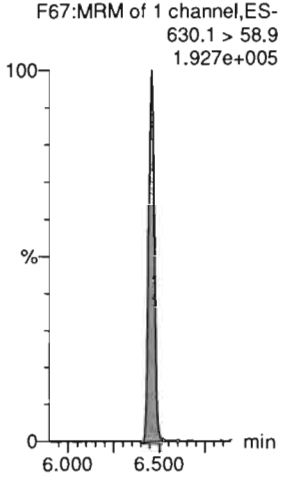
PFODA



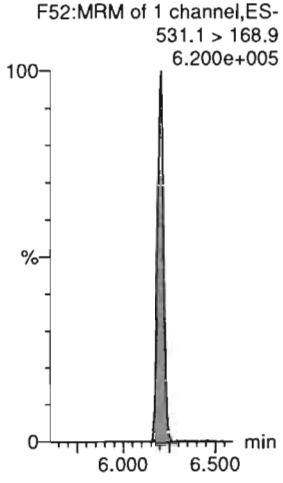
N-MeFOSE



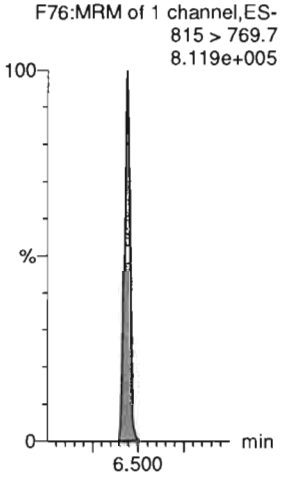
N-EtFOSE



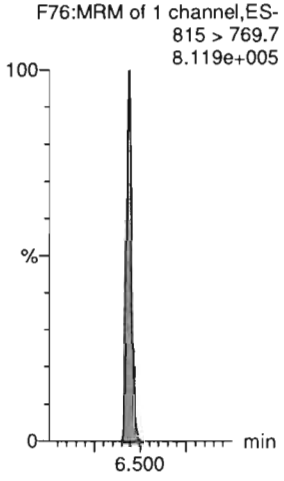
d5-N-ETFOSA-EIS



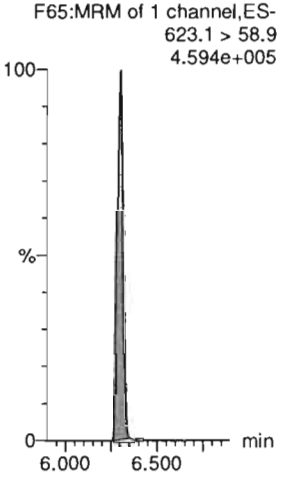
13C2-PFHxDA-EIS



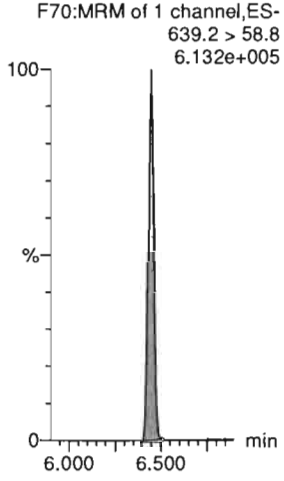
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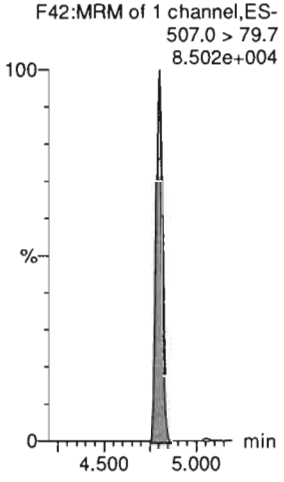
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d9-N-EtFOSE-EIS



13C8-PFOS-EIS

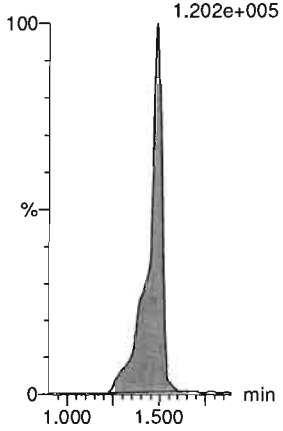


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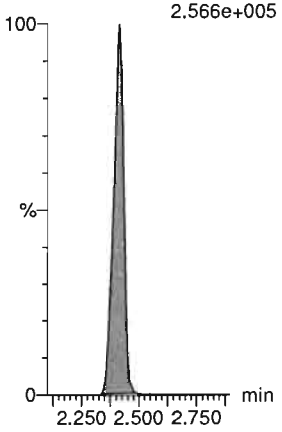
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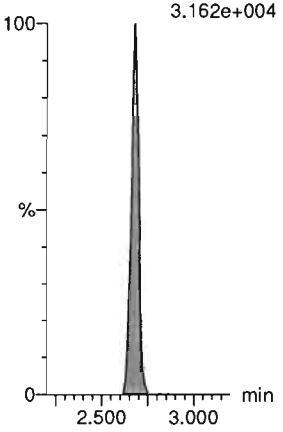
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.202e+005



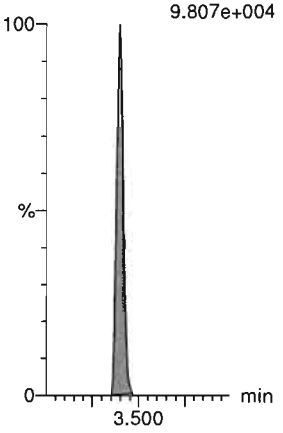
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.566e+005



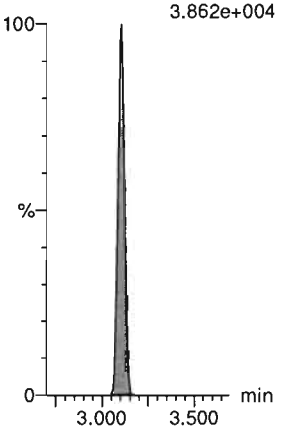
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F12:MRM of 1 channel,ES-
302.0 > 98.8
3.162e+004



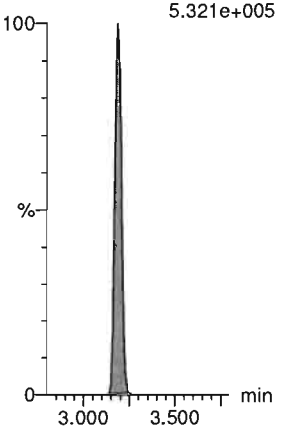
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F10:MRM of 2 channels,ES-
287.0 > 168.9
9.807e+004



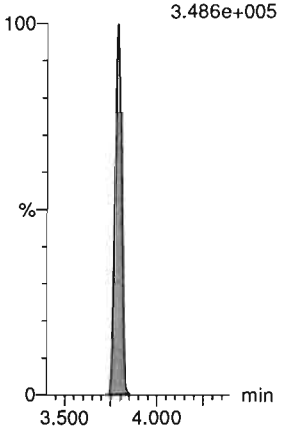
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F17:MRM of 2 channels,ES-
329.0 > 79.7
3.862e+004



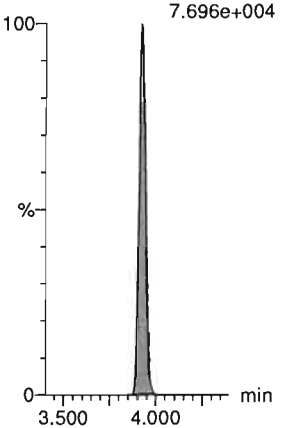
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F14:MRM of 1 channel,ES-
315.0 > 270.0
5.321e+005



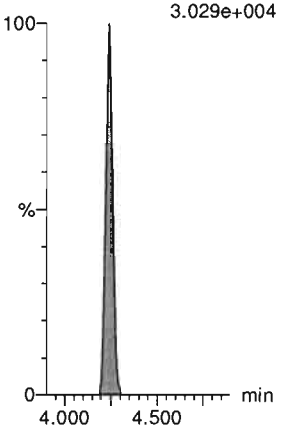
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.486e+005



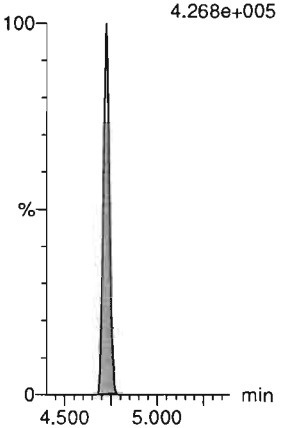
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.696e+004



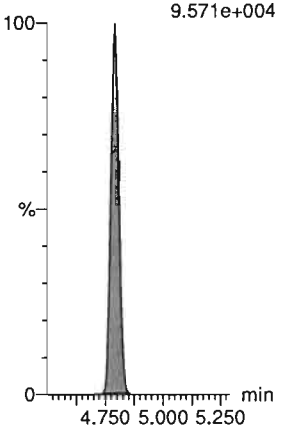
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.029e+004



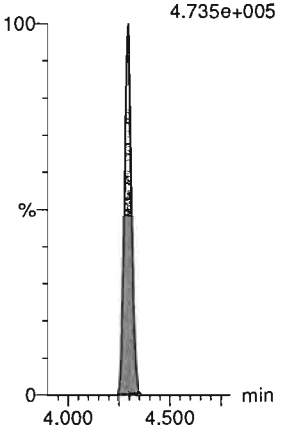
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.268e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.571e+004



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.735e+005

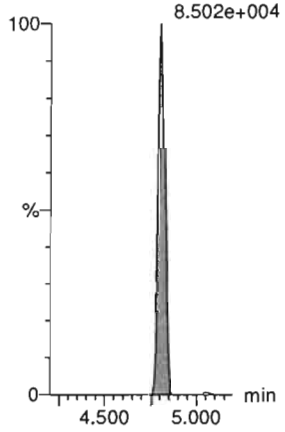


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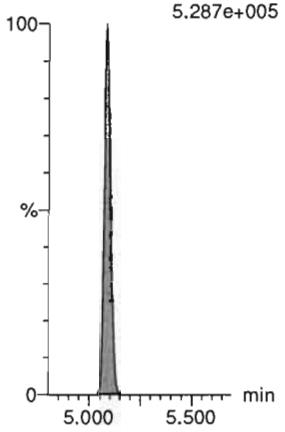
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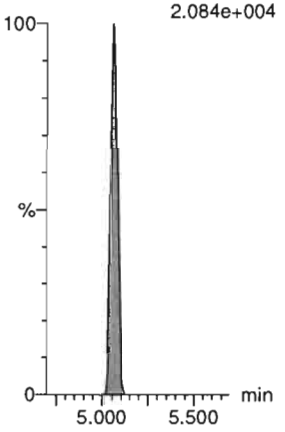
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.502e+004



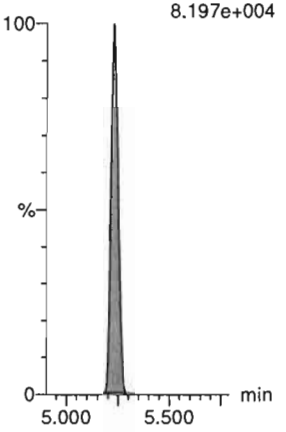
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F45:MRM of 1 channel,ES-
515.1 > 469.9
5.287e+005



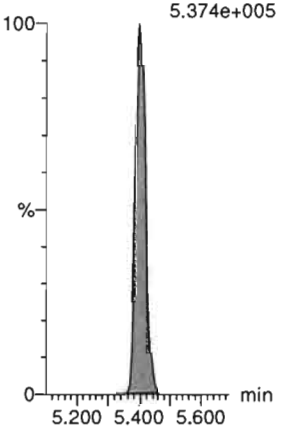
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F50:MRM of 1 channel,ES-
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2.084e+004



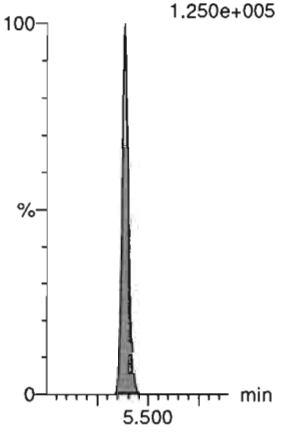
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F58:MRM of 1 channel,ES-
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8.197e+004



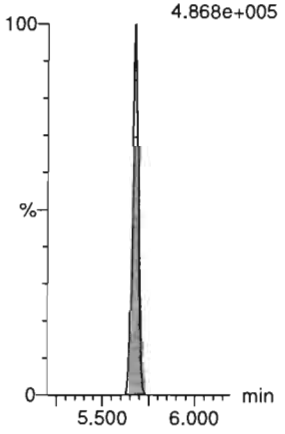
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F55:MRM of 1 channel,ES-
565 > 519.8
5.374e+005



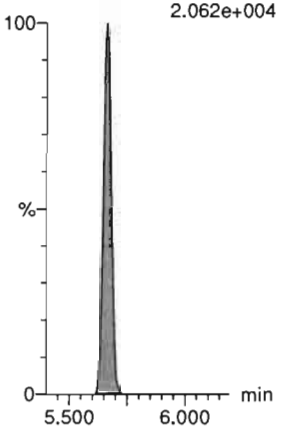
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F60:MRM of 1 channel,ES-
589.3 > 419
1.250e+005



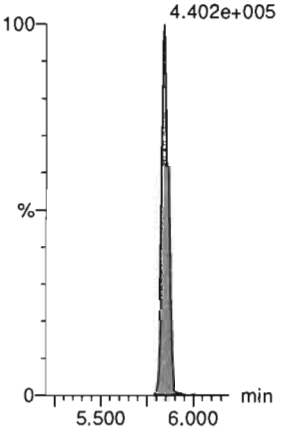
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F63:MRM of 1 channel,ES-
614.7 > 569.7
4.868e+005



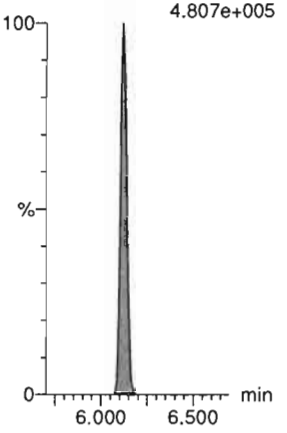
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F69:MRM of 1 channel,ES-
632.9 > 80.0
2.062e+004



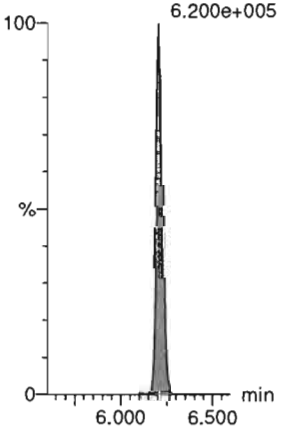
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F46:MRM of 1 channel,ES-
515.2 > 168.9
4.402e+005



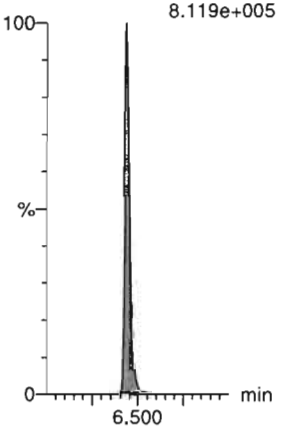
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.807e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.200e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.119e+005

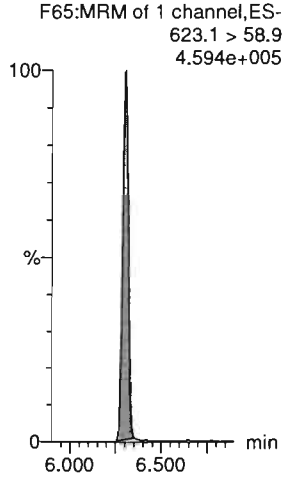


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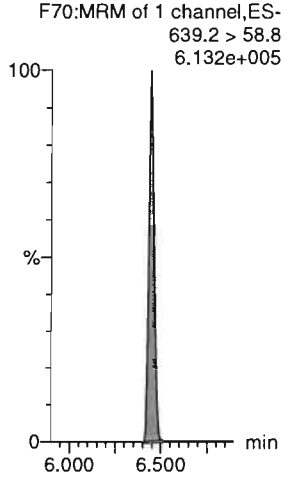
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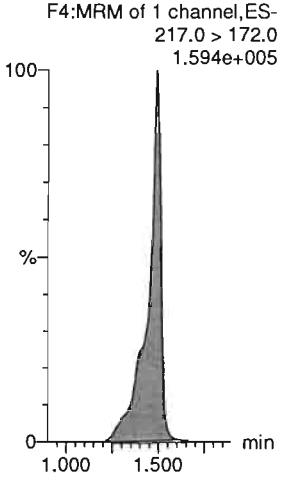
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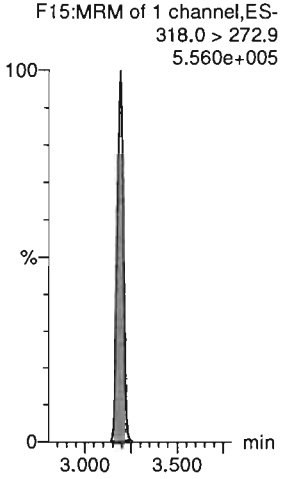
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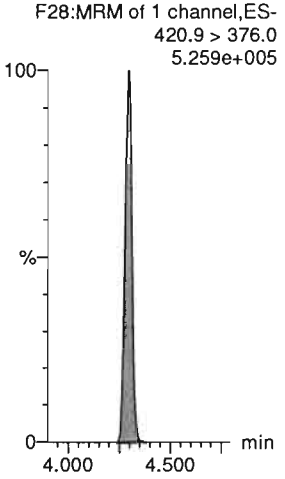
13C4-PFBA



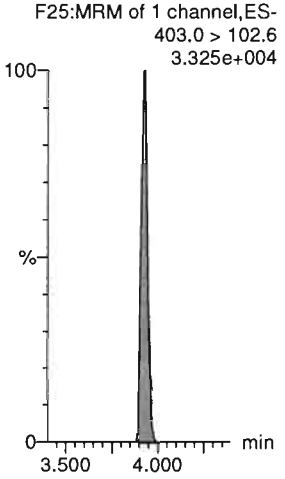
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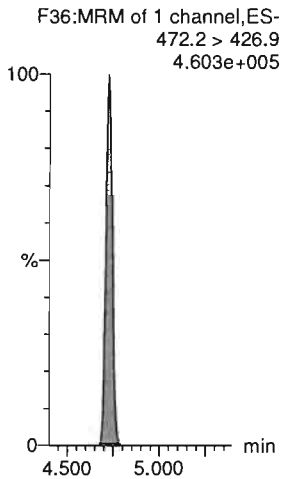
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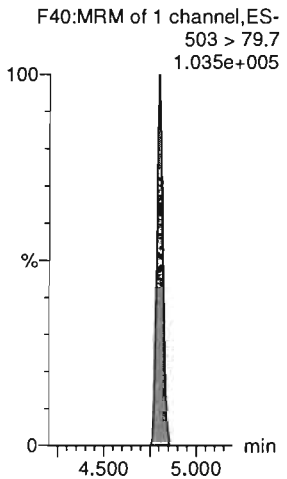
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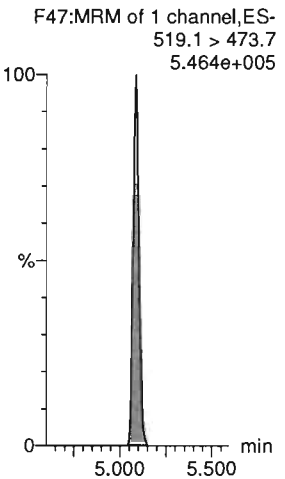
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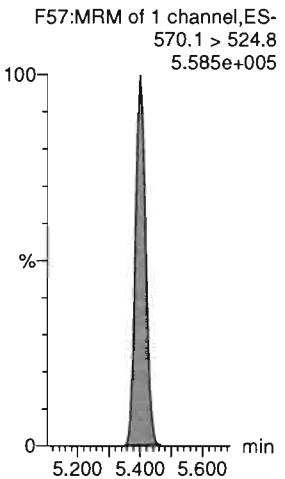
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Vista Analytical Laboratory

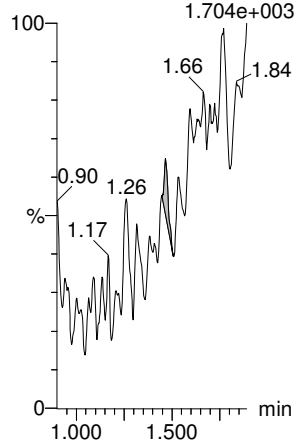
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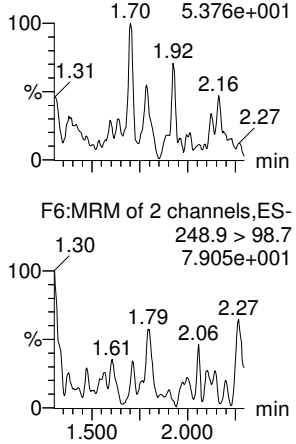
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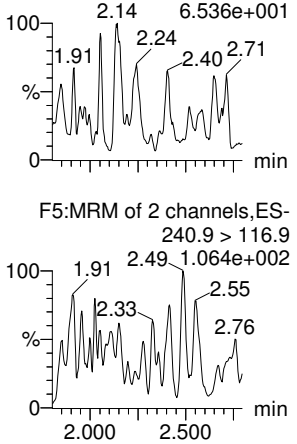
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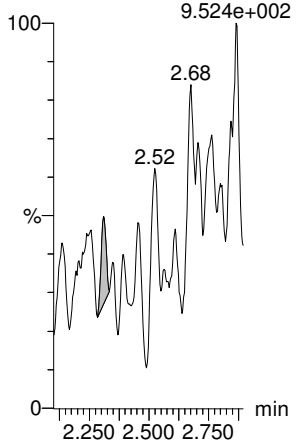
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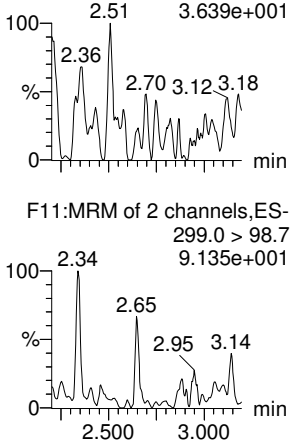
3:3 FTCA



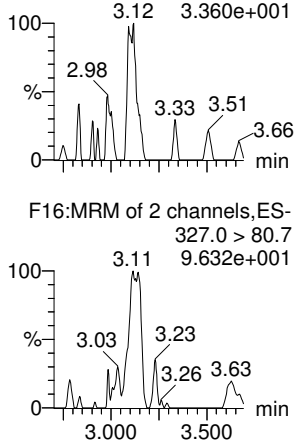
PFPeA



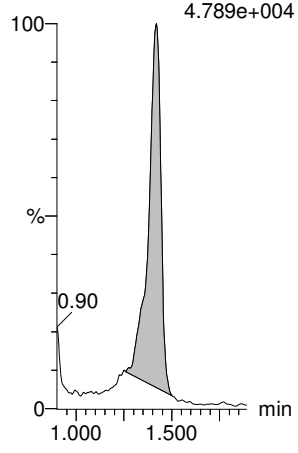
PFBS



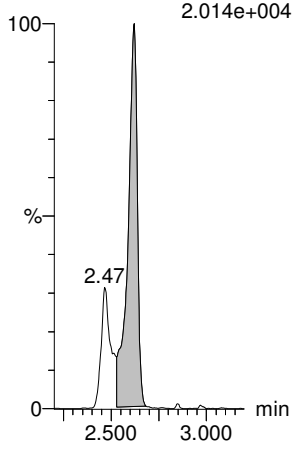
4:2 FTS



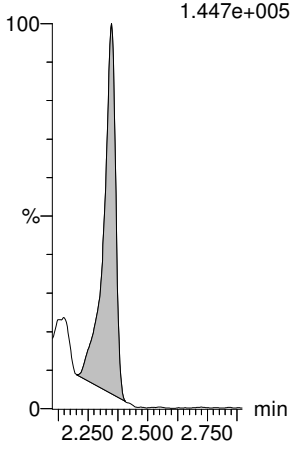
13C3-PFBA-EIS



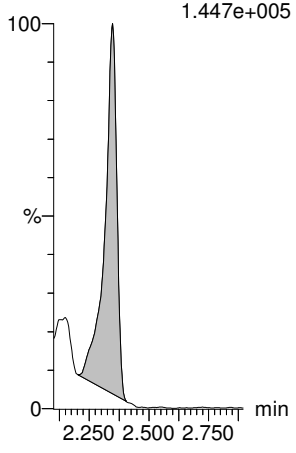
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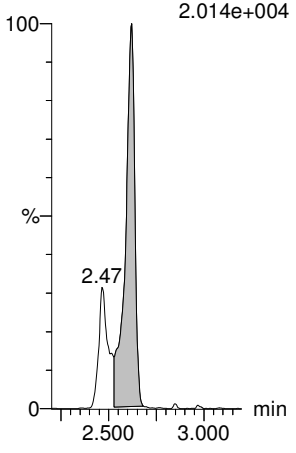
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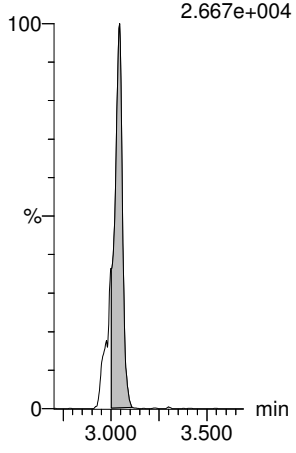
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

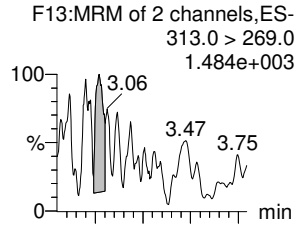


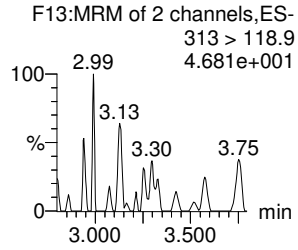
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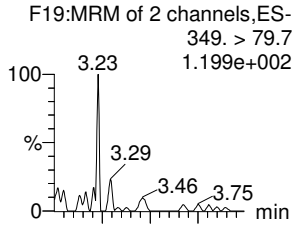
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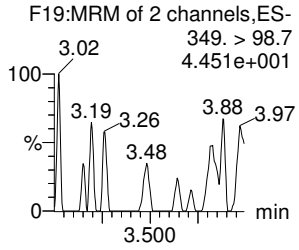
PFHxA



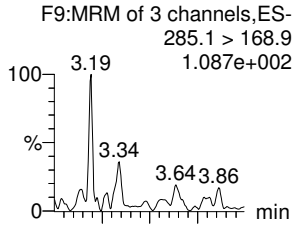


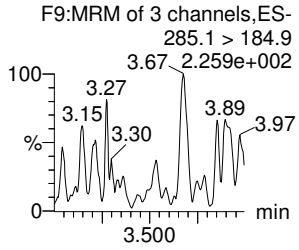
PFPeS



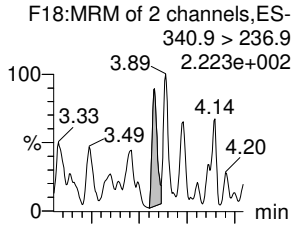


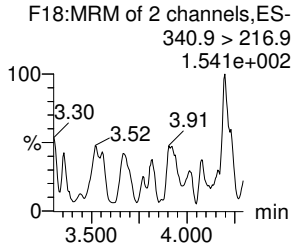
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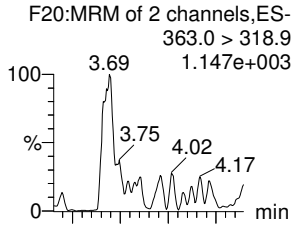


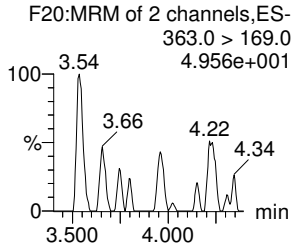
5:3 FTCA



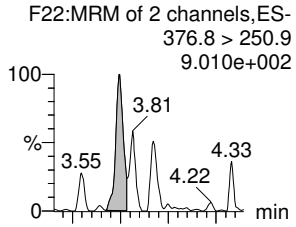


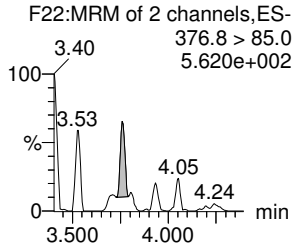
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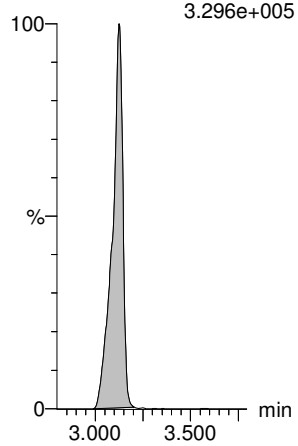


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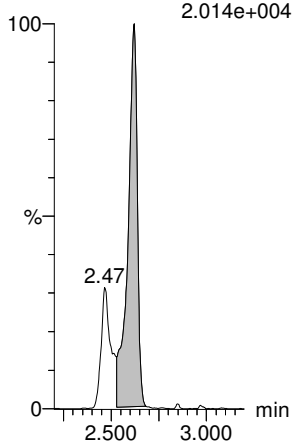




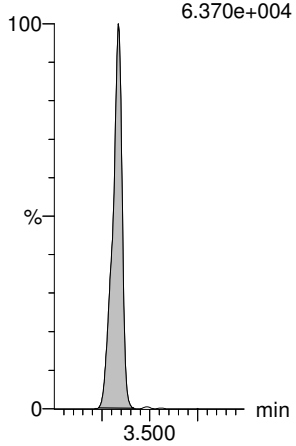
13C2-PFHxA-EIS



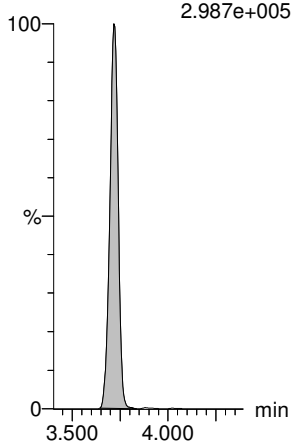
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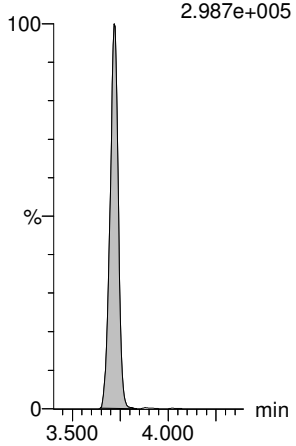
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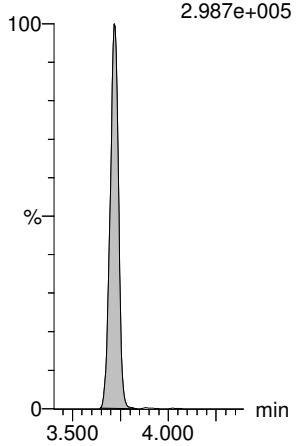
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13C4-PFHpA-EIS



13C4-PFHpA-EIS



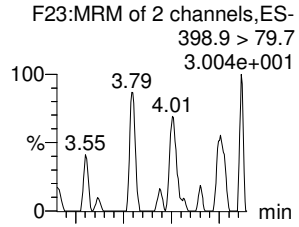
Vista Analytical Laboratory

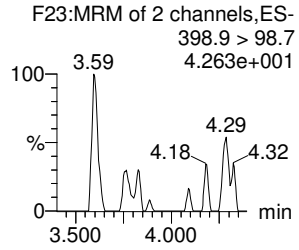
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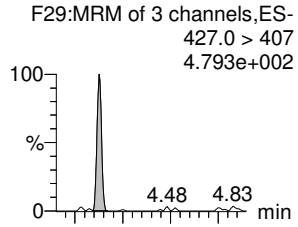
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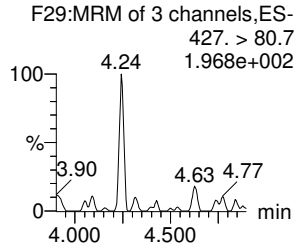
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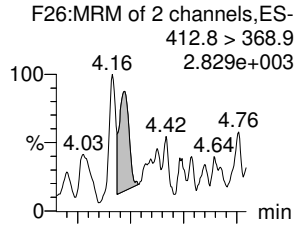


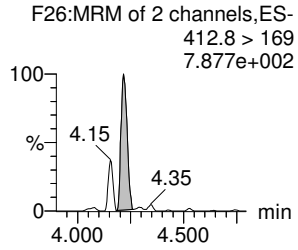
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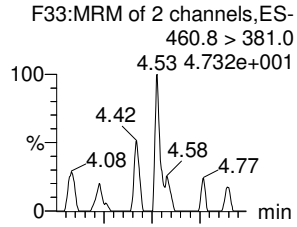


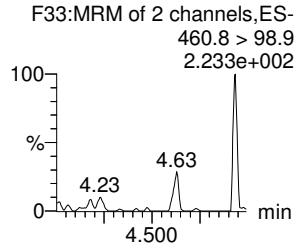
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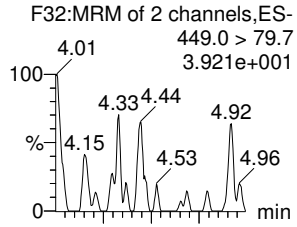


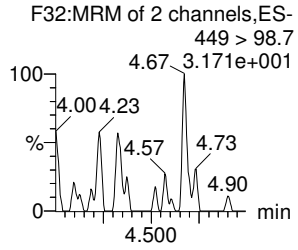
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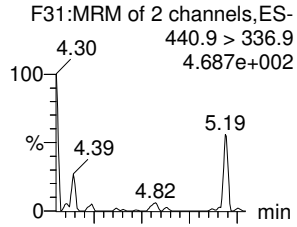


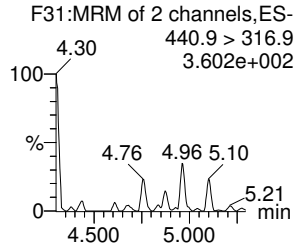
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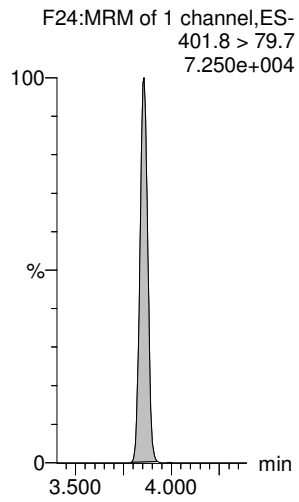


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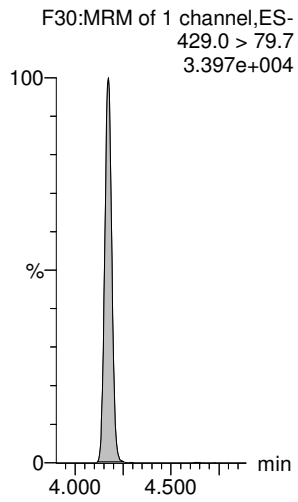




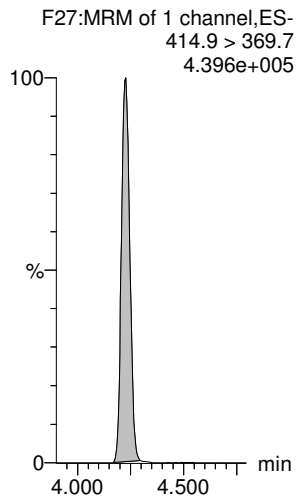
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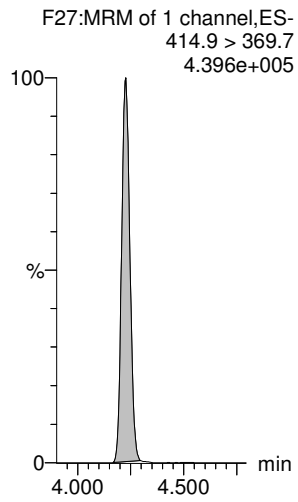
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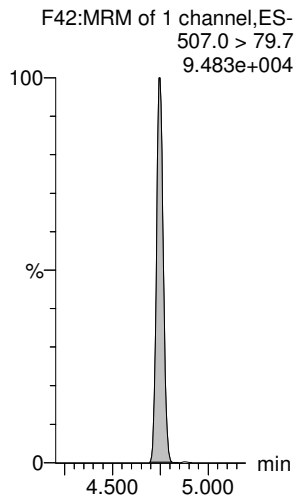
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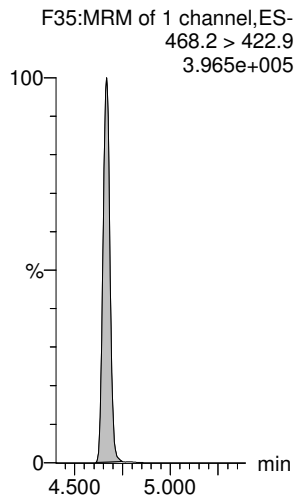
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13C8-PFOS-EIS



13C5-PFNA-EIS

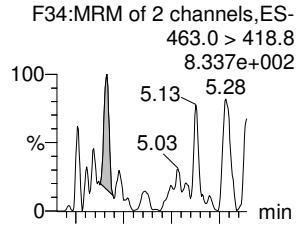


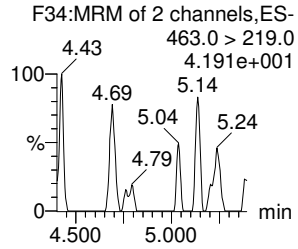
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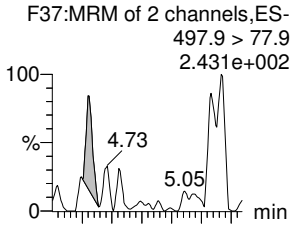
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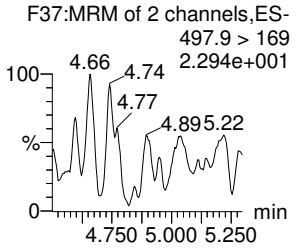
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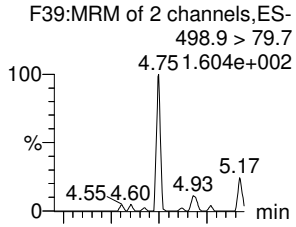


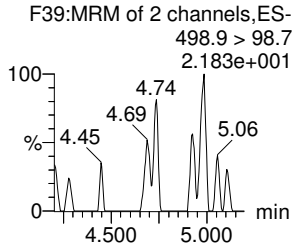
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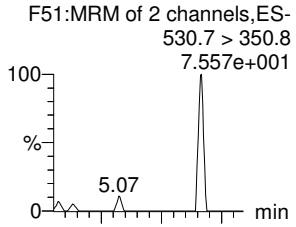


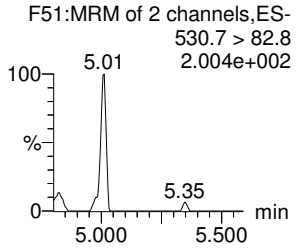
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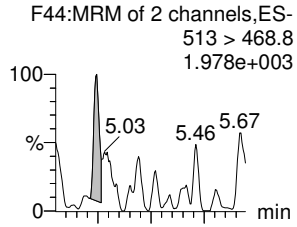


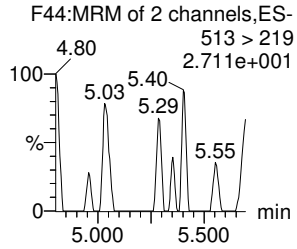
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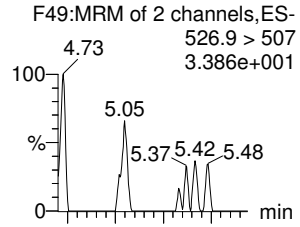


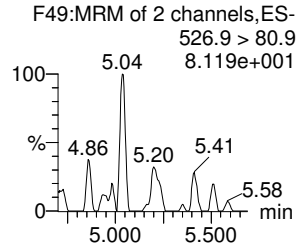
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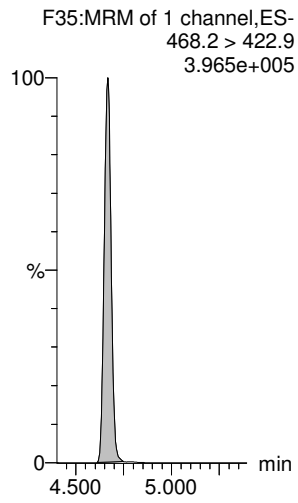


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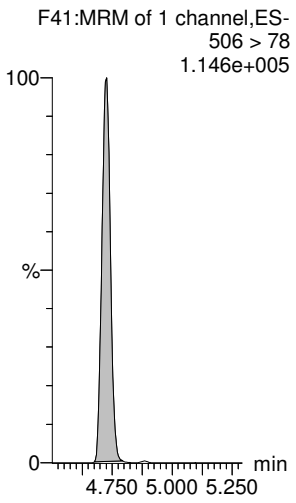




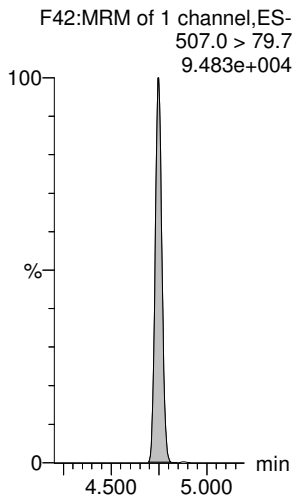
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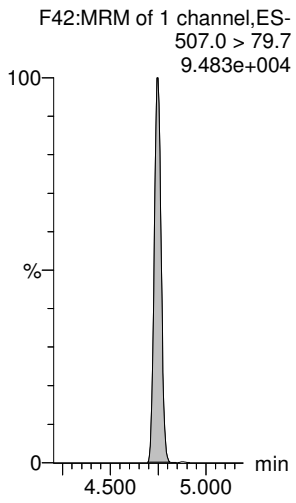
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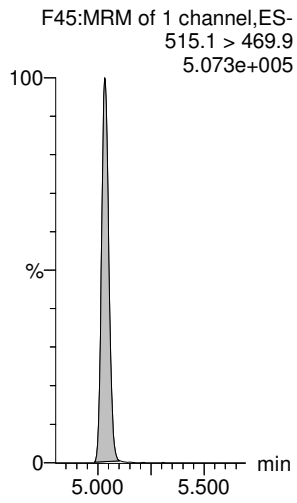
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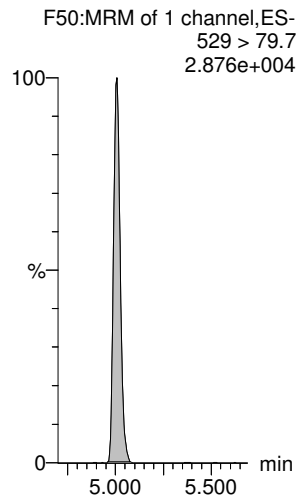
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13C2-PFDA-EIS



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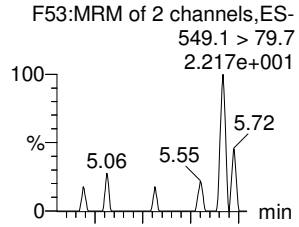


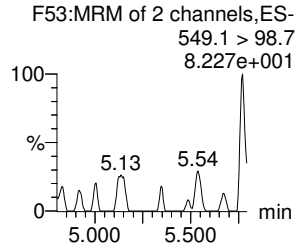
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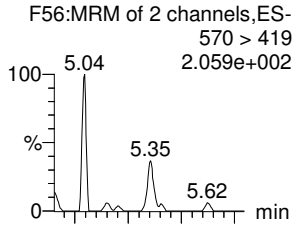
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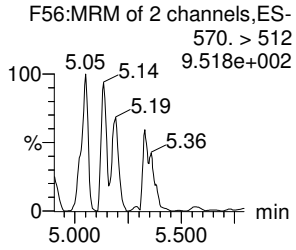
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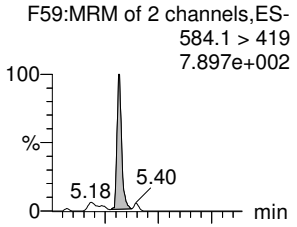


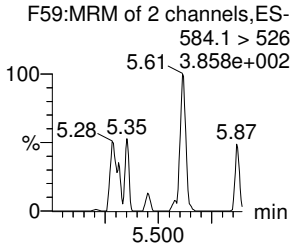
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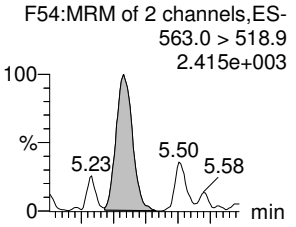


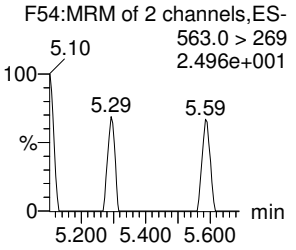
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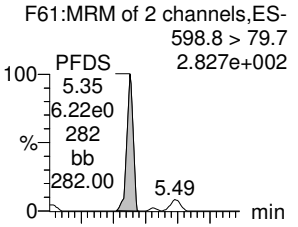


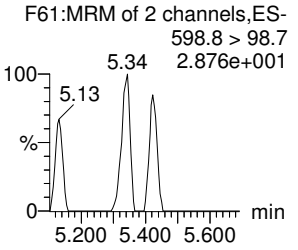
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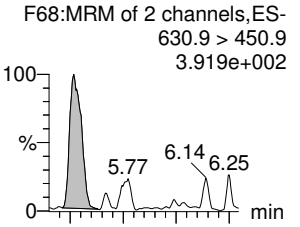


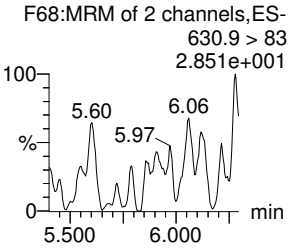
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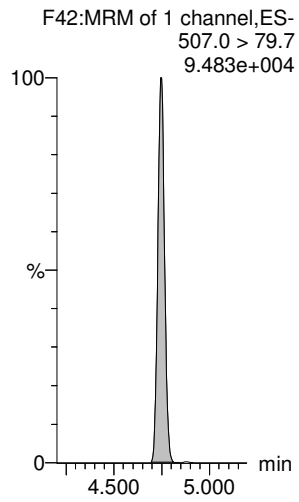


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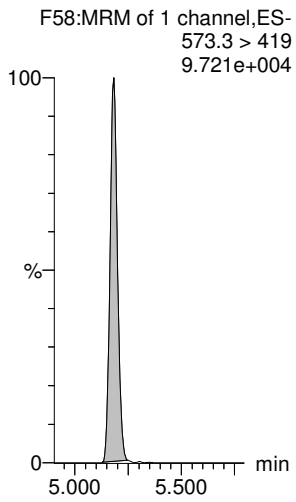




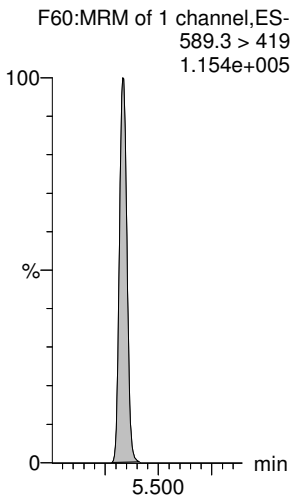
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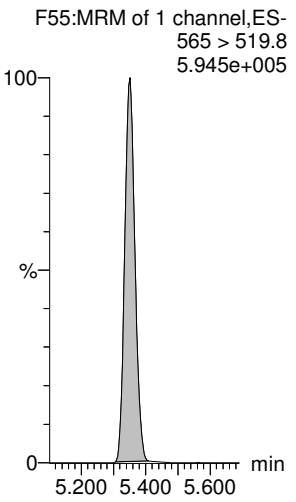
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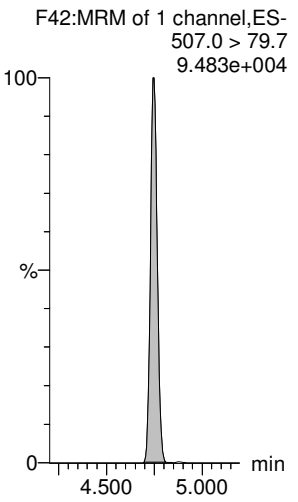
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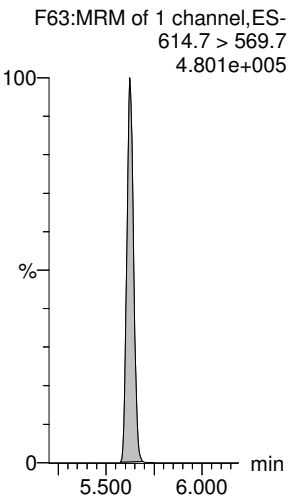
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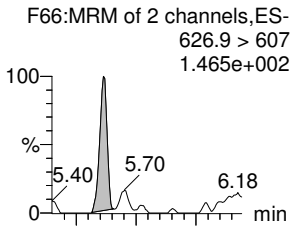


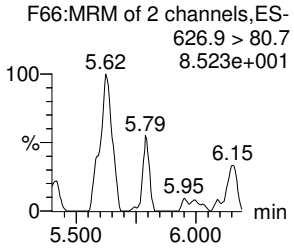
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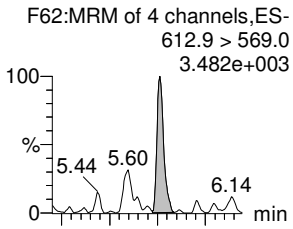
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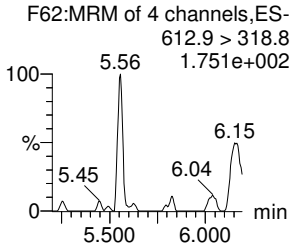
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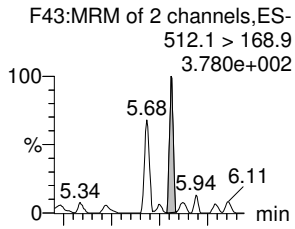


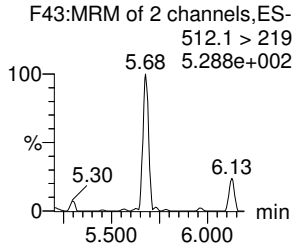
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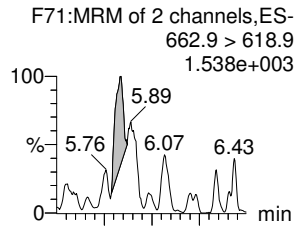


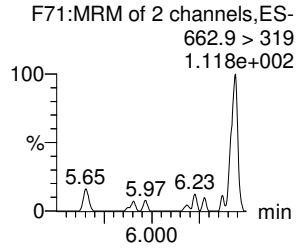
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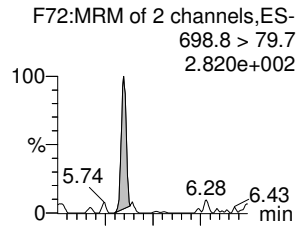


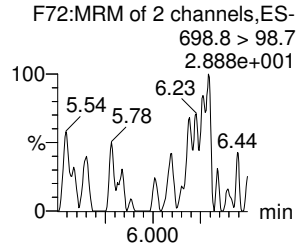
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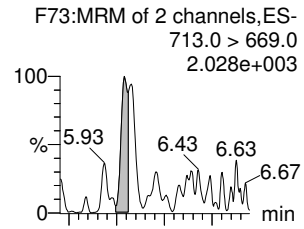


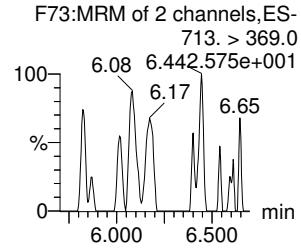
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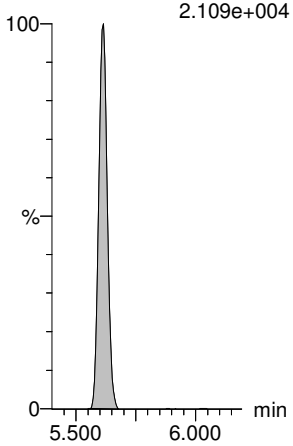


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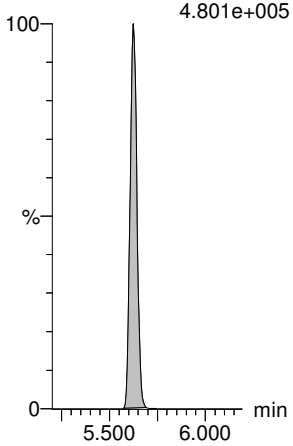




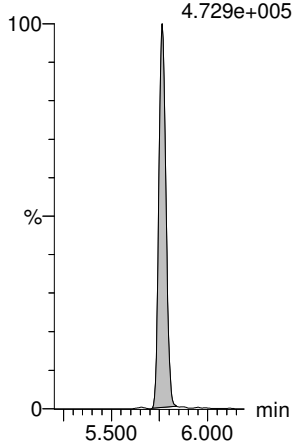
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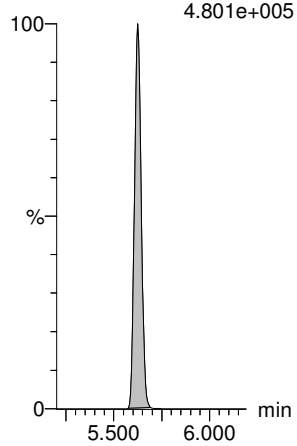
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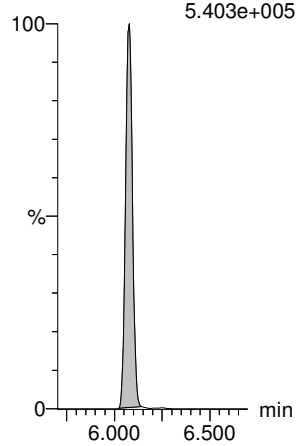
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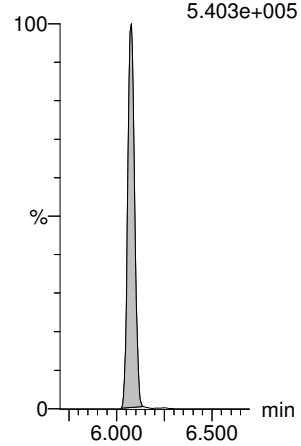
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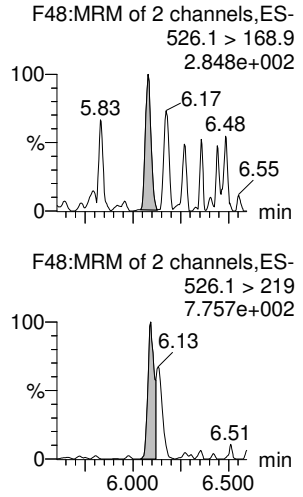


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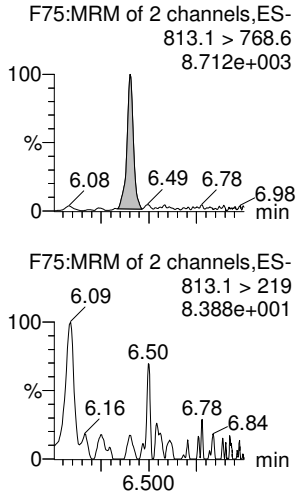
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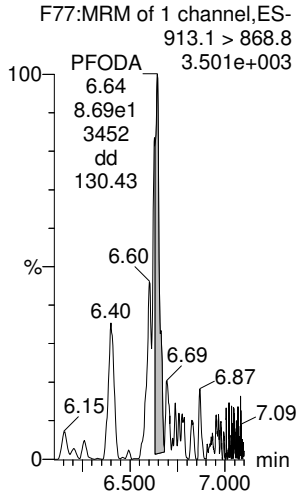
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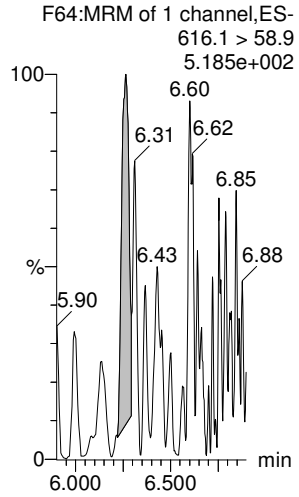
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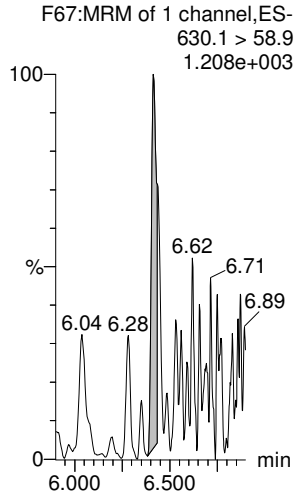
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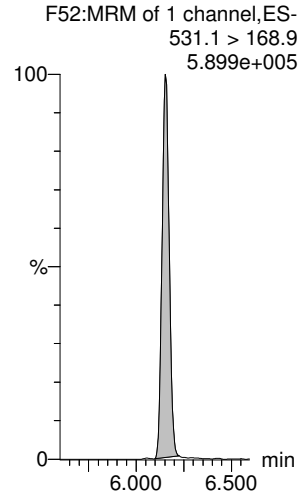
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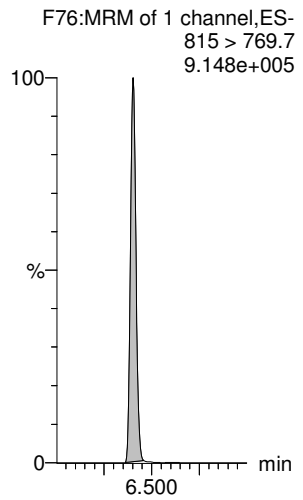
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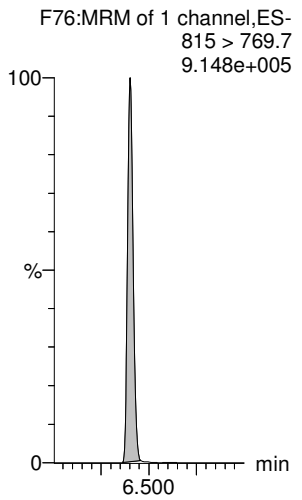
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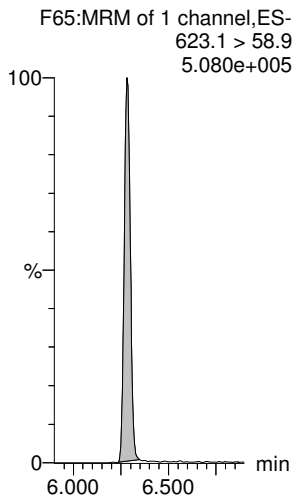
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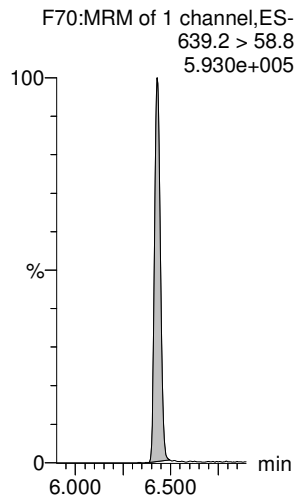
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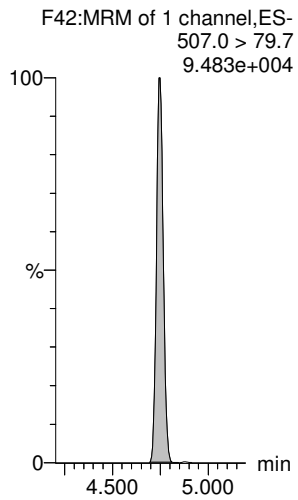
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS

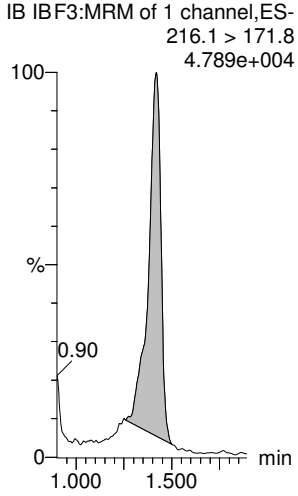


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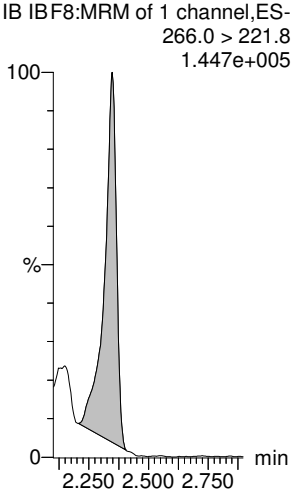
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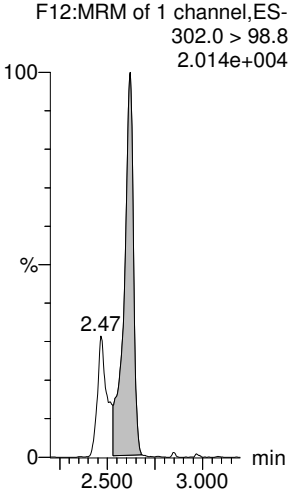
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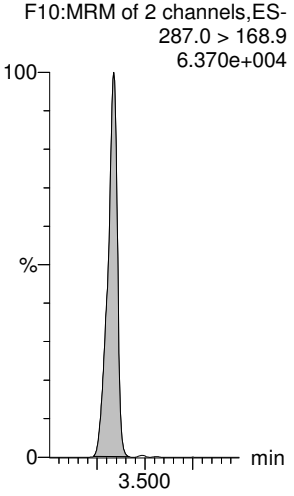
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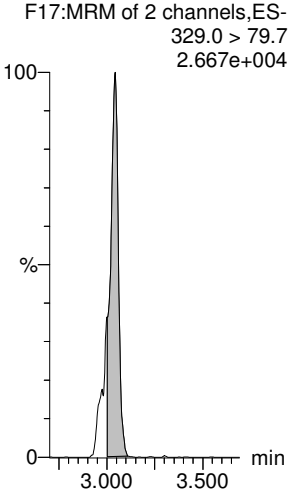
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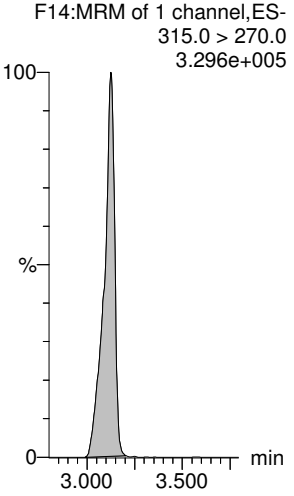
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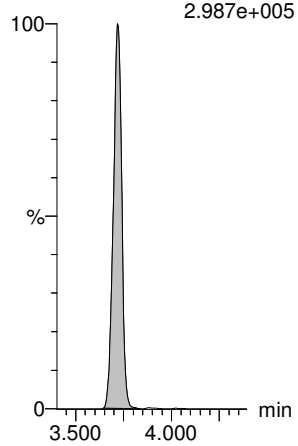
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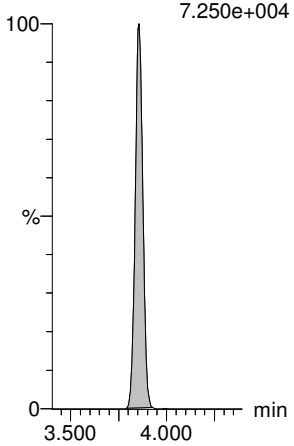
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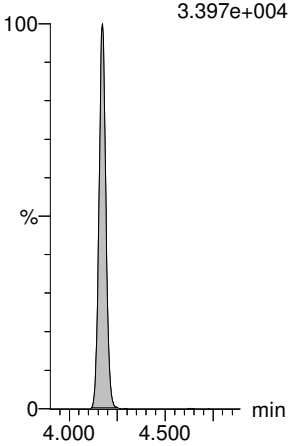
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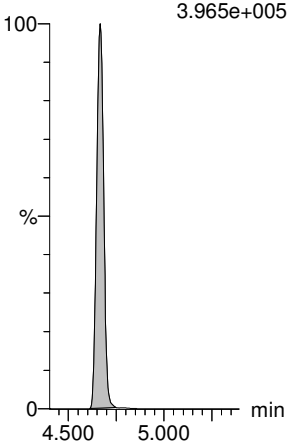
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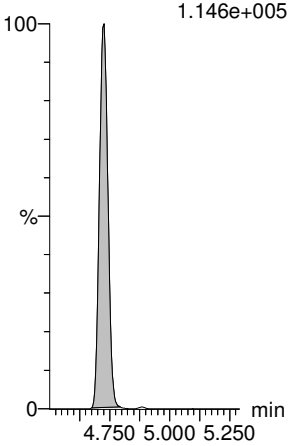
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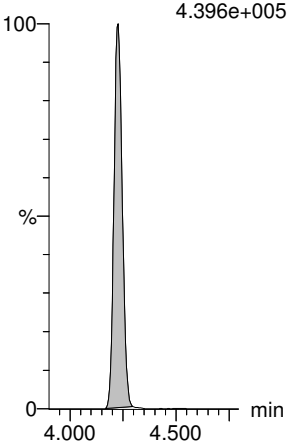
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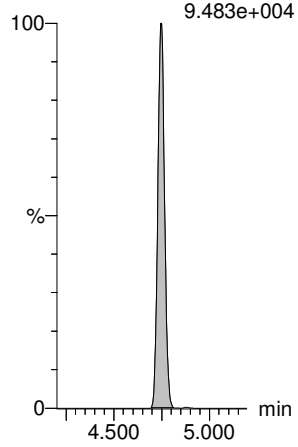


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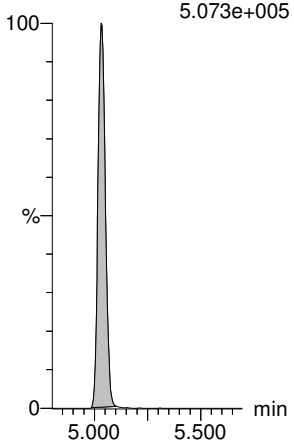
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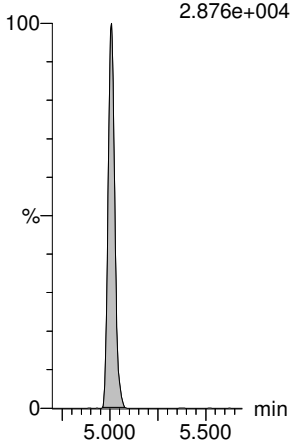
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F42:MRM of 1 channel,ES-
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9.483e+004



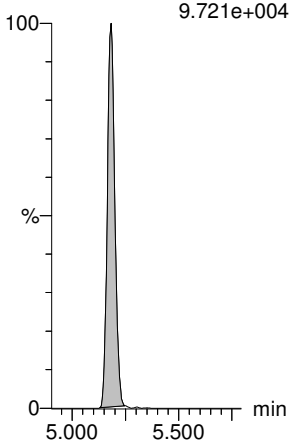
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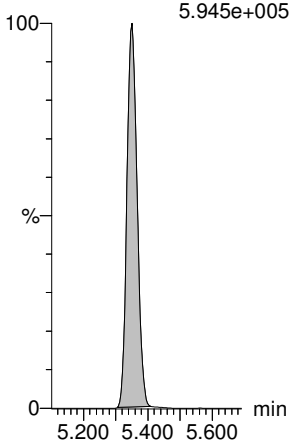
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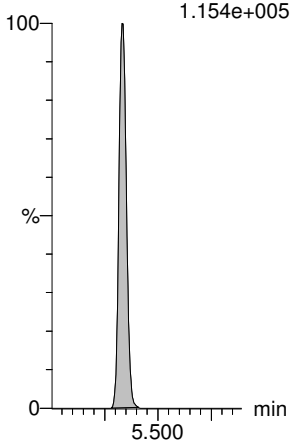
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F58:MRM of 1 channel,ES-
573.3 > 419
9.721e+004



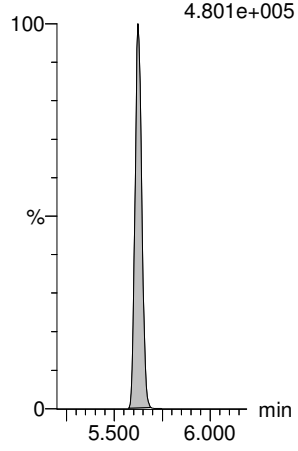
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.945e+005



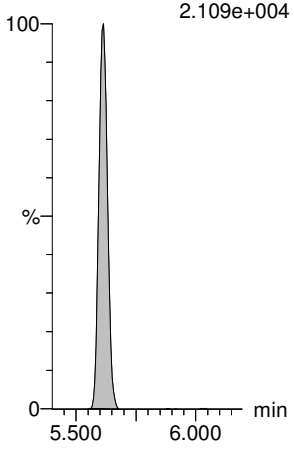
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.154e+005



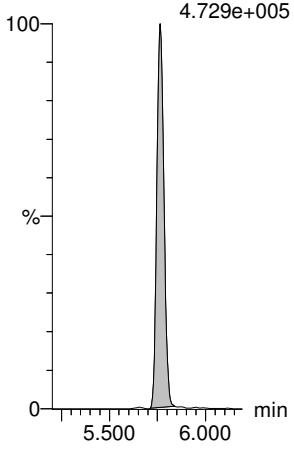
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.801e+005



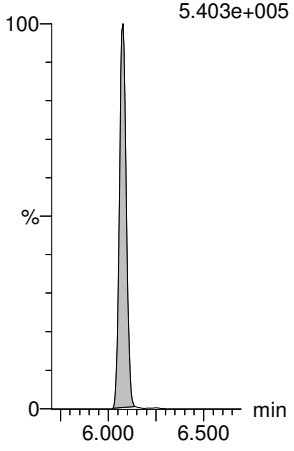
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.109e+004



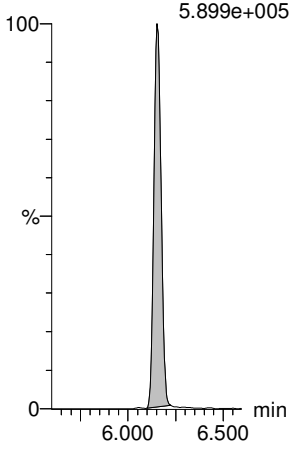
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.729e+005



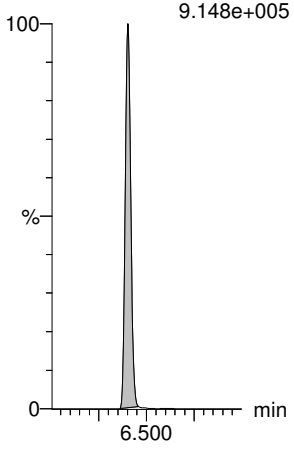
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.403e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.899e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.148e+005

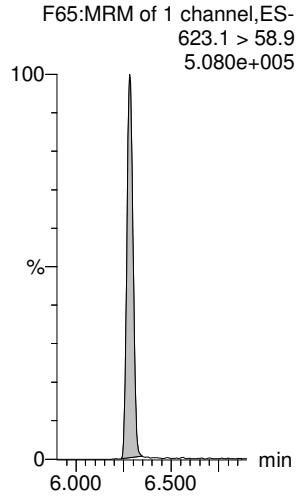


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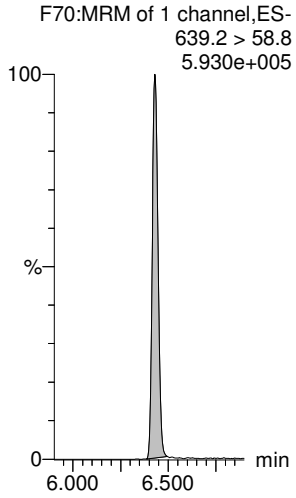
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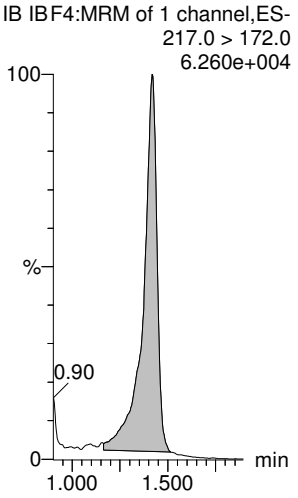
d7-N-MeFOSE-RSD



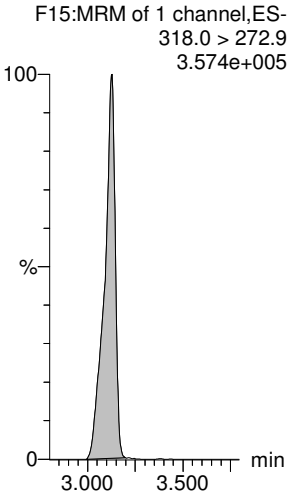
d9-N-EtFOSE-RSD



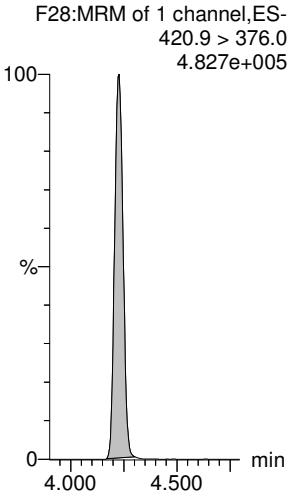
13C4-PFBA



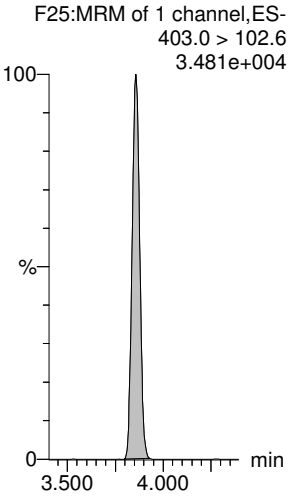
13C5-PFHxA



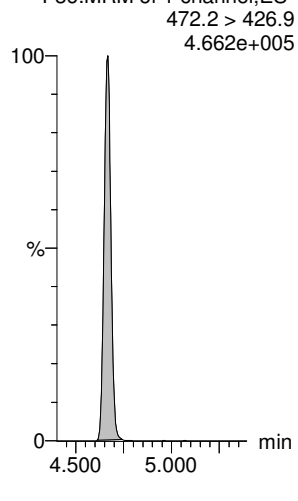
13C8-PFOA



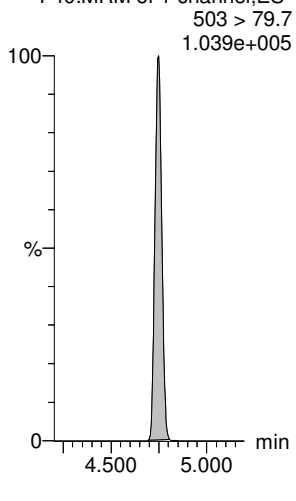
18O2-PFHxS



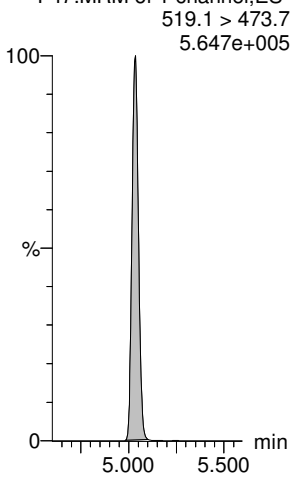
13C9-PFNA



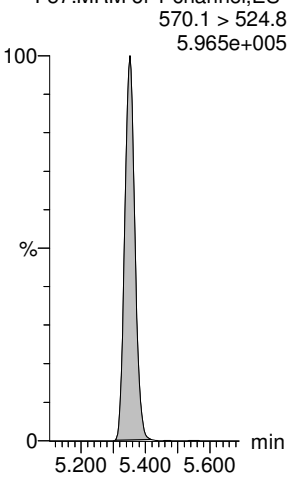
13C4-PFOS



13C6-PFDA



13C7-PFUdA



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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	6.087	3374.603	1.00	1.47	0.023				NO		
2	2	PFPrS	248.9 > 79.7		1117.574	1.00						NO		
3	3	3:3 FTCA	240.9 > 176.9		8162.300	1.00						NO		
4	4	PFPeA	263.1 > 218.9	5.105	8162.300	1.00	2.31	0.008				NO		
5	5	PFBS	299.0 > 79.7		1117.574	1.00						NO		
6	6	4:2 FTS	327.0 > 307		1218.698	1.00						NO		
7	47	13C3-PFBA-EIS	216.1 > 171.8	3374.603		1.00	1.42	3374.603	12.500	3.77	30.2	YES		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1117.574		1.00	2.62	1117.574	12.500	9.31	74.5	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	8162.300		1.00	2.35	8162.300	12.500	7.21	57.7	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	8162.300		1.00	2.35	8162.300	12.500	7.21	57.7	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1117.574		1.00	2.62	1117.574	12.500	9.31	74.5	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1218.698		1.00	3.04	1218.698	12.500	8.18	65.4	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	59.331	20717.152	1.00	3.02	0.036				NO		
15	8	PFPeS	349.>79.7		1117.574	1.00						NO		
16	9	HFPO-DA	285.1 > 168.9		3623.440	1.00						NO		
17	10	5:3 FTCA	340.9 > 236.9	5.697	14782.707	1.00	3.83	0.005		0.0705		NO		
18	11	PFHpA	363.0 > 318.9		14782.707	1.00						NO		
19	12	ADONA	376.8 > 250.9	41.141	14782.707	1.00	3.75	0.035				NO	4.883	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	20717.152		1.00	3.12	20717.152	12.500	11.5	92.3	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1117.574		1.00	2.62	1117.574	12.500	9.31	74.5	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3623.440		1.00	3.34	3623.440	12.500	11.5	92.3	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	14782.707		1.00	3.72	14782.707	12.500	12.0	95.9	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	14782.707		1.00	3.72	14782.707	12.500	12.0	95.9	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	14782.707		1.00	3.72	14782.707	12.500	12.0	95.9	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7		3320.766	1.00						NO		
28	15	6:2 FTS	427.0 > 407	13.202	1390.905	1.00	4.13	0.119				NO		
29	16	L-PFOA	412.8 > 368.9	110.780	19666.736	1.00	4.22	0.070				NO	4.336	YES
30	18	PFecHS	460.8 > 381.0		19666.736	1.00						NO		
31	19	PFHpS	449.0 > 79.7		3852.213	1.00						NO		
32	20	7:3 FTCA	440.9 > 336.9		16544.805	1.00						NO		
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3320.766		1.00	3.86	3320.766	12.500	12.1	97.2	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1390.905		1.00	4.17	1390.905	12.500	11.3	90.6	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	19666.736		1.00	4.23	19666.736	12.500	12.3	98.7	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	19666.736		1.00	4.23	19666.736	12.500	12.3	98.7	NO		

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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	71	13C8-PFOS-EIS	507.0 > 79.7	3852.213		1.00	4.75	3852.213	12.500	13.2	105.6	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	16544.805		1.00	4.67	16544.805	12.500	11.1	88.7	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	21.350	16544.805	1.00	4.66	0.016				NO		
41	22	PFOSA	497.9 > 77.9	5.084	4592.565	1.00	4.65	0.014		0.0480		NO		
42	23	L-PFOS	498.9 > 79.7		3852.213	1.00						NO		
43	25	9Cl-PF30NS	530.7 > 350.8		3852.213	1.00						NO		
44	26	PFDA	513 > 468.8	52.535	20059.008	1.00	4.99	0.033				NO		
45	27	8:2 FTS	526.9 > 507		1123.938	1.00						NO		
46	65	13C5-PFNA-EIS	468.2 > 422.9	16544.805		1.00	4.67	16544.805	12.500	11.1	88.7	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4592.565		1.00	4.73	4592.565	12.500	12.2	97.8	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3852.213		1.00	4.75	3852.213	12.500	13.2	105.6	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3852.213		1.00	4.75	3852.213	12.500	13.2	105.6	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	20059.008		1.00	5.03	20059.008	12.500	12.3	98.1	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1123.938		1.00	5.01	1123.938	12.500	11.0	88.0	NO		
52	-1													
53	28	PFNS	549.1 > 79.7		3852.213	1.00						NO		
54	29	L-MeFOSAA	570 > 419		3885.093	1.00						NO		
55	31	L-EtFOSAA	584.1 > 419	19.145	4576.282	1.00	5.32	0.052		0.0133		NO		
56	33	PFUdA	563.0 > 518.9	141.371	21489.662	1.00	5.33	0.082				NO		
57	34	PFDS	598.8 > 79.7	6.220	3852.213	1.00	5.35	0.020		0.0111		NO		
58	35	11Cl-PF30UdS	630.9 > 450.9	24.052	19587.941	1.00	5.52	0.015				NO		
59	71	13C8-PFOS-EIS	507.0 > 79.7	3852.213		1.00	4.75	3852.213	12.500	13.2	105.6	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	3885.093		1.00	5.18	3885.093	12.500	11.8	94.1	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	4576.282		1.00	5.33	4576.282	12.500	11.6	92.6	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	21489.662		1.00	5.35	21489.662	12.500	13.3	106.3	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3852.213		1.00	4.75	3852.213	12.500	13.2	105.6	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	19587.941		1.00	5.62	19587.941	12.500	11.6	92.9	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	5.157	873.436	1.00	5.61	0.074				NO		
67	37	PFDoA	612.9 > 569.0	139.302	19587.941	1.00	5.76	0.089		0.0106		NO		
68	38	N-MeFOSA	512.1 > 168.9	8.689	19895.789	1.00	5.81	0.065		0.0855		NO		
69	39	PFTrDA	662.9 > 618.9	48.682	19587.941	1.00	5.84	0.031				NO		
70	40	PFDoS	698.8 > 79.7	7.948	22213.631	1.00	5.85	0.004				NO		
71	41	PFTeDA	713.0 > 669.0	80.025	22213.631	1.00	6.04	0.045				NO		
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	873.436		1.00	5.61	873.436	12.500	12.1	97.1	NO		

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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83	13C2-PFDoA-EIS	614.7 > 569.7	19587.941		1.00	5.62	19587.941	12.500	11.6	92.9	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	19895.789		1.00	5.76	19895.789	149.200	141	94.2	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	19587.941		1.00	5.62	19587.941	12.500	11.6	92.9	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	22213.631		1.00	6.08	22213.631	12.500	11.7	93.7	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	22213.631		1.00	6.08	22213.631	12.500	11.7	93.7	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	9.688	25288.002	1.00	6.08	0.057				NO	0.330	YES
80	43	PFHxDA	813.1 > 768.6	332.756	29914.744	1.00	6.40	0.139				NO		
81	44	PFODA	913.1 > 868.8	86.946	29914.744	1.00	6.64	0.036		0.00864		NO		
82	45	N-MeFOSE	616.1 > 58.9	21.383	18268.793	1.00	6.27	0.175		0.142		NO		
83	46	N-EtFOSE	630.1 > 58.9	32.575	20460.025	1.00	6.41	0.238				NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	25288.002		1.00	6.15	25288.002	149.200	140	93.8	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	29914.744		1.00	6.40	29914.744	12.500	11.5	92.3	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	29914.744		1.00	6.40	29914.744	12.500	11.5	92.3	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	18268.793		1.00	6.28	18268.793	149.200	151	101.4	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	20460.025		1.00	6.43	20460.025	149.200	137	91.9	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3852.213		1.00	4.75	3852.213	12.500	13.2	105.6	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	3374.603	5063.513	1.00	1.42	8.331	12.500	10.4	83.3	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	8143.700	22758.422	1.00	2.35	4.473	12.500	7.59	60.7	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	1117.574	1564.224	1.00	2.62	8.931	12.500	7.92	63.4	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	3623.440	22758.422	1.00	3.34	1.990	12.500	11.4	91.3	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1218.698	1564.224	1.00	3.04	9.739	12.500	7.41	59.3	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	20717.152	22758.422	1.00	3.12	11.379	12.500	11.7	93.5	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	14782.707	22758.422	1.00	3.72	8.119	12.500	12.3	98.6	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	3320.766	1564.224	1.00	3.86	26.537	12.500	10.5	84.3	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1390.905	4144.186	1.00	4.17	4.195	12.500	10.9	87.3	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	16544.805	19038.262	1.00	4.67	10.863	12.500	11.6	92.6	NO		
101	68	13C8-PFOSA-RSD	506 > 78	4592.565	21475.115	1.00	4.73	2.673	12.500	12.7	101.8	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	19666.736	21630.061	1.00	4.23	11.365	12.500	12.3	98.6	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3852.213	4144.186	1.00	4.75	11.619	12.500	12.2	97.9	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	20059.008	21429.576	1.00	5.03	11.701	12.500	12.1	97.0	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1123.938	4144.186	1.00	5.01	3.390	12.500	10.3	82.2	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	3885.093	21475.115	1.00	5.18	2.261	12.500	13.0	103.9	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	21489.662	21475.115	1.00	5.35	12.508	12.500	12.4	99.2	NO		

Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 11:58:03 Pacific Standard Time
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Name: 200225P1-13, Date: 25-Feb-2020, Time: 20:04:45, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82	d5-N-EtFOSAA-RSD	589.3 > 419	4576.282	21475.115	1.00	5.33	2.664	12.500	11.5	92.0	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	19587.941	21429.576	1.00	5.62	11.426	12.500	11.8	94.4	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	873.436	4144.186	1.00	5.61	2.635	12.500	11.1	88.4	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	19895.789	21475.115	1.00	5.76	11.581	149.200	144	96.7	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	22213.631	21475.115	1.00	6.08	12.930	12.500	12.3	98.8	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	25288.002	21475.115	1.00	6.15	14.719	149.200	148	99.5	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	29914.744	21475.115	1.00	6.40	17.412	12.500	11.6	93.2	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	18268.793	21475.115	1.00	6.28	10.634	149.200	146	97.8	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	20460.025	21475.115	1.00	6.43	11.909	149.200	139	93.0	NO		
119	99	13C4-PFBA	217.0 > 172.0	5063.513	5063.513	1.00	1.42	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	22758.422	22758.422	1.00	3.13	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	21630.061	21630.061	1.00	4.23	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1564.224	1564.224	1.00	3.86	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	19038.262	19038.262	1.00	4.67	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	4144.186	4144.186	1.00	4.75	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	21429.576	21429.576	1.00	5.04	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	21475.115	21475.115	1.00	5.35	12.500	12.500	12.5	100.0	NO		

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PFNS not valid

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Name: 200225P1-53, Date: 26-Feb-2020, Time: 03:04:57, ID: ST200225P1-12 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	10138.624	11104.702	1.00	1.42	11.413	10.000	10.2	102.3	NO		
2	2	PFPrS	248.9 > 79.7	2142.382	1538.521	1.00	1.75	17.406	10.000	10.5	105.3	NO	2.382	NO
3	3	3:3 FTCA	240.9 > 176.9	912.257	14167.407	1.00	2.20	0.805	10.000	10.4	104.2	NO	4.004	NO
4	4	PFPeA	263.1 > 218.9	11858.240	14167.407	1.00	2.34	10.463	10.000	10.7	106.9	NO		
5	5	PFBS	299.0 > 79.7	2993.937	1538.521	1.00	2.62	24.325	10.000	10.5	105.0	NO	3.006	NO
6	6	4:2 FTS	327.0 > 307	1871.148	1718.875	1.00	3.04	13.607	10.000	9.96	99.6	NO	0.896	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	11104.702		1.00	1.42	11104.702	12.500	12.4	99.3	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1538.521		1.00	2.62	1538.521	12.500	12.8	102.5	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	14167.407		1.00	2.34	14167.407	12.500	12.5	100.1	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	14167.407		1.00	2.34	14167.407	12.500	12.5	100.1	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1538.521		1.00	2.62	1538.521	12.500	12.8	102.5	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1718.875		1.00	3.04	1718.875	12.500	11.5	92.3	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	18673.750	23428.365	1.00	3.13	9.963	10.000	11.1	110.6	NO	16.219	NO
15	8	PFPeS	349.>79.7	3168.291	1538.521	1.00	3.32	25.741	10.000	10.9	108.7	NO	2.648	NO
16	9	HFPO-DA	285.1 > 168.9	3659.602	4034.481	1.00	3.34	11.339	10.000	11.4	113.9	NO	2.769	NO
17	10	5:3 FTCA	340.9 > 236.9	2236.564	15984.586	1.00	3.67	1.749	10.000	9.44	94.4	NO	1.734	NO
18	11	PFHpA	363.0 > 318.9	15986.570	15984.586	1.00	3.73	12.502	10.000	10.1	100.7	NO	29.422	NO
19	12	ADONA	376.8 > 250.9	34532.645	15984.586	1.00	3.83	27.005	10.000	9.46	94.6	NO	3.785	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	23428.365		1.00	3.13	23428.365	12.500	13.1	104.4	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1538.521		1.00	2.62	1538.521	12.500	12.8	102.5	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	4034.481		1.00	3.34	4034.481	12.500	12.8	102.7	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	15984.586		1.00	3.72	15984.586	12.500	13.0	103.7	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	15984.586		1.00	3.72	15984.586	12.500	13.0	103.7	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	15984.586		1.00	3.72	15984.586	12.500	13.0	103.7	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2773.517	3211.341	1.00	3.86	10.796	10.000	10.6	105.5	NO	2.027	NO
28	15	6:2 FTS	427.0 > 407	2036.926	1442.435	1.00	4.17	17.652	10.000	11.2	112.0	NO	1.132	NO
29	16	L-PFOA	412.8 > 368.9	19583.383	21224.543	1.00	4.23	11.533	10.000	10.1	101.1	NO	2.920	NO
30	18	PFecHS	460.8 > 381.0	2760.345	21224.543	1.00	4.25	1.626	10.000	10.9	109.0	NO	0.465	NO
31	19	PFHpS	449.0 > 79.7	3159.228	3684.929	1.00	4.34	10.717	10.000	11.5	115.3	NO	2.039	NO
32	20	7:3 FTCA	440.9 > 336.9	2414.791	20823.170	1.00	4.66	1.450	10.000	9.39	93.9	NO	1.481	NO
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3211.341		1.00	3.86	3211.341	12.500	11.7	94.0	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1442.435		1.00	4.18	1442.435	12.500	11.7	94.0	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	21224.543		1.00	4.23	21224.543	12.500	13.3	106.6	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	21224.543		1.00	4.23	21224.543	12.500	13.3	106.6	NO		

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Name: 200225P1-53, Date: 26-Feb-2020, Time: 03:04:57, ID: ST200225P1-12 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	71	13C8-PFOS-EIS	507.0 > 79.7	3684.929		1.00	4.75	3684.929	12.500	12.6	101.0	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	20823.170		1.00	4.67	20823.170	12.500	14.0	111.7	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	18180.563	20823.170	1.00	4.67	10.914	10.000	9.12	91.2	NO	7.293	NO
41	22	PFOSA	497.9 > 77.9	3185.529	4923.242	1.00	4.73	8.088	10.000	9.88	98.8	NO	24.084	NO
42	23	L-PFOS	498.9 > 79.7	3090.084	3684.929	1.00	4.75	10.482	10.000	11.2	112.0	NO	2.151	NO
43	25	9Cl-PF30NS	530.7 > 350.8	3008.673	3684.929	1.00	4.96	10.206	10.000	10.1	101.3	NO	14.117	NO
44	26	PFDA	513 > 468.8	19288.559	20819.160	1.00	5.04	11.581	10.000	9.84	98.4	NO	10.368	NO
45	27	8:2 FTS	526.9 > 507	1454.139	1323.310	1.00	5.01	13.736	10.000	10.9	109.4	NO	3.437	NO
46	65	13C5-PFNA-EIS	468.2 > 422.9	20823.170		1.00	4.67	20823.170	12.500	14.0	111.7	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4923.242		1.00	4.73	4923.242	12.500	13.1	104.8	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3684.929		1.00	4.75	3684.929	12.500	12.6	101.0	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3684.929		1.00	4.75	3684.929	12.500	12.6	101.0	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	20819.160		1.00	5.04	20819.160	12.500	12.7	101.9	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1323.310		1.00	5.00	1323.310	12.500	13.0	103.6	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	3165.731	3684.929	1.00	5.10	10.739	10.000	12.0	120.4	NO	2.383	NO
54	29	L-MeFOSAA	570 > 419	5643.036	4484.013	1.00	5.19	15.731	10.000	8.14	81.4	NO	2.163	NO
55	31	L-EtFOSAA	584.1 > 419	5483.549	5729.217	1.00	5.34	11.964	10.000	10.0	100.0	NO	1.161	NO
56	33	PFUdA	563.0 > 518.9	16407.303	21343.498	1.00	5.35	9.609	10.000	10.3	102.7	NO	25.691	NO
57	34	PFDS	598.8 > 79.7	2722.575	3684.929	1.00	5.40	9.236	10.000	12.0	120.3	NO	1.899	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	7506.242	19140.156	1.00	5.56	4.902	10.000	10.7	107.2	NO	18.381	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3684.929		1.00	4.75	3684.929	12.500	12.6	101.0	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	4484.013		1.00	5.18	4484.013	12.500	13.6	108.6	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	5729.217		1.00	5.34	5729.217	12.500	14.5	115.9	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	21343.498		1.00	5.35	21343.498	12.500	13.2	105.6	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3684.929		1.00	4.75	3684.929	12.500	12.6	101.0	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	19140.156		1.00	5.63	19140.156	12.500	11.4	90.8	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	1629.179	936.011	1.00	5.61	21.757	10.000	9.71	97.1	NO	1.015	NO
67	37	PFDoA	612.9 > 569.0	18397.139	19140.156	1.00	5.63	12.015	10.000	11.1	111.0	NO	10.636	NO
68	38	N-MeFOSA	512.1 > 168.9	7852.328	21849.549	1.00	5.74	53.620	50.000	51.0	101.9	NO	1.675	NO
69	39	PFTrDA	662.9 > 618.9	18880.117	19140.156	1.00	5.87	12.330	10.000	11.0	110.1	NO	64.676	NO
70	40	PFDoS	698.8 > 79.7	3169.839	20588.139	1.00	5.89	1.925	10.000	11.9	118.9	NO	2.855	NO
71	41	PFTeDA	713.0 > 669.0	15924.633	20588.139	1.00	6.08	9.669	10.000	10.2	101.5	NO	21.045	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	936.011		1.00	5.61	936.011	12.500	13.0	104.1	NO		

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Name: 200225P1-53, Date: 26-Feb-2020, Time: 03:04:57, ID: ST200225P1-12 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83	13C2-PFDoA-EIS	614.7 > 569.7	19140.156		1.00	5.63	19140.156	12.500	11.4	90.8	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	21849.549		1.00	5.76	21849.549	149.200	154	103.5	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	19140.156		1.00	5.63	19140.156	12.500	11.4	90.8	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	20588.139		1.00	6.07	20588.139	12.500	10.9	86.9	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	20588.139		1.00	6.07	20588.139	12.500	10.9	86.9	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	9626.319	27826.098	1.00	6.14	51.615	50.000	49.9	99.8	NO	1.651	NO
80	43	PFHxDA	813.1 > 768.6	18972.604	28575.182	1.00	6.40	8.299	10.000	11.1	110.6	NO	194.487	NO
81	44	PFODA	913.1 > 868.8	25324.531	28575.182	1.00	6.63	11.078	10.000	12.5	125.3	NO		
82	45	N-MeFOSE	616.1 > 58.9	7010.353	19512.000	1.00	6.29	53.605	50.000	49.9	99.9	NO		
83	46	N-EtFOSE	630.1 > 58.9	8291.110	23608.133	1.00	6.44	52.399	50.000	53.0	106.1	NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	27826.098		1.00	6.15	27826.098	149.200	154	103.2	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	28575.182		1.00	6.40	28575.182	12.500	11.0	88.2	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	28575.182		1.00	6.40	28575.182	12.500	11.0	88.2	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	19512.000		1.00	6.28	19512.000	149.200	162	108.3	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	23608.133		1.00	6.43	23608.133	149.200	158	106.0	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3684.929		1.00	4.75	3684.929	12.500	12.6	101.0	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	11104.702	13524.131	1.00	1.42	10.264	12.500	12.8	102.7	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	14167.407	23890.418	1.00	2.34	7.413	12.500	12.6	100.6	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	1538.521	1469.114	1.00	2.62	13.091	12.500	11.6	92.9	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	4034.481	23890.418	1.00	3.34	2.111	12.500	12.1	96.8	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1718.875	1469.114	1.00	3.04	14.625	12.500	11.1	89.1	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	23428.365	23890.418	1.00	3.13	12.258	12.500	12.6	100.7	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	15984.586	23890.418	1.00	3.72	8.363	12.500	12.7	101.6	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	3211.341	1469.114	1.00	3.86	27.324	12.500	10.8	86.8	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1442.435	4090.575	1.00	4.18	4.408	12.500	11.5	91.7	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	20823.170	22192.109	1.00	4.67	11.729	12.500	12.5	100.0	NO		
101	68	13C8-PFOSA-RSD	506 > 78	4923.242	22470.008	1.00	4.73	2.739	12.500	13.0	104.3	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	21224.543	23414.926	1.00	4.23	11.331	12.500	12.3	98.3	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3684.929	4090.575	1.00	4.75	11.260	12.500	11.9	94.9	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	20819.160	21244.740	1.00	5.04	12.250	12.500	12.7	101.5	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1323.310	4090.575	1.00	5.00	4.044	12.500	12.3	98.1	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	4484.013	22470.008	1.00	5.18	2.494	12.500	14.3	114.6	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	21343.498	22470.008	1.00	5.35	11.873	12.500	11.8	94.2	NO		

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Name: 200225P1-53, Date: 26-Feb-2020, Time: 03:04:57, ID: ST200225P1-12 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82	d5-N-EtFOSAA-RSD	589.3 > 419	5729.217	22470.008	1.00	5.34	3.187	12.500	13.8	110.1	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	19140.156	21244.740	1.00	5.63	11.262	12.500	11.6	93.0	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	936.011	4090.575	1.00	5.61	2.860	12.500	12.0	96.0	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	21849.549	22470.008	1.00	5.76	12.155	149.200	151	101.5	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	20588.139	22470.008	1.00	6.07	11.453	12.500	10.9	87.5	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	27826.098	22470.008	1.00	6.15	15.480	149.200	156	104.6	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	28575.182	22470.008	1.00	6.40	15.896	12.500	10.6	85.1	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	19512.000	22470.008	1.00	6.28	10.854	149.200	149	99.8	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	23608.133	22470.008	1.00	6.43	13.133	149.200	153	102.6	NO		
119	99	13C4-PFBA	217.0 > 172.0	13524.131	13524.131	1.00	1.42	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	23890.418	23890.418	1.00	3.13	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	23414.926	23414.926	1.00	4.23	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1469.114	1469.114	1.00	3.86	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	22192.109	22192.109	1.00	4.67	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	4090.575	4090.575	1.00	4.75	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	21244.740	21244.740	1.00	5.04	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	22470.008	22470.008	1.00	5.35	12.500	12.500	12.5	100.0	NO		

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Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 14:31:44 Pacific Standard Time
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Method: P:\PFAS5.pro\MethDB\NEW_PFAS_80C_022520.mdb 26 Feb 2020 11:36:08
Calibration: P:\PFAS5.pro\CurveDB\C18_VAL-PFAS_Q5_02-25-20.cdb 26 Feb 2020 11:25:03

Compound name: PFBA

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1	1	200225P1-1	IPA	25-Feb-20	17:58:29
2	2	200225P1-2	IPA	25-Feb-20	18:09:11
3	3	200225P1-3	ST200225P1-1 PFC CS-2 20B1102	25-Feb-20	18:19:42
4	4	200225P1-4	ST200225P1-2 PFC CS-1 20B1103	25-Feb-20	18:30:13
5	5	200225P1-5	ST200225P1-3 PFC CS0 20B1104	25-Feb-20	18:40:42
6	6	200225P1-6	ST200225P1-4 PFC CS1 20B1105	25-Feb-20	18:51:13
7	7	200225P1-7	ST200225P1-5 PFC CS2 20B1106	25-Feb-20	19:01:42
8	8	200225P1-8	ST200225P1-6 PFC CS3 20B1107	25-Feb-20	19:12:14
9	9	200225P1-9	ST200225P1-7 PFC CS4 20B1108	25-Feb-20	19:22:44
10	10	200225P1-10	ST200225P1-8 PFC CS5 20B1109	25-Feb-20	19:33:15
11	11	200225P1-11	ST200225P1-9 PFC CS6 20B1110	25-Feb-20	19:43:44
12	12	200225P1-12	ST200225P1-10 PFC CS7 20B1111	25-Feb-20	19:54:16
13	13	200225P1-13	IB	25-Feb-20	20:04:45
14	14	200225P1-14	ICV200225P1-1 PFC ICV 20B1112	25-Feb-20	20:15:16
15	15	200225P1-15	IB	25-Feb-20	20:25:46
16	16	200225P1-16	2000305-01 8 Chestnut Dr 0.11658	25-Feb-20	20:36:14
17	17	200225P1-17	2000305-02 10 Chestnut Dr 0.11788	25-Feb-20	20:46:46
18	18	200225P1-18	B0B0146-BLK1 Method Blank 0.25	25-Feb-20	20:57:15
19	19	200225P1-19	B0B0146-BS1 OPR 0.25	25-Feb-20	21:07:48
20	20	200225P1-20	B0B0146-BSD1 LCSD 0.25	25-Feb-20	21:18:16
21	21	200225P1-21	2000322-10 3EFF 0.25804	25-Feb-20	21:28:47
22	22	200225P1-22	2000322-11 3INF FRB 0.24918	25-Feb-20	21:39:19
23	23	200225P1-23	2000322-12 3INF 0.24453	25-Feb-20	21:49:47
24	24	200225P1-24	2000322-13 2EFF 0.25549	25-Feb-20	22:00:18
25	25	200225P1-25	2000322-14 2INF FRB 0.24928	25-Feb-20	22:10:49
26	26	200225P1-26	2000322-15 2INF 0.24263	25-Feb-20	22:21:18
27	27	200225P1-27	2000322-16 Post CCB 1BEFF 0.25545	25-Feb-20	22:31:50
28	28	200225P1-28	2000322-17 1INF FRB 0.18612	25-Feb-20	22:42:20
29	29	200225P1-29	2000322-18 1INF 0.25095	25-Feb-20	22:52:49
30	30	200225P1-30	2000322-19 1EFF 0.24912	25-Feb-20	23:03:20
31	31	200225P1-31	B0B0123-BLK1 Method Blank 0.25	25-Feb-20	23:13:50
32	32	200225P1-32	B0B0123-BS1 OPR 0.25	25-Feb-20	23:24:19

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Compound name: PFBA

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34	34	200225P1-34	2000318-01 RW-9 0.2508	25-Feb-20	23:45:22
35	35	200225P1-35	ST200225P1-11 PFC CS3 20B1107	25-Feb-20	23:55:50
36	36	200225P1-36	IB	26-Feb-20	00:06:22
37	37	200225P1-37	2000318-02 RW-10 0.25656	26-Feb-20	00:16:53
38	38	200225P1-38	2000318-03 RW-11 0.25855	26-Feb-20	00:27:22
39	39	200225P1-39	2000318-04 FRB-5 0.2568	26-Feb-20	00:37:53
40	40	200225P1-40	B0B0127-BLK1 Method Blank 0.25	26-Feb-20	00:48:24
41	41	200225P1-41	B0B0127-BS1 OPR 0.25	26-Feb-20	00:58:53
42	42	200225P1-42	B0B0127-MS1@5X Matrix Spike 0.25239	26-Feb-20	01:09:24
43	43	200225P1-43	B0B0127-MSD1@5X Matrix Spike Dup 0.24499	26-Feb-20	01:19:53
44	44	200225P1-44	2000321-01 EB02-20200213 0.25641	26-Feb-20	01:30:25
45	45	200225P1-45	2000321-02@5X I013WMW02SR-20200213 0.24488	26-Feb-20	01:40:55
46	46	200225P1-46	2000321-03@5X IS72MW17S-20200213 0.24942	26-Feb-20	01:51:24
47	47	200225P1-47	2000321-04@5X I012MW01SR-20200213 0.24804	26-Feb-20	02:01:56
48	48	200225P1-48	2000321-05@5X I012MW10S-20200213 0.24821	26-Feb-20	02:12:26
49	49	200225P1-49	2000321-06@5X I012MW11S-20200213 0.25358	26-Feb-20	02:22:55
50	50	200225P1-50	2000321-07@5X I012MW15S-20200213 0.25036	26-Feb-20	02:33:27
51	51	200225P1-51	2000321-08@5X DUP02-20200213 0.2466	26-Feb-20	02:43:55
52	52	200225P1-52	2000321-09@5X I003MW01S-20200213 0.25107	26-Feb-20	02:54:28
53	53	200225P1-53	ST200225P1-12 PFC CS3 20B1107	26-Feb-20	03:04:57
54	54	200225P1-54	IB	26-Feb-20	03:15:28
55	55	200225P1-55	2000321-10@5X I003MW15S-20200213 0.24522	26-Feb-20	03:25:58
56	56	200225P1-56	2000321-11@5X I003MW02S-20200213 0.24704	26-Feb-20	03:36:27
57	57	200225P1-57	2000314-06@5X I006MW01S-20200212 0.2551	26-Feb-20	03:46:59
58	58	200225P1-58	2000314-07@5X I006MW08S-20200212 0.25052	26-Feb-20	03:57:28
59	59	200225P1-59	2000314-07 I006MW08S-20200212 0.25052	26-Feb-20	04:07:59
60	60	200225P1-60	IB	26-Feb-20	04:18:30
61	61	200225P1-61	2000314-08@5X BMW07S-20200212 0.2539	26-Feb-20	04:28:59
62	62	200225P1-62	2000314-09@5X I005MW01SR-20200212 0.25498	26-Feb-20	04:39:30
63	63	200225P1-63	2000314-09 I005MW01SR-20200212 0.25498	26-Feb-20	04:50:01
64	64	200225P1-64	IB	26-Feb-20	05:00:30
65	65	200225P1-65	2000314-10@5X DUP05-20200212 0.25284	26-Feb-20	05:11:00
66	66	200225P1-66	2000314-11 IS72MW15S-20200212 0.25446	26-Feb-20	05:21:31
67	67	200225P1-67	ST200225P1-13 PFC CS3 20B1107	26-Feb-20	05:32:00
68	68	200225P1-68	IB	26-Feb-20	05:42:31

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Compound name: PFBA

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70	70 200225P1-70	2000292-03 11535BFR POE Effluent-1 0.25426	26-Feb-20	06:03:31
71	71 200225P1-71	B0B0102-BS2 OPR 0.125	26-Feb-20	06:14:03
72	72 200225P1-72	ST200225P1-14 PFC CS3 20B1107	26-Feb-20	06:24:33
73	73 200225P1-73	IB	26-Feb-20	06:35:02

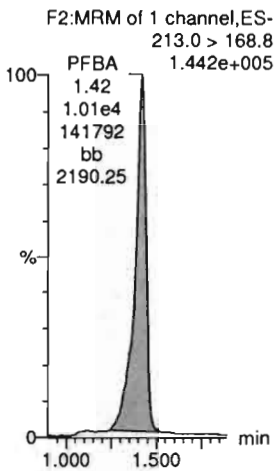
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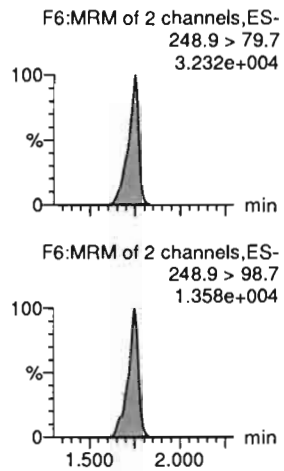
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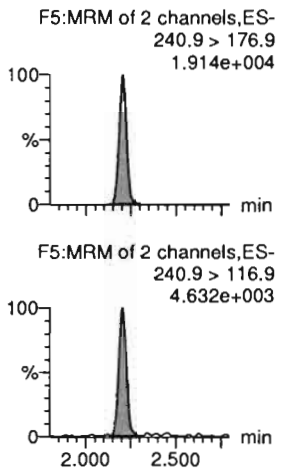
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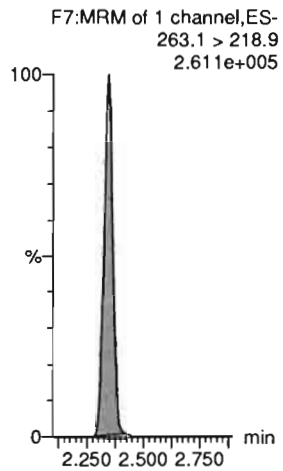
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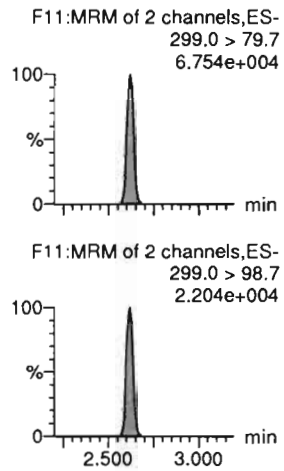
3:3 FTCA



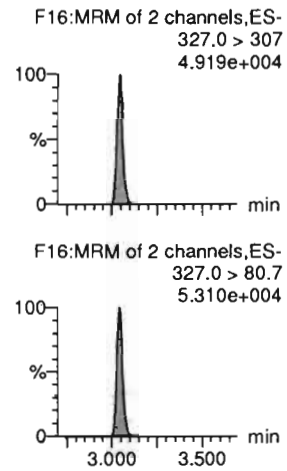
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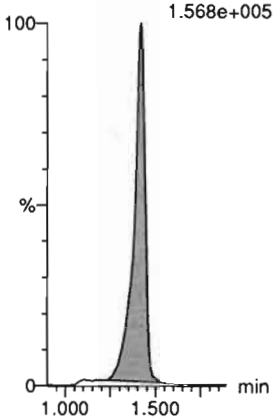
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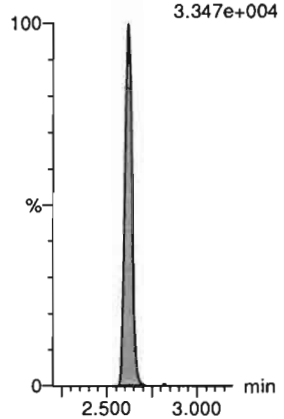
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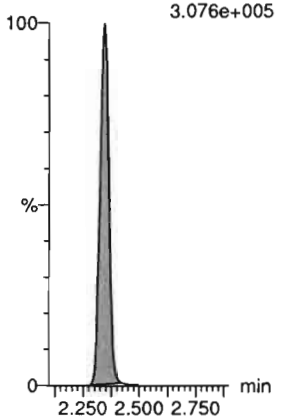
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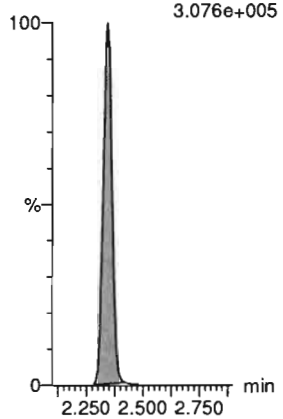
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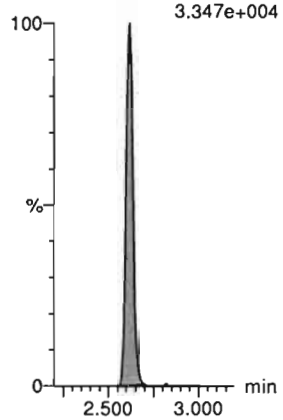
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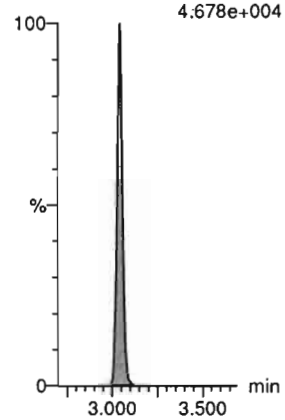
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS



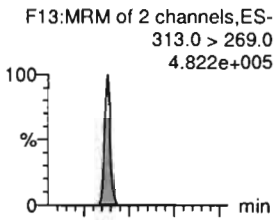
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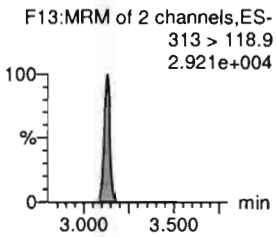
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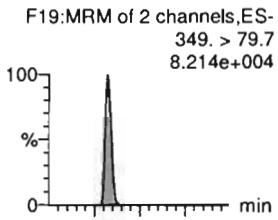
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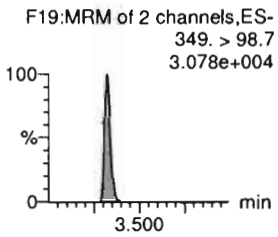
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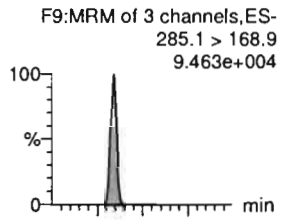


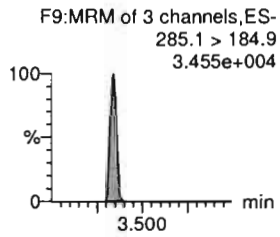
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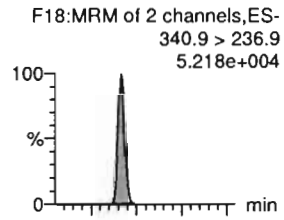


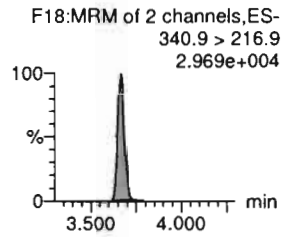
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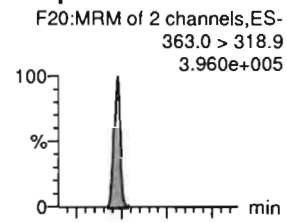


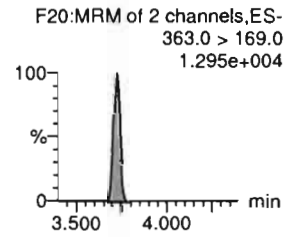
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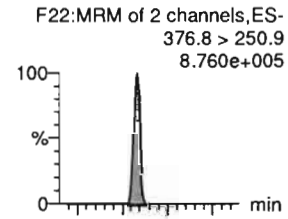


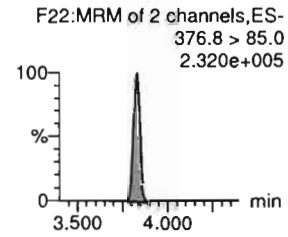
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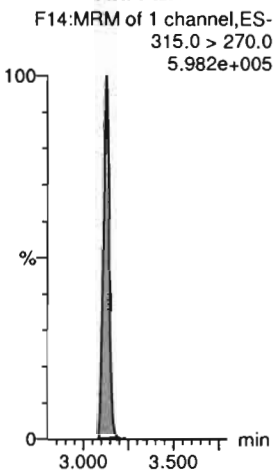


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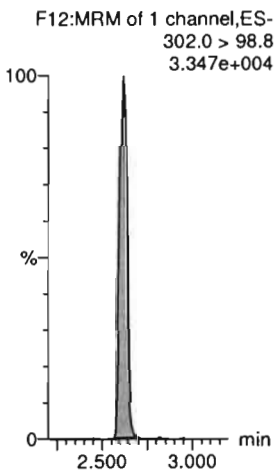




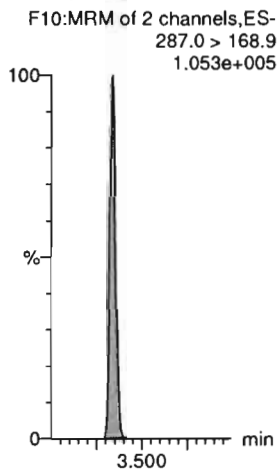
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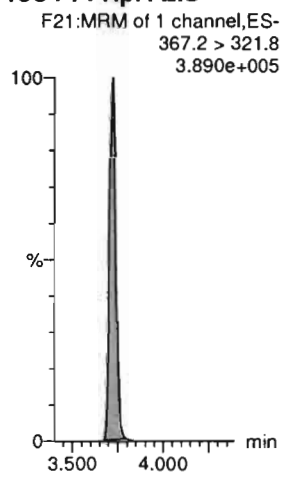
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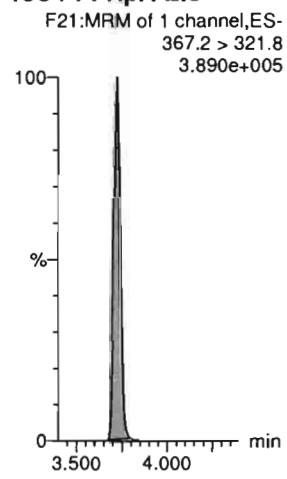
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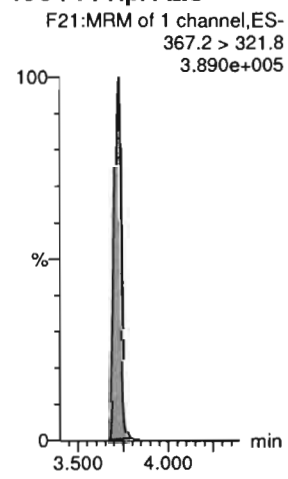
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13C4-PFHpA-EIS



13C4-PFHpA-EIS



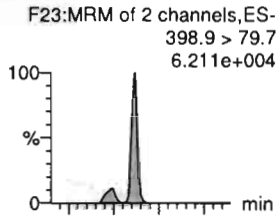
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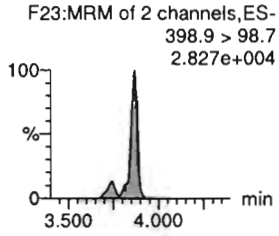
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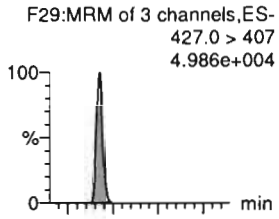
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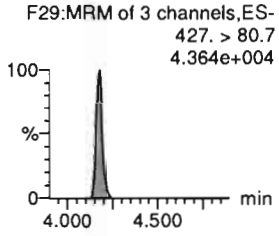
L-PFHxS



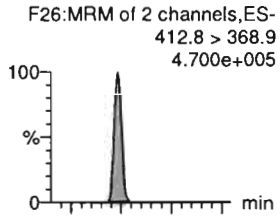


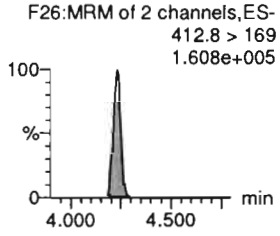
6:2 FTS



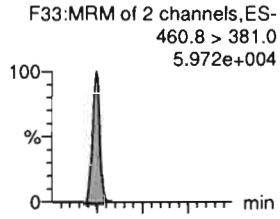


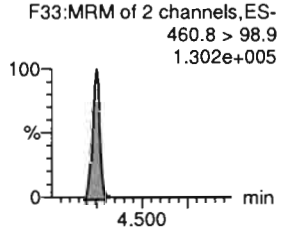
L-PFOA



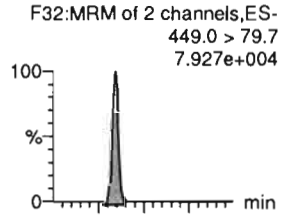


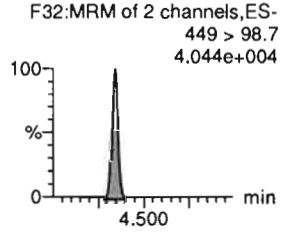
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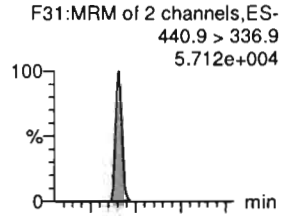


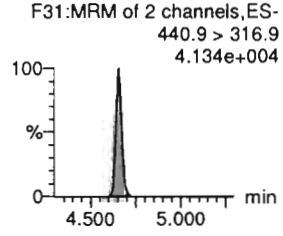
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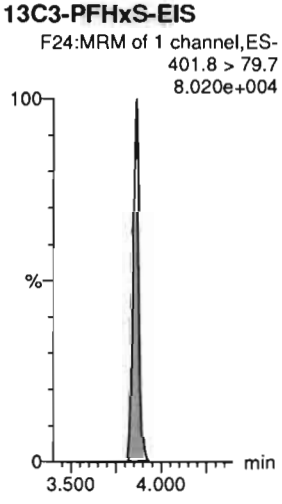


7:3 FTCA

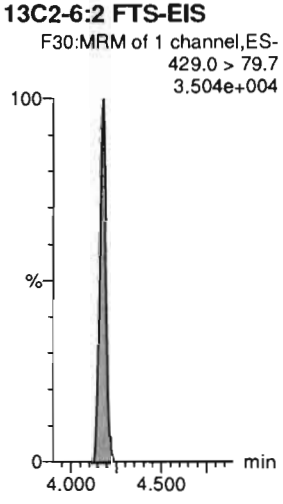




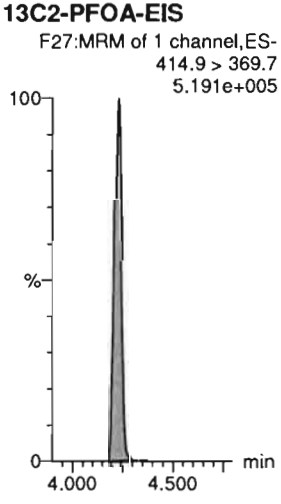
13C3-PFHxS-EIS



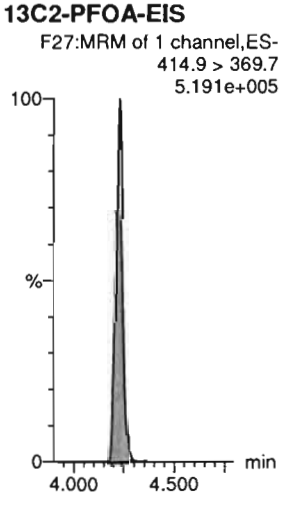
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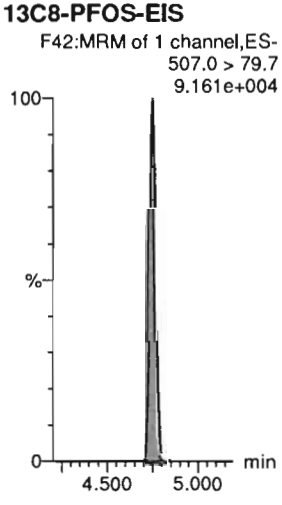
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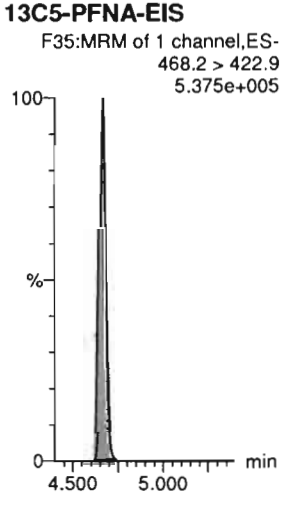
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS



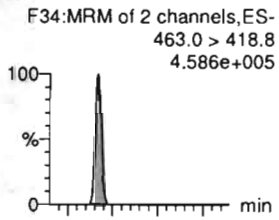
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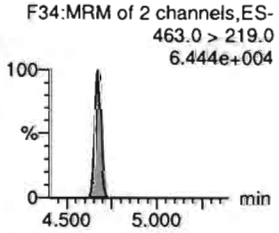
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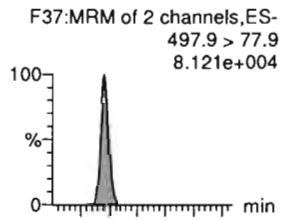
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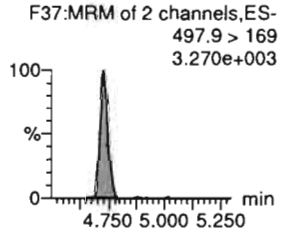
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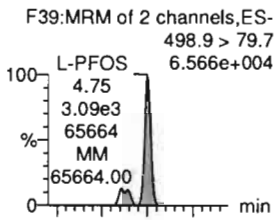


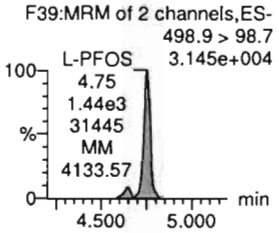
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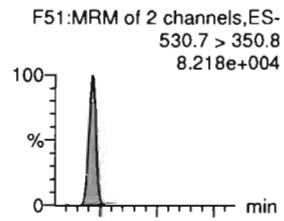


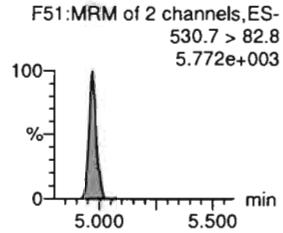
L-PFOS



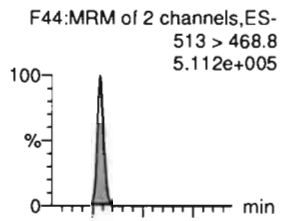


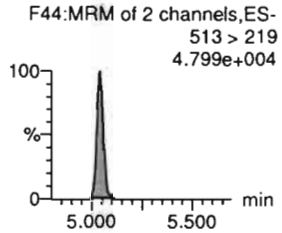
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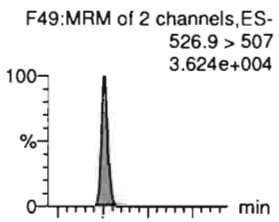


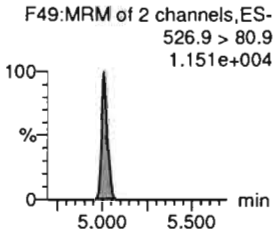
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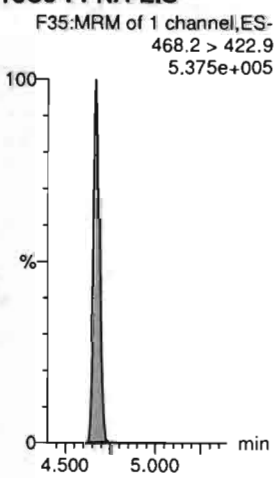


8:2 FTS

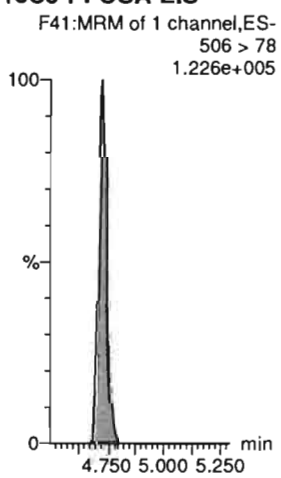




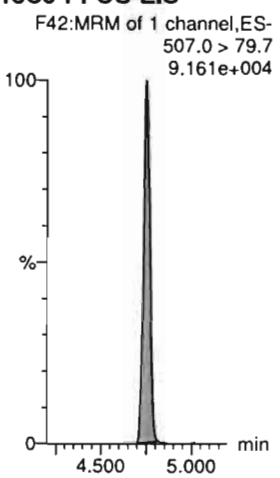
13C5-PFNA-EIS



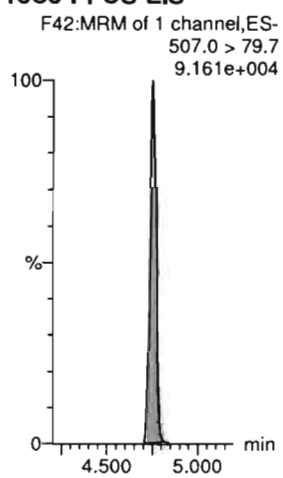
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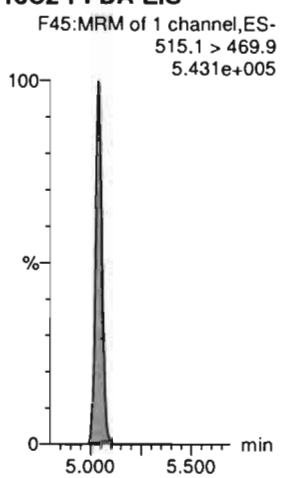
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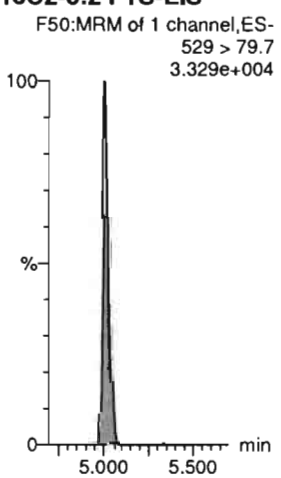
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS



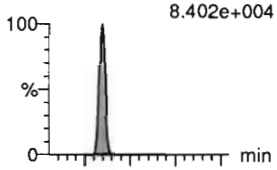
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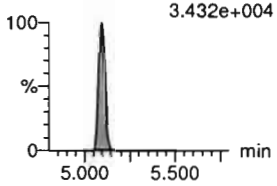
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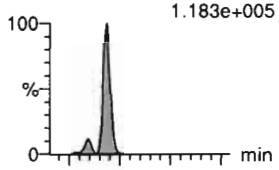
PFNS
F53:MRM of 2 channels,ES-
549.1 > 79.7
8.402e+004



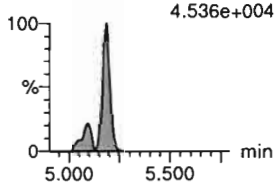
F53:MRM of 2 channels,ES-
549.1 > 98.7
3.432e+004



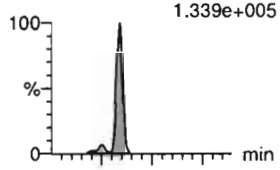
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
1.183e+005



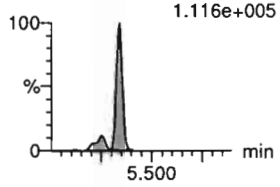
F56:MRM of 2 channels,ES-
570. > 512
4.536e+004



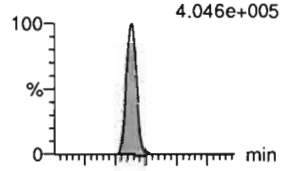
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
1.339e+005



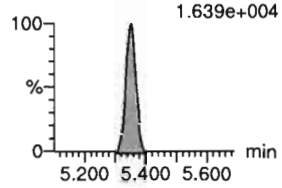
F59:MRM of 2 channels,ES-
584.1 > 526
1.116e+005



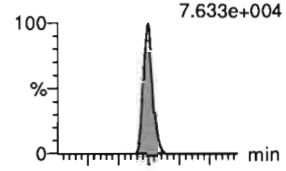
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
4.046e+005



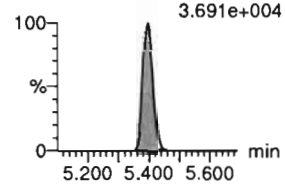
F54:MRM of 2 channels,ES-
563.0 > 269
1.639e+004



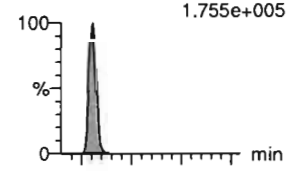
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.7
7.633e+004



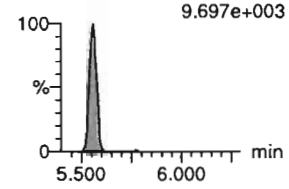
F61:MRM of 2 channels,ES-
598.8 > 98.7
3.691e+004



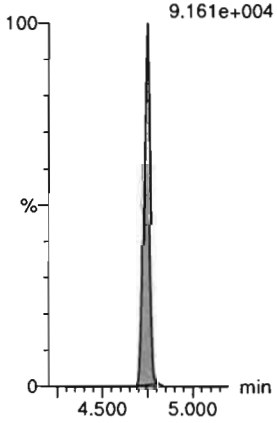
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
630.9 > 450.9
1.755e+005



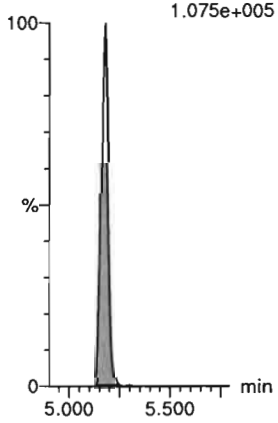
F68:MRM of 2 channels,ES-
630.9 > 83
9.697e+003



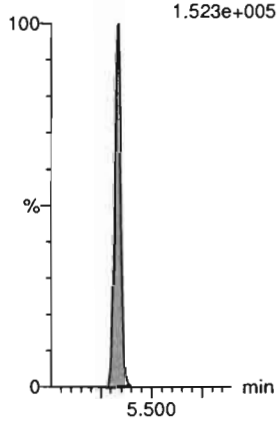
13C8-PFOS-EIS
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.161e+004



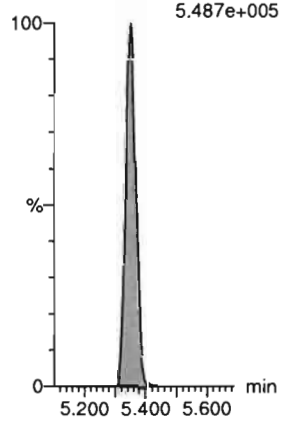
d3-N-MeFOSAA-EIS
F58:MRM of 1 channel,ES-
573.3 > 419
1.075e+005



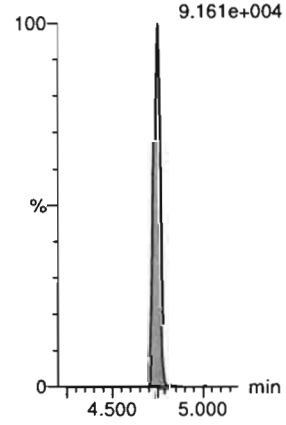
d5-N-EtFOSAA-EIS
F60:MRM of 1 channel,ES-
589.3 > 419
1.523e+005



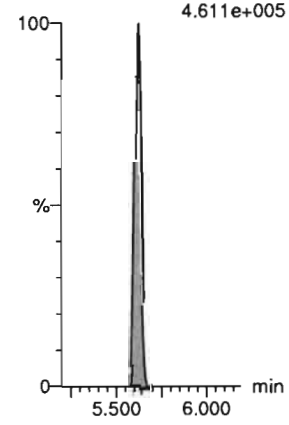
13C2-PFUdA-EIS
F55:MRM of 1 channel,ES-
565 > 519.8
5.487e+005



13C8-PFOS-EIS
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.161e+004



13C2-PFDoA-EIS
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.611e+005



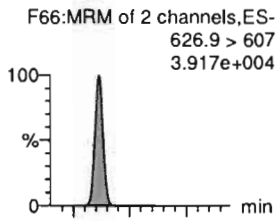
RK 2/26/2020

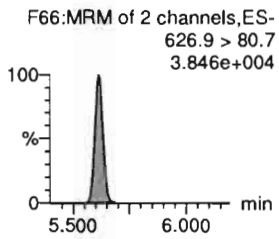
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Printed: Wednesday, February 26, 2020 13:46:21 Pacific Standard Time

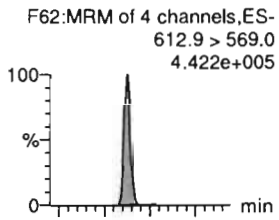
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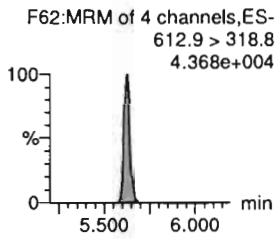
10:2 FTS



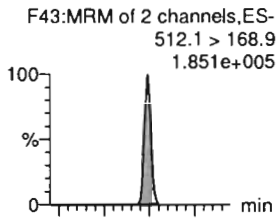


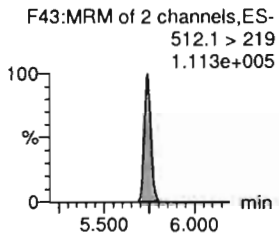
PFDoA



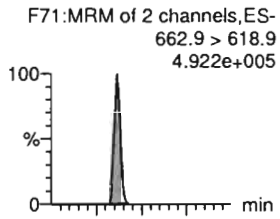


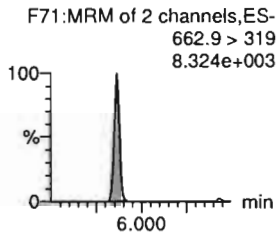
N-MeFOSA



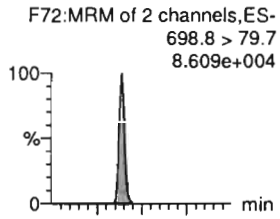


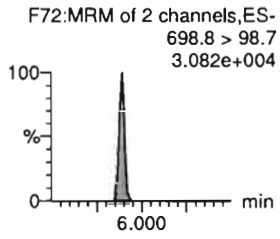
PFTrDA



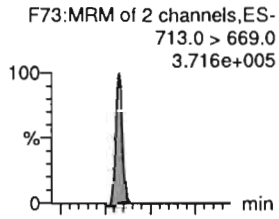


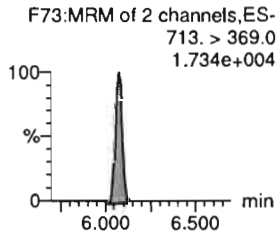
PFDoS



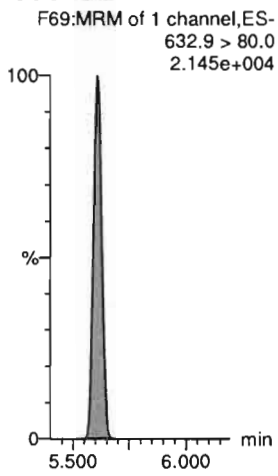


PFTeDA

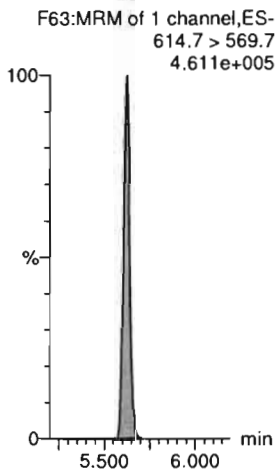




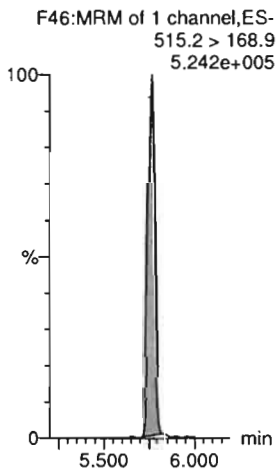
13C2-10:2 FTS-EIS



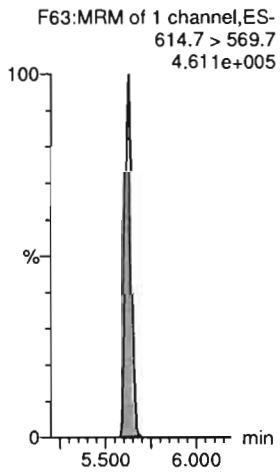
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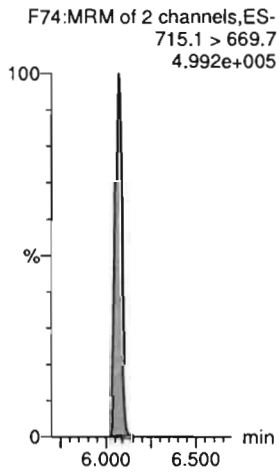
d3-N-MeFOSA-EIS



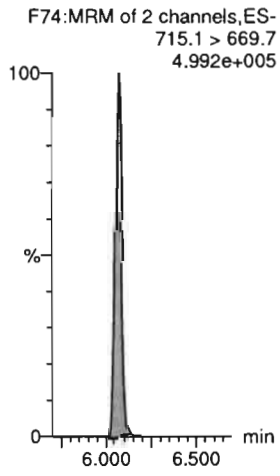
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS



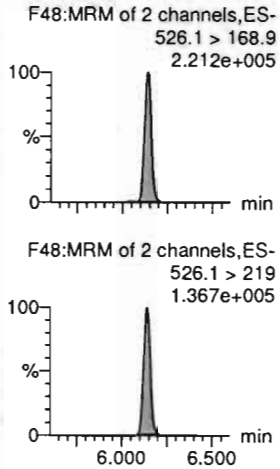
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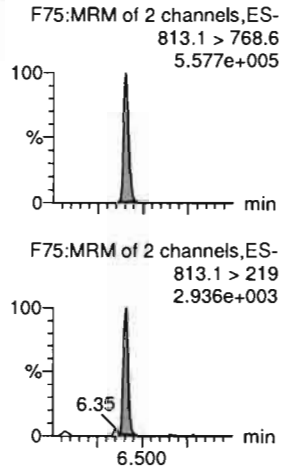
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Name: 200225P1-53, Date: 26-Feb-2020, Time: 03:04:57, ID: ST200225P1-12 PFC CS3 20B1107, Description: PFC CS3 20B1107

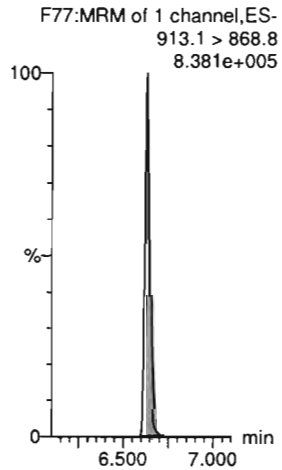
N-EtFOSA



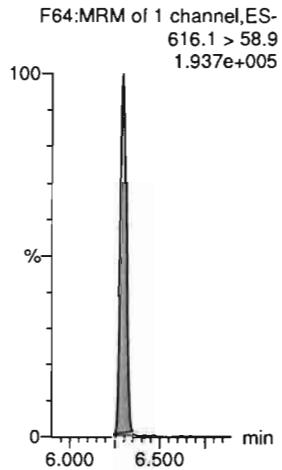
PFHxDA



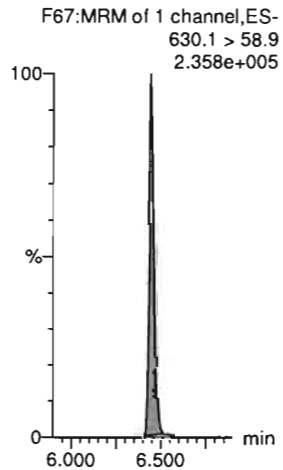
PFODA



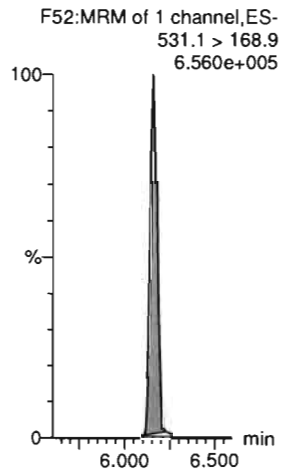
N-MeFOSE



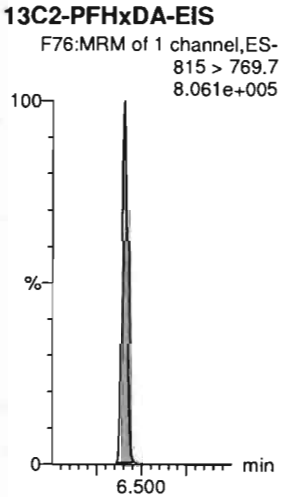
N-EtFOSE



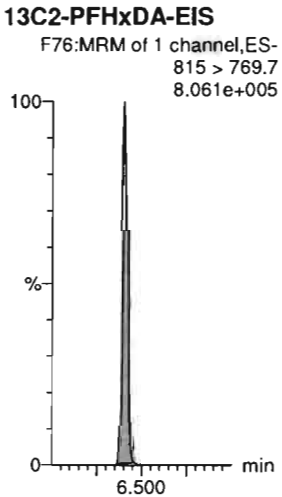
d5-N-ETFOSA-EIS



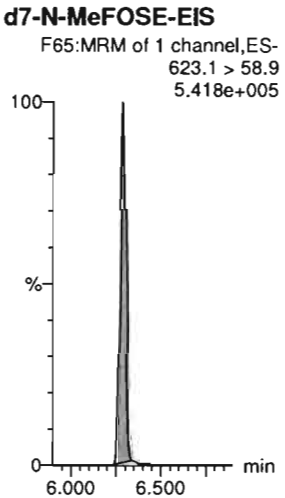
13C2-PFHxDA-EIS



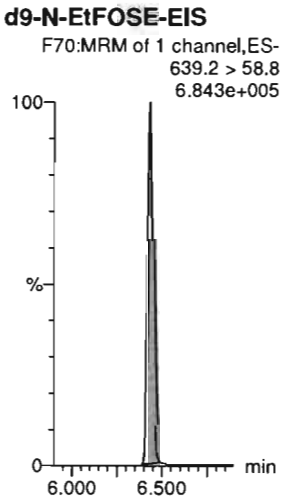
13C2-PFHxDA-EIS



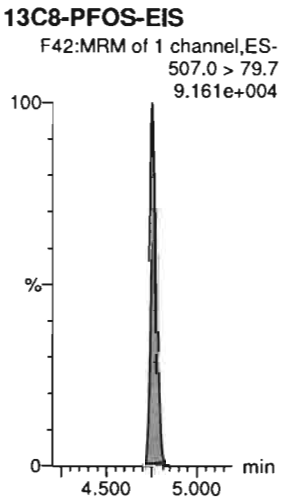
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS



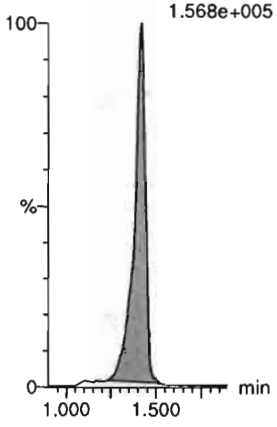
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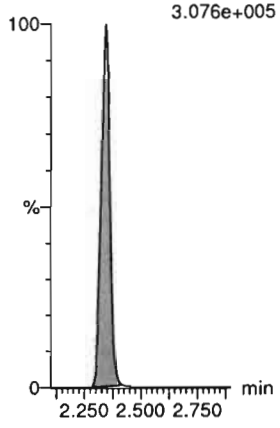
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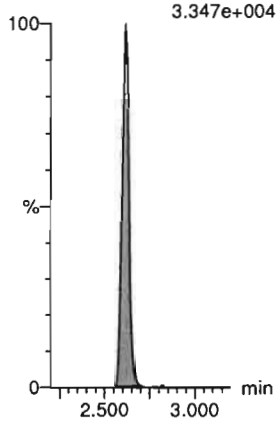
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.568e+005



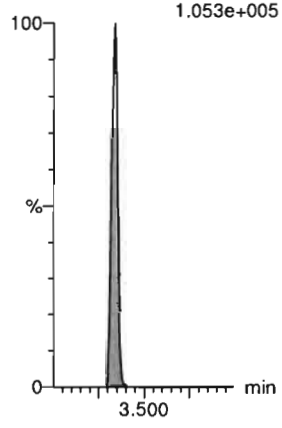
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
3.076e+005



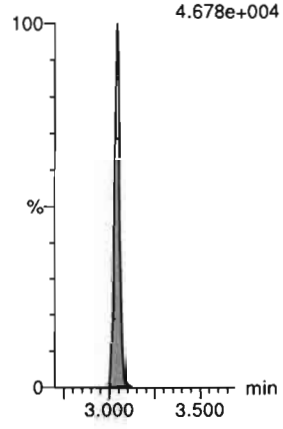
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.347e+004



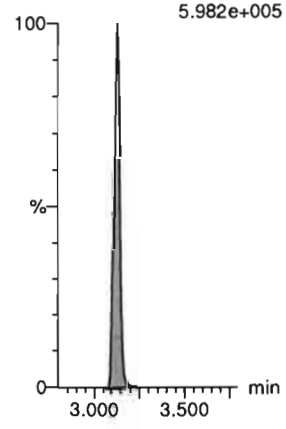
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.053e+005



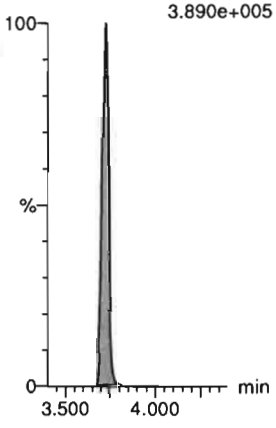
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.678e+004



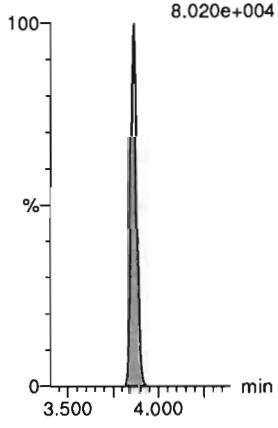
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.982e+005



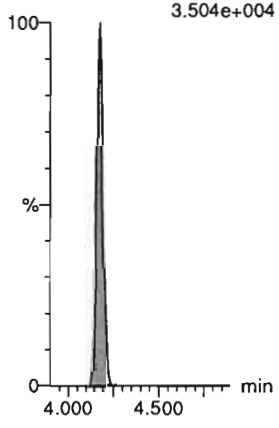
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.890e+005



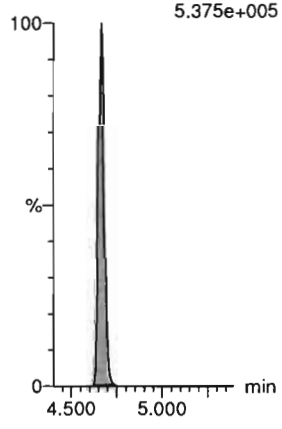
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.020e+004



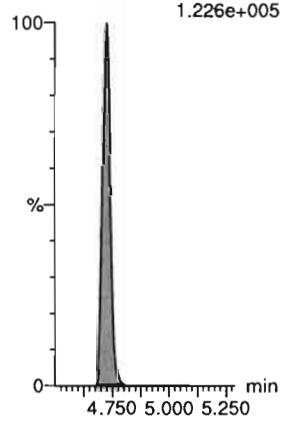
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.504e+004



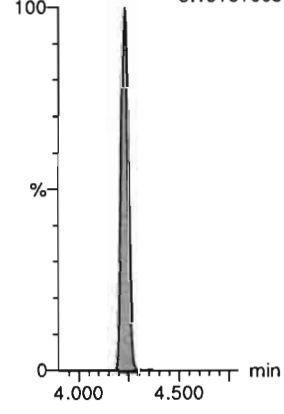
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.375e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.226e+005



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.191e+005



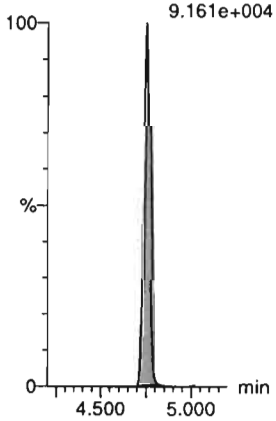
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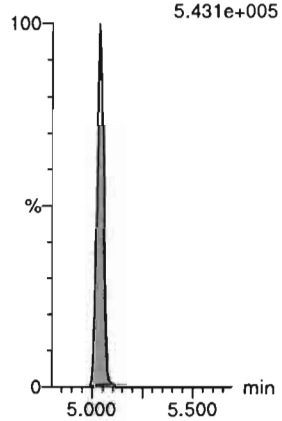
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Name: 200225P1-53, Date: 26-Feb-2020, Time: 03:04:57, ID: ST200225P1-12 PFC CS3 20B1107, Description: PFC CS3 20B1107

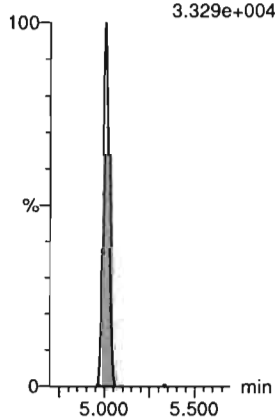
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.161e+004



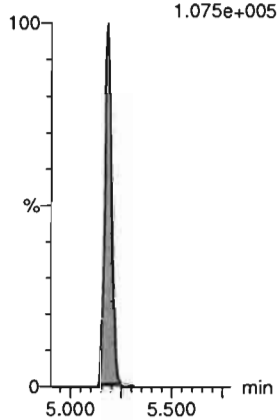
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.431e+005



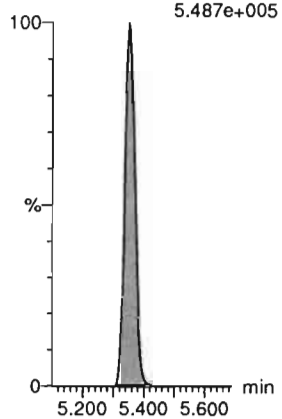
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.329e+004



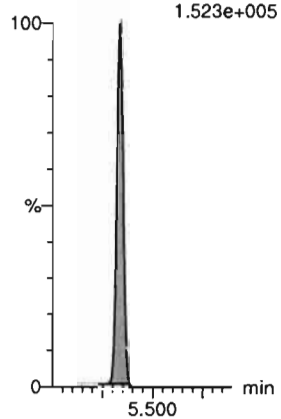
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.075e+005



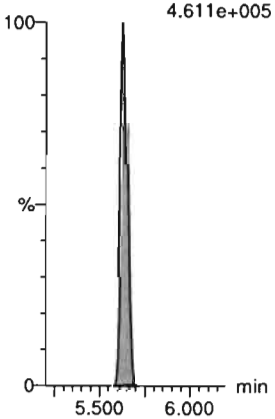
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.487e+005



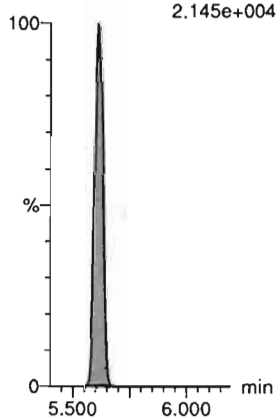
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.523e+005



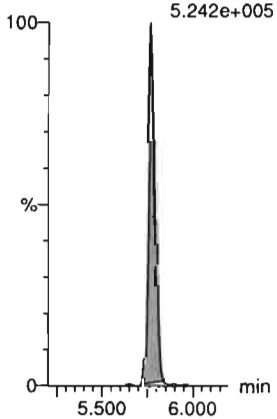
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.611e+005



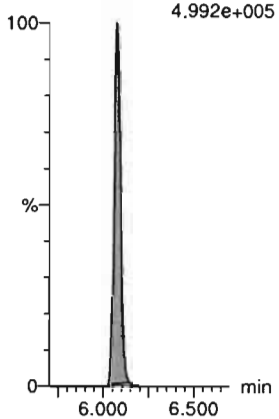
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.145e+004



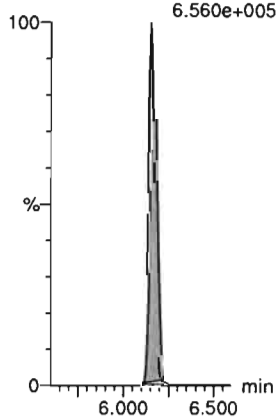
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.242e+005



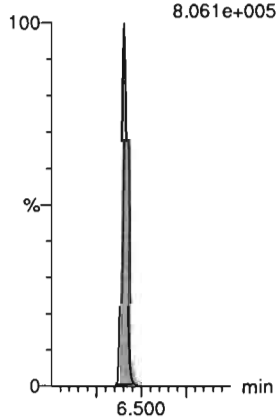
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.992e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.560e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.061e+005



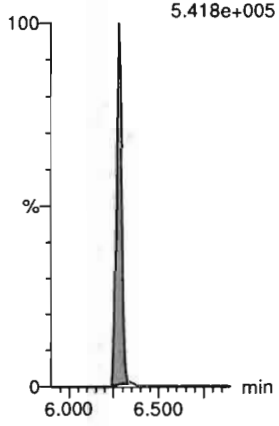
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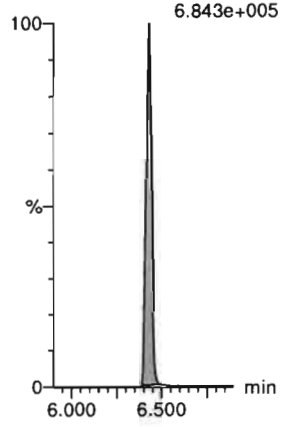
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Name: 200225P1-53, Date: 26-Feb-2020, Time: 03:04:57, ID: ST200225P1-12 PFC CS3 20B1107, Description: PFC CS3 20B1107

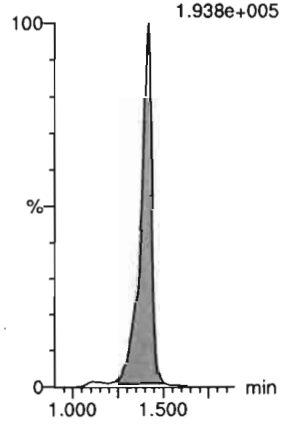
d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.418e+005



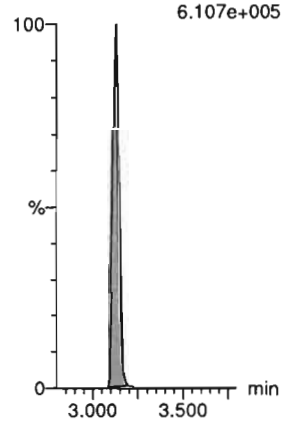
d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.843e+005



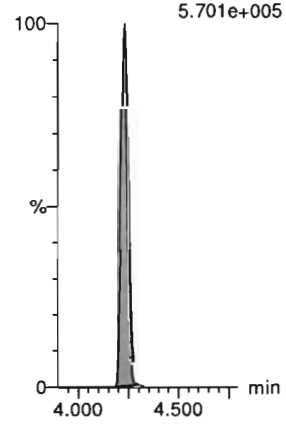
13C4-PFBA
F4:MRM of 1 channel,ES-
217.0 > 172.0
1.938e+005



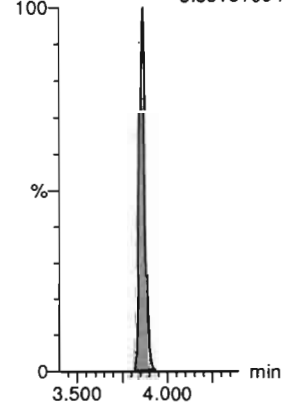
13C5-PFHxA
F15:MRM of 1 channel,ES-
318.0 > 272.9
6.107e+005



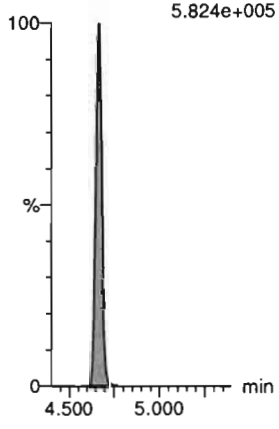
13C8-PFOA
F28:MRM of 1 channel,ES-
420.9 > 376.0
5.701e+005



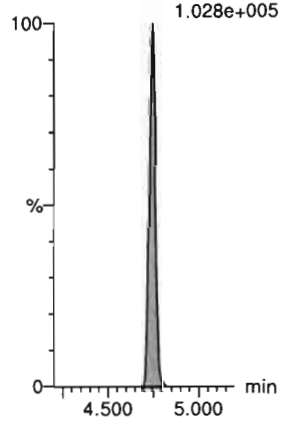
18O2-PFHxS
F25:MRM of 1 channel,ES-
403.0 > 102.6
3.891e+004



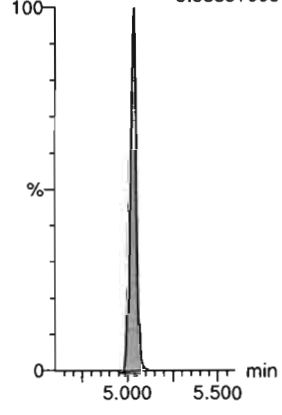
13C9-PFNA
F36:MRM of 1 channel,ES-
472.2 > 426.9
5.824e+005



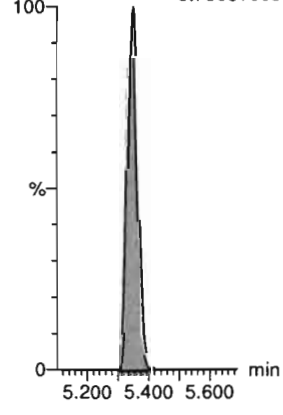
13C4-PFOS
F40:MRM of 1 channel,ES-
503 > 79.7
1.028e+005



13C6-PFDA
F47:MRM of 1 channel,ES-
519.1 > 473.7
5.533e+005



13C7-PFUdA
F57:MRM of 1 channel,ES-
570.1 > 524.8
5.796e+005



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PFNS Not Valid
✓ QPV 02/26/20

Name: 200225P1-67, Date: 26-Feb-2020, Time: 05:32:00, ID: ST200225P1-13 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	10527.850	11192.481	1.00	1.42	11.758	10.000	10.5	105.4	NO		
2	2	PFPrS	248.9 > 79.7	2124.962	1631.545	1.00	1.75	16.280	10.000	9.85	98.5	NO	2.278	NO
3	3	3:3 FTCA	240.9 > 176.9	927.099	14650.454	1.00	2.20	0.791	10.000	10.2	102.4	NO	3.902	NO
4	4	PFPeA	263.1 > 218.9	11130.188	14650.454	1.00	2.34	9.496	10.000	9.70	97.0	NO		
5	5	PFBS	299.0 > 79.7	3178.774	1631.545	1.00	2.62	24.354	10.000	10.5	105.2	NO	3.185	NO
6	6	4:2 FTS	327.0 > 307	1971.903	1783.152	1.00	3.04	13.823	10.000	10.1	101.2	NO	0.891	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	11192.481		1.00	1.42	11192.481	12.500	12.5	100.1	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1631.545		1.00	2.62	1631.545	12.500	13.6	108.7	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	14650.454		1.00	2.34	14650.454	12.500	12.9	103.6	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	14650.454		1.00	2.34	14650.454	12.500	12.9	103.6	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1631.545		1.00	2.62	1631.545	12.500	13.6	108.7	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1783.152		1.00	3.04	1783.152	12.500	12.0	95.7	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	18859.014	23603.199	1.00	3.13	9.988	10.000	11.1	110.9	NO	17.922	NO
15	8	PFPeS	349.>79.7	2965.565	1631.545	1.00	3.32	22.721	10.000	9.59	95.9	NO	2.351	NO
16	9	HFPO-DA	285.1 > 168.9	3515.313	4032.421	1.00	3.34	10.897	10.000	10.9	109.5	NO	2.683	NO
17	10	5:3 FTCA	340.9 > 236.9	2237.988	15621.605	1.00	3.67	1.791	10.000	9.66	96.6	NO	1.784	NO
18	11	PFHpA	363.0 > 318.9	15455.003	15621.605	1.00	3.73	12.367	10.000	9.96	99.6	NO	30.188	NO
19	12	ADONA	376.8 > 250.9	36290.680	15621.605	1.00	3.83	29.039	10.000	10.2	101.7	NO	3.945	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	23603.199		1.00	3.13	23603.199	12.500	13.2	105.2	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1631.545		1.00	2.62	1631.545	12.500	13.6	108.7	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	4032.421		1.00	3.34	4032.421	12.500	12.8	102.7	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	15621.605		1.00	3.72	15621.605	12.500	12.7	101.3	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	15621.605		1.00	3.72	15621.605	12.500	12.7	101.3	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	15621.605		1.00	3.72	15621.605	12.500	12.7	101.3	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2916.746	3463.990	1.00	3.86	10.525	10.000	10.3	102.9	NO	2.217	NO
28	15	6:2 FTS	427.0 > 407	1964.268	1347.166	1.00	4.17	18.226	10.000	11.6	115.7	NO	1.068	NO
29	16	L-PFOA	412.8 > 368.9	20714.396	20881.248	1.00	4.23	12.400	10.000	10.9	108.8	NO	3.191	NO
30	18	PFecHS	460.8 > 381.0	2854.803	20881.248	1.00	4.25	1.709	10.000	11.5	114.6	NO	0.461	NO
31	19	PFHpS	449.0 > 79.7	3060.497	3870.242	1.00	4.34	9.885	10.000	10.6	106.4	NO	1.952	NO
32	20	7:3 FTCA	440.9 > 336.9	2457.427	20112.873	1.00	4.66	1.527	10.000	9.88	98.8	NO	1.504	NO
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3463.990		1.00	3.86	3463.990	12.500	12.7	101.4	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1347.166		1.00	4.18	1347.166	12.500	11.0	87.8	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	20881.248		1.00	4.23	20881.248	12.500	13.1	104.8	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	20881.248		1.00	4.23	20881.248	12.500	13.1	104.8	NO		

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Name: 200225P1-67, Date: 26-Feb-2020, Time: 05:32:00, ID: ST200225P1-13 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	71	13C8-PFOS-EIS	507.0 > 79.7	3870.242		1.00	4.75	3870.242	12.500	13.3	106.1	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	20112.873		1.00	4.67	20112.873	12.500	13.5	107.8	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	18801.826	20112.873	1.00	4.67	11.685	10.000	9.77	97.7	NO	7.962	NO
41	22	PFOSA	497.9 > 77.9	3141.098	4119.056	1.00	4.73	9.532	10.000	11.6	116.4	NO	27.223	NO
42	23	L-PFOS	498.9 > 79.7	3415.367	3870.242	1.00	4.75	11.031	10.000	11.8	117.9	NO	2.531	NO
43	25	9Cl-PF30NS	530.7 > 350.8	3441.140	3870.242	1.00	4.96	11.114	10.000	11.1	110.5	NO	13.479	NO
44	26	PFDA	513 > 468.8	19625.305	21405.105	1.00	5.04	11.461	10.000	9.73	97.3	NO	9.266	NO
45	27	8:2 FTS	526.9 > 507	1332.760	1162.328	1.00	5.01	14.333	10.000	11.4	113.9	NO	2.207	NO
46	65	13C5-PFNA-EIS	468.2 > 422.9	20112.873		1.00	4.67	20112.873	12.500	13.5	107.8	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4119.056		1.00	4.73	4119.056	12.500	11.0	87.7	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3870.242		1.00	4.75	3870.242	12.500	13.3	106.1	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3870.242		1.00	4.75	3870.242	12.500	13.3	106.1	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	21405.105		1.00	5.04	21405.105	12.500	13.1	104.7	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1162.328		1.00	5.01	1162.328	12.500	11.4	91.0	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	3098.123	3870.242	1.00	5.10	10.006	10.000	11.2	112.0	NO	2.253	NO
54	29	L-MeFOSAA	570 > 419	5565.233	4855.387	1.00	5.19	14.327	10.000	7.41	74.1	NO	2.000	NO
55	31	L-EtFOSAA	584.1 > 419	5491.423	6071.760	1.00	5.34	11.305	10.000	9.45	94.5	NO	1.259	NO
56	33	PFUdA	563.0 > 518.9	17000.434	20265.061	1.00	5.35	10.486	10.000	11.2	112.2	NO	24.407	NO
57	34	PFDS	598.8 > 79.7	2704.333	3870.242	1.00	5.40	8.734	10.000	11.4	113.7	NO	1.860	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	8104.744	19837.098	1.00	5.56	5.107	10.000	11.2	111.7	NO	18.377	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3870.242		1.00	4.75	3870.242	12.500	13.3	106.1	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	4855.387		1.00	5.18	4855.387	12.500	14.7	117.6	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	6071.760		1.00	5.33	6071.760	12.500	15.4	122.9	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	20265.061		1.00	5.35	20265.061	12.500	12.5	100.3	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3870.242		1.00	4.75	3870.242	12.500	13.3	106.1	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	19837.098		1.00	5.63	19837.098	12.500	11.8	94.1	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	1577.949	947.298	1.00	5.61	20.822	10.000	9.28	92.8	NO	1.059	NO
67	37	PFDoA	612.9 > 569.0	17861.154	19837.098	1.00	5.63	11.255	10.000	10.4	103.9	NO	10.626	NO
68	38	N-MeFOSA	512.1 > 168.9	7666.929	22071.490	1.00	5.74	51.827	50.000	49.3	98.5	NO	1.657	NO
69	39	PFTrDA	662.9 > 618.9	18722.510	19837.098	1.00	5.87	11.798	10.000	10.5	105.2	NO	60.432	NO
70	40	PFDoS	698.8 > 79.7	3181.187	22948.188	1.00	5.89	1.733	10.000	10.7	106.9	NO	2.881	NO
71	41	PFTeDA	713.0 > 669.0	18749.666	22948.188	1.00	6.08	10.213	10.000	10.7	107.3	NO	15.706	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	947.298		1.00	5.61	947.298	12.500	13.2	105.3	NO		

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Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-67.qld

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Name: 200225P1-67, Date: 26-Feb-2020, Time: 05:32:00, ID: ST200225P1-13 PFC CS3 20B1107, Description: PFC CS3 20B1107

	# Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83 13C2-PFDoA-EIS	614.7 > 569.7	19837.098		1.00	5.63	19837.098	12.500	11.8	94.1	NO		
74	87 d3-N-MeFOSA-EIS	515.2 > 168.9	22071.490		1.00	5.76	22071.490	149.200	156	104.5	NO		
75	83 13C2-PFDoA-EIS	614.7 > 569.7	19837.098		1.00	5.63	19837.098	12.500	11.8	94.1	NO		
76	89 13C2-PFTeDA-EIS	715.1 > 669.7	22948.188		1.00	6.08	22948.188	12.500	12.1	96.8	NO		
77	89 13C2-PFTeDA-EIS	715.1 > 669.7	22948.188		1.00	6.08	22948.188	12.500	12.1	96.8	NO		
78	-1												
79	42 N-EtFOSA	526.1 > 168.9	9791.660	27339.668	1.00	6.14	53.436	50.000	51.7	103.3	NO	1.725	NO
80	43 PFHxDA	813.1 > 768.6	18242.189	30138.533	1.00	6.40	7.566	10.000	10.1	100.6	NO	139.737	NO
81	44 PFODA	913.1 > 868.8	24749.172	30138.533	1.00	6.63	10.265	10.000	11.6	116.1	NO		
82	45 N-MeFOSE	616.1 > 58.9	7186.412	19243.689	1.00	6.29	55.718	50.000	51.9	103.8	NO		
83	46 N-EtFOSE	630.1 > 58.9	7910.896	23162.246	1.00	6.44	50.958	50.000	51.6	103.2	NO		
84	91 d5-N-ETFOSA-EIS	531.1 > 168.9	27339.668		1.00	6.15	27339.668	149.200	151	101.4	NO		
85	93 13C2-PFHxDA-EIS	815 > 769.7	30138.533		1.00	6.40	30138.533	12.500	11.6	93.0	NO		
86	93 13C2-PFHxDA-EIS	815 > 769.7	30138.533		1.00	6.40	30138.533	12.500	11.6	93.0	NO		
87	95 d7-N-MeFOSE-EIS	623.1 > 58.9	19243.689		1.00	6.28	19243.689	149.200	159	106.8	NO		
88	97 d9-N-EtFOSE-EIS	639.2 > 58.8	23162.246		1.00	6.43	23162.246	149.200	155	104.0	NO		
89	71 13C8-PFOS-EIS	507.0 > 79.7	3870.242		1.00	4.75	3870.242	12.500	13.3	106.1	NO		
90	-1												
91	48 13C3-PFBA-RSD	216.1 > 171.8	11192.481	13845.522	1.00	1.42	10.105	12.500	12.6	101.1	NO		
92	50 13C3-PFPeA-RSD	266.0 > 221.8	14650.454	25495.596	1.00	2.34	7.183	12.500	12.2	97.5	NO		
93	52 13C3-PFBS-RSD	302.0 > 98.8	1631.545	1561.886	1.00	2.62	13.057	12.500	11.6	92.7	NO		
94	54 13C3-HFPO-DA-RSD	287.0 > 168.9	4032.421	25495.596	1.00	3.34	1.977	12.500	11.3	90.7	NO		
95	56 13C2-4:2 FTS-RSD	329.0 >79.7	1783.152	1561.886	1.00	3.04	14.271	12.500	10.9	86.9	NO		
96	58 13C2-PFHxA-RSD	315.0 > 270.0	23603.199	25495.596	1.00	3.13	11.572	12.500	11.9	95.1	NO		
97	60 13C4-PFHpA-RSD	367.2 > 321.8	15621.605	25495.596	1.00	3.72	7.659	12.500	11.6	93.0	NO		
98	62 13C3-PFHxS-RSD	401.8 > 79.7	3463.990	1561.886	1.00	3.86	27.723	12.500	11.0	88.1	NO		
99	64 13C2-6:2 FTS-RSD	429.0 >79.7	1347.166	4128.350	1.00	4.18	4.079	12.500	10.6	84.9	NO		
100	66 13C5-PFNA-RSD	468.2 > 422.9	20112.873	21707.621	1.00	4.67	11.582	12.500	12.3	98.8	NO		
101	68 13C8-PFOSA-RSD	506 > 78	4157.723	20498.439	1.00	4.73	2.535	12.500	12.1	96.6	NO		
102	70 13C2-PFOA-RSD	414.9 > 369.7	20881.248	23645.109	1.00	4.23	11.039	12.500	12.0	95.8	NO		
103	-1												
104	72 13C8-PFOS-RSD	507.0 > 79.7	3870.242	4128.350	1.00	4.75	11.718	12.500	12.3	98.7	NO		
105	74 13C2-PFDA-RSD	515.1 > 469.9	21405.105	22146.008	1.00	5.04	12.082	12.500	12.5	100.1	NO		
106	76 13C2-8:2 FTS-RSD	529 > 79.7	1162.328	4128.350	1.00	5.01	3.519	12.500	10.7	85.4	NO		
107	78 d3-N-MeFOSAA-RSD	573.3 > 419	4855.387	20498.439	1.00	5.18	2.961	12.500	17.0	136.1	NO		
108	80 13C2-PFUdA-RSD	565 > 519.8	20265.061	20498.439	1.00	5.35	12.358	12.500	12.3	98.0	NO		

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Name: 200225P1-67, Date: 26-Feb-2020, Time: 05:32:00, ID: ST200225P1-13 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82	d5-N-EtFOSAA-RSD	589.3 > 419	6071.760	20498.439	1.00	5.33	3.703	12.500	16.0	127.9	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	19837.098	22146.008	1.00	5.63	11.197	12.500	11.6	92.5	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	947.298	4128.350	1.00	5.61	2.868	12.500	12.0	96.3	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	22071.490	20498.439	1.00	5.76	13.459	149.200	168	112.3	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	22948.188	20498.439	1.00	6.08	13.994	12.500	13.4	106.9	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	27339.668	20498.439	1.00	6.15	16.672	149.200	168	112.7	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	30138.533	20498.439	1.00	6.40	18.379	12.500	12.3	98.4	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	19243.689	20498.439	1.00	6.28	11.735	149.200	161	107.9	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	23162.246	20498.439	1.00	6.43	14.124	149.200	165	110.3	NO		
119	99	13C4-PFBA	217.0 > 172.0	13845.522	13845.522	1.00	1.42	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	25495.596	25495.596	1.00	3.13	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	23645.109	23645.109	1.00	4.23	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1561.886	1561.886	1.00	3.86	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	21707.621	21707.621	1.00	4.67	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	4128.350	4128.350	1.00	4.75	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	22146.008	22146.008	1.00	5.04	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	20498.439	20498.439	1.00	5.35	12.500	12.500	12.5	100.0	NO		

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Dataset: Untitled

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Method: P:\PFAS5.pro\MethDB\NEW_PFAS_80C_022520.mdb 26 Feb 2020 11:36:08
Calibration: P:\PFAS5.pro\CurveDB\C18_VAL-PFAS_Q5_02-25-20.cdb 26 Feb 2020 11:25:03

Compound name: PFBA

	# Name	ID	Acq.Date	Acq.Time
1	1 200225P1-1	IPA	25-Feb-20	17:58:29
2	2 200225P1-2	IPA	25-Feb-20	18:09:11
3	3 200225P1-3	ST200225P1-1 PFC CS-2 20B1102	25-Feb-20	18:19:42
4	4 200225P1-4	ST200225P1-2 PFC CS-1 20B1103	25-Feb-20	18:30:13
5	5 200225P1-5	ST200225P1-3 PFC CS0 20B1104	25-Feb-20	18:40:42
6	6 200225P1-6	ST200225P1-4 PFC CS1 20B1105	25-Feb-20	18:51:13
7	7 200225P1-7	ST200225P1-5 PFC CS2 20B1106	25-Feb-20	19:01:42
8	8 200225P1-8	ST200225P1-6 PFC CS3 20B1107	25-Feb-20	19:12:14
9	9 200225P1-9	ST200225P1-7 PFC CS4 20B1108	25-Feb-20	19:22:44
10	10 200225P1-10	ST200225P1-8 PFC CS5 20B1109	25-Feb-20	19:33:15
11	11 200225P1-11	ST200225P1-9 PFC CS6 20B1110	25-Feb-20	19:43:44
12	12 200225P1-12	ST200225P1-10 PFC CS7 20B1111	25-Feb-20	19:54:16
13	13 200225P1-13	IB	25-Feb-20	20:04:45
14	14 200225P1-14	ICV200225P1-1 PFC ICV 20B1112	25-Feb-20	20:15:16
15	15 200225P1-15	IB	25-Feb-20	20:25:46
16	16 200225P1-16	2000305-01 8 Chestnut Dr 0.11658	25-Feb-20	20:36:14
17	17 200225P1-17	2000305-02 10 Chestnut Dr 0.11788	25-Feb-20	20:46:46
18	18 200225P1-18	B0B0146-BLK1 Method Blank 0.25	25-Feb-20	20:57:15
19	19 200225P1-19	B0B0146-BS1 OPR 0.25	25-Feb-20	21:07:48
20	20 200225P1-20	B0B0146-BSD1 LCSD 0.25	25-Feb-20	21:18:16
21	21 200225P1-21	2000322-10 3EFF 0.25804	25-Feb-20	21:28:47
22	22 200225P1-22	2000322-11 3INF FRB 0.24918	25-Feb-20	21:39:19
23	23 200225P1-23	2000322-12 3INF 0.24453	25-Feb-20	21:49:47
24	24 200225P1-24	2000322-13 2EFF 0.25549	25-Feb-20	22:00:18
25	25 200225P1-25	2000322-14 2INF FRB 0.24928	25-Feb-20	22:10:49
26	26 200225P1-26	2000322-15 2INF 0.24263	25-Feb-20	22:21:18
27	27 200225P1-27	2000322-16 Post CCB 1BEFF 0.25545	25-Feb-20	22:31:50
28	28 200225P1-28	2000322-17 1INF FRB 0.18612	25-Feb-20	22:42:20
29	29 200225P1-29	2000322-18 1INF 0.25095	25-Feb-20	22:52:49
30	30 200225P1-30	2000322-19 1EFF 0.24912	25-Feb-20	23:03:20
31	31 200225P1-31	B0B0123-BLK1 Method Blank 0.25	25-Feb-20	23:13:50
32	32 200225P1-32	B0B0123-BS1 OPR 0.25	25-Feb-20	23:24:19

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Compound name: PFBA

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33	33 200225P1-33	B0B0123-BSD1 LCSD 0.25	25-Feb-20	23:34:51
34	34 200225P1-34	2000318-01 RW-9 0.2508	25-Feb-20	23:45:22
35	35 200225P1-35	ST200225P1-11 PFC CS3 20B1107	25-Feb-20	23:55:50
36	36 200225P1-36	IB	26-Feb-20	00:06:22
37	37 200225P1-37	2000318-02 RW-10 0.25656	26-Feb-20	00:16:53
38	38 200225P1-38	2000318-03 RW-11 0.25855	26-Feb-20	00:27:22
39	39 200225P1-39	2000318-04 FRB-5 0.2568	26-Feb-20	00:37:53
40	40 200225P1-40	B0B0127-BLK1 Method Blank 0.25	26-Feb-20	00:48:24
41	41 200225P1-41	B0B0127-BS1 OPR 0.25	26-Feb-20	00:58:53
42	42 200225P1-42	B0B0127-MS1@5X Matrix Spike 0.25239	26-Feb-20	01:09:24
43	43 200225P1-43	B0B0127-MSD1@5X Matrix Spike Dup 0.24499	26-Feb-20	01:19:53
44	44 200225P1-44	2000321-01 EB02-20200213 0.25641	26-Feb-20	01:30:25
45	45 200225P1-45	2000321-02@5X I013WMW02SR-20200213 0.24488	26-Feb-20	01:40:55
46	46 200225P1-46	2000321-03@5X IS72MW17S-20200213 0.24942	26-Feb-20	01:51:24
47	47 200225P1-47	2000321-04@5X I012MW01SR-20200213 0.24804	26-Feb-20	02:01:56
48	48 200225P1-48	2000321-05@5X I012MW10S-20200213 0.24821	26-Feb-20	02:12:26
49	49 200225P1-49	2000321-06@5X I012MW11S-20200213 0.25358	26-Feb-20	02:22:55
50	50 200225P1-50	2000321-07@5X I012MW15S-20200213 0.25036	26-Feb-20	02:33:27
51	51 200225P1-51	2000321-08@5X DUP02-20200213 0.2466	26-Feb-20	02:43:55
52	52 200225P1-52	2000321-09@5X I003MW01S-20200213 0.25107	26-Feb-20	02:54:28
53	53 200225P1-53	ST200225P1-12 PFC CS3 20B1107	26-Feb-20	03:04:57
54	54 200225P1-54	IB	26-Feb-20	03:15:28
55	55 200225P1-55	2000321-10@5X I003MW15S-20200213 0.24522	26-Feb-20	03:25:58
56	56 200225P1-56	2000321-11@5X I003MW02S-20200213 0.24704	26-Feb-20	03:36:27
57	57 200225P1-57	2000314-06@5X I006MW01S-20200212 0.2551	26-Feb-20	03:46:59
58	58 200225P1-58	2000314-07@5X I006MW08S-20200212 0.25052	26-Feb-20	03:57:28
59	59 200225P1-59	2000314-07 I006MW08S-20200212 0.25052	26-Feb-20	04:07:59
60	60 200225P1-60	IB	26-Feb-20	04:18:30
61	61 200225P1-61	2000314-08@5X BMW07S-20200212 0.2539	26-Feb-20	04:28:59
62	62 200225P1-62	2000314-09@5X I005MW01SR-20200212 0.25498	26-Feb-20	04:39:30
63	63 200225P1-63	2000314-09 I005MW01SR-20200212 0.25498	26-Feb-20	04:50:01
64	64 200225P1-64	IB	26-Feb-20	05:00:30
65	65 200225P1-65	2000314-10@5X DUP05-20200212 0.25284	26-Feb-20	05:11:00
66	66 200225P1-66	2000314-11 IS72MW15S-20200212 0.25446	26-Feb-20	05:21:31
67	67 200225P1-67	ST200225P1-13 PFC CS3 20B1107	26-Feb-20	05:32:00
68	68 200225P1-68	IB	26-Feb-20	05:42:31

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Compound name: PFBA

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69	69 200225P1-69	2000292-02 11535BFR POE Midpoint-1 0.25829	26-Feb-20	05:53:02
70	70 200225P1-70	2000292-03 11535BFR POE Effluent-1 0.25426	26-Feb-20	06:03:31
71	71 200225P1-71	B0B0102-BS2 OPR 0.125	26-Feb-20	06:14:03
72	72 200225P1-72	ST200225P1-14 PFC CS3 20B1107	26-Feb-20	06:24:33
73	73 200225P1-73	IB	26-Feb-20	06:35:02

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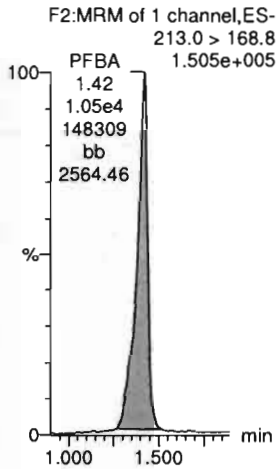
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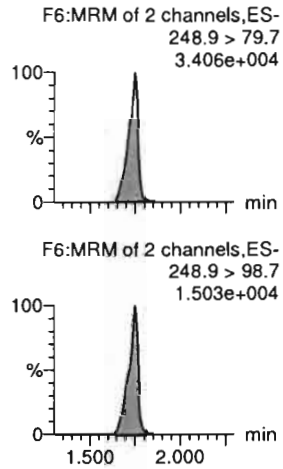
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Name: 200225P1-67, Date: 26-Feb-2020, Time: 05:32:00, ID: ST200225P1-13 PFC CS3 20B1107, Description: PFC CS3 20B1107

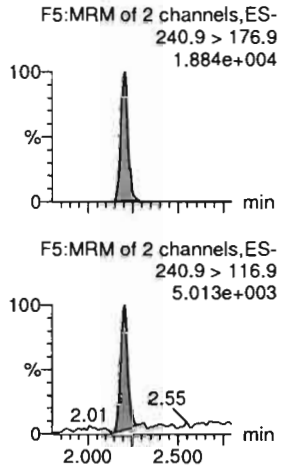
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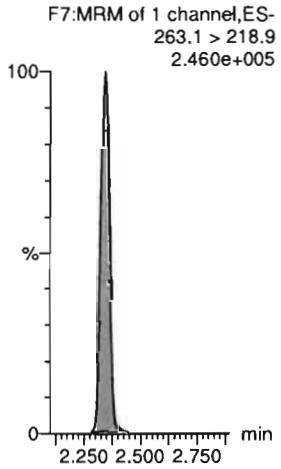
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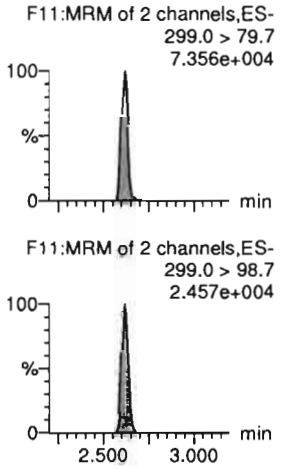
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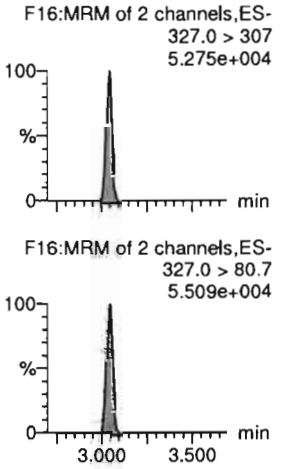
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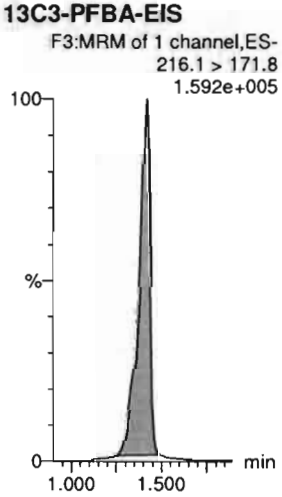
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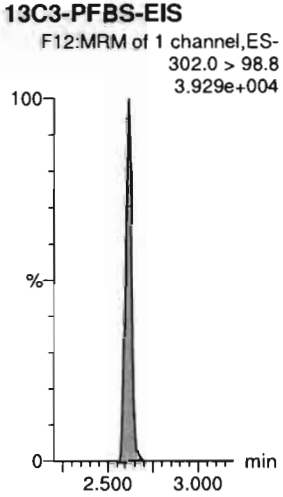
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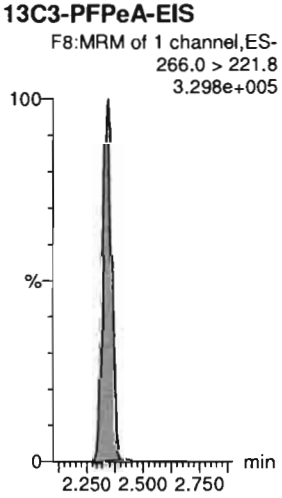
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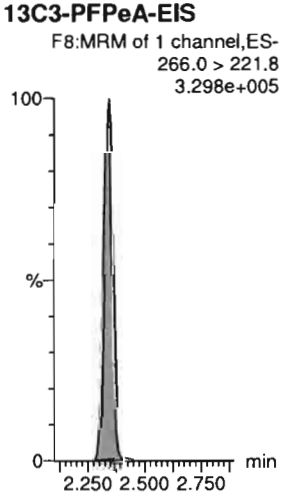
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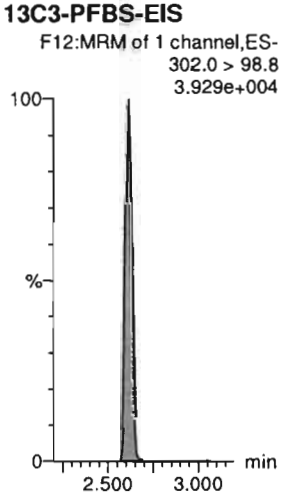
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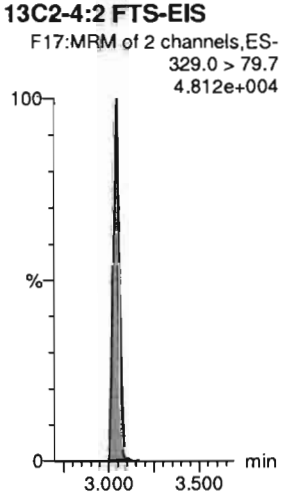
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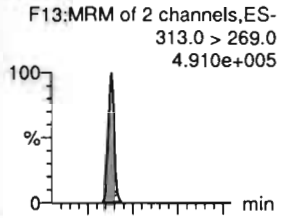
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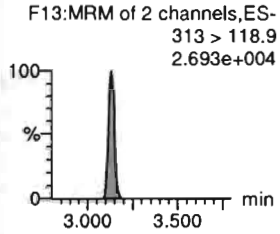
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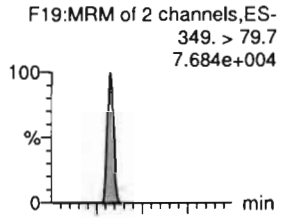
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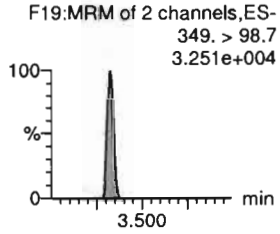
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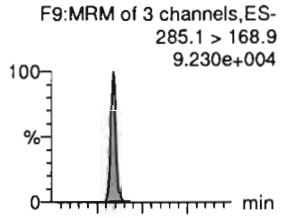


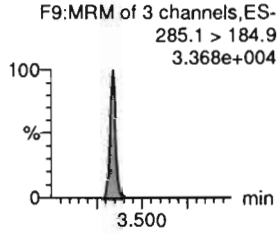
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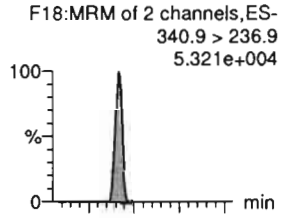


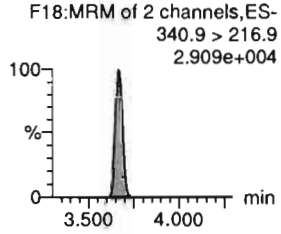
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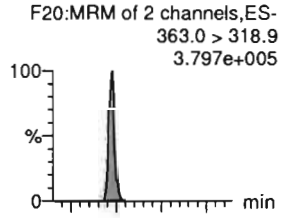


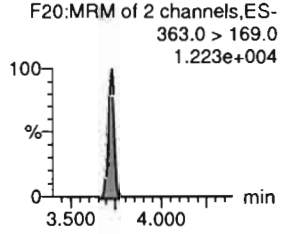
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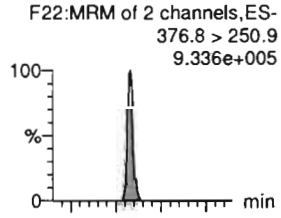


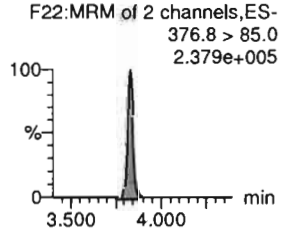
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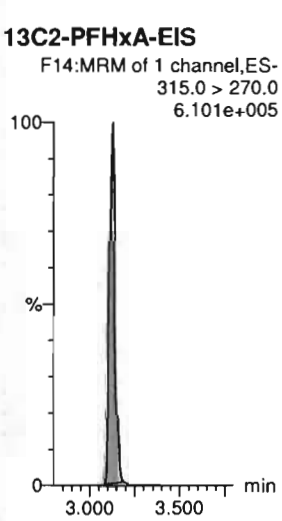


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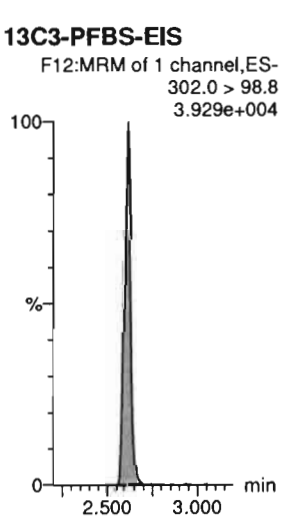




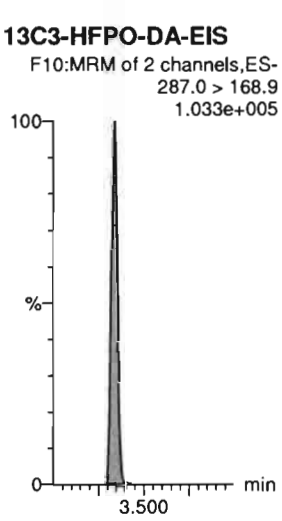
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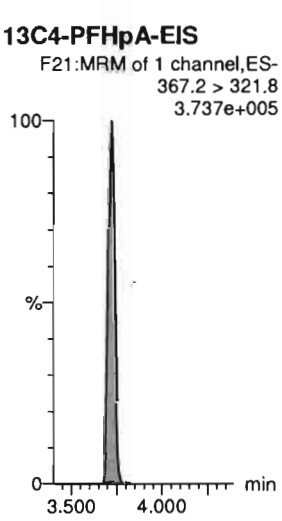
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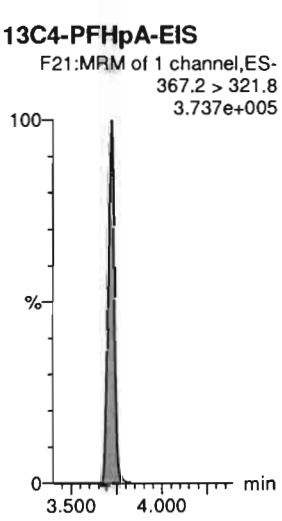
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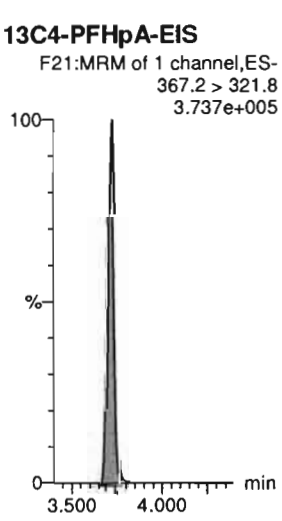
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13C4-PFHpA-EIS



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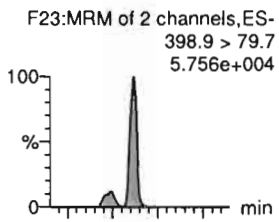
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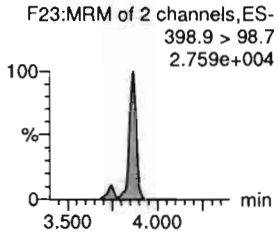
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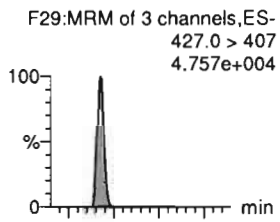
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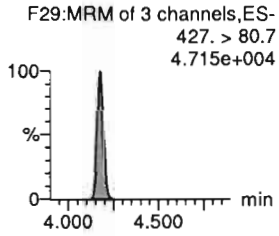
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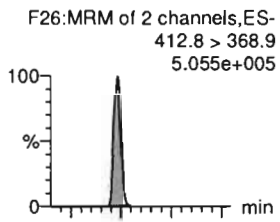


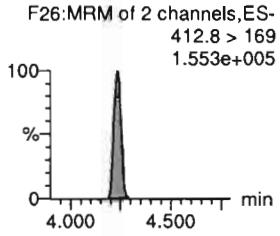
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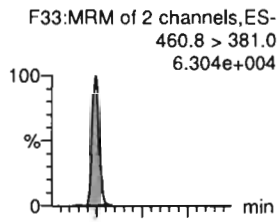


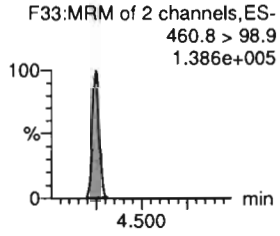
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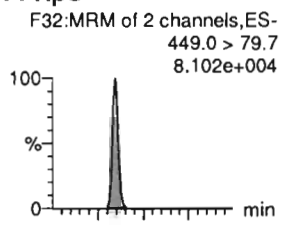


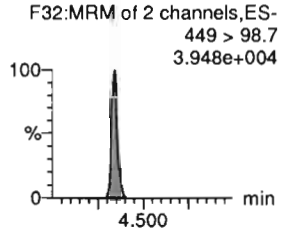
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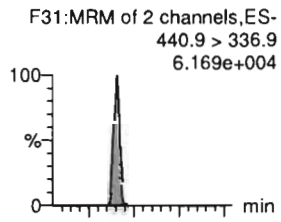


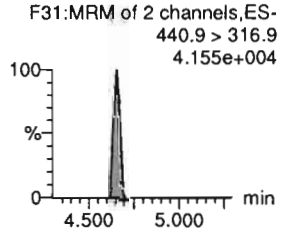
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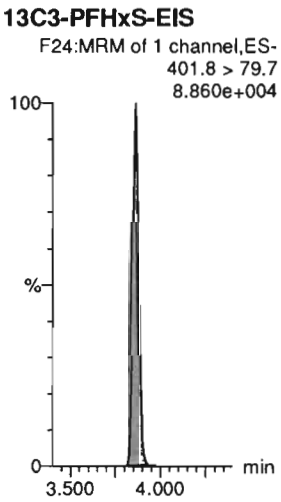


7:3 FTCA

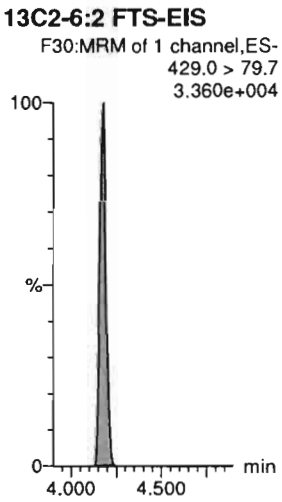




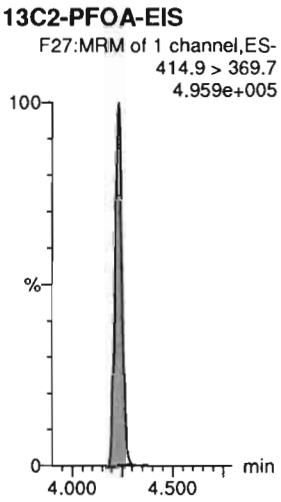
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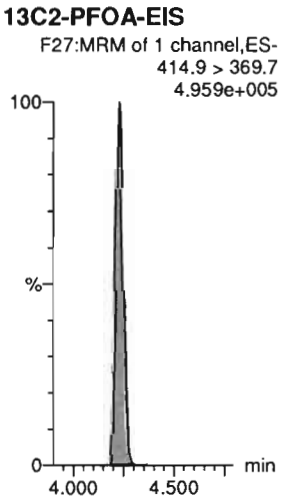
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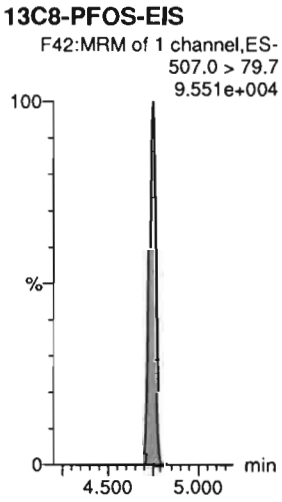
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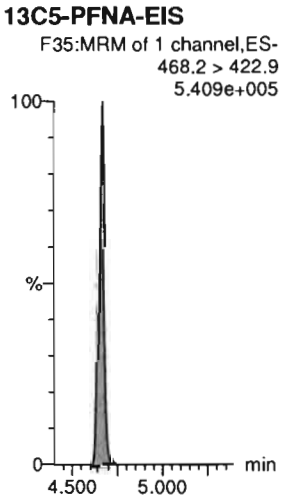
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13C8-PFOS-EIS



13C5-PFNA-EIS



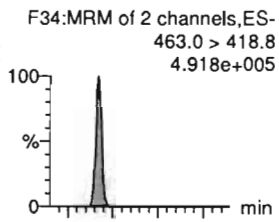
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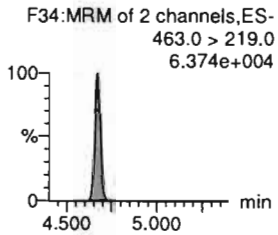
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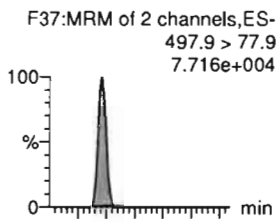
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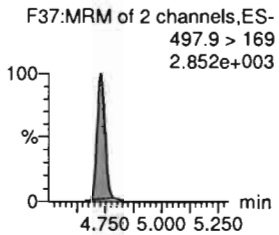
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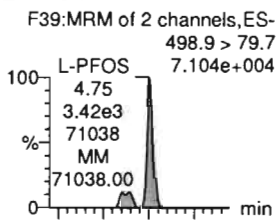


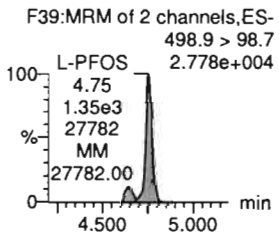
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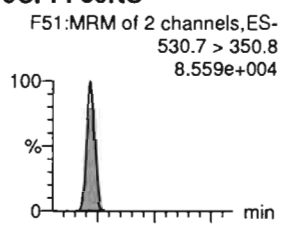


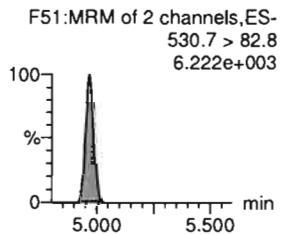
L-PFOS



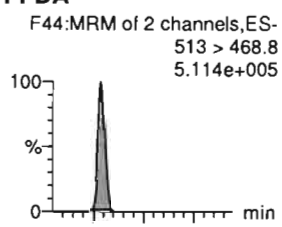


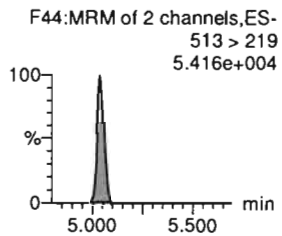
9Cl-PF30NS



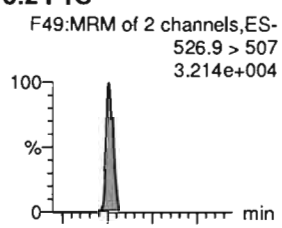


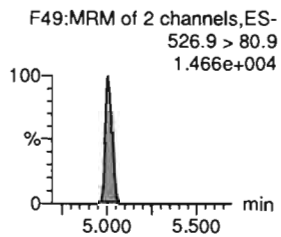
PFDA



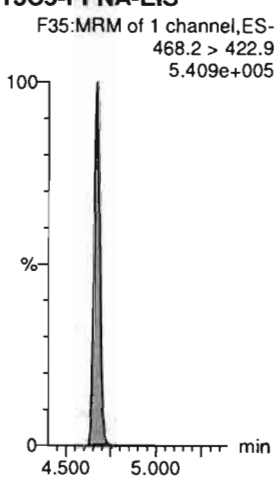


8:2 FTS

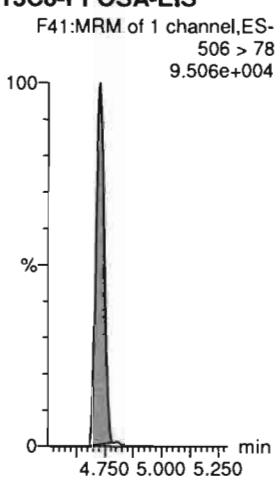




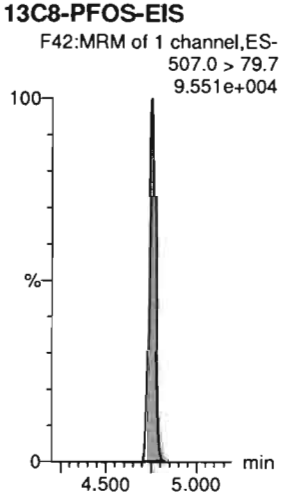
13C5-PFNA-EIS



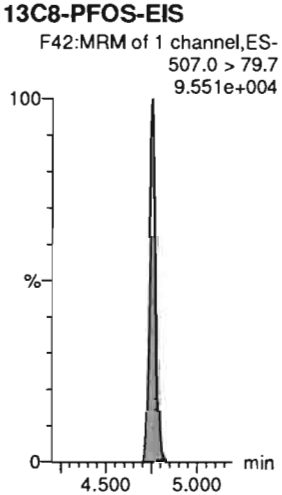
13C8-PFOSA-EIS



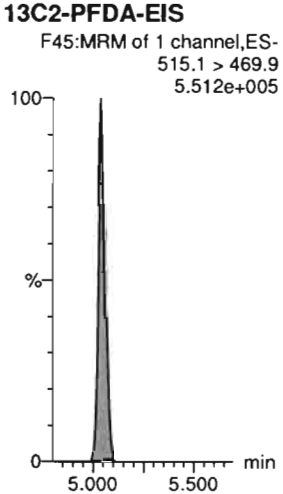
13C8-PFOS-EIS



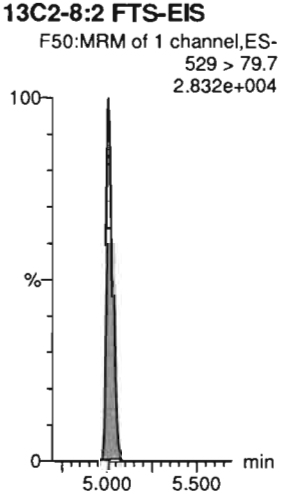
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS



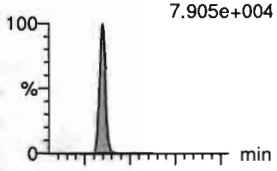
RK 2/26/2020

Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-67.qld

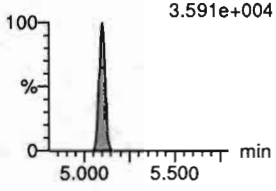
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Name: 200225P1-67, Date: 26-Feb-2020, Time: 05:32:00, ID: ST200225P1-13 PFC CS3 20B1107, Description: PFC CS3 20B1107

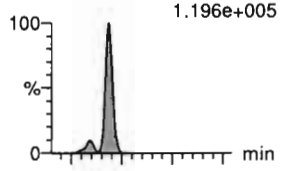
PFNS
F53:MRM of 2 channels,ES-
549.1 > 79.7
7.905e+004



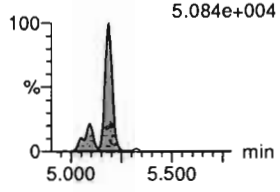
F53:MRM of 2 channels,ES-
549.1 > 98.7
3.591e+004



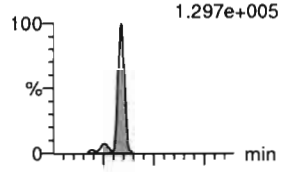
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
1.196e+005



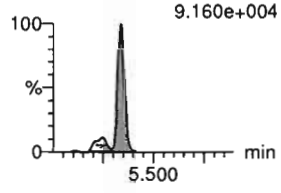
F56:MRM of 2 channels,ES-
570. > 512
5.084e+004



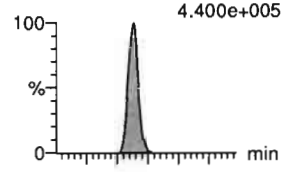
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
1.297e+005



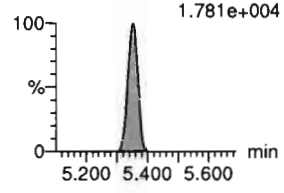
F59:MRM of 2 channels,ES-
584.1 > 526
9.160e+004



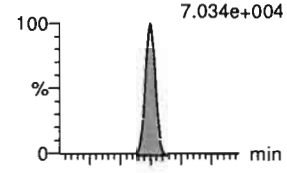
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
4.400e+005



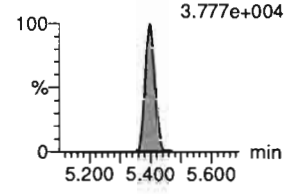
F54:MRM of 2 channels,ES-
563.0 > 269
1.781e+004



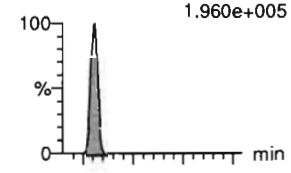
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.7
7.034e+004



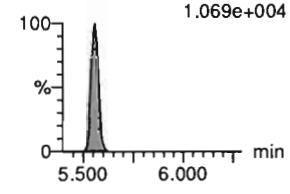
F61:MRM of 2 channels,ES-
598.8 > 98.7
3.777e+004



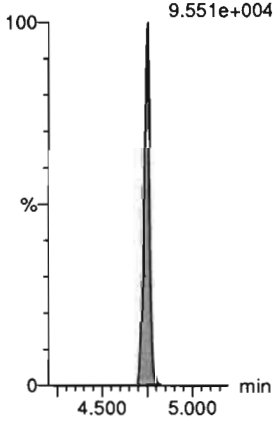
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
630.9 > 450.9
1.960e+005



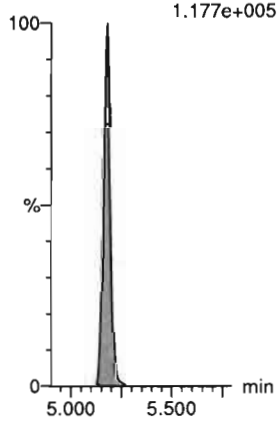
F68:MRM of 2 channels,ES-
630.9 > 83
1.069e+004



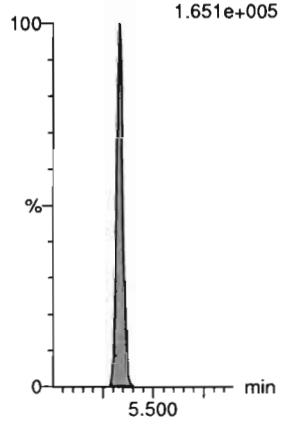
13C8-PFOS-EIS
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.551e+004



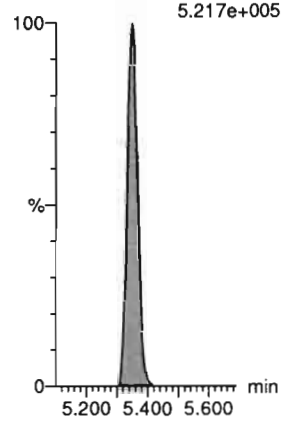
d3-N-MeFOSAA-EIS
F58:MRM of 1 channel,ES-
573.3 > 419
1.177e+005



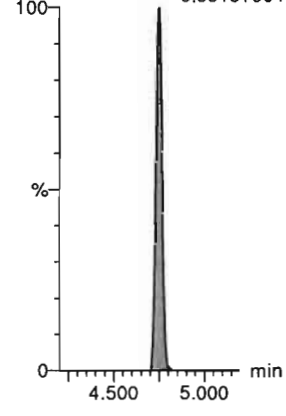
d5-N-EtFOSAA-EIS
F60:MRM of 1 channel,ES-
589.3 > 419
1.651e+005



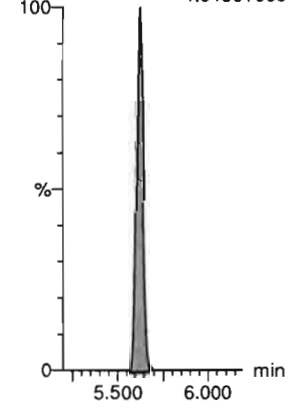
13C2-PFUdA-EIS
F55:MRM of 1 channel,ES-
565 > 519.8
5.217e+005



13C8-PFOS-EIS
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.551e+004



13C2-PFDoA-EIS
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.643e+005



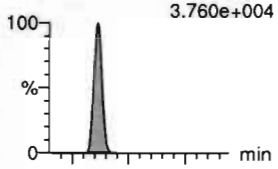
RK 2/26/2020

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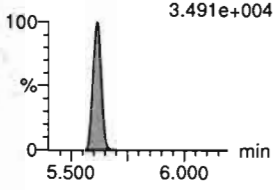
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Name: 200225P1-67, Date: 26-Feb-2020, Time: 05:32:00, ID: ST200225P1-13 PFC CS3 20B1107, Description: PFC CS3 20B1107

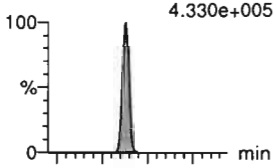
10:2 FTS
F66:MRM of 2 channels,ES-
626.9 > 607
3.760e+004



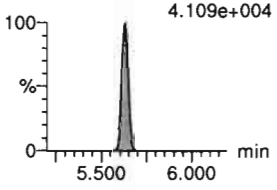
F66:MRM of 2 channels,ES-
626.9 > 80.7
3.491e+004



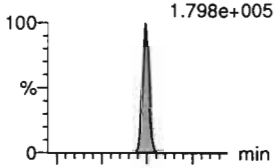
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
4.330e+005



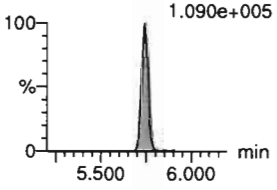
F62:MRM of 4 channels,ES-
612.9 > 318.8
4.109e+004



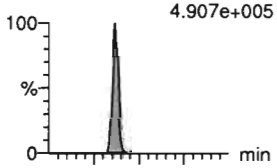
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
1.798e+005



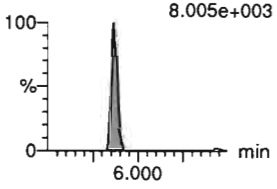
F43:MRM of 2 channels,ES-
512.1 > 219
1.090e+005



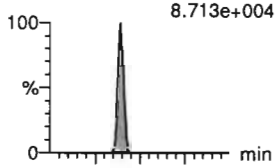
PFTrDA
F71:MRM of 2 channels,ES-
662.9 > 618.9
4.907e+005



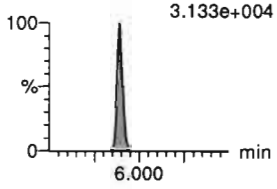
F71:MRM of 2 channels,ES-
662.9 > 319
8.005e+003



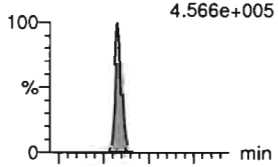
PFDoS
F72:MRM of 2 channels,ES-
698.8 > 79.7
8.713e+004



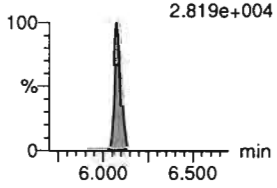
F72:MRM of 2 channels,ES-
698.8 > 98.7
3.133e+004



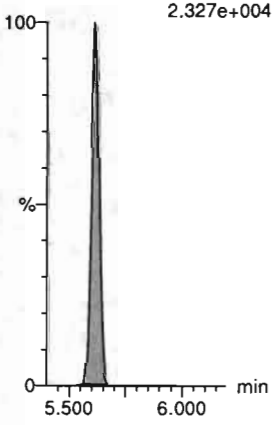
PFTeDA
F73:MRM of 2 channels,ES-
713.0 > 669.0
4.566e+005



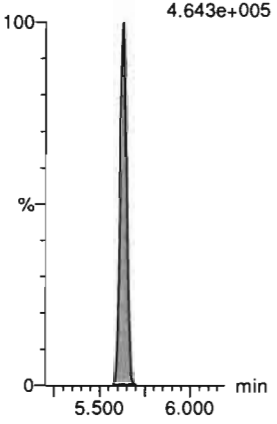
F73:MRM of 2 channels,ES-
713. > 369.0
2.819e+004



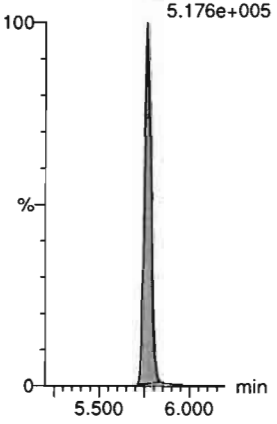
13C2-10:2 FTS-EIS
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.327e+004



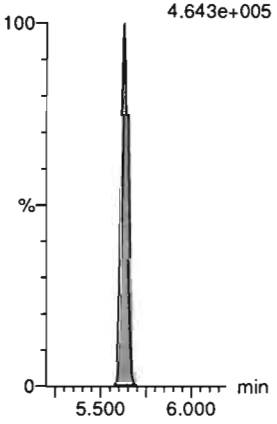
13C2-PFDoA-EIS
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.643e+005



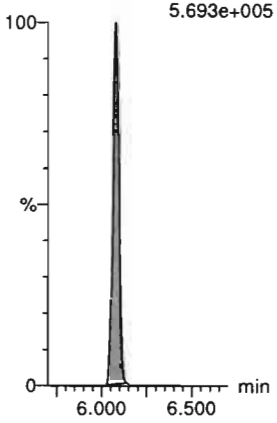
d3-N-MeFOSA-EIS
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.176e+005



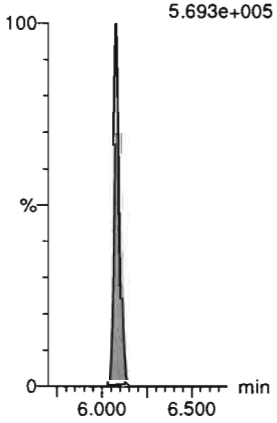
13C2-PFDoA-EIS
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.643e+005



13C2-PFTeDA-EIS
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.693e+005



13C2-PFTeDA-EIS
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.693e+005



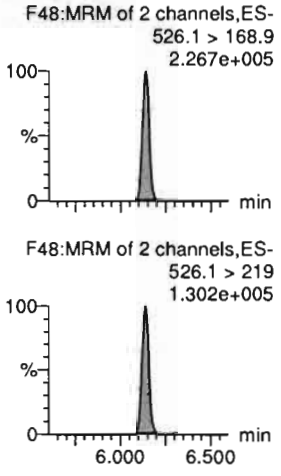
RK 2/26/2020

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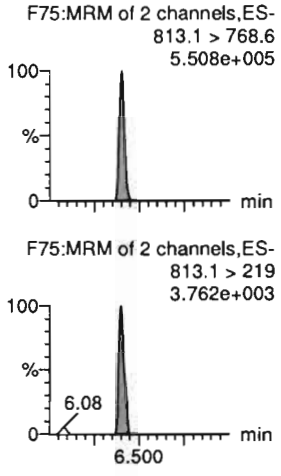
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Name: 200225P1-67, Date: 26-Feb-2020, Time: 05:32:00, ID: ST200225P1-13 PFC CS3 20B1107, Description: PFC CS3 20B1107

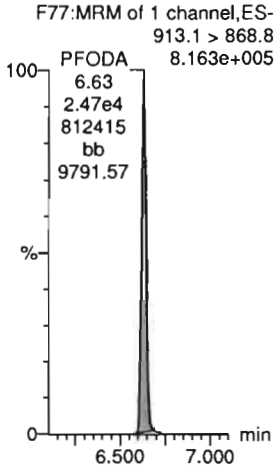
N-EtFOSA



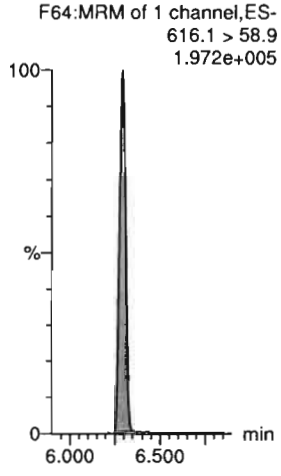
PFHxDA



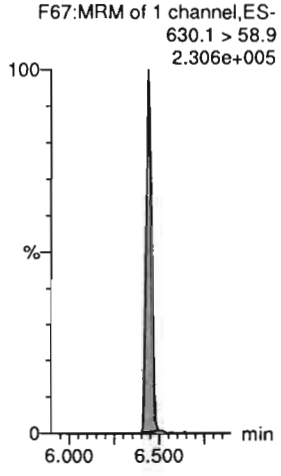
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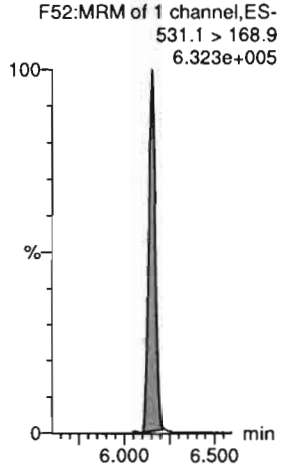
N-MeFOSE



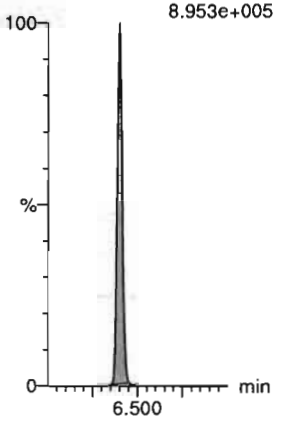
N-EtFOSE



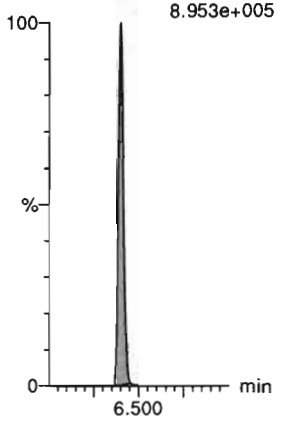
d5-N-ETFOSA-EIS



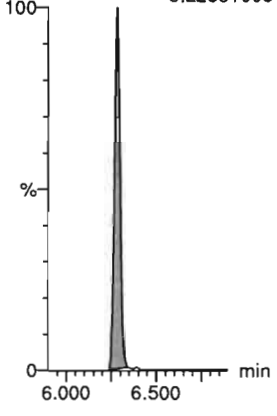
13C2-PFHxDA-EIS



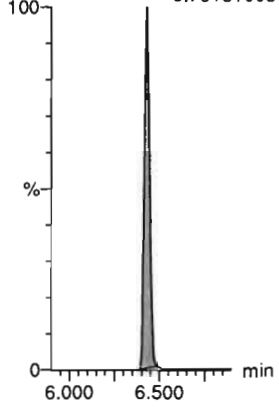
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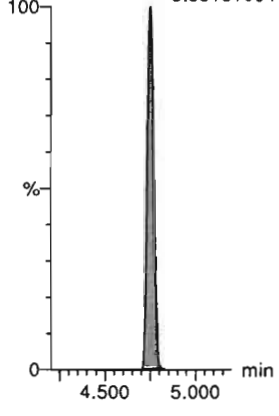
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS



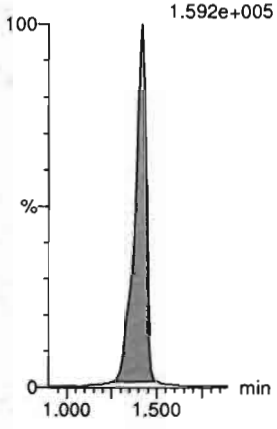
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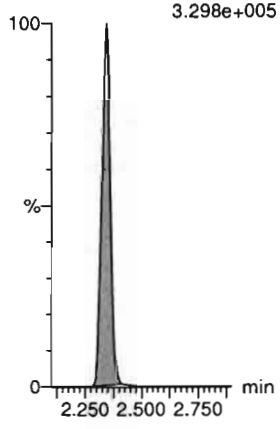
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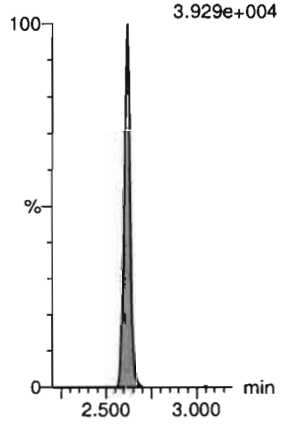
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.592e+005



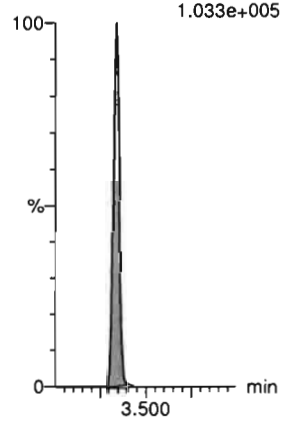
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
3.298e+005



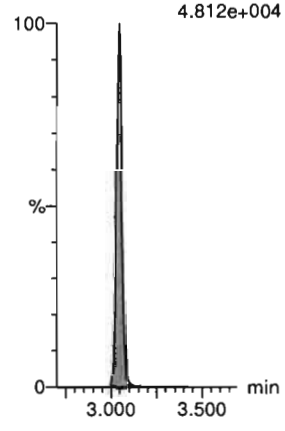
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.929e+004



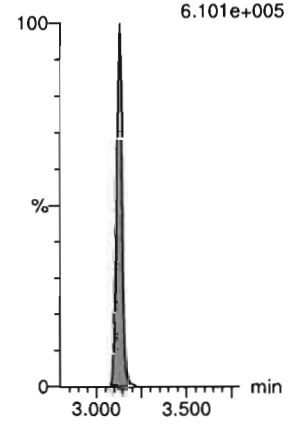
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.033e+005



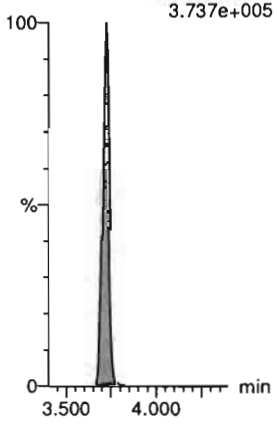
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.812e+004



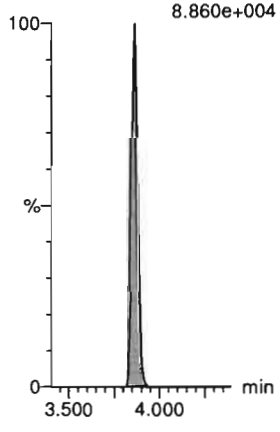
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
6.101e+005



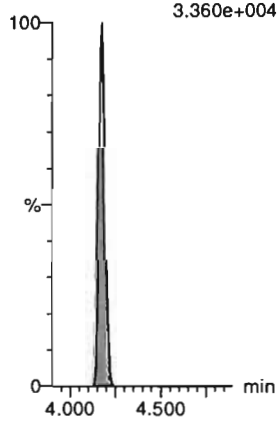
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.737e+005



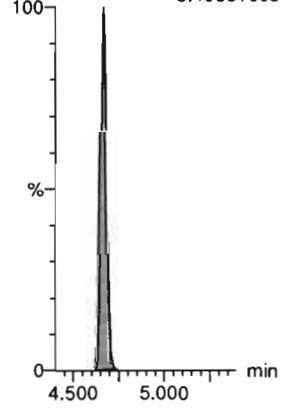
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.860e+004



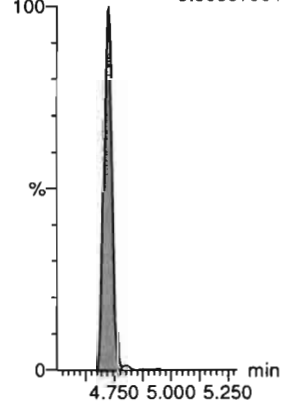
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.360e+004



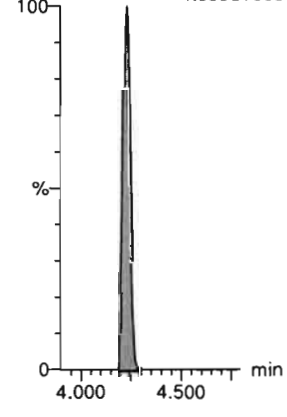
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.409e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.506e+004



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.959e+005



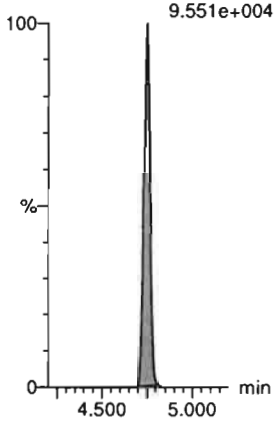
RK 2/26/2020

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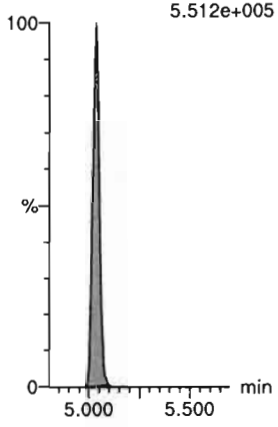
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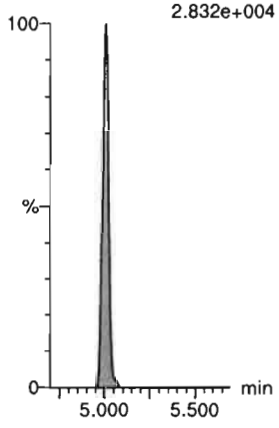
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.551e+004



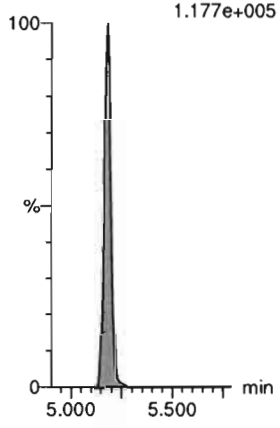
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.512e+005



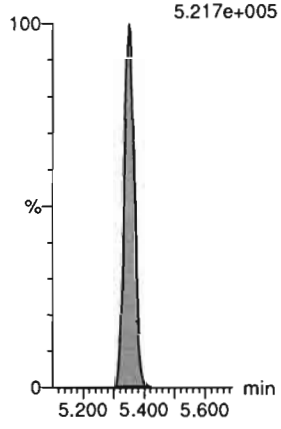
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.832e+004



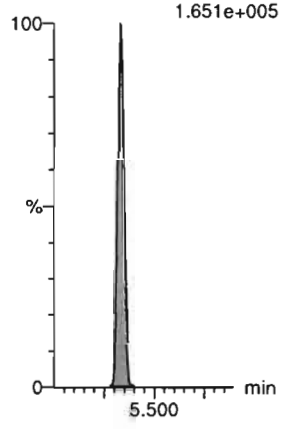
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.177e+005



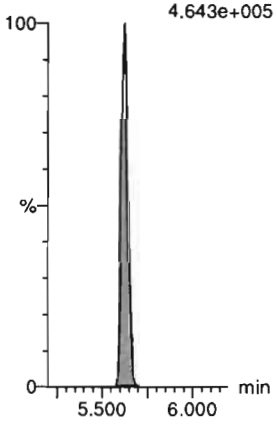
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.217e+005



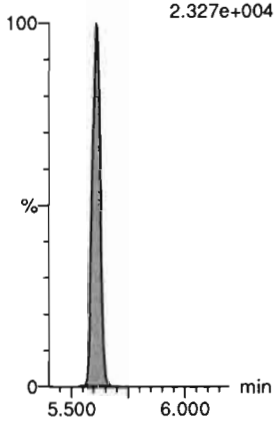
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.651e+005



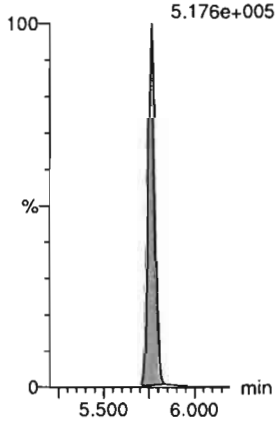
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.643e+005



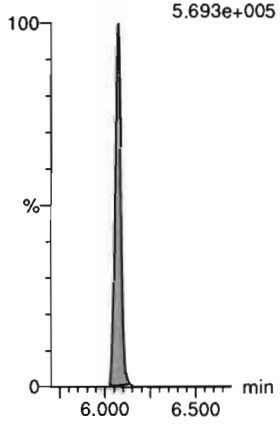
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.327e+004



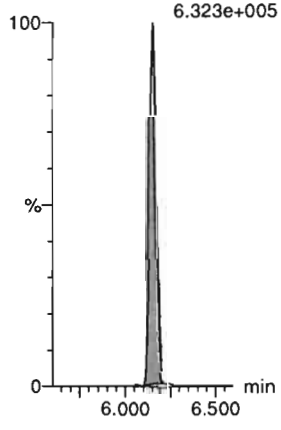
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.176e+005



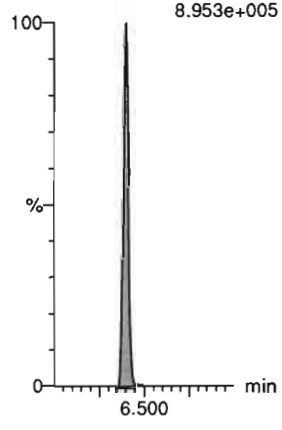
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.693e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.323e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.953e+005



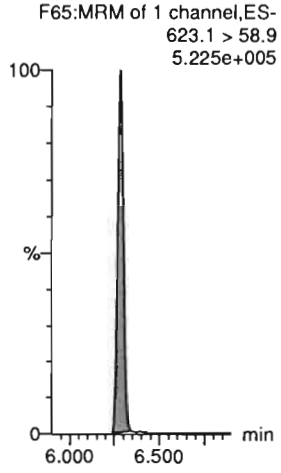
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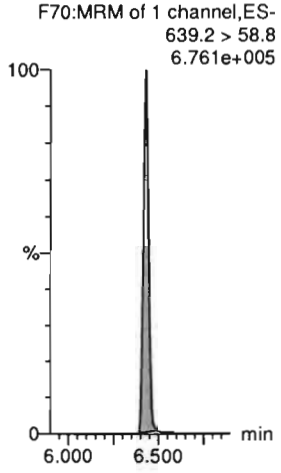
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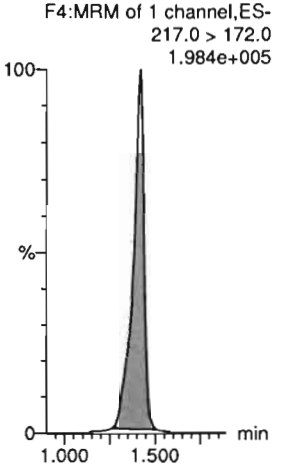
d7-N-MeFOSE-RSD



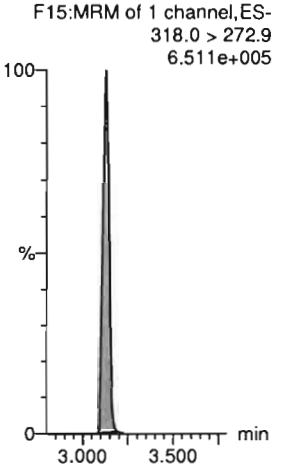
d9-N-EtFOSE-RSD



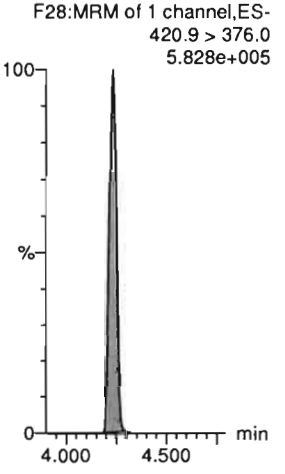
13C4-PFBA



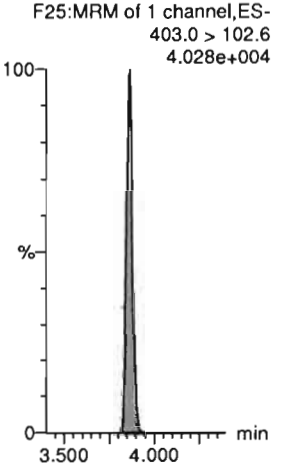
13C5-PFHxA



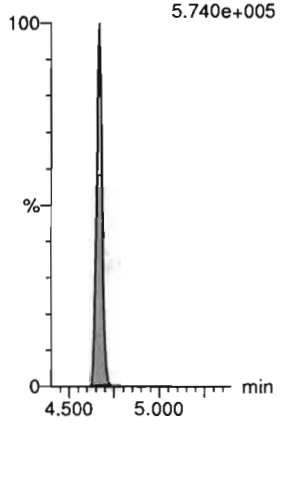
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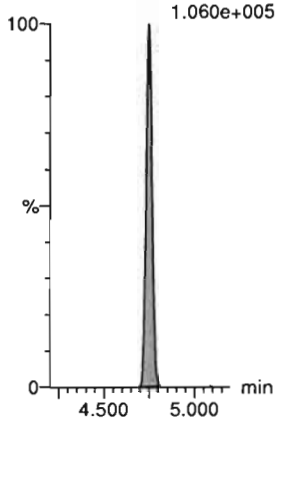
18O2-PFHxS



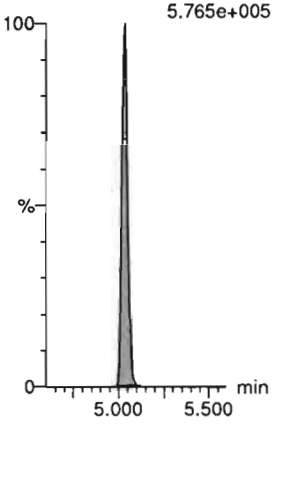
13C9-PFNA



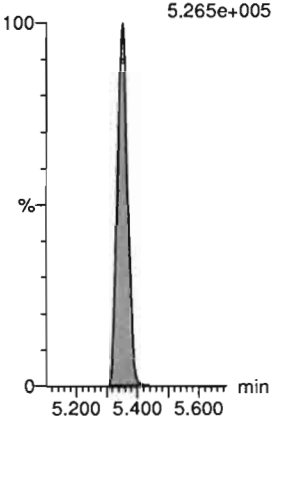
13C4-PFOS



13C6-PFDA



13C7-PFUdA



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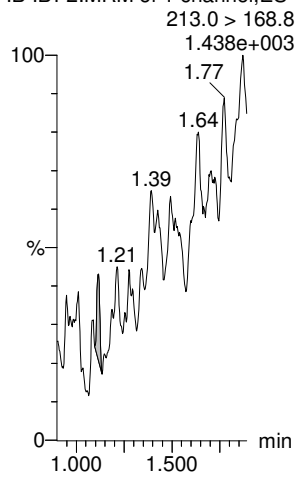
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Printed: Friday, February 28, 2020 10:19:02 Pacific Standard Time

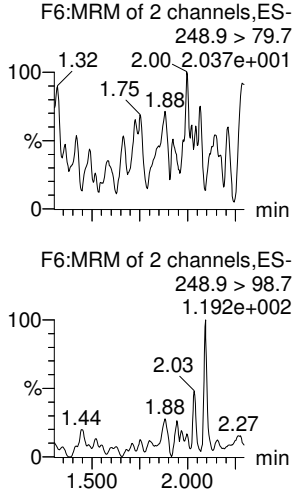
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Name: 200227P1-15, Date: 27-Feb-2020, Time: 17:58:10, ID: IB, Description: IB

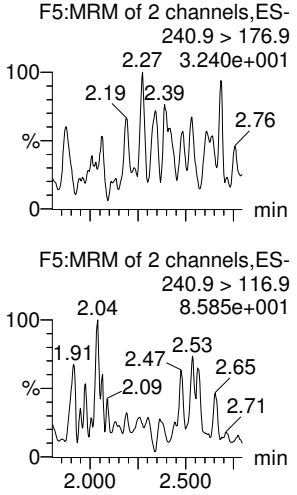
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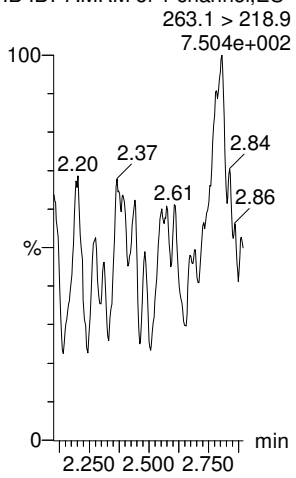
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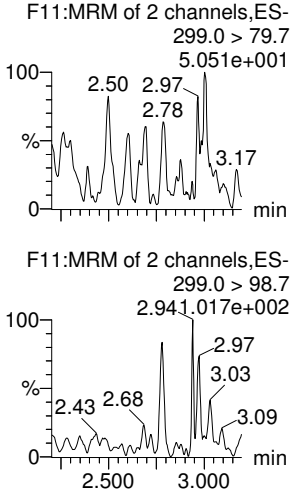
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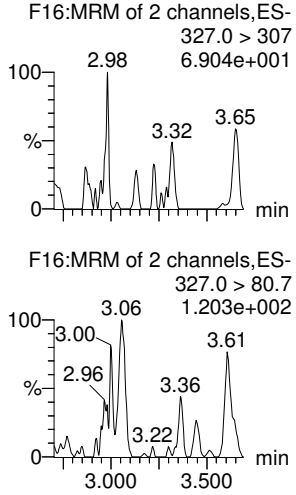
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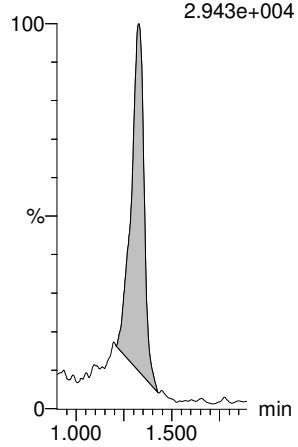
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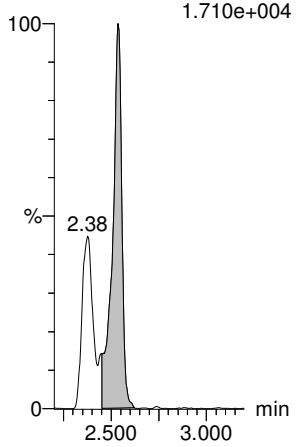
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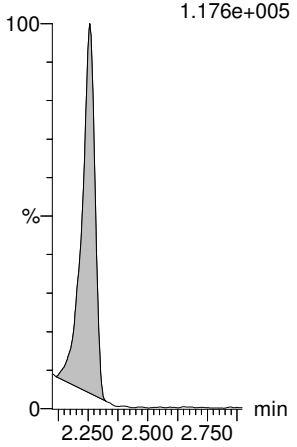
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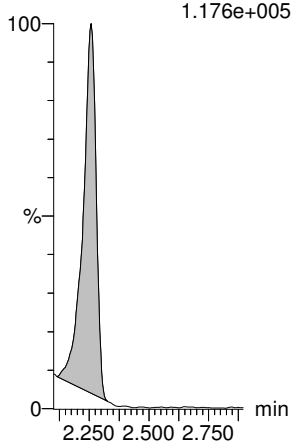
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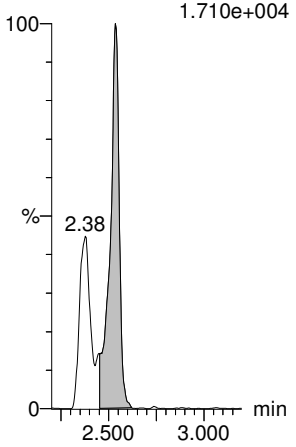
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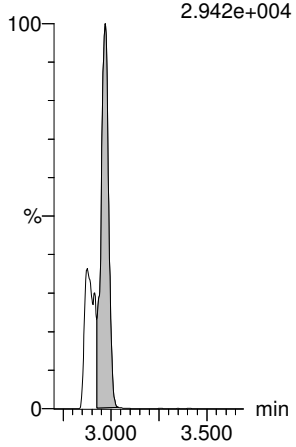
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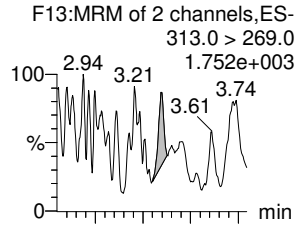


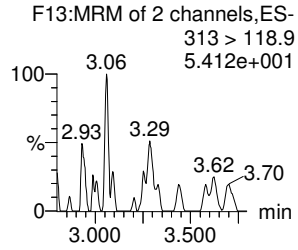
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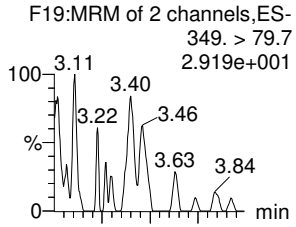
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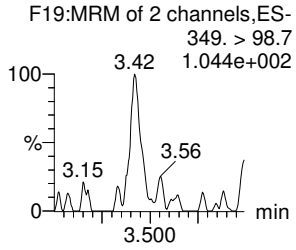
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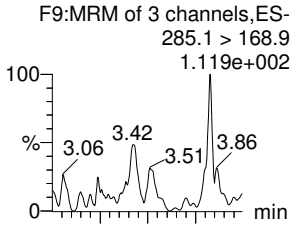


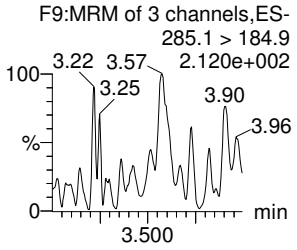
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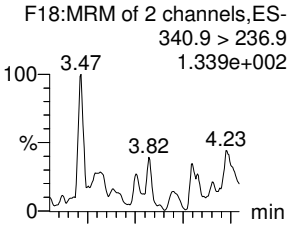


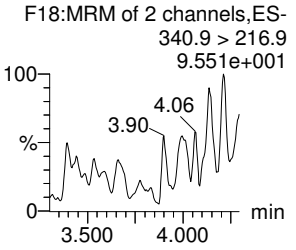
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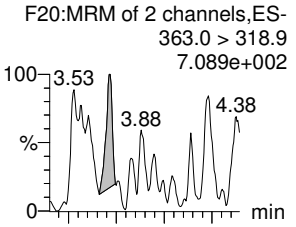


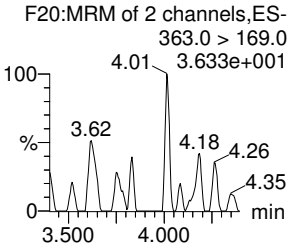
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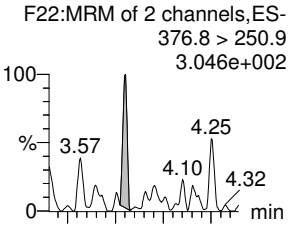


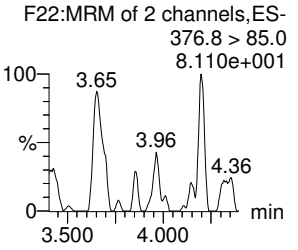
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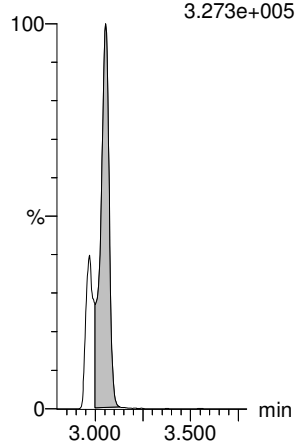


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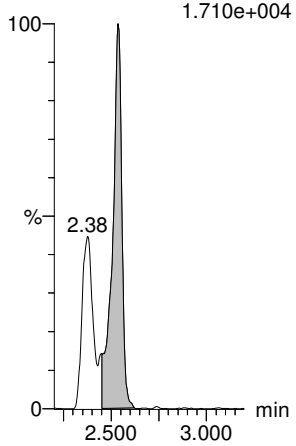




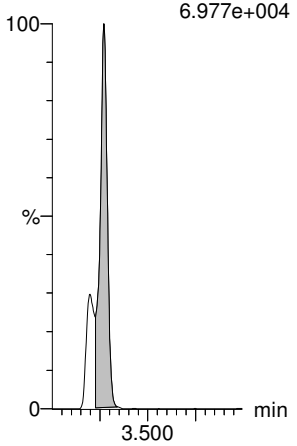
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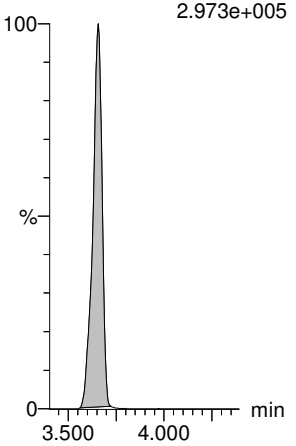
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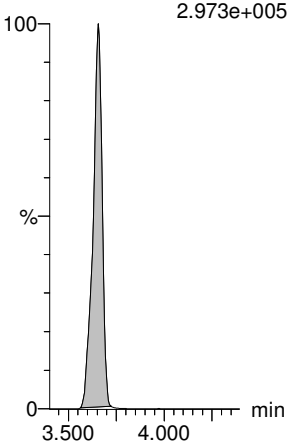
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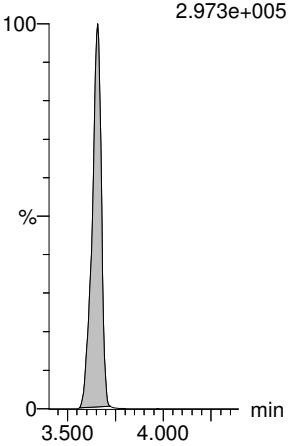
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13C4-PFHpA-EIS



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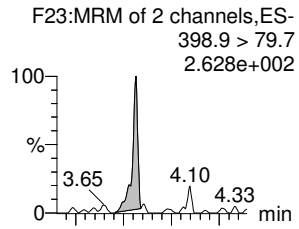


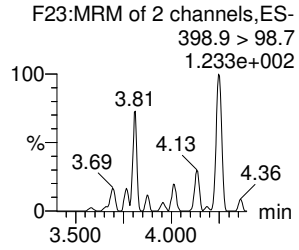
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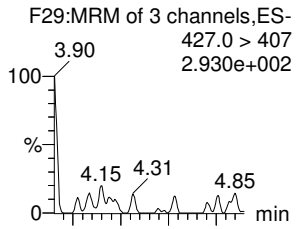
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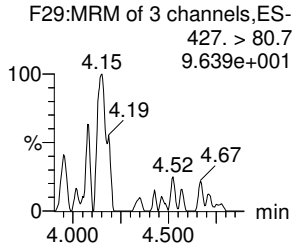
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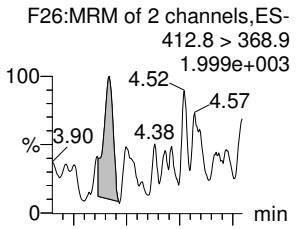


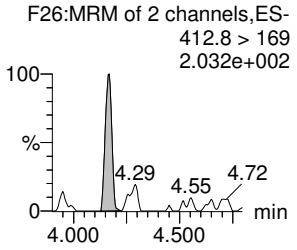
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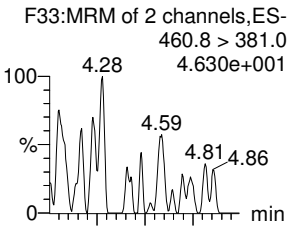


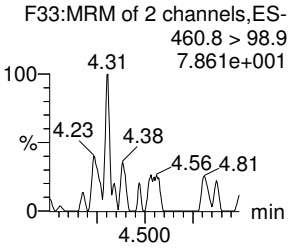
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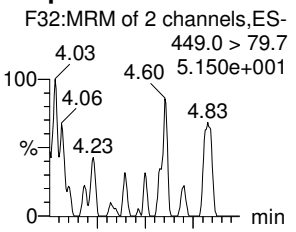


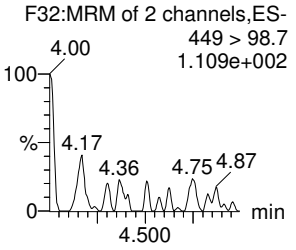
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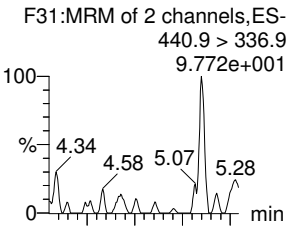


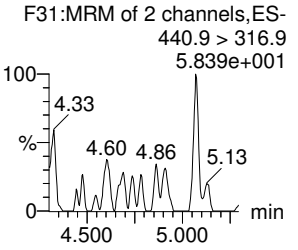
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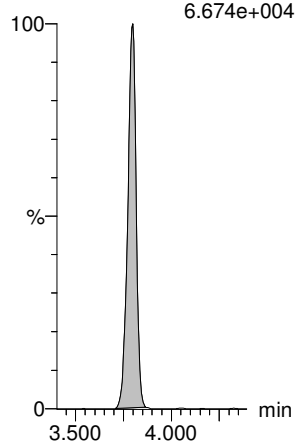


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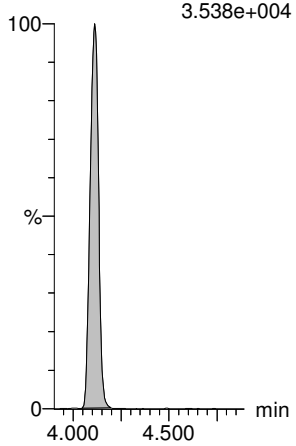




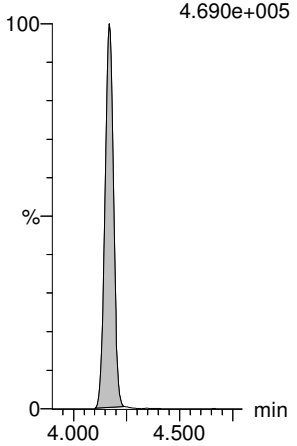
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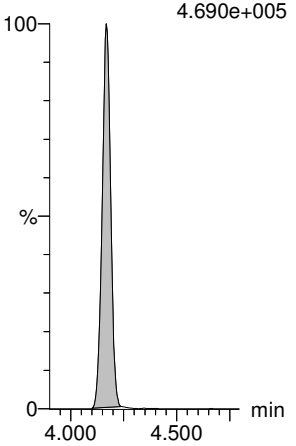
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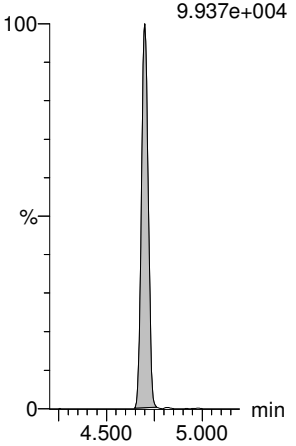
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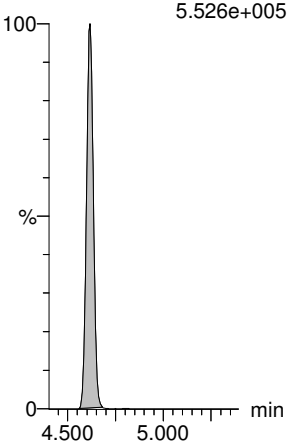
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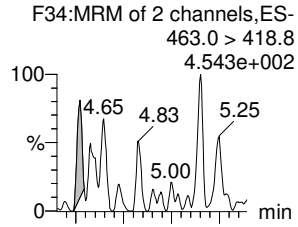


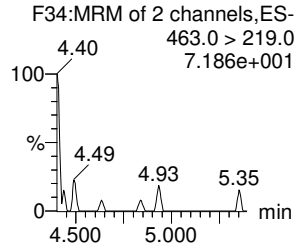
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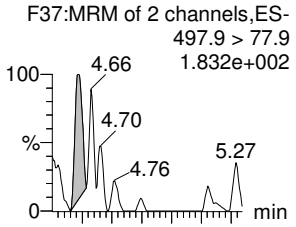
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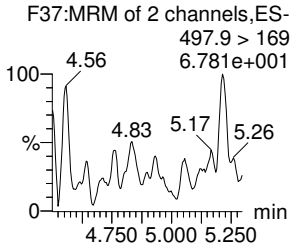
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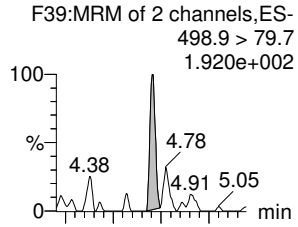


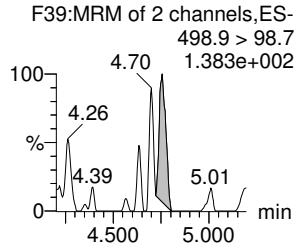
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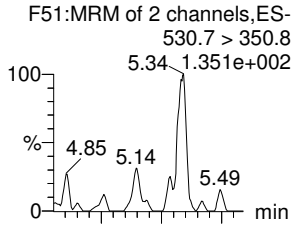


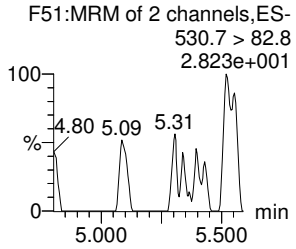
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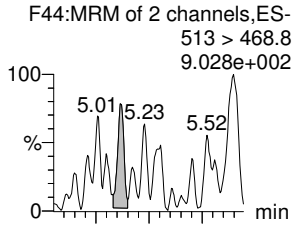


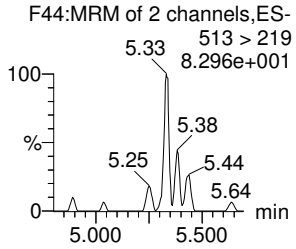
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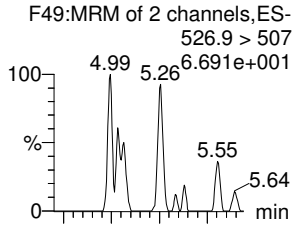


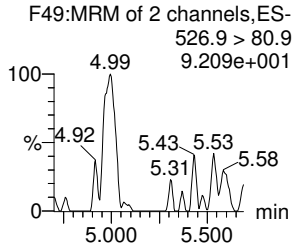
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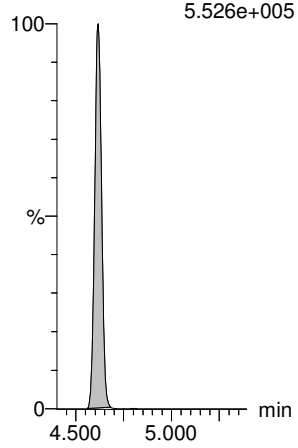


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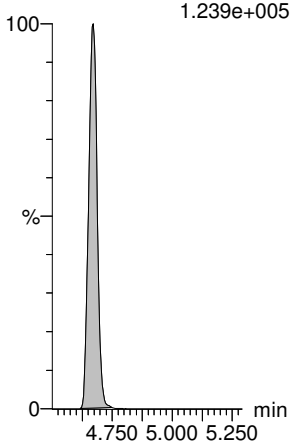




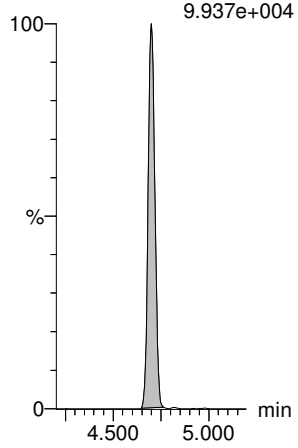
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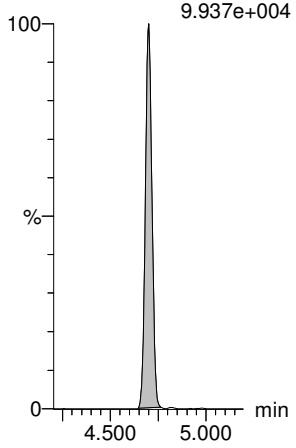
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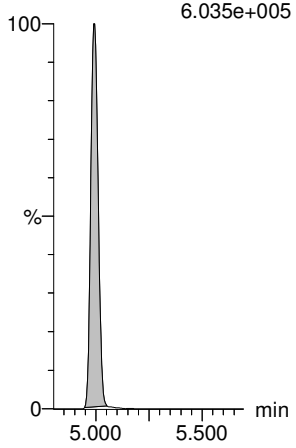
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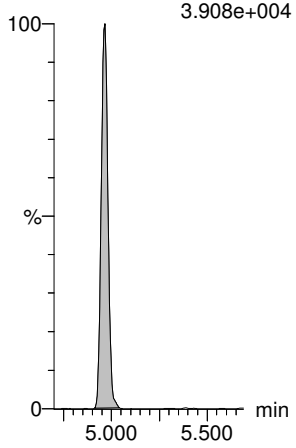
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

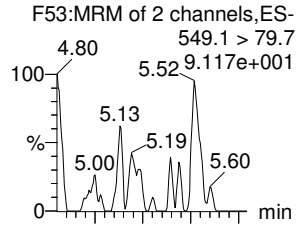


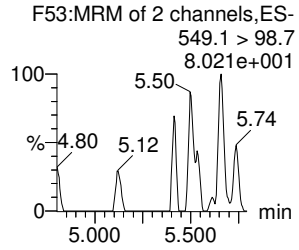
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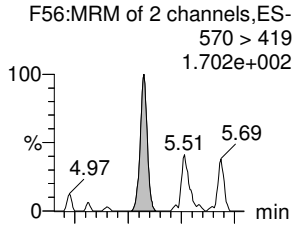
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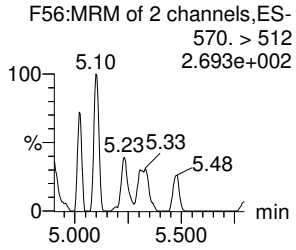
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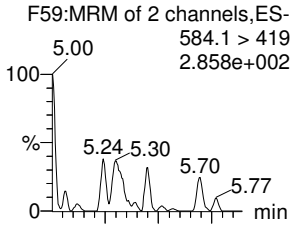


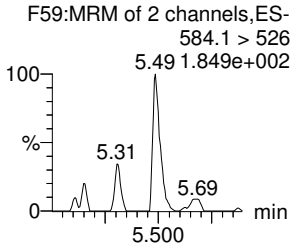
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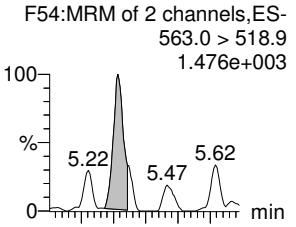


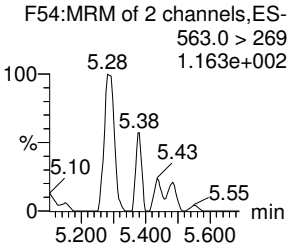
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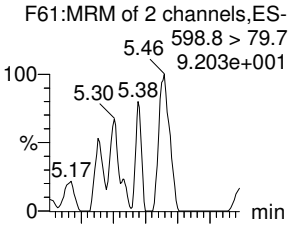


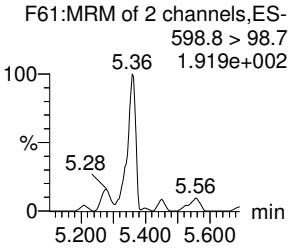
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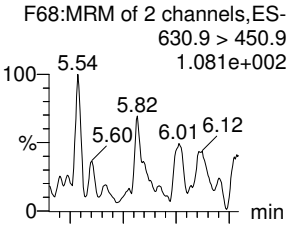


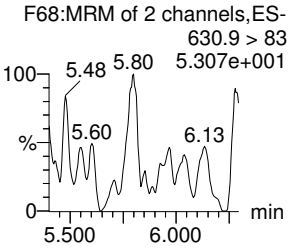
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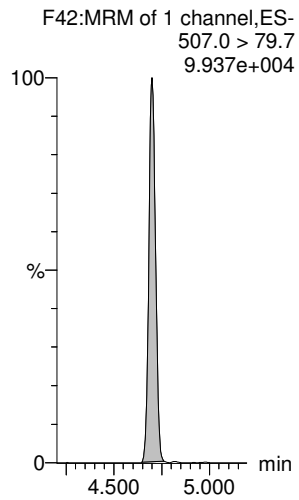


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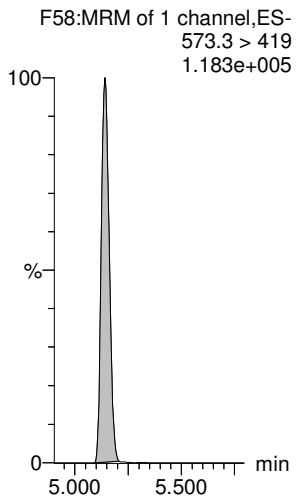




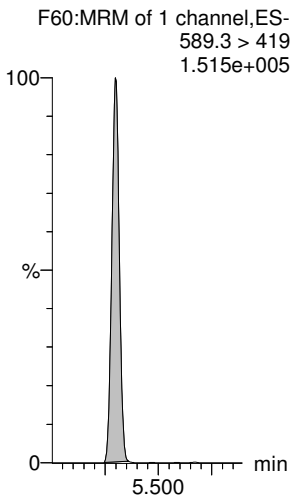
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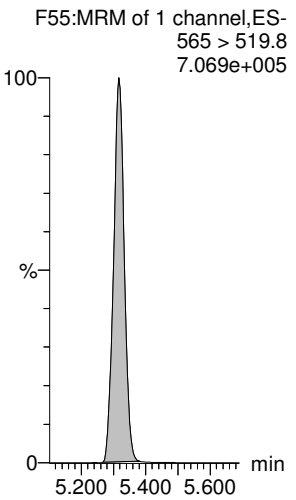
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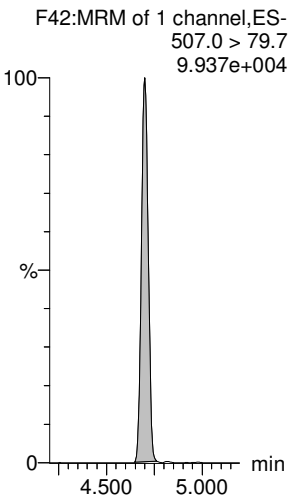
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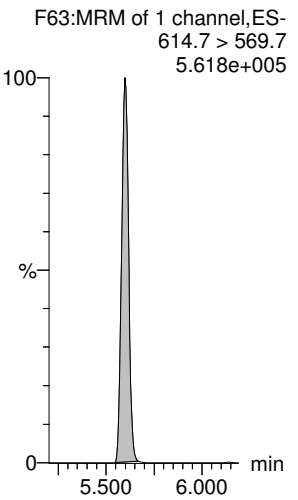
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13C8-PFOS-EIS



13C2-PFDoA-EIS

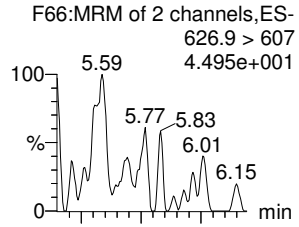


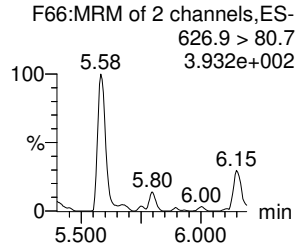
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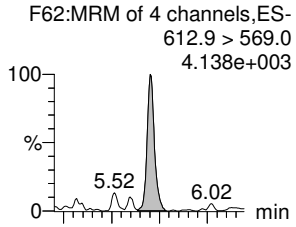
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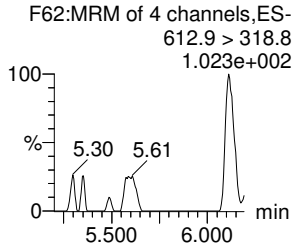
10:2 FTS



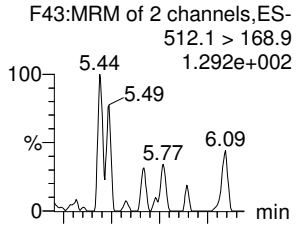


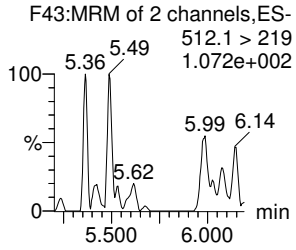
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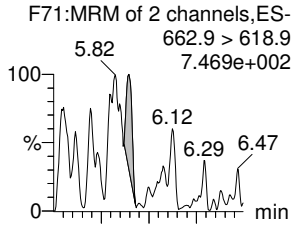


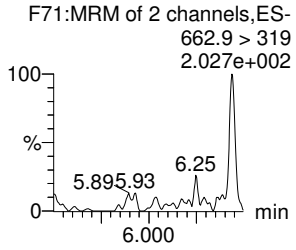
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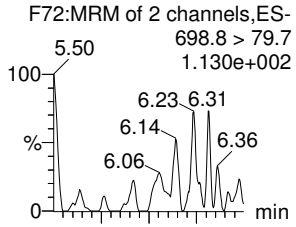


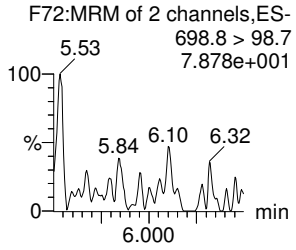
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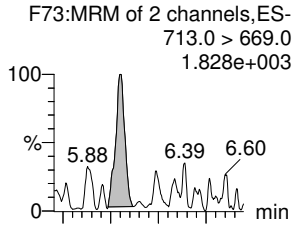


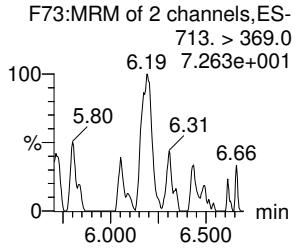
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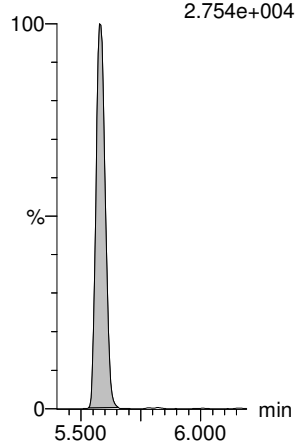


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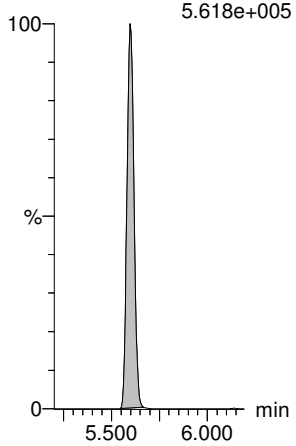




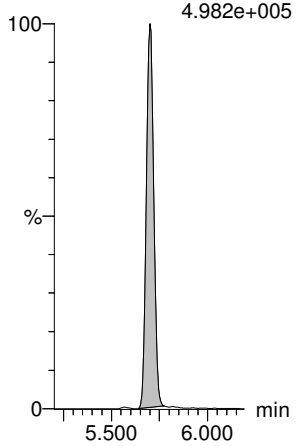
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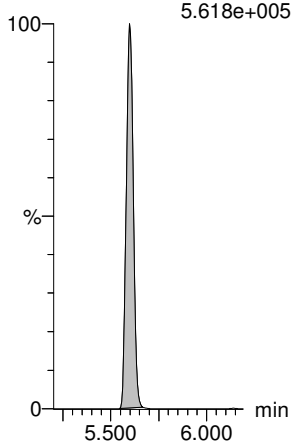
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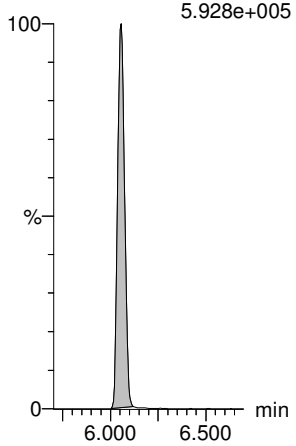
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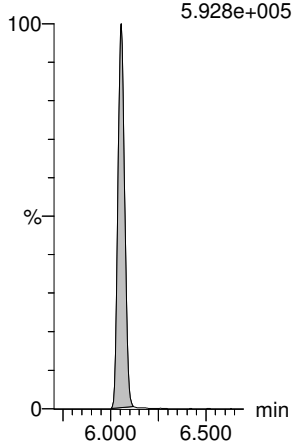
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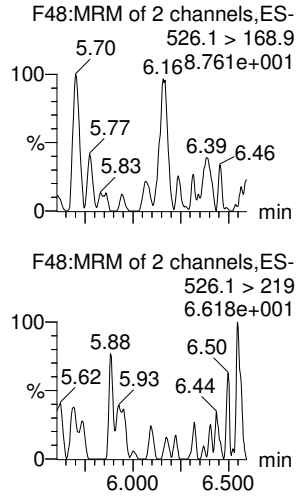


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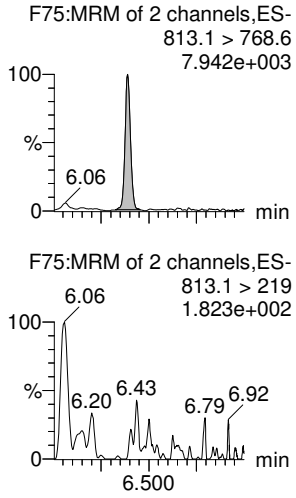
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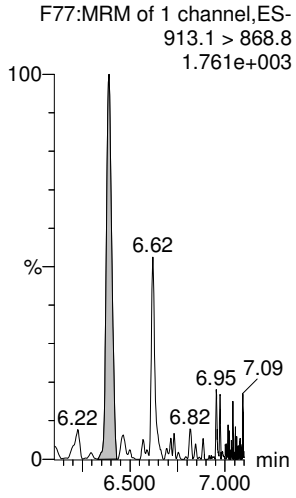
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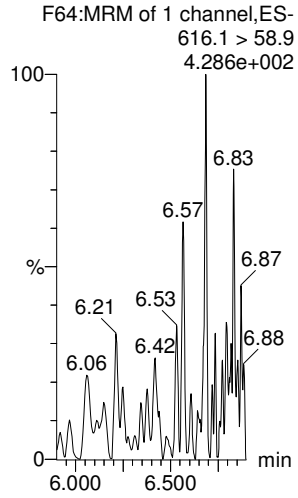
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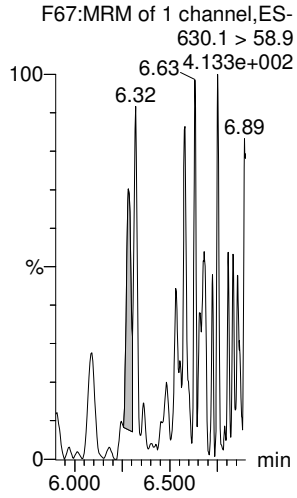
PFODA



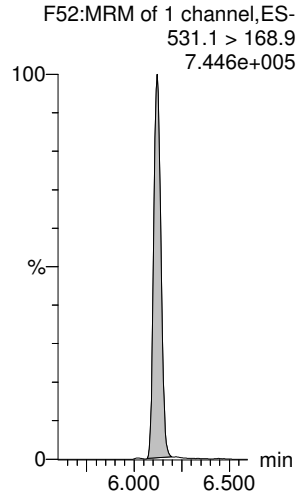
N-MeFOSE



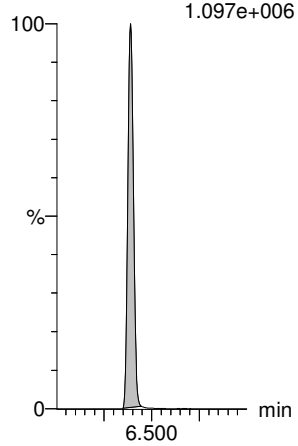
N-EtFOSE



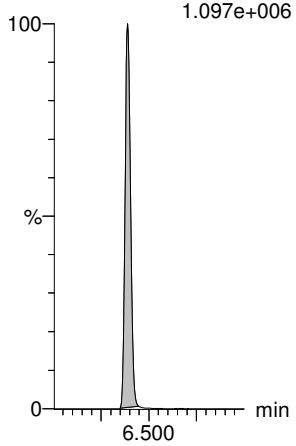
d5-N-ETFOSA-EIS



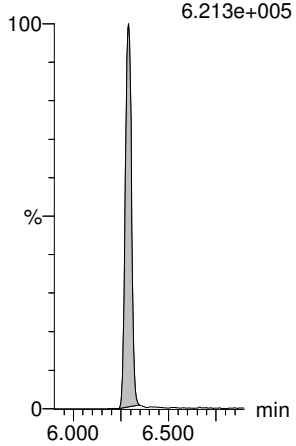
13C2-PFHxDA-EIS



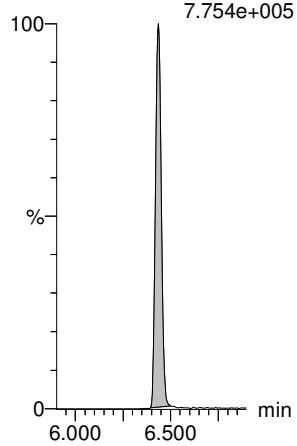
13C2-PFHxDA-EIS



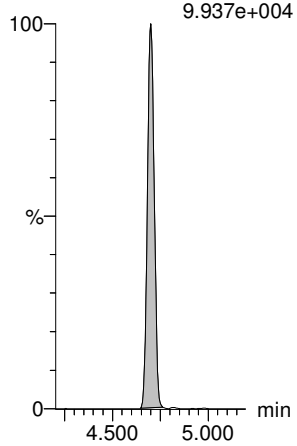
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS

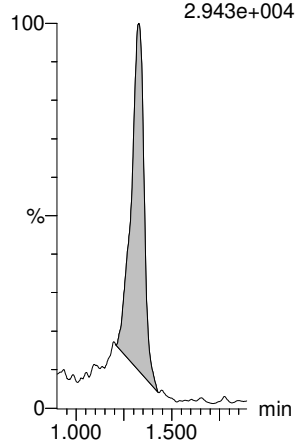


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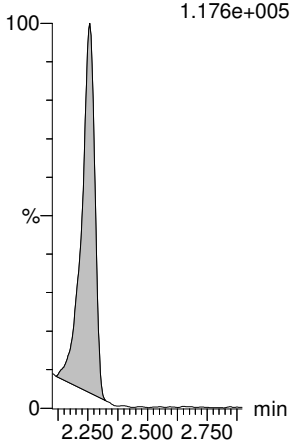
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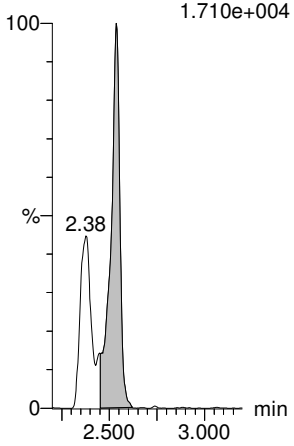
13C3-PFBA-RSD



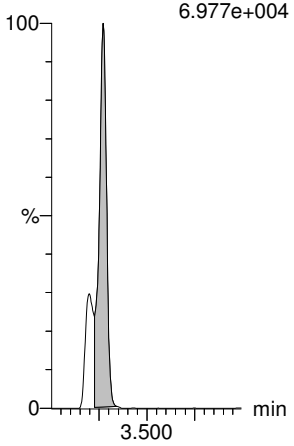
13C3-PFPeA-RSD



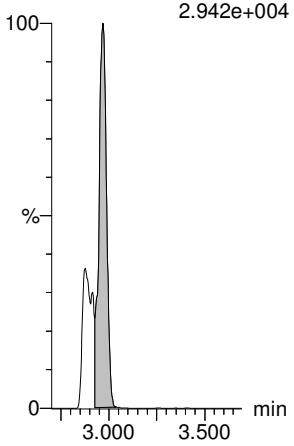
13C3-PFBS-RSD



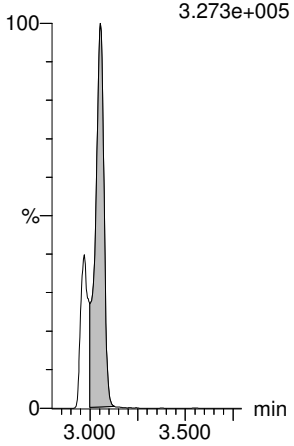
13C3-HFPO-DA-RSD



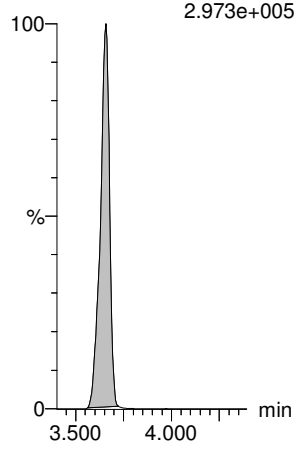
13C2-4:2 FTS-RSD



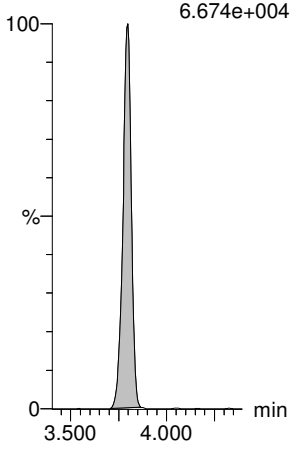
13C2-PFHxA-RSD



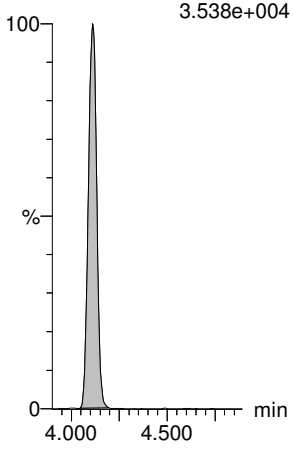
13C4-PFHpA-RSD



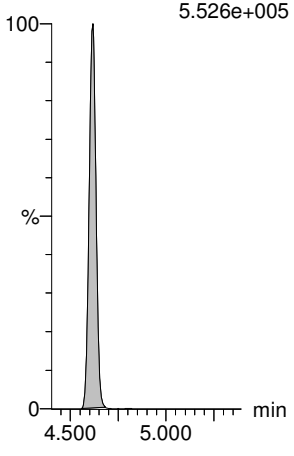
13C3-PFHxS-RSD



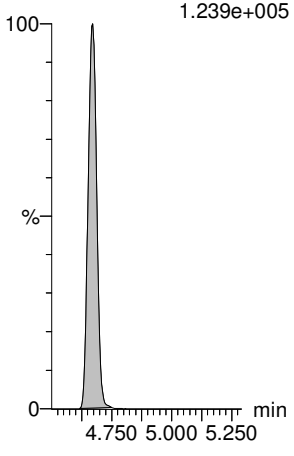
13C2-6:2 FTS-RSD



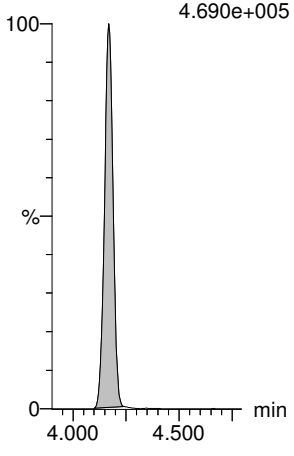
13C5-PFNA-RSD



13C8-PFOSA-RSD



13C2-PFOA-RSD

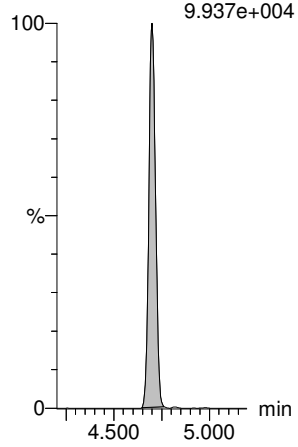


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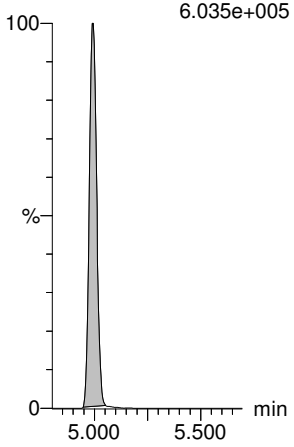
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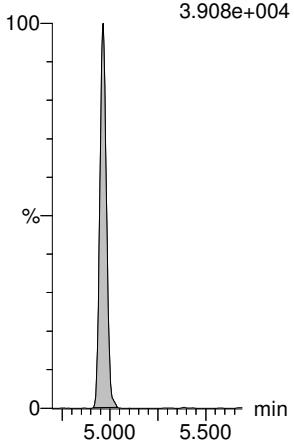
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.937e+004



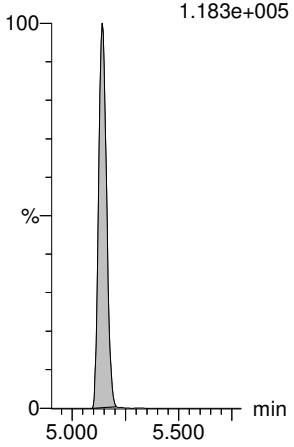
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
6.035e+005



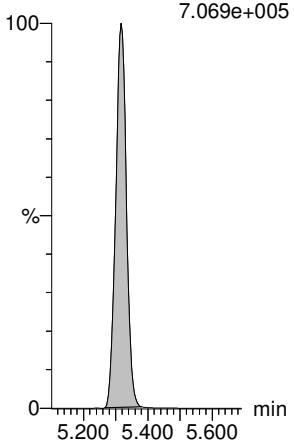
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.908e+004



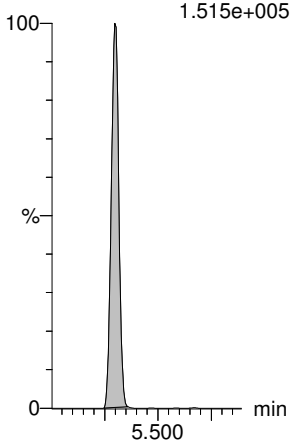
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.183e+005



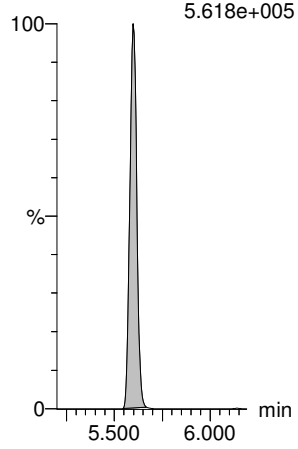
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
7.069e+005



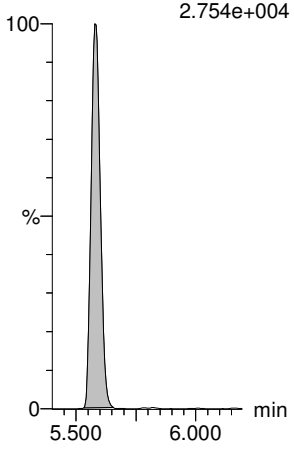
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.515e+005



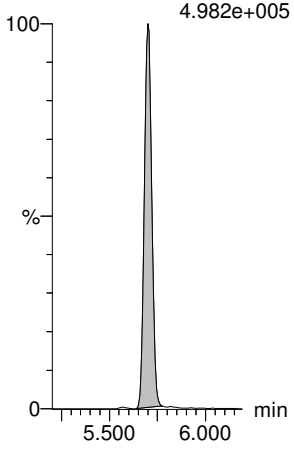
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.618e+005



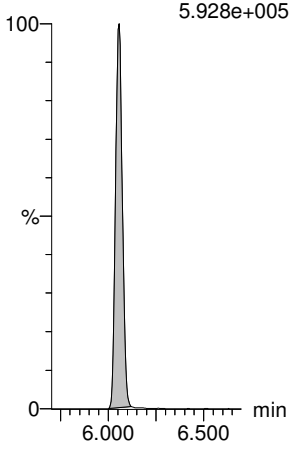
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.754e+004



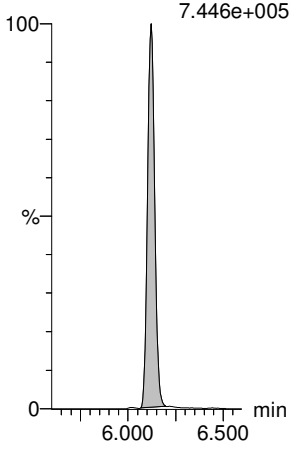
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.982e+005



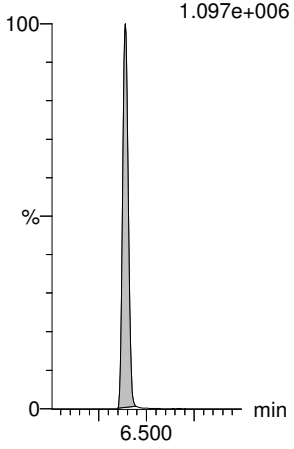
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.928e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.446e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.097e+006

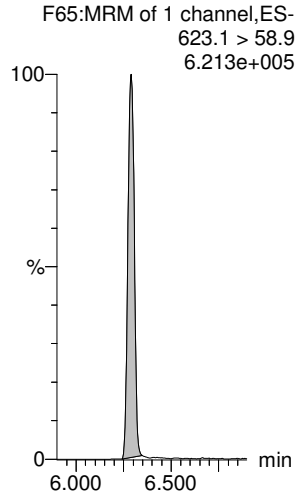


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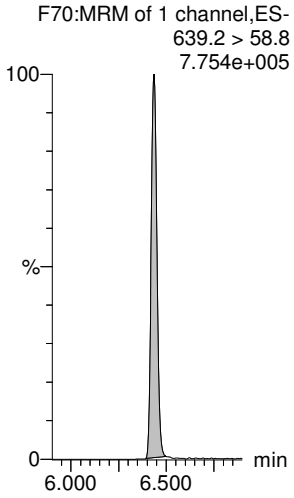
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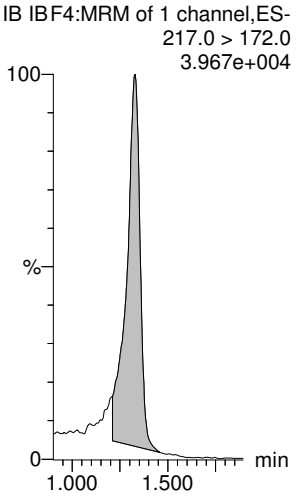
d7-N-MeFOSE-RSD



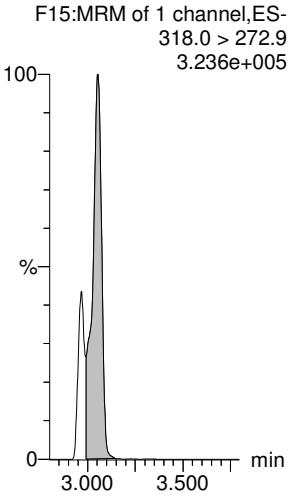
d9-N-EtFOSE-RSD



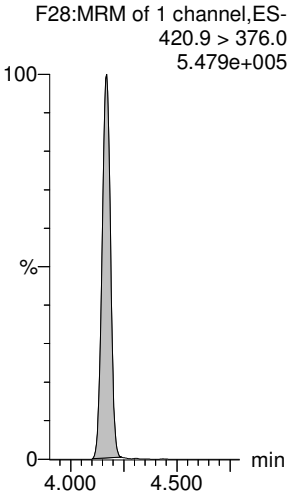
13C4-PFBA



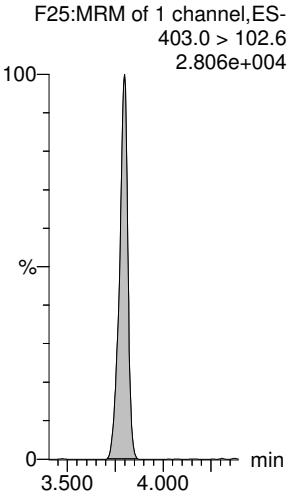
13C5-PFHxA



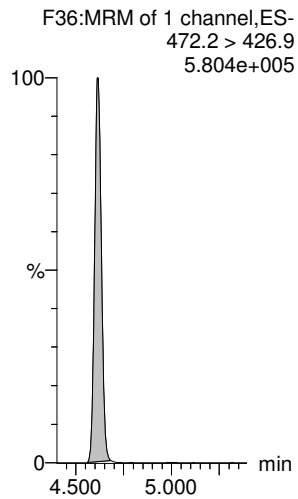
13C8-PFOA



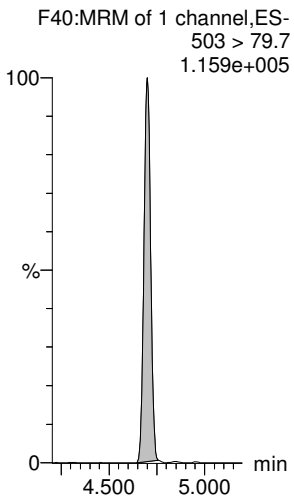
18O2-PFHxS



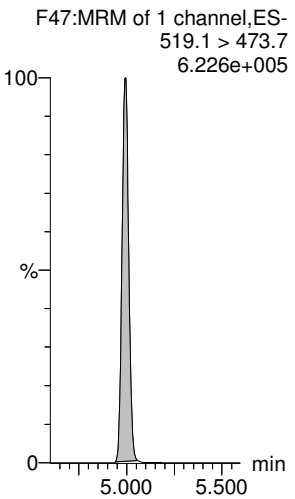
13C9-PFNA



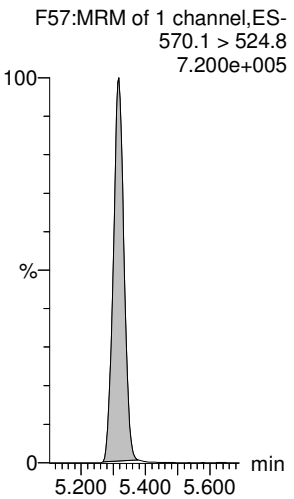
13C4-PFOS



13C6-PFDA



13C7-PFUdA



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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	5.979	2056.498	1.00	1.12	0.036				NO		
2	2	PFPrS	248.9 > 79.7		941.691	1.00						NO		YES
3	3	3:3 FTCA	240.9 > 176.9		7211.878	1.00						NO		YES
4	4	PFPeA	263.1 > 218.9		7211.878	1.00						NO		
5	5	PFBS	299.0 > 79.7		941.691	1.00						NO		YES
6	6	4:2 FTS	327.0 > 307		1347.511	1.00						NO		YES
7	47	13C3-PFBA-EIS	216.1 > 171.8	2056.498		1.00	1.33	2056.498	12.500	3.20	25.6	YES		
8	51	13C3-PFBS-EIS	302.0 > 98.8	941.691		1.00	2.54	941.691	12.500	7.67	61.4	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	7211.878		1.00	2.26	7211.878	12.500	6.22	49.7	YES		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	7211.878		1.00	2.26	7211.878	12.500	6.22	49.7	YES		
11	51	13C3-PFBS-EIS	302.0 > 98.8	941.691		1.00	2.54	941.691	12.500	7.67	61.4	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1347.511		1.00	2.97	1347.511	12.500	8.13	65.0	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	30.188	16627.254	1.00	3.34	0.023				NO		YES
15	8	PFPeS	349.>79.7		941.691	1.00						NO		YES
16	9	HFPO-DA	285.1 > 168.9		3047.664	1.00						NO		YES
17	10	5:3 FTCA	340.9 > 236.9		16200.894	1.00						NO		YES
18	11	PFHpA	363.0 > 318.9	22.115	16200.894	1.00	3.72	0.017				NO		YES
19	12	ADONA	376.8 > 250.9	7.452	16200.894	1.00	3.80	0.006				NO		YES
20	57	13C2-PFHxA-EIS	315.0 > 270.0	16627.254		1.00	3.05	16627.254	12.500	9.44	75.5	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	941.691		1.00	2.54	941.691	12.500	7.67	61.4	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3047.664		1.00	3.27	3047.664	12.500	9.29	74.3	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	16200.894		1.00	3.66	16200.894	12.500	12.5	100.4	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	16200.894		1.00	3.66	16200.894	12.500	12.5	100.4	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	16200.894		1.00	3.66	16200.894	12.500	12.5	100.4	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	8.346	3327.413	1.00	3.81	0.031				NO		YES
28	15	6:2 FTS	427.0 > 407		1771.795	1.00						NO		YES
29	16	L-PFOA	412.8 > 368.9	90.800	21312.219	1.00	4.17	0.053				NO	12.907	YES
30	18	PFecHS	460.8 > 381.0		21312.219	1.00						NO		YES
31	19	PFHpS	449.0 > 79.7		3967.881	1.00						NO		YES
32	20	7:3 FTCA	440.9 > 336.9		22886.457	1.00						NO		YES
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3327.413		1.00	3.80	3327.413	12.500	10.8	86.1	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1771.795		1.00	4.11	1771.795	12.500	11.9	95.2	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	21312.219		1.00	4.17	21312.219	12.500	12.0	95.7	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	21312.219		1.00	4.17	21312.219	12.500	12.0	95.7	NO		

Dataset: Untitled

Last Altered: Friday, February 28, 2020 10:18:53 Pacific Standard Time
Printed: Friday, February 28, 2020 10:19:02 Pacific Standard Time

Name: 200227P1-15, Date: 27-Feb-2020, Time: 17:58:10, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	71	13C8-PFOS-EIS	507.0 > 79.7	3967.881		1.00	4.70	3967.881	12.500	11.5	91.6	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	22886.457		1.00	4.62	22886.457	12.500	13.1	104.6	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	9.171	22886.457	1.00	4.52	0.005				NO		YES
41	22	PFOSA	497.9 > 77.9	5.847	5021.423	1.00	4.61	0.015				NO		YES
42	23	L-PFOS	498.9 > 79.7	6.075	3967.881	1.00	4.70	0.019		0.0491		NO	1.168	YES
43	25	9Cl-PF30NS	530.7 > 350.8		3967.881	1.00						NO		YES
44	26	PFDA	513 > 468.8	23.281	23565.637	1.00	5.11	0.012				NO		YES
45	27	8:2 FTS	526.9 > 507		1579.977	1.00						NO		YES
46	65	13C5-PFNA-EIS	468.2 > 422.9	22886.457		1.00	4.62	22886.457	12.500	13.1	104.6	NO		
47	67	13C8-PFOSA-EIS	506 > 78	5021.423		1.00	4.67	5021.423	12.500	11.2	89.4	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3967.881		1.00	4.70	3967.881	12.500	11.5	91.6	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3967.881		1.00	4.70	3967.881	12.500	11.5	91.6	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	23565.637		1.00	4.99	23565.637	12.500	12.3	98.4	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1579.977		1.00	4.96	1579.977	12.500	11.9	95.2	NO		
52	-1													
53	28	PFNS	549.1 > 79.7		3967.881	1.00						NO		YES
54	29	L-MeFOSAA	570 > 419	6.307	5008.103	1.00	5.32	0.016		0.0311		NO		YES
55	31	L-EtFOSAA	584.1 > 419		6147.624	1.00						NO		YES
56	33	PFUdA	563.0 > 518.9	52.471	26762.389	1.00	5.31	0.025				NO		YES
57	34	PFDS	598.8 > 79.7		3967.881	1.00						NO		YES
58	35	11Cl-PF30UdS	630.9 > 450.9		23202.117	1.00						NO		YES
59	71	13C8-PFOS-EIS	507.0 > 79.7	3967.881		1.00	4.70	3967.881	12.500	11.5	91.6	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	5008.103		1.00	5.14	5008.103	12.500	10.4	83.0	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	6147.624		1.00	5.30	6147.624	12.500	11.1	88.9	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	26762.389		1.00	5.32	26762.389	12.500	12.2	97.6	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3967.881		1.00	4.70	3967.881	12.500	11.5	91.6	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	23202.117		1.00	5.60	23202.117	12.500	11.9	95.4	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607		1208.054	1.00						NO		YES
67	37	PFDoA	612.9 > 569.0	182.153	23202.117	1.00	5.70	0.098		0.0513		NO		YES
68	38	N-MeFOSA	512.1 > 168.9		21771.527	1.00						NO		YES
69	39	PFTrDA	662.9 > 618.9	17.942	23202.117	1.00	5.89	0.010				NO		YES
70	40	PFDoS	698.8 > 79.7		24353.959	1.00						NO		YES
71	41	PFTeDA	713.0 > 669.0	97.627	24353.959	1.00	6.05	0.050				NO		YES
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	1208.054		1.00	5.58	1208.054	12.500	11.6	92.8	NO		

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Last Altered: Friday, February 28, 2020 10:18:53 Pacific Standard Time
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Name: 200227P1-15, Date: 27-Feb-2020, Time: 17:58:10, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83	13C2-PFDoA-EIS	614.7 > 569.7	23202.117		1.00	5.60	23202.117	12.500	11.9	95.4	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	21771.527		1.00	5.70	21771.527	149.200	148	99.1	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	23202.117		1.00	5.60	23202.117	12.500	11.9	95.4	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	24353.959		1.00	6.06	24353.959	12.500	11.7	93.4	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	24353.959		1.00	6.06	24353.959	12.500	11.7	93.4	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9		32100.252	1.00						NO		YES
80	43	PFHxDA	813.1 > 768.6	262.426	36299.520	1.00	6.39	0.090				NO		YES
81	44	PFODA	913.1 > 868.8	57.165	36299.520	1.00	6.39	0.020				NO		
82	45	N-MeFOSE	616.1 > 58.9		23417.418	1.00						NO		
83	46	N-EtFOSE	630.1 > 58.9	7.379	26461.822	1.00	6.28	0.042				NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	32100.252		1.00	6.12	32100.252	149.200	149	99.6	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	36299.520		1.00	6.39	36299.520	12.500	11.8	94.4	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	36299.520		1.00	6.39	36299.520	12.500	11.8	94.4	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	23417.418		1.00	6.29	23417.418	149.200	141	94.2	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	26461.822		1.00	6.44	26461.822	149.200	137	91.8	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3967.881		1.00	4.70	3967.881	12.500	11.5	91.6	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	2056.498	3104.933	1.00	1.33	8.279	12.500	10.2	81.5	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	7211.878	17555.361	1.00	2.26	5.135	12.500	8.69	69.6	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	941.691	1388.647	1.00	2.54	8.477	12.500	7.78	62.2	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	3047.664	17555.361	1.00	3.27	2.170	12.500	12.4	99.4	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1347.511	1388.647	1.00	2.97	12.130	12.500	8.60	68.8	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	16627.254	17555.361	1.00	3.05	11.839	12.500	12.1	96.7	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	16200.894	17555.361	1.00	3.66	11.536	12.500	17.1	136.6	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	3327.413	1388.647	1.00	3.80	29.952	12.500	12.3	98.7	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1771.795	4646.858	1.00	4.11	4.766	12.500	10.9	87.4	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	22886.457	23611.387	1.00	4.62	12.116	12.500	12.8	102.0	NO		
101	68	13C8-PFOSA-RSD	506 > 78	5021.423	27172.432	1.00	4.67	2.310	12.500	10.7	85.5	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	21312.219	24551.977	1.00	4.17	10.851	12.500	11.8	94.7	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3967.881	4646.858	1.00	4.70	10.674	12.500	11.5	92.1	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	23565.637	24918.301	1.00	4.99	11.821	12.500	12.0	96.2	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1579.977	4646.858	1.00	4.96	4.250	12.500	11.6	92.6	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	5008.103	27172.432	1.00	5.14	2.304	12.500	10.2	81.2	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	26762.389	27172.432	1.00	5.32	12.311	12.500	11.7	93.6	NO		

Dataset: Untitled

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Name: 200227P1-15, Date: 27-Feb-2020, Time: 17:58:10, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82	d5-N-EtFOSAA-RSD	589.3 > 419	6147.624	27172.432	1.00	5.30	2.828	12.500	11.7	93.6	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	23202.117	24918.301	1.00	5.60	11.639	12.500	12.0	95.9	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	1208.054	4646.858	1.00	5.58	3.250	12.500	11.4	91.0	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	21771.527	27172.432	1.00	5.70	10.015	149.200	134	89.8	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	24353.959	27172.432	1.00	6.06	11.203	12.500	10.7	85.5	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	32100.252	27172.432	1.00	6.12	14.767	149.200	142	95.2	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	36299.520	27172.432	1.00	6.39	16.699	12.500	11.4	91.2	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	23417.418	27172.432	1.00	6.29	10.773	149.200	132	88.4	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	26461.822	27172.432	1.00	6.44	12.173	149.200	130	87.0	NO		
119	99	13C4-PFBA	217.0 > 172.0	3104.933	3104.933	1.00	1.33	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	17555.361	17555.361	1.00	3.05	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	24551.977	24551.977	1.00	4.17	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1388.647	1388.647	1.00	3.80	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	23611.387	23611.387	1.00	4.61	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	4646.858	4646.858	1.00	4.70	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	24918.301	24918.301	1.00	4.99	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	27172.432	27172.432	1.00	5.32	12.500	12.500	12.5	100.0	NO		

Dataset: P:\PFAS5.PRO\RESULTS\200227P1\200227P1-86.qld

Last Altered: Friday, February 28, 2020 11:02:35 Pacific Standard Time
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JQA 02/28/20

Name: 200227P1-86, Date: 28-Feb-2020, Time: 06:24:04, ID: ST200227P1-14 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	6299.075	7024.237	1.00	1.34	11.210	10.000	9.67	96.7	NO		
2	2	PFPrS	248.9 > 79.7	1480.360	1299.117	1.00	1.67	14.244	10.000	10.2	101.8	NO	2.433	NO
3	3	3:3 FTCA	240.9 > 176.9	986.153	12373.850	1.00	2.13	0.996	10.000	10.7	107.2	NO	3.832	NO
4	4	PFPeA	263.1 > 218.9	9996.498	12373.850	1.00	2.27	10.098	10.000	10.6	105.9	NO		
5	5	PFBS	299.0 > 79.7	2861.178	1299.117	1.00	2.55	27.530	10.000	11.6	115.6	NO	3.081	NO
6	6	4:2 FTS	327.0 > 307	1715.686	1696.351	1.00	2.98	12.642	10.000	9.74	97.4	NO	0.924	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	7024.237		1.00	1.34	7024.237	12.500	10.9	87.5	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1299.117		1.00	2.54	1299.117	12.500	10.6	84.7	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	12373.850		1.00	2.27	12373.850	12.500	10.7	85.3	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	12373.850		1.00	2.27	12373.850	12.500	10.7	85.3	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1299.117		1.00	2.54	1299.117	12.500	10.6	84.7	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1696.351		1.00	2.98	1696.351	12.500	10.2	81.8	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	15399.081	20088.135	1.00	3.06	9.582	10.000	10.7	107.2	NO	18.309	NO
15	8	PFPeS	349.>79.7	2653.535	1299.117	1.00	3.26	25.532	10.000	10.4	103.6	NO	2.784	NO
16	9	HFPO-DA	285.1 > 168.9	3660.109	4308.341	1.00	3.28	10.619	10.000	10.2	101.6	NO	2.651	NO
17	10	5:3 FTCA	340.9 > 236.9	2411.382	13705.561	1.00	3.61	2.199	10.000	10.5	105.2	NO	1.810	NO
18	11	PFHpA	363.0 > 318.9	14062.620	13705.561	1.00	3.67	12.826	10.000	11.0	110.0	NO	30.656	NO
19	12	ADONA	376.8 > 250.9	29332.074	13705.561	1.00	3.77	26.752	10.000	10.2	101.6	NO	3.786	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	20088.135		1.00	3.06	20088.135	12.500	11.4	91.2	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1299.117		1.00	2.54	1299.117	12.500	10.6	84.7	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	4308.341		1.00	3.28	4308.341	12.500	13.1	105.0	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	13705.561		1.00	3.67	13705.561	12.500	10.6	84.9	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	13705.561		1.00	3.67	13705.561	12.500	10.6	84.9	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	13705.561		1.00	3.67	13705.561	12.500	10.6	84.9	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2678.807	3124.990	1.00	3.81	10.715	10.000	10.2	101.8	NO	2.414	NO
28	15	6:2 FTS	427.0 > 407	2018.486	1570.268	1.00	4.12	16.068	10.000	10.1	101.4	NO	1.302	NO
29	16	L-PFOA	412.8 > 368.9	17227.406	18341.801	1.00	4.18	11.741	10.000	9.67	96.7	NO	2.936	NO
30	18	PFecHS	460.8 > 381.0	2445.592	18341.801	1.00	4.19	1.667	10.000	9.74	97.4	NO	0.488	NO
31	19	PFHpS	449.0 > 79.7	2761.334	3604.161	1.00	4.29	9.577	10.000	9.86	98.6	NO	1.983	NO
32	20	7:3 FTCA	440.9 > 336.9	2386.321	18327.887	1.00	4.61	1.628	10.000	10.5	104.5	NO	1.535	NO
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3124.990		1.00	3.81	3124.990	12.500	10.1	80.8	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1570.268		1.00	4.12	1570.268	12.500	10.5	84.4	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	18341.801		1.00	4.18	18341.801	12.500	10.3	82.3	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	18341.801		1.00	4.18	18341.801	12.500	10.3	82.3	NO		

RK 2/28/2020

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Printed: Friday, February 28, 2020 11:32:27 Pacific Standard Time

Name: 200227P1-86, Date: 28-Feb-2020, Time: 06:24:04, ID: ST200227P1-14 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	71	13C8-PFOS-EIS	507.0 > 79.7	3604.161		1.00	4.70	3604.161	12.500	10.4	83.2	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	18327.887		1.00	4.62	18327.887	12.500	10.5	83.7	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	16446.133	18327.887	1.00	4.62	11.217	10.000	10.4	103.6	NO	7.780	NO
41	22	PFOSA	497.9 > 77.9	2877.597	4421.611	1.00	4.68	8.135	10.000	10.3	103.4	NO	25.574	NO
42	23	L-PFOS	498.9 > 79.7	2761.234	3604.161	1.00	4.70	9.577	10.000	10.2	102.4	NO	2.295	NO
43	25	9Cl-PF30NS	530.7 > 350.8	2796.223	3604.161	1.00	4.93	9.698	10.000	9.64	96.4	NO	24.824	NO
44	26	PFDA	513 > 468.8	16690.482	18286.580	1.00	5.00	11.409	10.000	9.86	98.6	NO	9.382	NO
45	27	8:2 FTS	526.9 > 507	1293.762	1169.052	1.00	4.97	13.833	10.000	9.90	99.0	NO	2.459	NO
46	65	13C5-PFNA-EIS	468.2 > 422.9	18327.887		1.00	4.62	18327.887	12.500	10.5	83.7	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4421.611		1.00	4.68	4421.611	12.500	9.84	78.8	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3604.161		1.00	4.70	3604.161	12.500	10.4	83.2	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3604.161		1.00	4.70	3604.161	12.500	10.4	83.2	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	18286.580		1.00	5.00	18286.580	12.500	9.55	76.4	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1169.052		1.00	4.97	1169.052	12.500	8.80	70.4	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	2808.030	3604.161	1.00	5.06	9.739	10.000	10.1	100.5	NO	2.446	NO
54	29	L-MeFOSAA	570 > 419	5136.797	4667.450	1.00	5.15	13.757	10.000	10.5	105.4	NO	1.862	NO
55	31	L-EtFOSAA	584.1 > 419	4635.962	5478.275	1.00	5.31	10.578	10.000	10.1	100.6	NO	1.243	NO
56	33	PFUdA	563.0 > 518.9	17314.449	20693.059	1.00	5.32	10.459	10.000	11.1	111.2	NO	28.575	NO
57	34	PFDS	598.8 > 79.7	2432.438	3604.161	1.00	5.37	8.436	10.000	10.1	100.8	NO	1.944	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	7045.523	16265.160	1.00	5.53	5.415	10.000	12.1	121.0	NO	21.298	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3604.161		1.00	4.70	3604.161	12.500	10.4	83.2	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	4667.450		1.00	5.14	4667.450	12.500	9.67	77.4	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	5478.275		1.00	5.31	5478.275	12.500	9.90	79.2	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	20693.059		1.00	5.32	20693.059	12.500	9.43	75.4	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3604.161		1.00	4.70	3604.161	12.500	10.4	83.2	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	16265.160		1.00	5.60	16265.160	12.500	8.36	66.8	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	1645.117	914.118	1.00	5.59	22.496	10.000	10.3	103.2	NO	1.050	NO
67	37	PFDoA	612.9 > 569.0	16225.868	16265.160	1.00	5.60	12.470	10.000	10.7	106.7	NO	9.645	NO
68	38	N-MeFOSA	512.1 > 168.9	7404.800	21010.420	1.00	5.68	52.583	50.000	47.9	95.7	NO	1.621	NO
69	39	PFTrDA	662.9 > 618.9	18139.684	16265.160	1.00	5.84	13.941	10.000	11.4	113.7	NO	50.594	NO
70	40	PFDoS	698.8 > 79.7	2699.427	20179.574	1.00	5.87	1.672	10.000	11.5	115.1	NO	2.884	NO
71	41	PFTeDA	713.0 > 669.0	17261.342	20179.574	1.00	6.06	10.692	10.000	11.8	118.0	NO	15.500	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	914.118		1.00	5.59	914.118	12.500	8.78	70.2	NO		

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Dataset: P:\PFAS5.PRO\RESULTS\200227P1\200227P1-86.qld

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Name: 200227P1-86, Date: 28-Feb-2020, Time: 06:24:04, ID: ST200227P1-14 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83	13C2-PFDoA-EIS	614.7 > 569.7	16265.160		1.00	5.60	16265.160	12.500	8.36	66.8	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	21010.420		1.00	5.71	21010.420	149.200	143	95.6	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	16265.160		1.00	5.60	16265.160	12.500	8.36	66.8	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	20179.574		1.00	6.06	20179.574	12.500	9.68	77.4	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	20179.574		1.00	6.06	20179.574	12.500	9.68	77.4	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	10752.991	29723.264	1.00	6.11	53.976	50.000	52.7	105.4	NO	1.858	NO
80	43	PFHxDA	813.1 > 768.6	16653.098	29272.350	1.00	6.39	7.111	10.000	9.92	99.2	NO	162.906	NO
81	44	PFODA	913.1 > 868.8	24159.703	29272.350	1.00	6.62	10.317	10.000	11.4	113.6	NO		
82	45	N-MeFOSE	616.1 > 58.9	9226.355	23774.150	1.00	6.30	57.902	50.000	54.6	109.3	NO		
83	46	N-EtFOSE	630.1 > 58.9	9442.630	27266.418	1.00	6.44	51.669	50.000	52.9	105.8	NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	29723.264		1.00	6.13	29723.264	149.200	138	92.3	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	29272.350		1.00	6.39	29272.350	12.500	9.52	76.2	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	29272.350		1.00	6.39	29272.350	12.500	9.52	76.2	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	23774.150		1.00	6.29	23774.150	149.200	143	95.6	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	27266.418		1.00	6.43	27266.418	149.200	141	94.5	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3604.161		1.00	4.70	3604.161	12.500	10.4	83.2	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	7006.892	8647.939	1.00	1.34	10.128	12.500	12.5	99.7	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	12395.237	20396.617	1.00	2.27	7.596	12.500	12.9	102.9	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	1299.117	1333.692	1.00	2.54	12.176	12.500	11.2	89.4	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	4308.341	20396.617	1.00	3.28	2.640	12.500	15.1	120.9	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1696.351	1333.692	1.00	2.98	15.899	12.500	11.3	90.2	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	20088.135	20396.617	1.00	3.06	12.311	12.500	12.6	100.6	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	13705.561	20396.617	1.00	3.67	8.399	12.500	12.4	99.5	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	3124.990	1333.692	1.00	3.81	29.289	12.500	12.1	96.6	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1570.268	3836.663	1.00	4.12	5.116	12.500	11.7	93.9	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	18236.232	19652.035	1.00	4.62	11.599	12.500	12.2	97.7	NO		
101	68	13C8-PFOSA-RSD	506 > 78	4421.611	21166.332	1.00	4.68	2.611	12.500	12.1	96.7	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	18341.801	20844.459	1.00	4.18	10.999	12.500	12.0	96.0	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3604.161	3836.663	1.00	4.70	11.742	12.500	12.7	101.3	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	18286.580	19069.596	1.00	5.00	11.987	12.500	12.2	97.6	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1169.052	3836.663	1.00	4.97	3.809	12.500	10.4	82.9	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	4667.450	21166.332	1.00	5.14	2.756	12.500	12.1	97.2	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	20693.059	21166.332	1.00	5.32	12.221	12.500	11.6	92.9	NO		

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Name: 200227P1-86, Date: 28-Feb-2020, Time: 06:24:04, ID: ST200227P1-14 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82	d5-N-EtFOSAA-RSD	589.3 > 419	5478.275	21166.332	1.00	5.31	3.235	12.500	13.4	107.1	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	16265.160	19069.596	1.00	5.60	10.662	12.500	11.0	87.8	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	914.118	3836.663	1.00	5.59	2.978	12.500	10.4	83.4	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	21010.420	21166.332	1.00	5.71	12.408	149.200	166	111.3	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	20179.574	21166.332	1.00	6.06	11.917	12.500	11.4	90.9	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	29723.264	21166.332	1.00	6.13	17.553	149.200	169	113.1	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	29272.350	21166.332	1.00	6.39	17.287	12.500	11.8	94.4	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	23774.150	21166.332	1.00	6.29	14.040	149.200	172	115.3	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	27266.418	21166.332	1.00	6.43	16.102	149.200	172	115.1	NO		
119	99	13C4-PFBA	217.0 > 172.0	8647.939	8647.939	1.00	1.34	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	20396.617	20396.617	1.00	3.06	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	20844.459	20844.459	1.00	4.18	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1333.692	1333.692	1.00	3.81	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	19652.035	19652.035	1.00	4.62	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	3836.663	3836.663	1.00	4.70	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	19069.596	19069.596	1.00	5.00	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	21166.332	21166.332	1.00	5.32	12.500	12.500	12.5	100.0	NO		

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Dataset: Untitled

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Method: P:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 10:51:32
Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-27-20.cdb 28 Feb 2020 09:57:55

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
1	1	200227P1-1	IPA	27-Feb-20	15:20:53
2	2	200227P1-2	IPA	27-Feb-20	15:31:38
3	3	200227P1-3	ST200227P1-1 PFC CS-2 20B1102	27-Feb-20	15:42:07
4	4	200227P1-4	ST200227P1-2 PFC CS-1 20B1103	27-Feb-20	15:52:39
5	5	200227P1-5	ST200227P1-3 PFC CS0 20B1104	27-Feb-20	16:03:08
6	6	200227P1-6	ST200227P1-4 PFC CS1 20B1105	27-Feb-20	16:13:39
7	7	200227P1-7	ST200227P1-5 PFC CS2 20B1106	27-Feb-20	16:26:17
8	8	200227P1-8	ST200227P1-6 PFC CS3 20B1107	27-Feb-20	16:36:51
9	9	200227P1-9	ST200227P1-7 PFC CS4 20B1108	27-Feb-20	16:47:20
10	10	200227P1-10	ST200227P1-8 PFC CS5 20B1109	27-Feb-20	16:58:53
11	11	200227P1-11	ST200227P1-9 PFC CS6 20B1110	27-Feb-20	17:16:12
12	12	200227P1-12	ST200227P1-10 PFC CS7 20B1111	27-Feb-20	17:26:40
13	13	200227P1-13	IB	27-Feb-20	17:37:10
14	14	200227P1-14	ICV200227P1-1 PFC ICV 20B1112	27-Feb-20	17:47:42
15	15	200227P1-15	IB	27-Feb-20	17:58:10
16	16	200227P1-16	B0B0123-BS1 OPR 0.25	27-Feb-20	18:08:42
17	17	200227P1-17	2000330-03 I003MW12S-20200214 0.25031	27-Feb-20	18:19:12
18	18	200227P1-18	2000330-02@5X I003MW05S-20200214 0.25637	27-Feb-20	18:29:43
19	19	200227P1-19	2000330-05@5X I003MW14S-20200214 0.25171	27-Feb-20	18:40:11
20	20	200227P1-20	IB	27-Feb-20	18:50:43
21	21	200227P1-21	B0B0221-BLK1 Method Blank 0.125	27-Feb-20	19:01:12
22	22	200227P1-22	B0B0221-BS1 OPR 0.125	27-Feb-20	19:11:44
23	23	200227P1-23	B0B0221-BSD1 LCSD 0.125	27-Feb-20	19:22:14
24	24	200227P1-24	2000386-09 Field Blank 0.11512	27-Feb-20	19:32:43
25	25	200227P1-25	2000386-10 Equipment Blank 0.11758	27-Feb-20	19:43:15
26	26	200227P1-26	2000391-10 Field Blank 0.11887	27-Feb-20	19:53:46
27	27	200227P1-27	2000391-11 Equipment Blank 0.08216	27-Feb-20	20:04:15
28	28	200227P1-28	B0B0180-BLK1 Method Blank 2	27-Feb-20	20:14:45
29	29	200227P1-29	B0B0180-BS1 OPR 2	27-Feb-20	20:25:16
30	30	200227P1-30	B0B0180-MS1 Matrix Spike 2.14	27-Feb-20	20:35:46
31	31	200227P1-31	B0B0180-MSD1 Matrix Spike Dup 2.15	27-Feb-20	20:46:15
32	32	200227P1-32	2000315-01 S-SB06-00-20200210 2.29	27-Feb-20	20:56:47

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Compound name: PFBA

	# Name	ID	Acq.Date	Acq.Time
33	33 200227P1-33	2000315-02 S-SB05-00-20200210 2.33	27-Feb-20	21:07:18
34	34 200227P1-34	2000315-03 S-SB05-4.5-20200210 2.26	27-Feb-20	21:17:46
35	35 200227P1-35	2000315-04 S-SB07-00-20200210 2.39	27-Feb-20	21:28:18
36	36 200227P1-36	2000315-05 S-SB07-05-20200210 2.31	27-Feb-20	21:38:49
37	37 200227P1-37	2000315-06 S-SB04-00-20200210 2.27	27-Feb-20	21:49:17
38	38 200227P1-38	2000315-07 S-SB04-4.5-20200210 2.25	27-Feb-20	21:59:48
39	39 200227P1-39	ST200227P1-11 PFC CS3 20B1107	27-Feb-20	22:10:19
40	40 200227P1-40	IB	27-Feb-20	22:20:48
41	41 200227P1-41	2000315-08 S-SB03-00-20200210 2.1	27-Feb-20	22:31:19
42	42 200227P1-42	2000315-09 S-SB12-02-20200210 2.27	27-Feb-20	22:41:50
43	43 200227P1-43	2000315-10 S-SB12-4.5-20200210 2.19	27-Feb-20	22:52:21
44	44 200227P1-44	2000315-11 S-SB09-00-20200210 2.32	27-Feb-20	23:02:49
45	45 200227P1-45	2000315-12 S-SB09-4.5-20200210 2.24	27-Feb-20	23:13:21
46	46 200227P1-46	2000315-13 S-SB08-00-20200210 2.13	27-Feb-20	23:23:49
47	47 200227P1-47	2000315-14 S-SB08-4.5-20200210 2.28	27-Feb-20	23:34:21
48	48 200227P1-48	B0B0184-BLK1 Method Blank 0.25	27-Feb-20	23:44:50
49	49 200227P1-49	B0B0184-BS1 OPR 0.25	27-Feb-20	23:55:22
50	50 200227P1-50	B0B0184-BSD1 LCSD 0.25	28-Feb-20	00:05:51
51	51 200227P1-51	2000354-01 S9MW55-20Q1 0.2499	28-Feb-20	00:16:22
52	52 200227P1-52	2000354-02 S9MW56-20Q1 0.24983	28-Feb-20	00:26:54
53	53 200227P1-53	2000354-03 S9MW59-20Q1 0.25123	28-Feb-20	00:37:23
54	54 200227P1-54	ST200227P1-12 PFC CS3 20B1107	28-Feb-20	00:47:54
55	55 200227P1-55	IB	28-Feb-20	00:58:24
56	56 200227P1-56	2000354-04 S9MW61L9-20Q1 0.25204	28-Feb-20	01:08:55
57	57 200227P1-57	2000354-05 91MW04-20Q1 0.24449	28-Feb-20	01:19:23
58	58 200227P1-58	2000354-06 S9SMW2A-20Q1 0.23864	28-Feb-20	01:29:55
59	59 200227P1-59	2000354-07 S9SMW10-20Q1 0.24862	28-Feb-20	01:40:24
60	60 200227P1-60	2000354-09@5X S9MW61L1-20Q1 0.25585	28-Feb-20	01:50:55
61	61 200227P1-61	2000354-10@10X 91MW10-20Q1 0.24621	28-Feb-20	02:01:26
62	62 200227P1-62	B0B0183-BLK1 Method Blank 0.25	28-Feb-20	02:11:55
63	63 200227P1-63	B0B0183-BS1 OPR 0.25	28-Feb-20	02:22:26
64	64 200227P1-64	B0B0183-BSD1 LCSD 0.25	28-Feb-20	02:32:57
65	65 200227P1-65	2000353-01@5X S9MW30-20Q1 0.25885	28-Feb-20	02:43:26
66	66 200227P1-66	IB	28-Feb-20	02:53:57
67	67 200227P1-67	2000353-02 S9MW29-20Q1 0.2606	28-Feb-20	03:04:28
68	68 200227P1-68	2000353-03 S9MW28-20Q1 0.24763	28-Feb-20	03:14:58

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Compound name: PFBA

	# Name	ID	Acq.Date	Acq.Time
69	69 200227P1-69	2000353-04 S9MW27-20Q1 0.24573	28-Feb-20	03:25:27
70	70 200227P1-70	ST200227P1-13 PFC CS0 20B1104	28-Feb-20	03:35:59
71	71 200227P1-71	IB	28-Feb-20	03:46:27
72	72 200227P1-72	2000353-05 S9SMW3-20Q1 0.24	28-Feb-20	03:57:00
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78	78 200227P1-78	2000353-10 S9MW68L1-20Q1 0.25186	28-Feb-20	04:59:59
79	79 200227P1-79	2000353-11 S9MW71L9-20Q1 0.252	28-Feb-20	05:10:29
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Vista Analytical Laboratory

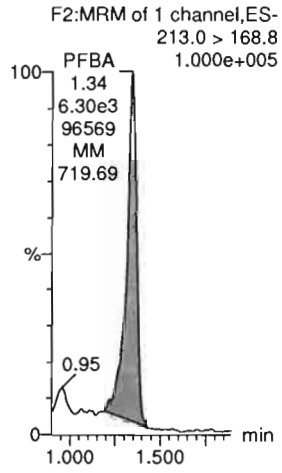
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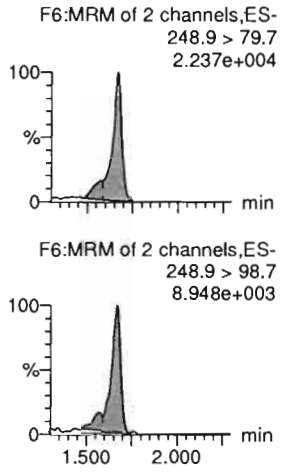
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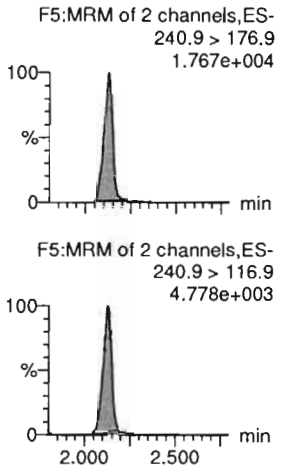
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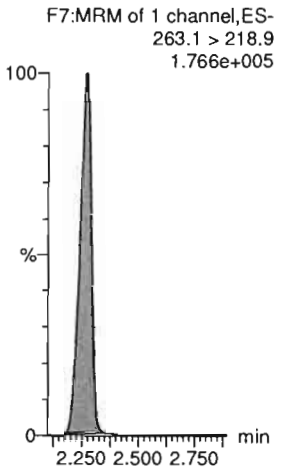
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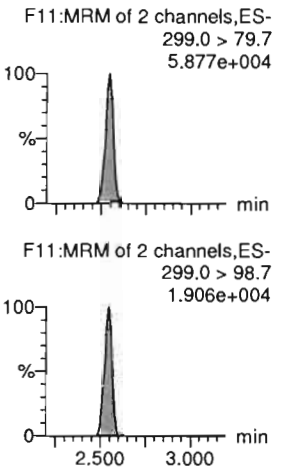
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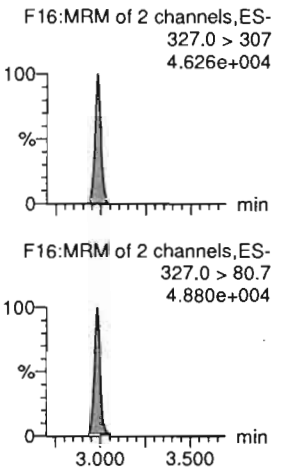
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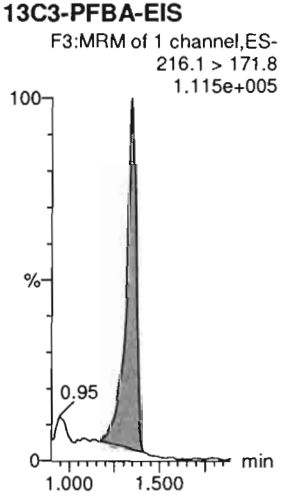
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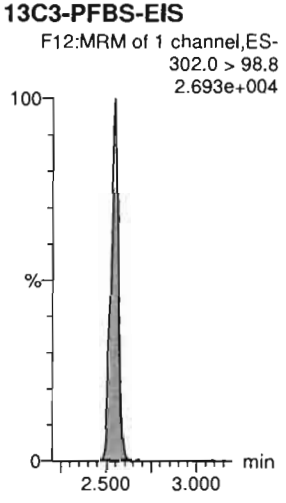
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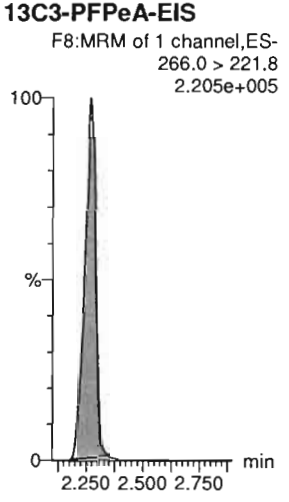
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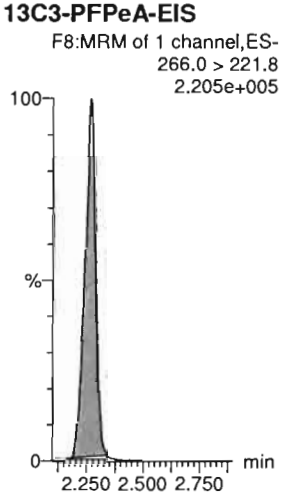
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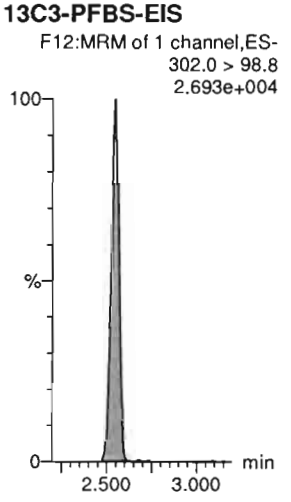
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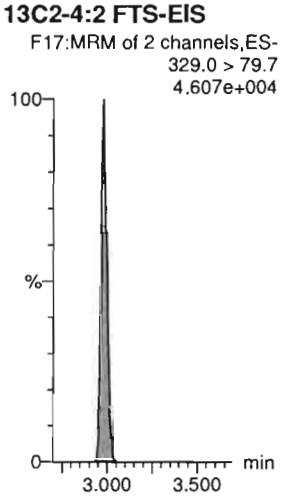
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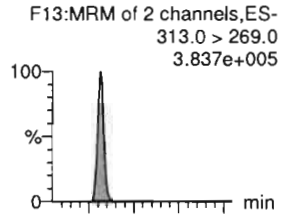
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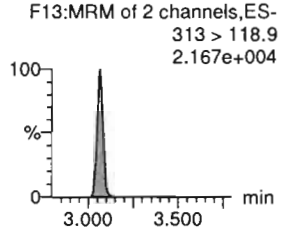
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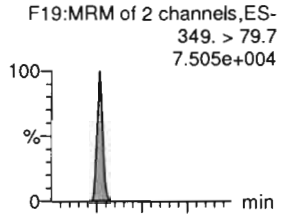
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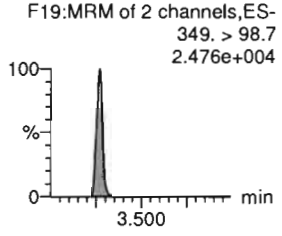
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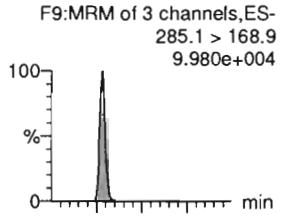


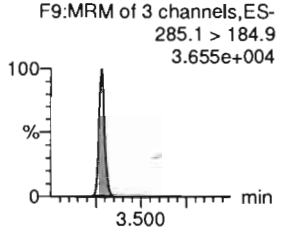
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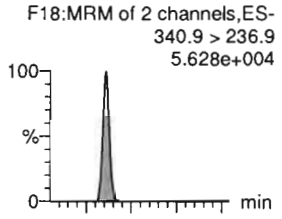


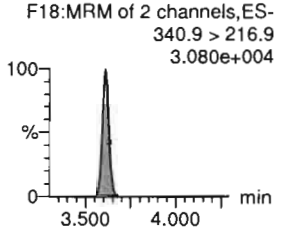
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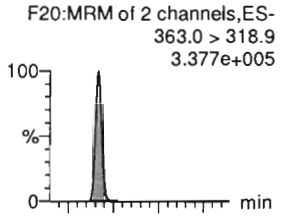


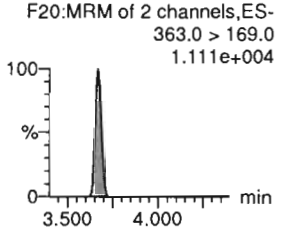
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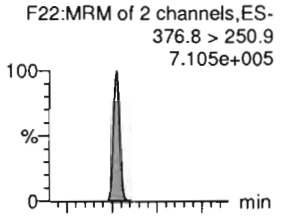


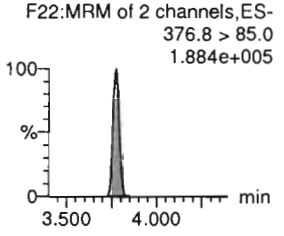
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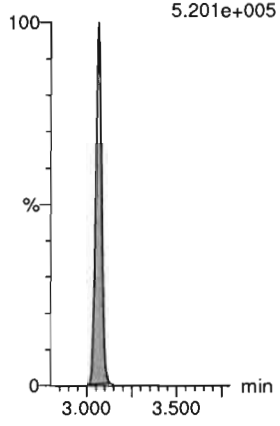


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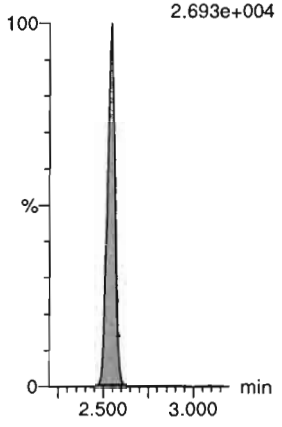




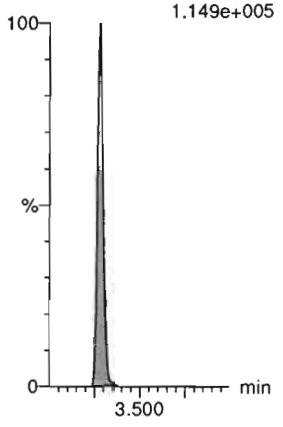
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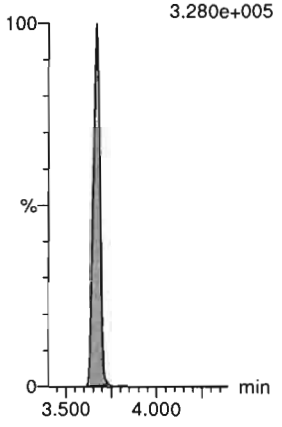
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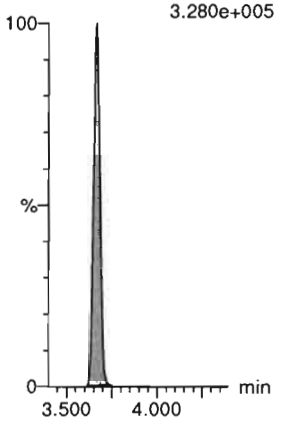
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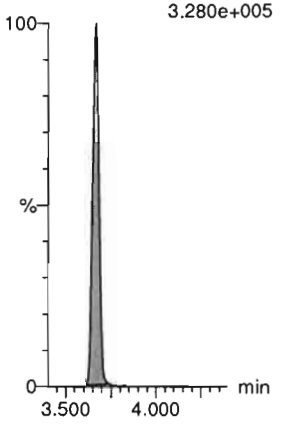
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13C4-PFHpA-EIS



13C4-PFHpA-EIS



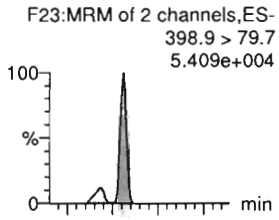
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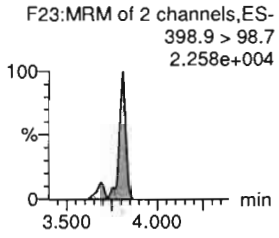
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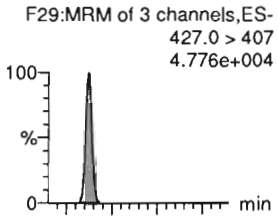
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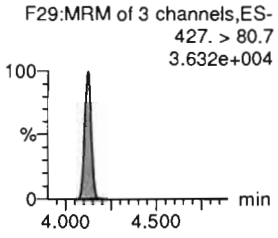
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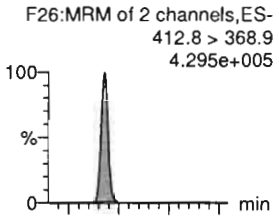


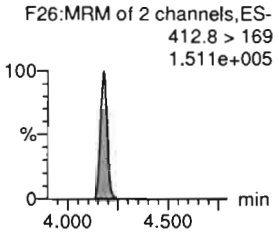
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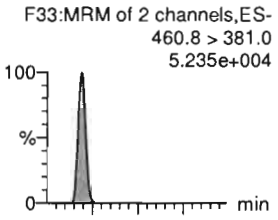


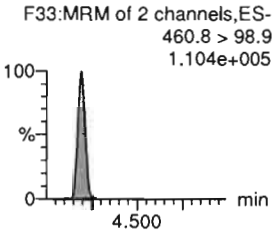
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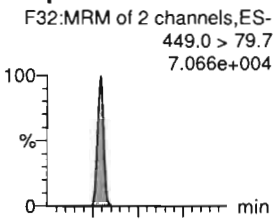


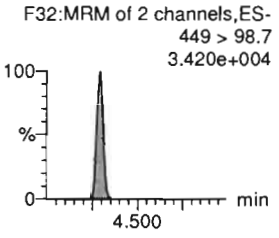
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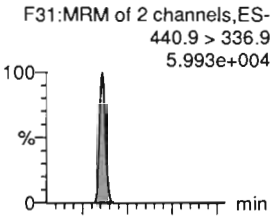


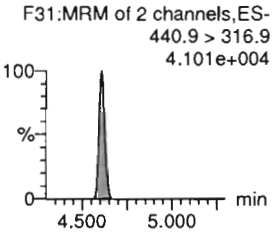
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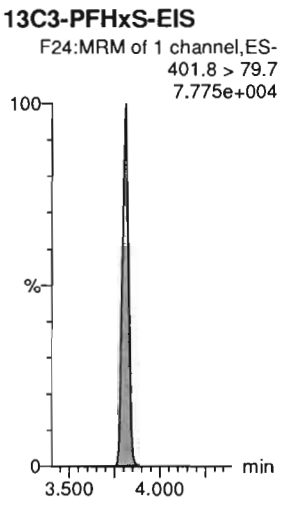


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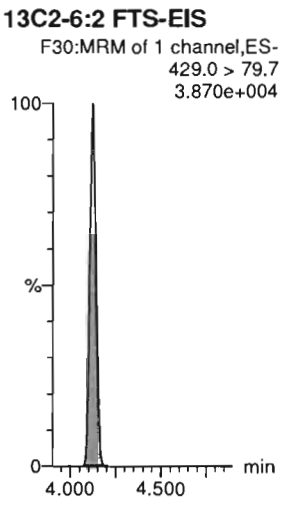




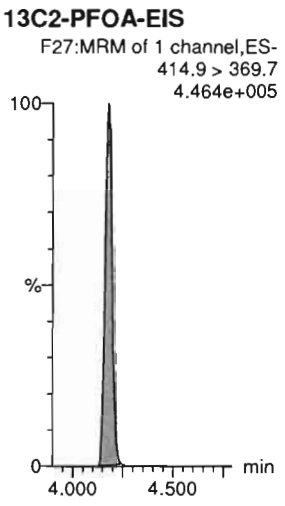
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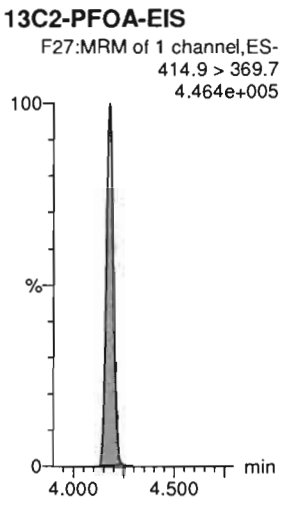
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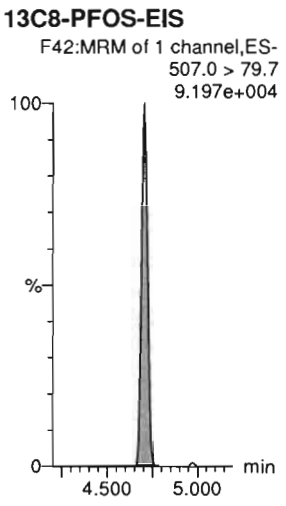
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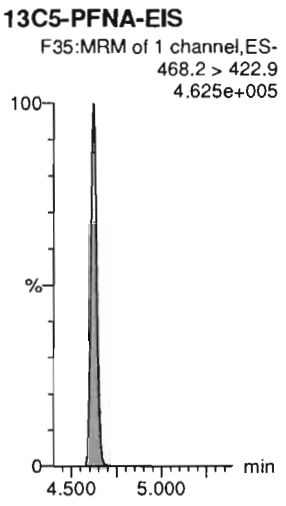
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13C8-PFOS-EIS



13C5-PFNA-EIS



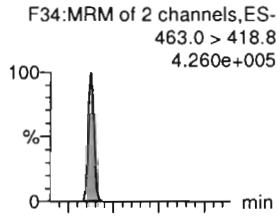
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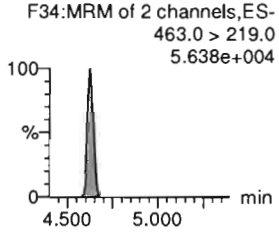
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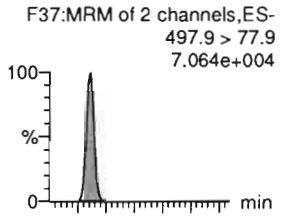
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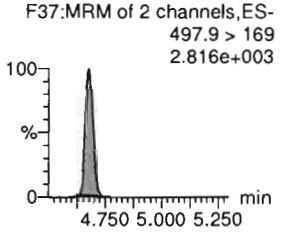
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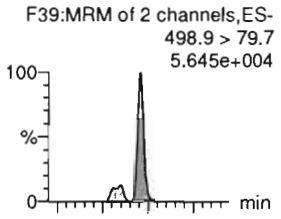


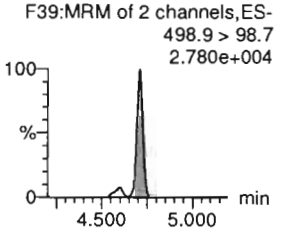
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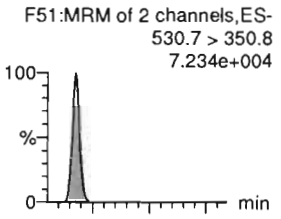


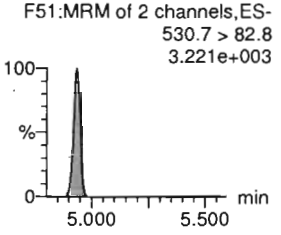
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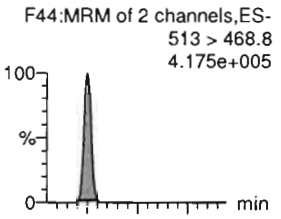


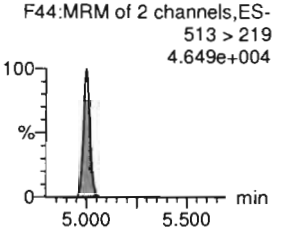
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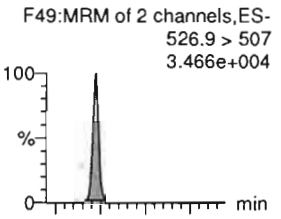


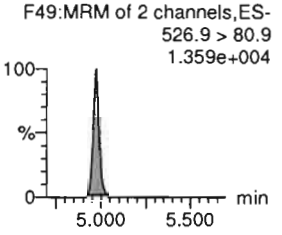
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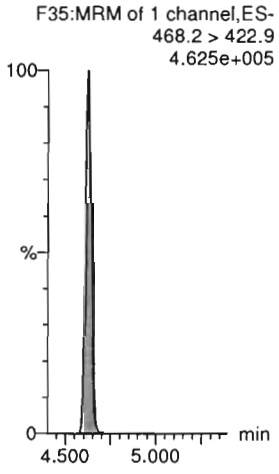


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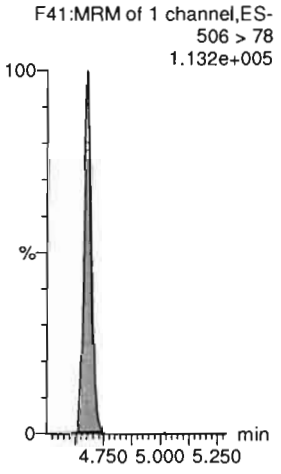




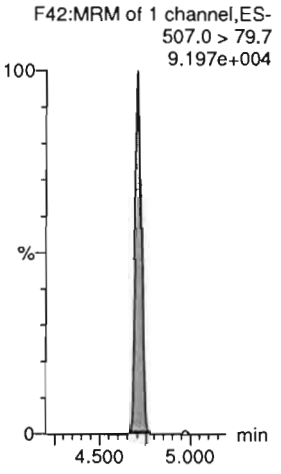
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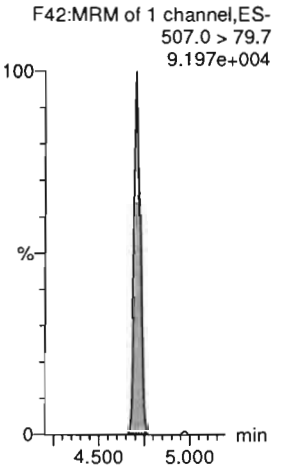
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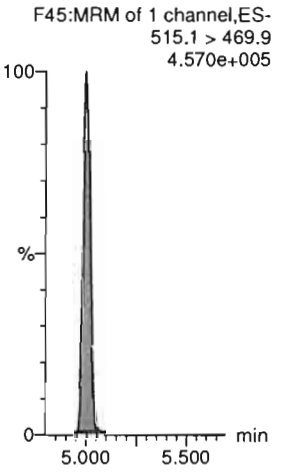
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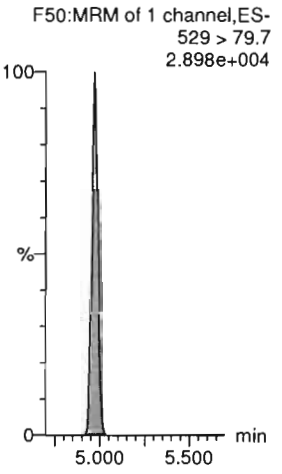
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS



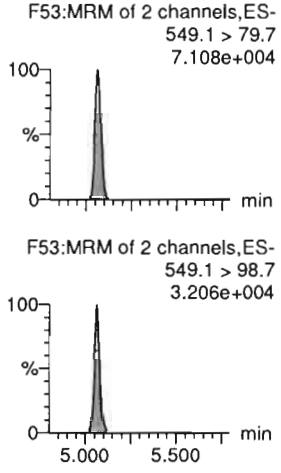
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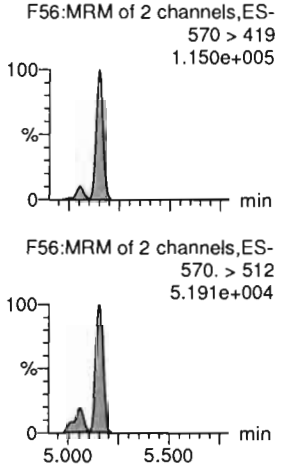
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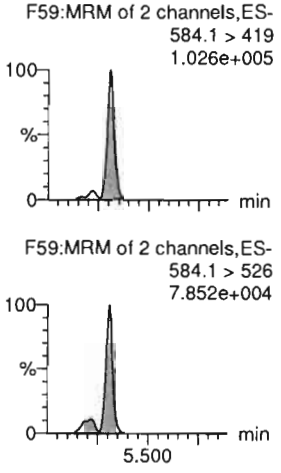
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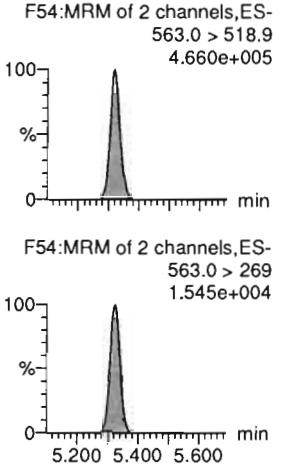
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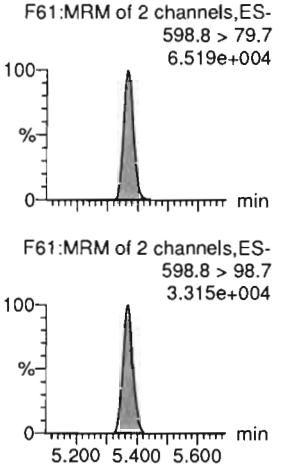
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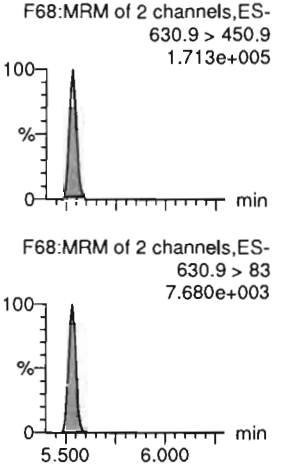
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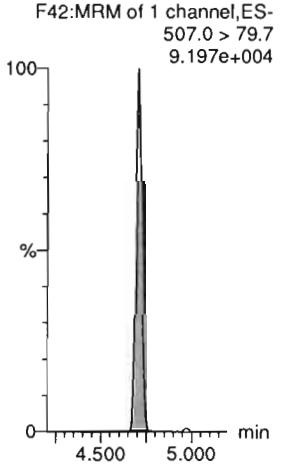
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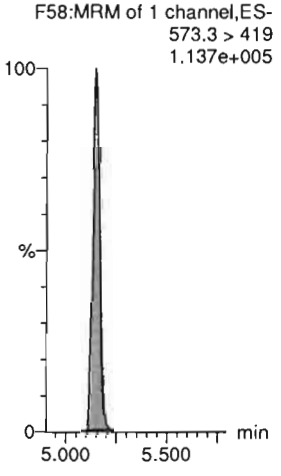
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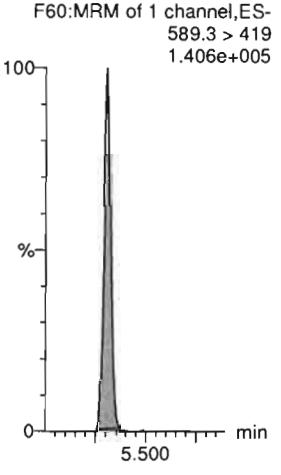
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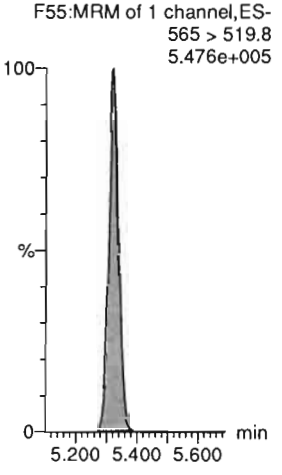
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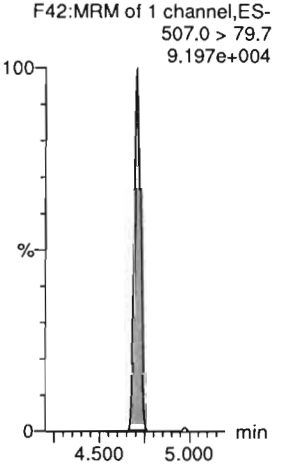
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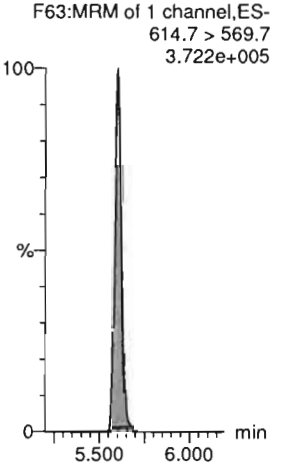
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13C8-PFOS-EIS



13C2-PFDoA-EIS



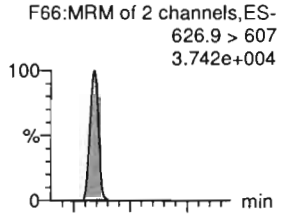
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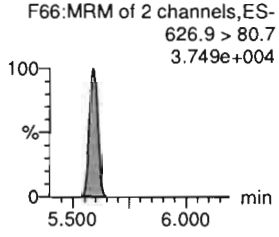
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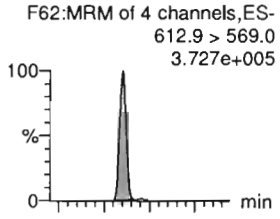
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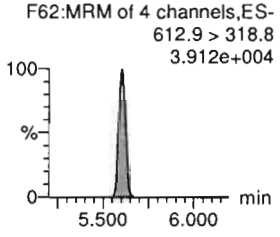
10:2 FTS



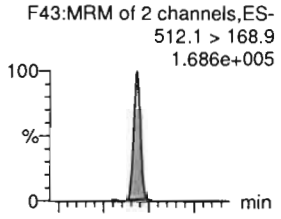


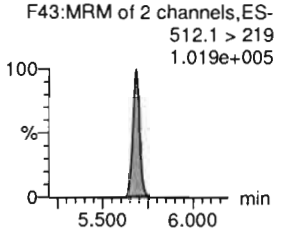
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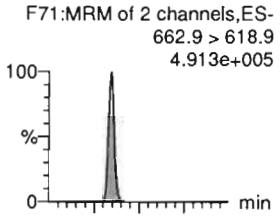


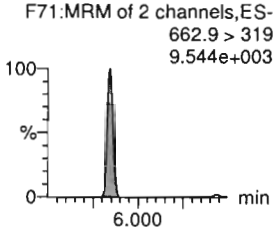
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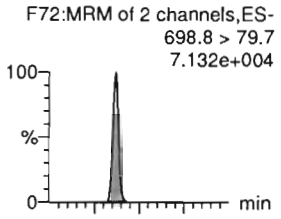


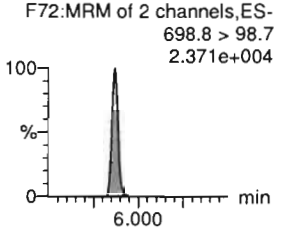
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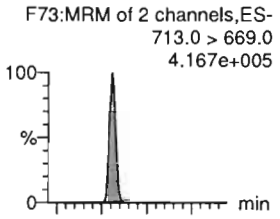


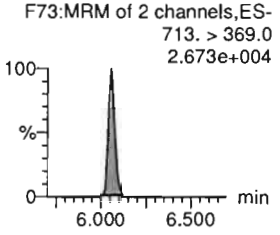
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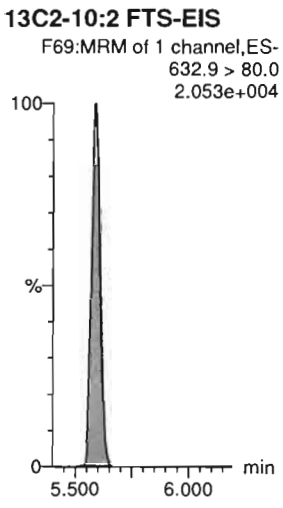


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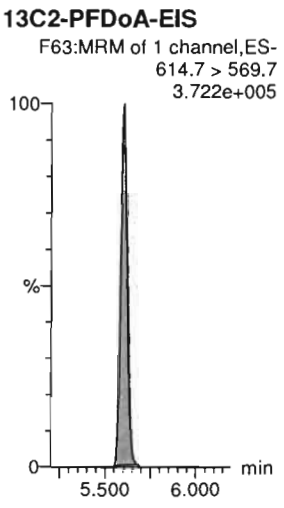




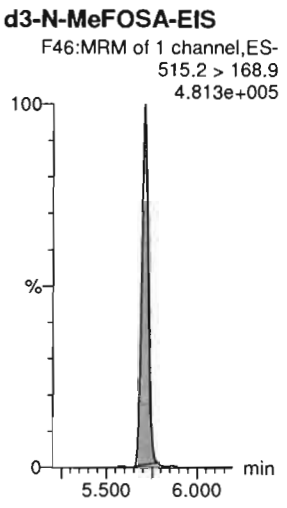
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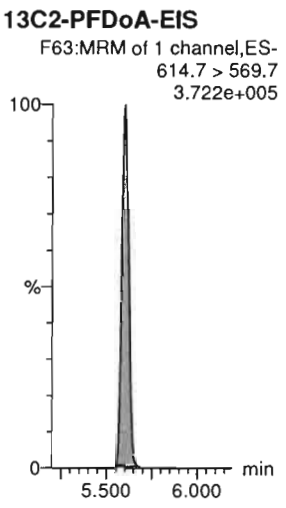
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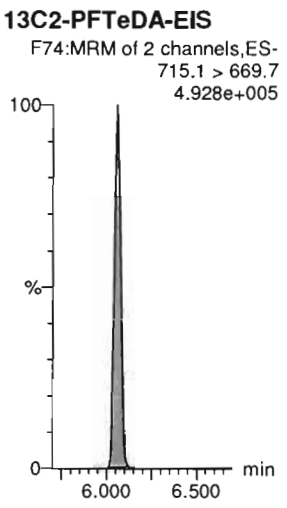
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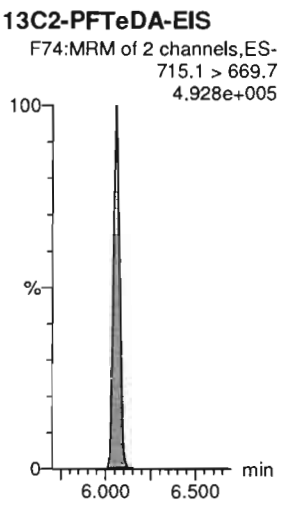
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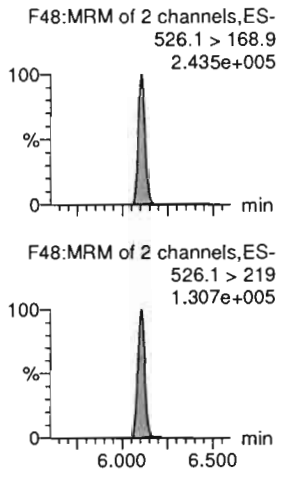
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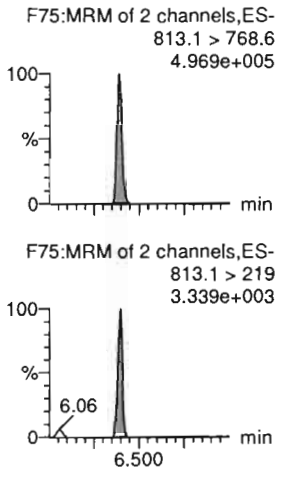
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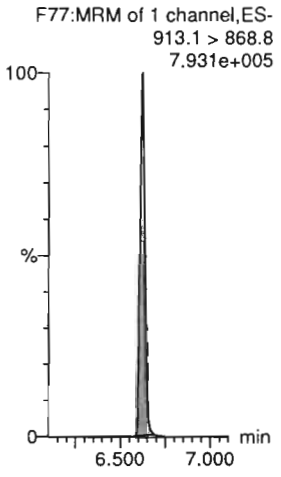
N-EtFOSA



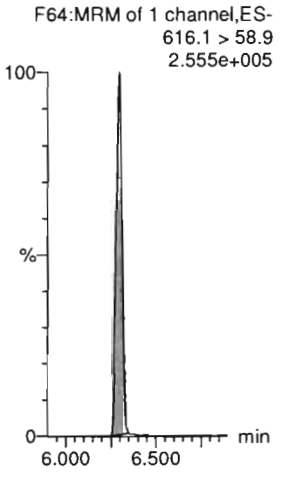
PFHxDA



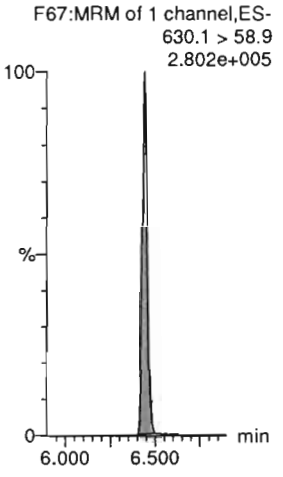
PFODA



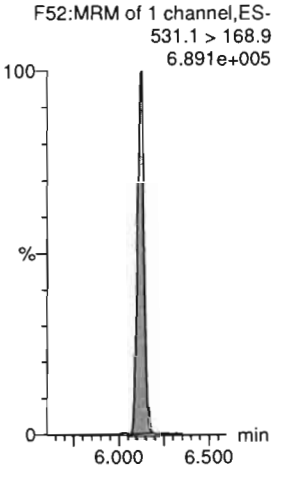
N-MeFOSE



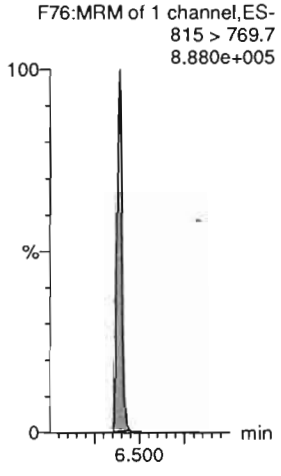
N-EtFOSE



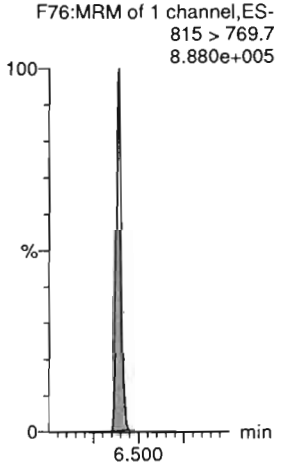
d5-N-ETFOSA-EIS



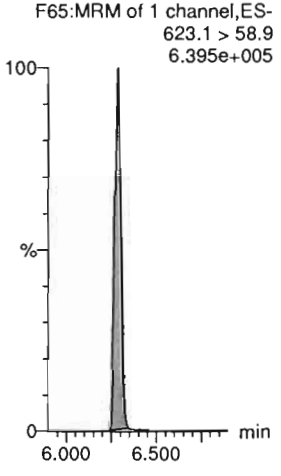
13C2-PFHxDA-EIS



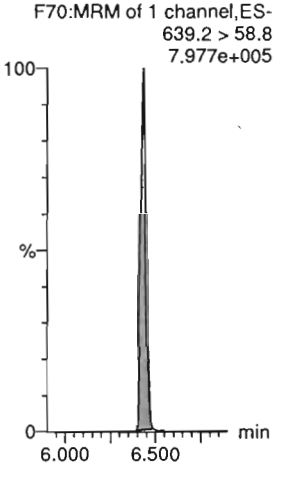
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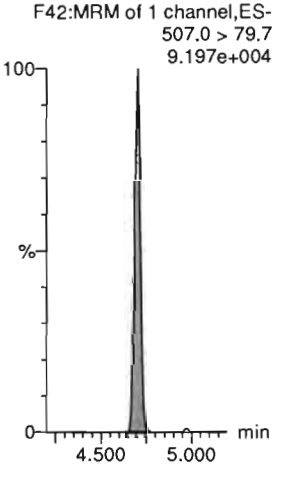
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS



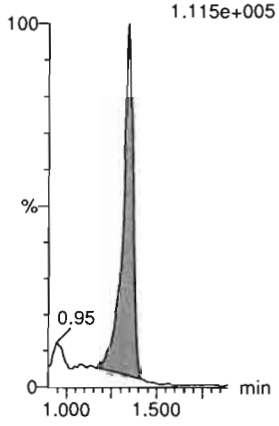
RK 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200227P1\200227P1-86.qld

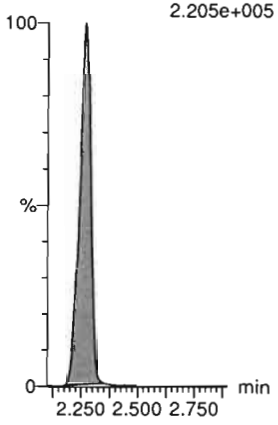
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Name: 200227P1-86, Date: 28-Feb-2020, Time: 06:24:04, ID: ST200227P1-14 PFC CS3 20B1107, Description: PFC CS3 20B1107

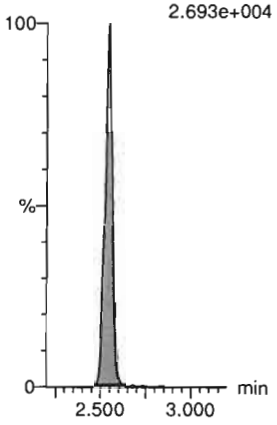
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.115e+005



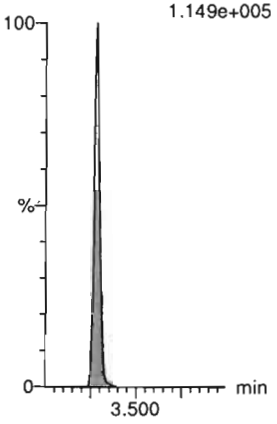
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.205e+005



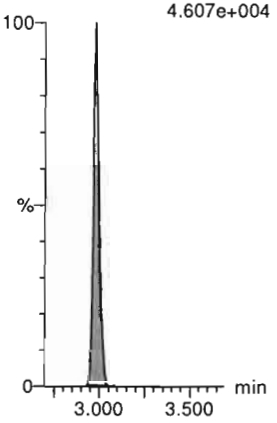
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.693e+004



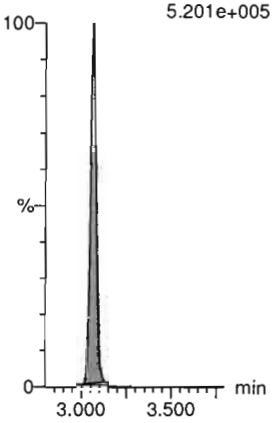
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.149e+005



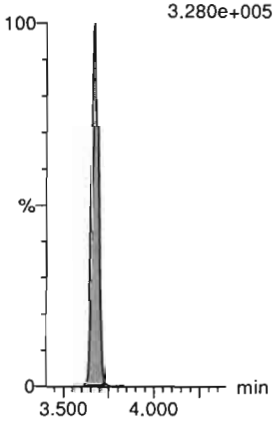
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.607e+004



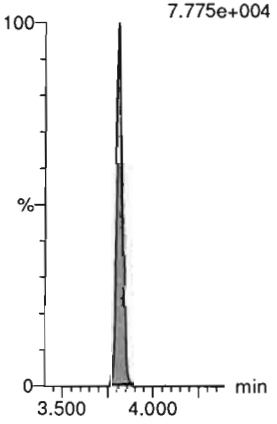
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.201e+005



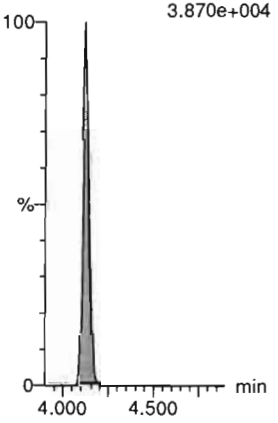
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.280e+005



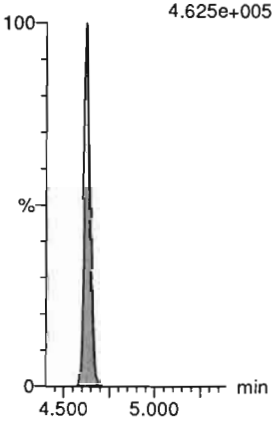
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.775e+004



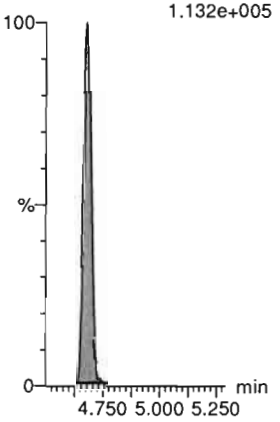
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.870e+004



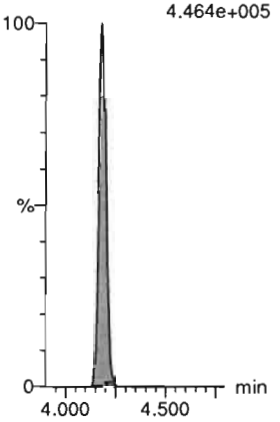
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.625e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.132e+005



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.464e+005



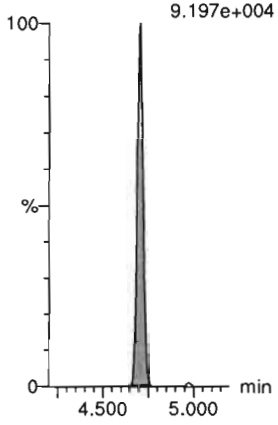
RK 2/28/2020

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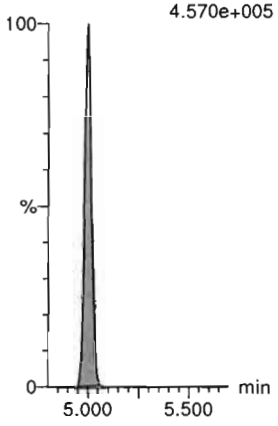
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Name: 200227P1-86, Date: 28-Feb-2020, Time: 06:24:04, ID: ST200227P1-14 PFC CS3 20B1107, Description: PFC CS3 20B1107

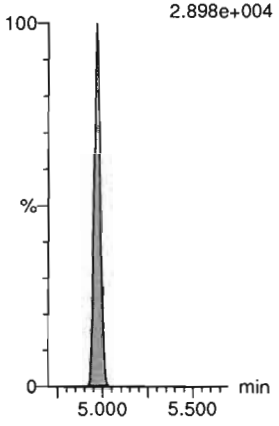
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.197e+004



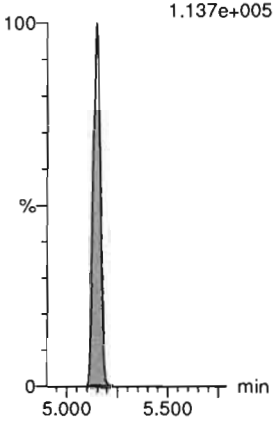
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.570e+005



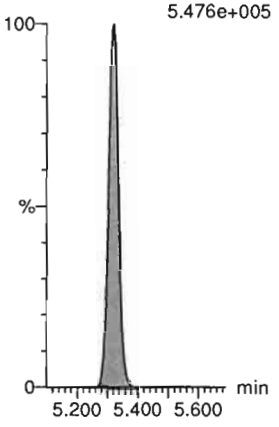
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.898e+004



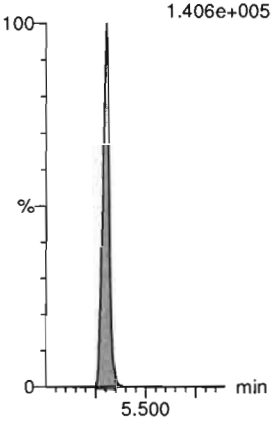
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.137e+005



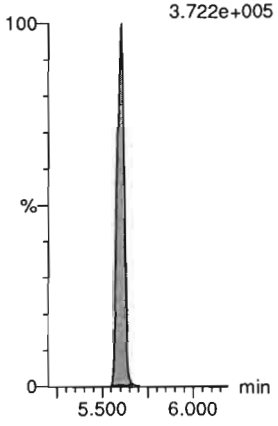
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.476e+005



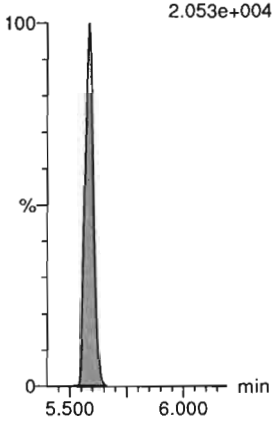
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.406e+005



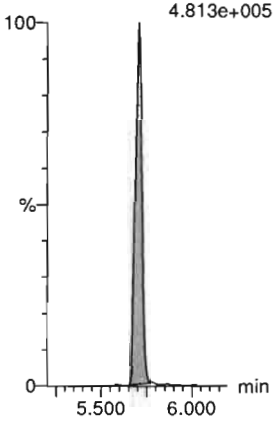
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.722e+005



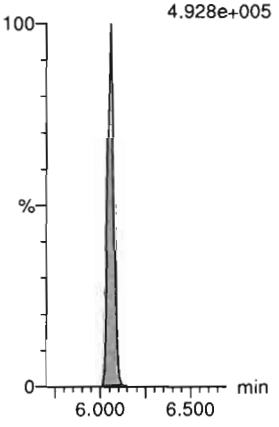
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.053e+004



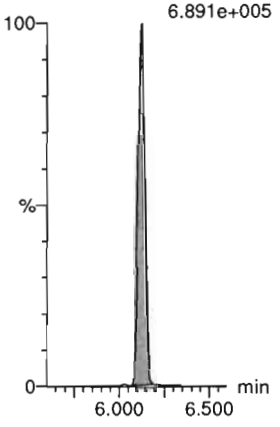
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.813e+005



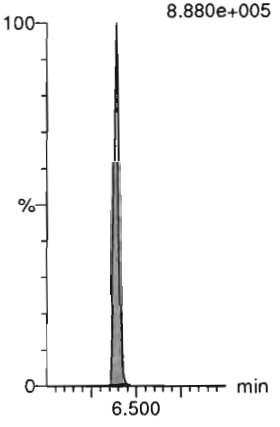
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.928e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.891e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.880e+005



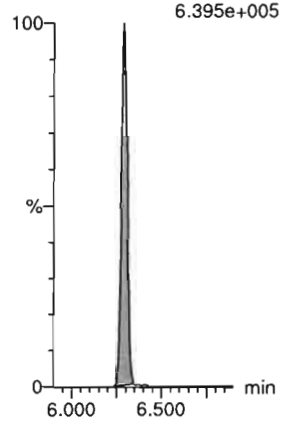
RK 2/28/2020

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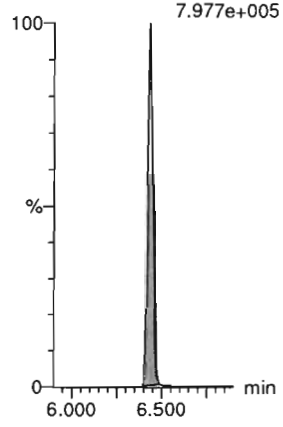
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Name: 200227P1-86, Date: 28-Feb-2020, Time: 06:24:04, ID: ST200227P1-14 PFC CS3 20B1107, Description: PFC CS3 20B1107

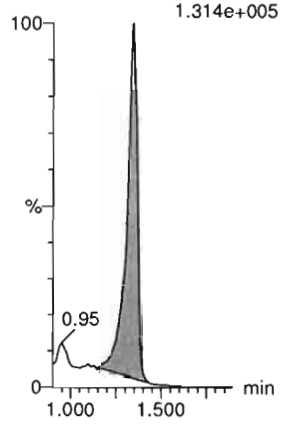
d7-N-MeFOSE-RSD



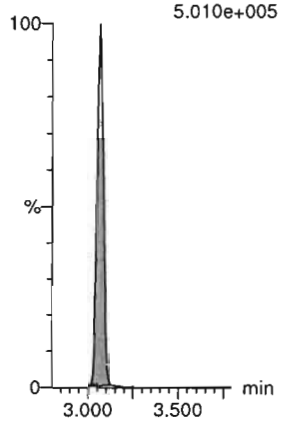
d9-N-EtFOSE-RSD



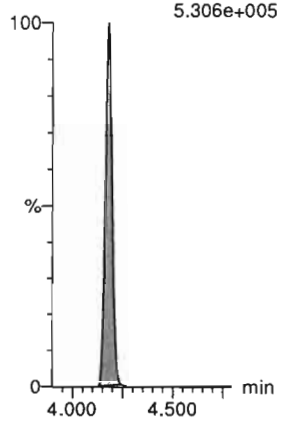
13C4-PFBA



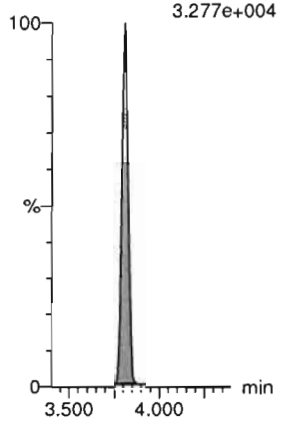
13C5-PFHxA



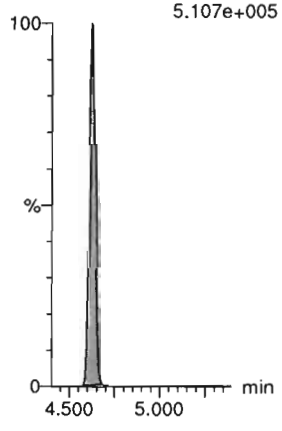
13C8-PFOA



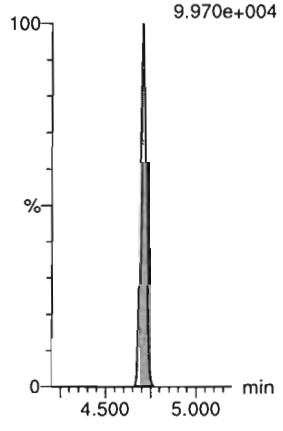
18O2-PFHxS



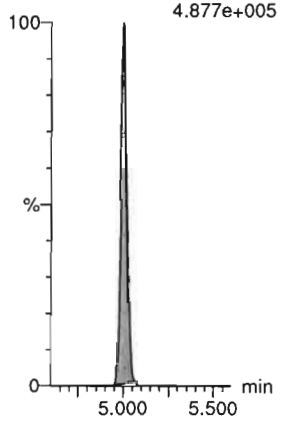
13C9-PFNA



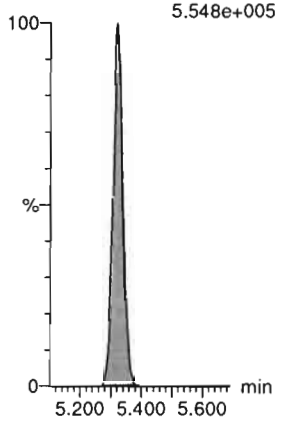
13C4-PFOS



13C6-PFDA



13C7-PFUdA



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Dataset: P:\PFAS5.PRO\RESULTS\200227P1\200227P1-92.qld

Last Altered: Friday, February 28, 2020 11:21:57 Pacific Standard Time
Printed: Friday, February 28, 2020 11:26:34 Pacific Standard Time

JOPV 2/28/20

Name: 200227P1-92, Date: 28-Feb-2020, Time: 07:27:04, ID: ST200227P1-15 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	6458.665	7166.424	1.00	1.34	11.265	10.000	9.72	97.2	NO		
2	2	PFPrS	248.9 > 79.7	1389.919	1321.517	1.00	1.67	13.147	10.000	9.40	94.0	NO	2.443	NO
3	3	3:3 FTCA	240.9 > 176.9	978.575	12047.114	1.00	2.12	1.015	10.000	10.9	109.3	NO	3.630	NO
4	4	PFPeA	263.1 > 218.9	9749.076	12047.114	1.00	2.27	10.116	10.000	10.6	106.0	NO		
5	5	PFBS	299.0 > 79.7	2894.813	1321.517	1.00	2.54	27.382	10.000	11.5	114.9	NO	3.271	NO
6	6	4:2 FTS	327.0 > 307	1671.955	1589.871	1.00	2.98	13.145	10.000	10.1	101.2	NO	0.880	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	7166.424		1.00	1.34	7166.424	12.500	11.2	89.3	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1321.517		1.00	2.54	1321.517	12.500	10.8	86.1	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	12047.114		1.00	2.27	12047.114	12.500	10.4	83.1	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	12047.114		1.00	2.27	12047.114	12.500	10.4	83.1	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1321.517		1.00	2.54	1321.517	12.500	10.8	86.1	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1589.871		1.00	2.98	1589.871	12.500	9.59	76.7	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	16356.324	19908.826	1.00	3.06	10.270	10.000	11.5	115.0	NO	18.209	NO
15	8	PFPeS	349.>79.7	2431.022	1321.517	1.00	3.26	22.995	10.000	9.33	93.3	NO	2.497	NO
16	9	HFPO-DA	285.1 > 168.9	3634.941	4280.516	1.00	3.28	10.615	10.000	10.2	101.6	NO	2.565	NO
17	10	5:3 FTCA	340.9 > 236.9	2395.068	13790.391	1.00	3.61	2.171	10.000	10.4	103.8	NO	1.736	NO
18	11	PFHpA	363.0 > 318.9	13615.561	13790.391	1.00	3.67	12.342	10.000	10.6	105.9	NO	30.350	NO
19	12	ADONA	376.8 > 250.9	30819.662	13790.391	1.00	3.77	27.936	10.000	10.6	106.1	NO	3.925	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	19908.826		1.00	3.06	19908.826	12.500	11.3	90.4	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1321.517		1.00	2.54	1321.517	12.500	10.8	86.1	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	4280.516		1.00	3.28	4280.516	12.500	13.0	104.3	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	13790.391		1.00	3.67	13790.391	12.500	10.7	85.5	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	13790.391		1.00	3.67	13790.391	12.500	10.7	85.5	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	13790.391		1.00	3.67	13790.391	12.500	10.7	85.5	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2623.434	2979.787	1.00	3.81	11.005	10.000	10.5	104.5	NO	2.304	NO
28	15	6:2 FTS	427.0 > 407	1932.473	1439.672	1.00	4.13	16.779	10.000	10.6	105.9	NO	1.276	NO
29	16	L-PFOA	412.8 > 368.9	18629.455	19143.139	1.00	4.18	12.165	10.000	10.0	100.3	NO	2.977	NO
30	18	PFecHS	460.8 > 381.0	2666.160	19143.139	1.00	4.19	1.741	10.000	10.2	101.8	NO	0.485	NO
31	19	PFHpS	449.0 > 79.7	2723.457	3435.391	1.00	4.29	9.910	10.000	10.2	102.1	NO	2.044	NO
32	20	7:3 FTCA	440.9 > 336.9	2399.645	17678.064	1.00	4.61	1.697	10.000	10.9	109.0	NO	1.460	NO
33	61	13C3-PFHxS-EIS	401.8 > 79.7	2979.787		1.00	3.81	2979.787	12.500	9.63	77.1	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1439.672		1.00	4.13	1439.672	12.500	9.67	77.4	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	19143.139		1.00	4.18	19143.139	12.500	10.7	85.9	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	19143.139		1.00	4.18	19143.139	12.500	10.7	85.9	NO		

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Dataset: P:\PFAS5.PRO\RESULTS\200227P1\200227P1-92.qld

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Name: 200227P1-92, Date: 28-Feb-2020, Time: 07:27:04, ID: ST200227P1-15 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	71	13C8-PFOS-EIS	507.0 > 79.7	3435.391		1.00	4.70	3435.391	12.500	9.92	79.3	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	17678.064		1.00	4.62	17678.064	12.500	10.1	80.8	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	16218.910	17678.064	1.00	4.62	11.468	10.000	10.6	105.9	NO	8.059	NO
41	22	PFOSA	497.9 > 77.9	3007.582	4110.451	1.00	4.68	9.146	10.000	11.6	116.3	NO	26.534	NO
42	23	L-PFOS	498.9 > 79.7	2678.027	3435.391	1.00	4.71	9.744	10.000	10.4	104.2	NO	2.340	NO
43	25	9Cl-PF30NS	530.7 > 350.8	2768.817	3435.391	1.00	4.93	10.075	10.000	10.0	100.1	NO	16.709	NO
44	26	PFDA	513 > 468.8	17578.252	17596.283	1.00	5.00	12.487	10.000	10.8	108.0	NO	9.672	NO
45	27	8:2 FTS	526.9 > 507	1295.067	1117.640	1.00	4.97	14.484	10.000	10.4	103.6	NO	2.490	NO
46	65	13C5-PFNA-EIS	468.2 > 422.9	17678.064		1.00	4.62	17678.064	12.500	10.1	80.8	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4110.451		1.00	4.68	4110.451	12.500	9.15	73.2	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3435.391		1.00	4.70	3435.391	12.500	9.92	79.3	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3435.391		1.00	4.70	3435.391	12.500	9.92	79.3	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	17596.283		1.00	5.00	17596.283	12.500	9.19	73.5	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1117.640		1.00	4.97	1117.640	12.500	8.42	67.3	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	2676.308	3435.391	1.00	5.06	9.738	10.000	10.1	100.5	NO	2.211	NO
54	29	L-MeFOSAA	570 > 419	5439.040	4605.454	1.00	5.15	14.762	10.000	11.3	113.1	NO	2.059	NO
55	31	L-EtFOSAA	584.1 > 419	4933.557	5691.753	1.00	5.31	10.835	10.000	10.3	103.1	NO	1.239	NO
56	33	PFUdA	563.0 > 518.9	17709.803	20687.168	1.00	5.32	10.701	10.000	11.4	113.9	NO	25.059	NO
57	34	PFDS	598.8 > 79.7	2110.687	3435.391	1.00	5.37	7.680	10.000	9.18	91.8	NO	1.847	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	7286.939	16877.414	1.00	5.53	5.397	10.000	12.1	120.6	NO	22.154	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3435.391		1.00	4.70	3435.391	12.500	9.92	79.3	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	4605.454		1.00	5.14	4605.454	12.500	9.54	76.4	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	5691.753		1.00	5.30	5691.753	12.500	10.3	82.3	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	20687.168		1.00	5.32	20687.168	12.500	9.43	75.4	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3435.391		1.00	4.70	3435.391	12.500	9.92	79.3	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	16877.414		1.00	5.60	16877.414	12.500	8.67	69.4	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	1706.653	894.698	1.00	5.59	23.844	10.000	10.9	109.4	NO	0.992	NO
67	37	PFDoA	612.9 > 569.0	16426.822	16877.414	1.00	5.60	12.166	10.000	10.4	104.1	NO	10.530	NO
68	38	N-MeFOSA	512.1 > 168.9	7626.147	20337.387	1.00	5.68	55.947	50.000	50.9	101.9	NO	1.617	NO
69	39	PFTrDA	662.9 > 618.9	17619.367	16877.414	1.00	5.84	13.050	10.000	10.6	106.3	NO	58.264	NO
70	40	PFDoS	698.8 > 79.7	2773.971	18463.229	1.00	5.87	1.878	10.000	13.0	129.5	NO	2.868	NO
71	41	PFTeDA	713.0 > 669.0	16867.162	18463.229	1.00	6.06	11.419	10.000	12.6	126.1	NO	17.906	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	894.698		1.00	5.58	894.698	12.500	8.59	68.7	NO		

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Name: 200227P1-92, Date: 28-Feb-2020, Time: 07:27:04, ID: ST200227P1-15 PFC CS3 20B1107, Description: PFC CS3 20B1107

	# Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83 13C2-PFDoA-EIS	614.7 > 569.7	16877.414		1.00	5.60	16877.414	12.500	8.67	69.4	NO		
74	87 d3-N-MeFOSA-EIS	515.2 > 168.9	20337.387		1.00	5.71	20337.387	149.200	138	92.6	NO		
75	83 13C2-PFDoA-EIS	614.7 > 569.7	16877.414		1.00	5.60	16877.414	12.500	8.67	69.4	NO		
76	89 13C2-PFTeDA-EIS	715.1 > 669.7	18463.229		1.00	6.06	18463.229	12.500	8.85	70.8	NO		
77	89 13C2-PFTeDA-EIS	715.1 > 669.7	18463.229		1.00	6.06	18463.229	12.500	8.85	70.8	NO		
78	-1												
79	42 N-EtFOSA	526.1 > 168.9	10575.044	29541.346	1.00	6.10	53.410	50.000	52.2	104.3	NO	1.638	NO
80	43 PFHxDA	813.1 > 768.6	16979.654	28717.688	1.00	6.39	7.391	10.000	10.3	103.2	NO	173.260	NO
81	44 PFODA	913.1 > 868.8	23575.922	28717.688	1.00	6.62	10.262	10.000	11.3	112.9	NO		
82	45 N-MeFOSE	616.1 > 58.9	8898.884	22216.963	1.00	6.30	59.761	50.000	56.4	112.8	NO		
83	46 N-EtFOSE	630.1 > 58.9	9338.439	28348.422	1.00	6.44	49.149	50.000	50.3	100.6	NO		
84	91 d5-N-ETFOSA-EIS	531.1 > 168.9	29541.346		1.00	6.13	29541.346	149.200	137	91.7	NO		
85	93 13C2-PFHxDA-EIS	815 > 769.7	28717.688		1.00	6.39	28717.688	12.500	9.34	74.7	NO		
86	93 13C2-PFHxDA-EIS	815 > 769.7	28717.688		1.00	6.39	28717.688	12.500	9.34	74.7	NO		
87	95 d7-N-MeFOSE-EIS	623.1 > 58.9	22216.963		1.00	6.29	22216.963	149.200	133	89.4	NO		
88	97 d9-N-EtFOSE-EIS	639.2 > 58.8	28348.422		1.00	6.43	28348.422	149.200	147	98.3	NO		
89	71 13C8-PFOS-EIS	507.0 > 79.7	3435.391		1.00	4.70	3435.391	12.500	9.92	79.3	NO		
90	-1												
91	48 13C3-PFBA-RSD	216.1 > 171.8	7159.070	8862.683	1.00	1.34	10.097	12.500	12.4	99.4	NO		
92	50 13C3-PFPeA-RSD	266.0 > 221.8	12047.114	20546.072	1.00	2.27	7.329	12.500	12.4	99.3	NO		
93	52 13C3-PFBS-RSD	302.0 > 98.8	1321.517	1043.126	1.00	2.54	15.836	12.500	14.5	116.2	NO		
94	54 13C3-HFPO-DA-RSD	287.0 > 168.9	4280.516	20546.072	1.00	3.28	2.604	12.500	14.9	119.3	NO		
95	56 13C2-4:2 FTS-RSD	329.0 >79.7	1589.871	1043.126	1.00	2.98	19.052	12.500	13.5	108.0	NO		
96	58 13C2-PFHxA-RSD	315.0 > 270.0	19908.826	20546.072	1.00	3.06	12.112	12.500	12.4	99.0	NO		
97	60 13C4-PFHpA-RSD	367.2 > 321.8	13790.391	20546.072	1.00	3.67	8.390	12.500	12.4	99.4	NO		
98	62 13C3-PFHxS-RSD	401.8 > 79.7	2979.787	1043.126	1.00	3.81	35.707	12.500	14.7	117.7	NO		
99	64 13C2-6:2 FTS-RSD	429.0 >79.7	1439.672	3704.790	1.00	4.13	4.857	12.500	11.1	89.1	NO		
100	66 13C5-PFNA-RSD	468.2 > 422.9	17678.064	18463.406	1.00	4.62	11.968	12.500	12.6	100.8	NO		
101	68 13C8-PFOSA-RSD	506 > 78	4110.451	19210.402	1.00	4.68	2.675	12.500	12.4	99.0	NO		
102	70 13C2-PFOA-RSD	414.9 > 369.7	19143.139	20978.334	1.00	4.18	11.406	12.500	12.4	99.5	NO		
103	-1												
104	72 13C8-PFOS-RSD	507.0 > 79.7	3435.391	3704.790	1.00	4.70	11.591	12.500	12.5	100.0	NO		
105	74 13C2-PFDA-RSD	515.1 > 469.9	17596.283	18507.713	1.00	5.00	11.884	12.500	12.1	96.7	NO		
106	76 13C2-8:2 FTS-RSD	529 > 79.7	1117.640	3704.790	1.00	4.97	3.771	12.500	10.3	82.1	NO		
107	78 d3-N-MeFOSAA-RSD	573.3 > 419	4605.454	19210.402	1.00	5.14	2.997	12.500	13.2	105.6	NO		
108	80 13C2-PFUdA-RSD	565 > 519.8	20687.168	19210.402	1.00	5.32	13.461	12.500	12.8	102.3	NO		

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Name: 200227P1-92, Date: 28-Feb-2020, Time: 07:27:04, ID: ST200227P1-15 PFC CS3 20B1107, Description: PFC CS3 20B1107

	# Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82 d5-N-EtFOSAA-RSD	589.3 > 419	5691.753	19210.402	1.00	5.30	3.704	12.500	15.3	122.5	NO		
110	84 13C2-PFDoA-RSD	614.7 > 569.7	16877.414	18507.713	1.00	5.60	11.399	12.500	11.7	93.9	NO		
111	86 13C2-10:2 FTS-RSD	632.9 > 80.0	894.698	3704.790	1.00	5.58	3.019	12.500	10.6	84.5	NO		
112	88 d3-N-MeFOSA-RSD	515.2 > 168.9	20337.387	19210.402	1.00	5.71	13.233	149.200	177	118.7	NO		
113	90 13C2-PFTeDA-RSD	715.1 > 669.7	18463.229	19210.402	1.00	6.06	12.014	12.500	11.5	91.7	NO		
114	92 d5-N-ETFOSA-RSD	531.1 > 168.9	29541.346	19210.402	1.00	6.13	19.222	149.200	185	123.9	NO		
115	94 13C2-PFHxDA-RSD	815 > 769.7	28717.688	19210.402	1.00	6.39	18.686	12.500	12.8	102.0	NO		
116	-1												
117	96 d7-N-MeFOSE-RSD	623.1 > 58.9	22216.963	19210.402	1.00	6.29	14.456	149.200	177	118.7	NO		
118	98 d9-N-EtFOSE-RSD	639.2 > 58.8	28348.422	19210.402	1.00	6.43	18.446	149.200	197	131.8	NO		
119	99 13C4-PFBA	217.0 > 172.0	8862.683	8862.683	1.00	1.34	12.500	12.500	12.5	100.0	NO		
120	1... 13C5-PFHxA	318.0 > 272.9	20546.072	20546.072	1.00	3.06	12.500	12.500	12.5	100.0	NO		
121	1... 13C8-PFOA	420.9 > 376.0	20978.334	20978.334	1.00	4.18	12.500	12.500	12.5	100.0	NO		
122	1... 18O2-PFHxS	403.0 > 102.6	1043.126	1043.126	1.00	3.81	12.500	12.500	12.5	100.0	NO		
123	1... 13C9-PFNA	472.2 > 426.9	18463.406	18463.406	1.00	4.62	12.500	12.500	12.5	100.0	NO		
124	1... 13C4-PFOS	503 > 79.7	3704.790	3704.790	1.00	4.71	12.500	12.500	12.5	100.0	NO		
125	1... 13C6-PFDA	519.1 > 473.7	18507.713	18507.713	1.00	5.00	12.500	12.500	12.5	100.0	NO		
126	1... 13C7-PFUdA	570.1 > 524.8	19210.402	19210.402	1.00	5.32	12.500	12.500	12.5	100.0	NO		

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Dataset: Untitled

Last Altered: Friday, February 28, 2020 11:57:34 Pacific Standard Time
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Method: P:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 10:51:32
Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-27-20.cdb 28 Feb 2020 09:57:55

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
1	1	200227P1-1	IPA	27-Feb-20	15:20:53
2	2	200227P1-2	IPA	27-Feb-20	15:31:38
3	3	200227P1-3	ST200227P1-1 PFC CS-2 20B1102	27-Feb-20	15:42:07
4	4	200227P1-4	ST200227P1-2 PFC CS-1 20B1103	27-Feb-20	15:52:39
5	5	200227P1-5	ST200227P1-3 PFC CS0 20B1104	27-Feb-20	16:03:08
6	6	200227P1-6	ST200227P1-4 PFC CS1 20B1105	27-Feb-20	16:13:39
7	7	200227P1-7	ST200227P1-5 PFC CS2 20B1106	27-Feb-20	16:26:17
8	8	200227P1-8	ST200227P1-6 PFC CS3 20B1107	27-Feb-20	16:36:51
9	9	200227P1-9	ST200227P1-7 PFC CS4 20B1108	27-Feb-20	16:47:20
10	10	200227P1-10	ST200227P1-8 PFC CS5 20B1109	27-Feb-20	16:58:53
11	11	200227P1-11	ST200227P1-9 PFC CS6 20B1110	27-Feb-20	17:16:12
12	12	200227P1-12	ST200227P1-10 PFC CS7 20B1111	27-Feb-20	17:26:40
13	13	200227P1-13	IB	27-Feb-20	17:37:10
14	14	200227P1-14	ICV200227P1-1 PFC ICV 20B1112	27-Feb-20	17:47:42
15	15	200227P1-15	IB	27-Feb-20	17:58:10
16	16	200227P1-16	B0B0123-BS1 OPR 0.25	27-Feb-20	18:08:42
17	17	200227P1-17	2000330-03 I003MW12S-20200214 0.25031	27-Feb-20	18:19:12
18	18	200227P1-18	2000330-02@5X I003MW05S-20200214 0.25637	27-Feb-20	18:29:43
19	19	200227P1-19	2000330-05@5X I003MW14S-20200214 0.25171	27-Feb-20	18:40:11
20	20	200227P1-20	IB	27-Feb-20	18:50:43
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22	22	200227P1-22	B0B0221-BS1 OPR 0.125	27-Feb-20	19:11:44
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24	24	200227P1-24	2000386-09 Field Blank 0.11512	27-Feb-20	19:32:43
25	25	200227P1-25	2000386-10 Equipment Blank 0.11758	27-Feb-20	19:43:15
26	26	200227P1-26	2000391-10 Field Blank 0.11887	27-Feb-20	19:53:46
27	27	200227P1-27	2000391-11 Equipment Blank 0.08216	27-Feb-20	20:04:15
28	28	200227P1-28	B0B0180-BLK1 Method Blank 2	27-Feb-20	20:14:45
29	29	200227P1-29	B0B0180-BS1 OPR 2	27-Feb-20	20:25:16
30	30	200227P1-30	B0B0180-MS1 Matrix Spike 2.14	27-Feb-20	20:35:46
31	31	200227P1-31	B0B0180-MSD1 Matrix Spike Dup 2.15	27-Feb-20	20:46:15
32	32	200227P1-32	2000315-01 S-SB06-00-20200210 2.29	27-Feb-20	20:56:47

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36	36	200227P1-36	2000315-05 S-SB07-05-20200210 2.31	27-Feb-20	21:38:49
37	37	200227P1-37	2000315-06 S-SB04-00-20200210 2.27	27-Feb-20	21:49:17
38	38	200227P1-38	2000315-07 S-SB04-4.5-20200210 2.25	27-Feb-20	21:59:48
39	39	200227P1-39	ST200227P1-11 PFC CS3 20B1107	27-Feb-20	22:10:19
40	40	200227P1-40	IB	27-Feb-20	22:20:48
41	41	200227P1-41	2000315-08 S-SB03-00-20200210 2.1	27-Feb-20	22:31:19
42	42	200227P1-42	2000315-09 S-SB12-02-20200210 2.27	27-Feb-20	22:41:50
43	43	200227P1-43	2000315-10 S-SB12-4.5-20200210 2.19	27-Feb-20	22:52:21
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47	47	200227P1-47	2000315-14 S-SB08-4.5-20200210 2.28	27-Feb-20	23:34:21
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Vista Analytical Laboratory

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72	72 200227P1-72	2000353-05 S9SMW3-20Q1 0.24	28-Feb-20	03:57:00
73	73 200227P1-73	2000353-06 S9MW21-20Q1 0.24253	28-Feb-20	04:07:28
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77	77 200227P1-77	2000353-09 S9MW26-20Q1 0.25354	28-Feb-20	04:49:31
78	78 200227P1-78	2000353-10 S9MW68L1-20Q1 0.25186	28-Feb-20	04:59:59
79	79 200227P1-79	2000353-11 S9MW71L9-20Q1 0.252	28-Feb-20	05:10:29
80	80 200227P1-80	B0B0218-BLK1 Method Blank 0.01	28-Feb-20	05:21:02
81	81 200227P1-81	B0B0218-BLK2 Method Blank 0.01	28-Feb-20	05:31:32
82	82 200227P1-82	B0B0218-BS1 OPR 0.01	28-Feb-20	05:42:01
83	83 200227P1-83	B0B0218-BS2 OPR 0.01	28-Feb-20	05:52:32
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86	86 200227P1-86	ST200227P1-14 PFC CS3 20B1107	28-Feb-20	06:24:04
87	87 200227P1-87	IB	28-Feb-20	06:34:35
88	88 200227P1-88	2000354-08 S9MW15-20Q1 0.25813	28-Feb-20	06:45:03
89	89 200227P1-89	2000314-08@10X BMW07S-20200212 0.2539	28-Feb-20	06:55:34
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91	91 200227P1-91	FLIPPER QC	28-Feb-20	07:16:35
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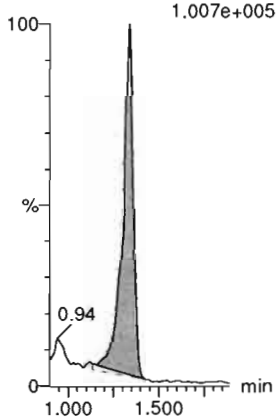
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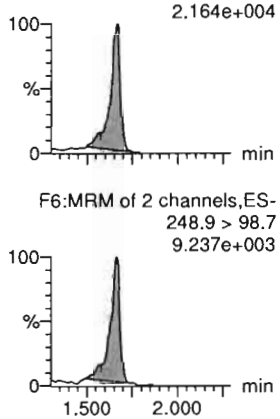
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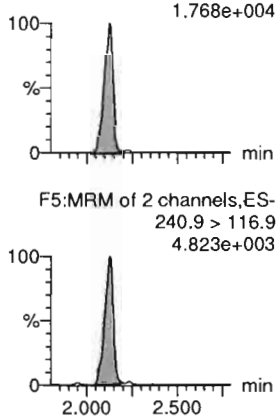
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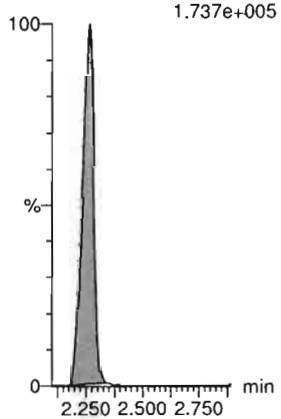
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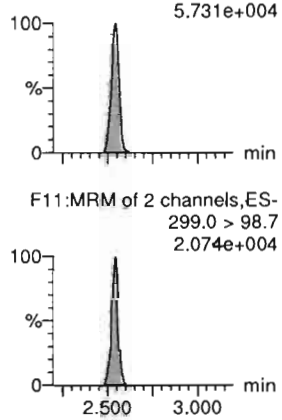
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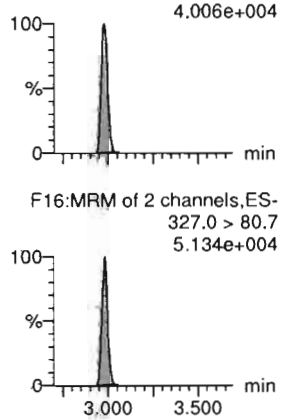
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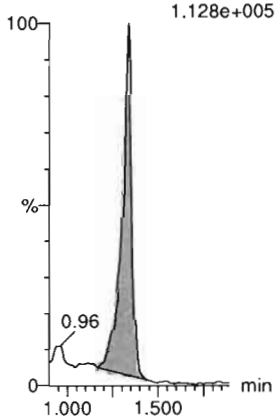
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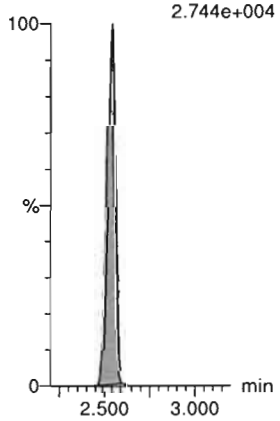
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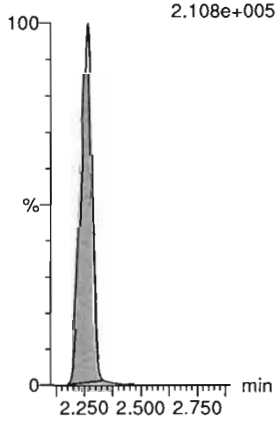
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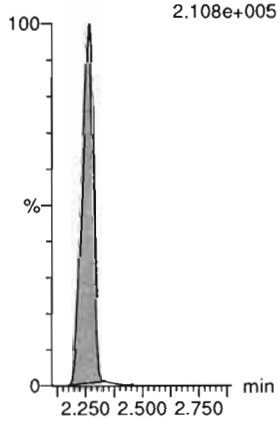
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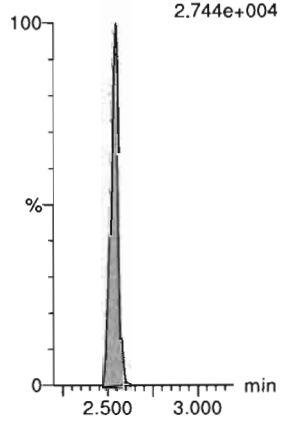
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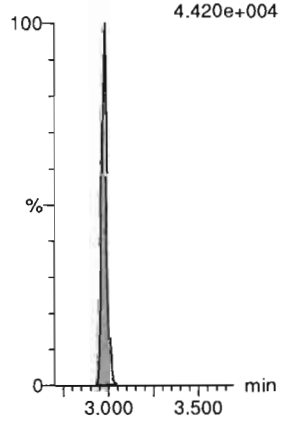
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13C2-4:2 FTS-EIS



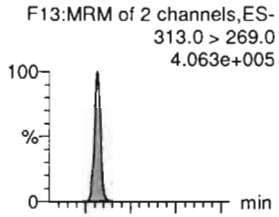
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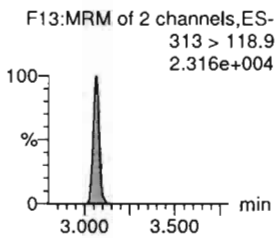
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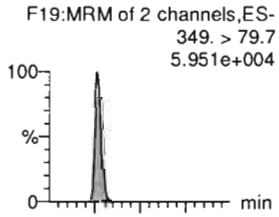
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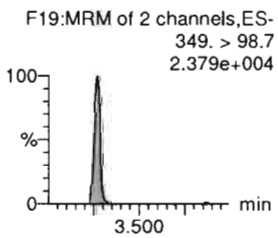
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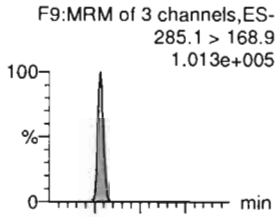


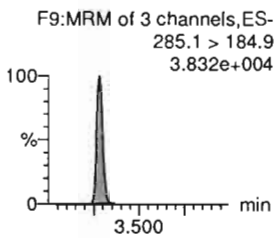
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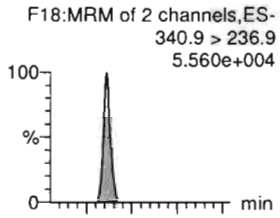


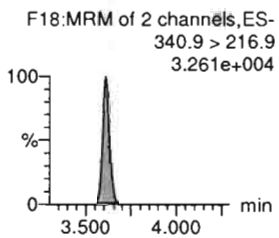
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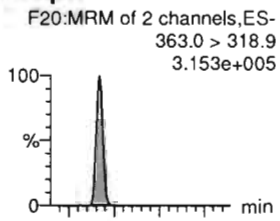


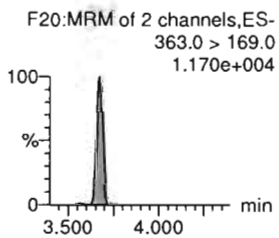
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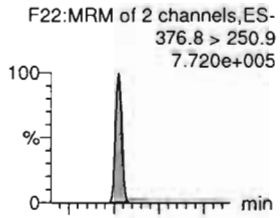


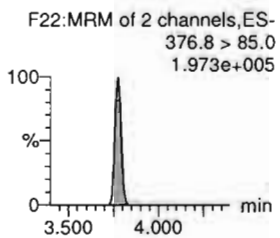
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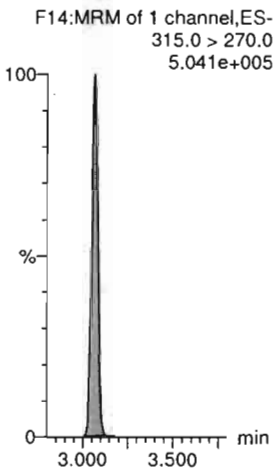


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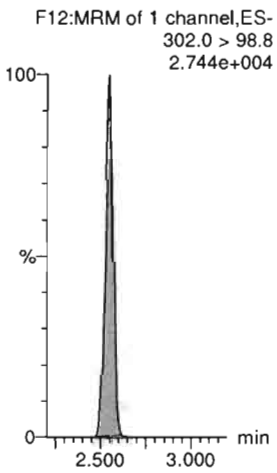




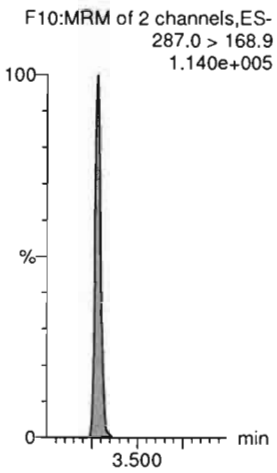
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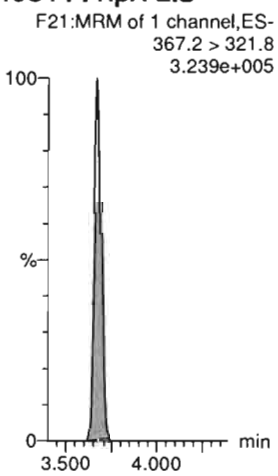
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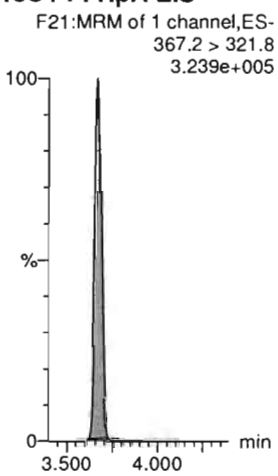
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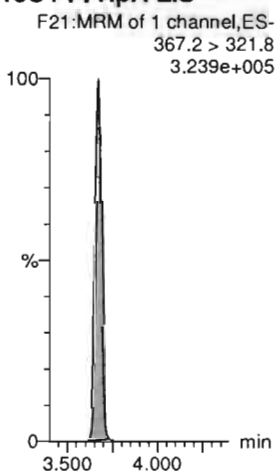
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13C4-PFHpA-EIS



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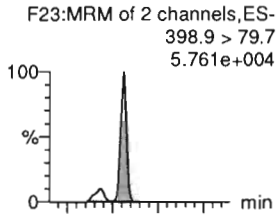
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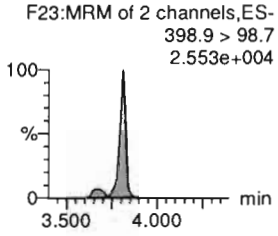
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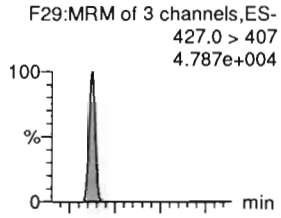
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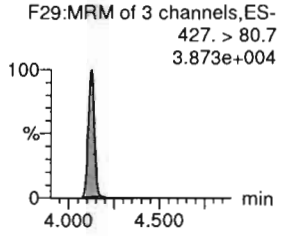
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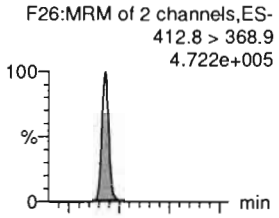


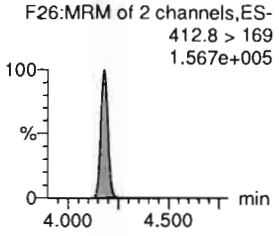
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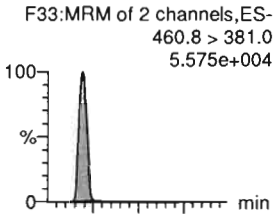


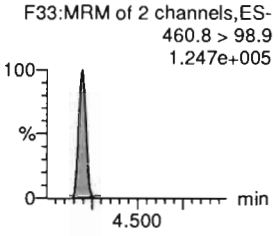
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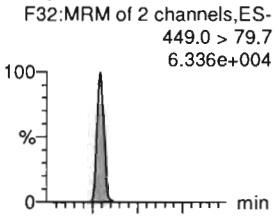


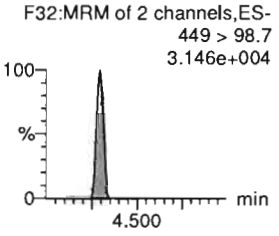
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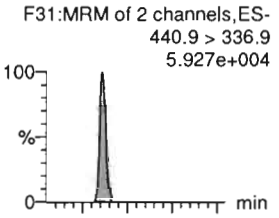


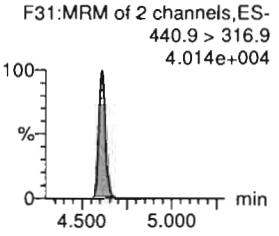
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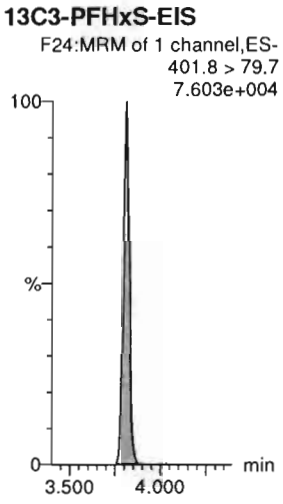


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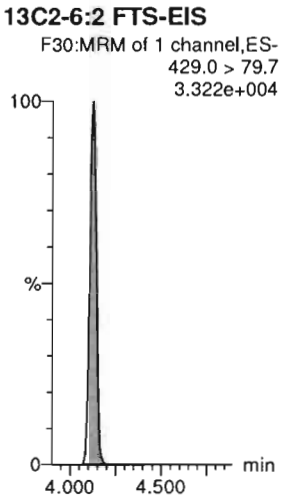




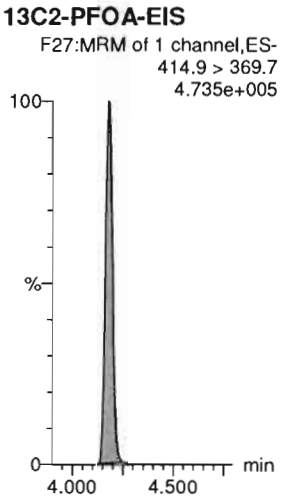
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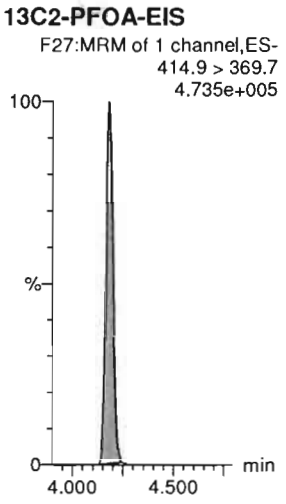
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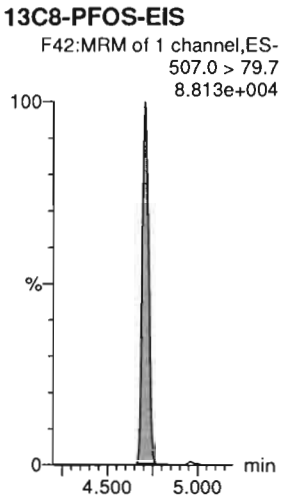
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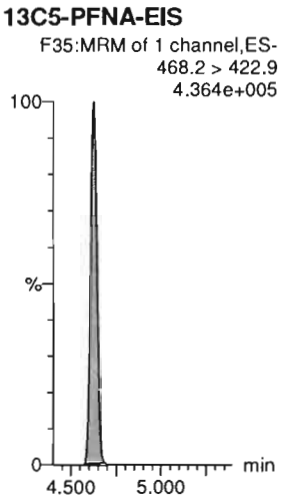
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13C8-PFOS-EIS



13C5-PFNA-EIS



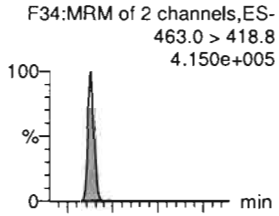
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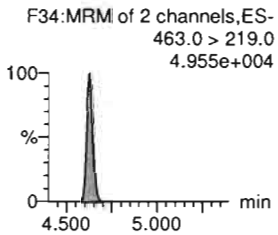
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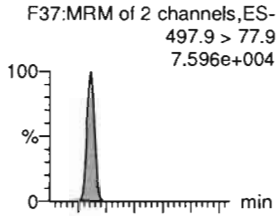
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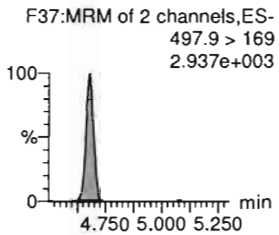
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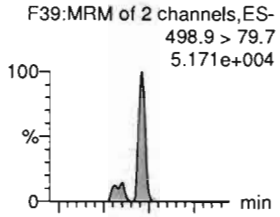


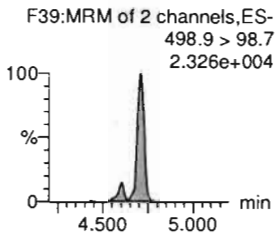
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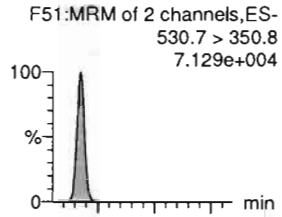


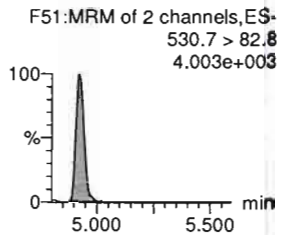
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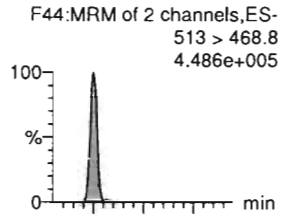


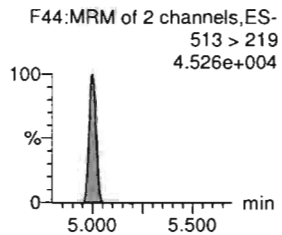
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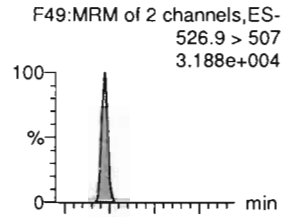


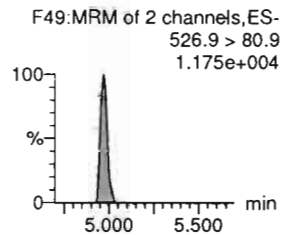
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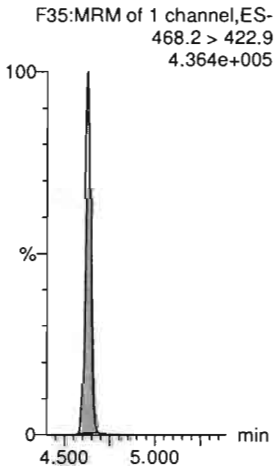


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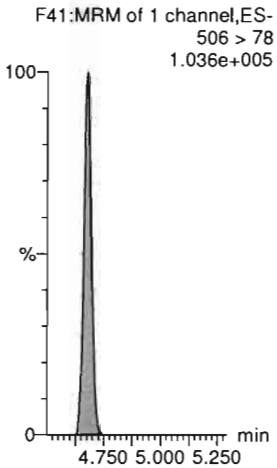




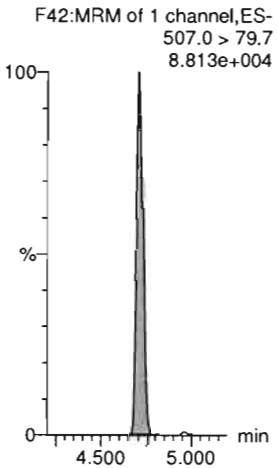
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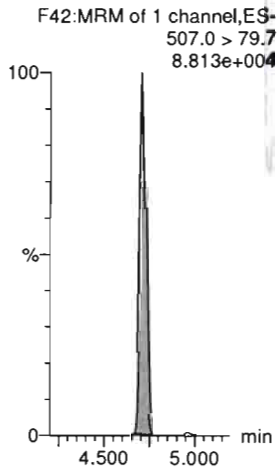
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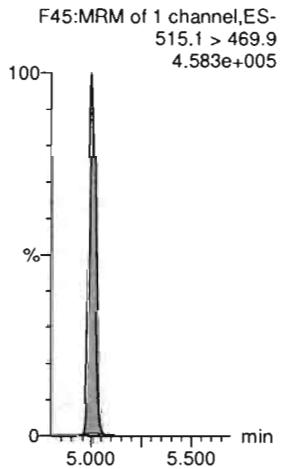
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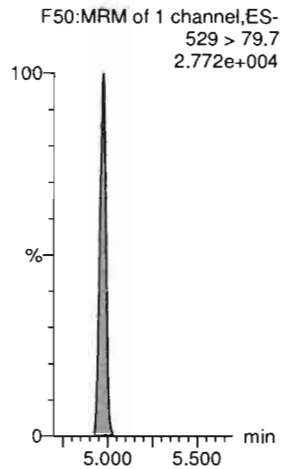
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13C2-8:2 FTS-EIS



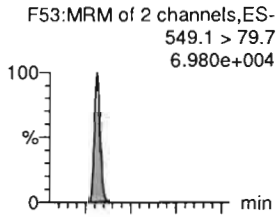
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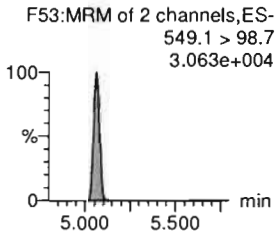
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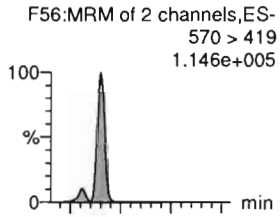
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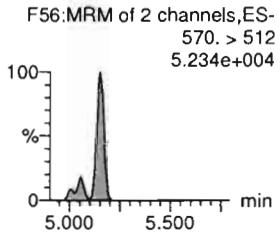
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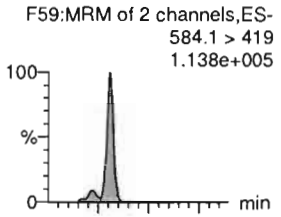


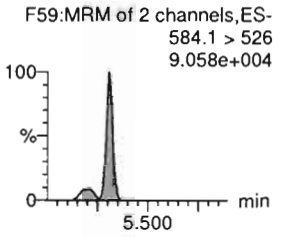
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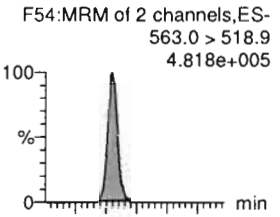


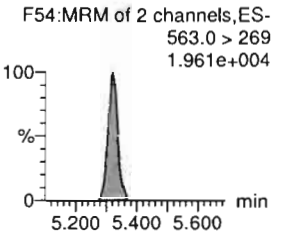
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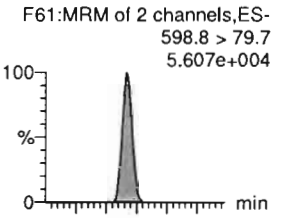


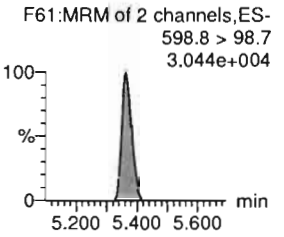
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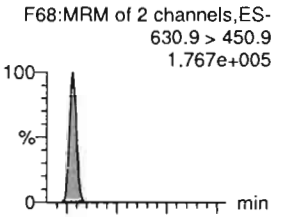


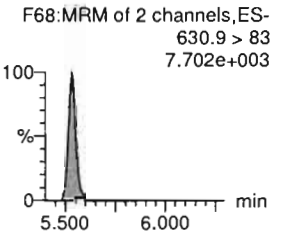
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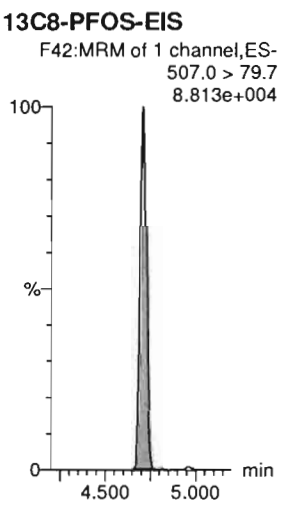


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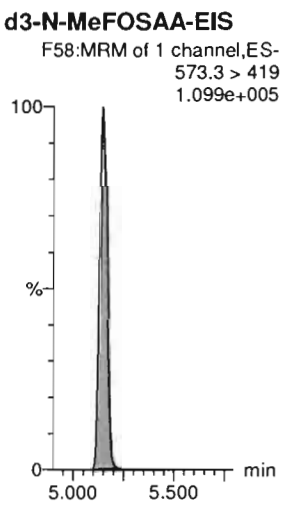




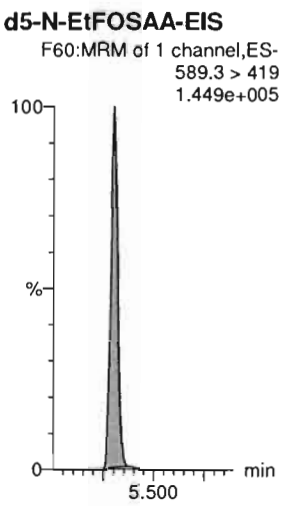
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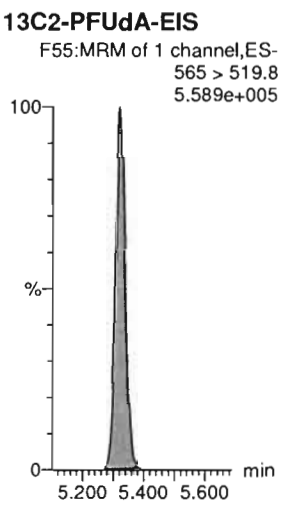
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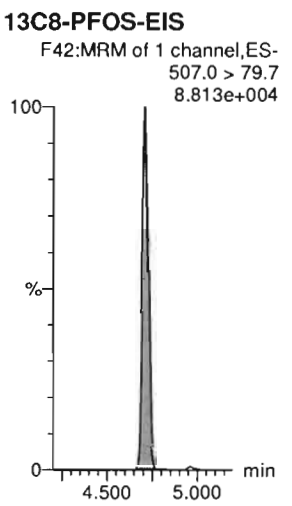
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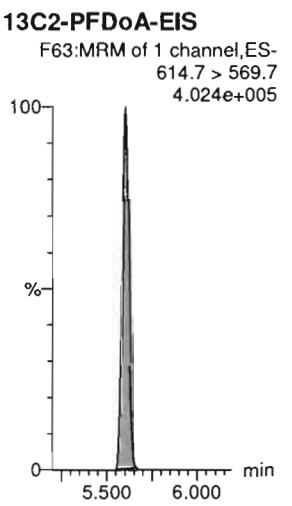
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13C8-PFOS-EIS



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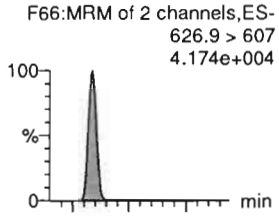
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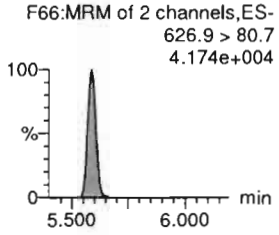
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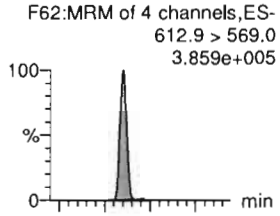
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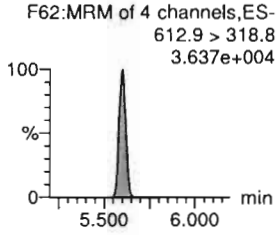
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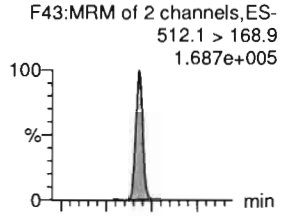


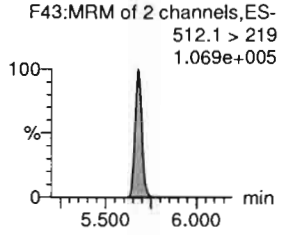
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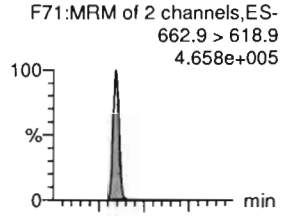


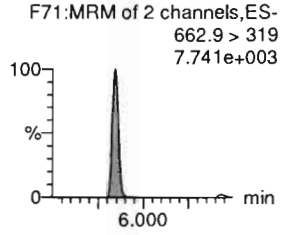
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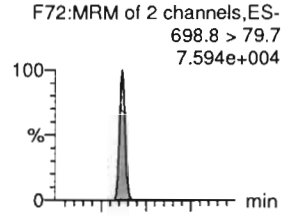


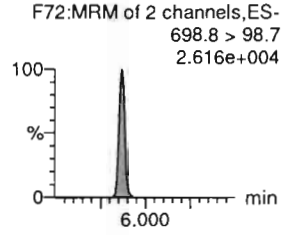
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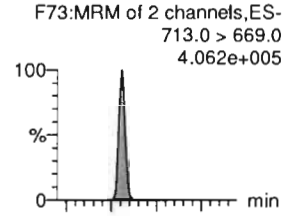


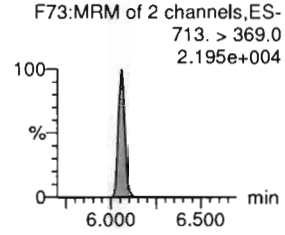
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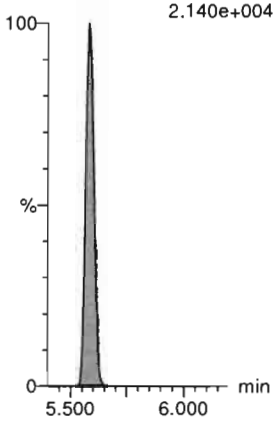


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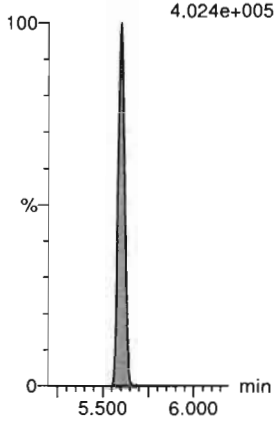




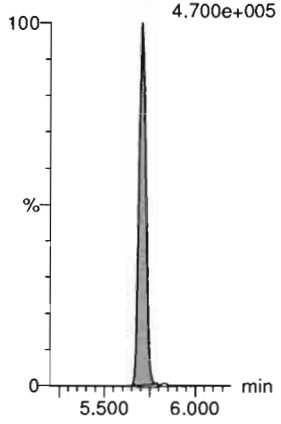
13C2-10:2 FTS-EIS



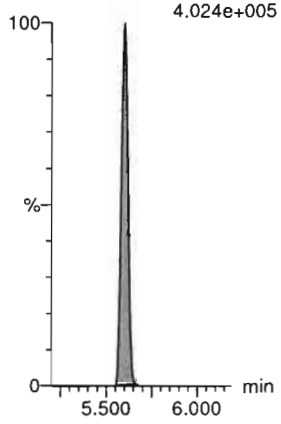
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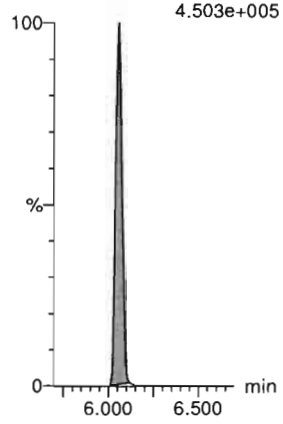
d3-N-MeFOSA-EIS



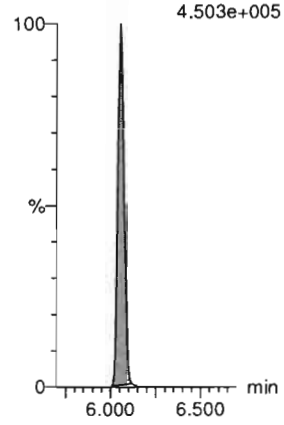
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS



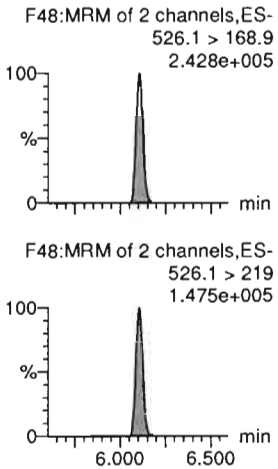
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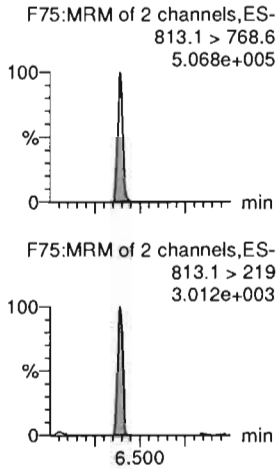
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Name: 200227P1-92, Date: 28-Feb-2020, Time: 07:27:04, ID: ST200227P1-15 PFC CS3 20B1107, Description: PFC CS3 20B1107

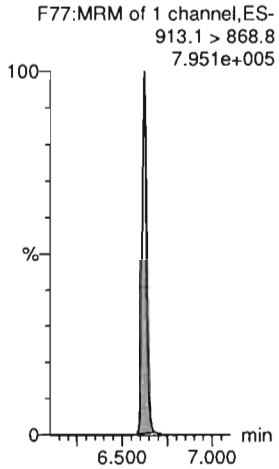
N-EtFOSA



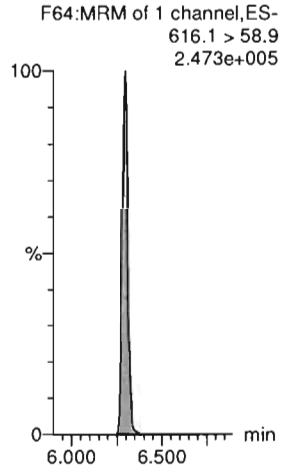
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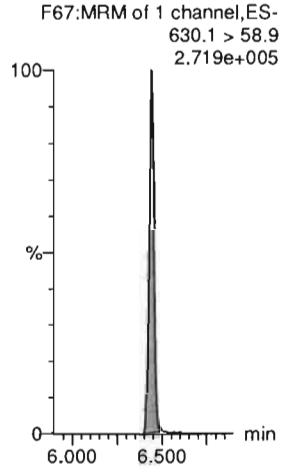
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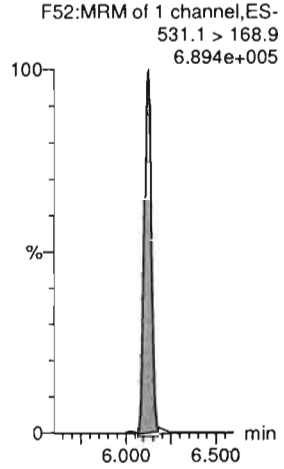
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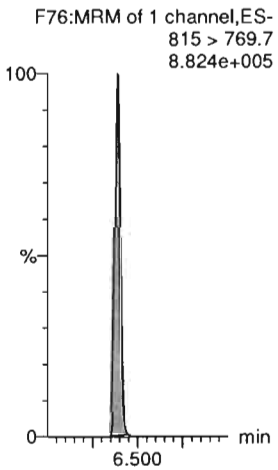
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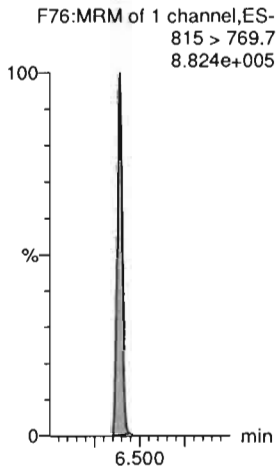
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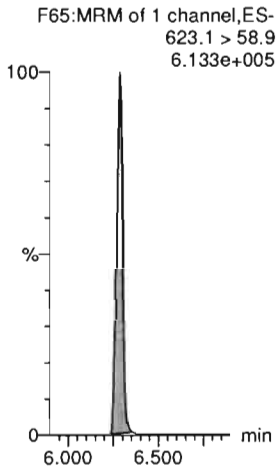
13C2-PFHxDA-EIS



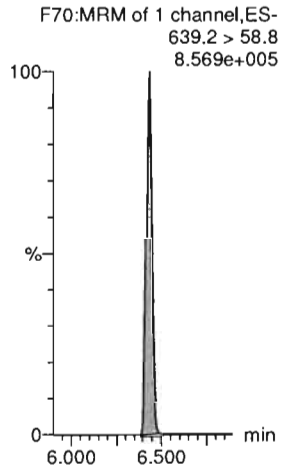
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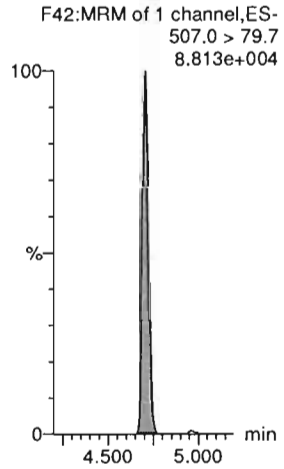
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS



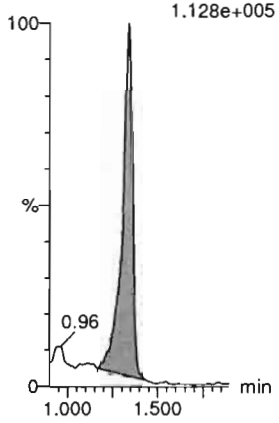
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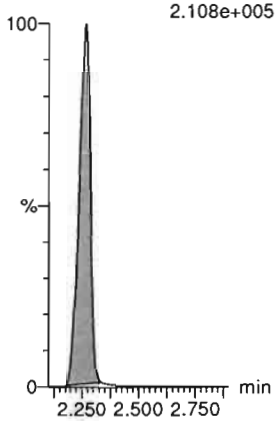
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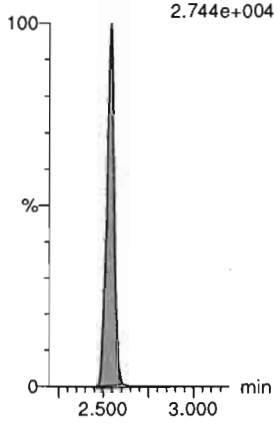
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.128e+005



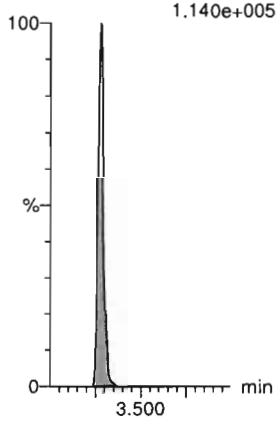
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.108e+005



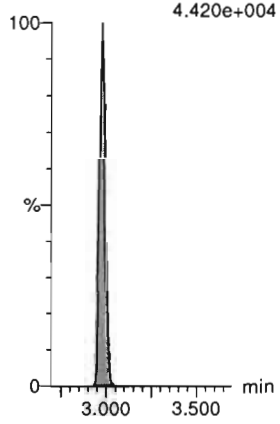
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.744e+004



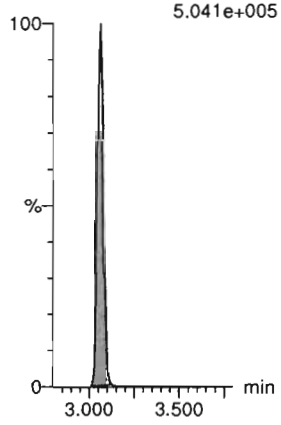
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.140e+005



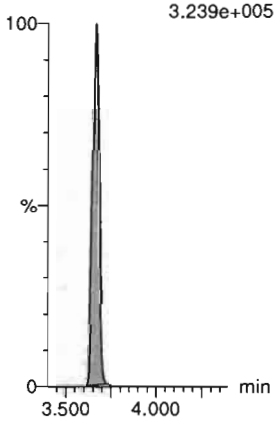
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.420e+004



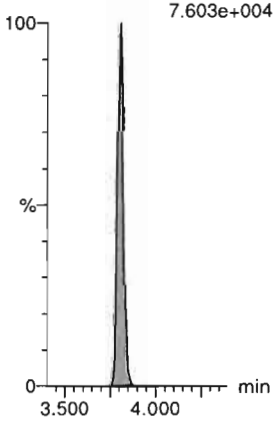
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.041e+005



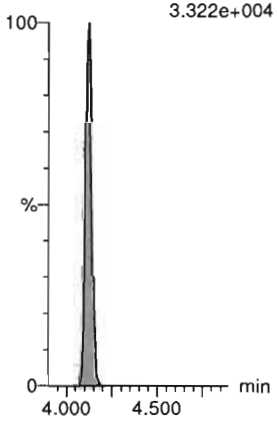
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.239e+005



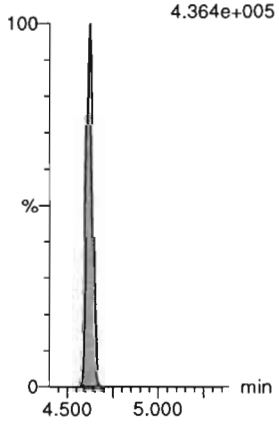
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F24:MRM of 1 channel,ES-
401.8 > 79.7
7.603e+004



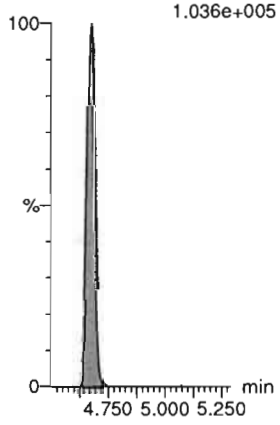
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.322e+004



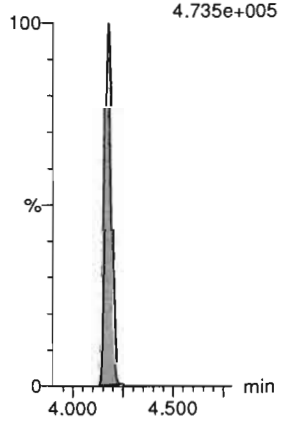
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.364e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.036e+005



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.735e+005



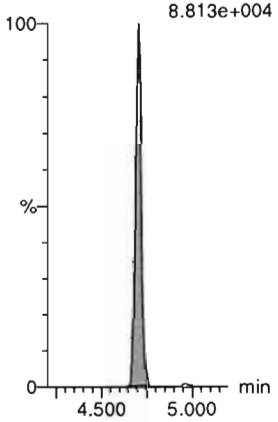
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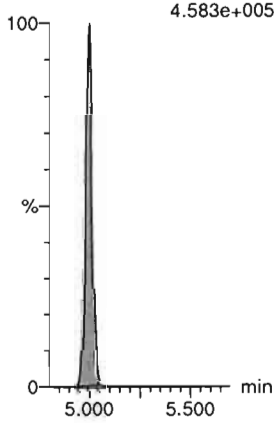
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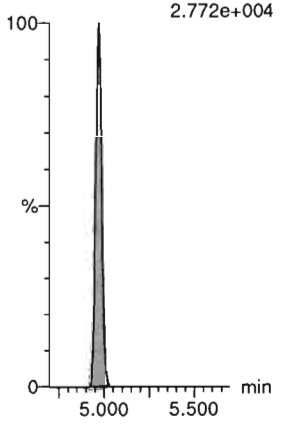
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.813e+004



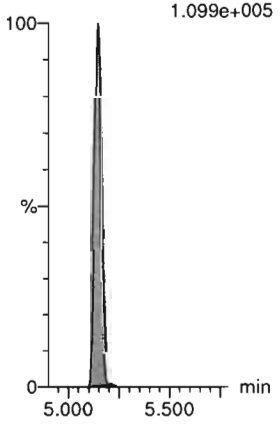
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F45:MRM of 1 channel,ES-
515.1 > 469.9
4.583e+005



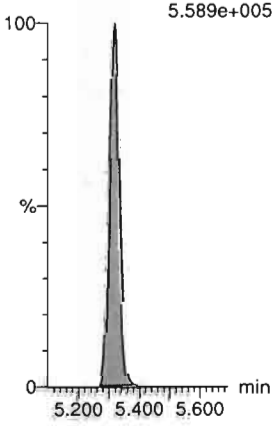
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.772e+004



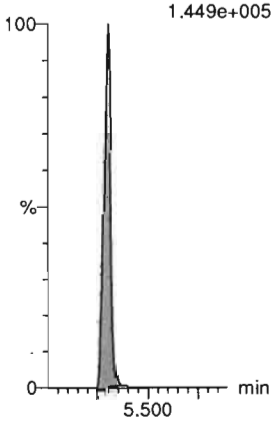
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F58:MRM of 1 channel,ES-
573.3 > 419
1.099e+005



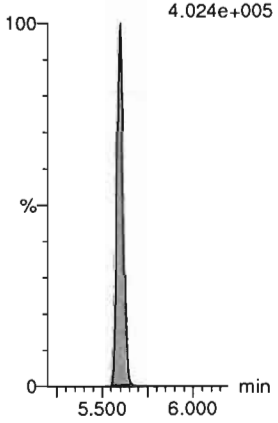
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.589e+005



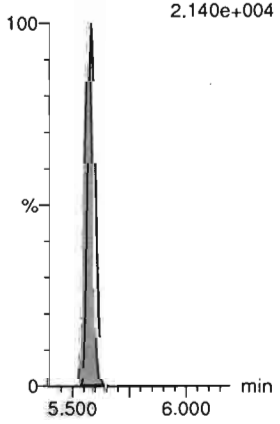
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.449e+005



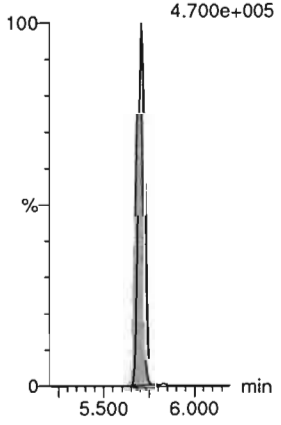
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.024e+005



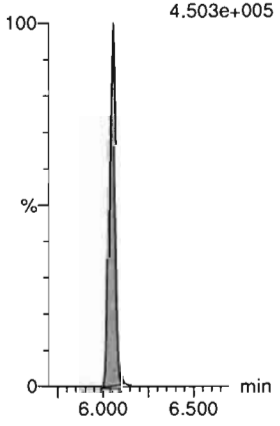
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.140e+004



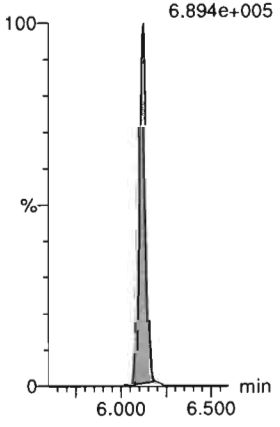
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.700e+005



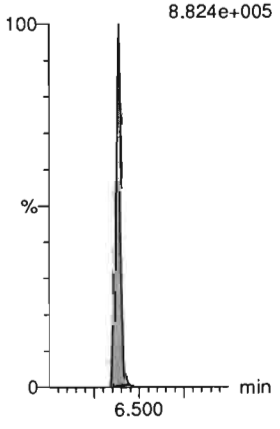
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.503e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.894e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.824e+005



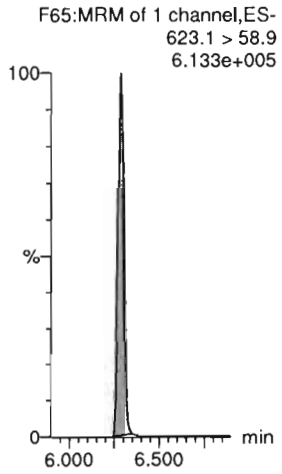
RK 2/28/2020

Dataset: P:\PFAS5.PRO\RESULTS\200227P1\200227P1-92.qld

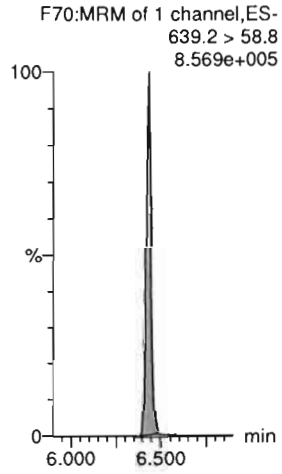
Last Altered: Friday, February 28, 2020 11:21:57 Pacific Standard Time
Printed: Friday, February 28, 2020 11:26:34 Pacific Standard Time

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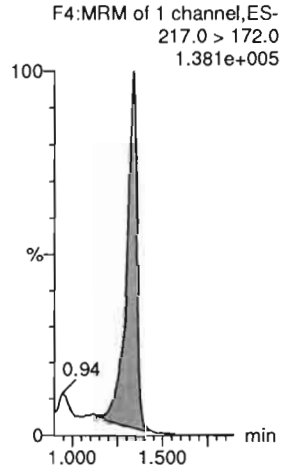
d7-N-MeFOSE-RSD



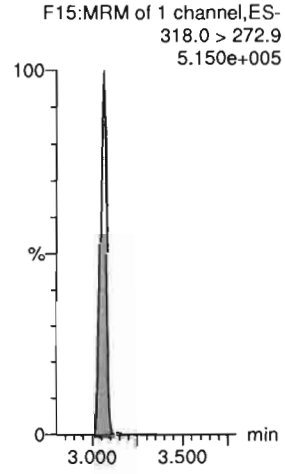
d9-N-EtFOSE-RSD



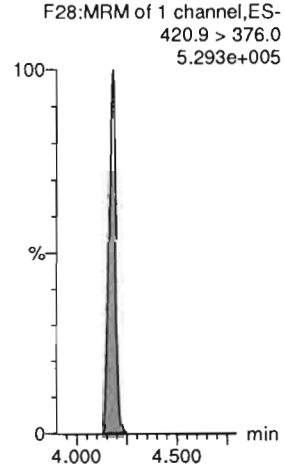
13C4-PFBA



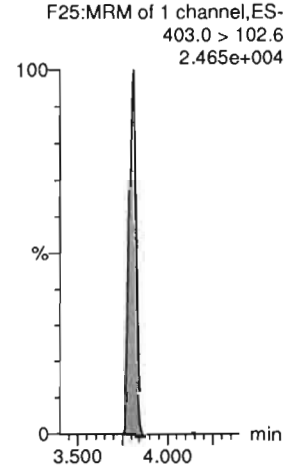
13C5-PFHxA



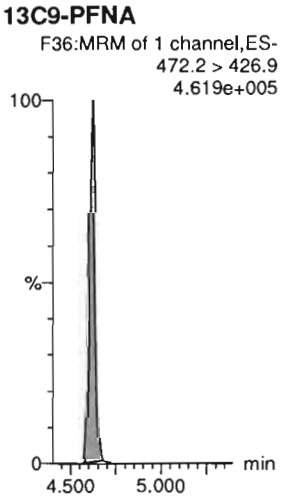
13C8-PFOA



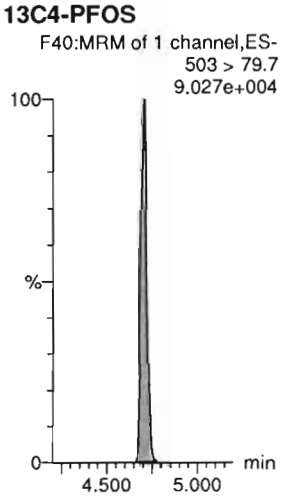
18O2-PFHxS



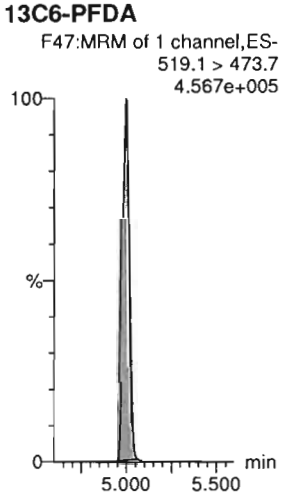
13C9-PFNA



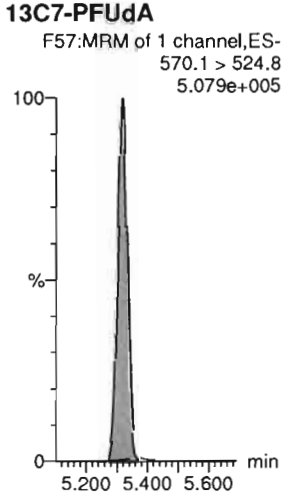
13C4-PFOS



13C6-PFDA



13C7-PFUdA



RK 2/28/2020

INITIAL CALIBRATION (ICAL)

INCLUDING ASSOCIATED

INITIAL CALIBRATION VERIFICATION (ICV) AND INSTRUMENT BLANK (IB)

Quantify Compound Summary Report **MassLynx V4.2 SCN977**
Vista Analytical Laboratory

Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

Last Altered: Friday, February 21, 2020 15:57:11 Pacific Standard Time
Printed: Friday, February 21, 2020 16:01:04 Pacific Standard Time

Low point
4:2 FTS: 0.5
L-PFHxS: 1.0
6:2 FTS: 1.0
7:3 FTCA: 0.5

high point:
3:3 FTCA: 100
4:2 FTS: 100
5:3 FTCA: 100
PFHpS: 250
7:3 FTCA: 100
N-EtFOSE: 1250

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022020.mdb 21 Feb 2020 08:56:55
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-20-20.cdb 21 Feb 2020 15:57:11

Compound name: PFBA
Correlation coefficient: r = 0.999717, r^2 = 0.999434
Calibration curve: 1.13327 * x + -0.14129
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	1.48	114.344	9487.311	0.151	0.3	3.0	NO	0.999	NO	MM
2	2	200220P1-4	Standard	0.500	1.48	338.405	10062.216	0.420	0.5	-0.9	NO	0.999	NO	MM
3	3	200220P1-5	Standard	1.000	1.48	764.124	9933.468	0.962	1.0	-2.7	NO	0.999	NO	MM
4	4	200220P1-6	Standard	2.000	1.48	1378.009	9932.887	1.734	1.7	-17.3	NO	0.999	NO	MM
5	5	200220P1-7	Standard	5.000	1.48	4600.956	9930.719	5.791	5.2	4.7	NO	0.999	NO	MM
6	6	200220P1-8	Standard	10.000	1.48	9853.644	10304.131	11.954	10.7	6.7	NO	0.999	NO	MM
7	7	200220P1-9	Standard	50.000	1.48	46610.254	9874.855	59.001	52.2	4.4	NO	0.999	NO	bb
8	8	200220P1-10	Standard	100.000	1.48	94108.695	9955.766	118.159	104.4	4.4	NO	0.999	NO	bb
9	9	200220P1-11	Standard	250.000	1.48	236935.703	10671.288	277.539	245.0	-2.0	NO	0.999	NO	MM
10	10	200220P1-12	Standard	500.000	1.48	456029.406	10105.821	564.068	497.9	-0.4	NO	0.999	NO	bb

Compound name: PFPrS
Coefficient of Determination: R^2 = 0.999844
Calibration curve: 3.06967e-005 * x^2 + 1.5689 * x + -0.0816588
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	1.79	22.296	1365.844	0.204	0.2	-27.2	NO	1.000	NO	MM
2	2	200220P1-4	Standard	0.500	1.81	88.434	1376.906	0.803	0.6	12.8	NO	1.000	NO	MM
3	3	200220P1-5	Standard	1.000	1.81	183.886	1404.860	1.636	1.1	9.5	NO	1.000	NO	MM
4	4	200220P1-6	Standard	2.000	1.82	327.924	1379.710	2.971	1.9	-2.7	NO	1.000	NO	MM
5	5	200220P1-7	Standard	5.000	1.81	894.358	1372.543	8.145	5.2	4.9	NO	1.000	NO	MM
6	6	200220P1-8	Standard	10.000	1.81	1841.685	1431.448	16.082	10.3	3.0	NO	1.000	NO	bb
7	7	200220P1-9	Standard	50.000	1.81	9064.380	1460.737	77.567	49.4	-1.1	NO	1.000	NO	bb
8	8	200220P1-10	Standard	100.000	1.81	18035.078	1408.211	160.089	101.9	1.9	NO	1.000	NO	bb
9	9	200220P1-11	Standard	250.000	1.81	43405.125	1394.472	389.082	246.9	-1.3	NO	1.000	NO	MM
10	10	200220P1-12	Standard	500.000	1.81	82543.383	1299.467	794.012	501.2	0.2	NO	1.000	NO	MM

Vista Analytical Laboratory

Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

Last Altered: Friday, February 21, 2020 11:03:18 Pacific Standard Time
Printed: Friday, February 21, 2020 11:08:04 Pacific Standard Time

Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.999097
Calibration curve: 1.57358e-005 * x^2 + 0.072826 * x + -0.000475915
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	2.26	13.025	11699.041	0.014	0.2	-21.0	NO	0.999	NO	MM
2	2	200220P1-4	Standard	0.500	2.27	38.197	12014.812	0.040	0.6	10.4	NO	0.999	NO	bb
3	3	200220P1-5	Standard	1.000	2.26	71.823	12028.183	0.075	1.0	3.1	NO	0.999	NO	bb
4	4	200220P1-6	Standard	2.000	2.26	135.686	12187.951	0.139	1.9	-4.2	NO	0.999	NO	bb
5	5	200220P1-7	Standard	5.000	2.26	360.385	11945.819	0.377	5.2	3.6	NO	0.999	NO	bb
6	6	200220P1-8	Standard	10.000	2.26	742.811	11792.354	0.787	10.8	7.9	NO	0.999	NO	bb
7	7	200220P1-9	Standard	50.000	2.26	3537.180	12425.581	3.558	48.4	-3.3	NO	0.999	NO	bb
8	8	200220P1-10	Standard	100.000	2.26	7146.531	11920.406	7.494	100.7	0.7	NO	0.999	NO	bb
9	9	200220P1-11	Standard	250.000	2.26	3676.616	12522.962	3.670	49.9	-80.1	YES	0.999	NO	bbX
10	10	200220P1-12	Standard	500.000	2.26	7165.609	11549.170	7.756	104.2	-79.2	YES	0.999	NO	bbX

Compound name: PFPeA
Coefficient of Determination: R^2 = 0.999471
Calibration curve: -6.39644e-006 * x^2 + 0.970478 * x + 0.0497364
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	2.41	260.699	11699.041	0.279	0.2	-5.7	NO	0.999	NO	bb
2	2	200220P1-4	Standard	0.500	2.40	519.399	12014.812	0.540	0.5	1.1	NO	0.999	NO	bb
3	3	200220P1-5	Standard	1.000	2.40	1076.600	12028.183	1.119	1.1	10.2	NO	0.999	NO	bb
4	4	200220P1-6	Standard	2.000	2.40	1983.295	12187.951	2.034	2.0	2.2	NO	0.999	NO	bb
5	5	200220P1-7	Standard	5.000	2.40	4904.038	11945.819	5.132	5.2	4.7	NO	0.999	NO	bb
6	6	200220P1-8	Standard	10.000	2.40	9800.875	11792.354	10.389	10.7	6.5	NO	0.999	NO	bb
7	7	200220P1-9	Standard	50.000	2.41	48495.246	12425.581	48.786	50.2	0.5	NO	0.999	NO	bb
8	8	200220P1-10	Standard	100.000	2.40	95766.477	11920.406	100.423	103.5	3.5	NO	0.999	NO	bb
9	9	200220P1-11	Standard	250.000	2.41	234900.938	12522.962	234.470	241.9	-3.2	NO	0.999	NO	bb
10	10	200220P1-12	Standard	500.000	2.41	449838.531	11549.170	486.873	503.3	0.7	NO	0.999	NO	bb

Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

Last Altered: Friday, February 21, 2020 12:12:49 Pacific Standard Time
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Compound name: PFBS
Correlation coefficient: r = 0.999743, r^2 = 0.999487
Calibration curve: 2.28739 * x + 0.162081
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	2.67	85.058	1365.844	0.778	0.3	7.8	NO	0.999	NO	bb
2	2	200220P1-4	Standard	0.500	2.67	120.053	1376.906	1.090	0.4	-18.9	NO	0.999	NO	bb
3	3	200220P1-5	Standard	1.000	2.67	301.505	1404.860	2.683	1.1	10.2	NO	0.999	NO	bb
4	4	200220P1-6	Standard	2.000	2.67	547.269	1379.710	4.958	2.1	4.8	NO	0.999	NO	bb
5	5	200220P1-7	Standard	5.000	2.67	1388.816	1372.543	12.648	5.5	9.2	NO	0.999	NO	bb
6	6	200220P1-8	Standard	10.000	2.67	2914.079	1431.448	25.447	11.1	10.5	NO	0.999	NO	bb
7	7	200220P1-9	Standard	50.000	2.67	13728.507	1460.737	117.479	51.3	2.6	NO	0.999	NO	bb
8	8	200220P1-10	Standard	100.000	2.67	26823.348	1408.211	238.098	104.0	4.0	NO	0.999	NO	bb
9	9	200220P1-11	Standard	250.000	2.67	63150.883	1394.472	566.082	247.4	-1.0	NO	0.999	NO	bb
10	10	200220P1-12	Standard	500.000	2.67	117877.250	1299.467	1133.900	495.6	-0.9	NO	0.999	NO	bb

Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.997734
Calibration curve: -0.00410682 * x^2 + 1.6845 * x + -0.166626
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	3.10	23.492	1393.605	0.211	0.2	-10.3	NO	0.998	NO	bbX
2	2	200220P1-4	Standard	0.500	3.10	106.473	1509.668	0.882	0.6	24.6	NO	0.998	NO	bb
3	3	200220P1-5	Standard	1.000	3.10	134.131	1646.149	1.019	0.7	-29.5	NO	0.998	NO	bb
4	4	200220P1-6	Standard	2.000	3.10	346.055	1525.886	2.835	1.8	-10.5	NO	0.998	NO	bb
5	5	200220P1-7	Standard	5.000	3.10	842.602	1435.392	7.338	4.5	-9.9	NO	0.998	NO	bb
6	6	200220P1-8	Standard	10.000	3.10	1835.215	1359.106	16.879	10.4	3.8	NO	0.998	NO	bb
7	7	200220P1-9	Standard	50.000	3.10	8668.705	1435.273	75.497	51.3	2.7	NO	0.998	NO	bb
8	8	200220P1-10	Standard	100.000	3.10	15839.246	1566.971	126.352	99.0	-1.0	NO	0.998	NO	bb
9	9	200220P1-11	Standard	250.000	3.10	38464.855	1533.484	313.541			NO	0.998	YES	bbXI
10	10	200220P1-12	Standard	500.000	3.10	71865.234	1302.366	689.757			NO	0.998	YES	bbXI

Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

Last Altered: Friday, February 21, 2020 11:03:18 Pacific Standard Time
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Compound name: PFHxA
Correlation coefficient: r = 0.999392, r^2 = 0.998785
Calibration curve: 0.886822 * x + 0.0669668
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	0.250	3.18	456.113	20012.639	0.285	0.2	-1.7	NO	0.999	NO	bd
2	2 200220P1-4	Standard	0.500	3.18	714.165	20000.619	0.446	0.4	-14.4	NO	0.999	NO	bb
3	3 200220P1-5	Standard	1.000	3.18	1607.009	20397.721	0.985	1.0	3.5	NO	0.999	NO	bb
4	4 200220P1-6	Standard	2.000	3.18	3378.583	20893.373	2.021	2.2	10.2	NO	0.999	NO	bb
5	5 200220P1-7	Standard	5.000	3.18	8269.901	20659.924	5.004	5.6	11.3	NO	0.999	NO	bb
6	6 200220P1-8	Standard	10.000	3.18	16325.025	20452.928	9.977	11.2	11.7	NO	0.999	NO	bb
7	7 200220P1-9	Standard	50.000	3.18	77819.195	20628.305	47.156	53.1	6.2	NO	0.999	NO	bb
8	8 200220P1-10	Standard	100.000	3.18	163157.344	22022.600	92.608	104.4	4.4	NO	0.999	NO	bb
9	9 200220P1-11	Standard	250.000	3.18	391642.469	21680.693	225.801	254.5	1.8	NO	0.999	NO	bb
10	10 200220P1-12	Standard	500.000	3.18	729646.875	21153.855	431.155	486.1	-2.8	NO	0.999	NO	bb

Compound name: PFPeS
Correlation coefficient: r = 0.998339, r^2 = 0.996680
Calibration curve: 2.05532 * x + 0.247448
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	0.250	3.37	69.269	1365.844	0.634	0.2	-24.8	NO	0.997	NO	bb
2	2 200220P1-4	Standard	0.500	3.37	157.285	1376.906	1.428	0.6	14.9	NO	0.997	NO	bb
3	3 200220P1-5	Standard	1.000	3.37	231.103	1404.860	2.056	0.9	-12.0	NO	0.997	NO	bb
4	4 200220P1-6	Standard	2.000	3.38	583.101	1379.710	5.283	2.4	22.5	NO	0.997	NO	bb
5	5 200220P1-7	Standard	5.000	3.37	1316.739	1372.543	11.992	5.7	14.3	NO	0.997	NO	bb
6	6 200220P1-8	Standard	10.000	3.37	2779.698	1431.448	24.273	11.7	16.9	NO	0.997	NO	bb
7	7 200220P1-9	Standard	50.000	3.38	13105.560	1460.737	112.149	54.4	8.9	NO	0.997	NO	bb
8	8 200220P1-10	Standard	100.000	3.37	26037.061	1408.211	231.118	112.3	12.3	NO	0.997	NO	bb
9	9 200220P1-11	Standard	250.000	3.38	56289.430	1394.472	504.577	245.4	-1.8	NO	0.997	NO	bb
10	10 200220P1-12	Standard	500.000	3.37	103675.352	1299.467	997.287	485.1	-3.0	NO	0.997	NO	bb

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Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.999574
Calibration curve: -0.000236652 * x^2 + 1.03625 * x + 0.0401894
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	0.250	3.39	81.286	3617.354	0.281	0.2	-7.1	NO	1.000	NO	bb
2	2 200220P1-4	Standard	0.500	3.39	166.843	3805.080	0.548	0.5	-2.0	NO	1.000	NO	bb
3	3 200220P1-5	Standard	1.000	3.39	347.017	3645.414	1.190	1.1	11.0	NO	1.000	NO	bb
4	4 200220P1-6	Standard	2.000	3.39	619.700	3855.269	2.009	1.9	-4.9	NO	1.000	NO	bb
5	5 200220P1-7	Standard	5.000	3.39	1657.558	3620.540	5.723	5.5	9.8	NO	1.000	NO	bb
6	6 200220P1-8	Standard	10.000	3.39	3247.886	3663.977	11.080	10.7	6.8	NO	1.000	NO	bb
7	7 200220P1-9	Standard	50.000	3.39	16100.552	3789.079	53.115	51.8	3.7	NO	1.000	NO	bb
8	8 200220P1-10	Standard	100.000	3.39	32044.715	3947.845	101.463	100.2	0.2	NO	1.000	NO	bb
9	9 200220P1-11	Standard	250.000	3.39	78015.531	4091.144	238.367	243.5	-2.6	NO	1.000	NO	bb
10	10 200220P1-12	Standard	500.000	3.39	146596.672	3968.618	461.737	503.4	0.7	NO	1.000	NO	bb

Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.999659
Calibration curve: 0.000117104 * x^2 + 0.178925 * x + -0.00538648
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	0.250	3.72	35.358	12482.621	0.035	0.2	-8.8	NO	1.000	NO	bb
2	2 200220P1-4	Standard	0.500	3.73	80.726	13031.973	0.077	0.5	-7.5	NO	1.000	NO	bb
3	3 200220P1-5	Standard	1.000	3.72	214.466	12972.090	0.207	1.2	18.4	NO	1.000	NO	bb
4	4 200220P1-6	Standard	2.000	3.72	352.873	13052.814	0.338	1.9	-4.2	NO	1.000	NO	bb
5	5 200220P1-7	Standard	5.000	3.72	967.489	12941.929	0.934	5.2	4.7	NO	1.000	NO	bb
6	6 200220P1-8	Standard	10.000	3.73	1935.316	13835.021	1.749	9.7	-2.6	NO	1.000	NO	bb
7	7 200220P1-9	Standard	50.000	3.73	9707.428	13156.412	9.223	49.9	-0.1	NO	1.000	NO	bb
8	8 200220P1-10	Standard	100.000	3.73	19054.666	12492.564	19.066	100.0	0.0	NO	1.000	NO	bb
9	9 200220P1-11	Standard	250.000	3.73	9894.734	13479.294	9.176	49.7	-80.1	YES	1.000	NO	bbX
10	10 200220P1-12	Standard	500.000	3.73	19486.533	12425.425	19.603	102.7	-79.5	YES	1.000	NO	bbX

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Compound name: PFHpA
Coefficient of Determination: R^2 = 0.999188
Calibration curve: -0.000176223 * x^2 + 1.2409 * x + 0.0769235
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	3.78	341.760	12482.621	0.342	0.2	-14.5	NO	0.999	NO	bb
2	2	200220P1-4	Standard	0.500	3.78	657.364	13031.973	0.631	0.4	-10.8	NO	0.999	NO	bb
3	3	200220P1-5	Standard	1.000	3.78	1407.119	12972.090	1.356	1.0	3.1	NO	0.999	NO	bb
4	4	200220P1-6	Standard	2.000	3.78	2897.300	13052.814	2.775	2.2	8.7	NO	0.999	NO	db
5	5	200220P1-7	Standard	5.000	3.78	7136.113	12941.929	6.892	5.5	9.9	NO	0.999	NO	bd
6	6	200220P1-8	Standard	10.000	3.78	13770.062	13835.021	12.441	10.0	-0.2	NO	0.999	NO	bb
7	7	200220P1-9	Standard	50.000	3.78	67110.016	13156.412	63.762	51.7	3.4	NO	0.999	NO	bb
8	8	200220P1-10	Standard	100.000	3.78	126632.930	12492.564	126.708	103.6	3.6	NO	0.999	NO	bb
9	9	200220P1-11	Standard	250.000	3.78	309706.594	13479.294	287.206	239.5	-4.2	NO	0.999	NO	bb
10	10	200220P1-12	Standard	500.000	3.78	577966.313	12425.425	581.435	504.7	0.9	NO	0.999	NO	bb

Compound name: ADONA
Coefficient of Determination: R^2 = 0.998312
Calibration curve: -0.000366708 * x^2 + 3.09045 * x + 0.169928
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	3.88	865.550	12482.621	0.867	0.2	-9.8	NO	0.998	NO	bb
2	2	200220P1-4	Standard	0.500	3.88	1726.728	13031.973	1.656	0.5	-3.8	NO	0.998	NO	bb
3	3	200220P1-5	Standard	1.000	3.88	3461.124	12972.090	3.335	1.0	2.4	NO	0.998	NO	bb
4	4	200220P1-6	Standard	2.000	3.88	6781.827	13052.814	6.495	2.0	2.4	NO	0.998	NO	bb
5	5	200220P1-7	Standard	5.000	3.88	17523.332	12941.929	16.925	5.4	8.5	NO	0.998	NO	bb
6	6	200220P1-8	Standard	10.000	3.89	34074.398	13835.021	30.786	9.9	-0.8	NO	0.998	NO	bb
7	7	200220P1-9	Standard	50.000	3.88	155520.281	13156.412	147.761	48.0	-3.9	NO	0.998	NO	bb
8	8	200220P1-10	Standard	100.000	3.88	332244.719	12492.564	332.442	108.9	8.9	NO	0.998	NO	bb
9	9	200220P1-11	Standard	250.000	3.88	771426.625	13479.294	715.381	238.2	-4.7	NO	0.998	NO	bb
10	10	200220P1-12	Standard	500.000	3.89	1457423.375	12425.425	1466.171	504.6	0.9	NO	0.998	NO	bb

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Compound name: L-PFHxS
Coefficient of Determination: R^2 = 0.998709
Calibration curve: -0.000159606 * x^2 + 1.08217 * x + 0.312795
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	3.90	29.072	3082.791	0.118			NO	0.999	NO	MMXI
2	2	200220P1-4	Standard	0.500	3.92	123.214	2944.146	0.523	0.2	-61.1	YES	0.999	NO	MMX
3	3	200220P1-5	Standard	1.000	3.92	335.544	2706.117	1.550	1.1	14.3	NO	0.999	NO	MM
4	4	200220P1-6	Standard	2.000	3.92	558.294	2868.805	2.433	2.0	-2.0	NO	0.999	NO	MM
5	5	200220P1-7	Standard	5.000	3.92	1349.810	3001.214	5.622	4.9	-1.8	NO	0.999	NO	MM
6	6	200220P1-8	Standard	10.000	3.92	2450.807	3158.346	9.700	8.7	-13.1	NO	0.999	NO	MM
7	7	200220P1-9	Standard	50.000	3.92	13034.770	3093.076	52.677	48.7	-2.5	NO	0.999	NO	MM
8	8	200220P1-10	Standard	100.000	3.92	26240.422	2849.217	115.121	107.8	7.8	NO	0.999	NO	MM
9	9	200220P1-11	Standard	250.000	3.92	60673.395	2998.248	252.954	242.1	-3.2	NO	0.999	NO	MM
10	10	200220P1-12	Standard	500.000	3.92	110952.781	2751.881	503.986	502.7	0.5	NO	0.999	NO	MM

Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.998365
Calibration curve: -0.00033273 * x^2 + 1.66674 * x + -0.842375
Response type: Internal Std (Ref 63), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	4.22	45.613	1369.139	0.416	0.8	202.1	YES	0.998	NO	bbX
2	2	200220P1-4	Standard	0.500	4.23	66.722	1283.517	0.650	0.9	79.1	YES	0.998	NO	bbX
3	3	200220P1-5	Standard	1.000	4.22	80.819	1230.354	0.821	1.0	-0.2	NO	0.998	NO	bb
4	4	200220P1-6	Standard	2.000	4.23	272.227	1431.884	2.376	1.9	-3.4	NO	0.998	NO	bb
5	5	200220P1-7	Standard	5.000	4.23	740.849	1408.519	6.575	4.5	-10.9	NO	0.998	NO	bb
6	6	200220P1-8	Standard	10.000	4.23	2199.027	1518.842	18.098	11.4	13.9	NO	0.998	NO	bb
7	7	200220P1-9	Standard	50.000	4.23	9342.231	1479.055	78.954	48.3	-3.3	NO	0.998	NO	bb
8	8	200220P1-10	Standard	100.000	4.23	18173.836	1302.443	174.421	107.5	7.5	NO	0.998	NO	bb
9	9	200220P1-11	Standard	250.000	4.23	43310.102	1430.818	378.368	238.9	-4.4	NO	0.998	NO	bb
10	10	200220P1-12	Standard	500.000	4.23	76247.234	1261.472	755.538	504.6	0.9	NO	0.998	NO	bb

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Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.999639
Calibration curve: -0.000239807 * x^2 + 1.20196 * x + 0.0927861
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	4.29	451.677	18027.223	0.313	0.2	-26.6	NO	1.000	NO	MM
2	2	200220P1-4	Standard	0.500	4.29	1207.397	19048.508	0.792	0.6	16.4	NO	1.000	NO	bb
3	3	200220P1-5	Standard	1.000	4.29	2008.972	17893.020	1.403	1.1	9.1	NO	1.000	NO	bb
4	4	200220P1-6	Standard	2.000	4.29	3576.485	18471.129	2.420	1.9	-3.1	NO	1.000	NO	bb
5	5	200220P1-7	Standard	5.000	4.29	9384.403	18048.473	6.499	5.3	6.7	NO	1.000	NO	bb
6	6	200220P1-8	Standard	10.000	4.29	18400.063	19089.504	12.049	10.0	-0.3	NO	1.000	NO	bb
7	7	200220P1-9	Standard	50.000	4.29	89483.125	18834.941	59.386	49.8	-0.3	NO	1.000	NO	bb
8	8	200220P1-10	Standard	100.000	4.29	162341.453	17822.139	113.862	96.5	-3.5	NO	1.000	NO	bb
9	9	200220P1-11	Standard	250.000	4.29	403461.906	17296.020	291.586	255.5	2.2	NO	1.000	NO	bb
10	10	200220P1-12	Standard	500.000	4.29	715704.875	16599.553	538.949	497.7	-0.5	NO	1.000	NO	bb

Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999604
Calibration curve: -4.3388e-005 * x^2 + 0.182512 * x + -0.0109277
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	4.30	33.094	18027.223	0.023	0.2	-25.8	NO	1.000	NO	bb
2	2	200220P1-4	Standard	0.500	4.30	114.457	19048.508	0.075	0.5	-5.7	NO	1.000	NO	bb
3	3	200220P1-5	Standard	1.000	4.30	287.442	17893.020	0.201	1.2	16.0	NO	1.000	NO	bb
4	4	200220P1-6	Standard	2.000	4.31	484.476	18471.129	0.328	1.9	-7.1	NO	1.000	NO	bd
5	5	200220P1-7	Standard	5.000	4.30	1381.767	18048.473	0.957	5.3	6.2	NO	1.000	NO	bb
6	6	200220P1-8	Standard	10.000	4.30	2634.252	19089.504	1.725	9.5	-4.7	NO	1.000	NO	dd
7	7	200220P1-9	Standard	50.000	4.30	12852.290	18834.941	8.530	47.3	-5.3	NO	1.000	NO	bb
8	8	200220P1-10	Standard	100.000	4.30	25771.445	17822.139	18.075	101.5	1.5	NO	1.000	NO	bb
9	9	200220P1-11	Standard	250.000	4.30	60072.121	17296.020	43.415	253.2	1.3	NO	1.000	NO	bb
10	10	200220P1-12	Standard	500.000	4.30	106420.625	16599.553	80.138	498.1	-0.4	NO	1.000	NO	bb

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Compound name: PFHpS
Coefficient of Determination: R^2 = 0.999329
Calibration curve: -0.00121734 * x^2 + 1.09408 * x + -0.0589565
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	4.39	47.365	3134.899	0.189	0.2	-9.4	NO	0.999	NO	bb
2	2	200220P1-4	Standard	0.500	4.40	149.548	3339.188	0.560	0.6	13.2	NO	0.999	NO	bb
3	3	200220P1-5	Standard	1.000	4.40	294.343	3403.621	1.081	1.0	4.3	NO	0.999	NO	bb
4	4	200220P1-6	Standard	2.000	4.39	572.504	3671.517	1.949	1.8	-8.0	NO	0.999	NO	bb
5	5	200220P1-7	Standard	5.000	4.40	1655.088	3582.422	5.775	5.4	7.3	NO	0.999	NO	bb
6	6	200220P1-8	Standard	10.000	4.40	2959.309	3697.559	10.004	9.3	-7.1	NO	0.999	NO	bb
7	7	200220P1-9	Standard	50.000	4.40	12675.344	3148.619	50.321	48.7	-2.6	NO	0.999	NO	bb
8	8	200220P1-10	Standard	100.000	4.40	27197.340	3413.870	99.584	102.8	2.8	NO	0.999	NO	bb
9	9	200220P1-11	Standard	250.000	4.40	56635.297	3599.188	196.695	248.6	-0.6	NO	0.999	NO	bb
10	10	200220P1-12	Standard	500.000	4.40	113878.570	2993.555	475.516			NO	0.999	NO	bbXI

Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.998839
Calibration curve: 2.04383e-005 * x^2 + 0.154102 * x + 0.00331171
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	4.73	19.334	15680.749	0.015	0.1	-68.6	YES	0.999	NO	MMX
2	2	200220P1-4	Standard	0.500	4.71	107.822	14942.147	0.090	0.6	12.8	NO	0.999	NO	bb
3	3	200220P1-5	Standard	1.000	4.71	156.600	15070.675	0.130	0.8	-17.9	NO	0.999	NO	bb
4	4	200220P1-6	Standard	2.000	4.71	404.833	15569.793	0.325	2.1	4.4	NO	0.999	NO	bb
5	5	200220P1-7	Standard	5.000	4.71	1035.669	15400.750	0.841	5.4	8.6	NO	0.999	NO	bb
6	6	200220P1-8	Standard	10.000	4.71	1927.544	17167.027	1.404	9.1	-9.2	NO	0.999	NO	bb
7	7	200220P1-9	Standard	50.000	4.71	10266.347	16245.348	7.899	50.9	1.8	NO	0.999	NO	bb
8	8	200220P1-10	Standard	100.000	4.71	19643.170	15781.290	15.559	99.6	-0.4	NO	0.999	NO	bb
9	9	200220P1-11	Standard	250.000	4.71	10376.027	15613.387	8.307	53.5	-78.6	YES	0.999	NO	bbX
10	10	200220P1-12	Standard	500.000	4.71	20856.080	15415.518	16.912	108.2	-78.4	YES	0.999	NO	bbX

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Compound name: PFNA
Correlation coefficient: r = 0.999754, r^2 = 0.999507
Calibration curve: 1.23155 * x + 0.0599721
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	0.250	4.72	420.049	15680.749	0.335	0.2	-10.7	NO	1.000	NO	bd
2	2 200220P1-4	Standard	0.500	4.72	795.287	14942.147	0.665	0.5	-1.7	NO	1.000	NO	bb
3	3 200220P1-5	Standard	1.000	4.72	1637.216	15070.675	1.358	1.1	5.4	NO	1.000	NO	bb
4	4 200220P1-6	Standard	2.000	4.72	3396.572	15569.793	2.727	2.2	8.3	NO	1.000	NO	bb
5	5 200220P1-7	Standard	5.000	4.72	8472.093	15400.750	6.876	5.5	10.7	NO	1.000	NO	bb
6	6 200220P1-8	Standard	10.000	4.72	17291.221	17167.027	12.590	10.2	1.7	NO	1.000	NO	bb
7	7 200220P1-9	Standard	50.000	4.72	83451.813	16245.348	64.212	52.1	4.2	NO	1.000	NO	bb
8	8 200220P1-10	Standard	100.000	4.72	158103.250	15781.290	125.230	101.6	1.6	NO	1.000	NO	bb
9	9 200220P1-11	Standard	250.000	4.72	391520.344	15613.387	313.449	254.5	1.8	NO	1.000	NO	bb
10	10 200220P1-12	Standard	500.000	4.72	745670.188	15415.518	604.643	490.9	-1.8	NO	1.000	NO	bb

Compound name: PFOSA
Coefficient of Determination: R^2 = 0.999278
Calibration curve: -0.00017731 * x^2 + 0.897342 * x + -0.0167461
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	0.250	4.78	49.164	3620.464	0.170	0.2	-16.9	NO	0.999	NO	MM
2	2 200220P1-4	Standard	0.500	4.78	143.797	3533.092	0.509	0.6	17.1	NO	0.999	NO	db
3	3 200220P1-5	Standard	1.000	4.78	306.640	3557.113	1.078	1.2	22.0	NO	0.999	NO	bb
4	4 200220P1-6	Standard	2.000	4.78	521.589	3785.300	1.722	1.9	-3.1	NO	0.999	NO	bb
5	5 200220P1-7	Standard	5.000	4.79	1231.471	3672.073	4.192	4.7	-6.1	NO	0.999	NO	bb
6	6 200220P1-8	Standard	10.000	4.78	2468.005	4038.352	7.639	8.5	-14.5	NO	0.999	NO	bb
7	7 200220P1-9	Standard	50.000	4.78	12938.181	3733.793	43.314	48.8	-2.5	NO	0.999	NO	bb
8	8 200220P1-10	Standard	100.000	4.78	25321.006	3435.960	92.118	104.8	4.8	NO	0.999	NO	bb
9	9 200220P1-11	Standard	250.000	4.78	60799.211	3597.537	211.253	247.5	-1.0	NO	0.999	NO	bb
10	10 200220P1-12	Standard	500.000	4.78	105554.539	3260.902	404.622	500.4	0.1	NO	0.999	NO	bb

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Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.997752
Calibration curve: 5.77565e-005 * x^2 + 0.92504 * x + -0.00276322
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	4.80	59.105	3134.899	0.236	0.3	3.1	NO	0.998	NO	MM
2	2	200220P1-4	Standard	0.500	4.80	86.735	3339.188	0.325	0.4	-29.2	NO	0.998	NO	bb
3	3	200220P1-5	Standard	1.000	4.80	266.393	3403.621	0.978	1.1	6.1	NO	0.998	NO	MM
4	4	200220P1-6	Standard	2.000	4.80	570.293	3671.517	1.942	2.1	5.1	NO	0.998	NO	MM
5	5	200220P1-7	Standard	5.000	4.80	1349.398	3582.422	4.708	5.1	1.8	NO	0.998	NO	MM
6	6	200220P1-8	Standard	10.000	4.80	2803.025	3697.559	9.476	10.2	2.4	NO	0.998	NO	MM
7	7	200220P1-9	Standard	50.000	4.80	13588.747	3148.619	53.947	58.1	16.2	NO	0.998	NO	MM
8	8	200220P1-10	Standard	100.000	4.80	24991.939	3413.870	91.509	98.3	-1.7	NO	0.998	NO	MM
9	9	200220P1-11	Standard	250.000	4.80	64248.555	3599.188	223.136	237.7	-4.9	NO	0.998	NO	MM
10	10	200220P1-12	Standard	500.000	4.80	115521.367	2993.555	482.375	505.5	1.1	NO	0.998	NO	MM

Compound name: 9Cl-PF30NS
Correlation coefficient: r = 0.996874, r^2 = 0.993759
Calibration curve: 1.16071 * x + -0.00606279
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	5.01	56.820	3134.899	0.227	0.2	-19.8	NO	0.994	NO	bb
2	2	200220P1-4	Standard	0.500	5.00	198.285	3339.188	0.742	0.6	28.9	NO	0.994	NO	bb
3	3	200220P1-5	Standard	1.000	5.00	290.165	3403.621	1.066	0.9	-7.7	NO	0.994	NO	bb
4	4	200220P1-6	Standard	2.000	5.01	687.997	3671.517	2.342	2.0	1.2	NO	0.994	NO	bb
5	5	200220P1-7	Standard	5.000	5.01	1720.100	3582.422	6.002	5.2	3.5	NO	0.994	NO	bb
6	6	200220P1-8	Standard	10.000	5.01	3011.038	3697.559	10.179	8.8	-12.3	NO	0.994	NO	bb
7	7	200220P1-9	Standard	50.000	5.01	16363.643	3148.619	64.964	56.0	11.9	NO	0.994	NO	bb
8	8	200220P1-10	Standard	100.000	5.01	32168.771	3413.870	117.787	101.5	1.5	NO	0.994	NO	bb
9	9	200220P1-11	Standard	250.000	5.01	73493.258	3599.188	255.242	219.9	-12.0	NO	0.994	NO	bb
10	10	200220P1-12	Standard	500.000	5.01	145556.156	2993.555	607.790	523.6	4.7	NO	0.994	NO	bb

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Compound name: PFDA
Coefficient of Determination: R^2 = 0.999172
Calibration curve: -0.000175497 * x^2 + 1.22701 * x + 0.0730403
Response type: Internal Std (Ref 73), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	5.08	491.337	18001.354	0.341	0.2	-12.6	NO	0.999	NO	bd
2	2	200220P1-4	Standard	0.500	5.08	830.331	17188.822	0.604	0.4	-13.5	NO	0.999	NO	bb
3	3	200220P1-5	Standard	1.000	5.08	1987.973	16655.424	1.492	1.2	15.7	NO	0.999	NO	bb
4	4	200220P1-6	Standard	2.000	5.08	3861.330	17626.307	2.738	2.2	8.6	NO	0.999	NO	bd
5	5	200220P1-7	Standard	5.000	5.08	9444.176	16828.695	7.015	5.7	13.2	NO	0.999	NO	bb
6	6	200220P1-8	Standard	10.000	5.08	18443.859	16955.131	13.598	11.0	10.4	NO	0.999	NO	bb
7	7	200220P1-9	Standard	50.000	5.08	90896.469	17972.971	63.217	51.8	3.7	NO	0.999	NO	bb
8	8	200220P1-10	Standard	100.000	5.08	174706.563	17851.639	122.332	101.1	1.1	NO	0.999	NO	bb
9	9	200220P1-11	Standard	250.000	5.08	391553.313	17168.783	285.076	240.6	-3.8	NO	0.999	NO	bb
10	10	200220P1-12	Standard	500.000	5.08	789157.438	17168.256	574.576	504.6	0.9	NO	0.999	NO	bb

Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.995942
Calibration curve: -0.000521597 * x^2 + 1.48034 * x + -0.217508
Response type: Internal Std (Ref 75), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	5.05	6.398	1034.617	0.077	0.2	-20.3	NO	0.996	NO	MM
2	2	200220P1-4	Standard	0.500	5.06	48.797	1048.430	0.582	0.5	8.0	NO	0.996	NO	bb
3	3	200220P1-5	Standard	1.000	5.05	75.681	1045.108	0.905	0.8	-24.1	NO	0.996	NO	bb
4	4	200220P1-6	Standard	2.000	5.05	258.879	903.218	3.583	2.6	28.5	NO	0.996	NO	bb
5	5	200220P1-7	Standard	5.000	5.05	742.248	1193.213	7.776	5.4	8.2	NO	0.996	NO	bb
6	6	200220P1-8	Standard	10.000	5.05	1231.226	1074.338	14.325	9.9	-1.4	NO	0.996	NO	bb
7	7	200220P1-9	Standard	50.000	5.05	6148.262	1125.896	68.260	47.0	-5.9	NO	0.996	NO	bb
8	8	200220P1-10	Standard	100.000	5.05	12571.593	980.440	160.280	112.9	12.9	NO	0.996	NO	bb
9	9	200220P1-11	Standard	250.000	5.05	26488.963	1051.534	314.885	231.8	-7.3	NO	0.996	NO	bb
10	10	200220P1-12	Standard	500.000	5.05	53916.660	1091.204	617.628	508.5	1.7	NO	0.996	NO	bb

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Compound name: PFNS
Correlation coefficient: r = 0.998736, r^2 = 0.997473
Calibration curve: 0.91038 * x + 0.0726293
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	5.14	72.428	3134.899	0.289	0.2	-5.0	NO	0.997	NO	bb
2	2	200220P1-4	Standard	0.500	5.14	173.266	3339.188	0.649	0.6	26.5	NO	0.997	NO	bb
3	3	200220P1-5	Standard	1.000	5.13	235.689	3403.621	0.866	0.9	-12.9	NO	0.997	NO	bb
4	4	200220P1-6	Standard	2.000	5.14	519.356	3671.517	1.768	1.9	-6.9	NO	0.997	NO	bb
5	5	200220P1-7	Standard	5.000	5.14	1451.487	3582.422	5.065	5.5	9.7	NO	0.997	NO	bb
6	6	200220P1-8	Standard	10.000	5.14	2918.950	3697.559	9.868	10.8	7.6	NO	0.997	NO	bb
7	7	200220P1-9	Standard	50.000	5.14	13583.276	3148.619	53.926	59.2	18.3	NO	0.997	NO	bb
8	8	200220P1-10	Standard	100.000	5.14	24468.268	3413.870	89.591	98.3	-1.7	NO	0.997	NO	bb
9	9	200220P1-11	Standard	250.000	5.14	62912.348	3599.188	218.495	239.9	-4.0	NO	0.997	NO	bb
10	10	200220P1-12	Standard	500.000	5.14	109353.906	2993.555	456.622	501.5	0.3	NO	0.997	NO	bb

Compound name: L-MeFOSAA
Coefficient of Determination: R^2 = 0.999717
Calibration curve: -0.000683729 * x^2 + 1.90832 * x + -0.0059177
Response type: Internal Std (Ref 77), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	5.24	87.482	3016.410	0.363	0.2	-22.8	NO	1.000	NO	bb
2	2	200220P1-4	Standard	0.500	5.23	218.245	2667.508	1.023	0.5	7.8	NO	1.000	NO	MM
3	3	200220P1-5	Standard	1.000	5.23	446.866	3036.359	1.840	1.0	-3.3	NO	1.000	NO	MM
4	4	200220P1-6	Standard	2.000	5.23	1104.209	3065.277	4.503	2.4	18.2	NO	1.000	NO	MM
5	5	200220P1-7	Standard	5.000	5.23	2525.145	3468.438	9.100	4.8	-4.4	NO	1.000	NO	MM
6	6	200220P1-8	Standard	10.000	5.23	5072.507	3285.958	19.296	10.2	1.5	NO	1.000	NO	MM
7	7	200220P1-9	Standard	50.000	5.23	25849.479	3394.840	95.179	50.8	1.6	NO	1.000	NO	MM
8	8	200220P1-10	Standard	100.000	5.23	54590.094	3657.222	186.583	101.5	1.5	NO	1.000	NO	MM
9	9	200220P1-11	Standard	250.000	5.23	117425.641	3440.745	426.600	245.1	-2.0	NO	1.000	NO	MM
10	10	200220P1-12	Standard	500.000	5.23	228530.531	3632.452	786.420	502.6	0.5	NO	1.000	NO	MM

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022020.mdb 21 Feb 2020 08:56:55
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-20-20.cdb 21 Feb 2020 11:03:18

Compound name: L-EtFOSAA
Correlation coefficient: r = 0.999675, r^2 = 0.999351
Calibration curve: 1.25302 * x + 0.0748
Response type: Internal Std (Ref 81), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	5.37	96.353	3697.274	0.326	0.2	-19.9	NO	0.999	NO	bb
2	2	200220P1-4	Standard	0.500	5.38	194.397	4301.055	0.565	0.4	-21.8	NO	0.999	NO	MM
3	3	200220P1-5	Standard	1.000	5.38	536.731	4278.258	1.568	1.2	19.2	NO	0.999	NO	MM
4	4	200220P1-6	Standard	2.000	5.38	1103.119	4324.604	3.188	2.5	24.2	NO	0.999	NO	MM
5	5	200220P1-7	Standard	5.000	5.38	2507.056	4530.818	6.917	5.5	9.2	NO	0.999	NO	MM
6	6	200220P1-8	Standard	10.000	5.38	4854.611	4512.287	13.448	10.7	6.7	NO	0.999	NO	MM
7	7	200220P1-9	Standard	50.000	5.38	25039.492	4695.998	66.651	53.1	6.3	NO	0.999	NO	MM
8	8	200220P1-10	Standard	100.000	5.38	43312.441	4286.607	126.302	100.7	0.7	NO	0.999	NO	MM
9	9	200220P1-11	Standard	250.000	5.38	106409.055	4223.098	314.961	251.3	0.5	NO	0.999	NO	MM
10	10	200220P1-12	Standard	500.000	5.38	199014.297	4025.157	618.033	493.2	-1.4	NO	0.999	NO	MM

Compound name: PFUdA
Coefficient of Determination: R^2 = 0.999590
Calibration curve: -0.000296059 * x^2 + 1.05298 * x + -0.0124351
Response type: Internal Std (Ref 79), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	5.39	333.694	18732.203	0.223	0.2	-10.7	NO	1.000	NO	bb
2	2	200220P1-4	Standard	0.500	5.39	817.862	19303.398	0.530	0.5	3.0	NO	1.000	NO	bb
3	3	200220P1-5	Standard	1.000	5.39	1635.374	19806.705	1.032	1.0	-0.8	NO	1.000	NO	db
4	4	200220P1-6	Standard	2.000	5.39	3414.357	19724.176	2.164	2.1	3.4	NO	1.000	NO	bb
5	5	200220P1-7	Standard	5.000	5.39	8570.759	19634.039	5.457	5.2	4.0	NO	1.000	NO	bb
6	6	200220P1-8	Standard	10.000	5.39	15745.968	17705.611	11.117	10.6	6.0	NO	1.000	NO	bb
7	7	200220P1-9	Standard	50.000	5.39	76652.430	19707.631	48.618	46.8	-6.4	NO	1.000	NO	bb
8	8	200220P1-10	Standard	100.000	5.39	153130.891	18670.961	102.519	100.2	0.2	NO	1.000	NO	bb
9	9	200220P1-11	Standard	250.000	5.39	370672.188	18640.654	248.564	254.2	1.7	NO	1.000	NO	bb
10	10	200220P1-12	Standard	500.000	5.39	702445.938	19477.016	450.817	497.8	-0.4	NO	1.000	NO	bb

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Compound name: PFDS
Coefficient of Determination: R^2 = 0.998274
Calibration curve: 7.33697e-005 * x^2 + 0.804163 * x + 0.0329009
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	5.44	65.485	3134.899	0.261	0.3	13.5	NO	0.998	NO	bb
2	2	200220P1-4	Standard	0.500	5.44	108.139	3339.188	0.405	0.5	-7.5	NO	0.998	NO	bb
3	3	200220P1-5	Standard	1.000	5.44	234.335	3403.621	0.861	1.0	2.9	NO	0.998	NO	bb
4	4	200220P1-6	Standard	2.000	5.44	463.935	3671.517	1.580	1.9	-3.9	NO	0.998	NO	bb
5	5	200220P1-7	Standard	5.000	5.44	1095.447	3582.422	3.822	4.7	-5.8	NO	0.998	NO	bb
6	6	200220P1-8	Standard	10.000	5.44	2577.820	3697.559	8.715	10.8	7.9	NO	0.998	NO	bb
7	7	200220P1-9	Standard	50.000	5.44	11518.183	3148.619	45.727	56.5	13.1	NO	0.998	NO	bb
8	8	200220P1-10	Standard	100.000	5.44	22170.482	3413.870	81.178	100.0	-0.0	NO	0.998	NO	bb
9	9	200220P1-11	Standard	250.000	5.44	56270.168	3599.188	195.427	237.8	-4.9	NO	0.998	NO	bb
10	10	200220P1-12	Standard	500.000	5.44	101788.914	2993.555	425.034	505.2	1.0	NO	0.998	NO	bb

Compound name: 11Cl-PF30UdS
Coefficient of Determination: R^2 = 0.996838
Calibration curve: -1.89567e-005 * x^2 + 0.451153 * x + 0.0424061
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	5.60	201.524	18226.420	0.138	0.2	-15.1	NO	0.997	NO	bb
2	2	200220P1-4	Standard	0.500	5.60	357.416	17947.455	0.249	0.5	-8.4	NO	0.997	NO	bb
3	3	200220P1-5	Standard	1.000	5.59	745.129	18181.920	0.512	1.0	4.2	NO	0.997	NO	bb
4	4	200220P1-6	Standard	2.000	5.60	1495.838	16880.262	1.108	2.4	18.1	NO	0.997	NO	bb
5	5	200220P1-7	Standard	5.000	5.60	3931.463	16872.459	2.913	6.4	27.3	NO	0.997	NO	bb
6	6	200220P1-8	Standard	10.000	5.60	7456.716	19663.664	4.740	10.4	4.2	NO	0.997	NO	bb
7	7	200220P1-9	Standard	50.000	5.60	36979.438	18800.338	24.587	54.5	9.1	NO	0.997	NO	bb
8	8	200220P1-10	Standard	100.000	5.60	70548.320	18745.896	47.043	104.6	4.6	NO	0.997	NO	bb
9	9	200220P1-11	Standard	250.000	5.60	163845.641	19925.018	102.789	230.0	-8.0	NO	0.997	NO	bb
10	10	200220P1-12	Standard	500.000	5.60	318876.063	17740.600	224.680	508.8	1.8	NO	0.997	NO	bb

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Compound name: 10:2 FTS
Coefficient of Determination: R^2 = 0.997215
Calibration curve: -0.000324143 * x^2 + 2.31829 * x + -0.102541
Response type: Internal Std (Ref 85), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	5.66	40.281	971.295	0.518	0.3	7.1	NO	0.997	NO	bb
2	2	200220P1-4	Standard	0.500	5.65	61.529	960.004	0.801	0.4	-22.0	NO	0.997	NO	bb
3	3	200220P1-5	Standard	1.000	5.66	186.248	888.197	2.621	1.2	17.5	NO	0.997	NO	bb
4	4	200220P1-6	Standard	2.000	5.65	332.763	816.162	5.096	2.2	12.2	NO	0.997	NO	bb
5	5	200220P1-7	Standard	5.000	5.66	755.148	897.362	10.519	4.6	-8.3	NO	0.997	NO	bb
6	6	200220P1-8	Standard	10.000	5.65	1618.303	834.543	24.239	10.5	5.2	NO	0.997	NO	bb
7	7	200220P1-9	Standard	50.000	5.66	7467.416	987.961	94.480	41.0	-17.9	NO	0.997	NO	bb
8	8	200220P1-10	Standard	100.000	5.65	14596.856	775.816	235.186	103.0	3.0	NO	0.997	NO	bb
9	9	200220P1-11	Standard	250.000	5.65	33370.984	714.900	583.490	261.3	4.5	NO	0.997	NO	bb
10	10	200220P1-12	Standard	500.000	5.65	58724.836	688.251	1066.559	494.3	-1.1	NO	0.997	NO	bb

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999142
Calibration curve: -1.0619e-005 * x^2 + 0.950464 * x + 0.134975
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	5.67	524.774	18226.420	0.360	0.2	-5.3	NO	0.999	NO	bb
2	2	200220P1-4	Standard	0.500	5.66	880.457	17947.455	0.613	0.5	0.6	NO	0.999	NO	bb
3	3	200220P1-5	Standard	1.000	5.67	1906.312	18181.920	1.311	1.2	23.7	NO	0.999	NO	bb
4	4	200220P1-6	Standard	2.000	5.66	2970.571	16880.262	2.200	2.2	8.6	NO	0.999	NO	bb
5	5	200220P1-7	Standard	5.000	5.67	7863.702	16872.459	5.826	6.0	19.8	NO	0.999	NO	bb
6	6	200220P1-8	Standard	10.000	5.67	16289.114	19663.664	10.355	10.8	7.5	NO	0.999	NO	bb
7	7	200220P1-9	Standard	50.000	5.67	75466.211	18800.338	50.176	52.7	5.4	NO	0.999	NO	bb
8	8	200220P1-10	Standard	100.000	5.67	140588.203	18745.896	93.746	98.6	-1.4	NO	0.999	NO	bb
9	9	200220P1-11	Standard	250.000	5.67	367600.063	19925.018	230.615	243.2	-2.7	NO	0.999	NO	bb
10	10	200220P1-12	Standard	500.000	5.67	675469.875	17740.600	475.935	503.4	0.7	NO	0.999	NO	bb

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Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.999763
Calibration curve: -5.62949e-005 * x^2 + 1.04899 * x + 0.147684
Response type: Internal Std (Ref 87), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	1.250	5.81	122.479	15962.999	1.145	1.0	-24.0	NO	1.000	NO	bb
2	2 200220P1-4	Standard	2.500	5.81	366.607	16667.066	3.282	3.0	19.5	NO	1.000	NO	bb
3	3 200220P1-5	Standard	5.000	5.81	690.168	17139.836	6.008	5.6	11.8	NO	1.000	NO	bb
4	4 200220P1-6	Standard	10.000	5.81	1251.323	16798.215	11.114	10.5	4.6	NO	1.000	NO	bb
5	5 200220P1-7	Standard	25.000	5.81	3188.476	17027.213	27.939	26.5	6.1	NO	1.000	NO	bb
6	6 200220P1-8	Standard	50.000	5.81	5914.591	18064.303	48.851	46.5	-6.9	NO	1.000	NO	bb
7	7 200220P1-9	Standard	250.000	5.81	30269.350	17667.113	255.627	246.8	-1.3	NO	1.000	NO	bb
8	8 200220P1-10	Standard	500.000	5.81	60378.145	17302.824	520.633	510.1	2.0	NO	1.000	NO	bb
9	9 200220P1-11	Standard	1250.000	5.81	146324.641	17976.174	1214.476	1240.2	-0.8	NO	1.000	NO	bb
10	10 200220P1-12	Standard	2500.000	5.81	267228.031	17536.160	2273.612	2503.7	0.1	NO	1.000	NO	bb

Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.998208
Calibration curve: -0.000115356 * x^2 + 0.981525 * x + 0.109726
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	0.250	5.90	432.934	18226.420	0.297	0.2	-23.7	NO	0.998	NO	bd
2	2 200220P1-4	Standard	0.500	5.91	937.554	17947.455	0.653	0.6	10.7	NO	0.998	NO	bb
3	3 200220P1-5	Standard	1.000	5.90	1791.902	18181.920	1.232	1.1	14.3	NO	0.998	NO	db
4	4 200220P1-6	Standard	2.000	5.91	3050.945	16880.262	2.259	2.2	9.5	NO	0.998	NO	db
5	5 200220P1-7	Standard	5.000	5.90	8485.636	16872.459	6.287	6.3	26.0	NO	0.998	NO	bb
6	6 200220P1-8	Standard	10.000	5.91	16618.668	19663.664	10.564	10.7	6.6	NO	0.998	NO	bb
7	7 200220P1-9	Standard	50.000	5.91	73718.094	18800.338	49.014	50.1	0.2	NO	0.998	NO	bb
8	8 200220P1-10	Standard	100.000	5.91	153291.688	18745.896	102.217	105.3	5.3	NO	0.998	NO	bb
9	9 200220P1-11	Standard	250.000	5.91	359387.656	19925.018	225.463	236.1	-5.5	NO	0.998	NO	bb
10	10 200220P1-12	Standard	500.000	5.91	663332.000	17740.600	467.383	506.2	1.2	NO	0.998	NO	bb

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Compound name: PFDoS
Coefficient of Determination: R^2 = 0.999656
Calibration curve: -6.64808e-005 * x^2 + 0.183129 * x + 0.000839227
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	5.93	61.509	19053.490	0.040	0.2	-13.7	NO	1.000	NO	bb
2	2	200220P1-4	Standard	0.500	5.93	172.499	19828.295	0.109	0.6	17.9	NO	1.000	NO	bb
3	3	200220P1-5	Standard	1.000	5.93	202.992	18055.973	0.141	0.8	-23.7	NO	1.000	NO	bb
4	4	200220P1-6	Standard	2.000	5.93	572.944	18189.154	0.394	2.1	7.4	NO	1.000	NO	bb
5	5	200220P1-7	Standard	5.000	5.93	1435.021	17643.662	1.017	5.6	11.2	NO	1.000	NO	bb
6	6	200220P1-8	Standard	10.000	5.93	2711.645	18006.408	1.882	10.3	3.1	NO	1.000	NO	bb
7	7	200220P1-9	Standard	50.000	5.93	13345.153	18692.244	8.924	49.6	-0.8	NO	1.000	NO	bb
8	8	200220P1-10	Standard	100.000	5.93	25840.854	18729.498	17.246	97.6	-2.4	NO	1.000	NO	bb
9	9	200220P1-11	Standard	250.000	5.93	61198.797	18173.855	42.093	253.1	1.2	NO	1.000	NO	bb
10	10	200220P1-12	Standard	500.000	5.93	102189.984	17077.631	74.798	498.7	-0.3	NO	1.000	NO	bb

Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.998923
Calibration curve: -2.14494e-006 * x^2 + 1.04256 * x + 0.0589962
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	6.11	423.941	19053.490	0.278	0.2	-15.9	NO	0.999	NO	bb
2	2	200220P1-4	Standard	0.500	6.11	956.573	19828.295	0.603	0.5	4.4	NO	0.999	NO	bd
3	3	200220P1-5	Standard	1.000	6.11	1686.658	18055.973	1.168	1.1	6.3	NO	0.999	NO	bb
4	4	200220P1-6	Standard	2.000	6.11	2923.239	18189.154	2.009	1.9	-6.5	NO	0.999	NO	bb
5	5	200220P1-7	Standard	5.000	6.11	9374.382	17643.662	6.641	6.3	26.3	NO	0.999	NO	bb
6	6	200220P1-8	Standard	10.000	6.11	16328.489	18006.408	11.335	10.8	8.2	NO	0.999	NO	bb
7	7	200220P1-9	Standard	50.000	6.11	77218.359	18692.244	51.638	49.5	-1.0	NO	0.999	NO	bb
8	8	200220P1-10	Standard	100.000	6.11	162351.875	18729.498	108.353	103.9	3.9	NO	0.999	NO	bb
9	9	200220P1-11	Standard	250.000	6.11	364704.625	18173.855	250.844	240.7	-3.7	NO	0.999	NO	bb
10	10	200220P1-12	Standard	500.000	6.12	717091.313	17077.631	524.876	503.9	0.8	NO	0.999	NO	bb

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Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999544
Calibration curve: -1.70702e-005 * x^2 + 0.94824 * x + 0.0530371
Response type: Internal Std (Ref 91), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	1.250	6.18	181.956	22126.004	1.227	1.2	-1.0	NO	1.000	NO	bb
2	2 200220P1-4	Standard	2.500	6.18	315.446	23242.711	2.025	2.1	-16.8	NO	1.000	NO	bb
3	3 200220P1-5	Standard	5.000	6.18	795.556	22928.920	5.177	5.4	8.1	NO	1.000	NO	bb
4	4 200220P1-6	Standard	10.000	6.19	1330.474	23587.563	8.416	8.8	-11.8	NO	1.000	NO	bb
5	5 200220P1-7	Standard	25.000	6.18	4131.594	22851.221	26.976	28.4	13.6	NO	1.000	NO	bb
6	6 200220P1-8	Standard	50.000	6.19	7907.536	23414.010	50.389	53.1	6.3	NO	1.000	NO	bb
7	7 200220P1-9	Standard	250.000	6.19	38583.492	23838.369	241.487	255.8	2.3	NO	1.000	NO	bb
8	8 200220P1-10	Standard	500.000	6.19	74277.719	23293.736	475.760	506.3	1.3	NO	1.000	NO	bb
9	9 200220P1-11	Standard	1250.000	6.19	175286.469	23152.299	1129.596	1217.9	-2.6	NO	1.000	NO	bb
10	10 200220P1-12	Standard	2500.000	6.19	317868.438	20830.982	2276.704	2514.8	0.6	NO	1.000	NO	bb

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999886
Calibration curve: -0.00014477 * x^2 + 0.739976 * x + 0.111894
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	0.250	6.43	641.914	28473.104	0.282	0.2	-8.1	NO	1.000	NO	bb
2	2 200220P1-4	Standard	0.500	6.43	1103.625	28618.551	0.482	0.5	0.1	NO	1.000	NO	bb
3	3 200220P1-5	Standard	1.000	6.43	1976.971	28820.514	0.857	1.0	0.8	NO	1.000	NO	bb
4	4 200220P1-6	Standard	2.000	6.43	3898.909	30083.389	1.620	2.0	1.9	NO	1.000	NO	bb
5	5 200220P1-7	Standard	5.000	6.43	8851.772	28369.861	3.900	5.1	2.5	NO	1.000	NO	bb
6	6 200220P1-8	Standard	10.000	6.43	18103.461	29365.074	7.706	10.3	2.8	NO	1.000	NO	bb
7	7 200220P1-9	Standard	50.000	6.43	84616.008	28221.439	37.479	51.0	2.0	NO	1.000	NO	bb
8	8 200220P1-10	Standard	100.000	6.43	167162.297	29442.813	70.969	97.6	-2.4	NO	1.000	NO	bb
9	9 200220P1-11	Standard	250.000	6.43	393369.500	27808.342	176.822	251.1	0.5	NO	1.000	NO	bb
10	10 200220P1-12	Standard	500.000	6.43	703220.625	26335.016	333.786	499.8	-0.0	NO	1.000	NO	bb

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Compound name: PFODA
Coefficient of Determination: R^2 = 0.999676
Calibration curve: -2.12208e-005 * x^2 + 0.882141 * x + 0.00318847
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	0.250	6.66	483.117	28473.104	0.212	0.2	-5.3	NO	1.000	NO	bb
2	2	200220P1-4	Standard	0.500	6.66	1108.282	28618.551	0.484	0.5	9.0	NO	1.000	NO	bb
3	3	200220P1-5	Standard	1.000	6.66	2016.365	28820.514	0.875	1.0	-1.2	NO	1.000	NO	MM
4	4	200220P1-6	Standard	2.000	6.66	4156.995	30083.389	1.727	2.0	-2.3	NO	1.000	NO	bb
5	5	200220P1-7	Standard	5.000	6.66	10073.089	28369.861	4.438	5.0	0.6	NO	1.000	NO	MM
6	6	200220P1-8	Standard	10.000	6.66	21179.301	29365.074	9.016	10.2	2.2	NO	1.000	NO	MM
7	7	200220P1-9	Standard	50.000	6.66	100105.680	28221.439	44.339	50.3	0.6	NO	1.000	NO	bb
8	8	200220P1-10	Standard	100.000	6.66	199073.641	29442.813	84.517	96.0	-4.0	NO	1.000	NO	bb
9	9	200220P1-11	Standard	250.000	6.66	498108.656	27808.342	223.903	255.4	2.2	NO	1.000	NO	MM
10	10	200220P1-12	Standard	500.000	6.66	914539.063	26335.016	434.089	498.0	-0.4	NO	1.000	NO	MM

Compound name: N-MeFOSE
Correlation coefficient: r = 0.999853, r^2 = 0.999705
Calibration curve: 1.03364 * x + 0.462802
Response type: Internal Std (Ref 95), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	1.250	6.31	171.950	16267.880	1.577	1.1	-13.8	NO	1.000	NO	MM
2	2	200220P1-4	Standard	2.500	6.30	316.623	16739.979	2.822	2.3	-8.7	NO	1.000	NO	bb
3	3	200220P1-5	Standard	5.000	6.31	665.056	16821.021	5.899	5.3	5.2	NO	1.000	NO	bb
4	4	200220P1-6	Standard	10.000	6.31	1184.135	16312.518	10.831	10.0	0.3	NO	1.000	NO	MM
5	5	200220P1-7	Standard	25.000	6.31	3264.377	16086.234	30.277	28.8	15.4	NO	1.000	NO	bb
6	6	200220P1-8	Standard	50.000	6.31	6198.597	16721.471	55.308	53.1	6.1	NO	1.000	NO	bb
7	7	200220P1-9	Standard	250.000	6.31	29290.641	17403.430	251.109	242.5	-3.0	NO	1.000	NO	bb
8	8	200220P1-10	Standard	500.000	6.31	60235.102	17760.828	506.006	489.1	-2.2	NO	1.000	NO	bb
9	9	200220P1-11	Standard	1250.000	6.31	150593.297	17313.752	1297.727	1255.0	0.4	NO	1.000	NO	bb
10	10	200220P1-12	Standard	2500.000	6.31	290377.000	16718.832	2591.344	2506.6	0.3	NO	1.000	NO	bb

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Compound name: N-EtFOSE
Coefficient of Determination: R^2 = 0.999646
Calibration curve: -0.000104993 * x^2 + 1.06013 * x + -0.0832109
Response type: Internal Std (Ref 97), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	1.250	6.46	123.006	18504.477	0.992	1.0	-18.9	NO	1.000	NO	MM
2	2	200220P1-4	Standard	2.500	6.46	403.603	18839.174	3.196	3.1	23.8	NO	1.000	NO	bb
3	3	200220P1-5	Standard	5.000	6.46	660.635	19707.281	5.002	4.8	-4.0	NO	1.000	NO	bb
4	4	200220P1-6	Standard	10.000	6.46	1268.138	20126.805	9.401	9.0	-10.5	NO	1.000	NO	bb
5	5	200220P1-7	Standard	25.000	6.46	3546.306	18655.471	28.362	26.9	7.6	NO	1.000	NO	bb
6	6	200220P1-8	Standard	50.000	6.46	7062.951	20903.463	50.412	47.9	-4.3	NO	1.000	NO	bb
7	7	200220P1-9	Standard	250.000	6.46	34918.207	20346.061	256.059	247.7	-0.9	NO	1.000	NO	bb
8	8	200220P1-10	Standard	500.000	6.46	66757.945	19579.516	508.709	505.2	1.0	NO	1.000	NO	bb
9	9	200220P1-11	Standard	1250.000	6.46	156449.016	20130.154	1159.564	1248.2	-0.1	NO	1.000	NO	bb
10	10	200220P1-12	Standard	2500.000	6.46	317153.406	19454.162	2432.348	3525.2	41.0	YES	1.000	NO	bbX

Compound name: 13C3-PFBA-EIS
Response Factor: 824.33
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	1.48	9487.311		9487.311	11.5	-7.9	NO		NO	MMX
2	2	200220P1-4	Standard	12.500	1.48	10062.216		10062.216	12.2	-2.3	NO		NO	MMX
3	3	200220P1-5	Standard	12.500	1.48	9933.468		9933.468	12.1	-3.6	NO		NO	MMX
4	4	200220P1-6	Standard	12.500	1.48	9932.887		9932.887	12.0	-3.6	NO		NO	MMX
5	5	200220P1-7	Standard	12.500	1.49	9930.719		9930.719	12.0	-3.6	NO		NO	MMX
6	6	200220P1-8	Standard	12.500	1.48	10304.131		10304.131	12.5	0.0	NO		NO	MM
7	7	200220P1-9	Standard	12.500	1.49	9874.855		9874.855	12.0	-4.2	NO		NO	bbX
8	8	200220P1-10	Standard	12.500	1.48	9955.766		9955.766	12.1	-3.4	NO		NO	bbX
9	9	200220P1-11	Standard	12.500	1.48	10671.288		10671.288	12.9	3.6	NO		NO	MMX
10	10	200220P1-12	Standard	12.500	1.48	10105.821		10105.821	12.3	-1.9	NO		NO	bbX

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Compound name: 13C3-PFBA-RSD
Response Factor: 0.78989
RRF SD: 0.00952812, Relative SD: 1.20626
Response type: Internal Std (Ref 99), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	1.48	9480.395	11888.075	9.968	12.6	1.0	NO		NO	MM
2	2 200220P1-4	Standard	12.500	1.48	10055.494	12593.931	9.980	12.6	1.1	NO		NO	MM
3	3 200220P1-5	Standard	12.500	1.48	9640.499	12542.025	9.608	12.2	-2.7	NO		NO	MM
4	4 200220P1-6	Standard	12.500	1.48	9936.805	12501.699	9.935	12.6	0.6	NO		NO	MM
5	5 200220P1-7	Standard	12.500	1.49	9760.691	12443.393	9.805	12.4	-0.7	NO		NO	MM
6	6 200220P1-8	Standard	12.500	1.48	10299.654	12920.699	9.964	12.6	0.9	NO		NO	MM
7	7 200220P1-9	Standard	12.500	1.49	9874.855	12496.652	9.878	12.5	0.0	NO		NO	bb
8	8 200220P1-10	Standard	12.500	1.48	9955.766	12758.912	9.754	12.3	-1.2	NO		NO	bb
9	9 200220P1-11	Standard	12.500	1.48	10667.808	13408.672	9.945	12.6	0.7	NO		NO	MM
10	10 200220P1-12	Standard	12.500	1.48	10105.821	12762.113	9.898	12.5	0.2	NO		NO	bb

Compound name: 13C3-PFPeA-EIS
Response Factor: 943.388
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	2.40	11699.041		11699.041	12.4	-0.8	NO		NO	bbX
2	2 200220P1-4	Standard	12.500	2.40	12014.812		12014.812	12.7	1.9	NO		NO	bbX
3	3 200220P1-5	Standard	12.500	2.40	12028.183		12028.183	12.7	2.0	NO		NO	bbX
4	4 200220P1-6	Standard	12.500	2.40	12187.951		12187.951	12.9	3.4	NO		NO	bbX
5	5 200220P1-7	Standard	12.500	2.40	11945.819		11945.819	12.7	1.3	NO		NO	bbX
6	6 200220P1-8	Standard	12.500	2.40	11792.354		11792.354	12.5	0.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	2.41	12425.581		12425.581	13.2	5.4	NO		NO	bbX
8	8 200220P1-10	Standard	12.500	2.40	11920.406		11920.406	12.6	1.1	NO		NO	bbX
9	9 200220P1-11	Standard	12.500	2.40	12522.962		12522.962	13.3	6.2	NO		NO	bbX
10	10 200220P1-12	Standard	12.500	2.40	11549.170		11549.170	12.2	-2.1	NO		NO	bbX

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Compound name: 13C3-PFPeA-RSD
Response Factor: 0.565212
RRF SD: 0.0177561, Relative SD: 3.14149
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	2.40	11699.041	20142.271	7.260	12.8	2.8	NO		NO	bb
2	2 200220P1-4	Standard	12.500	2.40	12014.812	21634.467	6.942	12.3	-1.7	NO		NO	bb
3	3 200220P1-5	Standard	12.500	2.40	12028.183	22079.555	6.810	12.0	-3.6	NO		NO	bb
4	4 200220P1-6	Standard	12.500	2.40	12187.951	20880.449	7.296	12.9	3.3	NO		NO	bb
5	5 200220P1-7	Standard	12.500	2.40	11945.819	20643.729	7.233	12.8	2.4	NO		NO	bb
6	6 200220P1-8	Standard	12.500	2.40	11792.354	21969.059	6.710	11.9	-5.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	2.41	12442.894	21719.918	7.161	12.7	1.4	NO		NO	bb
8	8 200220P1-10	Standard	12.500	2.40	11920.406	21611.453	6.895	12.2	-2.4	NO		NO	bb
9	9 200220P1-11	Standard	12.500	2.40	12522.962	21329.654	7.339	13.0	3.9	NO		NO	bb
10	10 200220P1-12	Standard	12.500	2.40	11549.170	20606.281	7.006	12.4	-0.8	NO		NO	bb

Compound name: 13C3-PFBS-EIS
Response Factor: 114.516
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	2.67	1365.844		1365.844	11.9	-4.6	NO		NO	bbX
2	2 200220P1-4	Standard	12.500	2.67	1376.906		1376.906	12.0	-3.8	NO		NO	bbX
3	3 200220P1-5	Standard	12.500	2.67	1404.860		1404.860	12.3	-1.9	NO		NO	bbX
4	4 200220P1-6	Standard	12.500	2.67	1379.710		1379.710	12.0	-3.6	NO		NO	MMX
5	5 200220P1-7	Standard	12.500	2.67	1372.543		1372.543	12.0	-4.1	NO		NO	bbX
6	6 200220P1-8	Standard	12.500	2.67	1431.448		1431.448	12.5	0.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	2.67	1460.737		1460.737	12.8	2.0	NO		NO	bbX
8	8 200220P1-10	Standard	12.500	2.67	1408.211		1408.211	12.3	-1.6	NO		NO	bbX
9	9 200220P1-11	Standard	12.500	2.67	1394.472		1394.472	12.2	-2.6	NO		NO	MMX
10	10 200220P1-12	Standard	12.500	2.67	1299.467		1299.467	11.3	-9.2	NO		NO	bbX

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Compound name: 13C3-PFBS-RSD
Response Factor: 1.12281
RRF SD: 0.0728534, Relative SD: 6.48849
Response type: Internal Std (Ref 101), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	2.67	1365.844	1223.123	13.959	12.4	-0.5	NO		NO	bb
2	2 200220P1-4	Standard	12.500	2.67	1376.906	1180.191	14.584	13.0	3.9	NO		NO	bb
3	3 200220P1-5	Standard	12.500	2.67	1404.860	1209.105	14.524	12.9	3.5	NO		NO	bb
4	4 200220P1-6	Standard	12.500	2.67	1377.568	1192.063	14.445	12.9	2.9	NO		NO	MM
5	5 200220P1-7	Standard	12.500	2.67	1372.543	1317.888	13.018	11.6	-7.2	NO		NO	bb
6	6 200220P1-8	Standard	12.500	2.67	1431.448	1450.318	12.337	11.0	-12.1	NO		NO	bb
7	7 200220P1-9	Standard	12.500	2.67	1460.737	1224.051	14.917	13.3	6.3	NO		NO	bb
8	8 200220P1-10	Standard	12.500	2.67	1408.211	1293.469	13.609	12.1	-3.0	NO		NO	bb
9	9 200220P1-11	Standard	12.500	2.67	1394.434	1279.869	13.619	12.1	-3.0	NO		NO	MM
10	10 200220P1-12	Standard	12.500	2.67	1299.467	1058.920	15.340	13.7	9.3	NO		NO	bb

Compound name: 13C3-HFPO-DA-EIS
Response Factor: 293.118
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	3.39	3617.354		3617.354	12.3	-1.3	NO		NO	bbX
2	2 200220P1-4	Standard	12.500	3.39	3805.080		3805.080	13.0	3.9	NO		NO	bbX
3	3 200220P1-5	Standard	12.500	3.39	3645.414		3645.414	12.4	-0.5	NO		NO	bbX
4	4 200220P1-6	Standard	12.500	3.39	3855.269		3855.269	13.2	5.2	NO		NO	bbX
5	5 200220P1-7	Standard	12.500	3.39	3620.540		3620.540	12.4	-1.2	NO		NO	bbX
6	6 200220P1-8	Standard	12.500	3.39	3663.977		3663.977	12.5	0.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	3.39	3789.079		3789.079	12.9	3.4	NO		NO	bbX
8	8 200220P1-10	Standard	12.500	3.39	3947.845		3947.845	13.5	7.7	NO		NO	bbX
9	9 200220P1-11	Standard	12.500	3.39	4091.144		4091.144	14.0	11.7	NO		NO	bbX
10	10 200220P1-12	Standard	12.500	3.39	3968.618		3968.618	13.5	8.3	NO		NO	bbX

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Compound name: 13C3-HFPO-DA-RSD
Response Factor: 0.178889
RRF SD: 0.00931062, Relative SD: 5.20468
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	3.39	3617.354	20142.271	2.245	12.5	0.4	NO		NO	bb
2	2	200220P1-4	Standard	12.500	3.39	3805.080	21634.467	2.199	12.3	-1.7	NO		NO	bb
3	3	200220P1-5	Standard	12.500	3.39	3645.414	22079.555	2.064	11.5	-7.7	NO		NO	bb
4	4	200220P1-6	Standard	12.500	3.39	3855.269	20880.449	2.308	12.9	3.2	NO		NO	bb
5	5	200220P1-7	Standard	12.500	3.39	3620.540	20643.729	2.192	12.3	-2.0	NO		NO	bb
6	6	200220P1-8	Standard	12.500	3.39	3663.977	21969.059	2.085	11.7	-6.8	NO		NO	bb
7	7	200220P1-9	Standard	12.500	3.39	3789.079	21719.918	2.181	12.2	-2.5	NO		NO	bb
8	8	200220P1-10	Standard	12.500	3.39	3947.845	21611.453	2.283	12.8	2.1	NO		NO	bb
9	9	200220P1-11	Standard	12.500	3.39	4091.144	21329.654	2.398	13.4	7.2	NO		NO	bb
10	10	200220P1-12	Standard	12.500	3.39	3968.618	20606.281	2.407	13.5	7.7	NO		NO	bb

Compound name: 13C2-4:2 FTS-EIS
Response Factor: 108.728
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	3.09	1393.605		1393.605	12.8	2.5	NO		NO	bbX
2	2	200220P1-4	Standard	12.500	3.09	1509.668		1509.668	13.9	11.1	NO		NO	MMX
3	3	200220P1-5	Standard	12.500	3.09	1646.149		1646.149	15.1	21.1	NO		NO	MMX
4	4	200220P1-6	Standard	12.500	3.10	1525.886		1525.886	14.0	12.3	NO		NO	bbX
5	5	200220P1-7	Standard	12.500	3.10	1435.392		1435.392	13.2	5.6	NO		NO	bbX
6	6	200220P1-8	Standard	12.500	3.09	1359.106		1359.106	12.5	0.0	NO		NO	MM
7	7	200220P1-9	Standard	12.500	3.10	1435.273		1435.273	13.2	5.6	NO		NO	bbX
8	8	200220P1-10	Standard	12.500	3.10	1566.971		1566.971	14.4	15.3	NO		NO	bbX
9	9	200220P1-11	Standard	12.500	3.09	1533.484		1533.484	14.1	12.8	NO		NO	bbX
10	10	200220P1-12	Standard	12.500	3.10	1302.366		1302.366	12.0	-4.2	NO		NO	bbX

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Compound name: 13C2-4:2 FTS-RSD
Response Factor: 1.19072
RRF SD: 0.119455, Relative SD: 10.0322
Response type: Internal Std (Ref 101), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	3.09	1393.605	1223.123	14.242	12.0	-4.3	NO		NO	bb
2	2	200220P1-4	Standard	12.500	3.09	1524.874	1180.191	16.151	13.6	8.5	NO		NO	MM
3	3	200220P1-5	Standard	12.500	3.09	1645.203	1209.105	17.008	14.3	14.3	NO		NO	MM
4	4	200220P1-6	Standard	12.500	3.10	1525.886	1192.063	16.000	13.4	7.5	NO		NO	bb
5	5	200220P1-7	Standard	12.500	3.10	1435.392	1317.888	13.615	11.4	-8.5	NO		NO	bb
6	6	200220P1-8	Standard	12.500	3.09	1354.348	1450.318	11.673	9.8	-21.6	NO		NO	bb
7	7	200220P1-9	Standard	12.500	3.10	1435.273	1224.051	14.657	12.3	-1.5	NO		NO	bb
8	8	200220P1-10	Standard	12.500	3.10	1566.971	1293.469	15.143	12.7	1.7	NO		NO	bb
9	9	200220P1-11	Standard	12.500	3.09	1533.484	1279.869	14.977	12.6	0.6	NO		NO	bb
10	10	200220P1-12	Standard	12.500	3.10	1302.366	1058.920	15.374	12.9	3.3	NO		NO	bb

Compound name: 13C2-PFHxA-EIS
Response Factor: 1636.23
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	3.18	20012.639		20012.639	12.2	-2.2	NO		NO	bbX
2	2	200220P1-4	Standard	12.500	3.18	20000.619		20000.619	12.2	-2.2	NO		NO	bbX
3	3	200220P1-5	Standard	12.500	3.18	20397.721		20397.721	12.5	-0.3	NO		NO	bbX
4	4	200220P1-6	Standard	12.500	3.18	20893.373		20893.373	12.8	2.2	NO		NO	bbX
5	5	200220P1-7	Standard	12.500	3.18	20659.924		20659.924	12.6	1.0	NO		NO	bbX
6	6	200220P1-8	Standard	12.500	3.18	20452.928		20452.928	12.5	0.0	NO		NO	bb
7	7	200220P1-9	Standard	12.500	3.18	20628.305		20628.305	12.6	0.9	NO		NO	bbX
8	8	200220P1-10	Standard	12.500	3.18	22022.600		22022.600	13.5	7.7	NO		NO	bbX
9	9	200220P1-11	Standard	12.500	3.18	21680.693		21680.693	13.3	6.0	NO		NO	bbX
10	10	200220P1-12	Standard	12.500	3.18	21153.855		21153.855	12.9	3.4	NO		NO	bbX

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Compound name: 13C2-PFHxA-RSD
Response Factor: 0.978606
RRF SD: 0.0416312, Relative SD: 4.25413
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	3.18	20012.639	20142.271	12.420	12.7	1.5	NO		NO	bb
2	2	200220P1-4	Standard	12.500	3.18	20000.619	21634.467	11.556	11.8	-5.5	NO		NO	bb
3	3	200220P1-5	Standard	12.500	3.18	20397.721	22079.555	11.548	11.8	-5.6	NO		NO	bb
4	4	200220P1-6	Standard	12.500	3.18	20893.373	20880.449	12.508	12.8	2.2	NO		NO	bb
5	5	200220P1-7	Standard	12.500	3.18	20659.924	20643.729	12.510	12.8	2.3	NO		NO	bb
6	6	200220P1-8	Standard	12.500	3.18	20452.928	21969.059	11.637	11.9	-4.9	NO		NO	bb
7	7	200220P1-9	Standard	12.500	3.18	20628.305	21719.918	11.872	12.1	-2.9	NO		NO	bb
8	8	200220P1-10	Standard	12.500	3.18	22022.600	21611.453	12.738	13.0	4.1	NO		NO	bb
9	9	200220P1-11	Standard	12.500	3.18	21680.693	21329.654	12.706	13.0	3.9	NO		NO	bb
10	10	200220P1-12	Standard	12.500	3.18	21153.855	20606.281	12.832	13.1	4.9	NO		NO	bb

Compound name: 13C4-PFHpA-EIS
Response Factor: 1106.8
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	3.78	12482.621		12482.621	11.3	-9.8	NO		NO	bbX
2	2	200220P1-4	Standard	12.500	3.78	13031.973		13031.973	11.8	-5.8	NO		NO	bbX
3	3	200220P1-5	Standard	12.500	3.78	12972.090		12972.090	11.7	-6.2	NO		NO	bbX
4	4	200220P1-6	Standard	12.500	3.78	13052.814		13052.814	11.8	-5.7	NO		NO	bbX
5	5	200220P1-7	Standard	12.500	3.78	12941.929		12941.929	11.7	-6.5	NO		NO	bbX
6	6	200220P1-8	Standard	12.500	3.78	13835.021		13835.021	12.5	0.0	NO		NO	bb
7	7	200220P1-9	Standard	12.500	3.78	13156.412		13156.412	11.9	-4.9	NO		NO	bbX
8	8	200220P1-10	Standard	12.500	3.78	12492.564		12492.564	11.3	-9.7	NO		NO	bbX
9	9	200220P1-11	Standard	12.500	3.78	13479.294		13479.294	12.2	-2.6	NO		NO	bbX
10	10	200220P1-12	Standard	12.500	3.78	12425.425		12425.425	11.2	-10.2	NO		NO	bbX

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Compound name: 13C4-PFHpA-RSD
Response Factor: 0.611013
RRF SD: 0.0186272, Relative SD: 3.04858
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	3.78	12482.621	20142.271	7.747	12.7	1.4	NO		NO	bb
2	2 200220P1-4	Standard	12.500	3.78	13031.973	21634.467	7.530	12.3	-1.4	NO		NO	bb
3	3 200220P1-5	Standard	12.500	3.78	12972.090	22079.555	7.344	12.0	-3.8	NO		NO	bb
4	4 200220P1-6	Standard	12.500	3.78	13052.814	20880.449	7.814	12.8	2.3	NO		NO	bb
5	5 200220P1-7	Standard	12.500	3.78	12941.929	20643.729	7.836	12.8	2.6	NO		NO	bb
6	6 200220P1-8	Standard	12.500	3.78	13835.021	21969.059	7.872	12.9	3.1	NO		NO	bb
7	7 200220P1-9	Standard	12.500	3.78	13156.412	21719.918	7.572	12.4	-0.9	NO		NO	bb
8	8 200220P1-10	Standard	12.500	3.78	12492.564	21611.453	7.226	11.8	-5.4	NO		NO	bb
9	9 200220P1-11	Standard	12.500	3.78	13479.294	21329.654	7.899	12.9	3.4	NO		NO	bb
10	10 200220P1-12	Standard	12.500	3.78	12425.425	20606.281	7.537	12.3	-1.3	NO		NO	bb

Compound name: 13C3-PFHxS-EIS
Response Factor: 252.668
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	3.92	3082.791		3082.791	12.2	-2.4	NO		NO	bbX
2	2 200220P1-4	Standard	12.500	3.92	2944.146		2944.146	11.7	-6.8	NO		NO	bbX
3	3 200220P1-5	Standard	12.500	3.92	2706.117		2706.117	10.7	-14.3	NO		NO	bbX
4	4 200220P1-6	Standard	12.500	3.92	2868.805		2868.805	11.4	-9.2	NO		NO	bbX
5	5 200220P1-7	Standard	12.500	3.92	3001.214		3001.214	11.9	-5.0	NO		NO	bbX
6	6 200220P1-8	Standard	12.500	3.92	3158.346		3158.346	12.5	0.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	3.92	3093.076		3093.076	12.2	-2.1	NO		NO	bbX
8	8 200220P1-10	Standard	12.500	3.92	2849.217		2849.217	11.3	-9.8	NO		NO	bbX
9	9 200220P1-11	Standard	12.500	3.92	2998.248		2998.248	11.9	-5.1	NO		NO	bbX
10	10 200220P1-12	Standard	12.500	3.92	2751.881		2751.881	10.9	-12.9	NO		NO	bbX

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Compound name: 13C3-PFHxS-RSD
Response Factor: 2.37858
RRF SD: 0.151806, Relative SD: 6.3822
Response type: Internal Std (Ref 101), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	3.92	3082.791	1223.123	31.505	13.2	6.0	NO		NO	bb
2	2 200220P1-4	Standard	12.500	3.92	2944.146	1180.191	31.183	13.1	4.9	NO		NO	bb
3	3 200220P1-5	Standard	12.500	3.92	2706.117	1209.105	27.976	11.8	-5.9	NO		NO	bb
4	4 200220P1-6	Standard	12.500	3.92	2868.805	1192.063	30.082	12.6	1.2	NO		NO	bb
5	5 200220P1-7	Standard	12.500	3.92	3001.214	1317.888	28.466	12.0	-4.3	NO		NO	bb
6	6 200220P1-8	Standard	12.500	3.92	3158.346	1450.318	27.221	11.4	-8.4	NO		NO	bb
7	7 200220P1-9	Standard	12.500	3.92	3093.076	1224.051	31.586	13.3	6.2	NO		NO	bb
8	8 200220P1-10	Standard	12.500	3.92	2849.217	1293.469	27.535	11.6	-7.4	NO		NO	bb
9	9 200220P1-11	Standard	12.500	3.92	2998.248	1279.869	29.283	12.3	-1.5	NO		NO	bb
10	10 200220P1-12	Standard	12.500	3.92	2751.881	1058.920	32.485	13.7	9.3	NO		NO	bb

Compound name: 13C2-6:2 FTS-EIS
Response Factor: 121.507
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	4.23	1369.139		1369.139	11.3	-9.9	NO		NO	bbX
2	2 200220P1-4	Standard	12.500	4.23	1283.517		1283.517	10.6	-15.5	NO		NO	bbX
3	3 200220P1-5	Standard	12.500	4.23	1230.354		1230.354	10.1	-19.0	NO		NO	bbX
4	4 200220P1-6	Standard	12.500	4.23	1431.884		1431.884	11.8	-5.7	NO		NO	bbX
5	5 200220P1-7	Standard	12.500	4.23	1408.519		1408.519	11.6	-7.3	NO		NO	bbX
6	6 200220P1-8	Standard	12.500	4.23	1518.842		1518.842	12.5	0.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	4.23	1479.055		1479.055	12.2	-2.6	NO		NO	bbX
8	8 200220P1-10	Standard	12.500	4.23	1302.443		1302.443	10.7	-14.2	NO		NO	bbX
9	9 200220P1-11	Standard	12.500	4.23	1430.818		1430.818	11.8	-5.8	NO		NO	bbX
10	10 200220P1-12	Standard	12.500	4.23	1261.472		1261.472	10.4	-16.9	NO		NO	bbX

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Compound name: 13C2-6:2 FTS-RSD
Response Factor: 0.377568
RRF SD: 0.0244257, Relative SD: 6.46921
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	4.23	1369.139	3375.218	5.071	13.4	7.4	NO		NO	bb
2	2 200220P1-4	Standard	12.500	4.23	1283.517	3591.504	4.467	11.8	-5.3	NO		NO	bb
3	3 200220P1-5	Standard	12.500	4.23	1230.354	3737.936	4.114	10.9	-12.8	NO		NO	bb
4	4 200220P1-6	Standard	12.500	4.23	1431.884	3826.934	4.677	12.4	-0.9	NO		NO	bb
5	5 200220P1-7	Standard	12.500	4.23	1408.519	3421.741	5.145	13.6	9.0	NO		NO	bb
6	6 200220P1-8	Standard	12.500	4.23	1518.842	3872.213	4.903	13.0	3.9	NO		NO	bb
7	7 200220P1-9	Standard	12.500	4.23	1479.055	3807.600	4.856	12.9	2.9	NO		NO	bb
8	8 200220P1-10	Standard	12.500	4.23	1302.443	3614.641	4.504	11.9	-4.6	NO		NO	bb
9	9 200220P1-11	Standard	12.500	4.23	1430.818	3746.795	4.773	12.6	1.1	NO		NO	bb
10	10 200220P1-12	Standard	12.500	4.23	1261.472	3365.532	4.685	12.4	-0.7	NO		NO	bb

Compound name: 13C5-PFNA-EIS
Response Factor: 1373.36
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	4.72	15680.749		15680.749	11.4	-8.7	NO		NO	bbX
2	2 200220P1-4	Standard	12.500	4.72	14942.147		14942.147	10.9	-13.0	NO		NO	bbX
3	3 200220P1-5	Standard	12.500	4.72	15070.675		15070.675	11.0	-12.2	NO		NO	bbX
4	4 200220P1-6	Standard	12.500	4.72	15569.793		15569.793	11.3	-9.3	NO		NO	bbX
5	5 200220P1-7	Standard	12.500	4.72	15400.750		15400.750	11.2	-10.3	NO		NO	bbX
6	6 200220P1-8	Standard	12.500	4.72	17167.027		17167.027	12.5	0.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	4.72	16245.348		16245.348	11.8	-5.4	NO		NO	bbX
8	8 200220P1-10	Standard	12.500	4.72	15781.290		15781.290	11.5	-8.1	NO		NO	bbX
9	9 200220P1-11	Standard	12.500	4.72	15613.387		15613.387	11.4	-9.1	NO		NO	bbX
10	10 200220P1-12	Standard	12.500	4.72	15415.518		15415.518	11.2	-10.2	NO		NO	bbX

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Compound name: 13C5-PFNA-RSD
Response Factor: 0.936635
RRF SD: 0.033364, Relative SD: 3.56211
Response type: Internal Std (Ref 103), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	4.72	15680.749	16032.552	12.226	13.1	4.4	NO		NO	bb
2	2	200220P1-4	Standard	12.500	4.72	14942.147	15482.925	12.063	12.9	3.0	NO		NO	bb
3	3	200220P1-5	Standard	12.500	4.72	15070.675	16296.199	11.560	12.3	-1.3	NO		NO	bb
4	4	200220P1-6	Standard	12.500	4.72	15569.793	17785.301	10.943	11.7	-6.5	NO		NO	bb
5	5	200220P1-7	Standard	12.500	4.72	15400.750	16090.972	11.964	12.8	2.2	NO		NO	bb
6	6	200220P1-8	Standard	12.500	4.72	17167.027	18174.621	11.807	12.6	0.8	NO		NO	bb
7	7	200220P1-9	Standard	12.500	4.72	16245.348	17629.514	11.519	12.3	-1.6	NO		NO	bb
8	8	200220P1-10	Standard	12.500	4.72	15781.290	16484.016	11.967	12.8	2.2	NO		NO	bb
9	9	200220P1-11	Standard	12.500	4.72	15613.387	17549.574	11.121	11.9	-5.0	NO		NO	bb
10	10	200220P1-12	Standard	12.500	4.72	15415.518	16179.260	11.910	12.7	1.7	NO		NO	bb

Compound name: 13C8-PFOSA-EIS
Response Factor: 323.068
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	4.78	3620.464		3620.464	11.2	-10.3	NO		NO	bbX
2	2	200220P1-4	Standard	12.500	4.78	3533.092		3533.092	10.9	-12.5	NO		NO	bdX
3	3	200220P1-5	Standard	12.500	4.78	3557.113		3557.113	11.0	-11.9	NO		NO	bbX
4	4	200220P1-6	Standard	12.500	4.78	3785.300		3785.300	11.7	-6.3	NO		NO	bbX
5	5	200220P1-7	Standard	12.500	4.78	3672.073		3672.073	11.4	-9.1	NO		NO	bbX
6	6	200220P1-8	Standard	12.500	4.78	4038.352		4038.352	12.5	0.0	NO		NO	bb
7	7	200220P1-9	Standard	12.500	4.78	3733.793		3733.793	11.6	-7.5	NO		NO	bbX
8	8	200220P1-10	Standard	12.500	4.78	3435.960		3435.960	10.6	-14.9	NO		NO	bdX
9	9	200220P1-11	Standard	12.500	4.78	3597.537		3597.537	11.1	-10.9	NO		NO	bbX
10	10	200220P1-12	Standard	12.500	4.78	3260.902		3260.902	10.1	-19.3	NO		NO	bbX

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Compound name: 13C8-PFOSA-RSD
Response Factor: 0.190936
RRF SD: 0.0145666, Relative SD: 7.62903
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	4.78	3620.464	18234.537	2.482	13.0	4.0	NO		NO	bb
2	2	200220P1-4	Standard	12.500	4.78	3533.092	17612.855	2.507	13.1	5.1	NO		NO	bd
3	3	200220P1-5	Standard	12.500	4.78	3557.113	20648.279	2.153	11.3	-9.8	NO		NO	bb
4	4	200220P1-6	Standard	12.500	4.78	3785.300	19841.098	2.385	12.5	-0.1	NO		NO	bb
5	5	200220P1-7	Standard	12.500	4.78	3672.073	19689.107	2.331	12.2	-2.3	NO		NO	bb
6	6	200220P1-8	Standard	12.500	4.78	4038.352	18168.391	2.778	14.6	16.4	NO		NO	bb
7	7	200220P1-9	Standard	12.500	4.78	3733.793	20740.715	2.250	11.8	-5.7	NO		NO	bb
8	8	200220P1-10	Standard	12.500	4.78	3435.960	17887.111	2.401	12.6	0.6	NO		NO	bd
9	9	200220P1-11	Standard	12.500	4.78	3597.537	18712.764	2.403	12.6	0.7	NO		NO	bb
10	10	200220P1-12	Standard	12.500	4.78	3260.902	18738.523	2.175	11.4	-8.9	NO		NO	bb

Compound name: 13C2-PFOA-EIS
Response Factor: 1527.16
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	4.29	18027.223		18027.223	11.8	-5.6	NO		NO	bbX
2	2	200220P1-4	Standard	12.500	4.29	19048.508		19048.508	12.5	-0.2	NO		NO	bbX
3	3	200220P1-5	Standard	12.500	4.29	17893.020		17893.020	11.7	-6.3	NO		NO	bbX
4	4	200220P1-6	Standard	12.500	4.29	18471.129		18471.129	12.1	-3.2	NO		NO	bbX
5	5	200220P1-7	Standard	12.500	4.29	18048.473		18048.473	11.8	-5.5	NO		NO	bbX
6	6	200220P1-8	Standard	12.500	4.29	19089.504		19089.504	12.5	0.0	NO		NO	bb
7	7	200220P1-9	Standard	12.500	4.29	18834.941		18834.941	12.3	-1.3	NO		NO	bbX
8	8	200220P1-10	Standard	12.500	4.29	17822.139		17822.139	11.7	-6.6	NO		NO	bbX
9	9	200220P1-11	Standard	12.500	4.29	17296.020		17296.020	11.3	-9.4	NO		NO	bbX
10	10	200220P1-12	Standard	12.500	4.29	16599.553		16599.553	10.9	-13.0	NO		NO	bbX

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Compound name: 13C2-PFOA-RSD
Response Factor: 0.916957
RRF SD: 0.0482449, Relative SD: 5.26141
Response type: Internal Std (Ref 102), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	4.29	18027.223	19241.080	11.711	12.8	2.2	NO		NO	bb
2	2 200220P1-4	Standard	12.500	4.29	19048.508	20977.639	11.350	12.4	-1.0	NO		NO	bb
3	3 200220P1-5	Standard	12.500	4.29	17893.020	20418.293	10.954	11.9	-4.4	NO		NO	bb
4	4 200220P1-6	Standard	12.500	4.29	18471.129	20255.918	11.399	12.4	-0.6	NO		NO	bb
5	5 200220P1-7	Standard	12.500	4.29	18048.473	20356.574	11.083	12.1	-3.3	NO		NO	bb
6	6 200220P1-8	Standard	12.500	4.29	19089.504	22121.662	10.787	11.8	-5.9	NO		NO	bb
7	7 200220P1-9	Standard	12.500	4.29	18834.941	18484.418	12.737	13.9	11.1	NO		NO	bb
8	8 200220P1-10	Standard	12.500	4.29	17822.139	19098.527	11.665	12.7	1.8	NO		NO	bb
9	9 200220P1-11	Standard	12.500	4.29	17296.020	19856.025	10.888	11.9	-5.0	NO		NO	bb
10	10 200220P1-12	Standard	12.500	4.29	16599.553	17225.596	12.046	13.1	5.1	NO		NO	bb

Compound name: 13C8-PFOS-EIS
Response Factor: 295.805
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	4.79	3134.899		3134.899	10.6	-15.2	NO		NO	bbX
2	2 200220P1-4	Standard	12.500	4.79	3339.188		3339.188	11.3	-9.7	NO		NO	bbX
3	3 200220P1-5	Standard	12.500	4.79	3403.621		3403.621	11.5	-7.9	NO		NO	bbX
4	4 200220P1-6	Standard	12.500	4.79	3671.517		3671.517	12.4	-0.7	NO		NO	bbX
5	5 200220P1-7	Standard	12.500	4.79	3582.422		3582.422	12.1	-3.1	NO		NO	bbX
6	6 200220P1-8	Standard	12.500	4.80	3697.559		3697.559	12.5	0.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	4.79	3148.619		3148.619	10.6	-14.8	NO		NO	bbX
8	8 200220P1-10	Standard	12.500	4.79	3413.870		3413.870	11.5	-7.7	NO		NO	bbX
9	9 200220P1-11	Standard	12.500	4.80	3599.188		3599.188	12.2	-2.7	NO		NO	bbX
10	10 200220P1-12	Standard	12.500	4.80	2993.555		2993.555	10.1	-19.0	NO		NO	bbX

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Compound name: 13C8-PFOS-RSD
Response Factor: 0.935182
RRF SD: 0.0564556, Relative SD: 6.03685
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	4.79	3134.899	3375.218	11.610	12.4	-0.7	NO		NO	bb
2	2 200220P1-4	Standard	12.500	4.79	3339.188	3591.504	11.622	12.4	-0.6	NO		NO	bb
3	3 200220P1-5	Standard	12.500	4.79	3403.621	3737.936	11.382	12.2	-2.6	NO		NO	bb
4	4 200220P1-6	Standard	12.500	4.79	3671.517	3826.934	11.992	12.8	2.6	NO		NO	bb
5	5 200220P1-7	Standard	12.500	4.79	3582.422	3421.741	13.087	14.0	12.0	NO		NO	bb
6	6 200220P1-8	Standard	12.500	4.80	3697.559	3872.213	11.936	12.8	2.1	NO		NO	bb
7	7 200220P1-9	Standard	12.500	4.79	3148.619	3807.600	10.337	11.1	-11.6	NO		NO	bb
8	8 200220P1-10	Standard	12.500	4.79	3413.870	3614.641	11.806	12.6	1.0	NO		NO	bb
9	9 200220P1-11	Standard	12.500	4.80	3599.188	3746.795	12.008	12.8	2.7	NO		NO	bb
10	10 200220P1-12	Standard	12.500	4.80	2993.555	3365.532	11.118	11.9	-4.9	NO		NO	bb

Compound name: 13C2-PFDA-EIS
Response Factor: 1356.41
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	5.08	18001.354		18001.354	13.3	6.2	NO		NO	bbX
2	2 200220P1-4	Standard	12.500	5.08	17188.822		17188.822	12.7	1.4	NO		NO	bbX
3	3 200220P1-5	Standard	12.500	5.08	16655.424		16655.424	12.3	-1.8	NO		NO	bbX
4	4 200220P1-6	Standard	12.500	5.08	17626.307		17626.307	13.0	4.0	NO		NO	bbX
5	5 200220P1-7	Standard	12.500	5.08	16828.695		16828.695	12.4	-0.7	NO		NO	bbX
6	6 200220P1-8	Standard	12.500	5.08	16955.131		16955.131	12.5	0.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	5.08	17972.971		17972.971	13.3	6.0	NO		NO	bbX
8	8 200220P1-10	Standard	12.500	5.08	17851.639		17851.639	13.2	5.3	NO		NO	bbX
9	9 200220P1-11	Standard	12.500	5.08	17168.783		17168.783	12.7	1.3	NO		NO	bbX
10	10 200220P1-12	Standard	12.500	5.08	17168.256		17168.256	12.7	1.3	NO		NO	bbX

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Compound name: 13C2-PFDA-RSD
Response Factor: 0.946734
RRF SD: 0.0354396, Relative SD: 3.74335
Response type: Internal Std (Ref 105), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	5.08	18001.354	18654.029	12.063	12.7	1.9	NO		NO	bb
2	2 200220P1-4	Standard	12.500	5.08	17188.822	17390.426	12.355	13.1	4.4	NO		NO	bb
3	3 200220P1-5	Standard	12.500	5.08	16655.424	17848.303	11.665	12.3	-1.4	NO		NO	bb
4	4 200220P1-6	Standard	12.500	5.08	17626.307	19309.916	11.410	12.1	-3.6	NO		NO	bb
5	5 200220P1-7	Standard	12.500	5.08	16828.695	18816.568	11.179	11.8	-5.5	NO		NO	bb
6	6 200220P1-8	Standard	12.500.	5.08	16955.131	18749.072	11.304	11.9	-4.5	NO		NO	bb
7	7 200220P1-9	Standard	12.500	5.08	17972.971	19109.350	11.757	12.4	-0.7	NO		NO	bb
8	8 200220P1-10	Standard	12.500	5.08	17851.639	18063.303	12.354	13.0	4.4	NO		NO	bb
9	9 200220P1-11	Standard	12.500	5.08	17168.783	17984.857	11.933	12.6	0.8	NO		NO	bb
10	10 200220P1-12	Standard	12.500	5.08	17168.256	17415.027	12.323	13.0	4.1	NO		NO	bb

Compound name: 13C2-8:2 FTS-EIS
Response Factor: 85.947
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	5.05	1034.617		1034.617	12.0	-3.7	NO		NO	bbX
2	2 200220P1-4	Standard	12.500	5.05	1048.430		1048.430	12.2	-2.4	NO		NO	bbX
3	3 200220P1-5	Standard	12.500	5.05	1045.108		1045.108	12.2	-2.7	NO		NO	bbX
4	4 200220P1-6	Standard	12.500	5.05	903.218		903.218	10.5	-15.9	NO		NO	bbX
5	5 200220P1-7	Standard	12.500	5.05	1193.213		1193.213	13.9	11.1	NO		NO	bbX
6	6 200220P1-8	Standard	12.500	5.05	1074.338		1074.338	12.5	0.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	5.05	1125.896		1125.896	13.1	4.8	NO		NO	bbX
8	8 200220P1-10	Standard	12.500	5.05	980.440		980.440	11.4	-8.7	NO		NO	bbX
9	9 200220P1-11	Standard	12.500	5.05	1051.534		1051.534	12.2	-2.1	NO		NO	bbX
10	10 200220P1-12	Standard	12.500	5.05	1091.204		1091.204	12.7	1.6	NO		NO	bbX

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Compound name: 13C2-8:2 FTS-RSD
Response Factor: 0.291204
RRF SD: 0.0307923, Relative SD: 10.5741
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	5.05	1034.617	3375.218	3.832	13.2	5.3	NO		NO	bb
2	2 200220P1-4	Standard	12.500	5.05	1048.430	3591.504	3.649	12.5	0.2	NO		NO	bb
3	3 200220P1-5	Standard	12.500	5.05	1045.108	3737.936	3.495	12.0	-4.0	NO		NO	bb
4	4 200220P1-6	Standard	12.500	5.05	903.218	3826.934	2.950	10.1	-19.0	NO		NO	bb
5	5 200220P1-7	Standard	12.500	5.05	1193.213	3421.741	4.359	15.0	19.7	NO		NO	bb
6	6 200220P1-8	Standard	12.500	5.05	1074.338	3872.213	3.468	11.9	-4.7	NO		NO	bb
7	7 200220P1-9	Standard	12.500	5.05	1125.896	3807.600	3.696	12.7	1.5	NO		NO	bb
8	8 200220P1-10	Standard	12.500	5.05	980.440	3614.641	3.391	11.6	-6.9	NO		NO	bb
9	9 200220P1-11	Standard	12.500	5.05	1051.534	3746.795	3.508	12.0	-3.6	NO		NO	bb
10	10 200220P1-12	Standard	12.500	5.05	1091.204	3365.532	4.053	13.9	11.3	NO		NO	bb

Compound name: d3-N-MeFOSAA-EIS
Response Factor: 262.877
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	5.22	3016.410		3016.410	11.5	-8.2	NO		NO	bbX
2	2 200220P1-4	Standard	12.500	5.22	2667.508		2667.508	10.1	-18.8	NO		NO	bbX
3	3 200220P1-5	Standard	12.500	5.23	3036.359		3036.359	11.6	-7.6	NO		NO	bbX
4	4 200220P1-6	Standard	12.500	5.23	3065.277		3065.277	11.7	-6.7	NO		NO	bbX
5	5 200220P1-7	Standard	12.500	5.22	3468.438		3468.438	13.2	5.6	NO		NO	bbX
6	6 200220P1-8	Standard	12.500	5.23	3285.958		3285.958	12.5	0.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	5.23	3394.840		3394.840	12.9	3.3	NO		NO	bbX
8	8 200220P1-10	Standard	12.500	5.23	3657.222		3657.222	13.9	11.3	NO		NO	bbX
9	9 200220P1-11	Standard	12.500	5.23	3440.745		3440.745	13.1	4.7	NO		NO	bbX
10	10 200220P1-12	Standard	12.500	5.23	3632.452		3632.452	13.8	10.5	NO		NO	bbX

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Compound name: d3-N-MeFOSAA-RSD
Response Factor: 0.17213
RRF SD: 0.0189485, Relative SD: 11.0082
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	5.22	3016.410	18234.537	2.068	12.0	-3.9	NO		NO	bb
2	2 200220P1-4	Standard	12.500	5.22	2667.508	17612.855	1.893	11.0	-12.0	NO		NO	bb
3	3 200220P1-5	Standard	12.500	5.23	3036.359	20648.279	1.838	10.7	-14.6	NO		NO	bb
4	4 200220P1-6	Standard	12.500	5.23	3065.277	19841.098	1.931	11.2	-10.2	NO		NO	bb
5	5 200220P1-7	Standard	12.500	5.22	3468.438	19689.107	2.202	12.8	2.3	NO		NO	bb
6	6 200220P1-8	Standard	12.500	5.23	3285.958	18168.391	2.261	13.1	5.1	NO		NO	bb
7	7 200220P1-9	Standard	12.500	5.23	3394.840	20740.715	2.046	11.9	-4.9	NO		NO	bb
8	8 200220P1-10	Standard	12.500	5.23	3657.222	17887.111	2.556	14.8	18.8	NO		NO	bb
9	9 200220P1-11	Standard	12.500	5.23	3440.745	18712.764	2.298	13.4	6.8	NO		NO	bb
10	10 200220P1-12	Standard	12.500	5.23	3632.452	18738.523	2.423	14.1	12.6	NO		NO	bb

Compound name: 13C2-PFUdA-EIS
Response Factor: 1416.45
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	5.39	18732.203		18732.203	13.2	5.8	NO		NO	bbX
2	2 200220P1-4	Standard	12.500	5.39	19303.398		19303.398	13.6	9.0	NO		NO	bbX
3	3 200220P1-5	Standard	12.500	5.39	19806.705		19806.705	14.0	11.9	NO		NO	bbX
4	4 200220P1-6	Standard	12.500	5.39	19724.176		19724.176	13.9	11.4	NO		NO	bbX
5	5 200220P1-7	Standard	12.500	5.39	19634.039		19634.039	13.9	10.9	NO		NO	bbX
6	6 200220P1-8	Standard	12.500	5.39	17705.611		17705.611	12.5	0.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	5.39	19707.631		19707.631	13.9	11.3	NO		NO	bbX
8	8 200220P1-10	Standard	12.500	5.39	18670.961		18670.961	13.2	5.5	NO		NO	bbX
9	9 200220P1-11	Standard	12.500	5.39	18640.654		18640.654	13.2	5.3	NO		NO	bbX
10	10 200220P1-12	Standard	12.500	5.39	19477.016		19477.016	13.8	10.0	NO		NO	bbX

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Compound name: 13C2-PFUdA-RSD
Response Factor: 1.00779
RRF SD: 0.0443125, Relative SD: 4.39699
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	5.39	18732.203	18234.537	12.841	12.7	1.9	NO		NO	bb
2	2	200220P1-4	Standard	12.500	5.39	19303.398	17612.855	13.700	13.6	8.8	NO		NO	bb
3	3	200220P1-5	Standard	12.500	5.39	19806.705	20648.279	11.991	11.9	-4.8	NO		NO	bb
4	4	200220P1-6	Standard	12.500	5.39	19724.176	19841.098	12.426	12.3	-1.4	NO		NO	bb
5	5	200220P1-7	Standard	12.500	5.39	19634.039	19689.107	12.465	12.4	-1.1	NO		NO	bb
6	6	200220P1-8	Standard	12.500	5.39	17705.611	18168.391	12.182	12.1	-3.3	NO		NO	bb
7	7	200220P1-9	Standard	12.500	5.39	19707.631	20740.715	11.877	11.8	-5.7	NO		NO	bb
8	8	200220P1-10	Standard	12.500	5.39	18670.961	17887.111	13.048	12.9	3.6	NO		NO	bb
9	9	200220P1-11	Standard	12.500	5.39	18640.654	18712.764	12.452	12.4	-1.2	NO		NO	bb
10	10	200220P1-12	Standard	12.500	5.39	19477.016	18738.523	12.993	12.9	3.1	NO		NO	bb

Compound name: d5-N-EtFOSAA-EIS
Response Factor: 360.983
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	5.38	3697.274		3697.274	10.2	-18.1	NO		NO	bbX
2	2	200220P1-4	Standard	12.500	5.38	4301.055		4301.055	11.9	-4.7	NO		NO	bbX
3	3	200220P1-5	Standard	12.500	5.38	4278.258		4278.258	11.9	-5.2	NO		NO	bbX
4	4	200220P1-6	Standard	12.500	5.38	4324.604		4324.604	12.0	-4.2	NO		NO	bbX
5	5	200220P1-7	Standard	12.500	5.38	4530.818		4530.818	12.6	0.4	NO		NO	bbX
6	6	200220P1-8	Standard	12.500	5.38	4512.287		4512.287	12.5	0.0	NO		NO	bb
7	7	200220P1-9	Standard	12.500	5.38	4695.998		4695.998	13.0	4.1	NO		NO	bbX
8	8	200220P1-10	Standard	12.500	5.38	4286.607		4286.607	11.9	-5.0	NO		NO	bbX
9	9	200220P1-11	Standard	12.500	5.38	4223.098		4223.098	11.7	-6.4	NO		NO	bbX
10	10	200220P1-12	Standard	12.500	5.38	4025.157		4025.157	11.2	-10.8	NO		NO	bbX

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Compound name: d5-N-EtFOSAA-RSD
Response Factor: 0.225715
RRF SD: 0.0153381, Relative SD: 6.79533
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	5.38	3697.274	18234.537	2.535	11.2	-10.2	NO		NO	bb
2	2 200220P1-4	Standard	12.500	5.38	4301.055	17612.855	3.052	13.5	8.2	NO		NO	bb
3	3 200220P1-5	Standard	12.500	5.38	4278.258	20648.279	2.590	11.5	-8.2	NO		NO	bb
4	4 200220P1-6	Standard	12.500	5.38	4324.604	19841.098	2.725	12.1	-3.4	NO		NO	bb
5	5 200220P1-7	Standard	12.500	5.38	4530.818	19689.107	2.876	12.7	2.0	NO		NO	bb
6	6 200220P1-8	Standard	12.500	5.38	4512.287	18168.391	3.104	13.8	10.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	5.38	4695.998	20740.715	2.830	12.5	0.3	NO		NO	bb
8	8 200220P1-10	Standard	12.500	5.38	4286.607	17887.111	2.996	13.3	6.2	NO		NO	bb
9	9 200220P1-11	Standard	12.500	5.38	4223.098	18712.764	2.821	12.5	-0.0	NO		NO	bb
10	10 200220P1-12	Standard	12.500	5.38	4025.157	18738.523	2.685	11.9	-4.8	NO		NO	bb

Compound name: 13C2-PFDoA-EIS
Response Factor: 1573.09
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	5.67	18226.420		18226.420	11.6	-7.3	NO		NO	bbX
2	2 200220P1-4	Standard	12.500	5.66	17947.455		17947.455	11.4	-8.7	NO		NO	bbX
3	3 200220P1-5	Standard	12.500	5.67	18181.920		18181.920	11.6	-7.5	NO		NO	bbX
4	4 200220P1-6	Standard	12.500	5.67	16880.262		16880.262	10.7	-14.2	NO		NO	bbX
5	5 200220P1-7	Standard	12.500	5.67	16872.459		16872.459	10.7	-14.2	NO		NO	bbX
6	6 200220P1-8	Standard	12.500	5.67	19663.664		19663.664	12.5	0.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	5.67	18800.338		18800.338	12.0	-4.4	NO		NO	bbX
8	8 200220P1-10	Standard	12.500	5.67	18745.896		18745.896	11.9	-4.7	NO		NO	bbX
9	9 200220P1-11	Standard	12.500	5.67	19925.018		19925.018	12.7	1.3	NO		NO	bbX
10	10 200220P1-12	Standard	12.500	5.67	17740.600		17740.600	11.3	-9.8	NO		NO	bbX

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Compound name: 13C2-PFDoA-RSD
Response Factor: 0.999563
RRF SD: 0.0702864, Relative SD: 7.03171
Response type: Internal Std (Ref 105), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	5.67	18226.420	18654.029	12.213	12.2	-2.2	NO		NO	bb
2	2	200220P1-4	Standard	12.500	5.66	17947.455	17390.426	12.900	12.9	3.2	NO		NO	bb
3	3	200220P1-5	Standard	12.500	5.67	18181.920	17848.303	12.734	12.7	1.9	NO		NO	bb
4	4	200220P1-6	Standard	12.500	5.67	16880.262	19309.916	10.927	10.9	-12.5	NO		NO	bb
5	5	200220P1-7	Standard	12.500	5.67	16872.459	18816.568	11.209	11.2	-10.3	NO		NO	bb
6	6	200220P1-8	Standard	12.500	5.67	19663.664	18749.072	13.110	13.1	4.9	NO		NO	bb
7	7	200220P1-9	Standard	12.500	5.67	18800.338	19109.350	12.298	12.3	-1.6	NO		NO	bb
8	8	200220P1-10	Standard	12.500	5.67	18745.896	18063.303	12.972	13.0	3.8	NO		NO	bb
9	9	200220P1-11	Standard	12.500	5.67	19925.018	17984.857	13.848	13.9	10.8	NO		NO	bb
10	10	200220P1-12	Standard	12.500	5.67	17740.600	17415.027	12.734	12.7	1.9	NO		NO	bb

Compound name: 13C2-10:2 FTS-EIS
Response Factor: 66.7634
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	5.65	971.295		971.295	14.5	16.4	NO		NO	bbX
2	2	200220P1-4	Standard	12.500	5.65	960.004		960.004	14.4	15.0	NO		NO	bbX
3	3	200220P1-5	Standard	12.500	5.66	888.197		888.197	13.3	6.4	NO		NO	bbX
4	4	200220P1-6	Standard	12.500	5.66	816.162		816.162	12.2	-2.2	NO		NO	bbX
5	5	200220P1-7	Standard	12.500	5.66	897.362		897.362	13.4	7.5	NO		NO	bbX
6	6	200220P1-8	Standard	12.500	5.65	834.543		834.543	12.5	0.0	NO		NO	bb
7	7	200220P1-9	Standard	12.500	5.66	987.961		987.961	14.8	18.4	NO		NO	dbX
8	8	200220P1-10	Standard	12.500	5.66	775.816		775.816	11.6	-7.0	NO		NO	bbX
9	9	200220P1-11	Standard	12.500	5.66	714.900		714.900	10.7	-14.3	NO		NO	dbX
10	10	200220P1-12	Standard	12.500	5.65	688.251		688.251	10.3	-17.5	NO		NO	dbX

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Compound name: 13C2-10:2 FTS-RSD
Response Factor: 0.235314
RRF SD: 0.03219, Relative SD: 13.6796
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	5.65	971.295	3375.218	3.597	15.3	22.3	NO		NO	bb
2	2	200220P1-4	Standard	12.500	5.65	960.004	3591.504	3.341	14.2	13.6	NO		NO	bb
3	3	200220P1-5	Standard	12.500	5.66	888.197	3737.936	2.970	12.6	1.0	NO		NO	bb
4	4	200220P1-6	Standard	12.500	5.66	816.162	3826.934	2.666	11.3	-9.4	NO		NO	bb
5	5	200220P1-7	Standard	12.500	5.66	897.362	3421.741	3.278	13.9	11.4	NO		NO	bb
6	6	200220P1-8	Standard	12.500	5.65	834.543	3872.213	2.694	11.4	-8.4	NO		NO	bb
7	7	200220P1-9	Standard	12.500	5.66	987.961	3807.600	3.243	13.8	10.3	NO		NO	db
8	8	200220P1-10	Standard	12.500	5.66	775.816	3614.641	2.683	11.4	-8.8	NO		NO	bb
9	9	200220P1-11	Standard	12.500	5.66	714.900	3746.795	2.385	10.1	-18.9	NO		NO	db
10	10	200220P1-12	Standard	12.500	5.65	688.251	3365.532	2.556	10.9	-13.1	NO		NO	db

Compound name: d3-N-MeFOSA-EIS
Response Factor: 121.074
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	149.200	5.83	15962.999		15962.999	131.8	-11.6	NO		NO	bbX
2	2	200220P1-4	Standard	149.200	5.83	16667.066		16667.066	137.7	-7.7	NO		NO	bbX
3	3	200220P1-5	Standard	149.200	5.83	17139.836		17139.836	141.6	-5.1	NO		NO	bbX
4	4	200220P1-6	Standard	149.200	5.83	16798.215		16798.215	138.7	-7.0	NO		NO	bbX
5	5	200220P1-7	Standard	149.200	5.83	17027.213		17027.213	140.6	-5.7	NO		NO	bbX
6	6	200220P1-8	Standard	149.200	5.83	18064.303		18064.303	149.2	0.0	NO		NO	bb
7	7	200220P1-9	Standard	149.200	5.83	17667.113		17667.113	145.9	-2.2	NO		NO	bbX
8	8	200220P1-10	Standard	149.200	5.84	17302.824		17302.824	142.9	-4.2	NO		NO	bbX
9	9	200220P1-11	Standard	149.200	5.83	17976.174		17976.174	148.5	-0.5	NO		NO	bbX
10	10	200220P1-12	Standard	149.200	5.84	17536.160		17536.160	144.8	-2.9	NO		NO	bbX

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Compound name: d3-N-MeFOSA-RSD
Response Factor: 0.0760149
RRF SD: 0.00498721, Relative SD: 6.56083
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	149.200	5.83	15962.999	18234.537	10.943	144.0	-3.5	NO		NO	bb
2	2 200220P1-4	Standard	149.200	5.83	16667.066	17612.855	11.829	155.6	4.3	NO		NO	bb
3	3 200220P1-5	Standard	149.200	5.83	17139.836	20648.279	10.376	136.5	-8.5	NO		NO	bb
4	4 200220P1-6	Standard	149.200	5.83	16798.215	19841.098	10.583	139.2	-6.7	NO		NO	bb
5	5 200220P1-7	Standard	149.200	5.83	17027.213	19689.107	10.810	142.2	-4.7	NO		NO	bb
6	6 200220P1-8	Standard	149.200	5.83	18064.303	18168.391	12.428	163.5	9.6	NO		NO	bb
7	7 200220P1-9	Standard	149.200	5.83	17667.113	20740.715	10.648	140.1	-6.1	NO		NO	bb
8	8 200220P1-10	Standard	149.200	5.84	17302.824	17887.111	12.092	159.1	6.6	NO		NO	bb
9	9 200220P1-11	Standard	149.200	5.83	17976.174	18712.764	12.008	158.0	5.9	NO		NO	bb
10	10 200220P1-12	Standard	149.200	5.84	17536.160	18738.523	11.698	153.9	3.1	NO		NO	bb

Compound name: 13C2-PFTeDA-EIS
Response Factor: 1440.51
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	6.11	19053.490		19053.490	13.2	5.8	NO		NO	bbX
2	2 200220P1-4	Standard	12.500	6.11	19828.295		19828.295	13.8	10.1	NO		NO	bbX
3	3 200220P1-5	Standard	12.500	6.11	18055.973		18055.973	12.5	0.3	NO		NO	bbX
4	4 200220P1-6	Standard	12.500	6.11	18189.154		18189.154	12.6	1.0	NO		NO	bbX
5	5 200220P1-7	Standard	12.500	6.11	17643.662		17643.662	12.2	-2.0	NO		NO	bbX
6	6 200220P1-8	Standard	12.500	6.11	18006.408		18006.408	12.5	0.0	NO		NO	bb
7	7 200220P1-9	Standard	12.500	6.11	18692.244		18692.244	13.0	3.8	NO		NO	bbX
8	8 200220P1-10	Standard	12.500	6.12	18729.498		18729.498	13.0	4.0	NO		NO	bbX
9	9 200220P1-11	Standard	12.500	6.11	18173.855		18173.855	12.6	0.9	NO		NO	bbX
10	10 200220P1-12	Standard	12.500	6.12	17077.631		17077.631	11.9	-5.2	NO		NO	bbX

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Compound name: 13C2-PFTeDA-RSD
Response Factor: 0.967999
RRF SD: 0.0828801, Relative SD: 8.56201
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	6.11	19053.490	18234.537	13.061	13.5	7.9	NO		NO	bb
2	2 200220P1-4	Standard	12.500	6.11	19828.295	17612.855	14.072	14.5	16.3	NO		NO	bb
3	3 200220P1-5	Standard	12.500	6.11	18055.973	20648.279	10.931	11.3	-9.7	NO		NO	bb
4	4 200220P1-6	Standard	12.500	6.11	18189.154	19841.098	11.459	11.8	-5.3	NO		NO	bb
5	5 200220P1-7	Standard	12.500	6.11	17643.662	19689.107	11.201	11.6	-7.4	NO		NO	bb
6	6 200220P1-8	Standard	12.500	6.11	18006.408	18168.391	12.389	12.8	2.4	NO		NO	bb
7	7 200220P1-9	Standard	12.500	6.11	18692.244	20740.715	11.265	11.6	-6.9	NO		NO	bb
8	8 200220P1-10	Standard	12.500	6.12	18729.498	17887.111	13.089	13.5	8.2	NO		NO	bb
9	9 200220P1-11	Standard	12.500	6.11	18173.855	18712.764	12.140	12.5	0.3	NO		NO	bb
10	10 200220P1-12	Standard	12.500	6.12	17077.631	18738.523	11.392	11.8	-5.9	NO		NO	bb

Compound name: d5-N-ETFOSA-EIS
Response Factor: 156.93
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	149.200	6.20	22126.004		22126.004	141.0	-5.5	NO		NO	bbX
2	2 200220P1-4	Standard	149.200	6.20	23242.711		23242.711	148.1	-0.7	NO		NO	bbX
3	3 200220P1-5	Standard	149.200	6.20	22928.920		22928.920	146.1	-2.1	NO		NO	bbX
4	4 200220P1-6	Standard	149.200	6.20	23587.563		23587.563	150.3	0.7	NO		NO	bbX
5	5 200220P1-7	Standard	149.200	6.20	22851.221		22851.221	145.6	-2.4	NO		NO	bbX
6	6 200220P1-8	Standard	149.200	6.20	23414.010		23414.010	149.2	0.0	NO		NO	bb
7	7 200220P1-9	Standard	149.200	6.20	23838.369		23838.369	151.9	1.8	NO		NO	bbX
8	8 200220P1-10	Standard	149.200	6.20	23293.736		23293.736	148.4	-0.5	NO		NO	bbX
9	9 200220P1-11	Standard	149.200	6.20	23152.299		23152.299	147.5	-1.1	NO		NO	bbX
10	10 200220P1-12	Standard	149.200	6.20	20830.982		20830.982	132.7	-11.0	NO		NO	bdX

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Compound name: d5-N-ETFOSA-RSD
Response Factor: 0.101225
RRF SD: 0.00646552, Relative SD: 6.38729
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	149.200	6.20	22126.004	18234.537	15.168	149.8	0.4	NO		NO	bb
2	2	200220P1-4	Standard	149.200	6.20	23242.711	17612.855	16.496	163.0	9.2	NO		NO	bb
3	3	200220P1-5	Standard	149.200	6.20	22928.920	20648.279	13.881	137.1	-8.1	NO		NO	bb
4	4	200220P1-6	Standard	149.200	6.20	23587.563	19841.098	14.860	146.8	-1.6	NO		NO	bb
5	5	200220P1-7	Standard	149.200	6.20	22851.221	19689.107	14.508	143.3	-3.9	NO		NO	bb
6	6	200220P1-8	Standard	149.200	6.20	23414.010	18168.391	16.109	159.1	6.7	NO		NO	bb
7	7	200220P1-9	Standard	149.200	6.20	23838.369	20740.715	14.367	141.9	-4.9	NO		NO	bb
8	8	200220P1-10	Standard	149.200	6.20	23293.736	17887.111	16.278	160.8	7.8	NO		NO	bb
9	9	200220P1-11	Standard	149.200	6.20	23152.299	18712.764	15.466	152.8	2.4	NO		NO	bb
10	10	200220P1-12	Standard	149.200	6.20	20830.982	18738.523	13.896	137.3	-8.0	NO		NO	bd

Compound name: 13C2-PFHxDA-EIS
Response Factor: 2349.21
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	6.44	28473.104		28473.104	12.1	-3.0	NO		NO	bbX
2	2	200220P1-4	Standard	12.500	6.43	28618.551		28618.551	12.2	-2.5	NO		NO	bbX
3	3	200220P1-5	Standard	12.500	6.44	28820.514		28820.514	12.3	-1.9	NO		NO	bbX
4	4	200220P1-6	Standard	12.500	6.43	30083.389		30083.389	12.8	2.4	NO		NO	bbX
5	5	200220P1-7	Standard	12.500	6.44	28369.861		28369.861	12.1	-3.4	NO		NO	bbX
6	6	200220P1-8	Standard	12.500	6.43	29365.074		29365.074	12.5	0.0	NO		NO	MM
7	7	200220P1-9	Standard	12.500	6.44	28221.439		28221.439	12.0	-3.9	NO		NO	bbX
8	8	200220P1-10	Standard	12.500	6.43	29442.813		29442.813	12.5	0.3	NO		NO	bbX
9	9	200220P1-11	Standard	12.500	6.43	27808.342		27808.342	11.8	-5.3	NO		NO	bbX
10	10	200220P1-12	Standard	12.500	6.43	26335.016		26335.016	11.2	-10.3	NO		NO	bbX

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Compound name: 13C2-PFHxDA-RSD
Response Factor: 1.5043
RRF SD: 0.102652, Relative SD: 6.82388
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	12.500	6.44	28473.104	18234.537	19.519	13.0	3.8	NO		NO	bb
2	2 200220P1-4	Standard	12.500	6.43	28618.551	17612.855	20.311	13.5	8.0	NO		NO	bb
3	3 200220P1-5	Standard	12.500	6.44	28820.514	20648.279	17.447	11.6	-7.2	NO		NO	bb
4	4 200220P1-6	Standard	12.500	6.43	30083.389	19841.098	18.953	12.6	0.8	NO		NO	bb
5	5 200220P1-7	Standard	12.500	6.44	28369.861	19689.107	18.011	12.0	-4.2	NO		NO	bb
6	6 200220P1-8	Standard	12.500	6.43	29170.943	18168.391	20.070	13.3	6.7	NO		NO	bb
7	7 200220P1-9	Standard	12.500	6.44	28221.439	20740.715	17.008	11.3	-9.5	NO		NO	bb
8	8 200220P1-10	Standard	12.500	6.43	29442.813	17887.111	20.575	13.7	9.4	NO		NO	bb
9	9 200220P1-11	Standard	12.500	6.43	27808.342	18712.764	18.576	12.3	-1.2	NO		NO	bb
10	10 200220P1-12	Standard	12.500	6.43	26335.016	18738.523	17.567	11.7	-6.6	NO		NO	bb

Compound name: d7-N-MeFOSE-EIS
Response Factor: 112.074
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200220P1-3	Standard	149.200	6.30	16267.880		16267.880	145.2	-2.7	NO		NO	bbX
2	2 200220P1-4	Standard	149.200	6.30	16739.979		16739.979	149.4	0.1	NO		NO	bbX
3	3 200220P1-5	Standard	149.200	6.30	16821.021		16821.021	150.1	0.6	NO		NO	bbX
4	4 200220P1-6	Standard	149.200	6.30	16312.518		16312.518	145.6	-2.4	NO		NO	bbX
5	5 200220P1-7	Standard	149.200	6.30	16086.234		16086.234	143.5	-3.8	NO		NO	bbX
6	6 200220P1-8	Standard	149.200	6.30	16721.471		16721.471	149.2	0.0	NO		NO	bb
7	7 200220P1-9	Standard	149.200	6.30	17403.430		17403.430	155.3	4.1	NO		NO	bbX
8	8 200220P1-10	Standard	149.200	6.30	17760.828		17760.828	158.5	6.2	NO		NO	bbX
9	9 200220P1-11	Standard	149.200	6.30	17313.752		17313.752	154.5	3.5	NO		NO	bbX
10	10 200220P1-12	Standard	149.200	6.30	16718.832		16718.832	149.2	-0.0	NO		NO	bbX

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Compound name: d7-N-MeFOSE-RSD
Response Factor: 0.0742816
RRF SD: 0.00518778, Relative SD: 6.98394
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	149.200	6.30	16267.880	18234.537	11.152	150.1	0.6	NO		NO	bb
2	2	200220P1-4	Standard	149.200	6.30	16739.979	17612.855	11.881	159.9	7.2	NO		NO	bb
3	3	200220P1-5	Standard	149.200	6.30	16821.021	20648.279	10.183	137.1	-8.1	NO		NO	bb
4	4	200220P1-6	Standard	149.200	6.30	16312.518	19841.098	10.277	138.4	-7.3	NO		NO	bb
5	5	200220P1-7	Standard	149.200	6.30	16086.234	19689.107	10.213	137.5	-7.9	NO		NO	bb
6	6	200220P1-8	Standard	149.200	6.30	16721.471	18168.391	11.505	154.9	3.8	NO		NO	bb
7	7	200220P1-9	Standard	149.200	6.30	17403.430	20740.715	10.489	141.2	-5.4	NO		NO	bb
8	8	200220P1-10	Standard	149.200	6.30	17760.828	17887.111	12.412	167.1	12.0	NO		NO	bb
9	9	200220P1-11	Standard	149.200	6.30	17313.752	18712.764	11.565	155.7	4.4	NO		NO	bb
10	10	200220P1-12	Standard	149.200	6.30	16718.832	18738.523	11.153	150.1	0.6	NO		NO	bb

Compound name: d9-N-EtFOSE-EIS
Response Factor: 140.104
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	149.200	6.45	18504.477		18504.477	132.1	-11.5	NO		NO	bbX
2	2	200220P1-4	Standard	149.200	6.45	18839.174		18839.174	134.5	-9.9	NO		NO	bbX
3	3	200220P1-5	Standard	149.200	6.45	19707.281		19707.281	140.7	-5.7	NO		NO	bbX
4	4	200220P1-6	Standard	149.200	6.45	20126.805		20126.805	143.7	-3.7	NO		NO	bbX
5	5	200220P1-7	Standard	149.200	6.45	18655.471		18655.471	133.2	-10.8	NO		NO	bbX
6	6	200220P1-8	Standard	149.200	6.45	20903.463		20903.463	149.2	0.0	NO		NO	bb
7	7	200220P1-9	Standard	149.200	6.45	20346.061		20346.061	145.2	-2.7	NO		NO	bbX
8	8	200220P1-10	Standard	149.200	6.45	19579.516		19579.516	139.8	-6.3	NO		NO	bbX
9	9	200220P1-11	Standard	149.200	6.45	20130.154		20130.154	143.7	-3.7	NO		NO	bbX
10	10	200220P1-12	Standard	149.200	6.45	19454.162		19454.162	138.9	-6.9	NO		NO	bbX

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Compound name: d9-N-EtFOSE-RSD
Response Factor: 0.0866356
RRF SD: 0.00541977, Relative SD: 6.25582
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	149.200	6.45	18504.477	18234.537	12.685	146.4	-1.9	NO		NO	bb
2	2	200220P1-4	Standard	149.200	6.45	18839.174	17612.855	13.370	154.3	3.4	NO		NO	bb
3	3	200220P1-5	Standard	149.200	6.45	19707.281	20648.279	11.930	137.7	-7.7	NO		NO	bb
4	4	200220P1-6	Standard	149.200	6.45	20126.805	19841.098	12.680	146.4	-1.9	NO		NO	bb
5	5	200220P1-7	Standard	149.200	6.45	18655.471	19689.107	11.844	136.7	-8.4	NO		NO	bb
6	6	200220P1-8	Standard	149.200	6.45	20903.463	18168.391	14.382	166.0	11.3	NO		NO	bb
7	7	200220P1-9	Standard	149.200	6.45	20346.061	20740.715	12.262	141.5	-5.1	NO		NO	bb
8	8	200220P1-10	Standard	149.200	6.45	19579.516	17887.111	13.683	157.9	5.9	NO		NO	bb
9	9	200220P1-11	Standard	149.200	6.45	20130.154	18712.764	13.447	155.2	4.0	NO		NO	bb
10	10	200220P1-12	Standard	149.200	6.45	19454.162	18738.523	12.977	149.8	0.4	NO		NO	bb

Compound name: 13C4-PFBA
Response Factor: 1
RRF SD: 3.70074e-017, Relative SD: 3.70074e-015
Response type: Internal Std (Ref 99), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	1.48	11888.075	11888.075	12.500	12.5	0.0	NO		NO	MM
2	2	200220P1-4	Standard	12.500	1.48	12593.931	12593.931	12.500	12.5	0.0	NO		NO	MM
3	3	200220P1-5	Standard	12.500	1.48	12542.025	12542.025	12.500	12.5	0.0	NO		NO	MM
4	4	200220P1-6	Standard	12.500	1.48	12501.699	12501.699	12.500	12.5	0.0	NO		NO	MM
5	5	200220P1-7	Standard	12.500	1.49	12443.393	12443.393	12.500	12.5	0.0	NO		NO	MM
6	6	200220P1-8	Standard	12.500	1.48	12920.699	12920.699	12.500	12.5	0.0	NO		NO	MM
7	7	200220P1-9	Standard	12.500	1.49	12496.652	12496.652	12.500	12.5	0.0	NO		NO	bb
8	8	200220P1-10	Standard	12.500	1.48	12758.912	12758.912	12.500	12.5	0.0	NO		NO	bb
9	9	200220P1-11	Standard	12.500	1.48	13408.672	13408.672	12.500	12.5	0.0	NO		NO	MM
10	10	200220P1-12	Standard	12.500	1.48	12762.113	12762.113	12.500	12.5	0.0	NO		NO	MM

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Compound name: 13C5-PFHxA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	3.18	20142.271	20142.271	12.500	12.5	0.0	NO		NO	bb
2	2	200220P1-4	Standard	12.500	3.18	21634.467	21634.467	12.500	12.5	0.0	NO		NO	bb
3	3	200220P1-5	Standard	12.500	3.18	22079.555	22079.555	12.500	12.5	0.0	NO		NO	bb
4	4	200220P1-6	Standard	12.500	3.18	20880.449	20880.449	12.500	12.5	0.0	NO		NO	bb
5	5	200220P1-7	Standard	12.500	3.18	20643.729	20643.729	12.500	12.5	0.0	NO		NO	bb
6	6	200220P1-8	Standard	12.500	3.18	21969.059	21969.059	12.500	12.5	0.0	NO		NO	bb
7	7	200220P1-9	Standard	12.500	3.18	21719.918	21719.918	12.500	12.5	0.0	NO		NO	bb
8	8	200220P1-10	Standard	12.500	3.18	21611.453	21611.453	12.500	12.5	0.0	NO		NO	bb
9	9	200220P1-11	Standard	12.500	3.18	21329.654	21329.654	12.500	12.5	0.0	NO		NO	bb
10	10	200220P1-12	Standard	12.500	3.18	20606.281	20606.281	12.500	12.5	0.0	NO		NO	bb

Compound name: 18O2-PFHxS
Response Factor: 1
RRF SD: 1.04673e-016, Relative SD: 1.04673e-014
Response type: Internal Std (Ref 101), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	3.92	1223.123	1223.123	12.500	12.5	0.0	NO		NO	bb
2	2	200220P1-4	Standard	12.500	3.92	1180.191	1180.191	12.500	12.5	0.0	NO		NO	bb
3	3	200220P1-5	Standard	12.500	3.92	1209.105	1209.105	12.500	12.5	0.0	NO		NO	bb
4	4	200220P1-6	Standard	12.500	3.92	1192.063	1192.063	12.500	12.5	0.0	NO		NO	MM
5	5	200220P1-7	Standard	12.500	3.92	1317.888	1317.888	12.500	12.5	0.0	NO		NO	bb
6	6	200220P1-8	Standard	12.500	3.92	1450.318	1450.318	12.500	12.5	0.0	NO		NO	bb
7	7	200220P1-9	Standard	12.500	3.92	1224.051	1224.051	12.500	12.5	0.0	NO		NO	bb
8	8	200220P1-10	Standard	12.500	3.92	1293.469	1293.469	12.500	12.5	0.0	NO		NO	bb
9	9	200220P1-11	Standard	12.500	3.92	1279.869	1279.869	12.500	12.5	0.0	NO		NO	bb
10	10	200220P1-12	Standard	12.500	3.92	1058.920	1058.920	12.500	12.5	0.0	NO		NO	bb

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Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 102), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	4.29	19241.080	19241.080	12.500	12.5	0.0	NO		NO	bb
2	2	200220P1-4	Standard	12.500	4.29	20977.639	20977.639	12.500	12.5	0.0	NO		NO	bb
3	3	200220P1-5	Standard	12.500	4.29	20418.293	20418.293	12.500	12.5	0.0	NO		NO	bb
4	4	200220P1-6	Standard	12.500	4.29	20255.918	20255.918	12.500	12.5	0.0	NO		NO	bb
5	5	200220P1-7	Standard	12.500	4.29	20356.574	20356.574	12.500	12.5	0.0	NO		NO	bb
6	6	200220P1-8	Standard	12.500	4.29	22121.662	22121.662	12.500	12.5	0.0	NO		NO	bb
7	7	200220P1-9	Standard	12.500	4.29	18484.418	18484.418	12.500	12.5	0.0	NO		NO	bb
8	8	200220P1-10	Standard	12.500	4.29	19098.527	19098.527	12.500	12.5	0.0	NO		NO	bb
9	9	200220P1-11	Standard	12.500	4.29	19856.025	19856.025	12.500	12.5	0.0	NO		NO	bb
10	10	200220P1-12	Standard	12.500	4.29	17225.596	17225.596	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 7.40149e-017, Relative SD: 7.40149e-015
Response type: Internal Std (Ref 103), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	4.72	16032.552	16032.552	12.500	12.5	0.0	NO		NO	bb
2	2	200220P1-4	Standard	12.500	4.72	15482.925	15482.925	12.500	12.5	0.0	NO		NO	bb
3	3	200220P1-5	Standard	12.500	4.72	16296.199	16296.199	12.500	12.5	0.0	NO		NO	bb
4	4	200220P1-6	Standard	12.500	4.72	17785.301	17785.301	12.500	12.5	0.0	NO		NO	bb
5	5	200220P1-7	Standard	12.500	4.72	16090.972	16090.972	12.500	12.5	0.0	NO		NO	bb
6	6	200220P1-8	Standard	12.500	4.72	18174.621	18174.621	12.500	12.5	0.0	NO		NO	bb
7	7	200220P1-9	Standard	12.500	4.72	17629.514	17629.514	12.500	12.5	0.0	NO		NO	bb
8	8	200220P1-10	Standard	12.500	4.72	16484.016	16484.016	12.500	12.5	0.0	NO		NO	bb
9	9	200220P1-11	Standard	12.500	4.72	17549.574	17549.574	12.500	12.5	0.0	NO		NO	bb
10	10	200220P1-12	Standard	12.500	4.72	16179.260	16179.260	12.500	12.5	0.0	NO		NO	bb

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Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 1.04673e-016, Relative SD: 1.04673e-014
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200220P1-3	Standard	12.500	4.79	3375.218	3375.218	12.500	12.5	0.0	NO		NO	bb
2	2	200220P1-4	Standard	12.500	4.80	3591.504	3591.504	12.500	12.5	0.0	NO		NO	bb
3	3	200220P1-5	Standard	12.500	4.80	3737.936	3737.936	12.500	12.5	0.0	NO		NO	bb
4	4	200220P1-6	Standard	12.500	4.79	3826.934	3826.934	12.500	12.5	0.0	NO		NO	bb
5	5	200220P1-7	Standard	12.500	4.80	3421.741	3421.741	12.500	12.5	0.0	NO		NO	bb
6	6	200220P1-8	Standard	12.500	4.79	3872.213	3872.213	12.500	12.5	0.0	NO		NO	bb
7	7	200220P1-9	Standard	12.500	4.80	3807.600	3807.600	12.500	12.5	0.0	NO		NO	bb
8	8	200220P1-10	Standard	12.500	4.80	3614.641	3614.641	12.500	12.5	0.0	NO		NO	bb
9	9	200220P1-11	Standard	12.500	4.79	3746.795	3746.795	12.500	12.5	0.0	NO		NO	bb
10	10	200220P1-12	Standard	12.500	4.80	3365.532	3365.532	12.500	12.5	0.0	NO		NO	bb

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022020.mdb 21 Feb 2020 08:56:55
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-20-20.cdb 21 Feb 2020 15:57:11

Name: 200220P1-8, Date: 20-Feb-2020, Time: 18:37:32, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	IS#	CoD	CoD Flag	%RSD
1	1	PFBA	47	0.9994	NO	
2	2	PFPrS	51	0.9998	NO	
3	3	3:3 FTCA	49	0.9991	NO	
4	4	PFPeA	49	0.9995	NO	
5	5	PFBS	51	0.9995	NO	
6	6	4:2 FTS	55	0.9977	NO	
7	7	PFHxA	57	0.9988	NO	
8	8	PFPeS	51	0.9967	NO	
9	9	HFPO-DA	53	0.9996	NO	
10	10	5:3 FTCA	59	0.9997	NO	
11	11	PFHpA	59	0.9992	NO	
12	12	ADONA	59	0.9983	NO	
13	13	L-PFHxS	61	0.9987	NO	
14	15	6:2 FTS	63	0.9984	NO	
15	16	L-PFOA	69	0.9996	NO	
16	18	PFecHS	69	0.9996	NO	
17	19	PFHpS	71	0.9993	NO	
18	20	7:3 FTCA	65	0.9988	NO	
19	21	PFNA	65	0.9995	NO	
20	22	PFOSA	67	0.9993	NO	
21	23	L-PFOS	71	0.9978	NO	
22	25	9Cl-PF30NS	71	0.9938	NO	
23	26	PFDA	73	0.9992	NO	
24	27	8:2 FTS	75	0.9959	NO	
25	28	PFNS	71	0.9975	NO	
26	29	L-MeFOSAA	77	0.9997	NO	

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022020.mdb 21 Feb 2020 08:56:55
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-20-20.cdb 21 Feb 2020 12:12:49

Name: 200220P1-8, Date: 20-Feb-2020, Time: 18:37:32, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	IS#	CoD	CoD Flag	%RSD
1	31	L-EtFOSAA	81	0.9994	NO	
2	33	PFUdA	79	0.9996	NO	
3	34	PFDS	71	0.9983	NO	
4	35	11Cl-PF30UdS	83	0.9968	NO	
5	36	10:2 FTS	85	0.9972	NO	
6	37	PFDoA	83	0.9991	NO	
7	38	N-MeFOSA	87	0.9998	NO	
8	39	PFTrDA	83	0.9982	NO	
9	40	PFDoS	89	0.9997	NO	
10	41	PFTeDA	89	0.9989	NO	
11	42	N-EtFOSA	91	0.9995	NO	
12	43	PFHxDA	93	0.9999	NO	
13	44	PFODA	93	0.9997	NO	
14	45	N-MeFOSE	95	0.9997	NO	
15	46	N-EtFOSE	97	0.9996	NO	
16	47	13C3-PFBA-EIS			NO	0.000
17	48	13C3-PFBA-RSD	99		NO	1.206
18	49	13C3-PFPeA-EIS			NO	0.000
19	50	13C3-PFPeA-RSD	100		NO	3.141
20	51	13C3-PFBS-EIS			NO	0.000
21	52	13C3-PFBS-RSD	101		NO	6.488
22	53	13C3-HFPO-DA-EIS			NO	0.000
23	54	13C3-HFPO-DA-RSD	100		NO	5.205
24	55	13C2-4:2 FTS-EIS			NO	0.000
25	56	13C2-4:2 FTS-RSD	101		NO	10.032
26	57	13C2-PFHxA-EIS			NO	0.000
27	58	13C2-PFHxA-RSD	100		NO	4.254
28	59	13C4-PFHpA-EIS			NO	0.000
29	60	13C4-PFHpA-RSD	100		NO	3.049
30	61	13C3-PFHxS-EIS			NO	0.000
31	62	13C3-PFHxS-RSD	101		NO	6.382
32	63	13C2-6:2 FTS-EIS			NO	0.000

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Name: 200220P1-8, Date: 20-Feb-2020, Time: 18:37:32, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	IS#	CoD	CoD Flag	%RSD
33	64	13C2-6:2 FTS-RSD	104		NO	6.469
34	65	13C5-PFNA-EIS			NO	0.000
35	66	13C5-PFNA-RSD	103		NO	3.562
36	67	13C8-PFOSA-EIS			NO	0.000
37	68	13C8-PFOSA-RSD	106		NO	7.629
38	69	13C2-PFOA-EIS			NO	0.000
39	70	13C2-PFOA-RSD	102		NO	5.261
40	71	13C8-PFOS-EIS			NO	0.000
41	72	13C8-PFOS-RSD	104		NO	6.037
42	73	13C2-PFDA-EIS			NO	0.000
43	74	13C2-PFDA-RSD	105		NO	3.743
44	75	13C2-8:2 FTS-EIS			NO	0.000
45	76	13C2-8:2 FTS-RSD	104		NO	10.574
46	77	d3-N-MeFOSAA-EIS			NO	0.000
47	78	d3-N-MeFOSAA-RSD	106		NO	11.008
48	79	13C2-PFUdA-EIS			NO	0.000
49	80	13C2-PFUdA-RSD	106		NO	4.397
50	81	d5-N-EtFOSAA-EIS			NO	0.000
51	82	d5-N-EtFOSAA-RSD	106		NO	6.795
52	83	13C2-PFDoA-EIS			NO	0.000
53	84	13C2-PFDoA-RSD	105		NO	7.032
54	85	13C2-10:2 FTS-EIS			NO	0.000
55	86	13C2-10:2 FTS-RSD	104		NO	13.680
56	87	d3-N-MeFOSA-EIS			NO	0.000
57	88	d3-N-MeFOSA-RSD	106		NO	6.561
58	89	13C2-PFTeDA-EIS			NO	0.000
59	90	13C2-PFTeDA-RSD	106		NO	8.562
60	91	d5-N-ETFOSA-EIS			NO	0.000
61	92	d5-N-ETFOSA-RSD	106		NO	6.387
62	93	13C2-PFHxDA-EIS			NO	0.000
63	94	13C2-PFHxDA-RSD	106		NO	6.824
64	95	d7-N-MeFOSE-EIS			NO	0.000
65	96	d7-N-MeFOSE-RSD	106		NO	6.984
66	97	d9-N-EtFOSE-EIS			NO	0.000
67	98	d9-N-EtFOSE-RSD	106		NO	6.256
68	99	13C4-PFBA	99		NO	0.000

Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

Last Altered: Friday, February 21, 2020 12:12:49 Pacific Standard Time
Printed: Friday, February 21, 2020 12:21:02 Pacific Standard Time

Name: 200220P1-8, Date: 20-Feb-2020, Time: 18:37:32, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	IS#	CoD	CoD Flag	%RSD
69	1...	13C5-PFHxA	100		NO	0.000
70	1...	18O2-PFHxS	101		NO	0.000
71	1...	13C8-PFOA	102		NO	0.000
72	1...	13C9-PFNA	103		NO	0.000
73	1...	13C4-PFOS	104		NO	0.000

Vista Analytical Laboratory

Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

Last Altered: Friday, February 21, 2020 11:03:18 Pacific Standard Time
Printed: Friday, February 21, 2020 11:19:12 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022020.mdb 21 Feb 2020 08:56:55
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-20-20.cdb 21 Feb 2020 11:03:18

Name: 200220P1-8, Date: 20-Feb-2020, Time: 18:37:32, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	PFBA	1.48	1.48			
2	PFPrS	1.79	1.81	2.661	2.661	NO
3	3:3 FTCA	2.26	2.26	3.754	3.754	NO
4	PFPeA	2.40	2.40			
5	PFBS	2.67	2.67	3.164	3.164	NO
6	4:2 FTS	3.09	3.10	0.941	0.941	NO
7	PFHxA	3.18	3.18	16.088	16.088	NO
8	PFPeS	3.38	3.37	2.144	2.144	NO
9	HFPO-DA	3.39	3.39	2.636	2.636	NO
10	5:3 FTCA	3.72	3.73	1.758	1.758	NO
11	PFHpA	3.78	3.78	20.395	20.395	NO
12	ADONA	3.87	3.89	3.766	3.766	NO
13	L-PFHxS	3.92	3.92	2.082	2.082	NO
14	6:2 FTS	4.23	4.23	1.427	1.427	NO
15	L-PFOA	4.29	4.29	3.028	3.028	NO
16	PFecHS	4.30	4.30	0.488	0.488	NO
17	PFHpS	4.40	4.40	1.948	1.948	NO
18	7:3 FTCA	4.71	4.71	1.503	1.503	NO
19	PFNA	4.72	4.72	7.476	7.476	NO
20	PFOSA	4.78	4.78	21.946	21.946	NO
21	L-PFOS	4.80	4.80	2.240	2.240	NO
22	9Cl-PF30NS	5.01	5.01	16.133	16.133	NO
23	PFDA	5.08	5.08	9.635	9.635	NO
24	8:2 FTS	5.05	5.05	2.540	2.540	NO
25	PFNS	5.15	5.14	2.143	2.143	NO
26	L-MeFOSAA	5.23	5.23	2.013	2.013	NO

Vista Analytical Laboratory

Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

Last Altered: Friday, February 21, 2020 11:03:18 Pacific Standard Time
Printed: Friday, February 21, 2020 11:19:34 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022020.mdb 21 Feb 2020 08:56:55
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-20-20.cdb 21 Feb 2020 11:03:18

Name: 200220P1-8, Date: 20-Feb-2020, Time: 18:37:32, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	L-EtFOSAA	5.38	5.38	1.184	1.184	NO
2	PFUdA	5.39	5.39	25.568	25.568	NO
3	PFDS	5.44	5.44	1.983	1.983	NO
4	11Cl-PF30UdS	5.60	5.60	20.498	20.498	NO
5	10:2 FTS	5.65	5.65	0.991	0.991	NO
6	PFDoA	5.67	5.67	10.584	10.584	NO
7	N-MeFOSA	5.82	5.81	1.530	1.530	NO
8	PFTrDA	5.93	5.91	63.965	63.965	NO
9	PFDoS	5.92	5.93	3.164	3.164	NO
10	PFTeDA	6.11	6.11	18.948	18.948	NO
11	N-EtFOSA	6.18	6.19	1.666	1.666	NO
12	PFHxDA	6.43	6.43	134.098	134.098	NO
13	PFODA	6.65	6.66			
14	N-MeFOSE	6.30	6.31			
15	N-EtFOSE	6.45	6.46			

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 21, 2020 11:22:07 Pacific Standard Time
Printed: Friday, February 21, 2020 11:22:45 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022020.mdb 21 Feb 2020 08:56:55
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-20-20.cdb 21 Feb 2020 11:03:18

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
1	1	200220P1-1	IPA	20-Feb-20	17:23:58
2	2	200220P1-2	IPA	20-Feb-20	17:34:30
3	3	200220P1-3	ST200220P1-1 PFC CS-2 20B1102	20-Feb-20	17:45:02
4	4	200220P1-4	ST200220P1-2 PFC CS-1 20B1103	20-Feb-20	17:55:31
5	5	200220P1-5	ST200220P1-3 PFC CS0 20B1104	20-Feb-20	18:06:03
6	6	200220P1-6	ST200220P1-4 PFC CS1 20B1105	20-Feb-20	18:16:31
7	7	200220P1-7	ST200220P1-5 PFC CS2 20B1106	20-Feb-20	18:27:04
8	8	200220P1-8	ST200220P1-6 PFC CS3 20B1107	20-Feb-20	18:37:32
9	9	200220P1-9	ST200220P1-7 PFC CS4 20B1108	20-Feb-20	18:48:04
10	10	200220P1-10	ST200220P1-8 PFC CS5 20B1109	20-Feb-20	18:58:35
11	11	200220P1-11	ST200220P1-9 PFC CS6 20B1110	20-Feb-20	19:09:05
12	12	200220P1-12	ST200220P1-10 PFC CS7 20B1111	20-Feb-20	19:19:35
13	13	200220P1-13	IB	20-Feb-20	19:30:05
14	14	200220P1-14	ICV200220P1-1 PFC ICV 20B1112	20-Feb-20	19:40:36
15	15	200220P1-15	IB	20-Feb-20	19:51:06

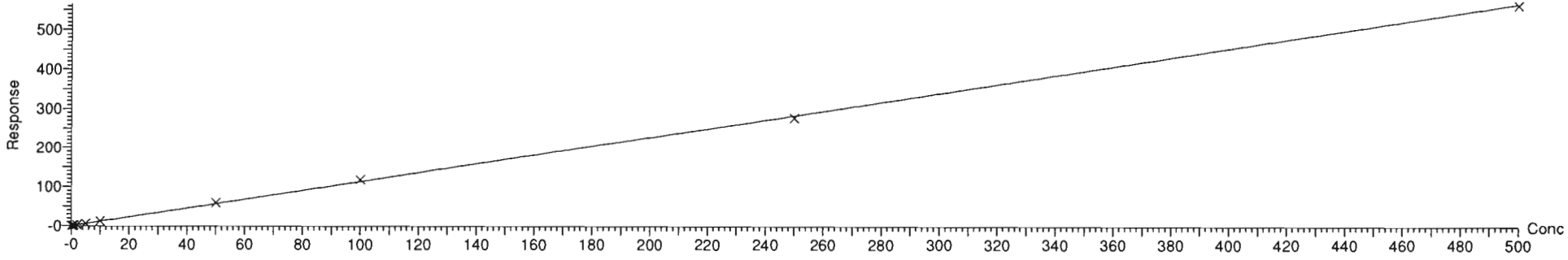
Vista Analytical Laboratory Q1

Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

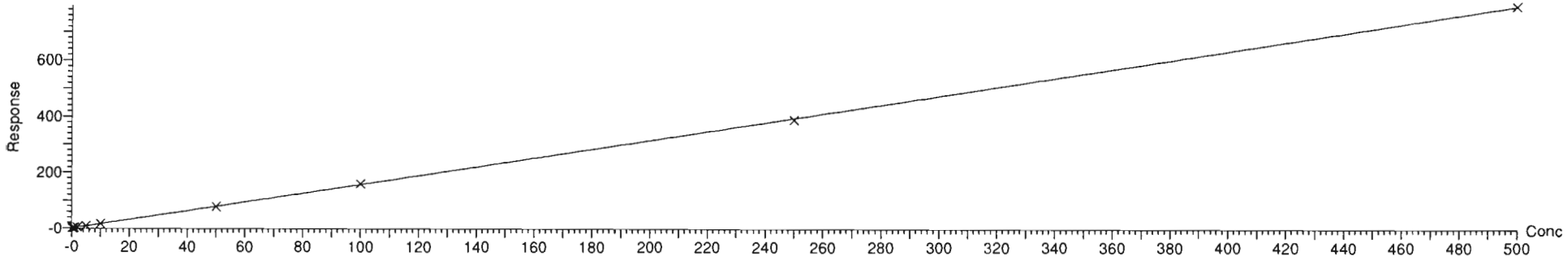
Last Altered: Friday, February 21, 2020 15:57:11 Pacific Standard Time
Printed: Friday, February 21, 2020 16:03:54 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022020.mdb 21 Feb 2020 08:56:55
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-20-20.cdb 21 Feb 2020 15:57:11

Compound name: PFBA
Correlation coefficient: r = 0.999717, r^2 = 0.999434
Calibration curve: 1.13327 * x + -0.14129
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



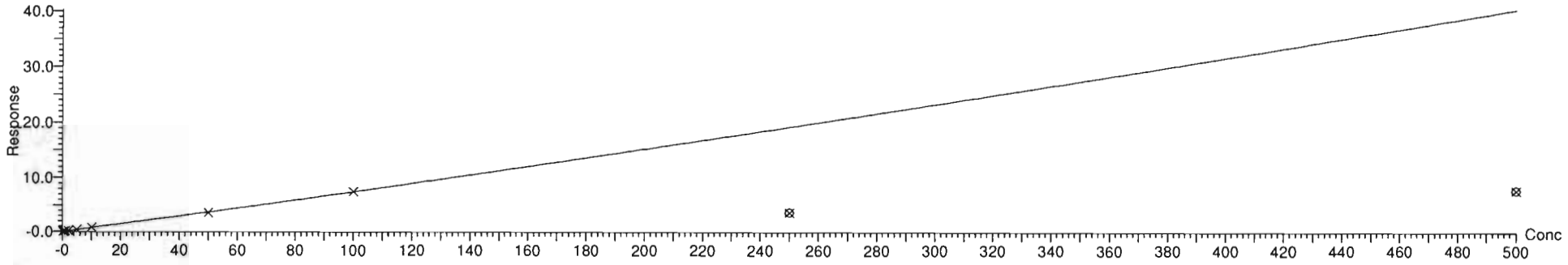
Compound name: PFPrS
Coefficient of Determination: R^2 = 0.999844
Calibration curve: 3.06967e-005 * x^2 + 1.5689 * x + -0.0816588
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



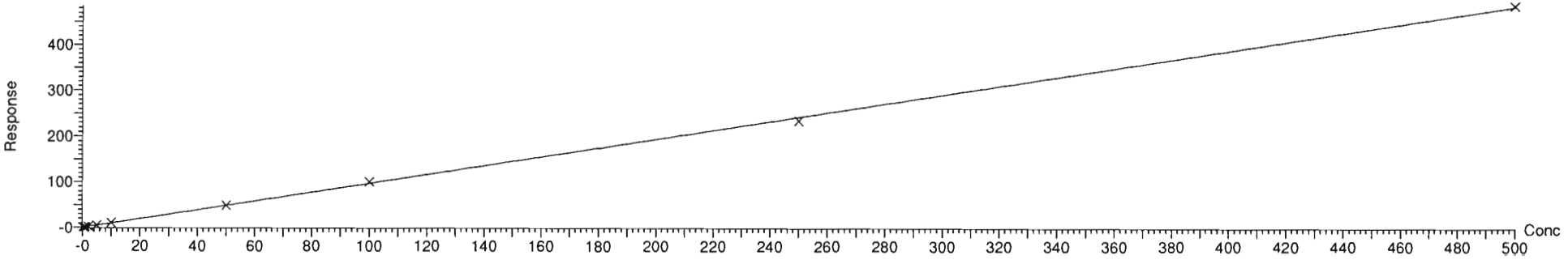
Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

Last Altered: Friday, February 21, 2020 11:03:18 Pacific Standard Time
Printed: Friday, February 21, 2020 11:17:00 Pacific Standard Time

Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.999097
Calibration curve: 1.57358e-005 * x^2 + 0.072826 * x + -0.000475915
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



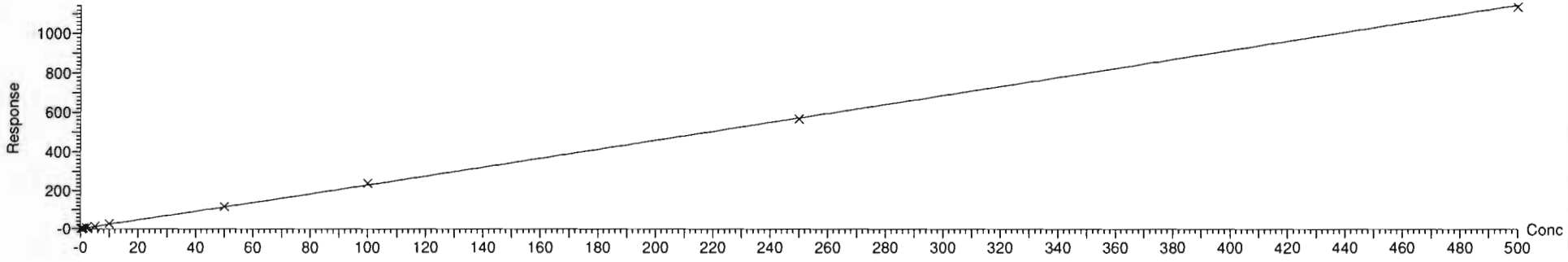
Compound name: PFPeA
Coefficient of Determination: R^2 = 0.999471
Calibration curve: -6.39644e-006 * x^2 + 0.970478 * x + 0.0497364
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



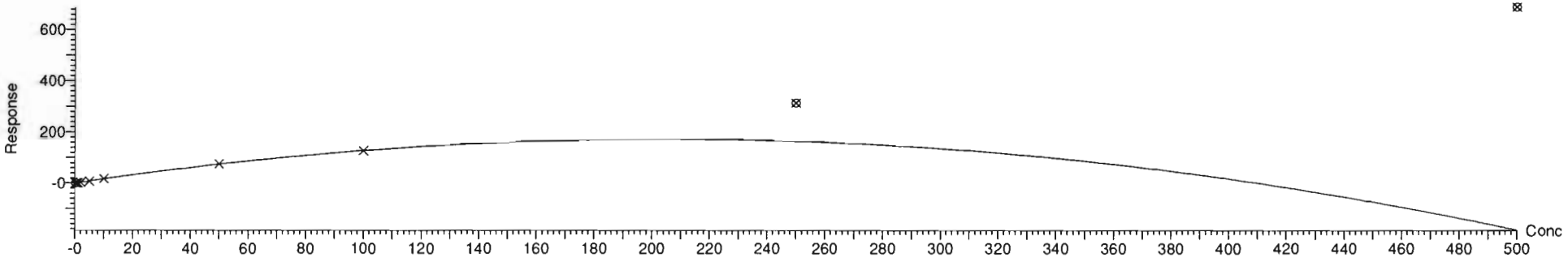
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Last Altered: Friday, February 21, 2020 12:12:49 Pacific Standard Time
Printed: Friday, February 21, 2020 12:17:25 Pacific Standard Time

Compound name: PFBS
Correlation coefficient: r = 0.999743, r^2 = 0.999487
Calibration curve: 2.28739 * x + 0.162081
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



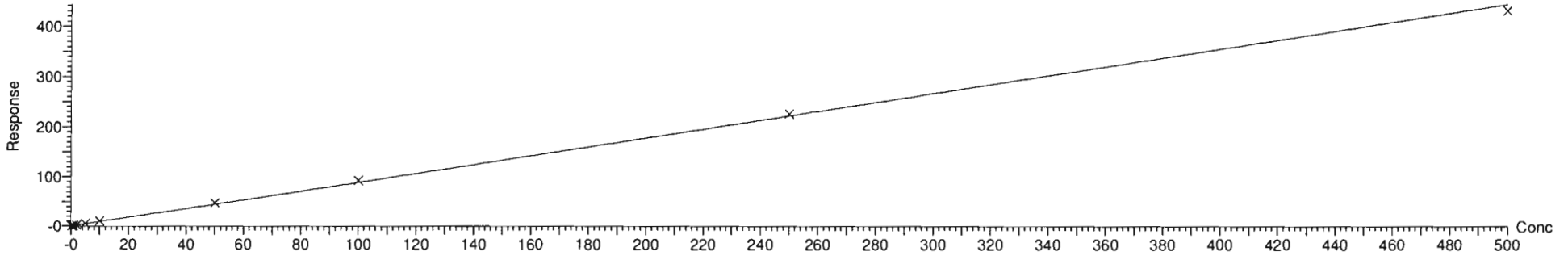
Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.997734
Calibration curve: -0.00410682 * x^2 + 1.6845 * x + -0.166626
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



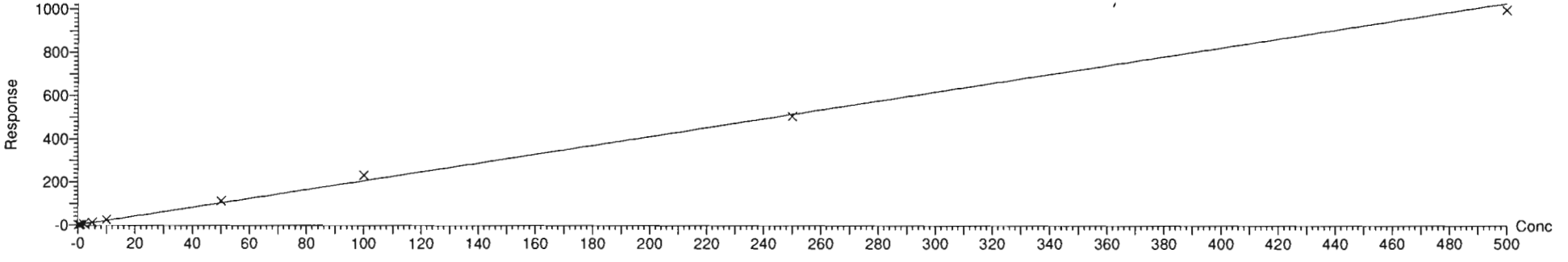
Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

Last Altered: Friday, February 21, 2020 11:03:18 Pacific Standard Time
Printed: Friday, February 21, 2020 11:17:00 Pacific Standard Time

Compound name: PFHxA
Correlation coefficient: r = 0.999392, r^2 = 0.998785
Calibration curve: 0.886822 * x + 0.0669668
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



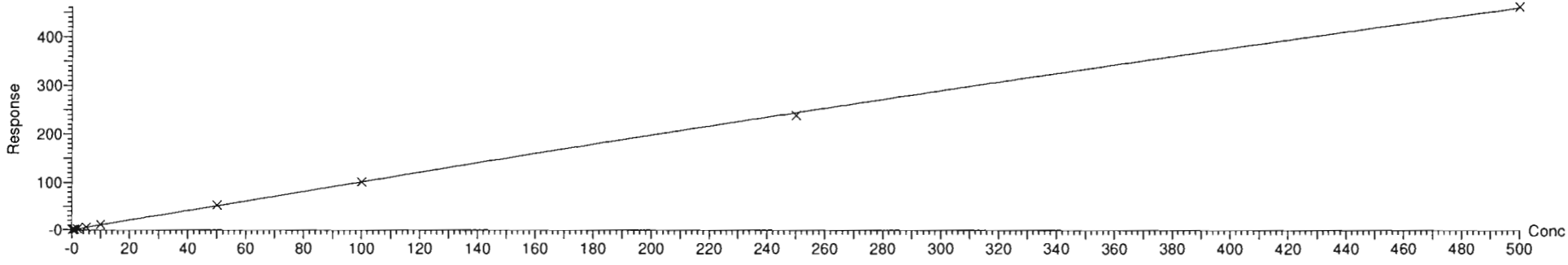
Compound name: PFPeS
Correlation coefficient: r = 0.998339, r^2 = 0.996680
Calibration curve: 2.05532 * x + 0.247448
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



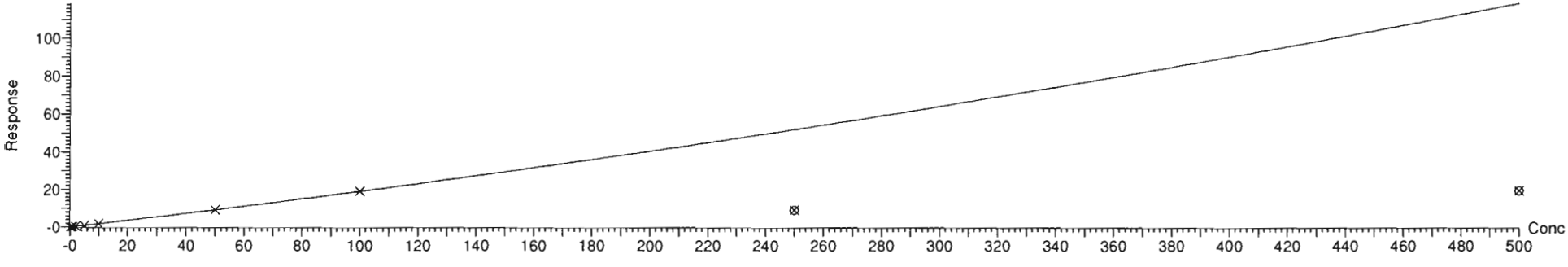
Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

Last Altered: Friday, February 21, 2020 11:03:18 Pacific Standard Time
Printed: Friday, February 21, 2020 11:17:00 Pacific Standard Time

Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.999574
Calibration curve: -0.000236652 * x^2 + 1.03625 * x + 0.0401894
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



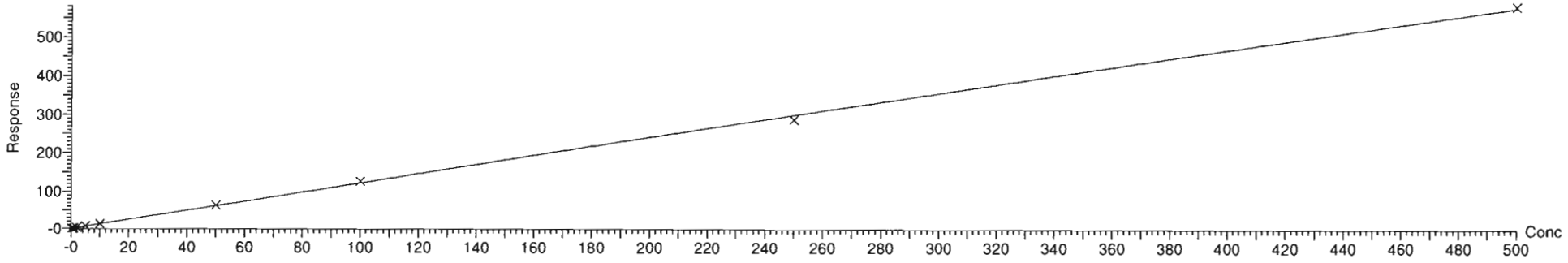
Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.999659
Calibration curve: 0.000117104 * x^2 + 0.178925 * x + -0.00538648
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



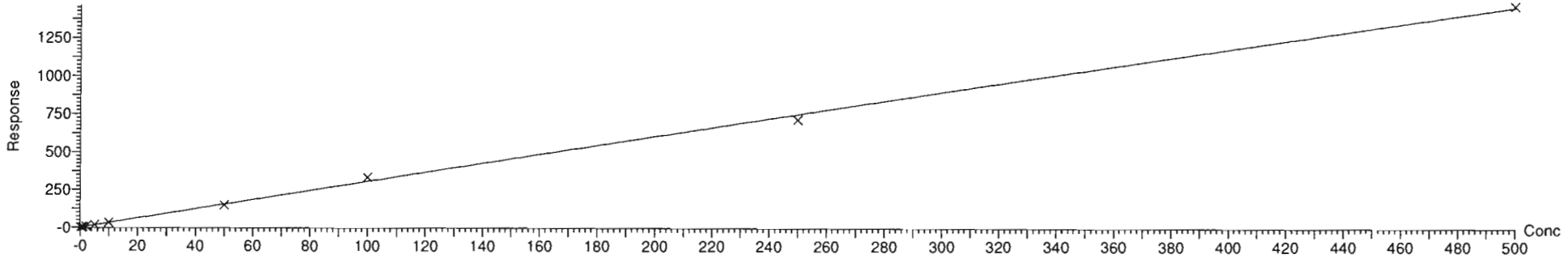
Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

Last Altered: Friday, February 21, 2020 11:03:18 Pacific Standard Time
Printed: Friday, February 21, 2020 11:17:00 Pacific Standard Time

Compound name: PFHpA
Coefficient of Determination: R^2 = 0.999188
Calibration curve: -0.000176223 * x^2 + 1.2409 * x + 0.0769235
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



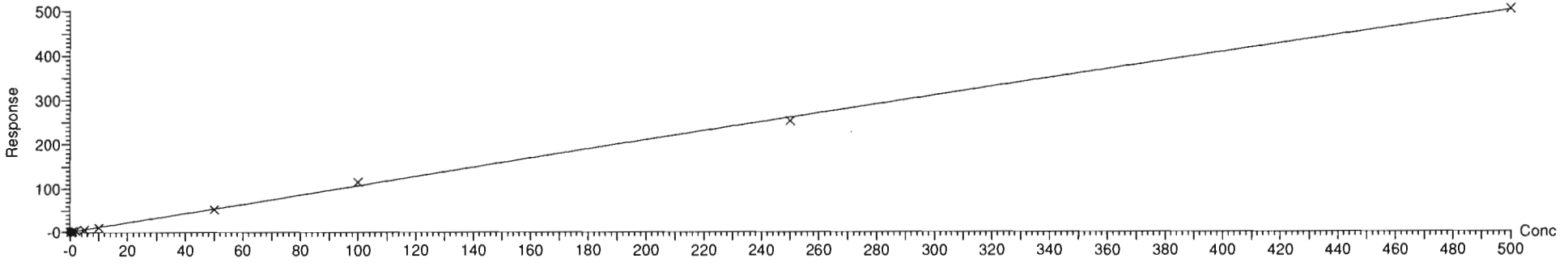
Compound name: ADONA
Coefficient of Determination: R^2 = 0.998312
Calibration curve: -0.000366708 * x^2 + 3.09045 * x + 0.169928
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



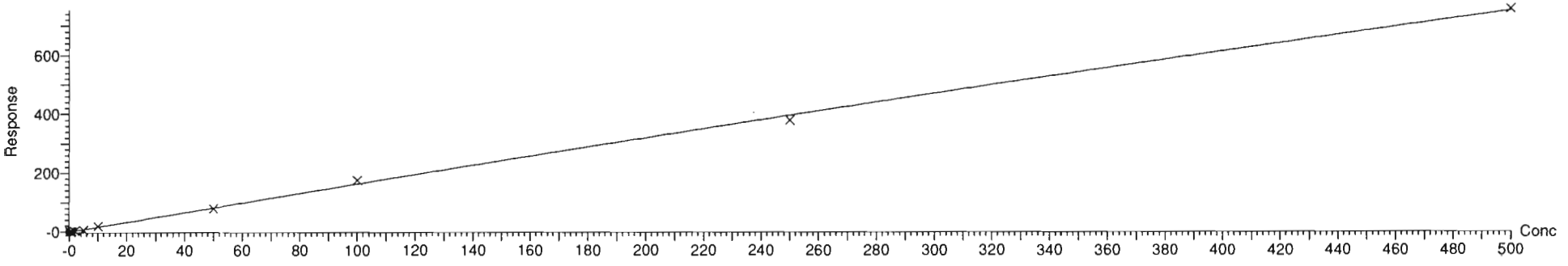
Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

Last Altered: Friday, February 21, 2020 15:57:11 Pacific Standard Time
Printed: Friday, February 21, 2020 16:03:54 Pacific Standard Time

Compound name: L-PFHxS
Coefficient of Determination: R^2 = 0.998709
Calibration curve: -0.000159606 * x^2 + 1.08217 * x + 0.312795
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



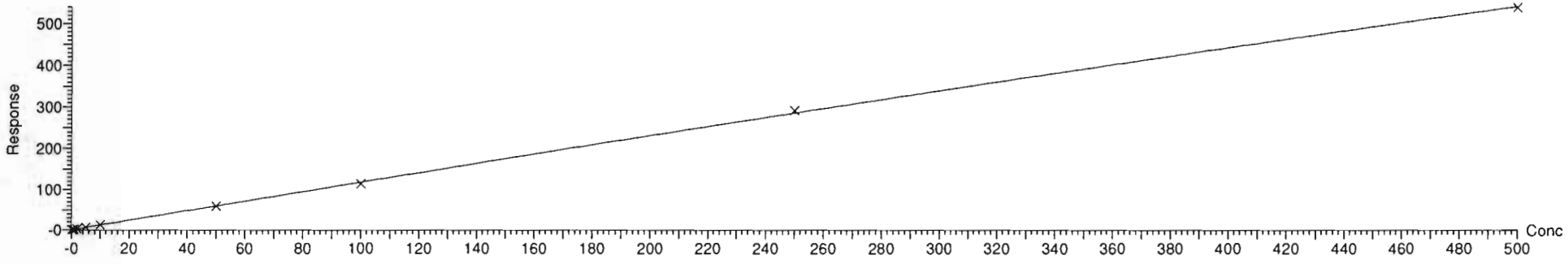
Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.998365
Calibration curve: -0.00033273 * x^2 + 1.66674 * x + -0.842375
Response type: Internal Std (Ref 63), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



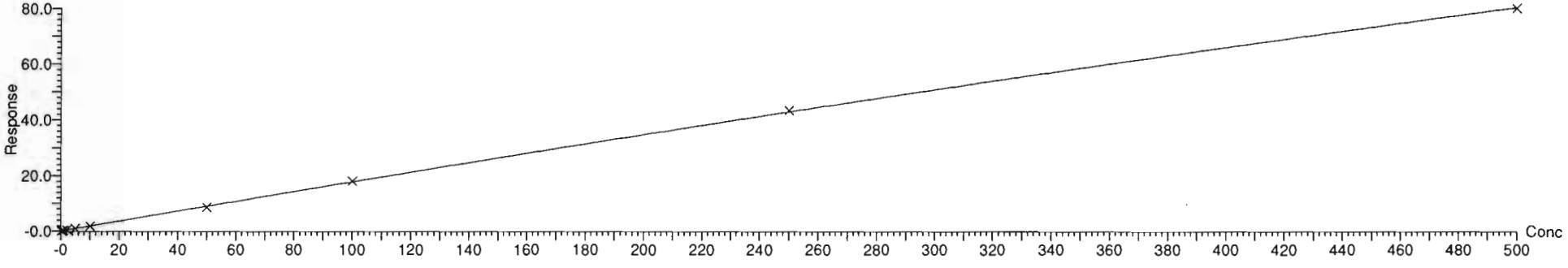
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Last Altered: Friday, February 21, 2020 11:03:18 Pacific Standard Time
Printed: Friday, February 21, 2020 11:17:00 Pacific Standard Time

Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.999639
Calibration curve: -0.000239807 * x^2 + 1.20196 * x + 0.0927861
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



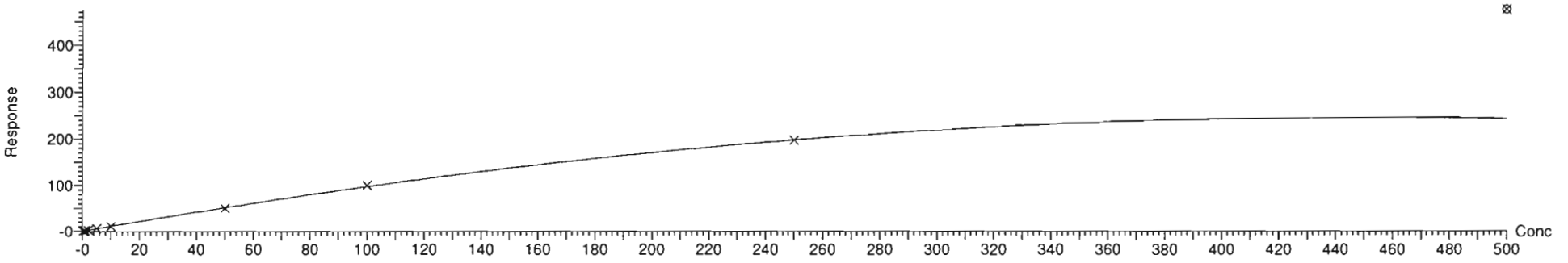
Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999604
Calibration curve: -4.3388e-005 * x^2 + 0.182512 * x + -0.0109277
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



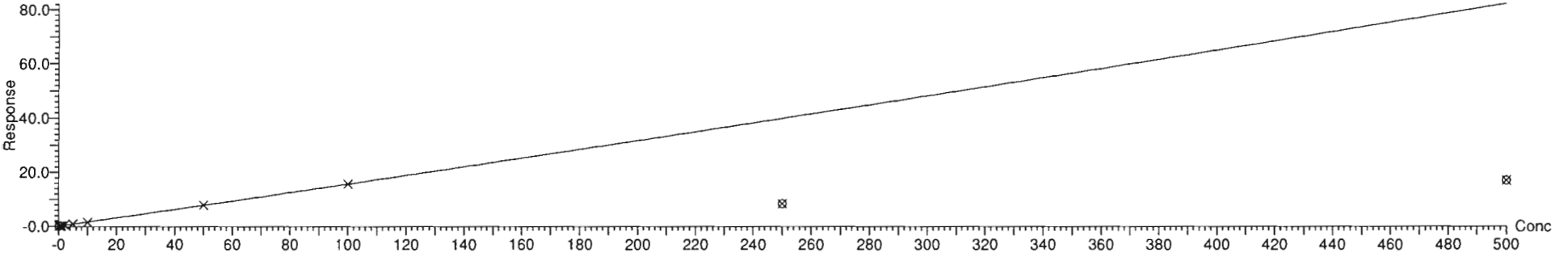
Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

Last Altered: Friday, February 21, 2020 12:00:58 Pacific Standard Time
Printed: Friday, February 21, 2020 12:04:35 Pacific Standard Time

Compound name: PFHpS
Coefficient of Determination: R^2 = 0.999329
Calibration curve: -0.00121734 * x^2 + 1.09408 * x + -0.0589565
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



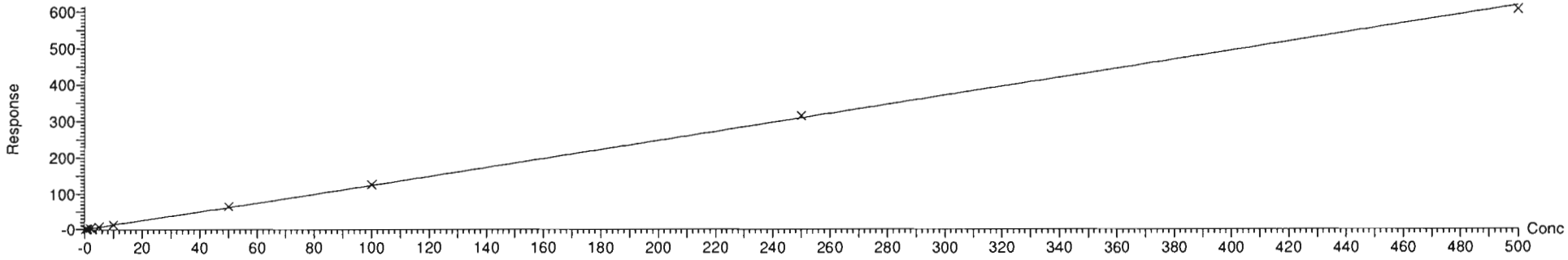
Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.998839
Calibration curve: 2.04383e-005 * x^2 + 0.154102 * x + 0.00331171
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



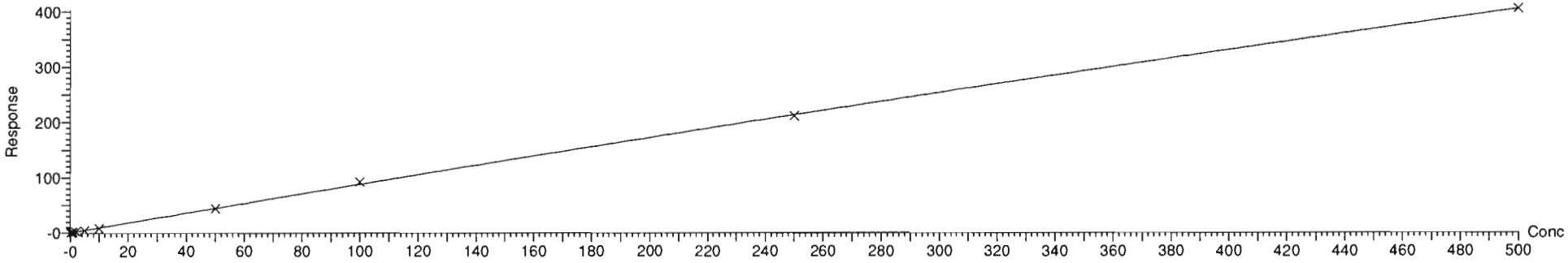
Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

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Compound name: PFNA
Correlation coefficient: r = 0.999754, r^2 = 0.999507
Calibration curve: 1.23155 * x + 0.0599721
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



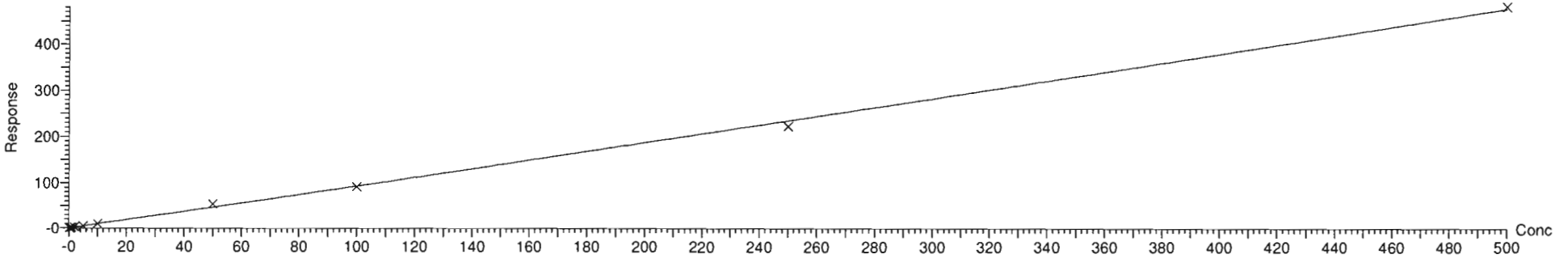
Compound name: PFOSA
Coefficient of Determination: R^2 = 0.999278
Calibration curve: -0.00017731 * x^2 + 0.897342 * x + -0.0167461
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



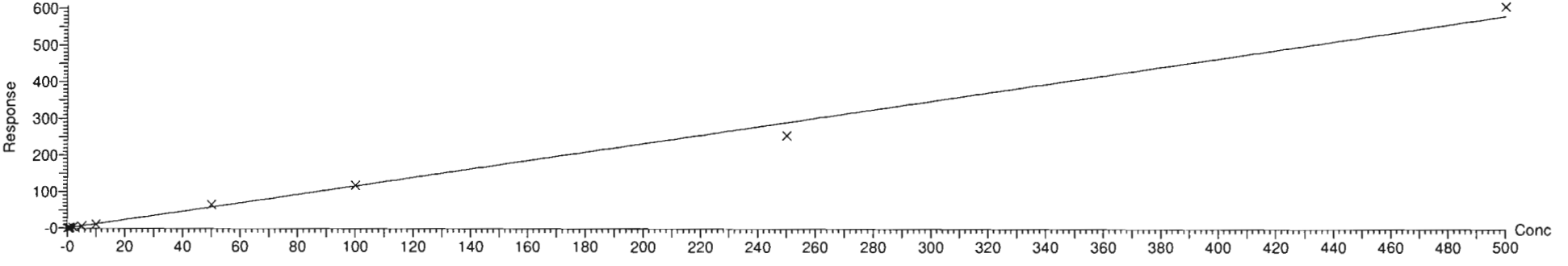
Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

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Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.997752
Calibration curve: 5.77565e-005 * x^2 + 0.92504 * x + -0.00276322
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



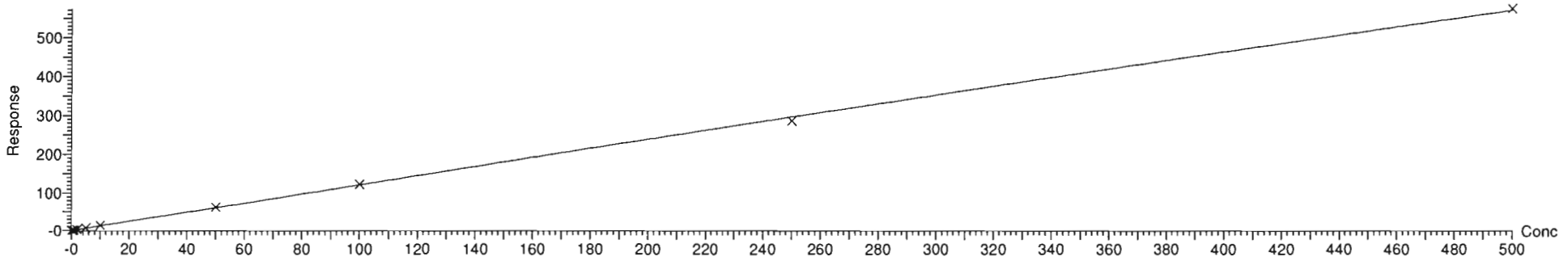
Compound name: 9Cl-PF30NS
Correlation coefficient: r = 0.996874, r^2 = 0.993759
Calibration curve: 1.16071 * x + -0.00606279
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



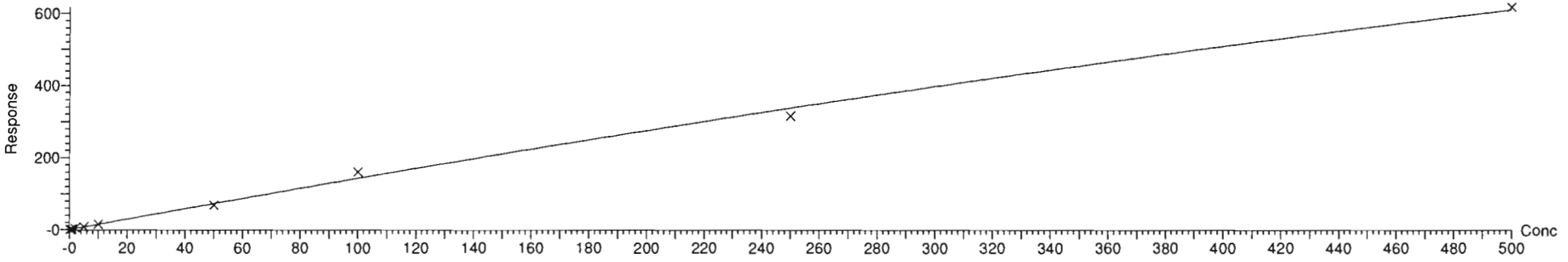
Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

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Compound name: PFDA
Coefficient of Determination: R^2 = 0.999172
Calibration curve: -0.000175497 * x^2 + 1.22701 * x + 0.0730403
Response type: Internal Std (Ref 73), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



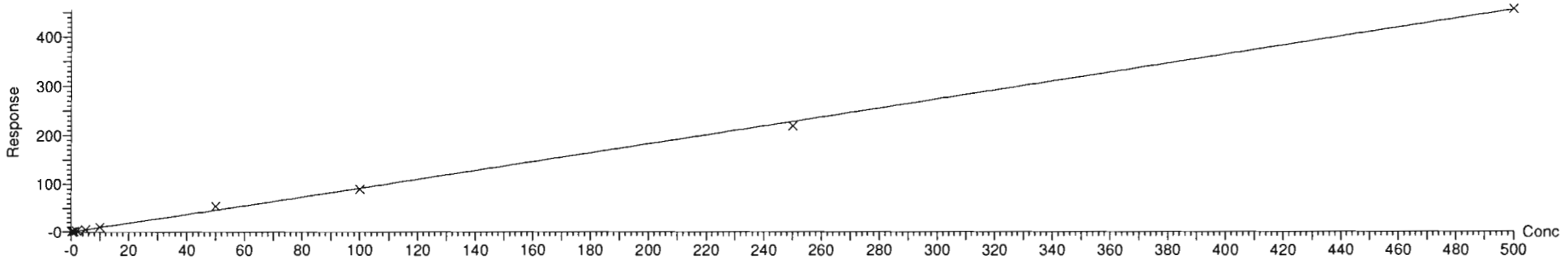
Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.995942
Calibration curve: -0.000521597 * x^2 + 1.48034 * x + -0.217508
Response type: Internal Std (Ref 75), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



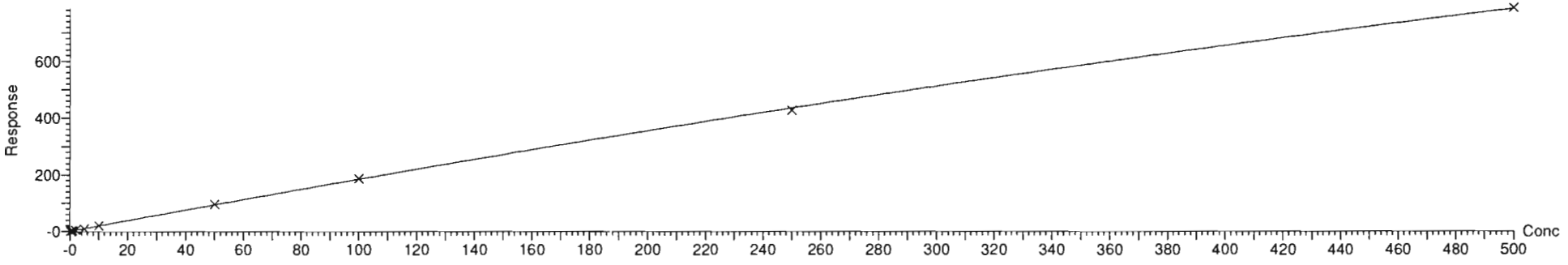
Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

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Compound name: PFNS
Correlation coefficient: r = 0.998736, r^2 = 0.997473
Calibration curve: 0.91038 * x + 0.0726293
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Compound name: L-MeFOSAA
Coefficient of Determination: R^2 = 0.999717
Calibration curve: -0.000683729 * x^2 + 1.90832 * x + -0.0059177
Response type: Internal Std (Ref 77), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



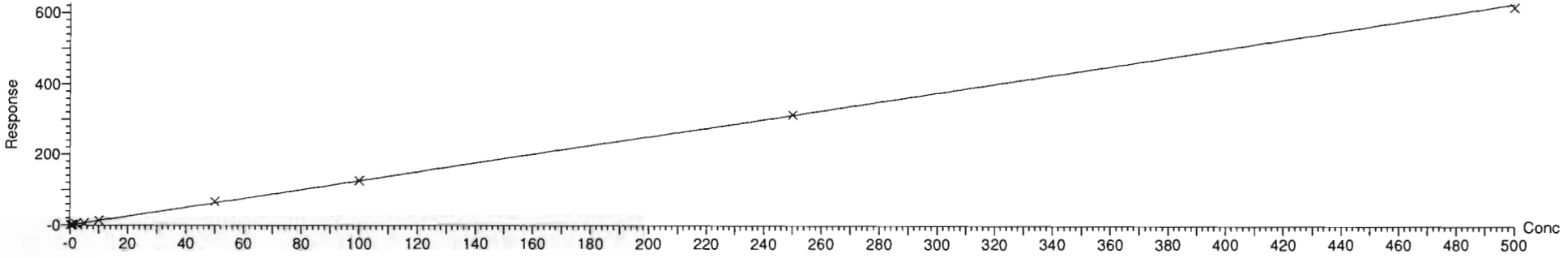
Vista Analytical Laboratory Q1

Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

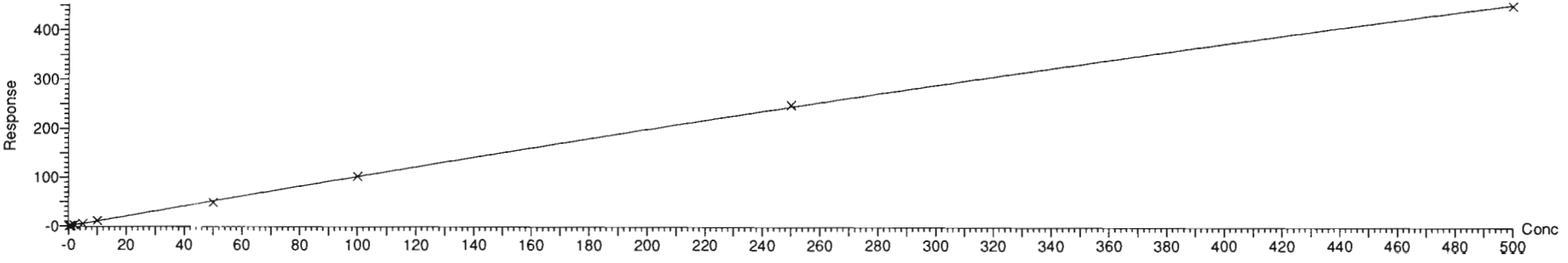
Last Altered: Friday, February 21, 2020 11:03:18 Pacific Standard Time
Printed: Friday, February 21, 2020 11:18:00 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022020.mdb 21 Feb 2020 08:56:55
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-20-20.cdb 21 Feb 2020 11:03:18

Compound name: L-EtFOSAA
Correlation coefficient: r = 0.999675, r^2 = 0.999351
Calibration curve: 1.25302 * x + 0.0748
Response type: Internal Std (Ref 81), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



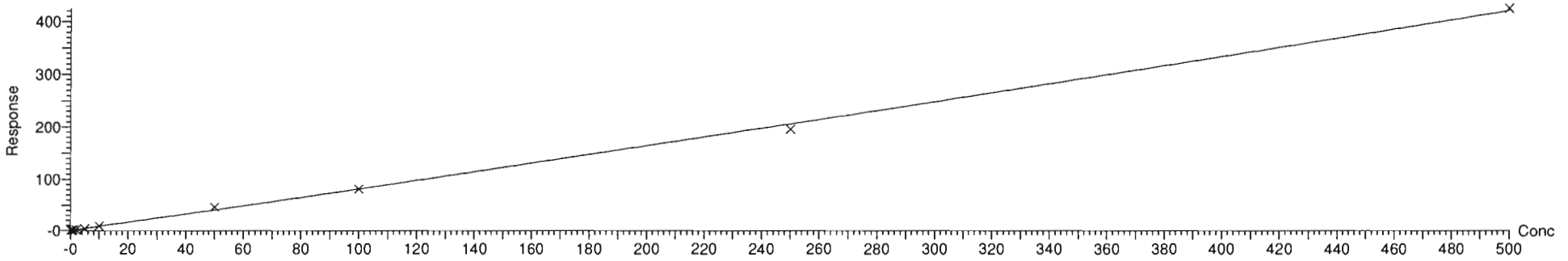
Compound name: PFUdA
Coefficient of Determination: R^2 = 0.999590
Calibration curve: -0.000296059 * x^2 + 1.05298 * x + -0.0124351
Response type: Internal Std (Ref 79), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



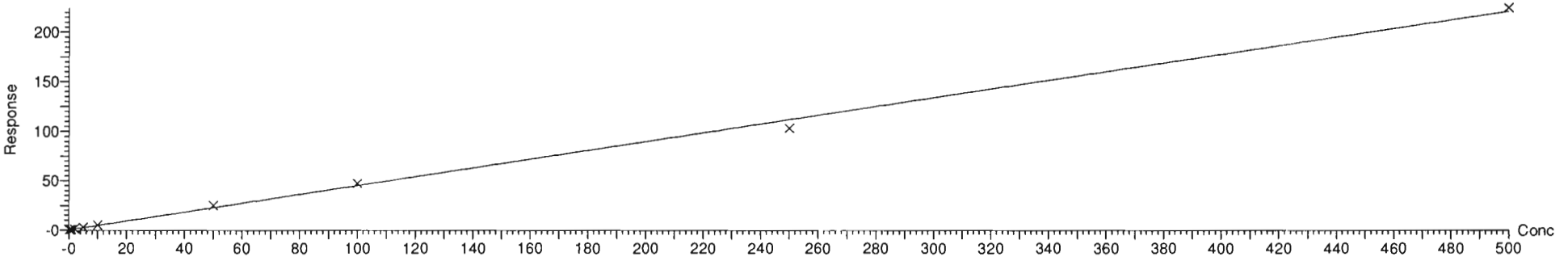
Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

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Compound name: PFDS
Coefficient of Determination: R^2 = 0.998274
Calibration curve: 7.33697e-005 * x^2 + 0.804163 * x + 0.0329009
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Compound name: 11Cl-PF30UdS
Coefficient of Determination: R^2 = 0.996838
Calibration curve: -1.89567e-005 * x^2 + 0.451153 * x + 0.0424061
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

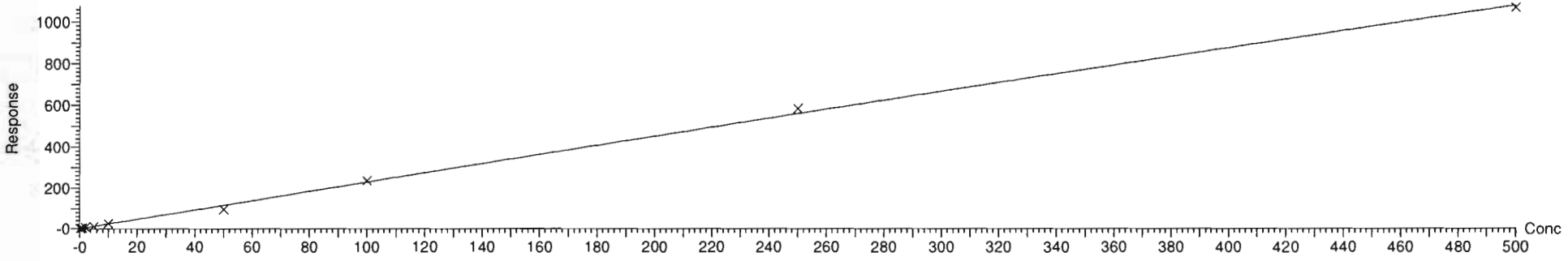


Vista Analytical Laboratory Q1

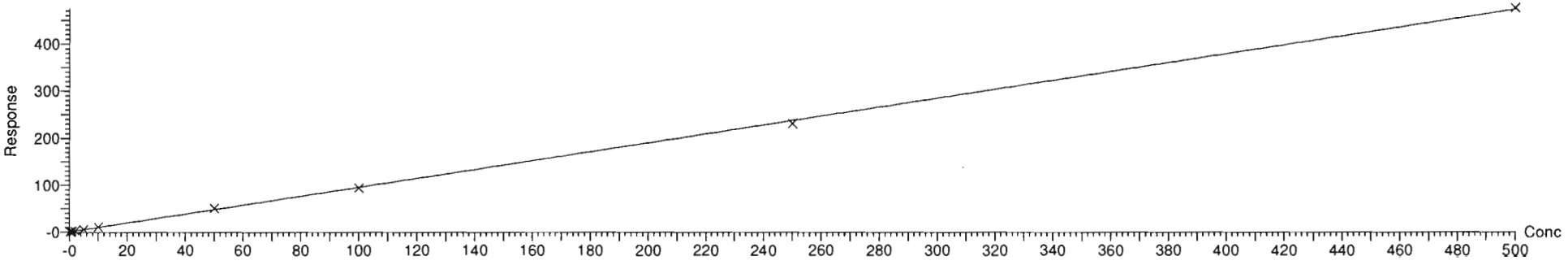
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Compound name: 10:2 FTS
Coefficient of Determination: R^2 = 0.997215
Calibration curve: -0.000324143 * x^2 + 2.31829 * x + -0.102541
Response type: Internal Std (Ref 85), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



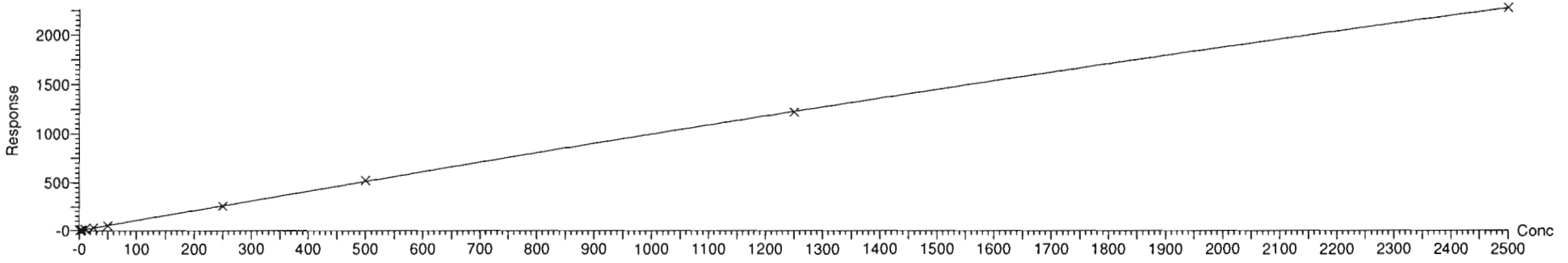
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999142
Calibration curve: -1.0619e-005 * x^2 + 0.950464 * x + 0.134975
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



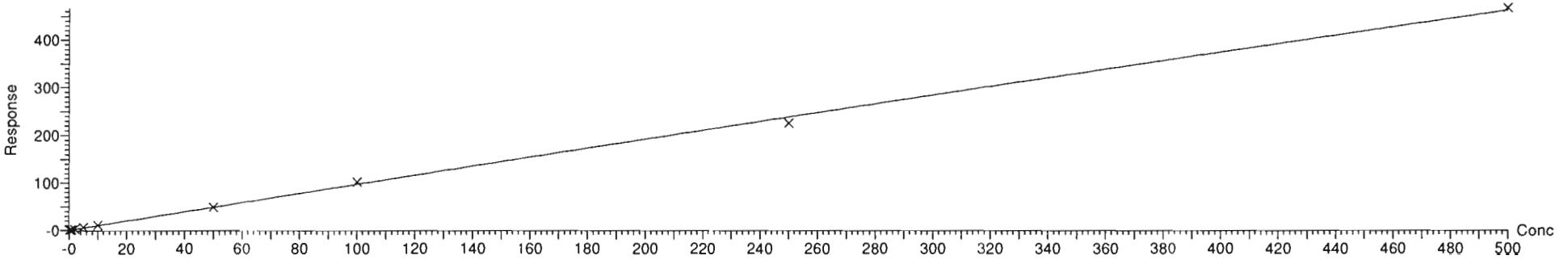
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Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.999763
Calibration curve: -5.62949e-005 * x^2 + 1.04899 * x + 0.147684
Response type: Internal Std (Ref 87), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



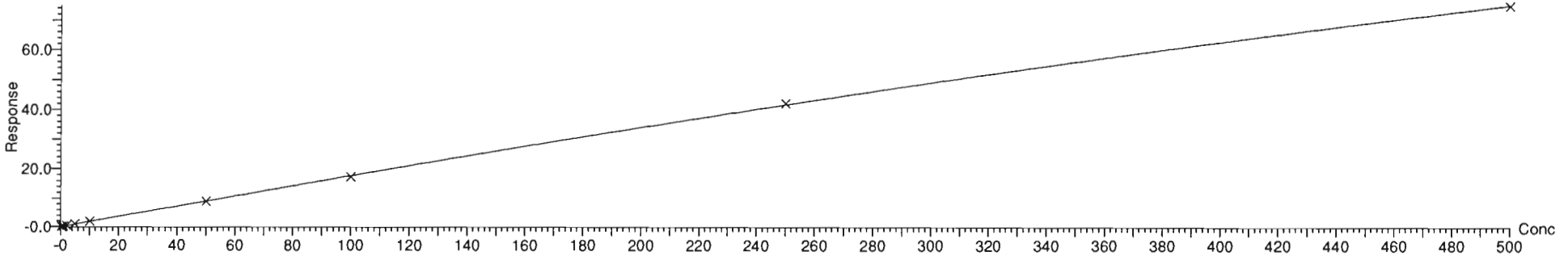
Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.998208
Calibration curve: -0.000115356 * x^2 + 0.981525 * x + 0.109726
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



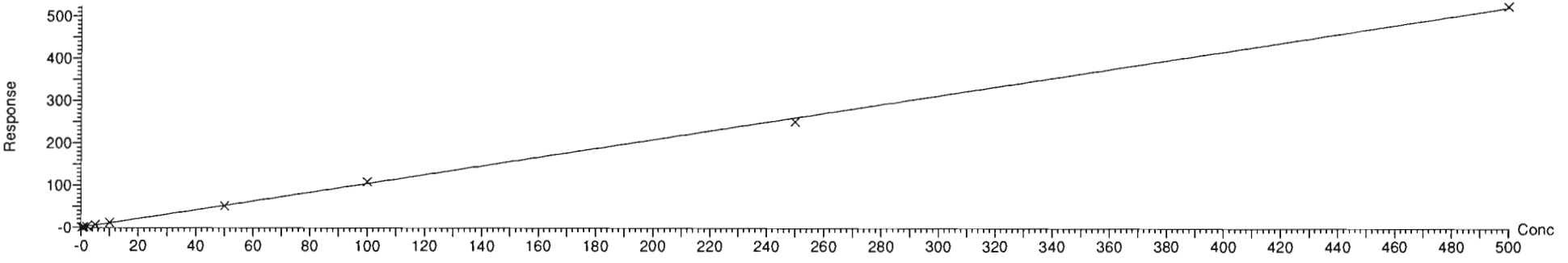
Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

Last Altered: Friday, February 21, 2020 11:03:18 Pacific Standard Time
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Compound name: PFDoS
Coefficient of Determination: R^2 = 0.999656
Calibration curve: -6.64808e-005 * x^2 + 0.183129 * x + 0.000839227
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



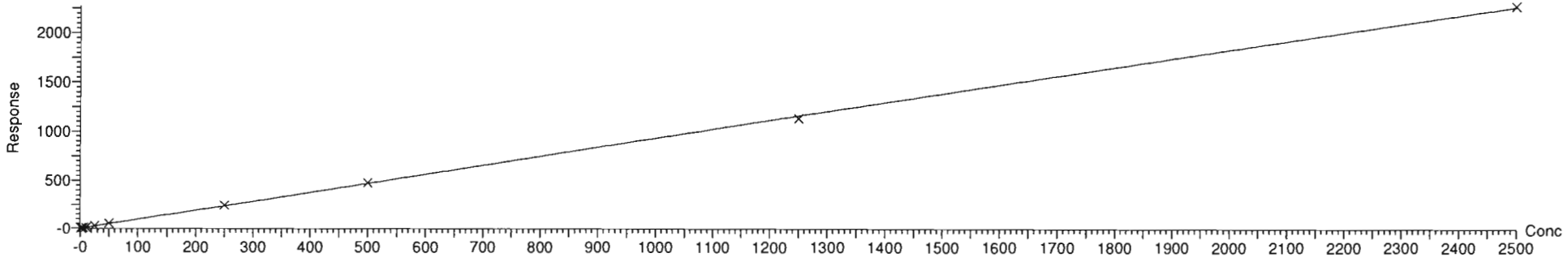
Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.998923
Calibration curve: -2.14494e-006 * x^2 + 1.04256 * x + 0.0589962
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



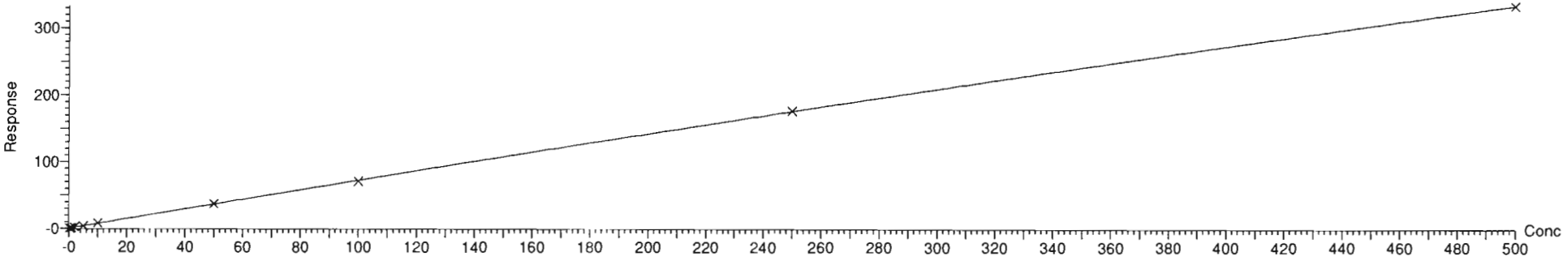
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Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999544
Calibration curve: -1.70702e-005 * x^2 + 0.94824 * x + 0.0530371
Response type: Internal Std (Ref 91), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



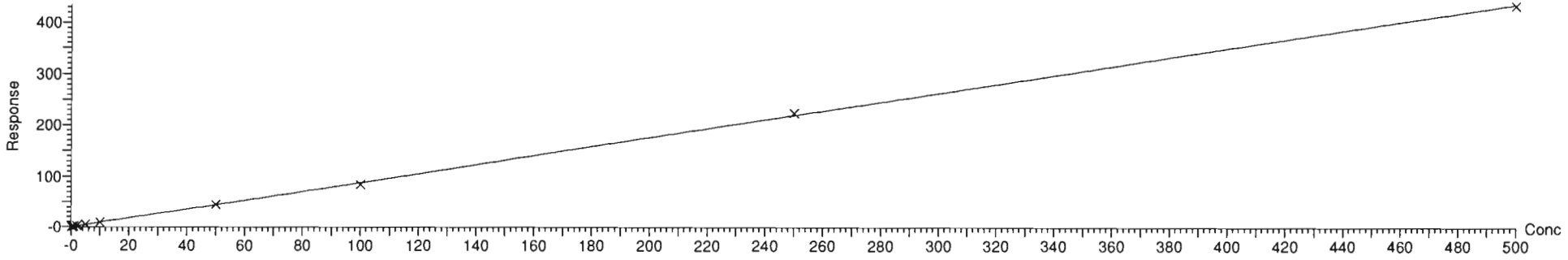
Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999886
Calibration curve: -0.00014477 * x^2 + 0.739976 * x + 0.111894
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



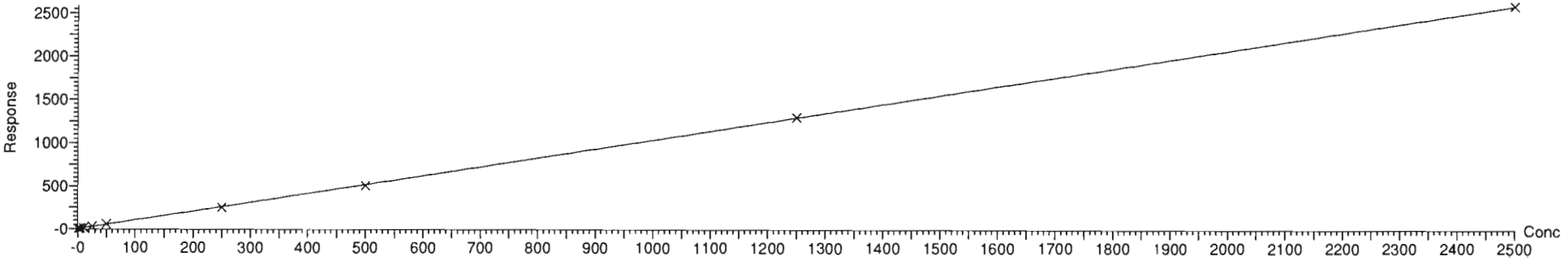
Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

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Compound name: PFODA
Coefficient of Determination: R^2 = 0.999676
Calibration curve: -2.12208e-005 * x^2 + 0.882141 * x + 0.00318847
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



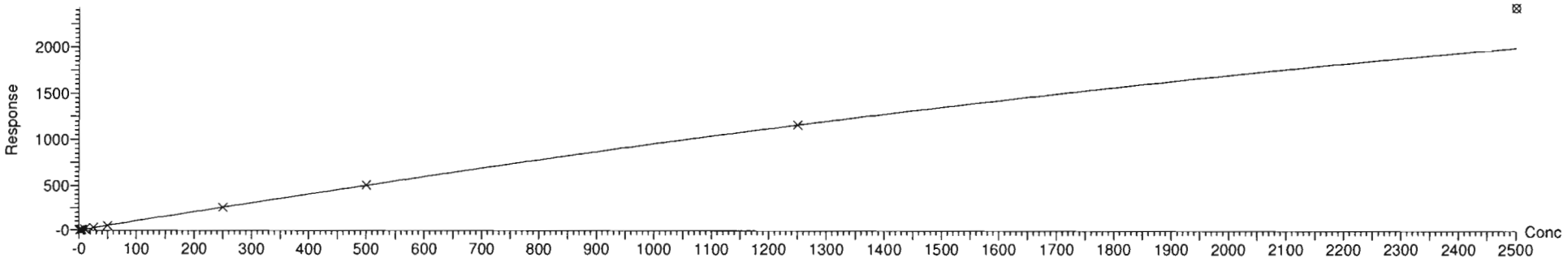
Compound name: N-MeFOSE
Correlation coefficient: r = 0.999853, r^2 = 0.999705
Calibration curve: 1.03364 * x + 0.462802
Response type: Internal Std (Ref 95), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-CRV.qld

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Compound name: N-EtFOSE
Coefficient of Determination: R^2 = 0.999646
Calibration curve: -0.000104993 * x^2 + 1.06013 * x + -0.0832109
Response type: Internal Std (Ref 97), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Vista Analytical Laboratory

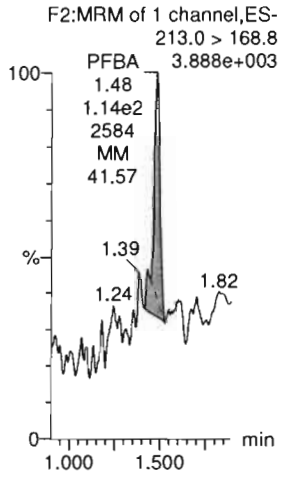
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Last Altered: Friday, February 21, 2020 10:14:20 Pacific Standard Time
Printed: Friday, February 21, 2020 10:14:25 Pacific Standard Time

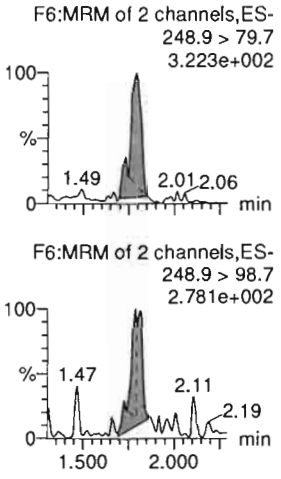
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Calibration: 21 Feb 2020 10:14:20

Name: 200220P1-3, Date: 20-Feb-2020, Time: 17:45:02, ID: ST200220P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

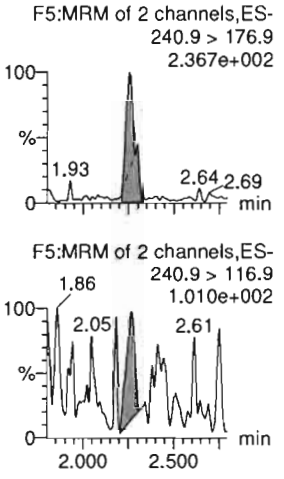
PFBA



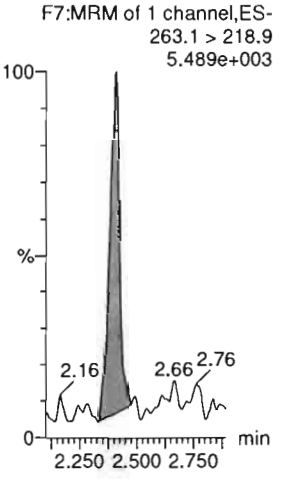
PFPrS



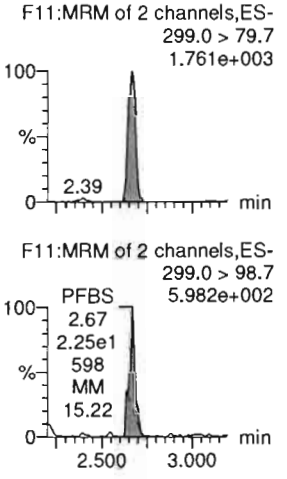
3:3 FTCA



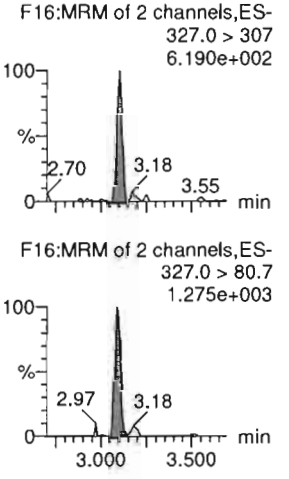
PFPeA



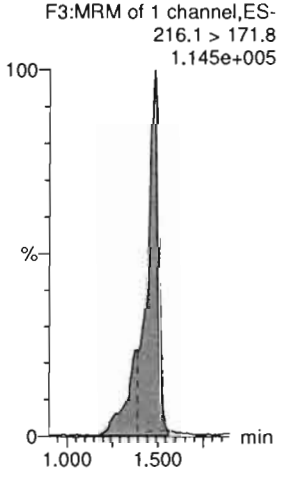
PFBS



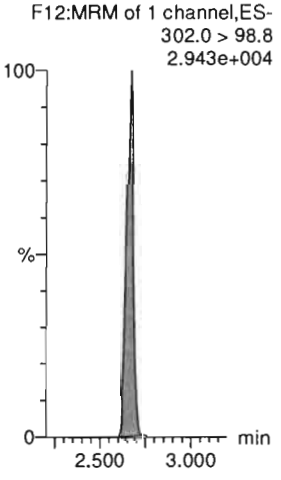
4:2 FTS



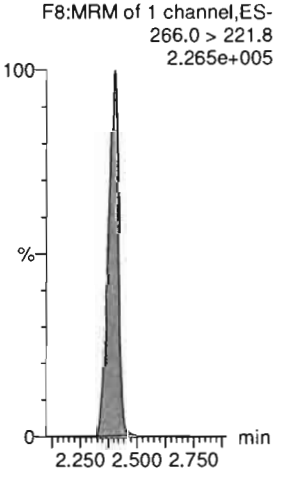
13C3-PFBA-EIS



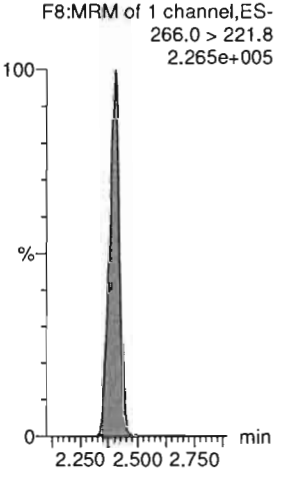
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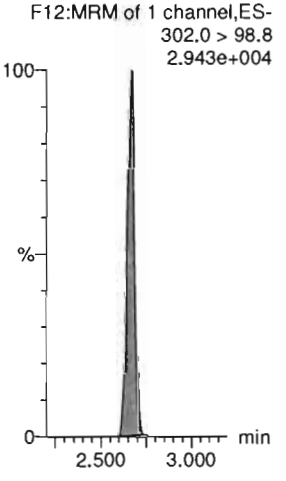
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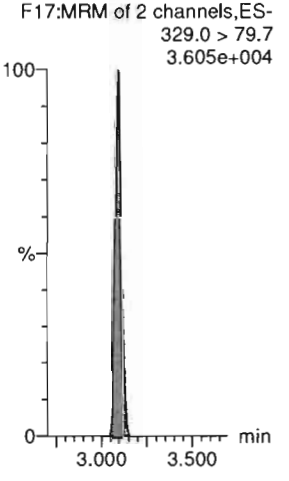
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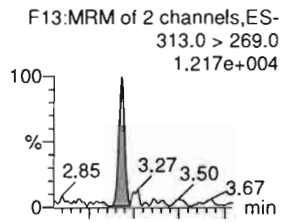


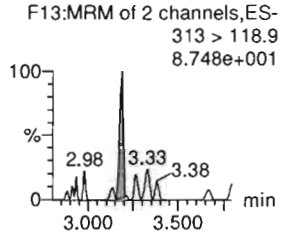
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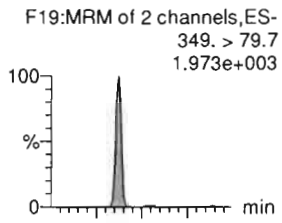
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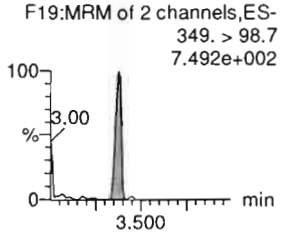
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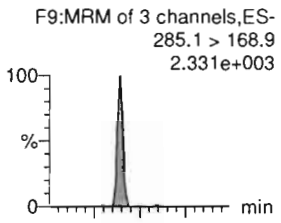


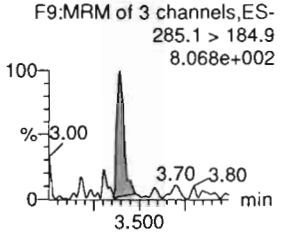
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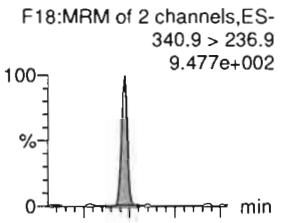


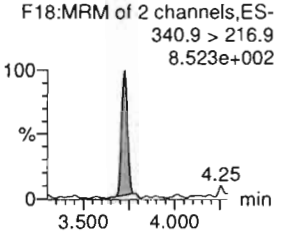
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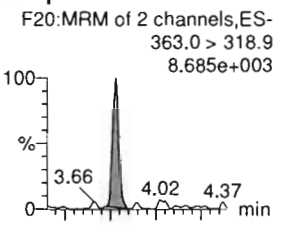


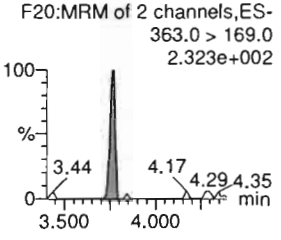
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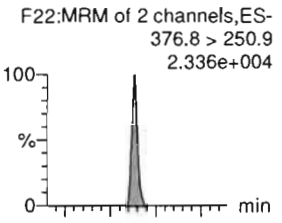


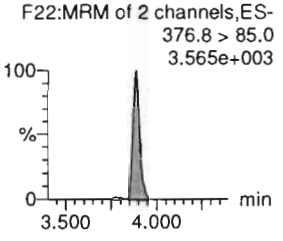
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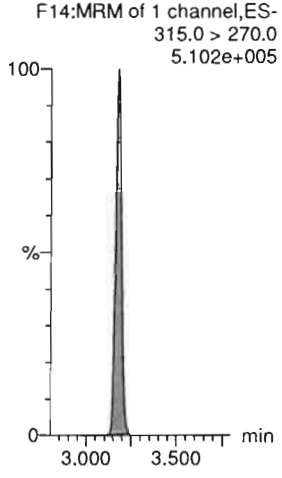


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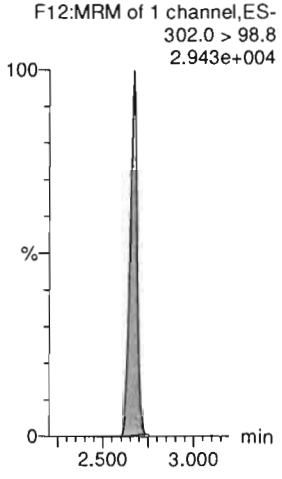




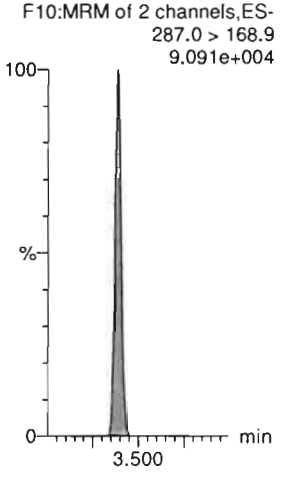
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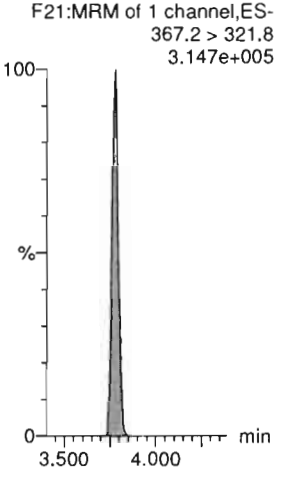
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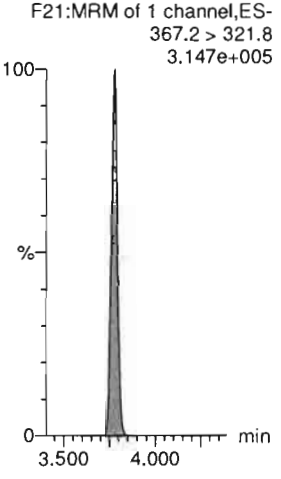
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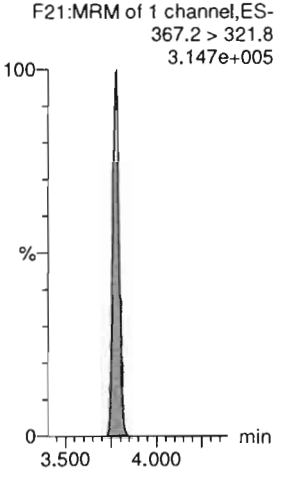
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13C4-PFHpA-EIS



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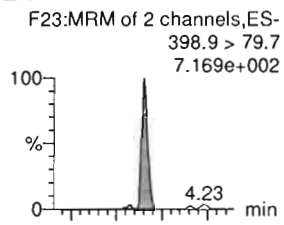


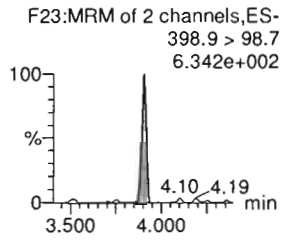
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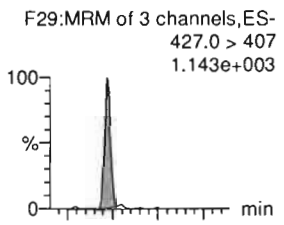
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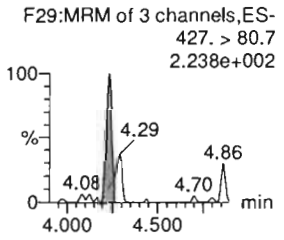
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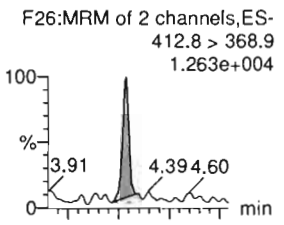


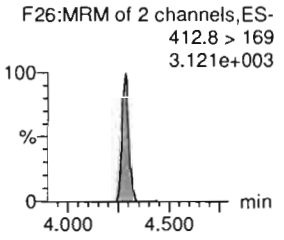
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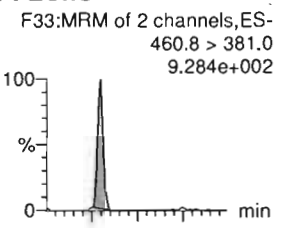


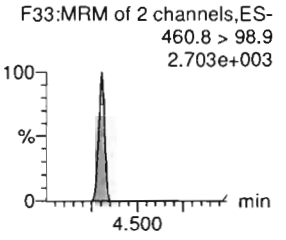
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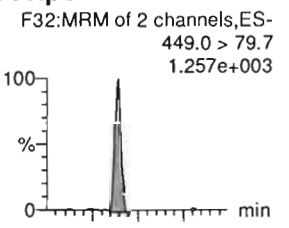


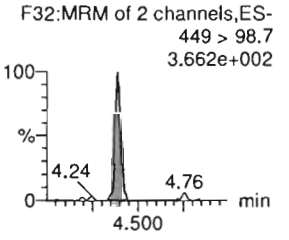
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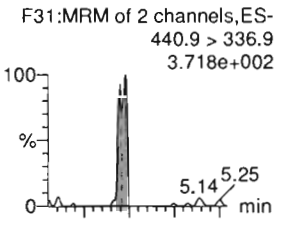


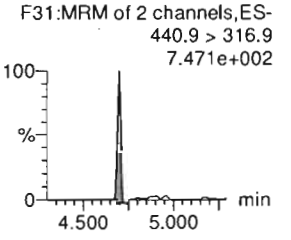
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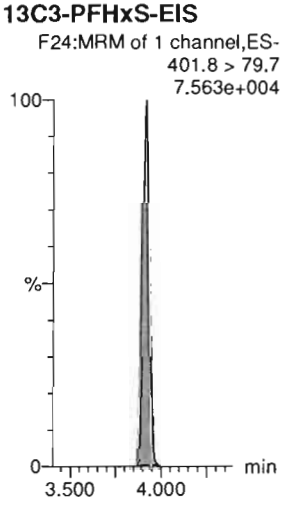


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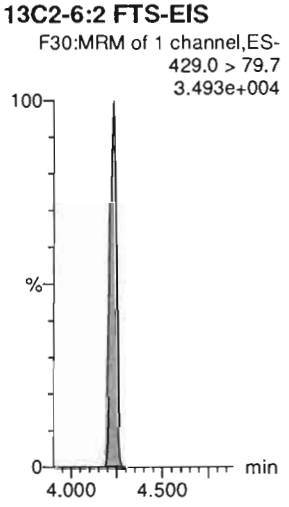




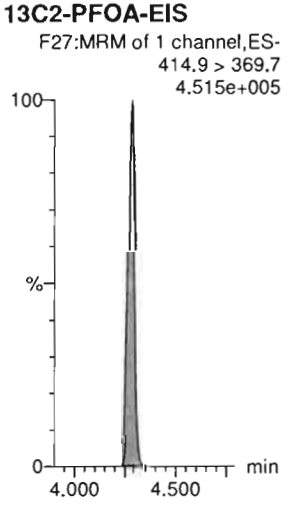
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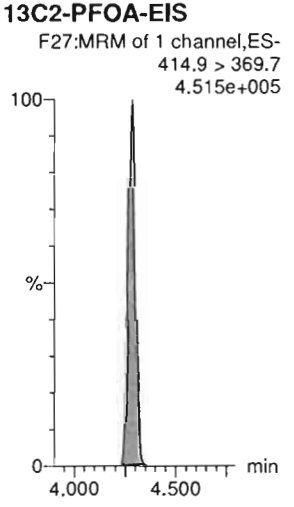
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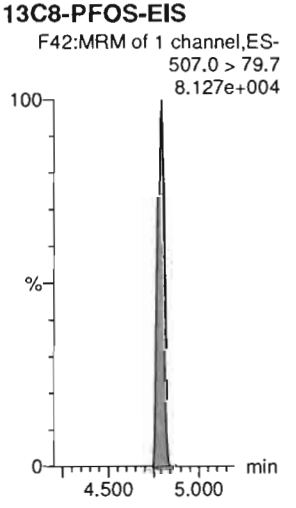
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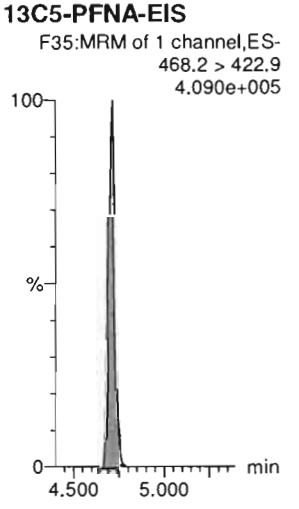
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13C8-PFOS-EIS



13C5-PFNA-EIS

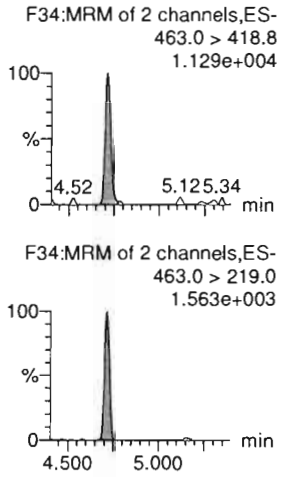


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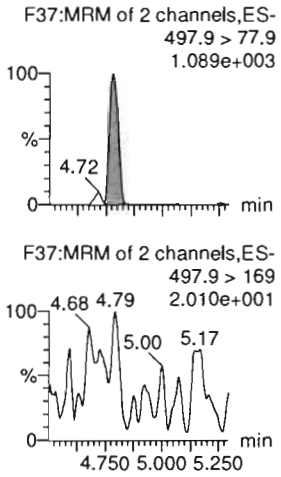
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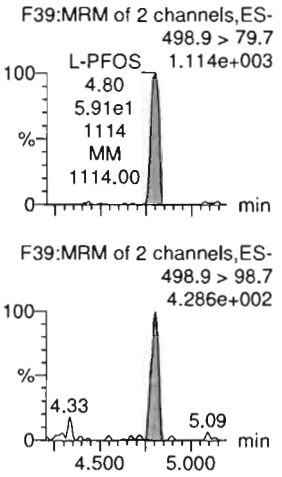
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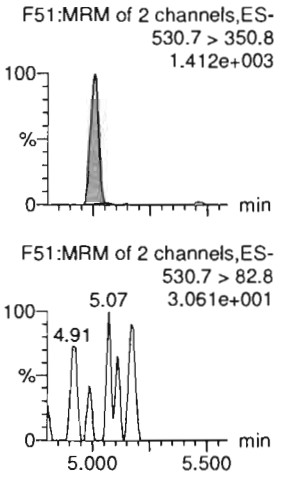
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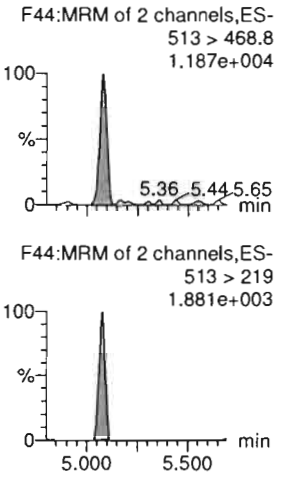
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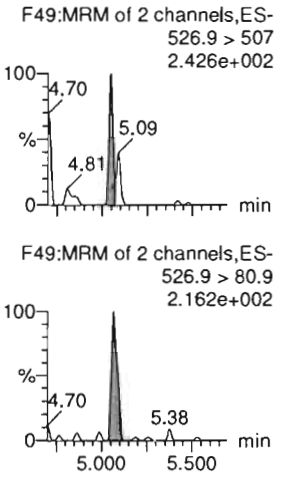
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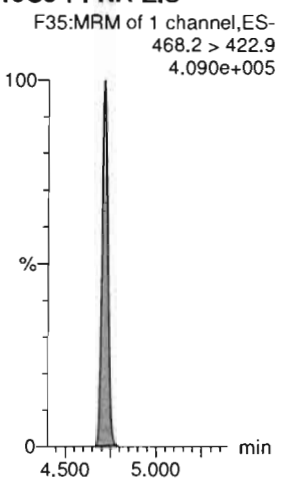
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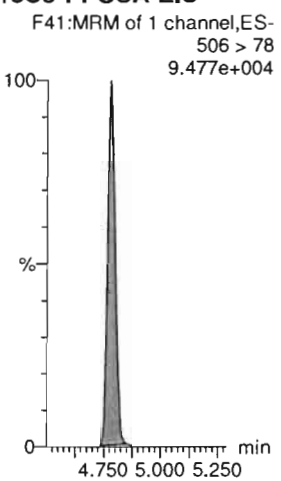
8:2 FTS



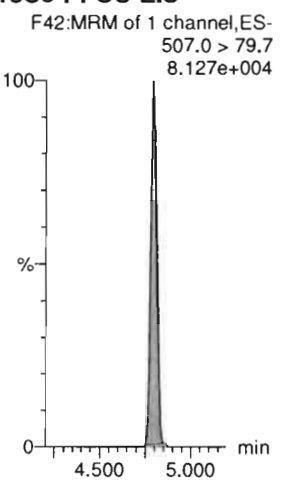
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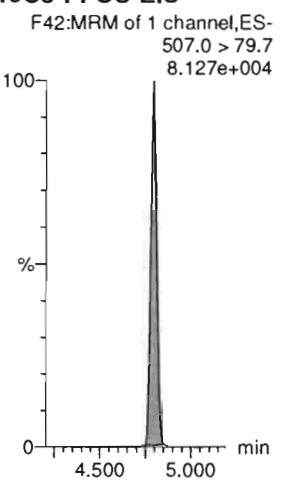
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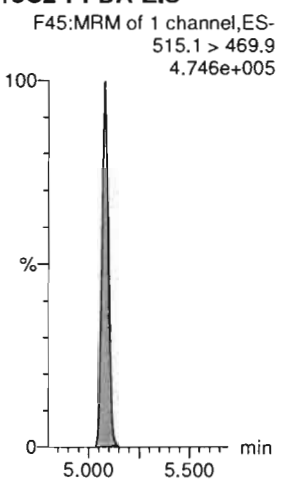
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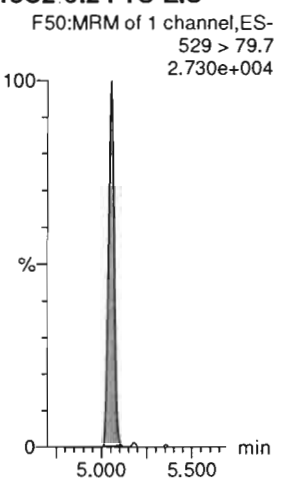
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13C2-PFDA-EIS



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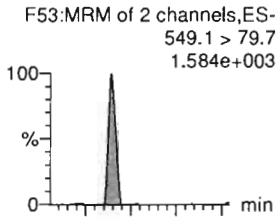


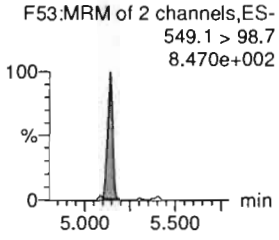
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Printed: Friday, February 21, 2020 09:00:36 Pacific Standard Time

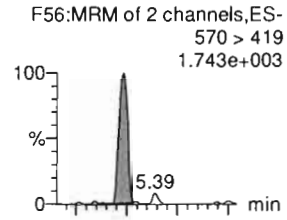
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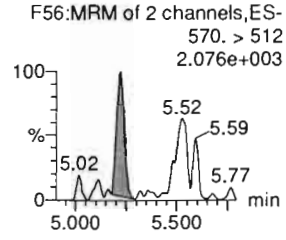
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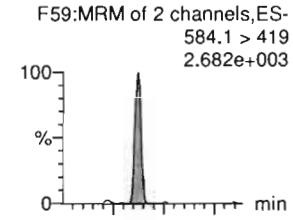


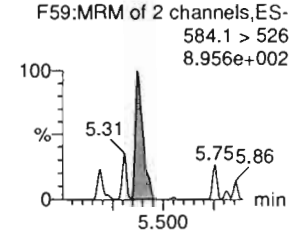
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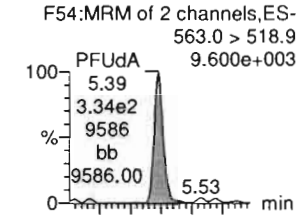


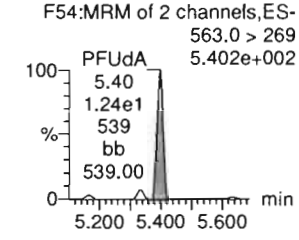
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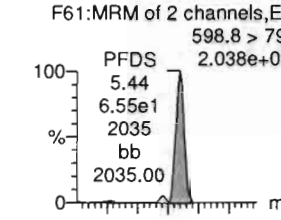


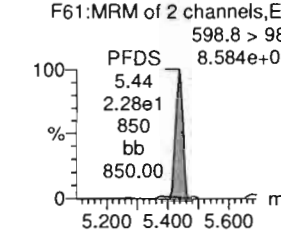
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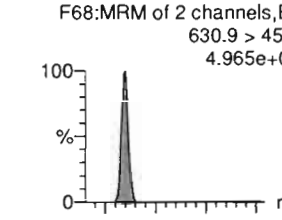


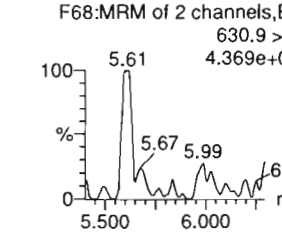
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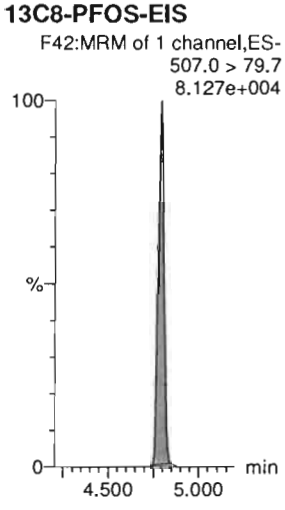


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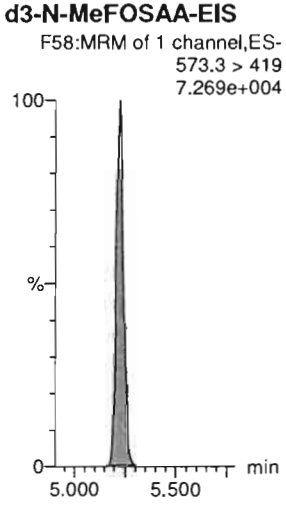




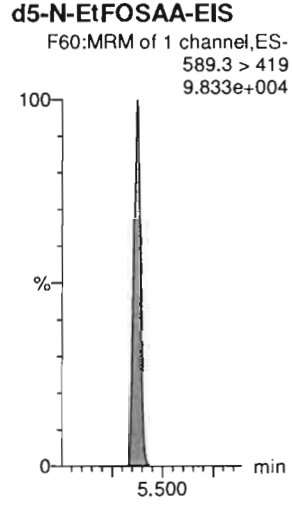
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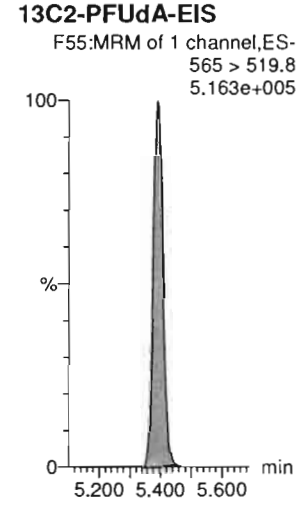
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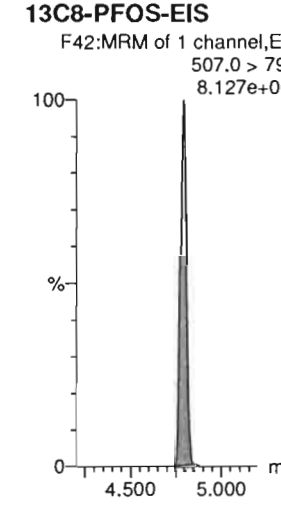
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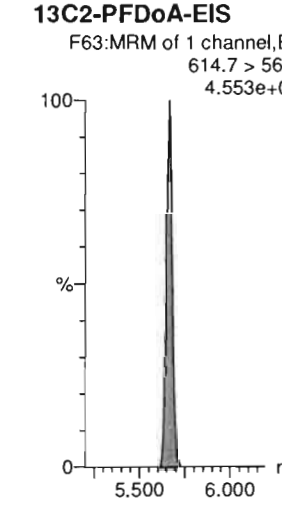
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13C8-PFOS-EIS



13C2-PFDoA-EIS

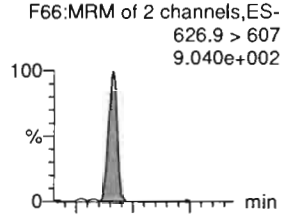


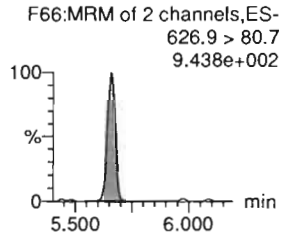
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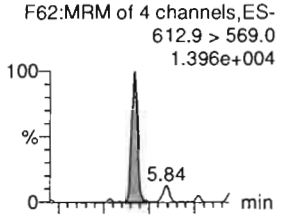
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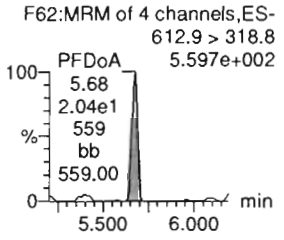
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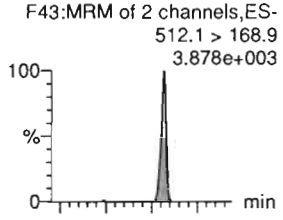


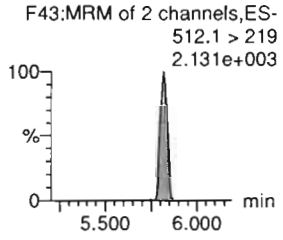
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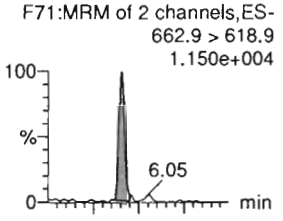


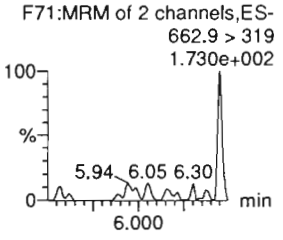
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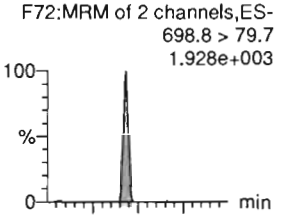


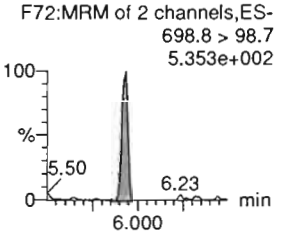
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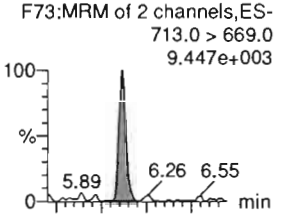


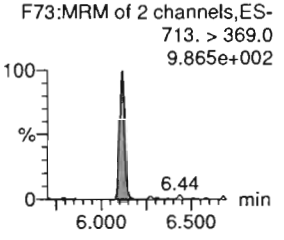
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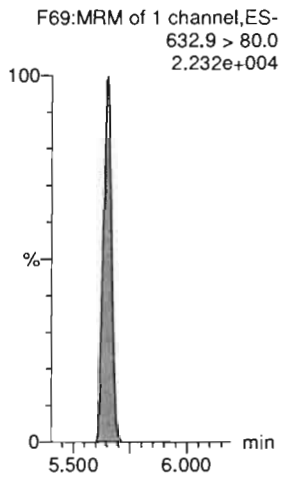


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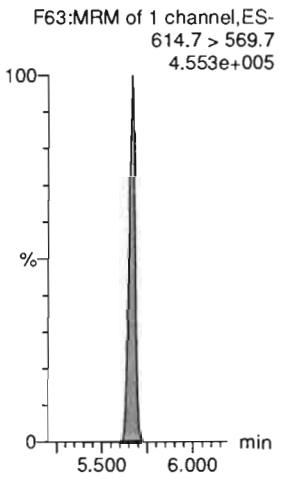




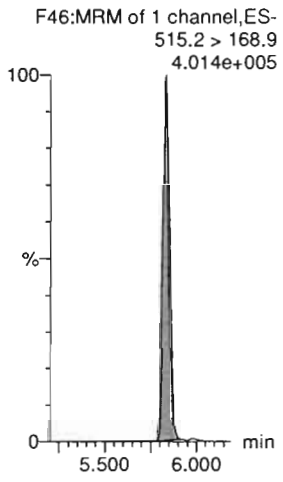
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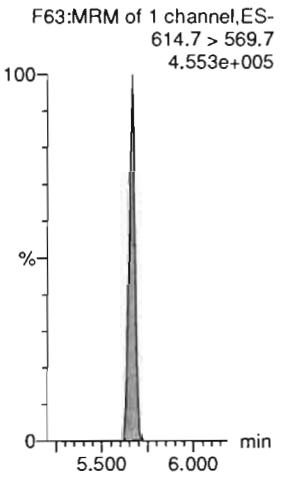
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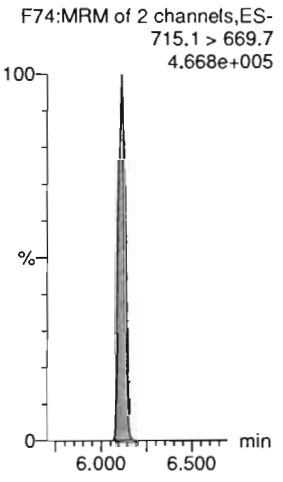
d3-N-MeFOSA-EIS



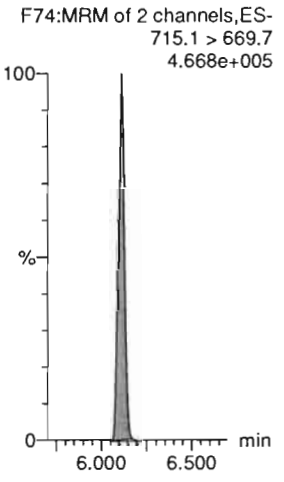
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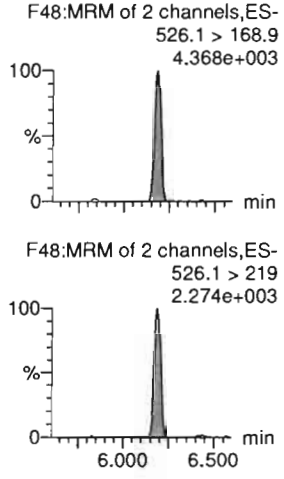


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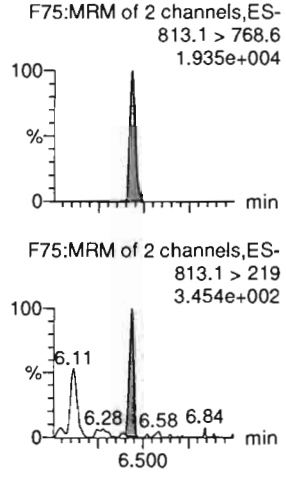
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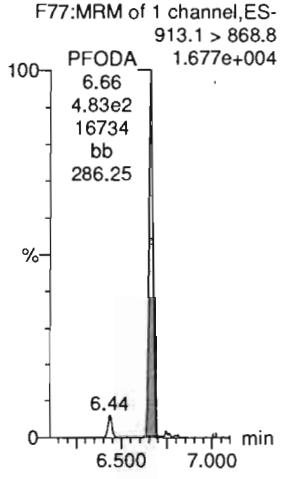
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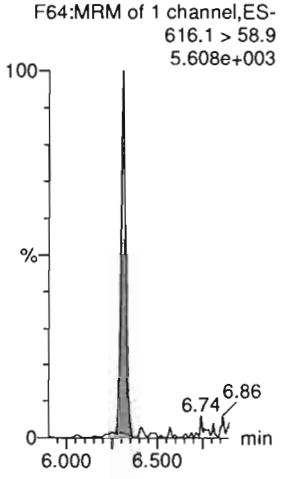
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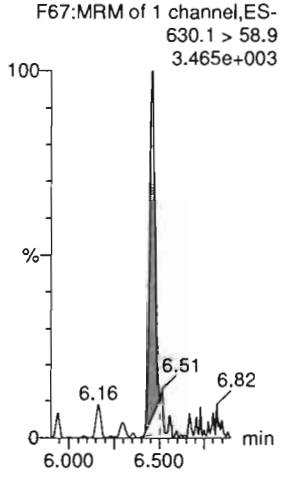
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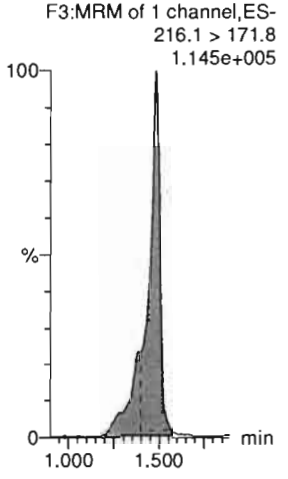
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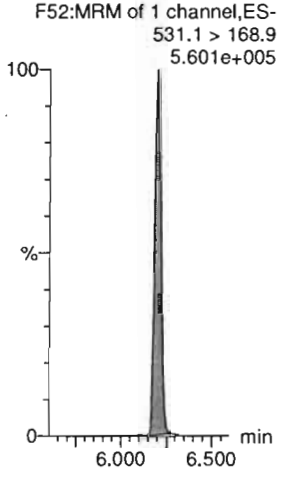
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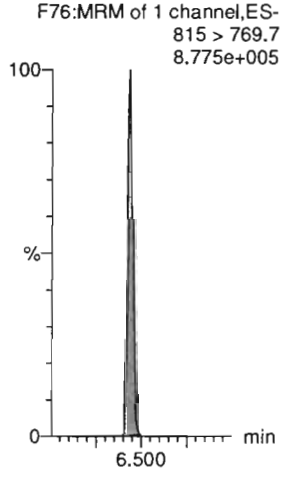
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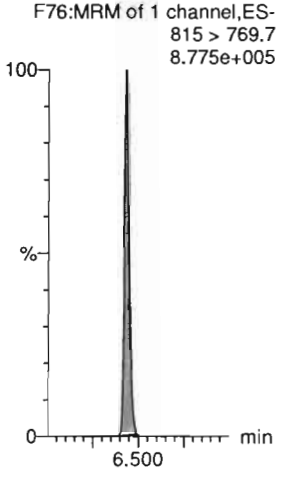
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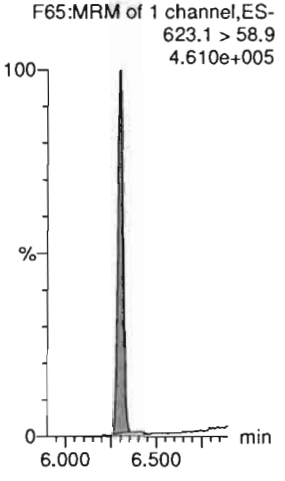
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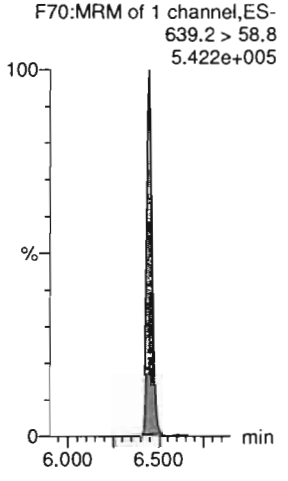
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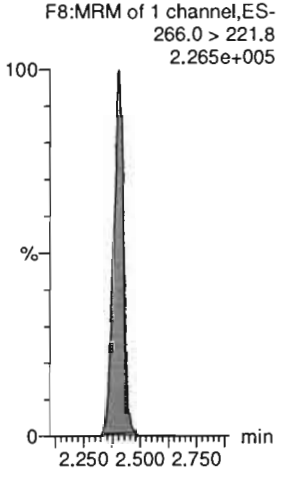
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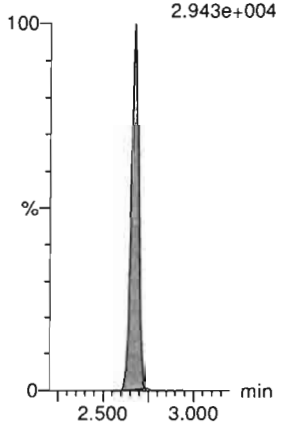


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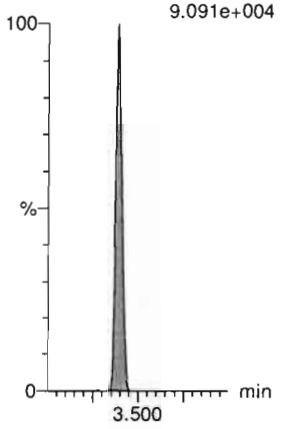
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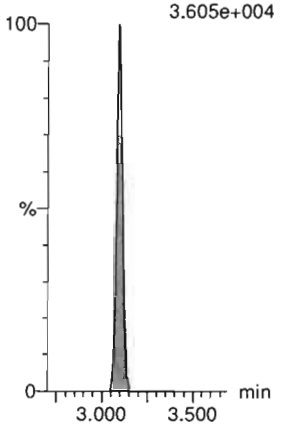
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F12:MRM of 1 channel,ES-
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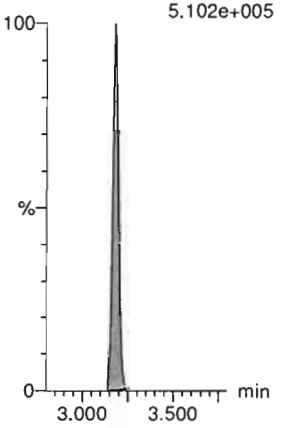
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
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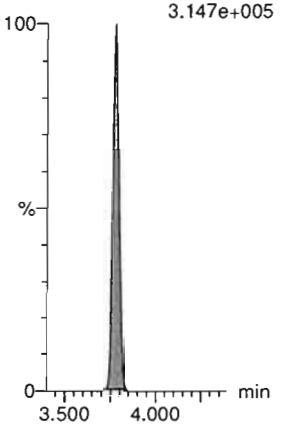
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.605e+004



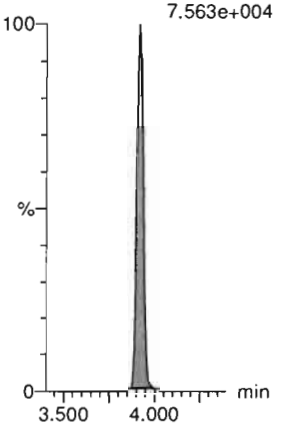
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.102e+005



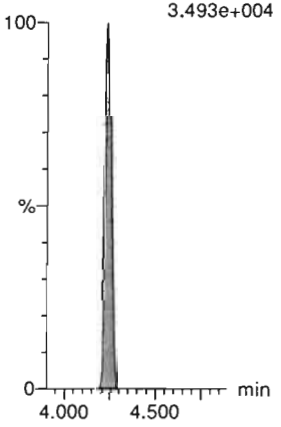
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.147e+005



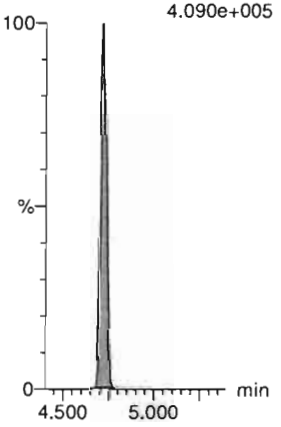
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.563e+004



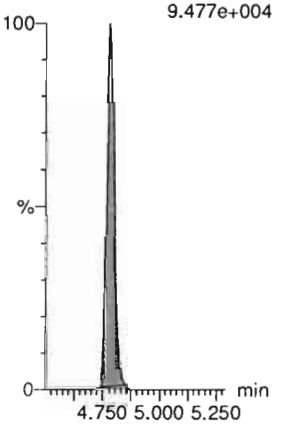
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.493e+004



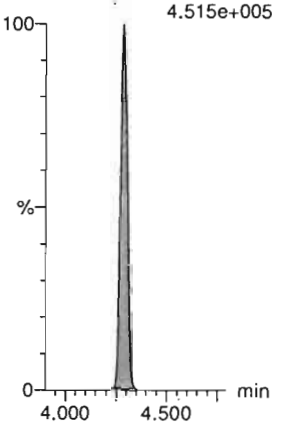
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.090e+005



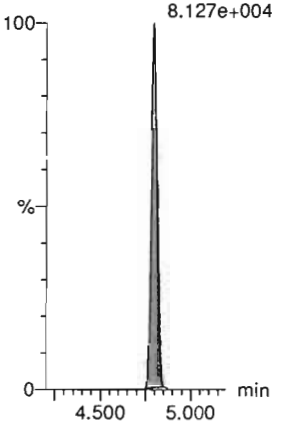
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.477e+004



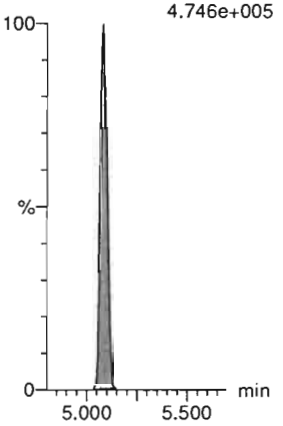
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.515e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.127e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.746e+005

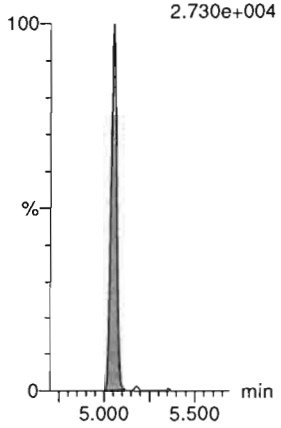


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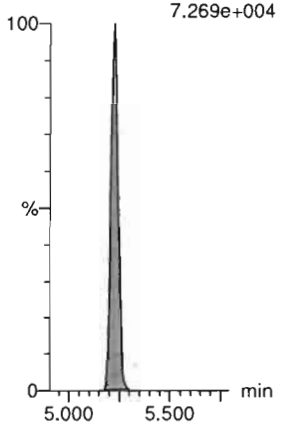
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Name: 200220P1-3, Date: 20-Feb-2020, Time: 17:45:02, ID: ST200220P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

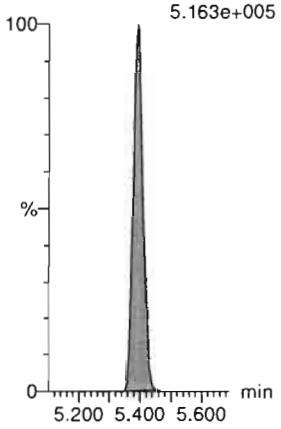
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.730e+004



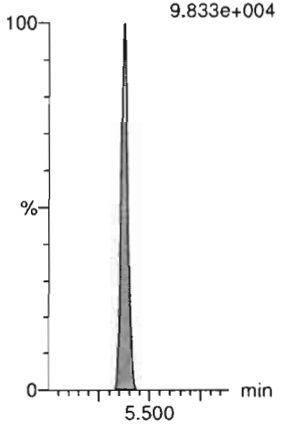
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
7.269e+004



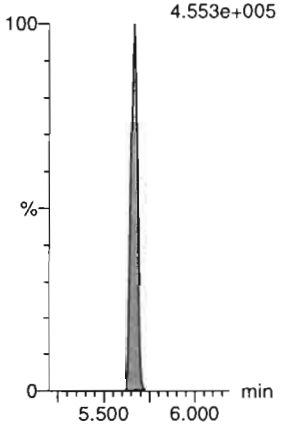
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.163e+005



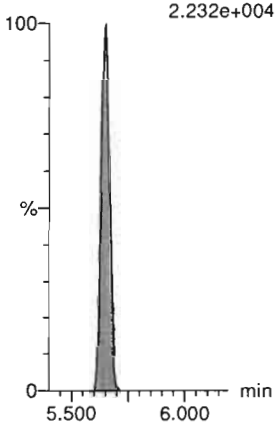
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
9.833e+004



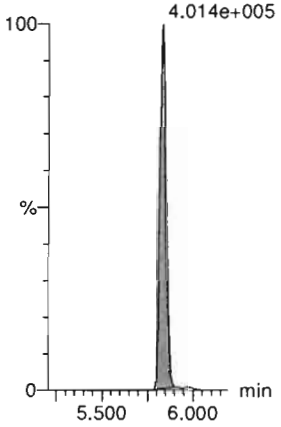
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.553e+005



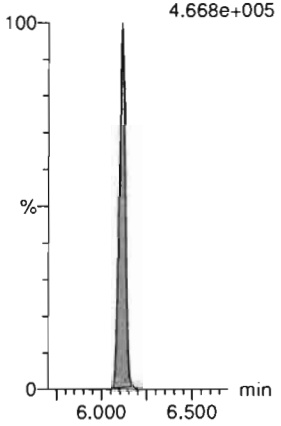
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.232e+004



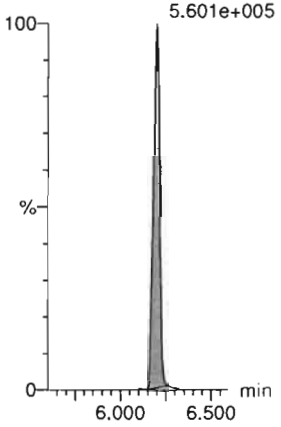
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.014e+005



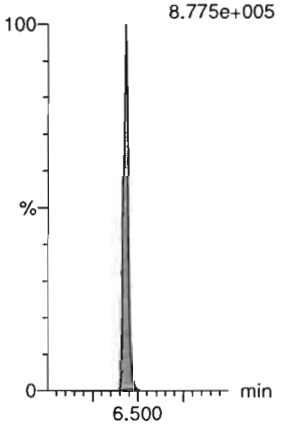
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.668e+005



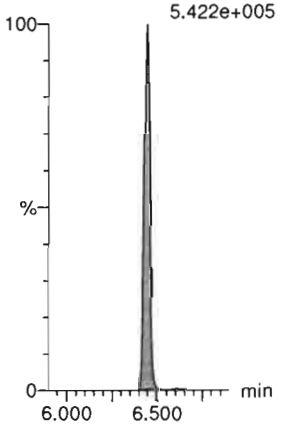
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.601e+005



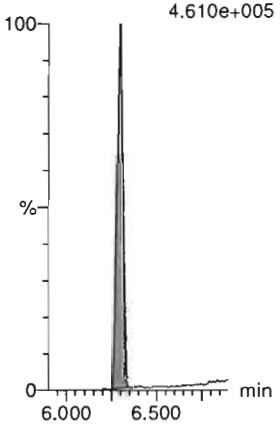
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.775e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
5.422e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
4.610e+005

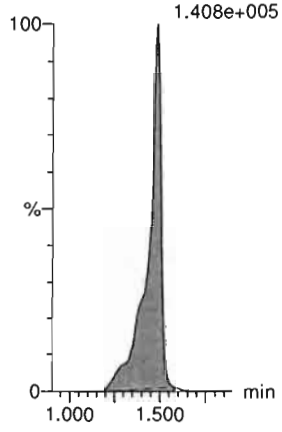


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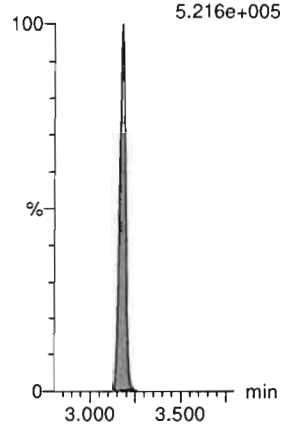
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Name: 200220P1-3, Date: 20-Feb-2020, Time: 17:45:02, ID: ST200220P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

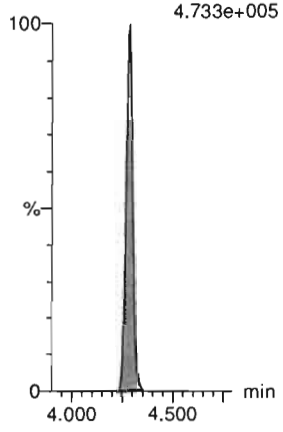
13C4-PFBA



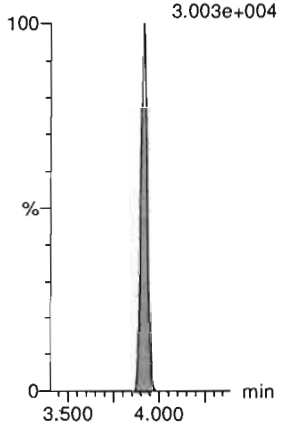
13C5-PFHxA



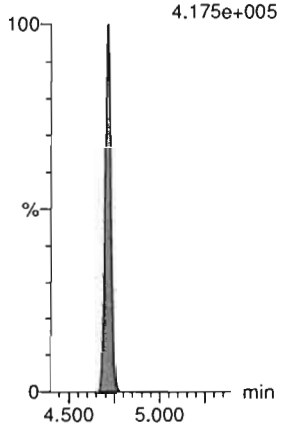
13C8-PFOA



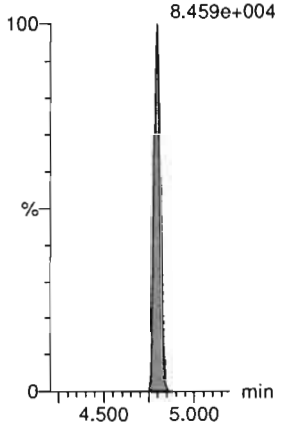
18O2-PFHxS



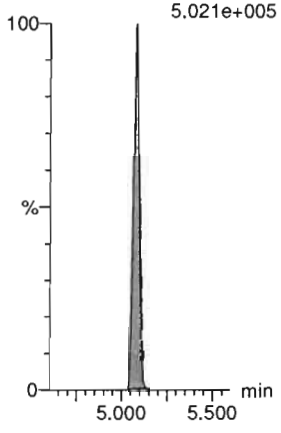
13C9-PFNA



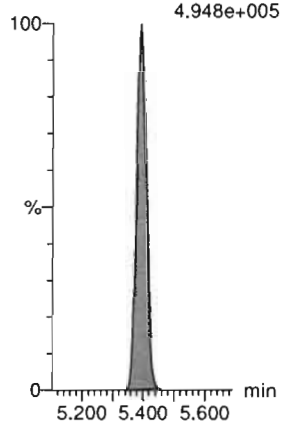
13C4-PFOS



13C6-PFDA



13C7-PFUdA

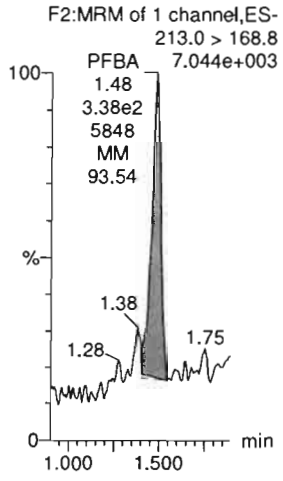


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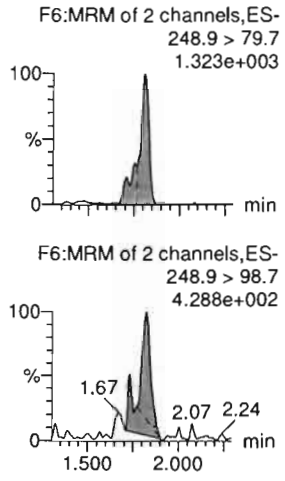
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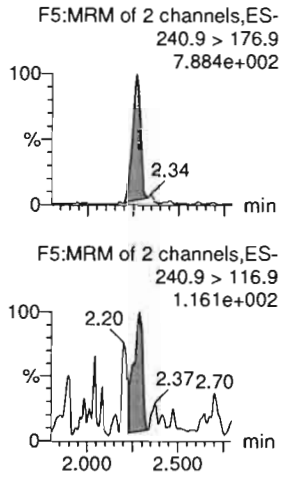
PFBA



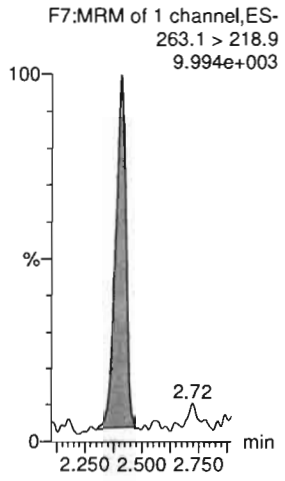
PFPrS



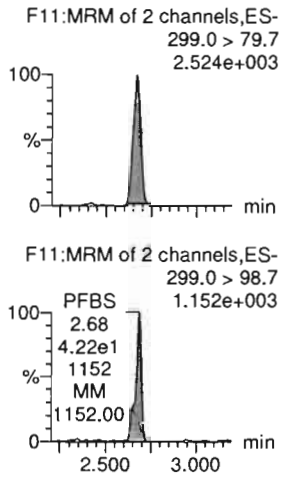
3:3 FTCA



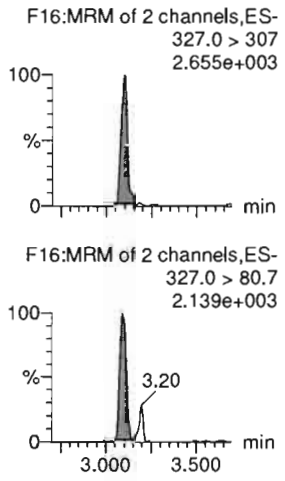
PFPeA



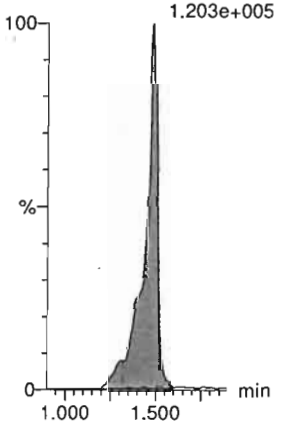
PFBS



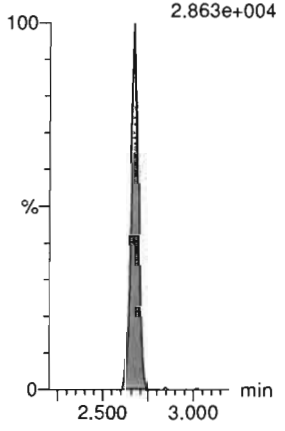
4:2 FTS



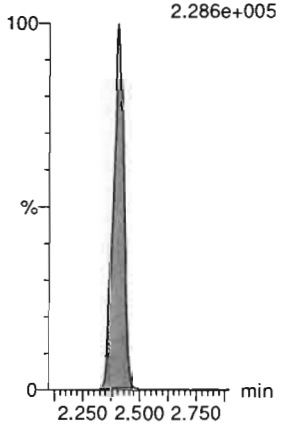
13C3-PFBA-EIS



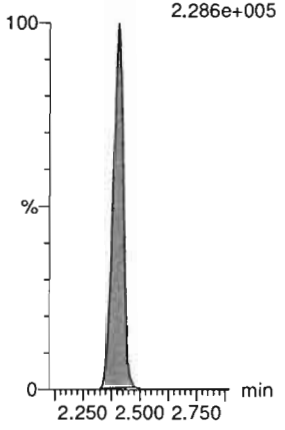
13C3-PFBS-EIS



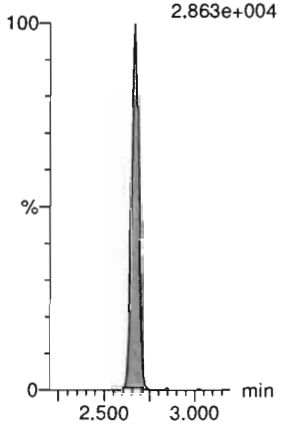
13C3-PFPeA-EIS



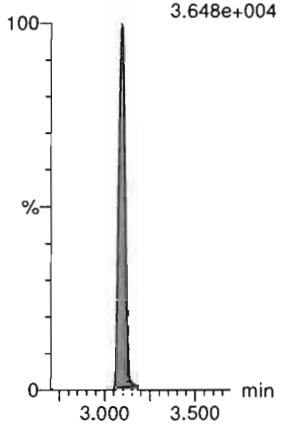
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

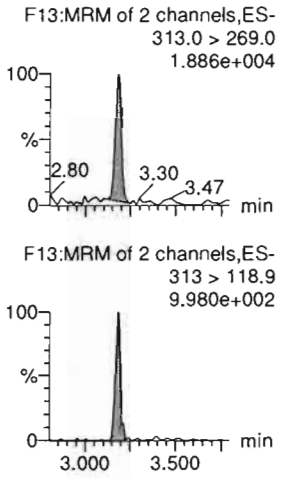


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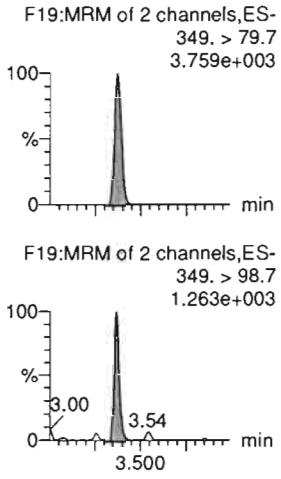
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Name: 200220P1-4, Date: 20-Feb-2020, Time: 17:55:31, ID: ST200220P1-2 PFC CS-1 20B1103, Description: PFC CS-1 20B1103

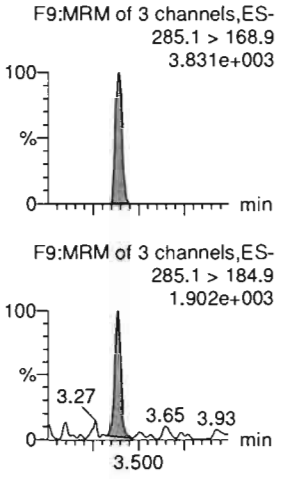
PFHxA



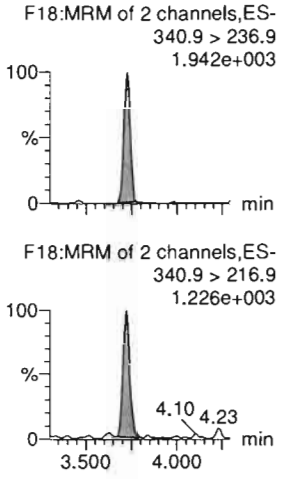
PFPeS



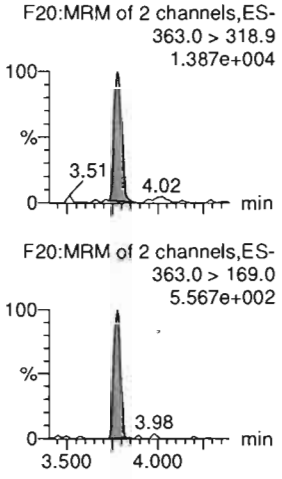
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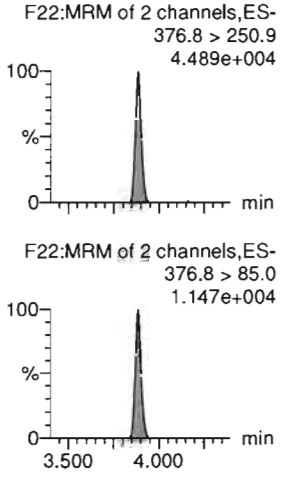
5:3 FTCA



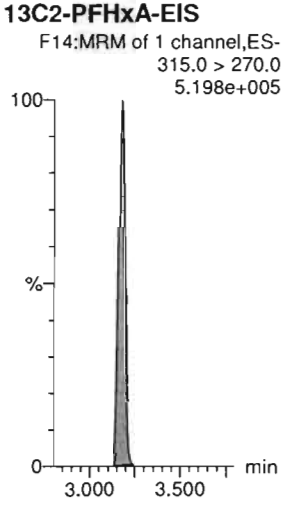
PFHpA



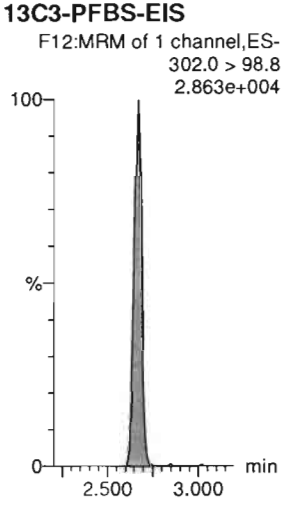
ADONA



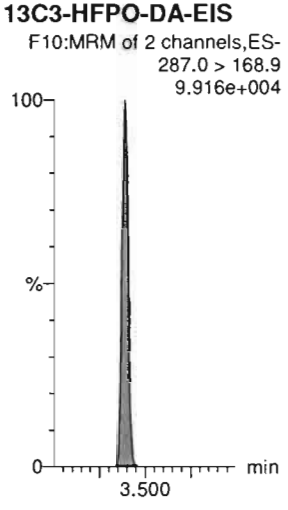
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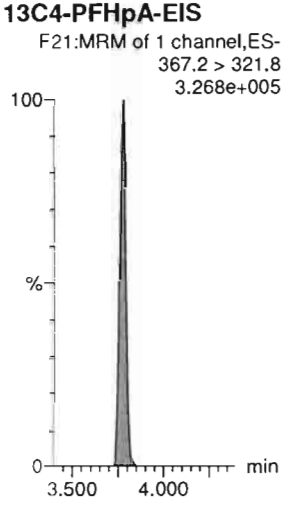
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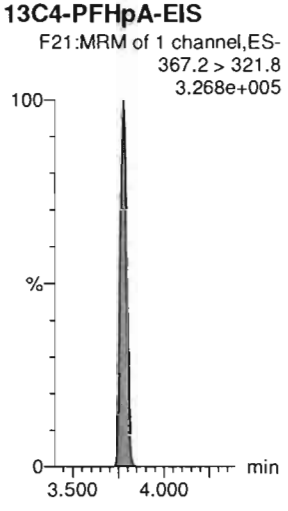
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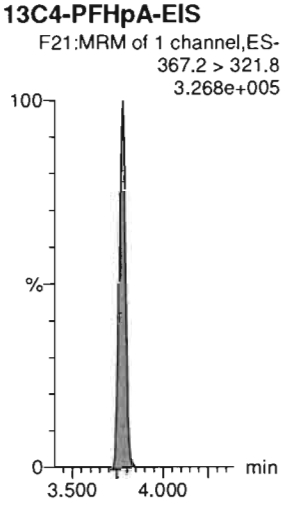
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13C4-PFHpA-EIS



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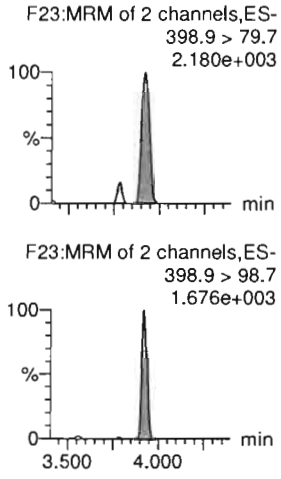


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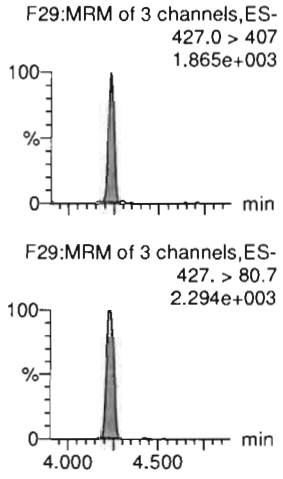
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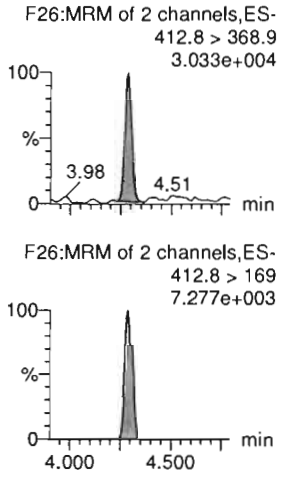
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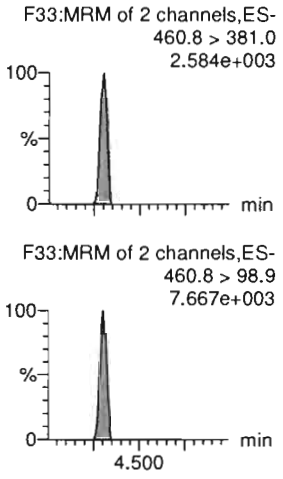
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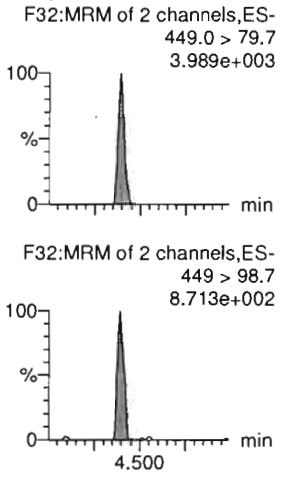
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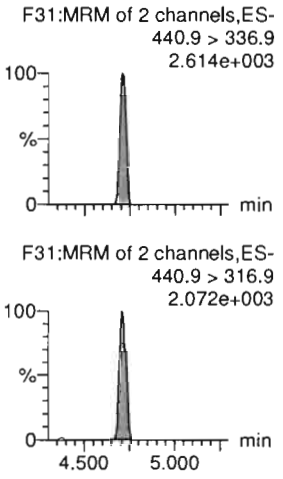
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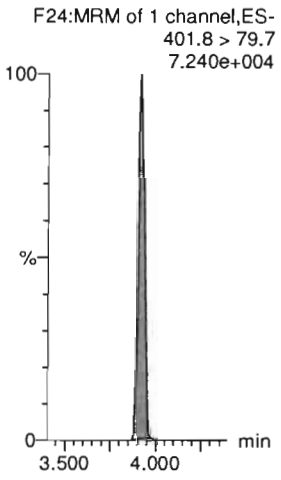
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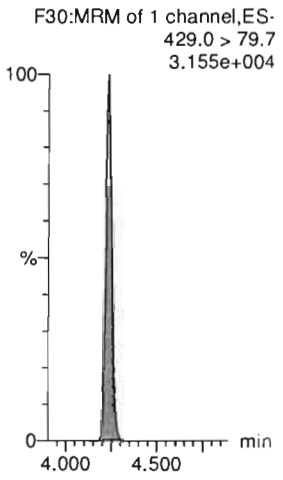
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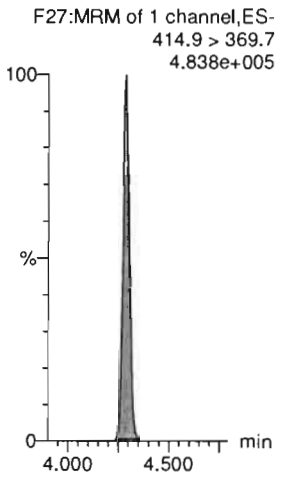
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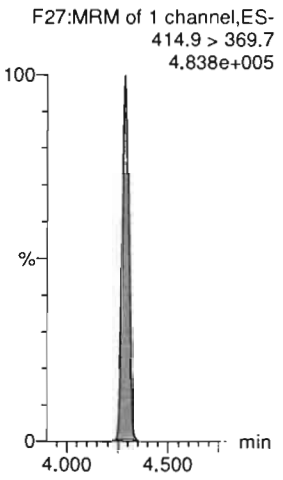
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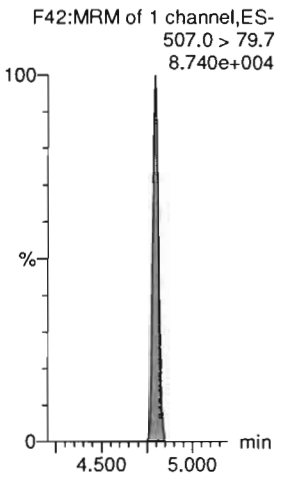
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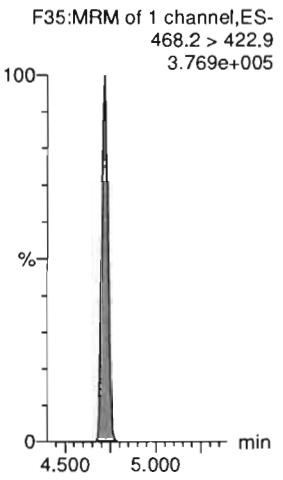
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13C8-PFOS-EIS



13C5-PFNA-EIS

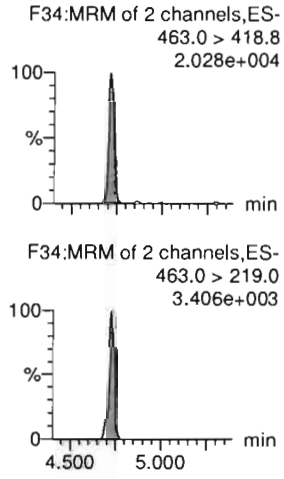


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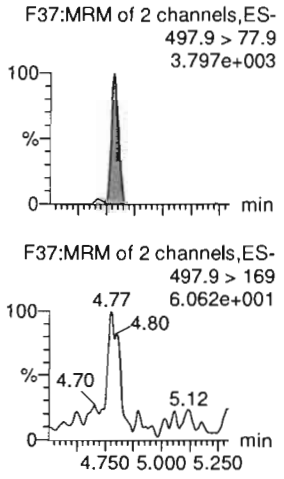
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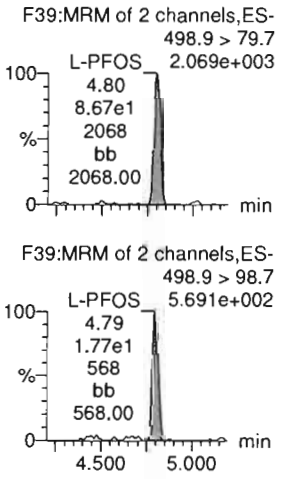
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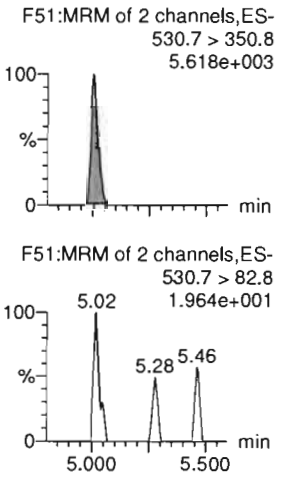
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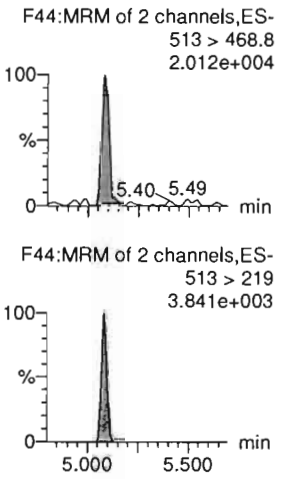
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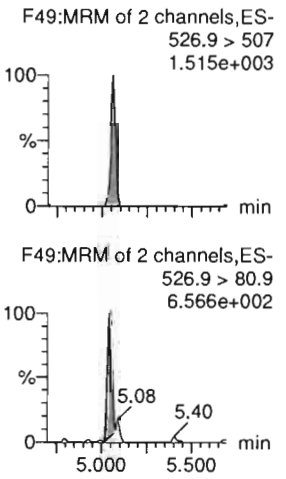
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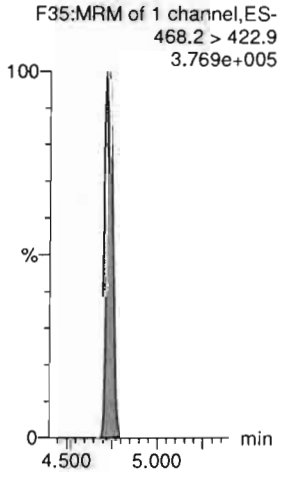
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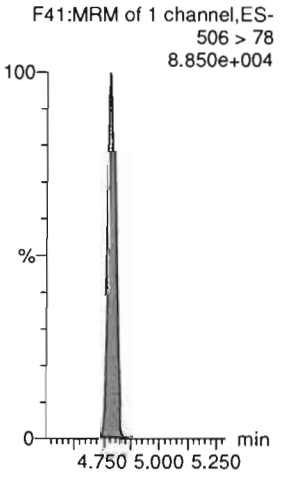
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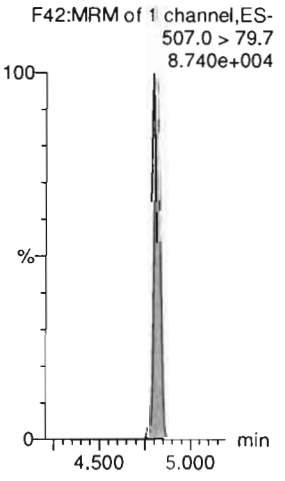
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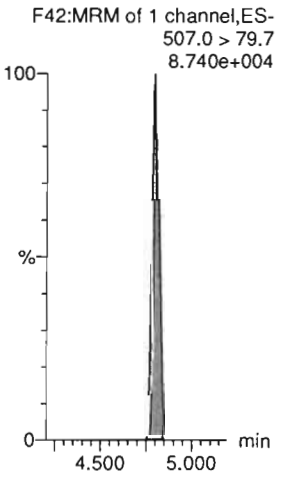
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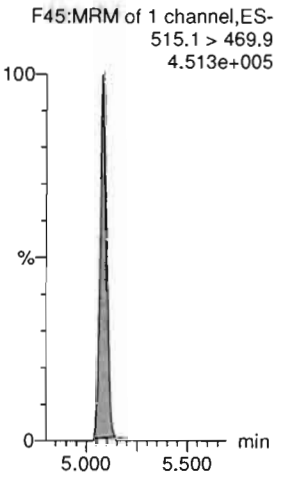
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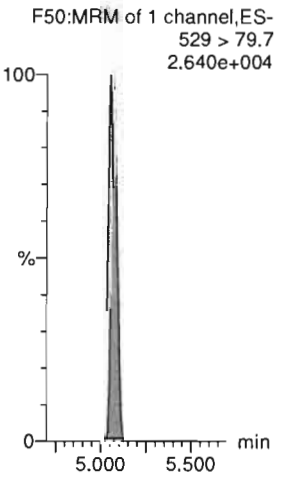
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

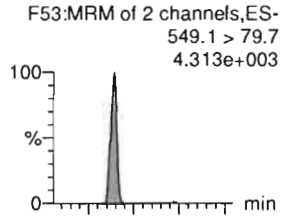


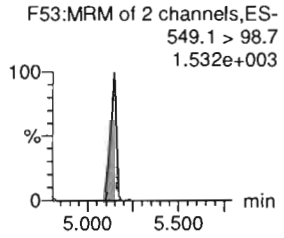
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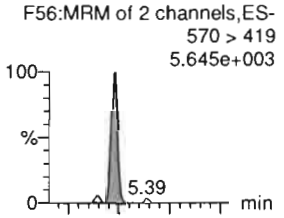
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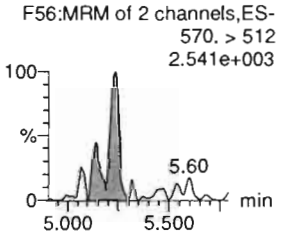
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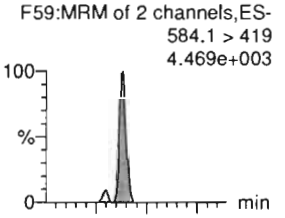


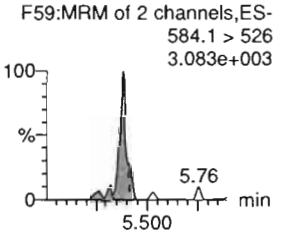
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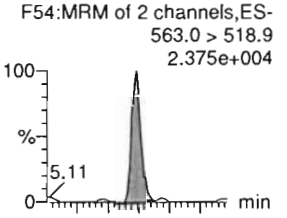


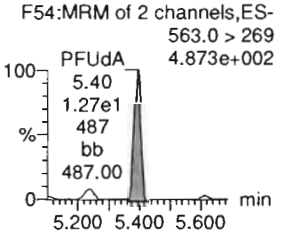
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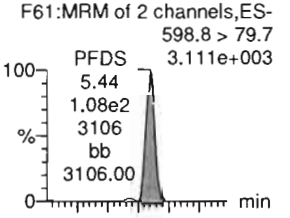


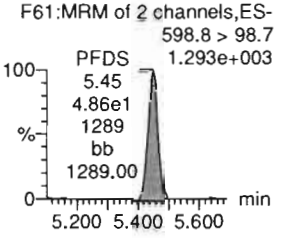
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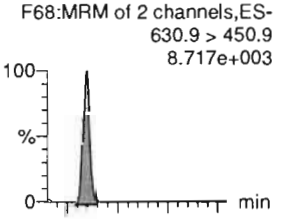


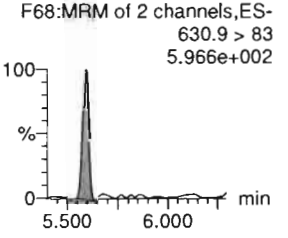
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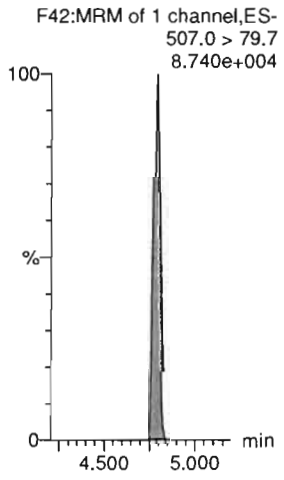


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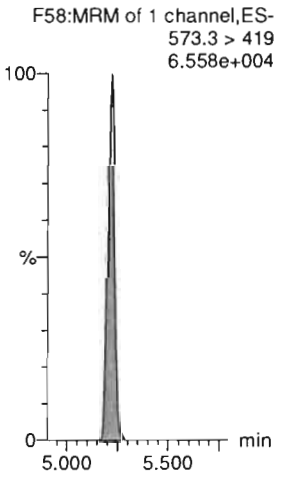




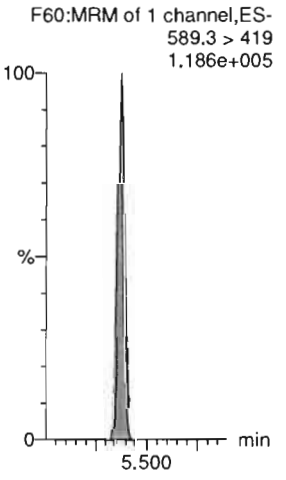
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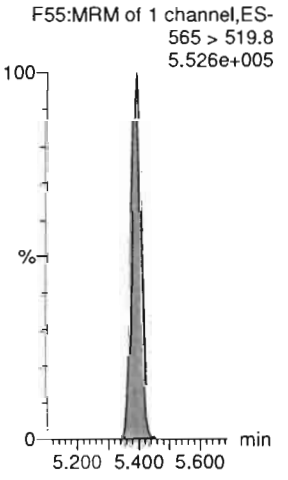
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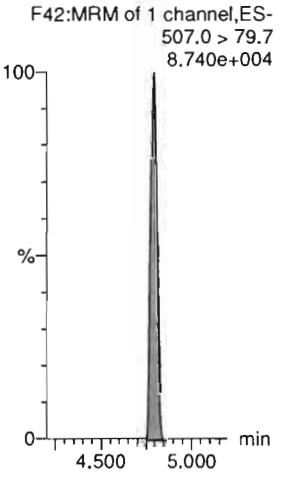
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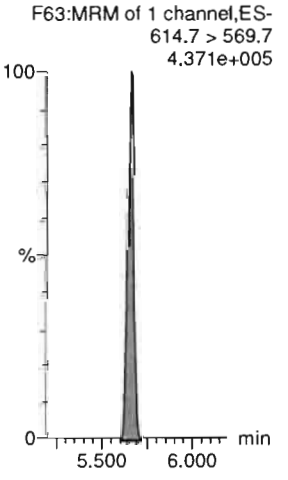
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13C8-PFOS-EIS



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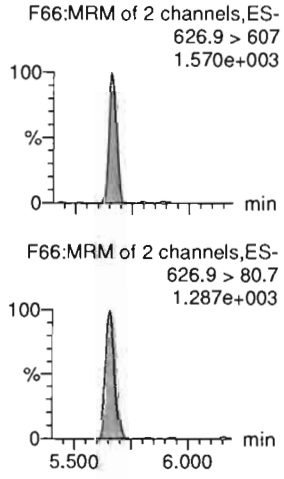


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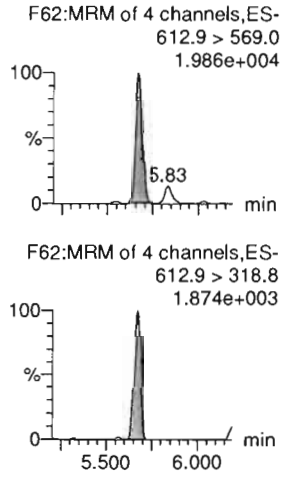
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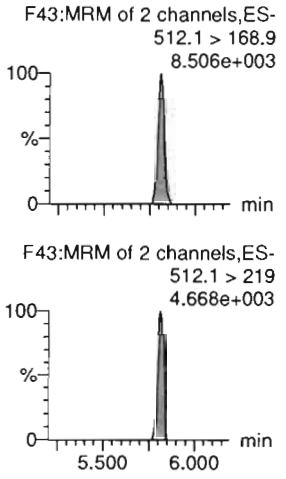
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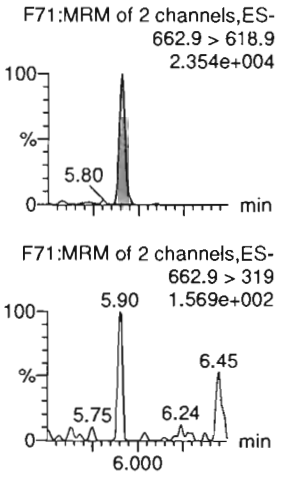
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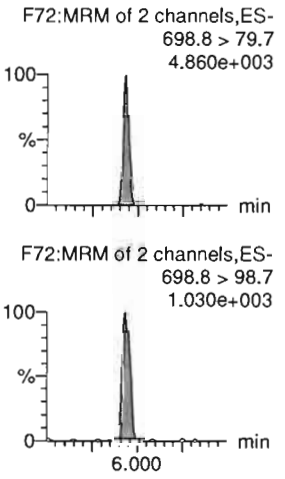
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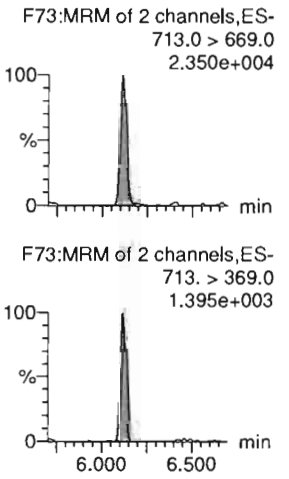
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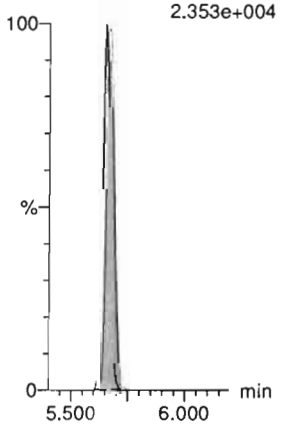
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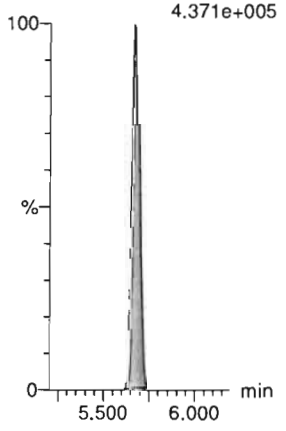
PFTeDA



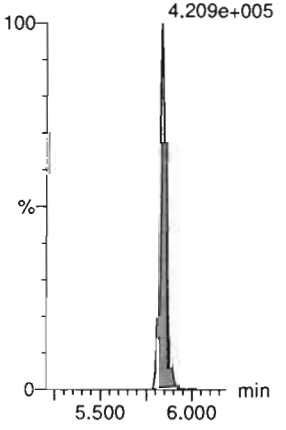
13C2-10:2 FTS-EIS



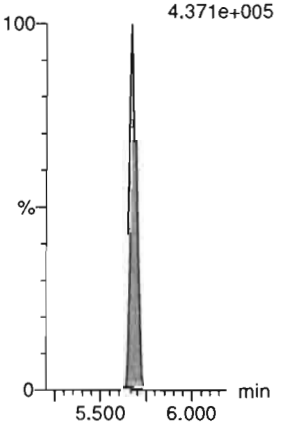
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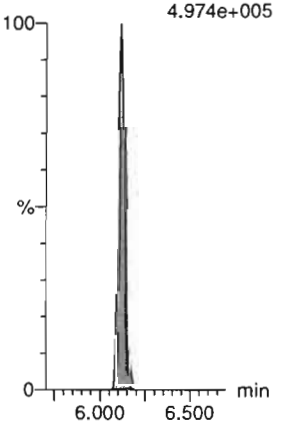
d3-N-MeFOSA-EIS



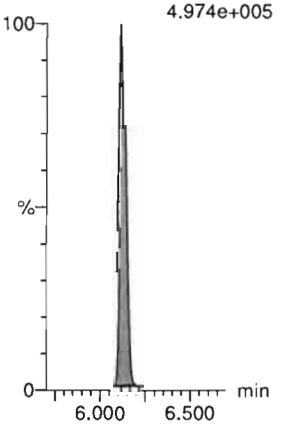
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

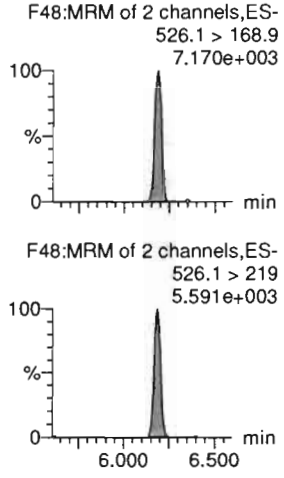


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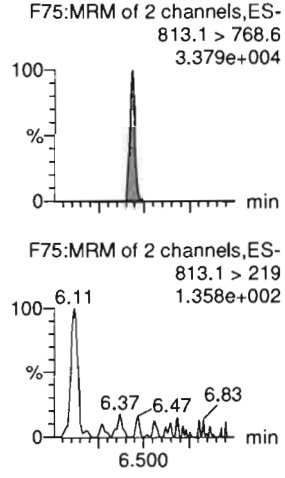
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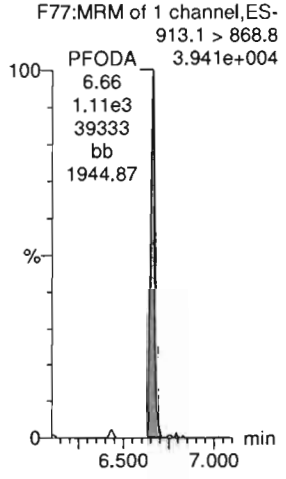
N-EtFOSA



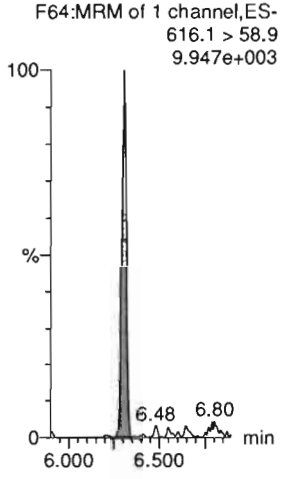
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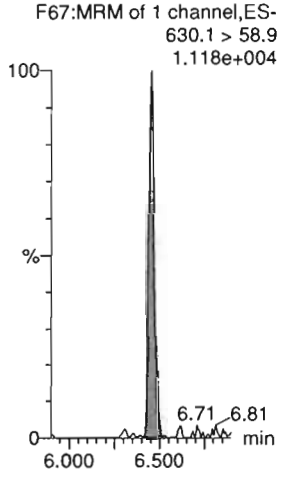
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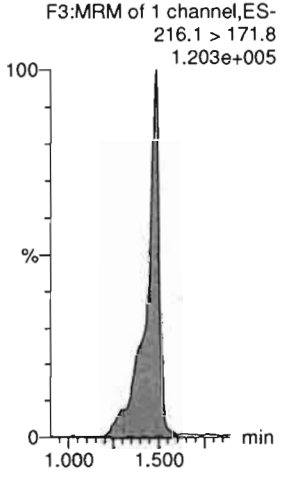
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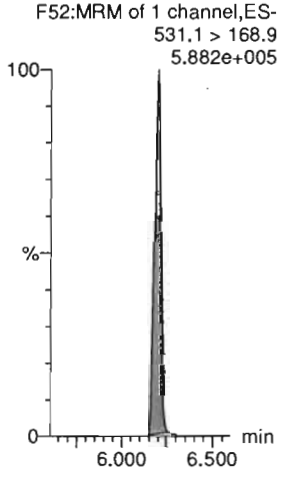
N-EtFOSE



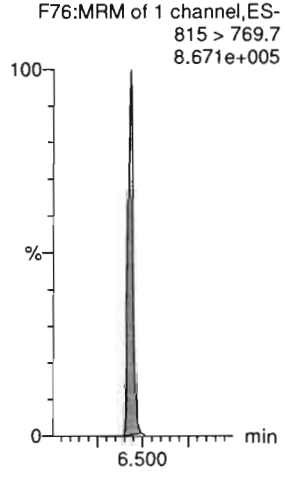
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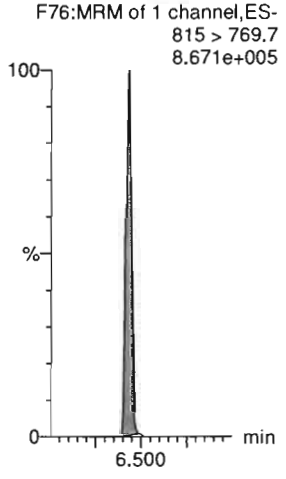
d5-N-ETFOSA-EIS



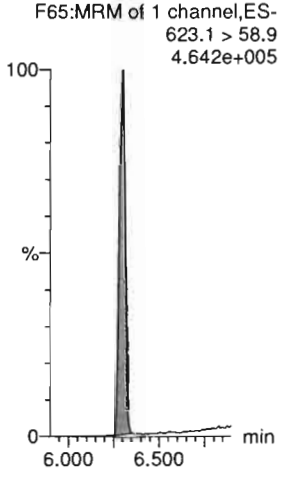
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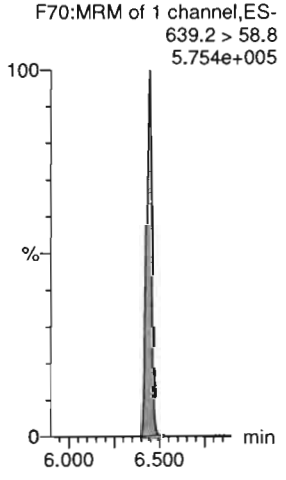
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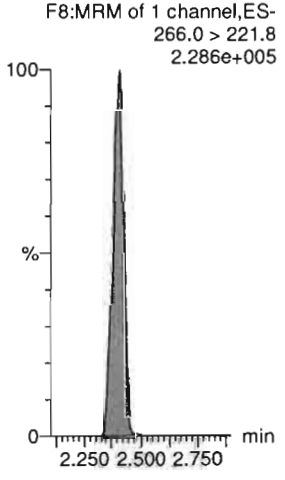
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

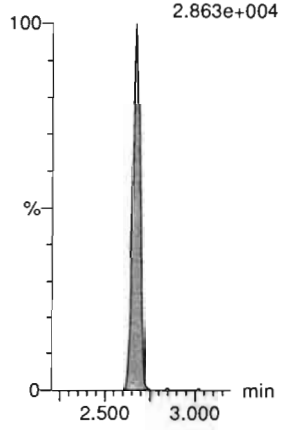


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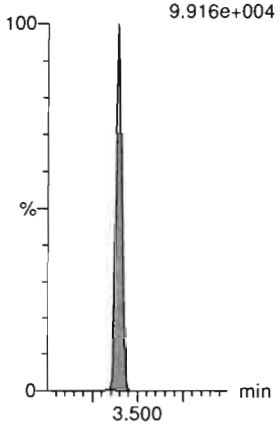
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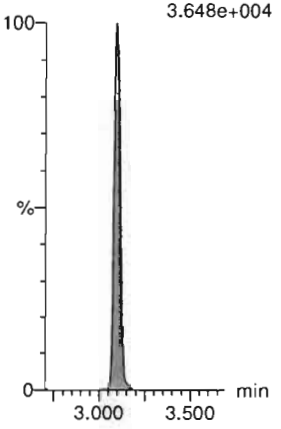
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.863e+004



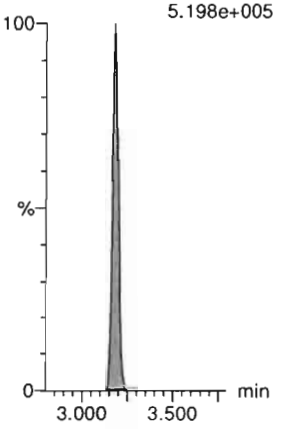
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
9.916e+004



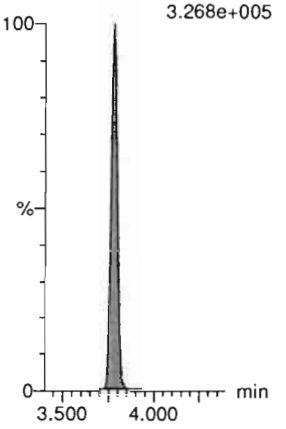
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.648e+004



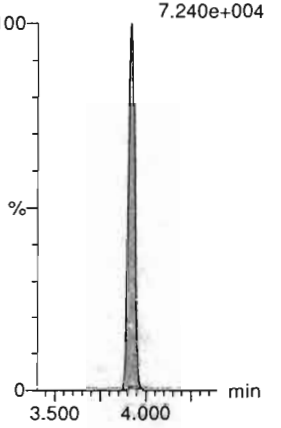
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.198e+005



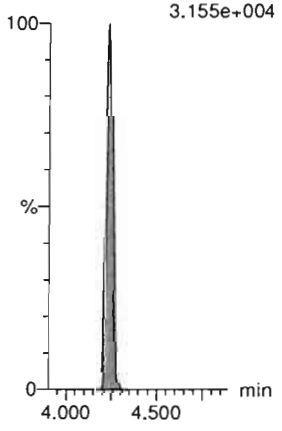
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.268e+005



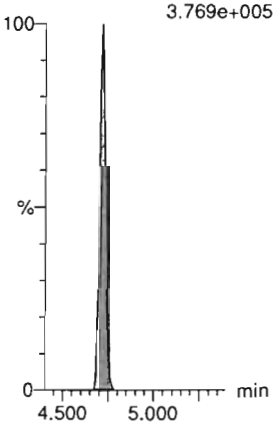
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.240e+004



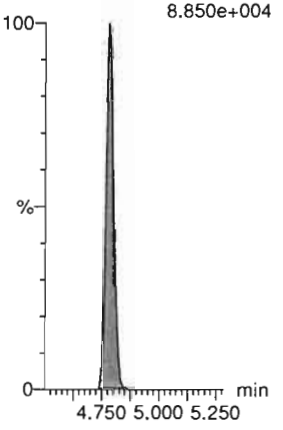
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.155e+004



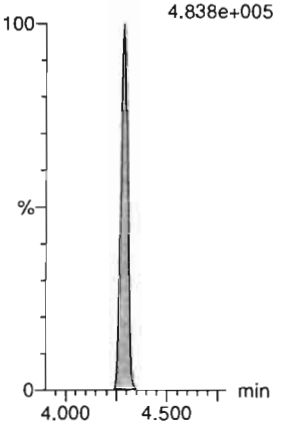
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
3.769e+005



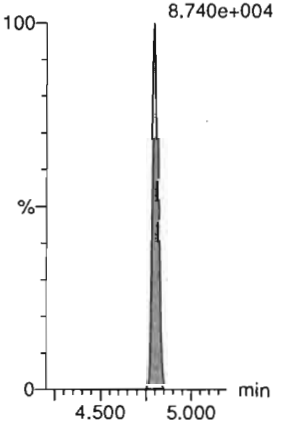
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
8.850e+004



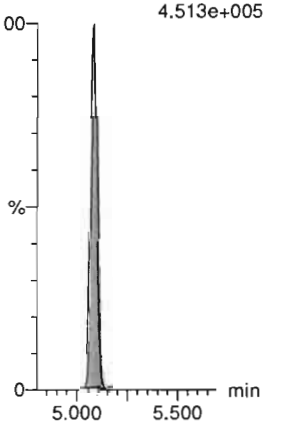
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.838e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.740e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.513e+005

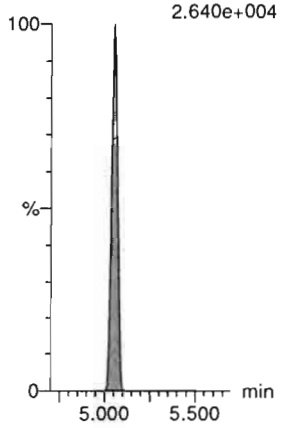


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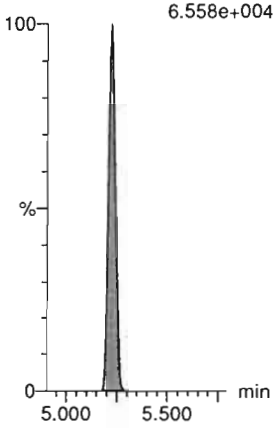
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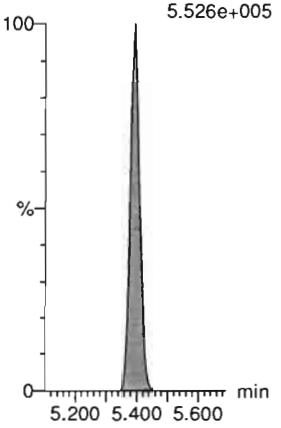
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.640e+004



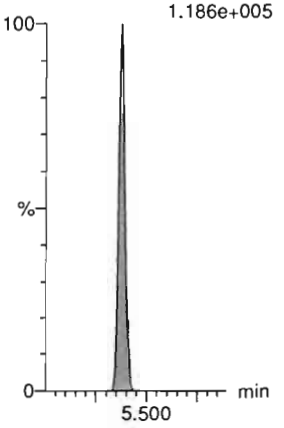
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
6.558e+004



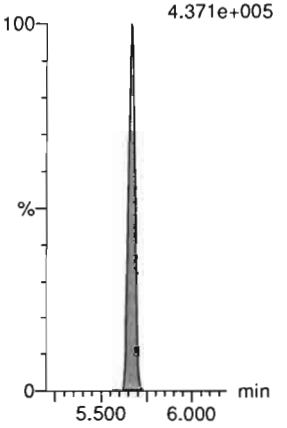
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.526e+005



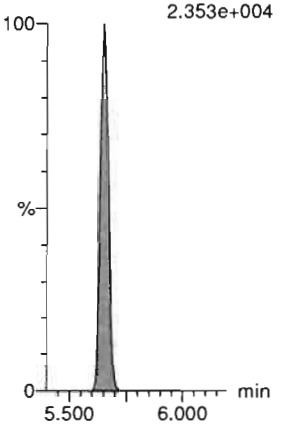
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F60:MRM of 1 channel,ES-
589.3 > 419
1.186e+005



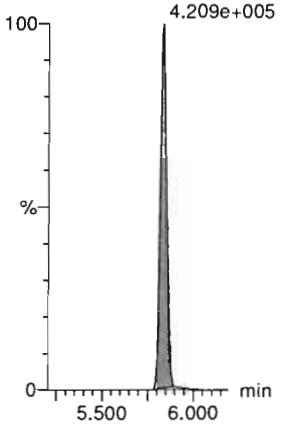
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.371e+005



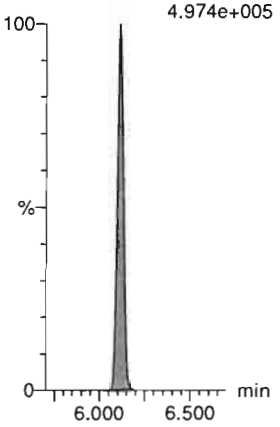
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.353e+004



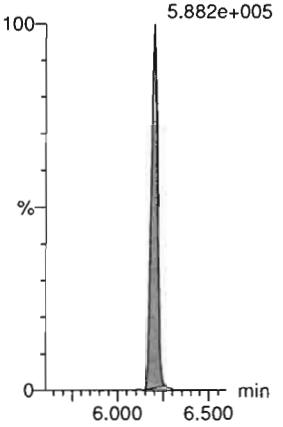
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.209e+005



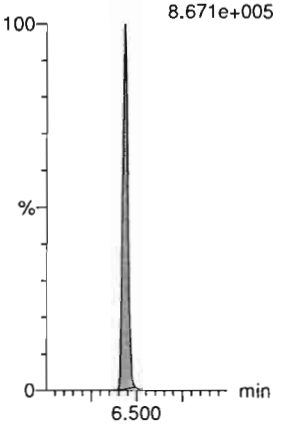
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F74:MRM of 2 channels,ES-
715.1 > 669.7
4.974e+005



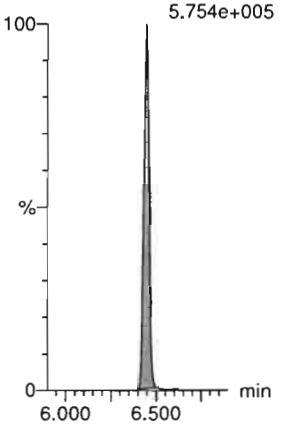
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.882e+005



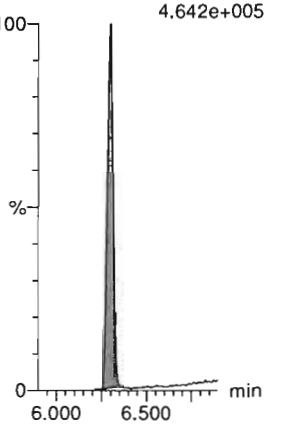
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.671e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
5.754e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
4.642e+005

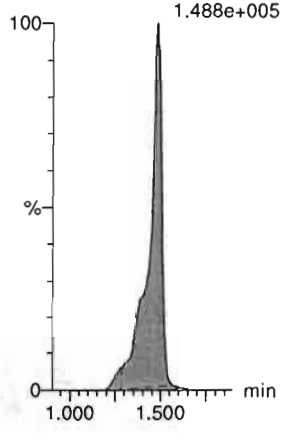


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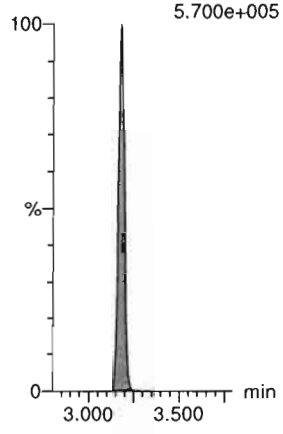
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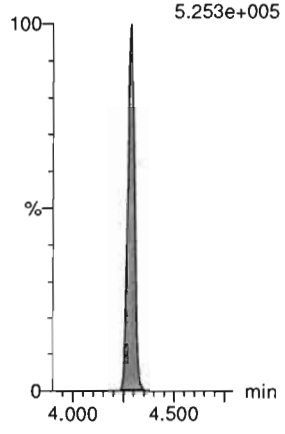
13C4-PFBA



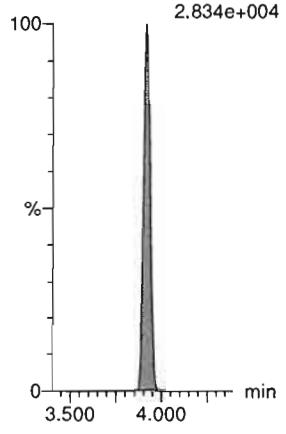
13C5-PFHxA



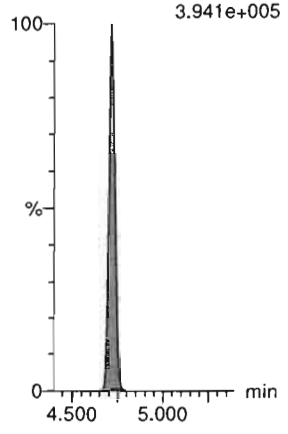
13C8-PFOA



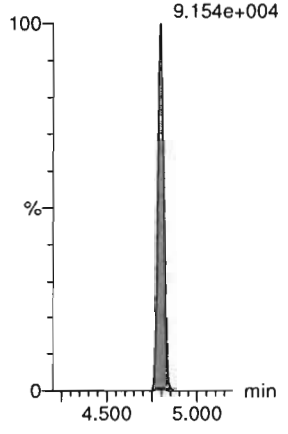
18O2-PFHxS



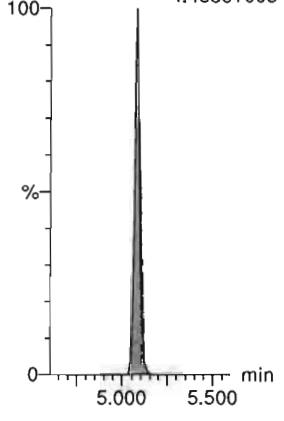
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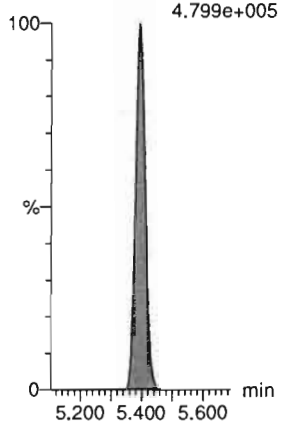
13C4-PFOS



13C6-PFDA



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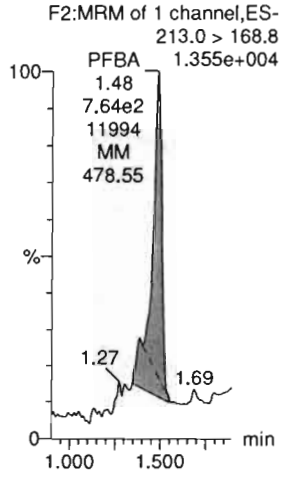


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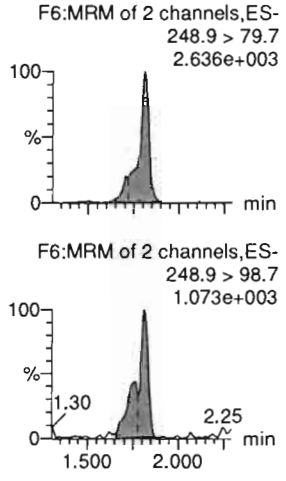
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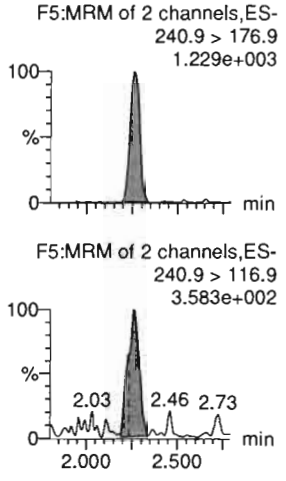
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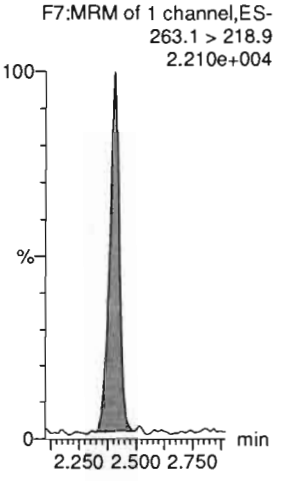
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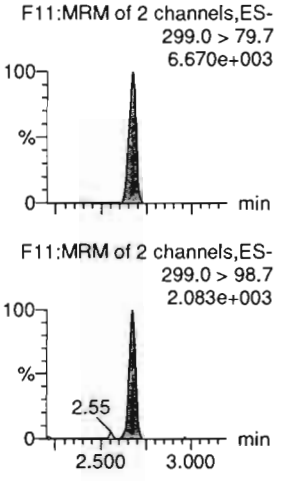
3:3 FTCA



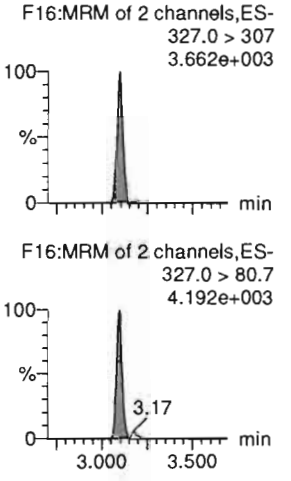
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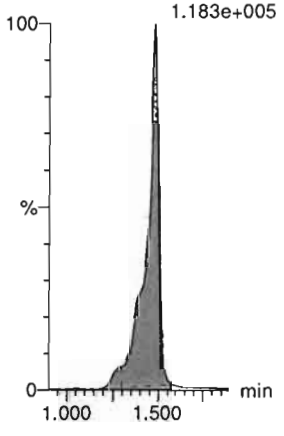
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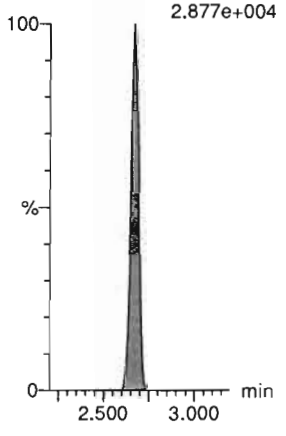
4:2 FTS



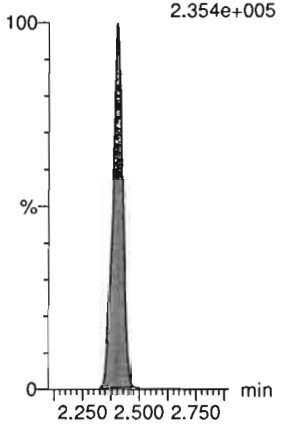
13C3-PFBA-EIS



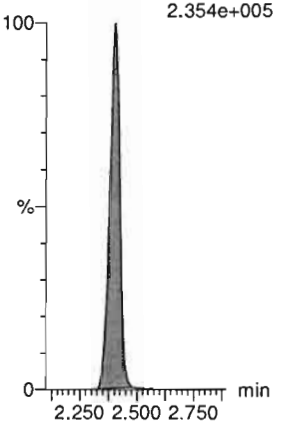
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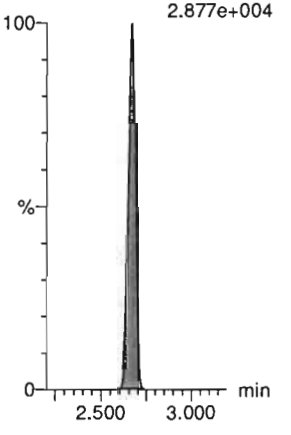
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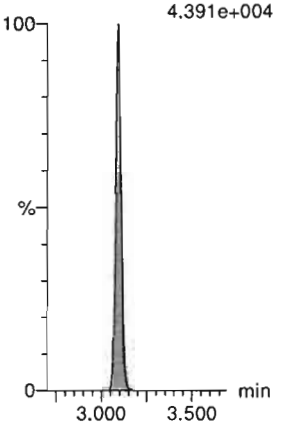
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

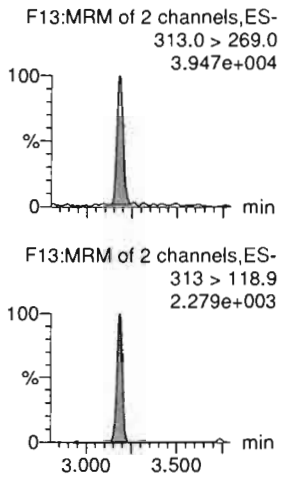


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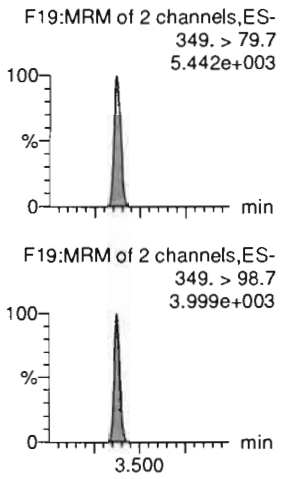
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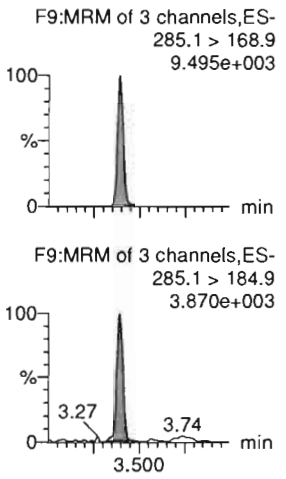
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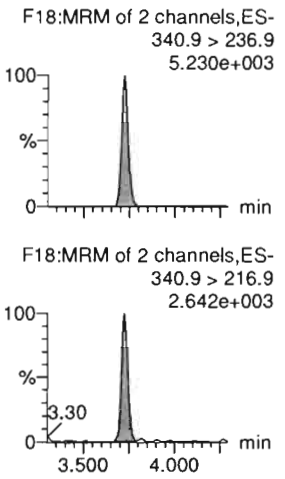
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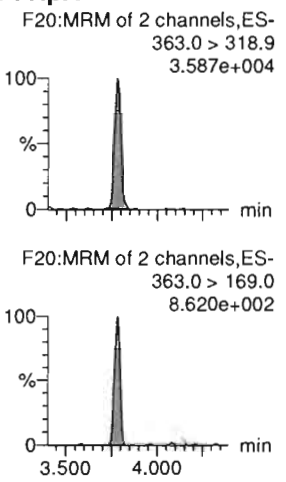
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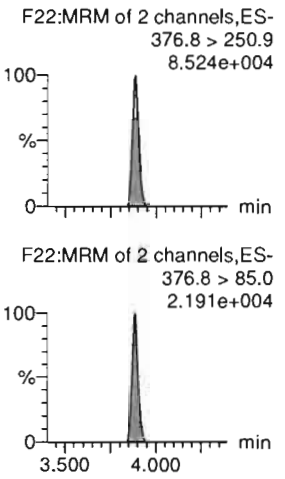
5:3 FTCA



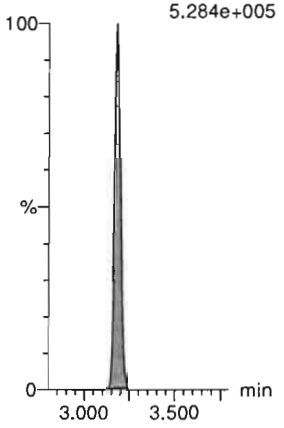
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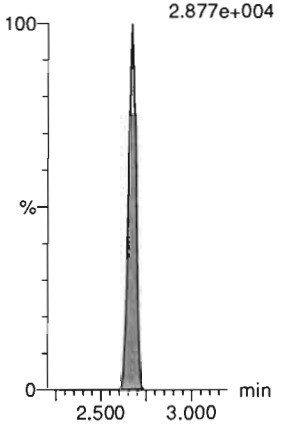
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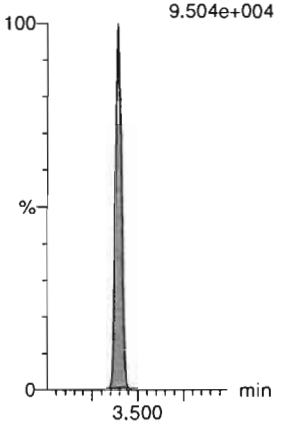
13C2-PFHxA-EIS



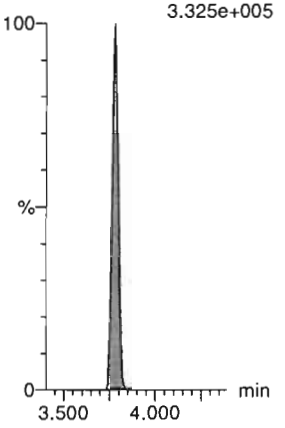
13C3-PFBS-EIS



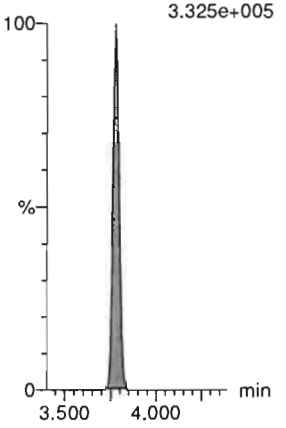
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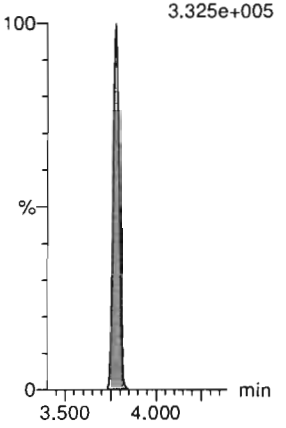
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

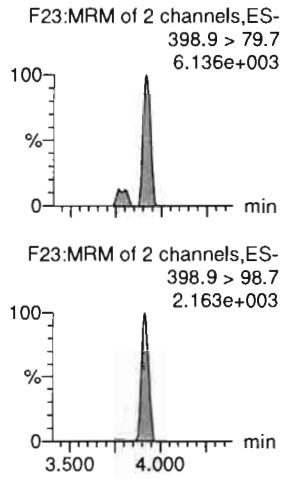


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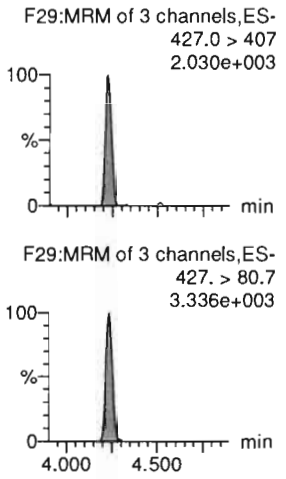
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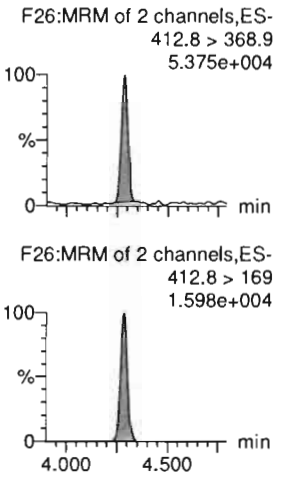
L-PFHxS



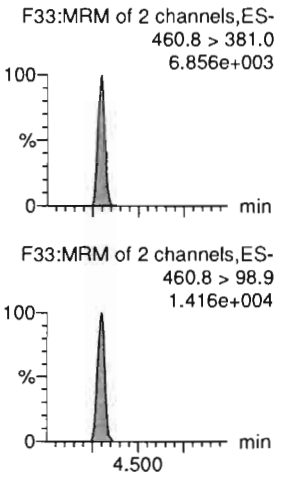
6:2 FTS



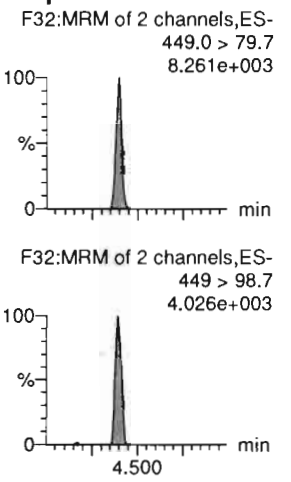
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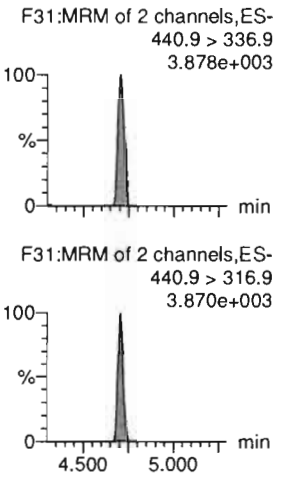
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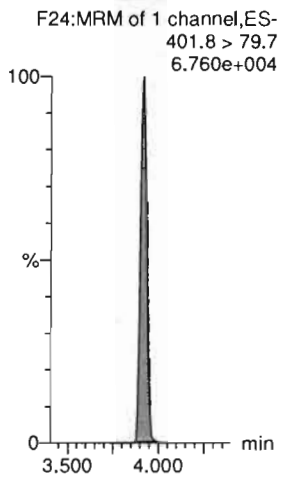
PFHpS



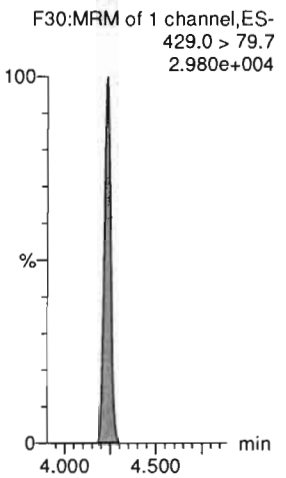
7:3 FTCA



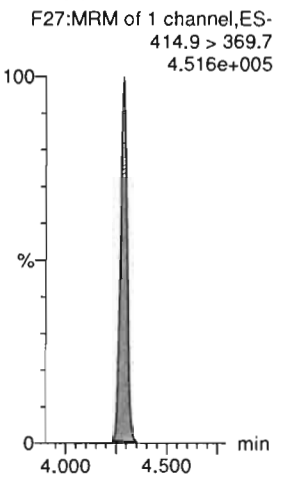
13C3-PFHxS-EIS



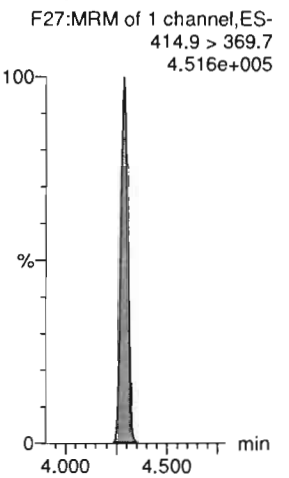
13C2-6:2 FTS-EIS



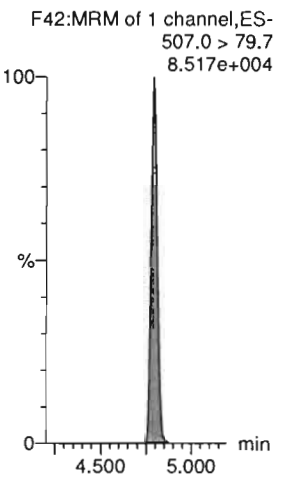
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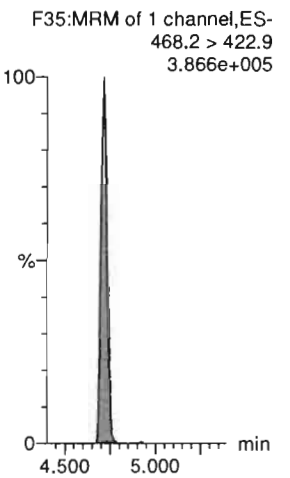
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13C8-PFOS-EIS



13C5-PFNA-EIS

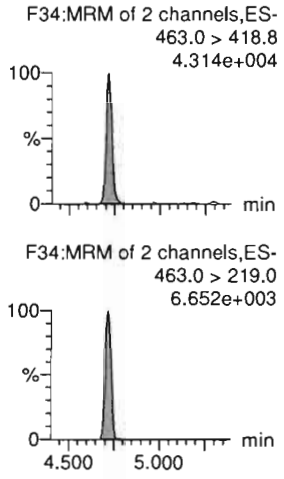


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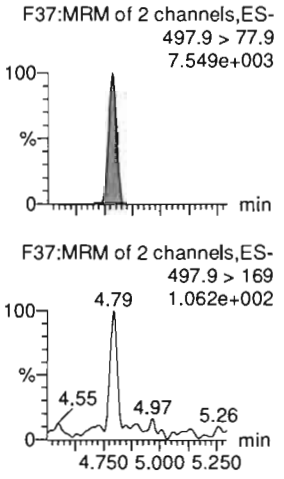
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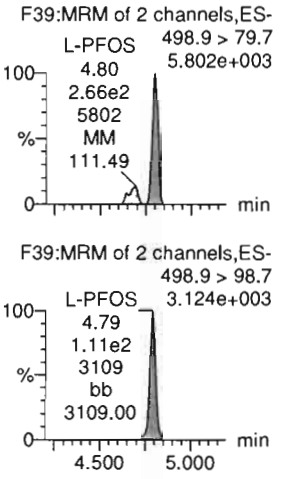
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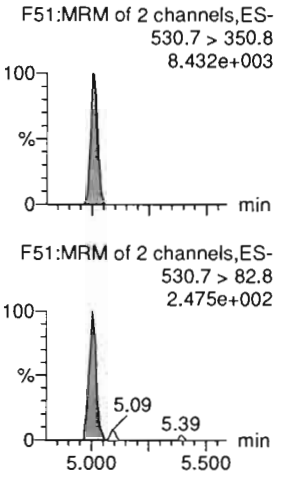
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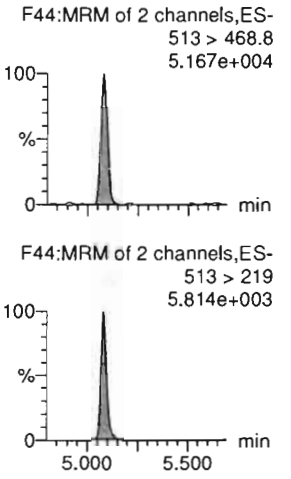
L-PFOS



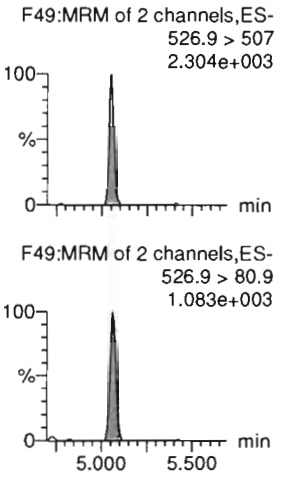
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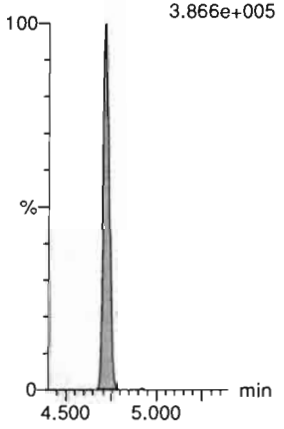
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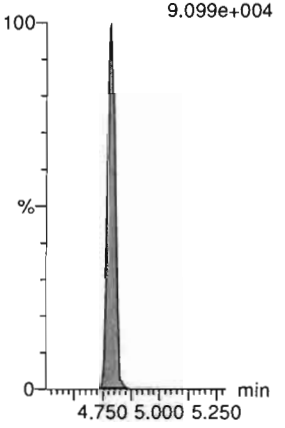
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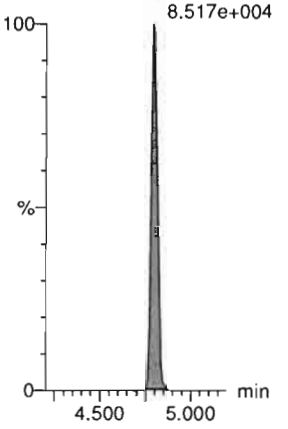
13C5-PFNA-EIS



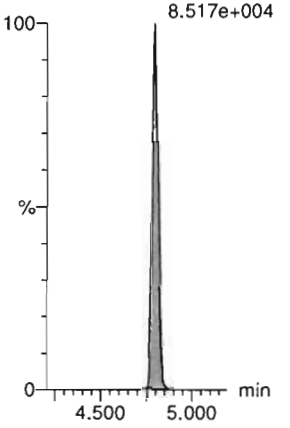
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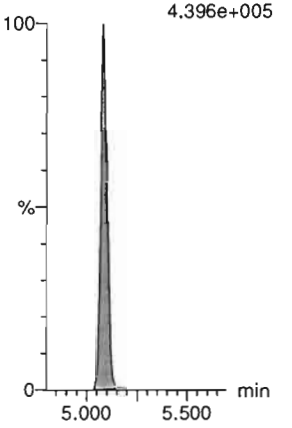
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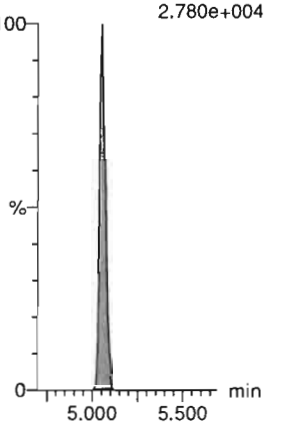
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

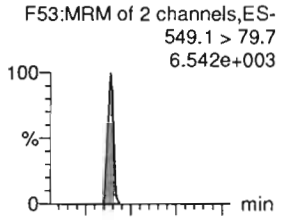


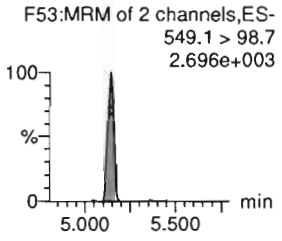
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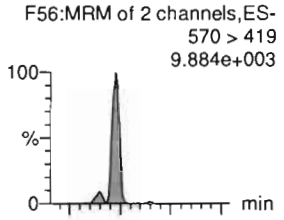
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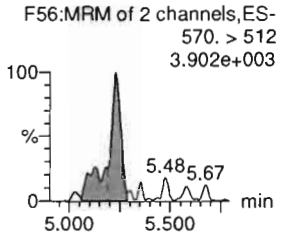
PFNS



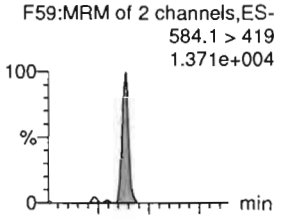


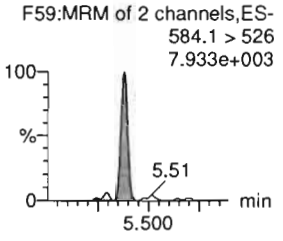
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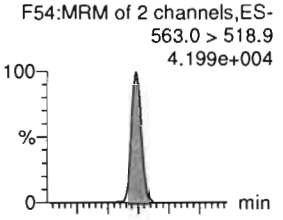


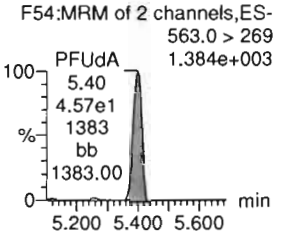
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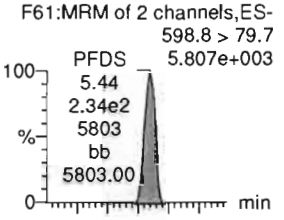


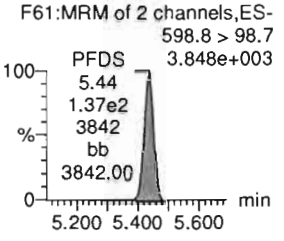
PFUdA



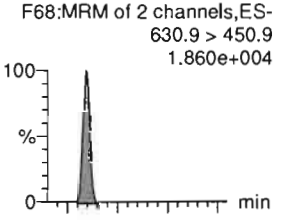


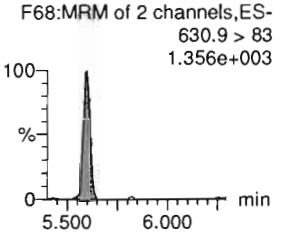
PFDS



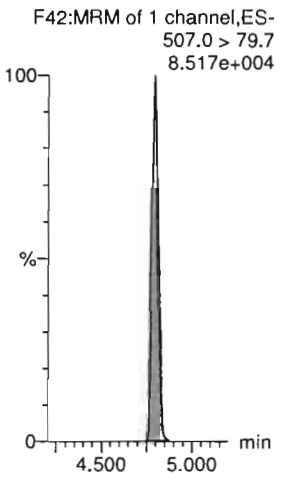


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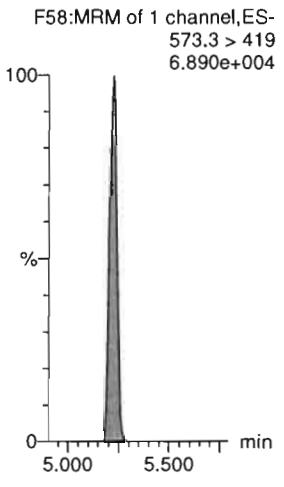




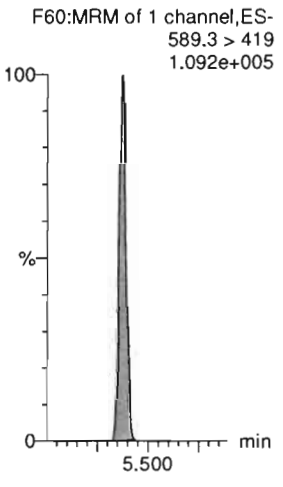
13C8-PFOS-EIS



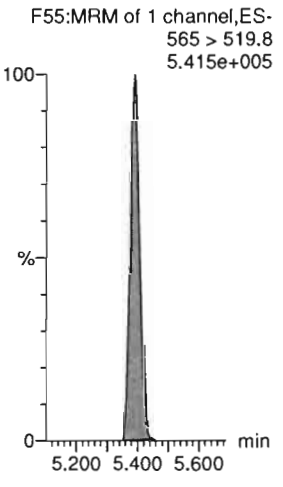
d3-N-MeFOSAA-EIS



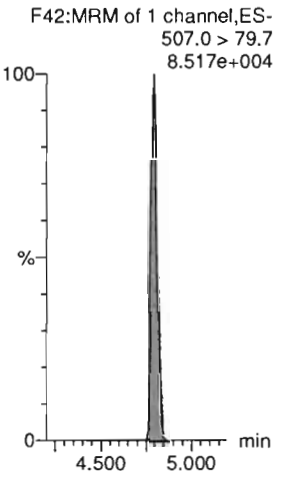
d5-N-EtFOSAA-EIS



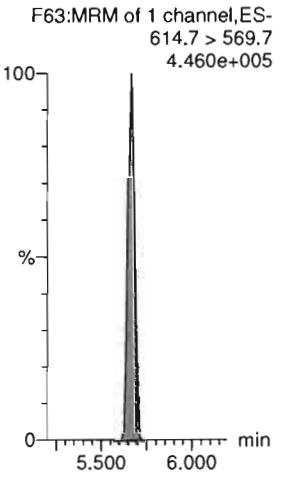
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

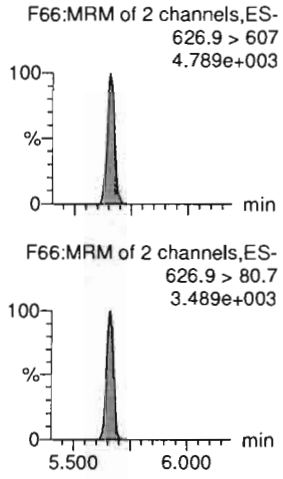


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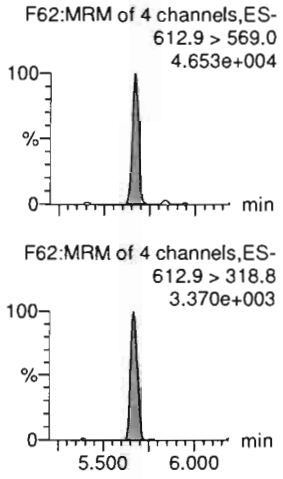
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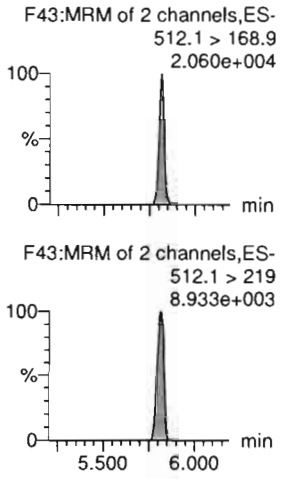
10:2 FTS



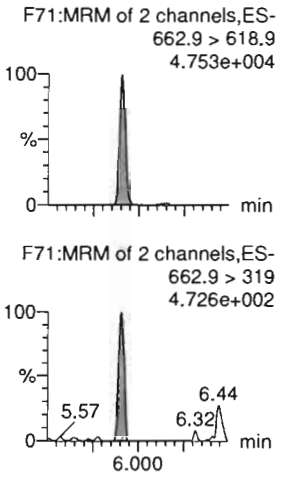
PFDoA



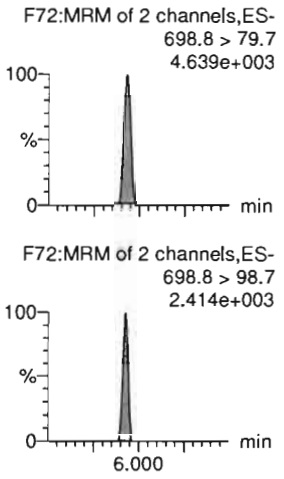
N-MeFOSA



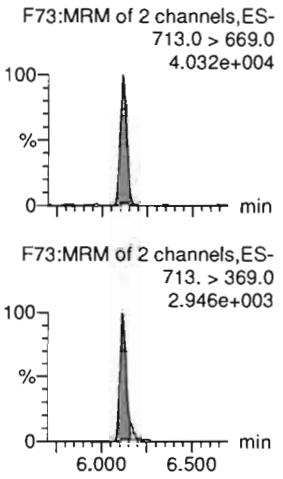
PFTrDA



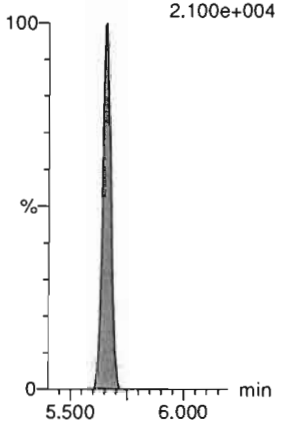
PFDoS



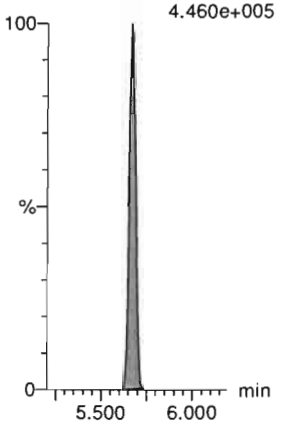
PFTeDA



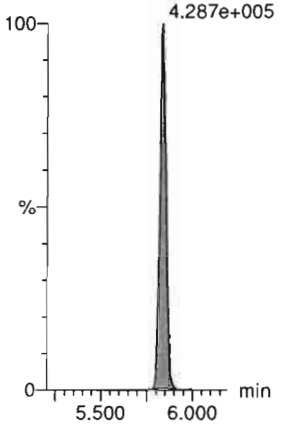
13C2-10:2 FTS-EIS



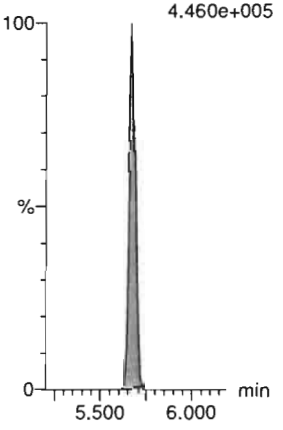
13C2-PFDoA-EIS



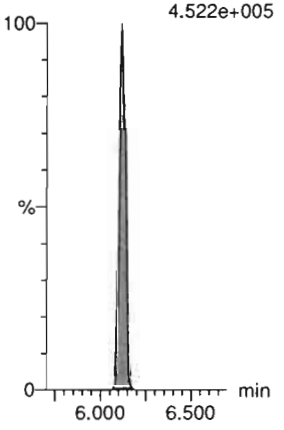
d3-N-MeFOSA-EIS



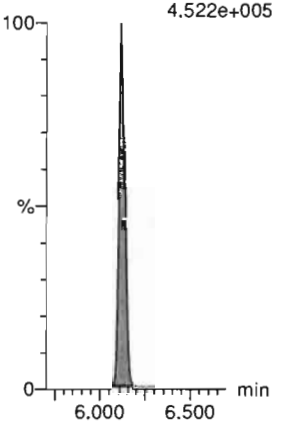
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

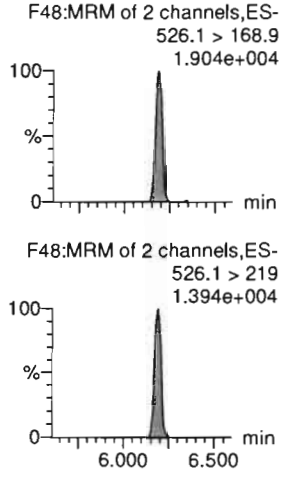


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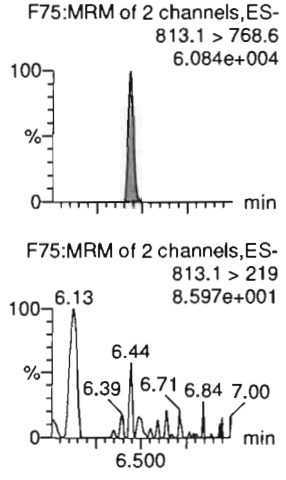
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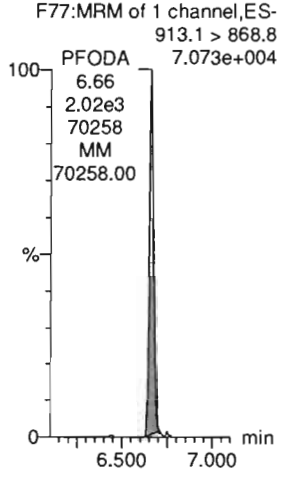
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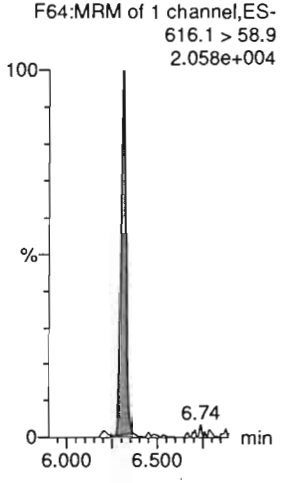
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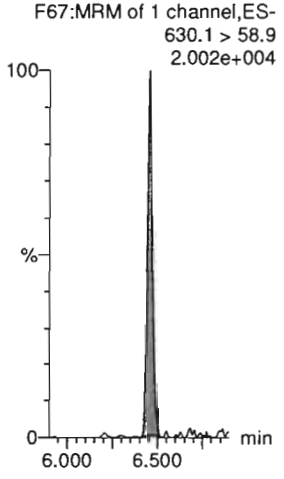
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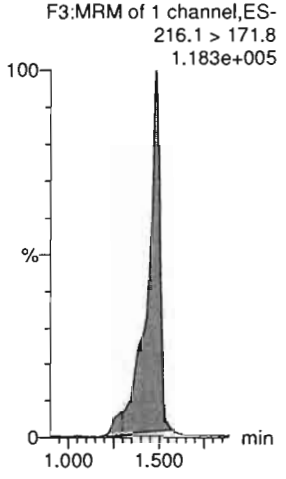
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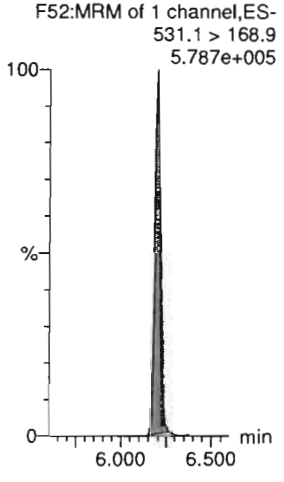
N-EtFOSE



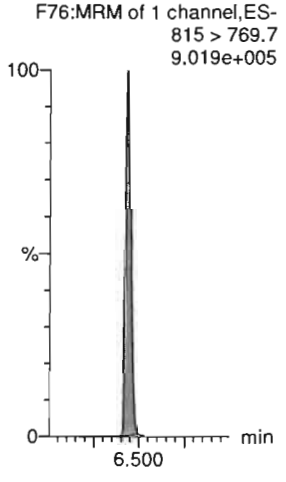
13C3-PFBA-RSD



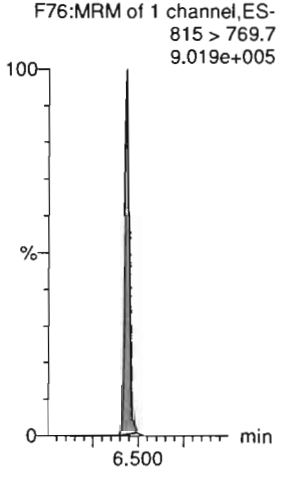
d5-N-ETFOSA-EIS



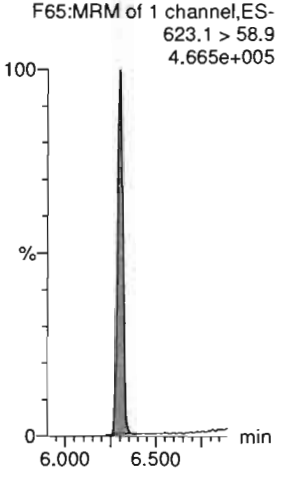
13C2-PFHxDA-EIS



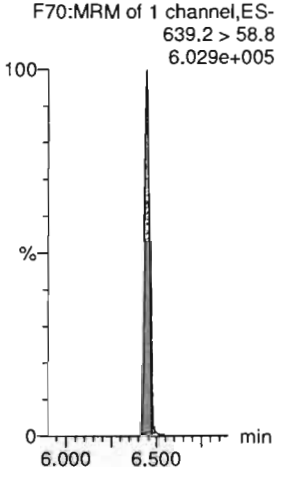
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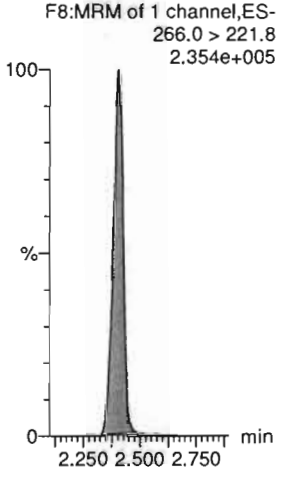
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

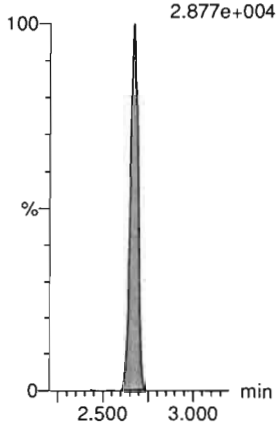


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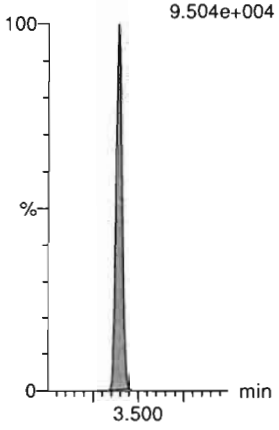
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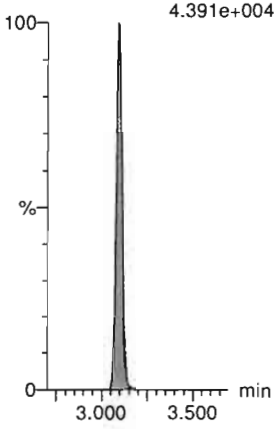
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.877e+004



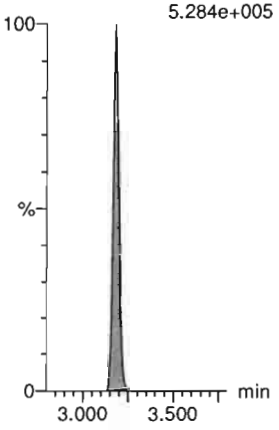
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
9.504e+004



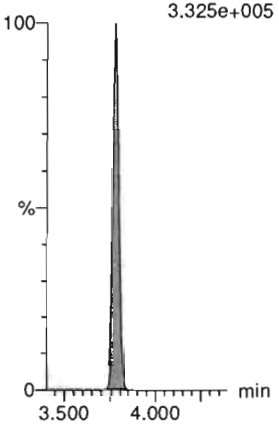
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.391e+004



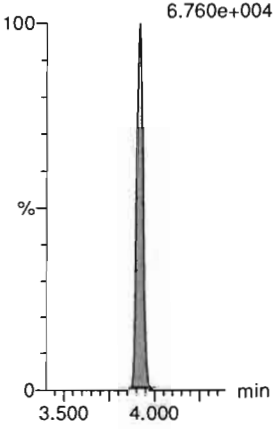
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.284e+005



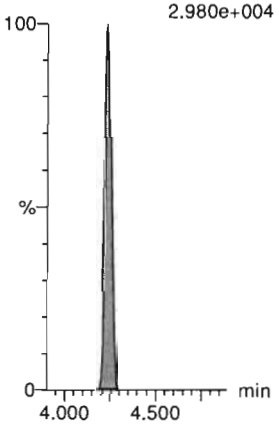
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.325e+005



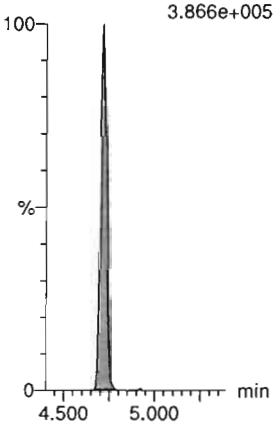
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
6.760e+004



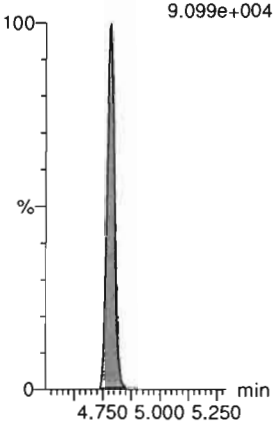
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
2.980e+004



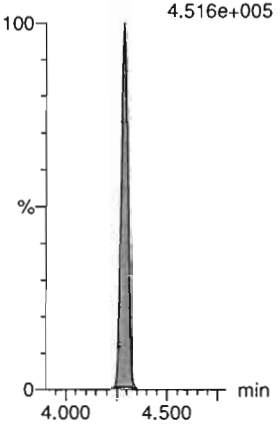
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
3.866e+005



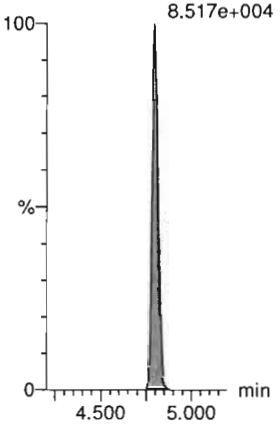
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.099e+004



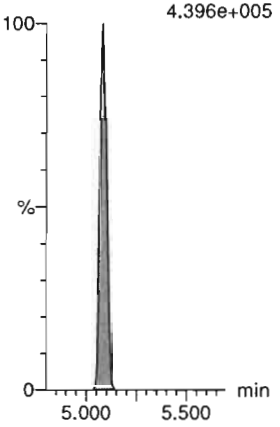
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.516e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.517e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.396e+005

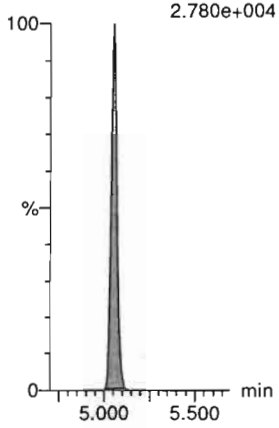


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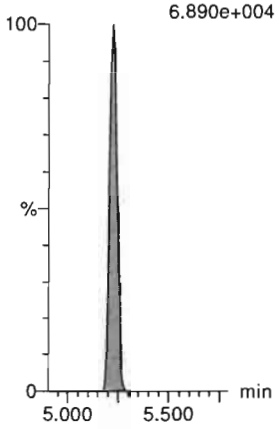
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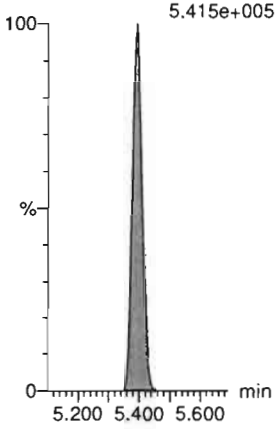
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.780e+004



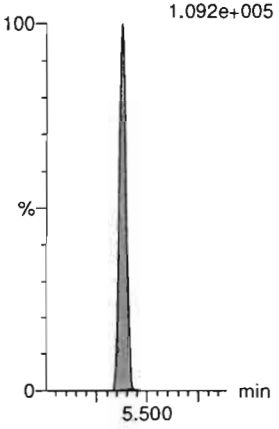
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
6.890e+004



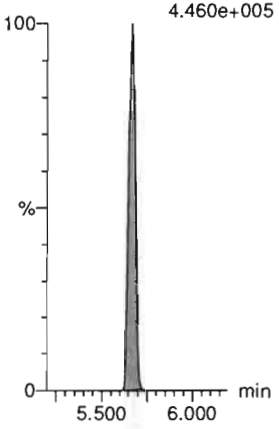
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.415e+005



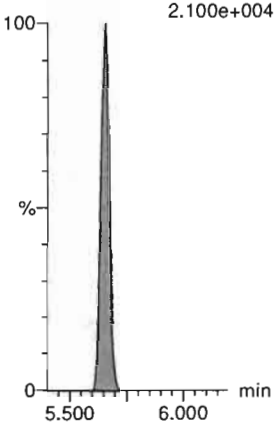
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.092e+005



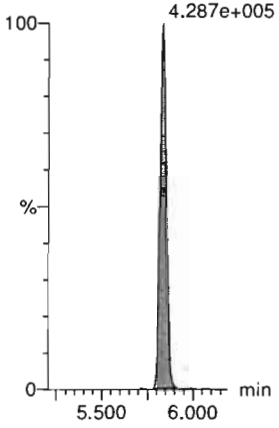
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.460e+005



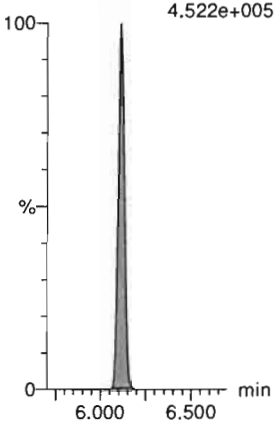
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.100e+004



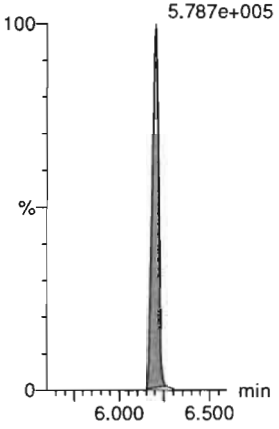
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.287e+005



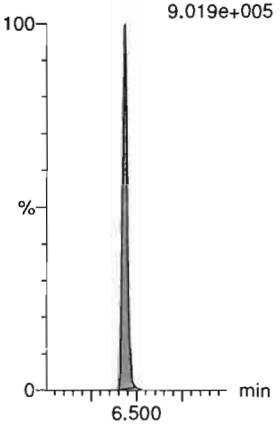
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.522e+005



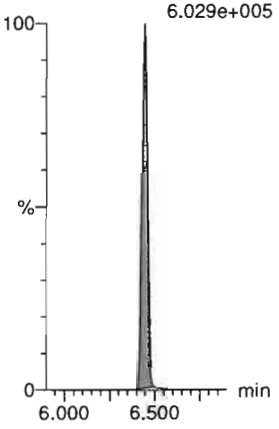
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.787e+005



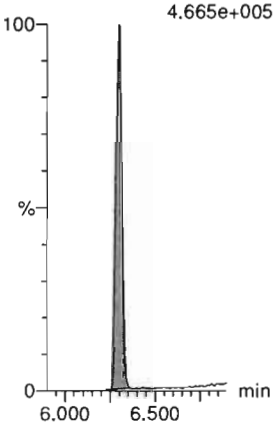
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.019e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.029e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
4.665e+005

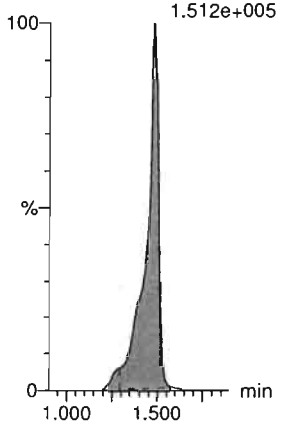


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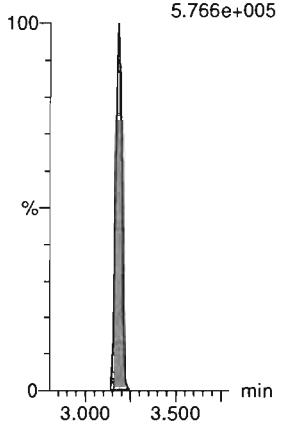
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Name: 200220P1-5, Date: 20-Feb-2020, Time: 18:06:03, ID: ST200220P1-3 PFC CS0 20B1104, Description: PFC CS0 20B1104

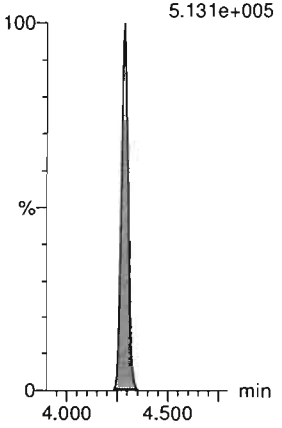
13C4-PFBA



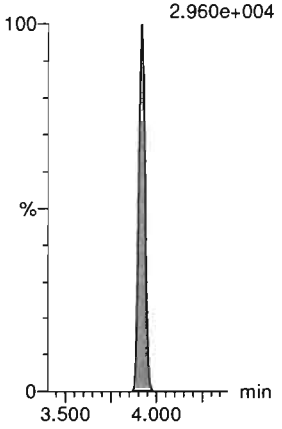
13C5-PFHxA



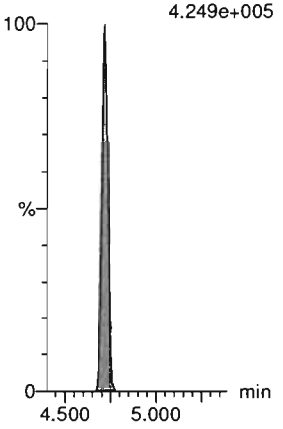
13C8-PFOA



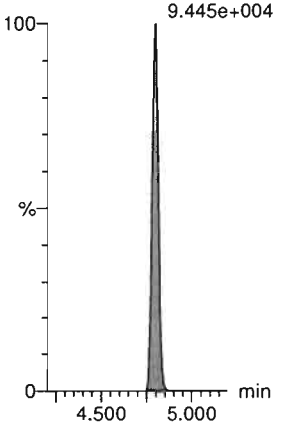
18O2-PFHxS



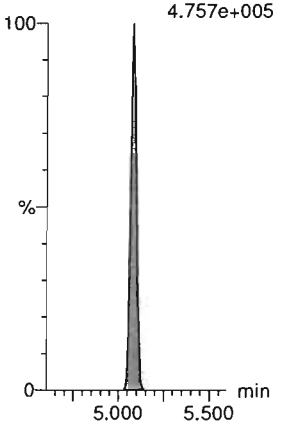
13C9-PFNA



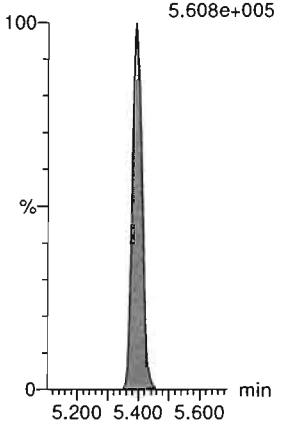
13C4-PFOS



13C6-PFDA



13C7-PFUdA

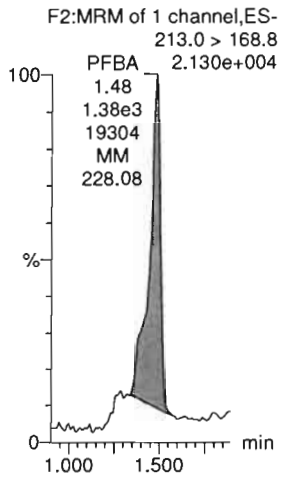


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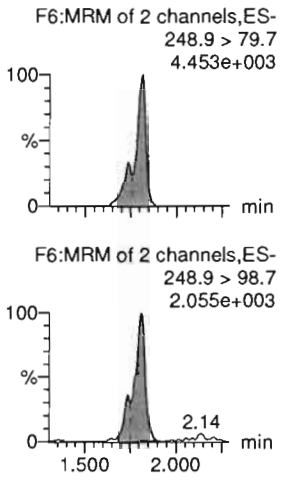
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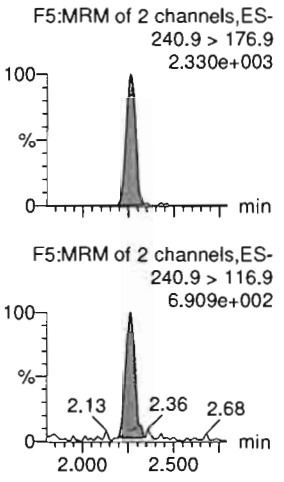
PFBA



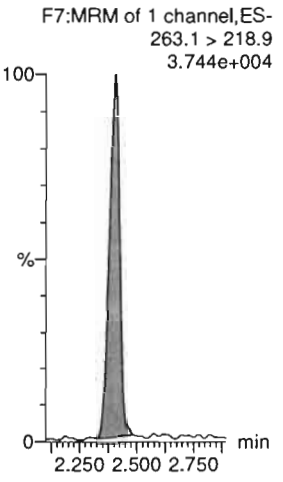
PFPrS



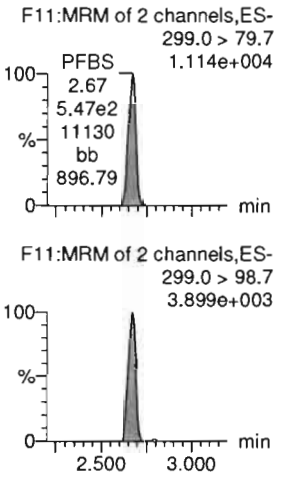
3:3 FTCA



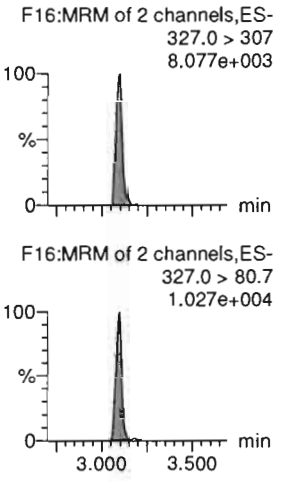
PFPeA



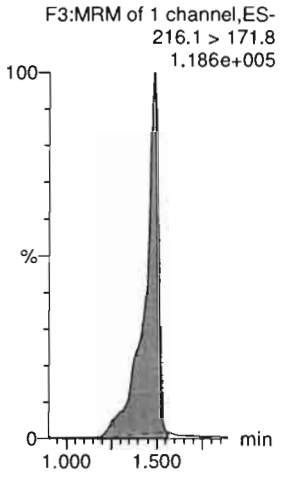
PFBS



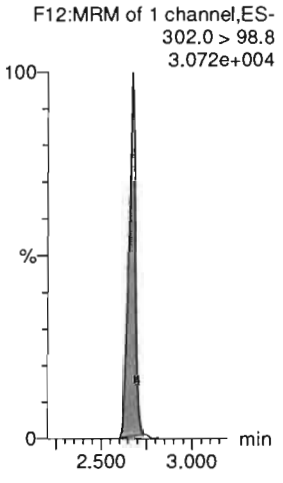
4:2 FTS



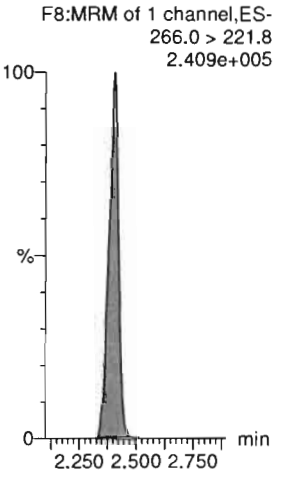
13C3-PFBA-EIS



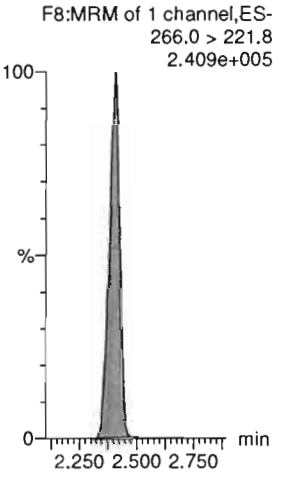
13C3-PFBS-EIS



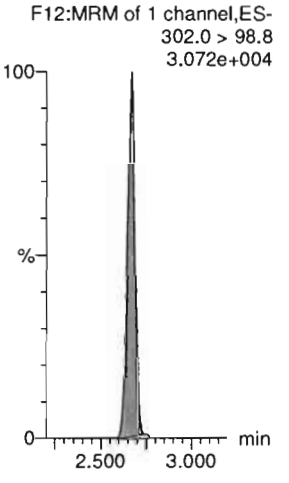
13C3-PFPeA-EIS



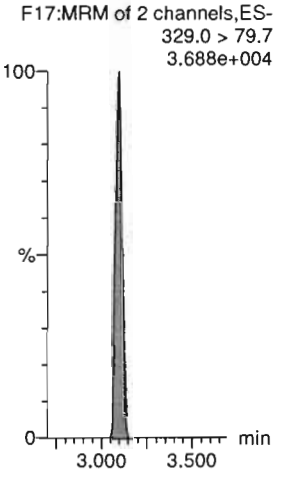
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

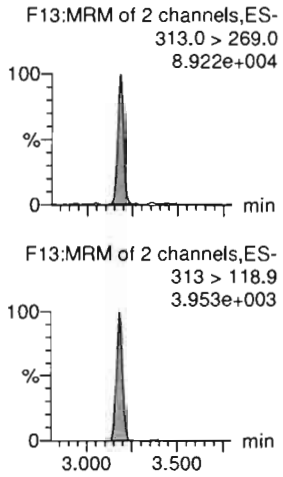


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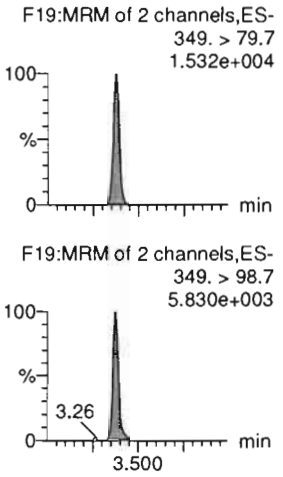
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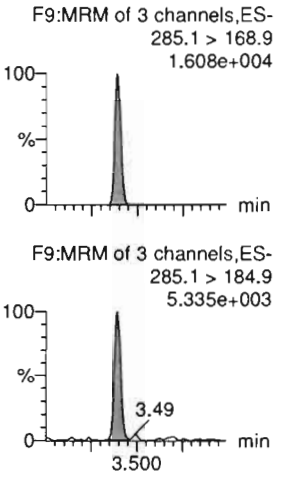
PFHxA



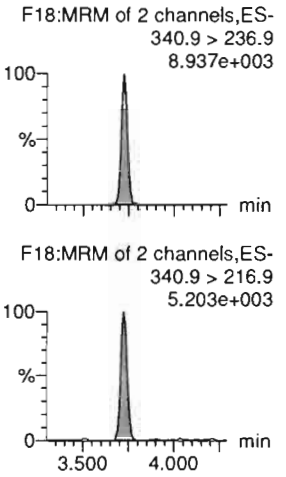
PFPeS



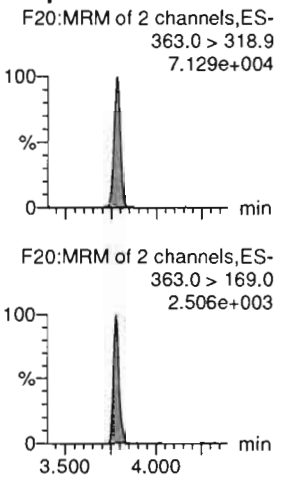
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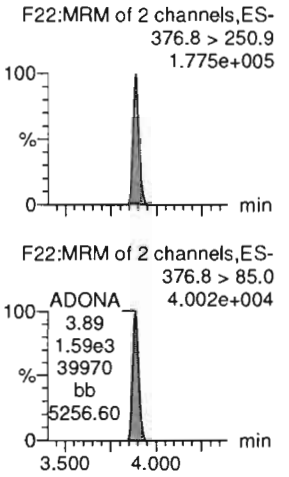
5:3 FTCA



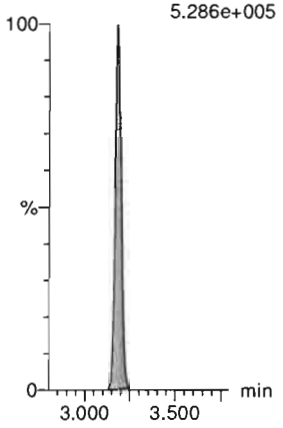
PFHpA



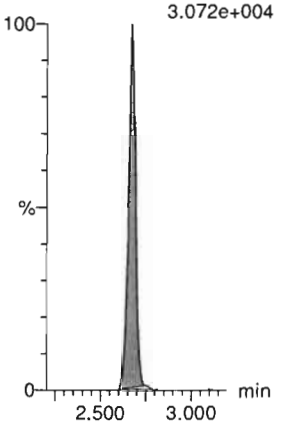
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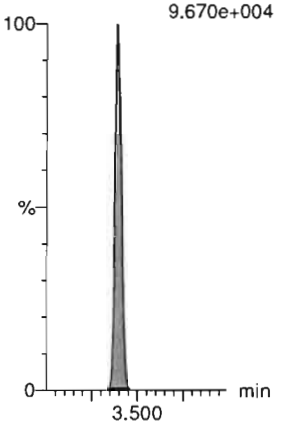
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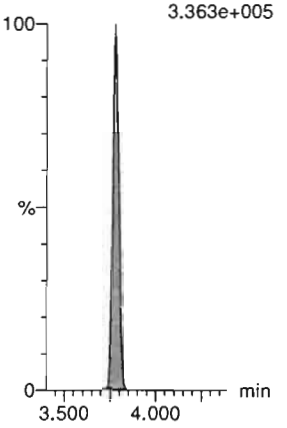
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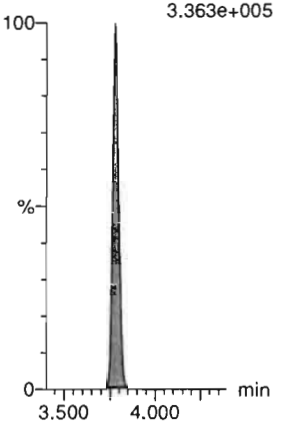
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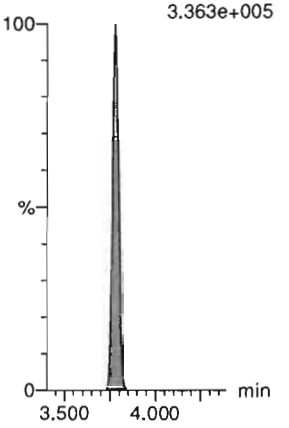
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13C4-PFHpA-EIS



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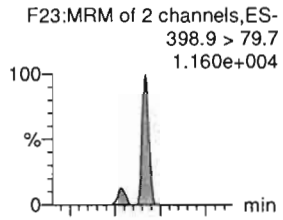


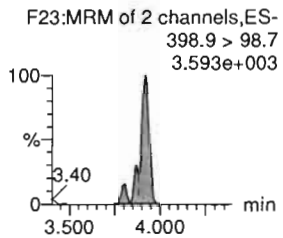
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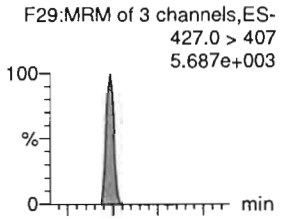
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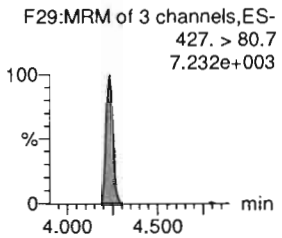
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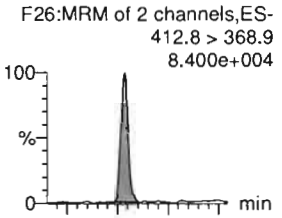


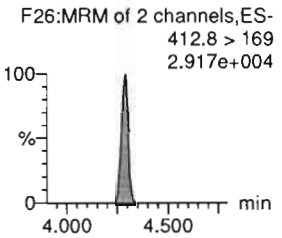
6:2 FTS



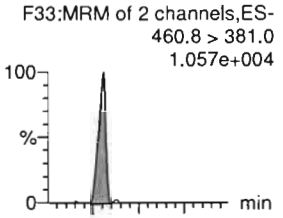


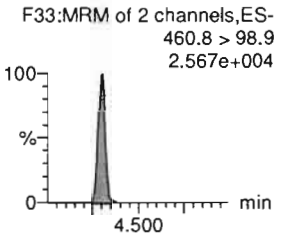
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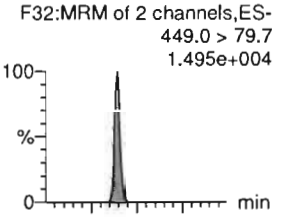


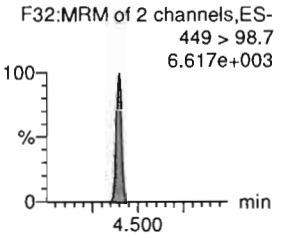
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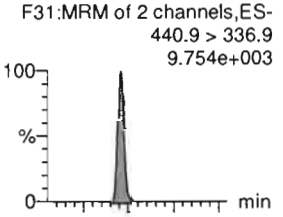


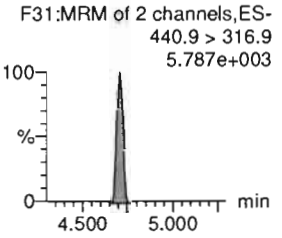
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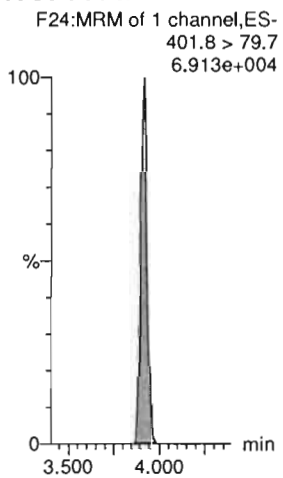


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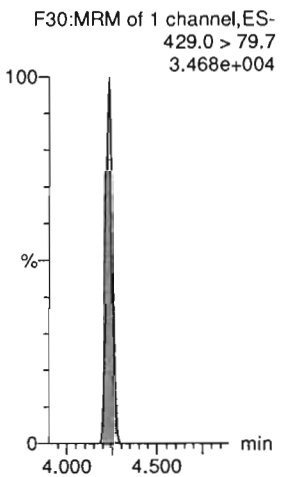




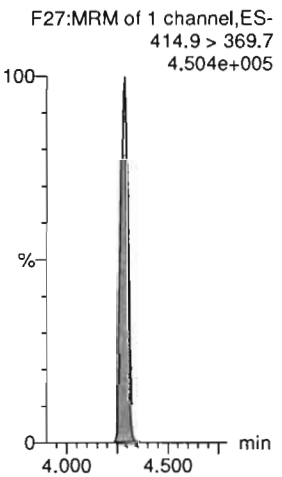
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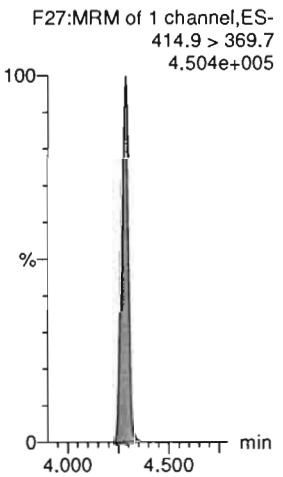
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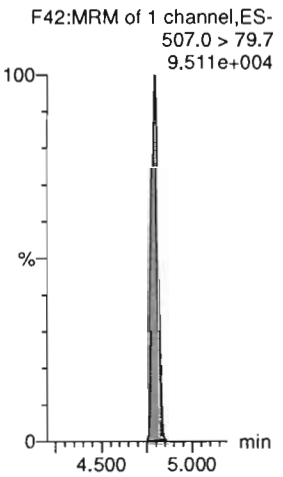
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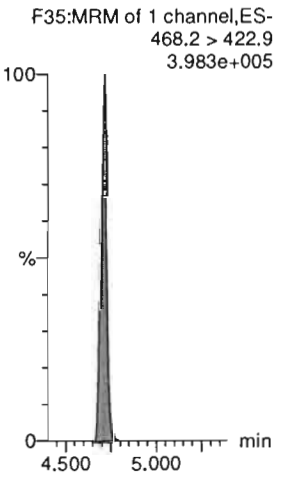
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13C8-PFOS-EIS



13C5-PFNA-EIS

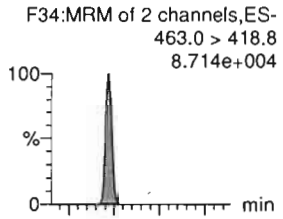


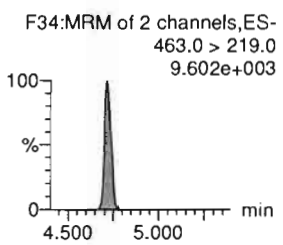
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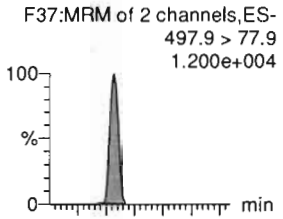
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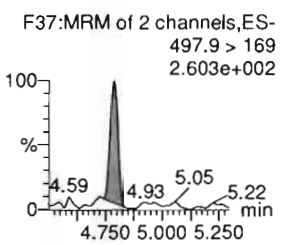
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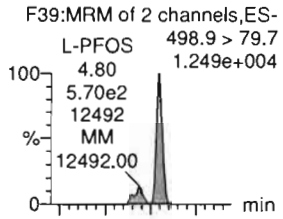


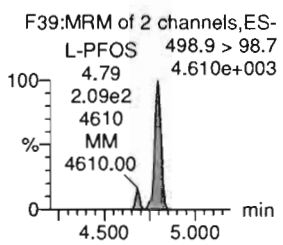
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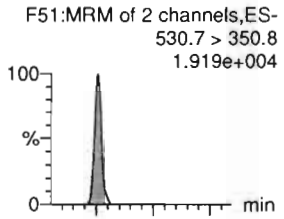


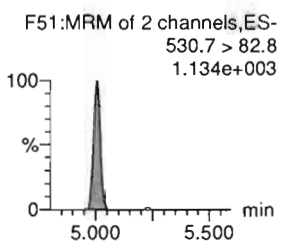
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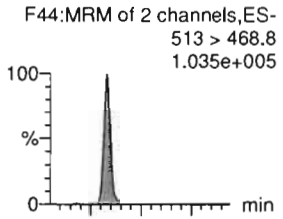


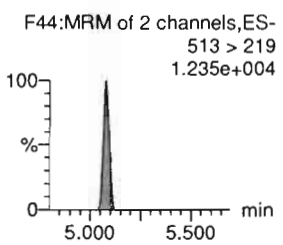
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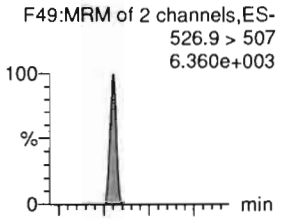


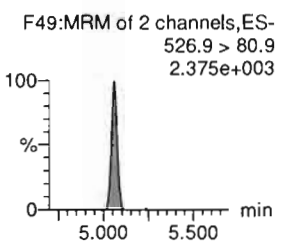
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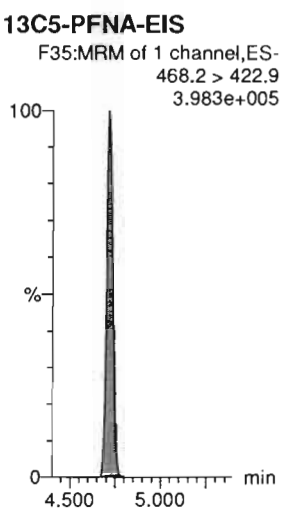


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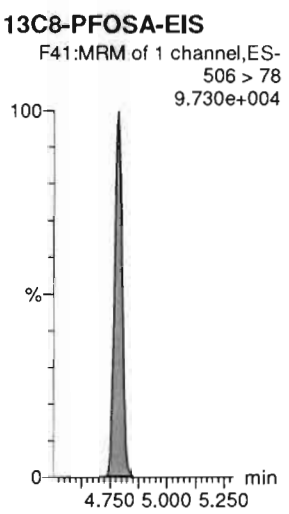




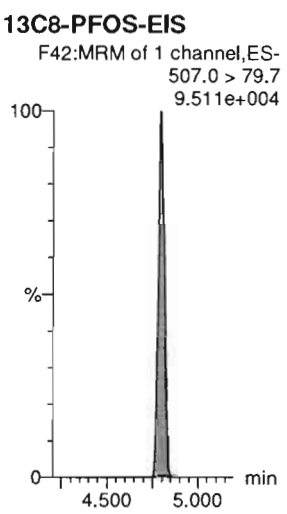
13C5-PFNA-EIS



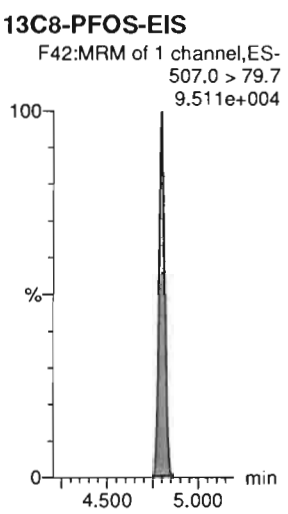
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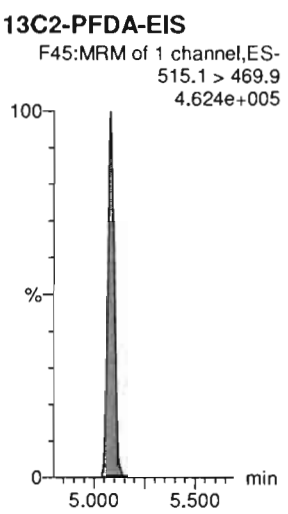
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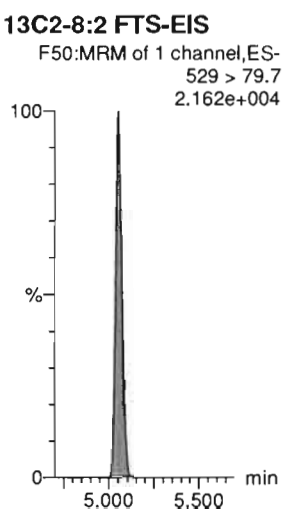
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

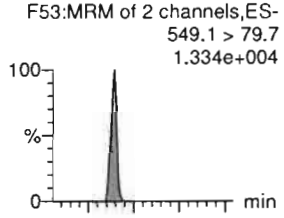


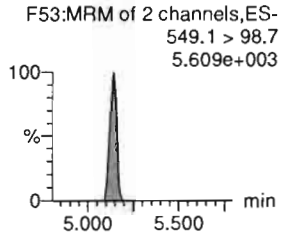
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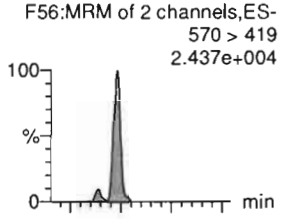
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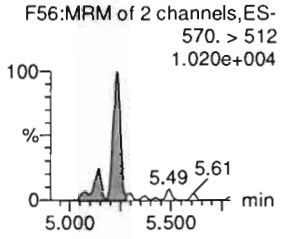
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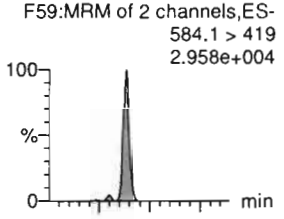


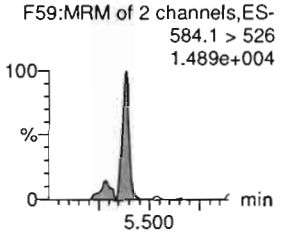
L-MeFOSAA



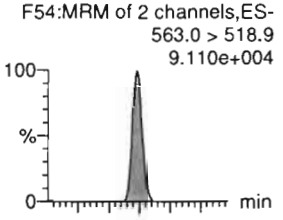


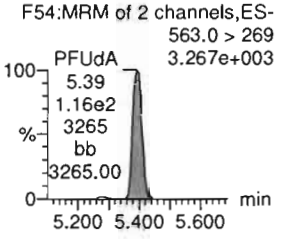
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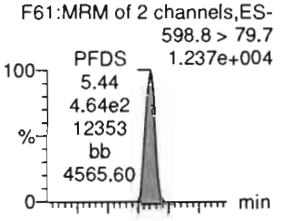


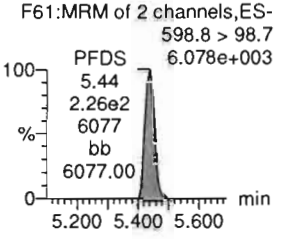
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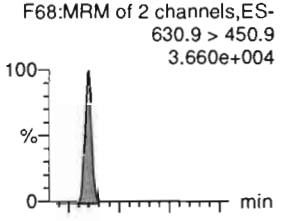


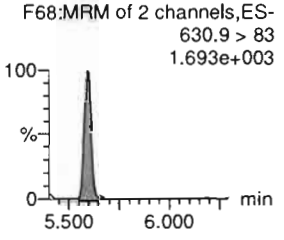
PFDS



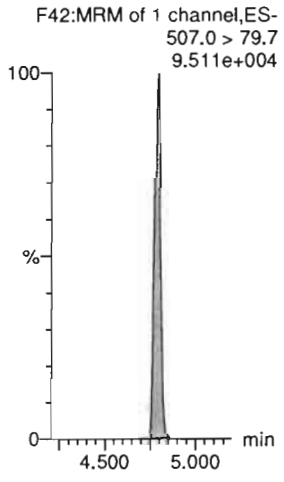


11Cl-PF30UdS

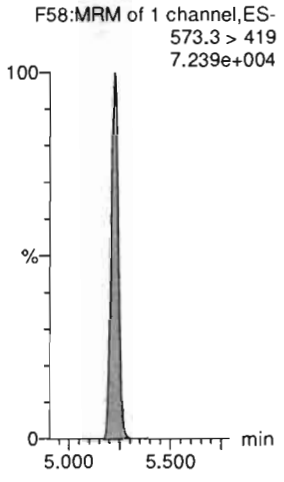




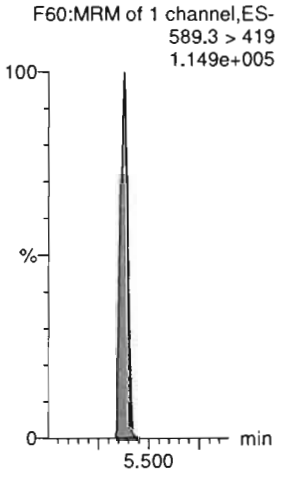
13C8-PFOS-EIS



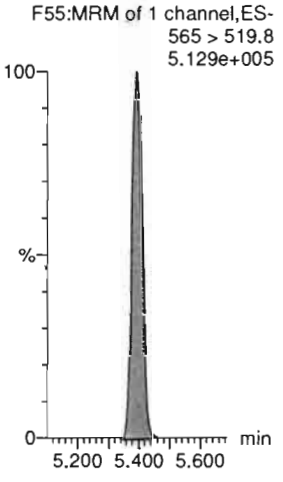
d3-N-MeFOSAA-EIS



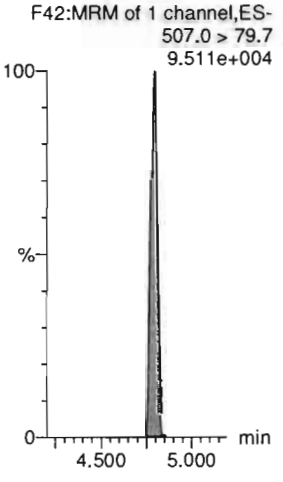
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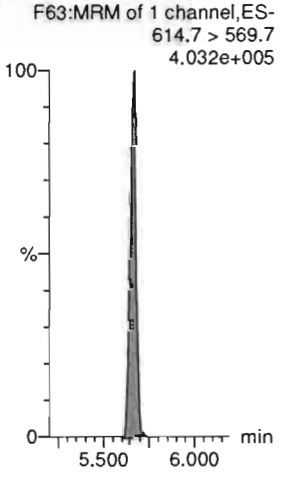
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

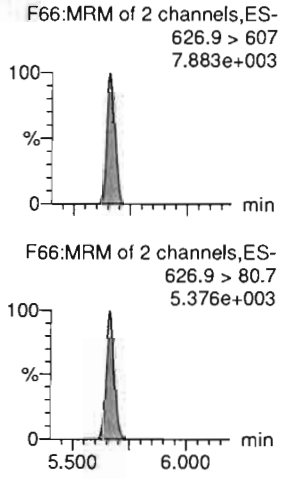


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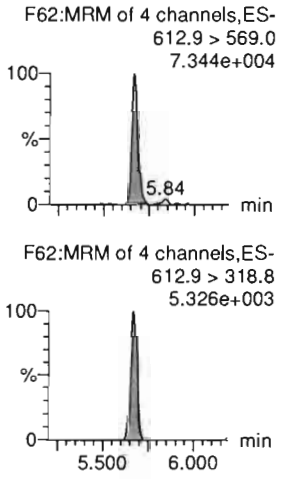
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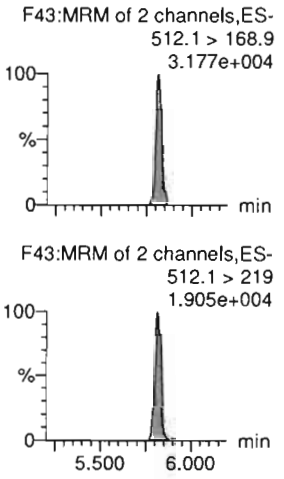
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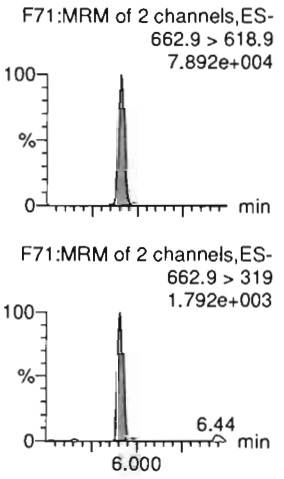
PFDoA



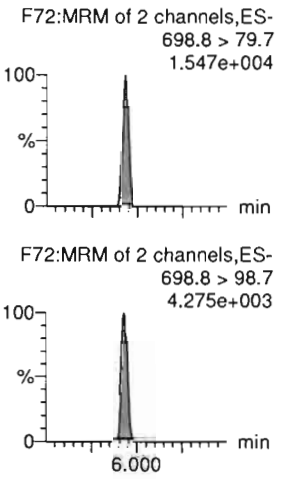
N-MeFOSA



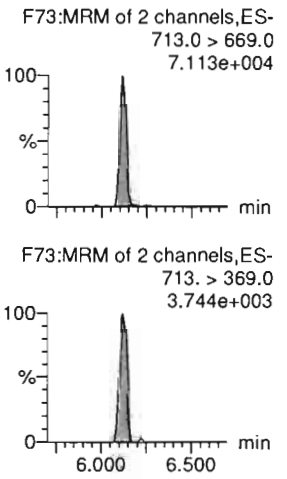
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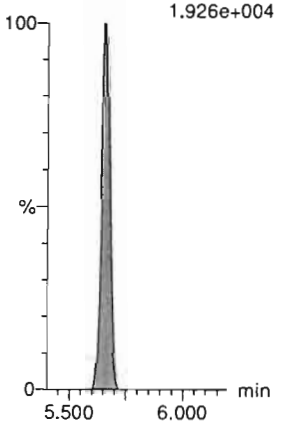
PFDoS



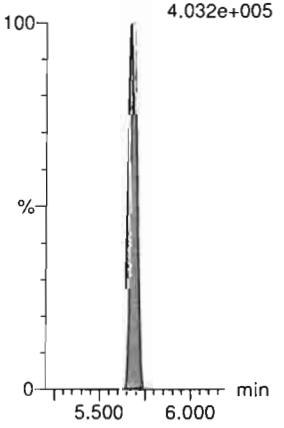
PFTeDA



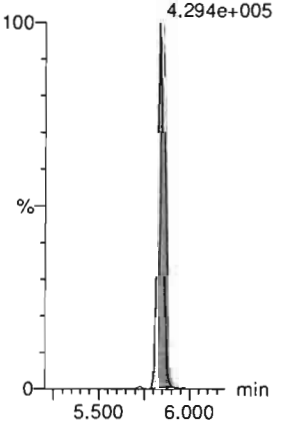
13C2-10:2 FTS-EIS



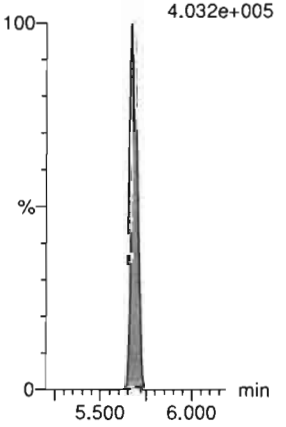
13C2-PFDoA-EIS



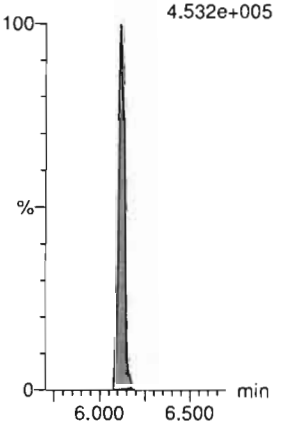
d3-N-MeFOSA-EIS



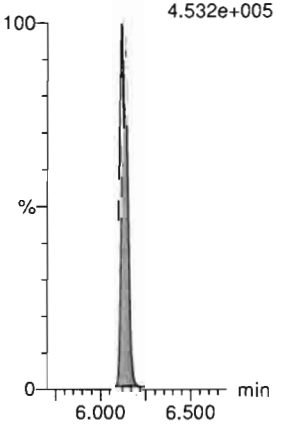
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

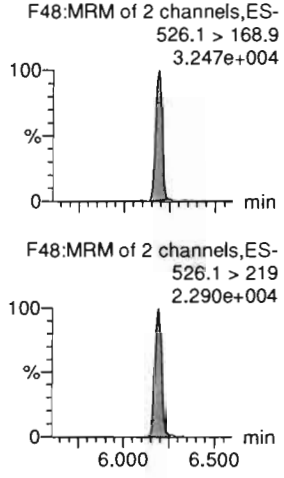


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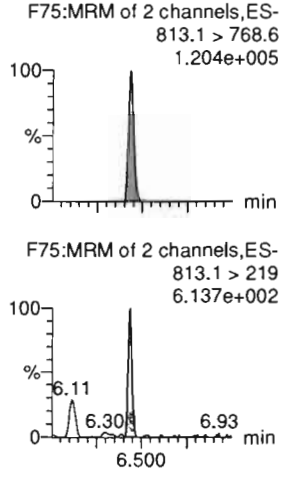
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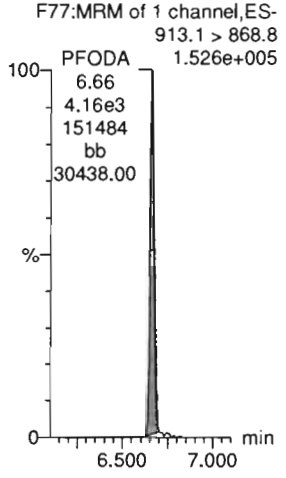
N-EtFOSA



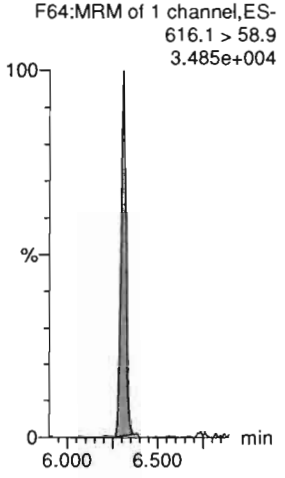
PFHxDA



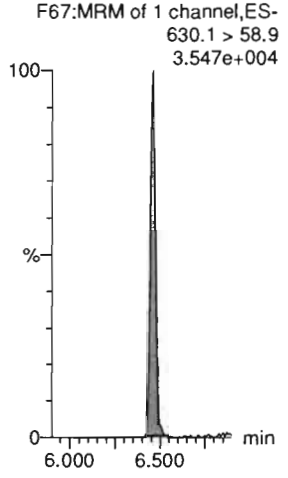
PFODA



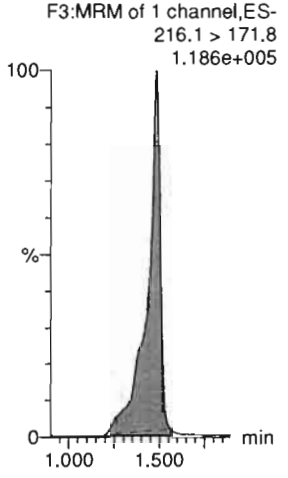
N-MeFOSE



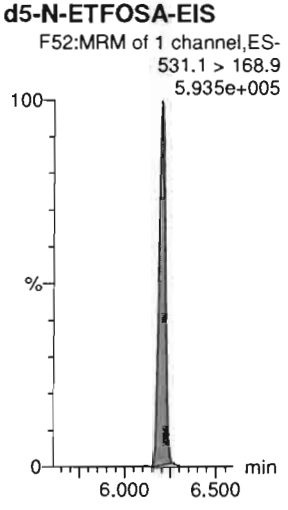
N-EtFOSE



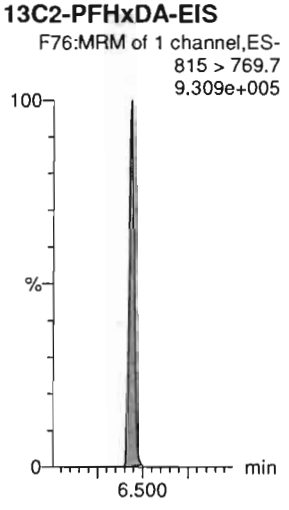
13C3-PFBA-RSD



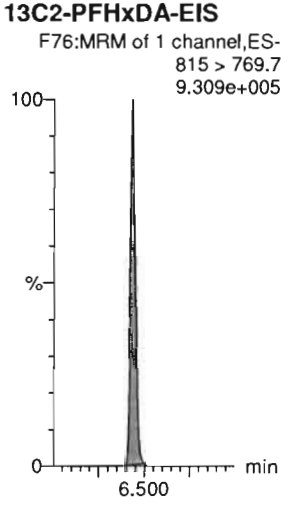
d5-N-ETFOSA-EIS



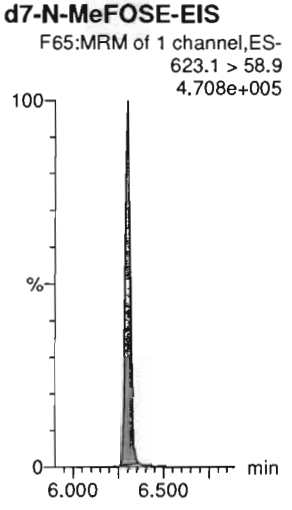
13C2-PFHxDA-EIS



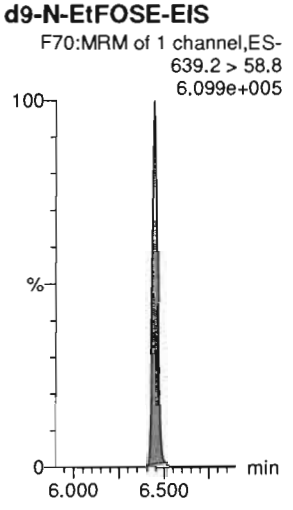
13C2-PFHxDA-EIS



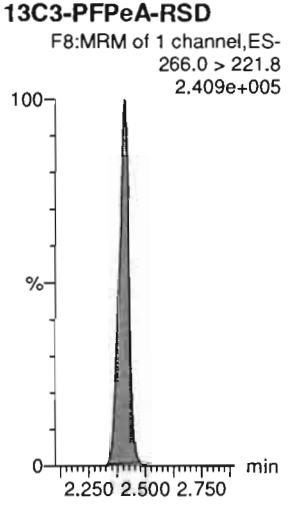
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

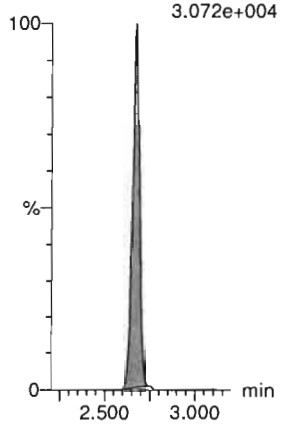


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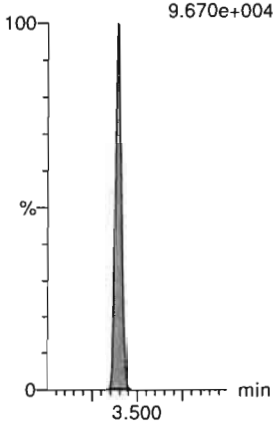
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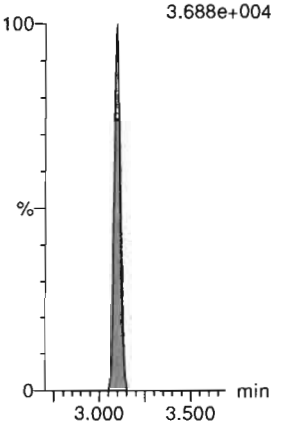
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.072e+004



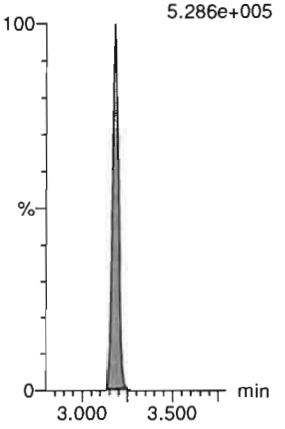
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
9.670e+004



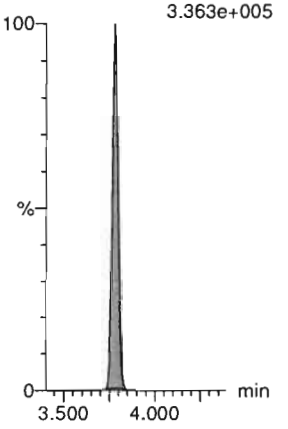
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.688e+004



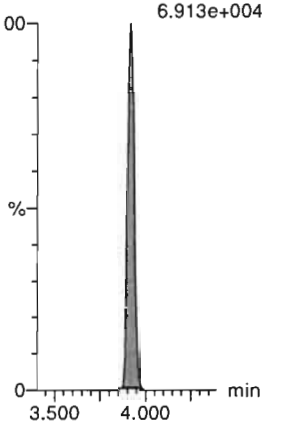
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.286e+005



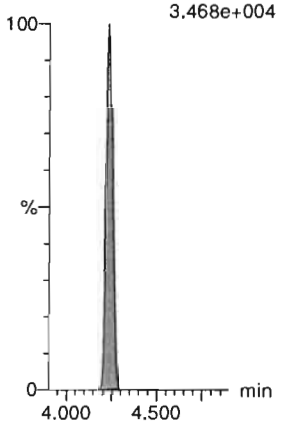
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.363e+005



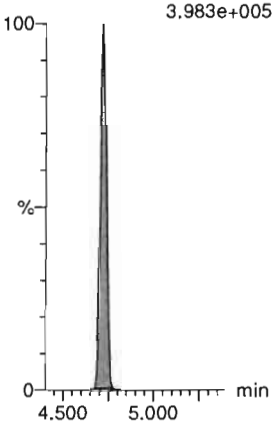
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
6.913e+004



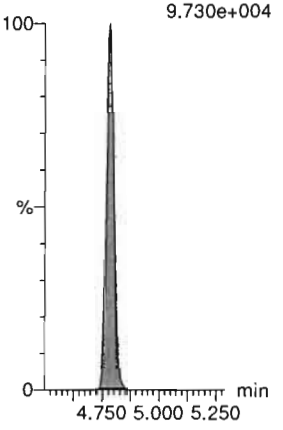
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.468e+004



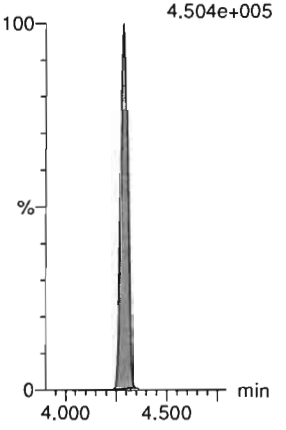
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
3.983e+005



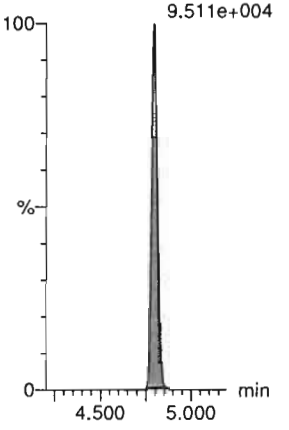
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.730e+004



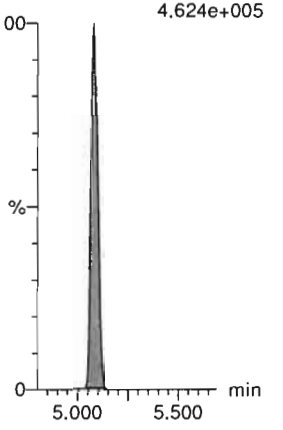
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.504e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.511e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.624e+005

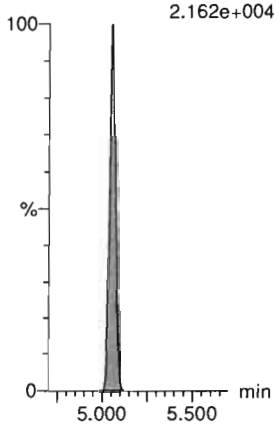


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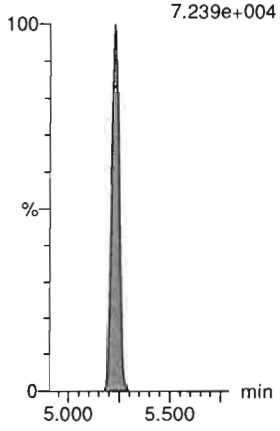
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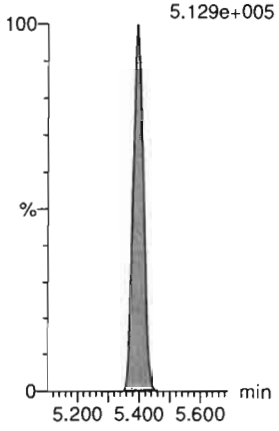
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.162e+004



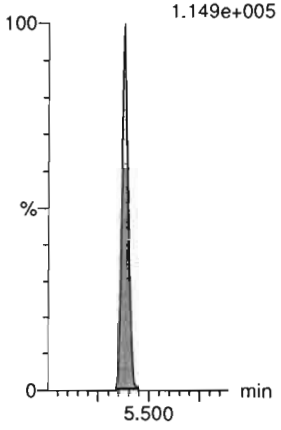
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
7.239e+004



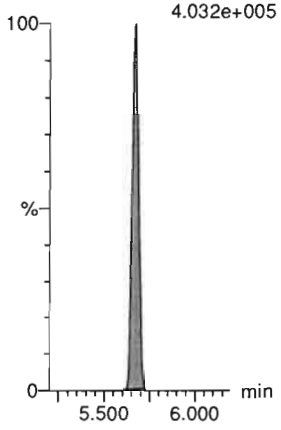
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.129e+005



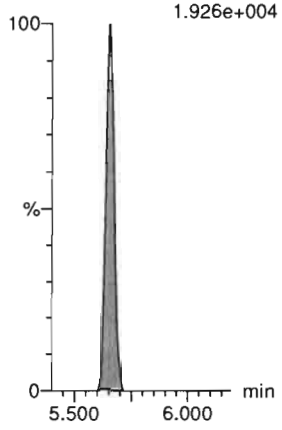
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.149e+005



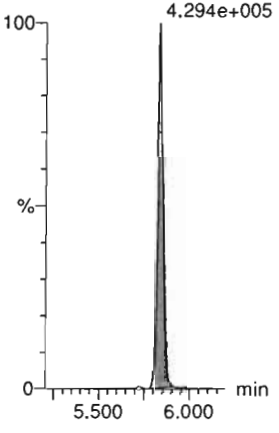
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.032e+005



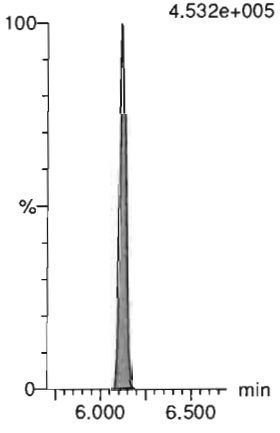
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
1.926e+004



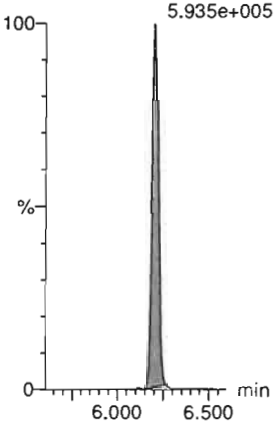
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.294e+005



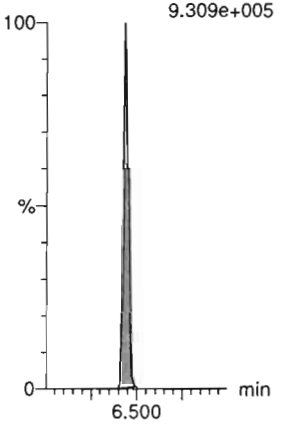
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.532e+005



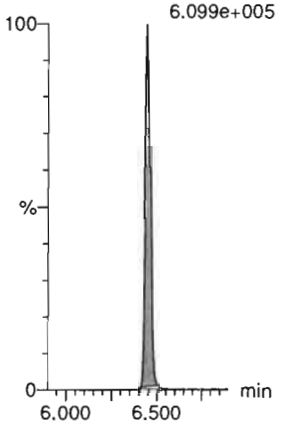
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.935e+005



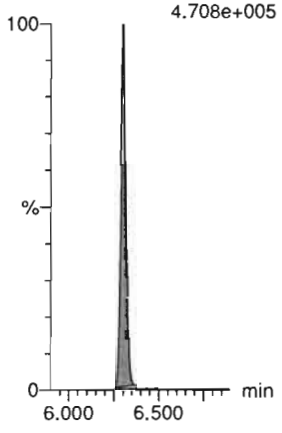
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.309e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.099e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
4.708e+005

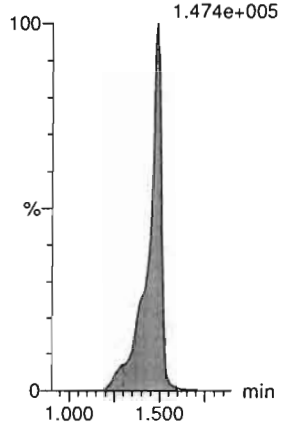


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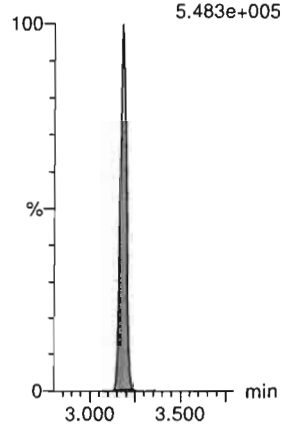
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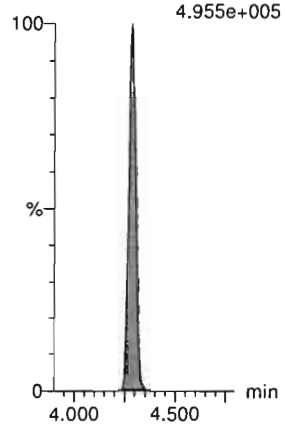
13C4-PFBA



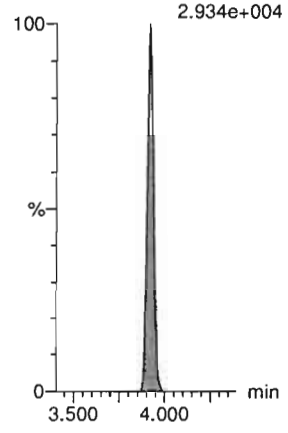
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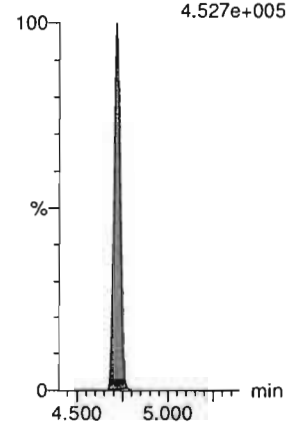
13C8-PFOA



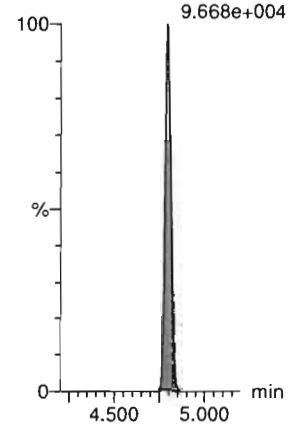
18O2-PFHxS



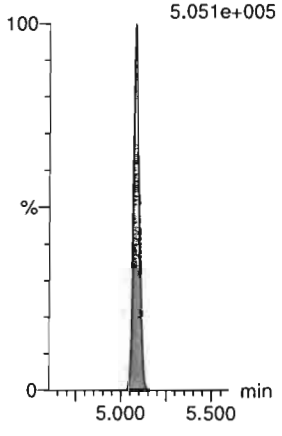
13C9-PFNA



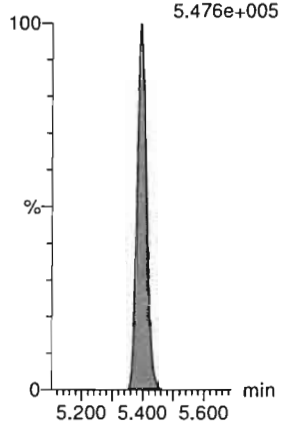
13C4-PFOS



13C6-PFDA



13C7-PFUdA

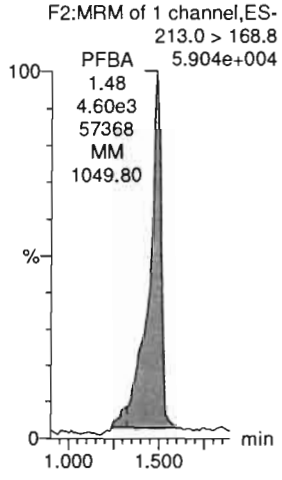


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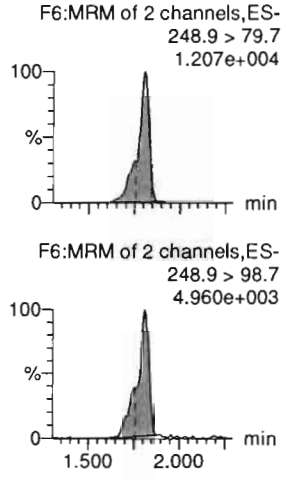
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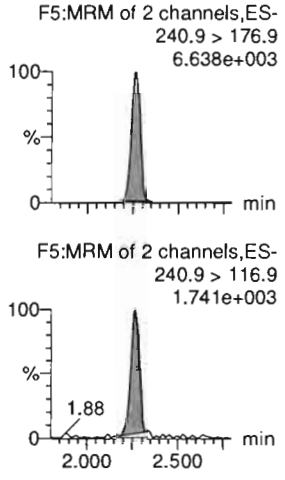
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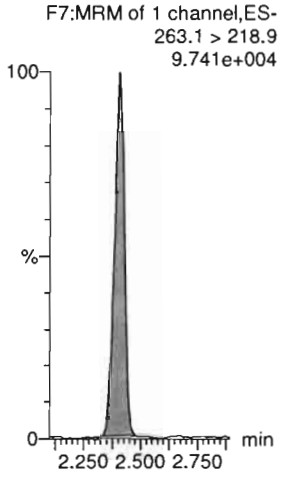
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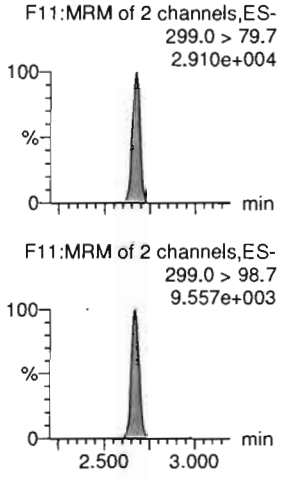
3:3 FTCA



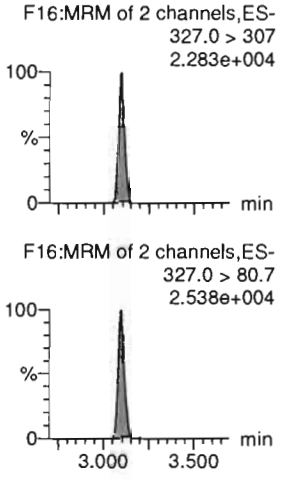
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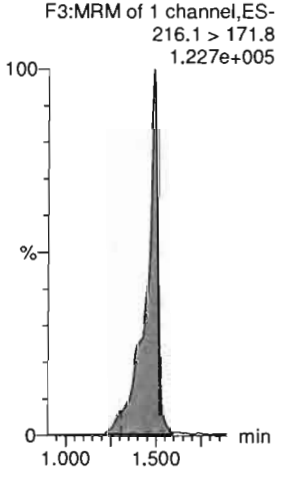
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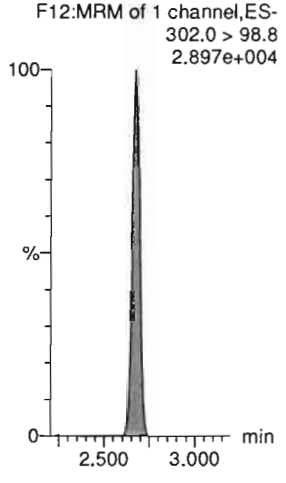
4:2 FTS



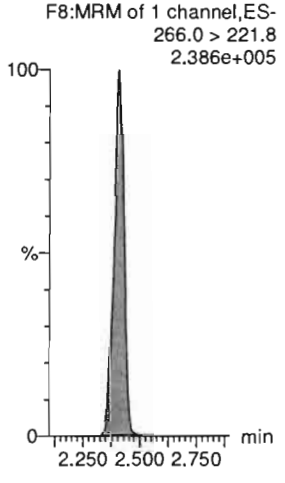
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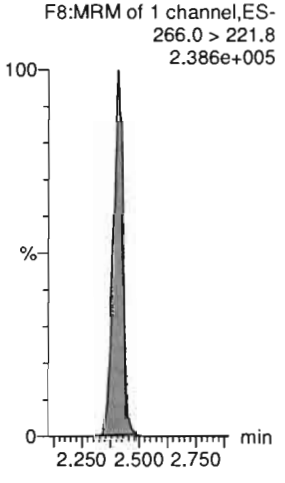
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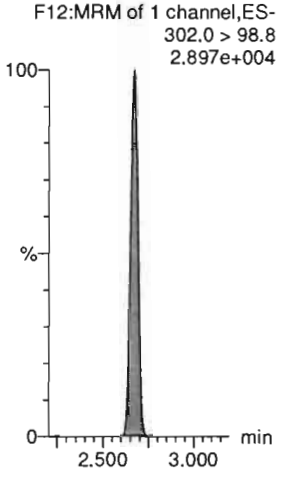
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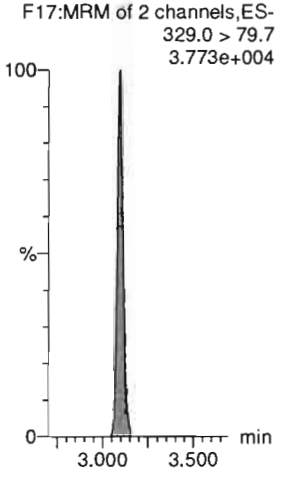
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

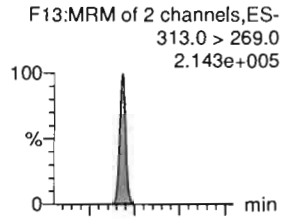


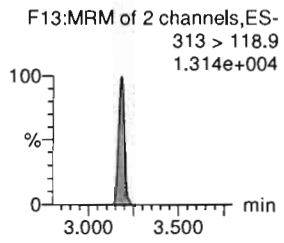
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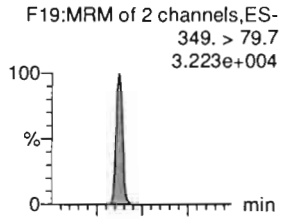
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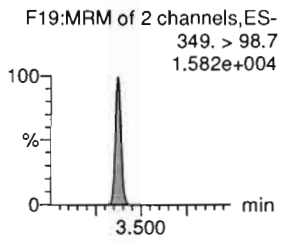
PFHxA



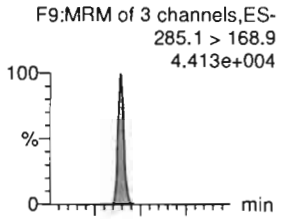


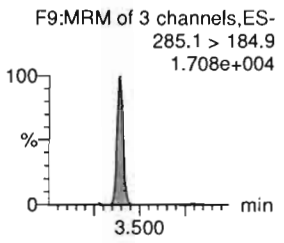
PFPeS



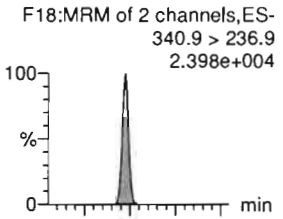


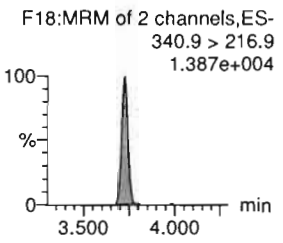
HFPO-DA



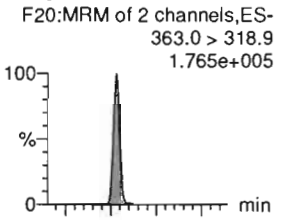


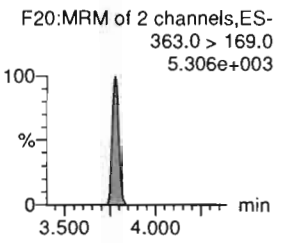
5:3 FTCA



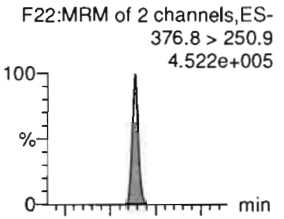


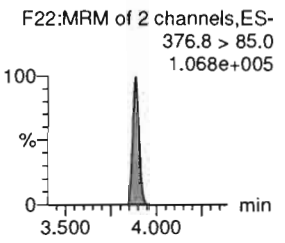
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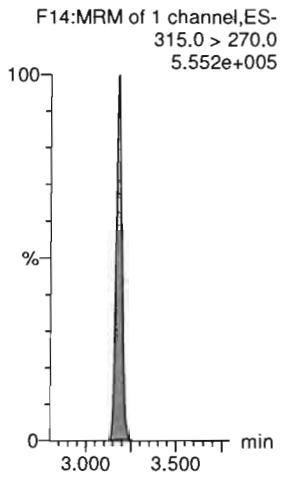


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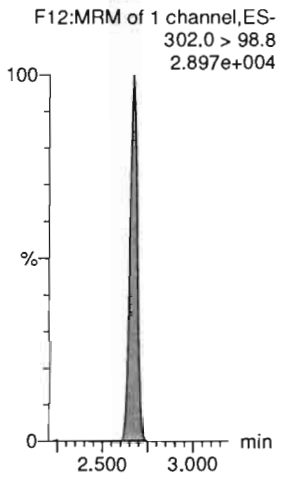




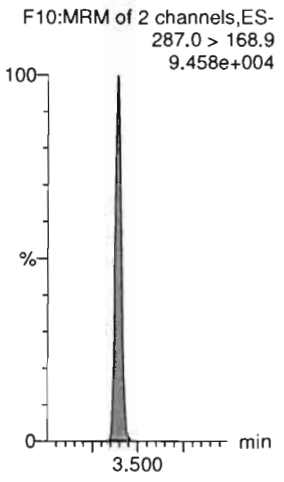
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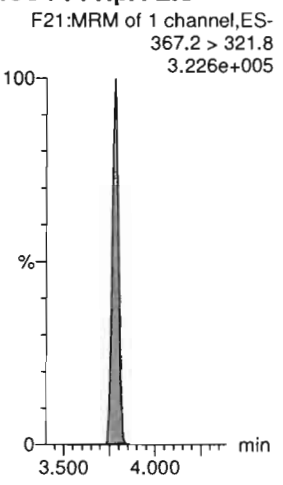
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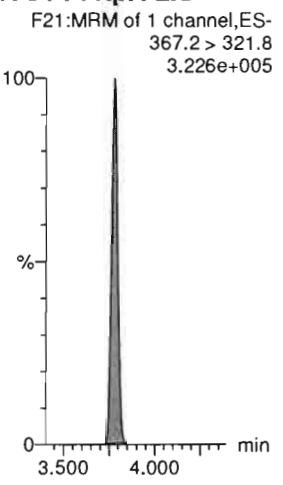
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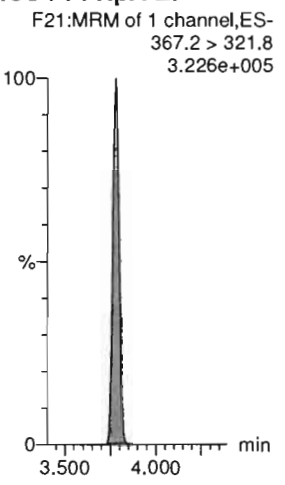
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

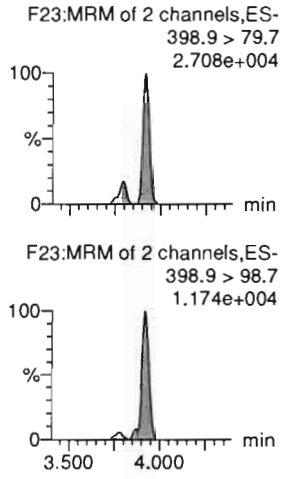


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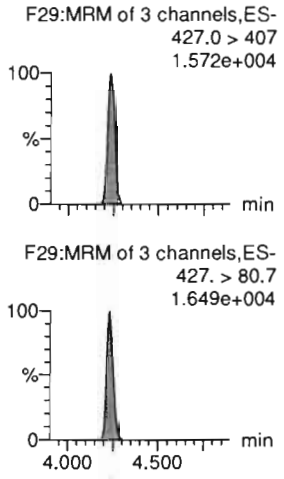
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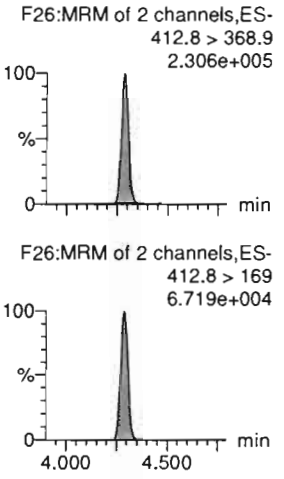
L-PFHxS



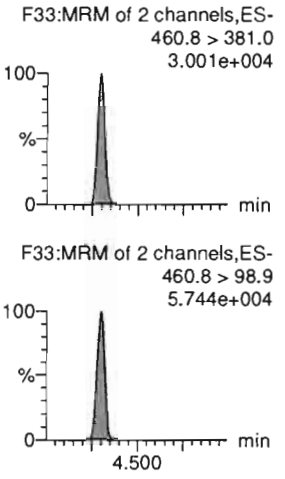
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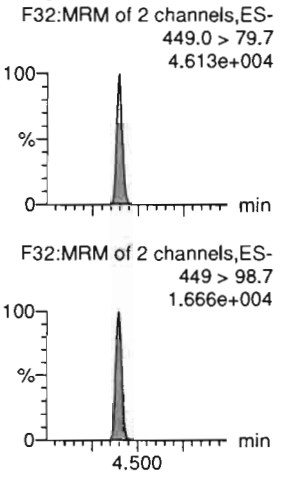
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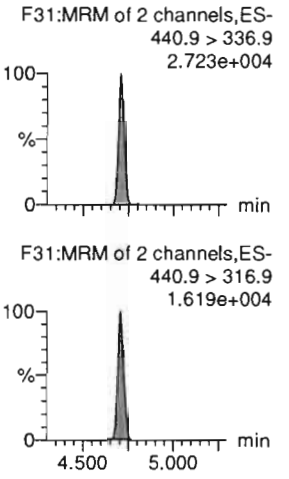
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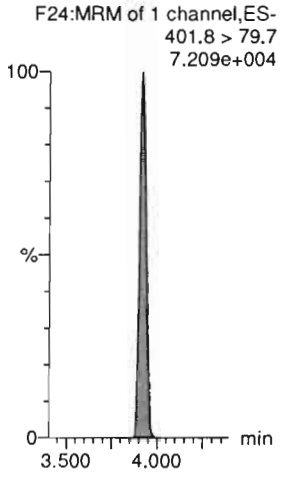
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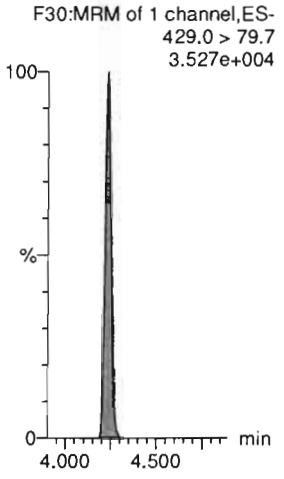
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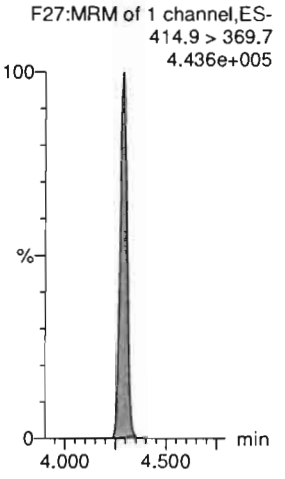
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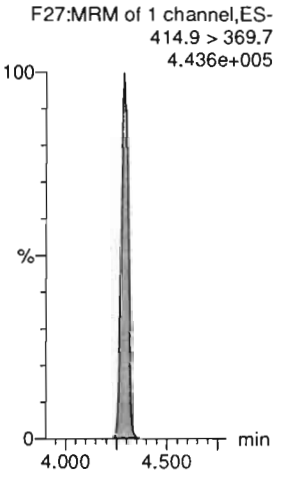
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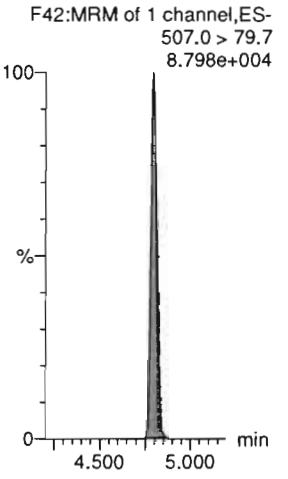
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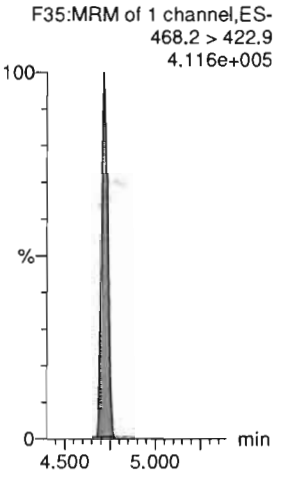
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13C8-PFOS-EIS



13C5-PFNA-EIS

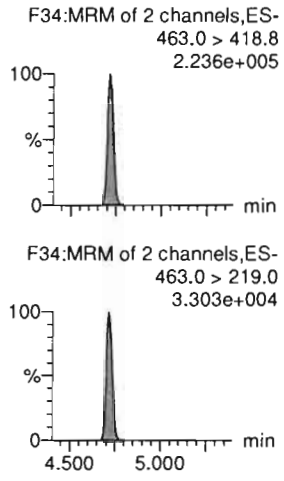


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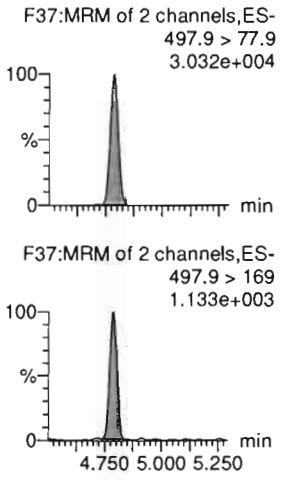
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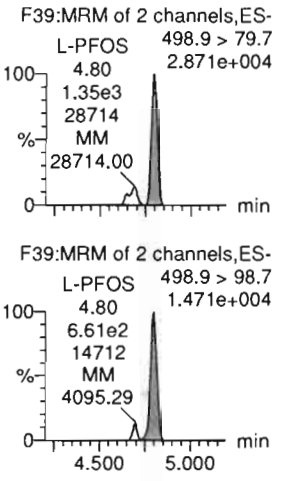
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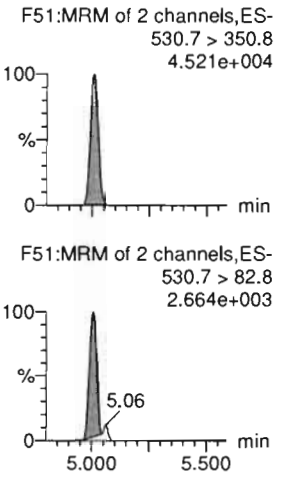
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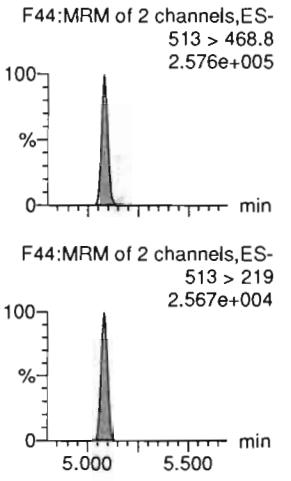
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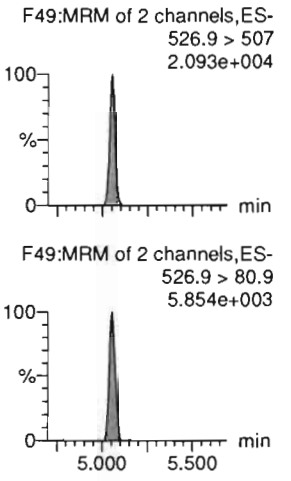
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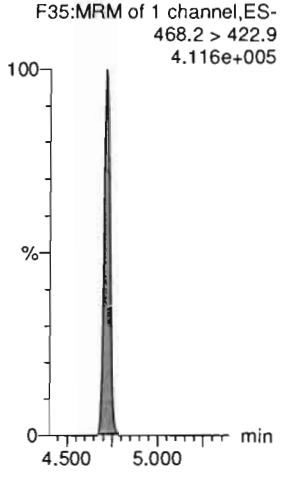
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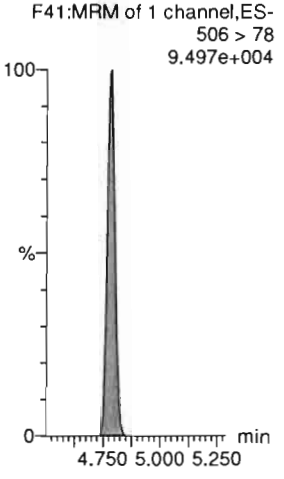
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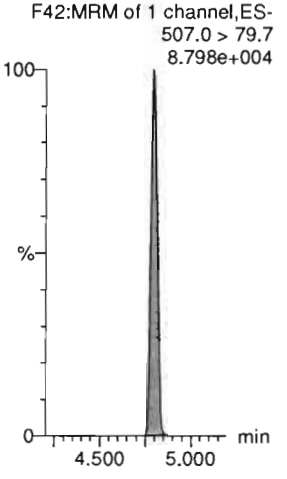
13C5-PFNA-EIS



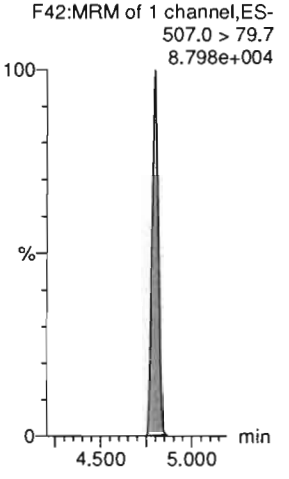
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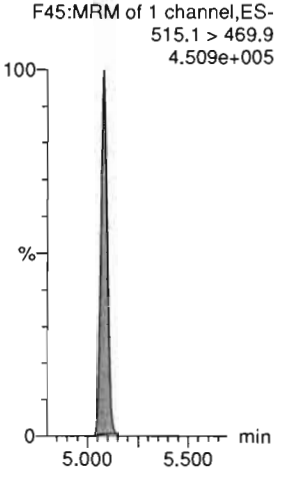
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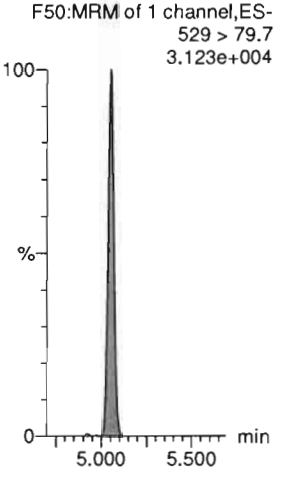
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

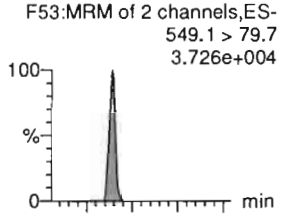


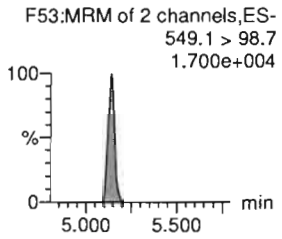
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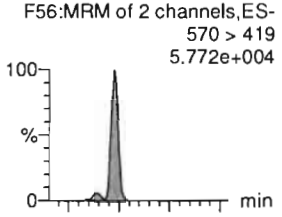
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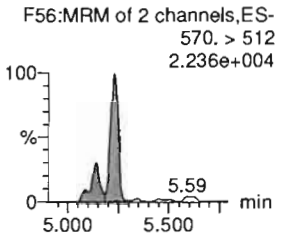
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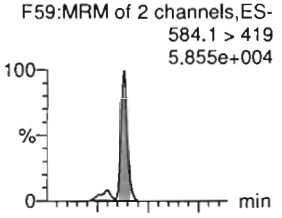


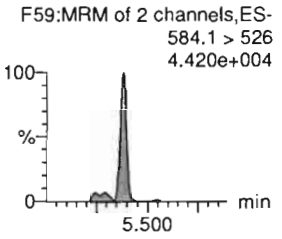
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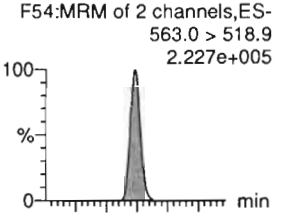


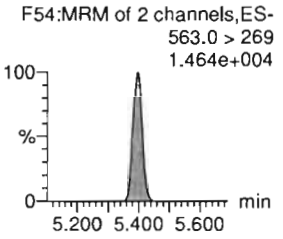
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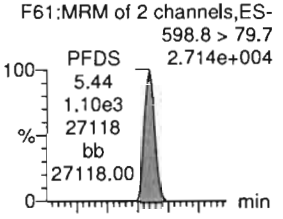


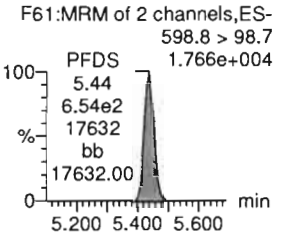
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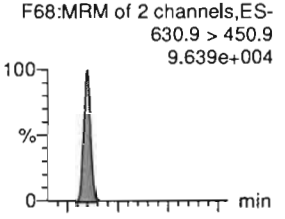


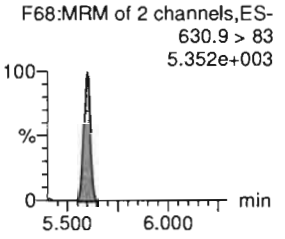
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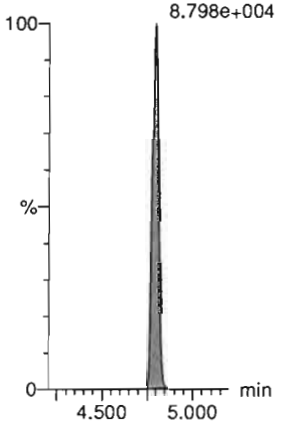


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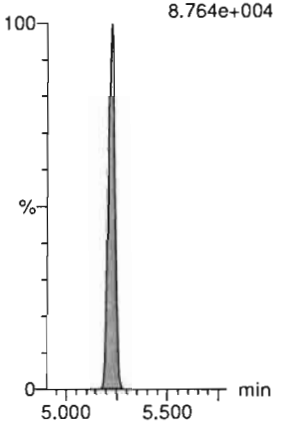




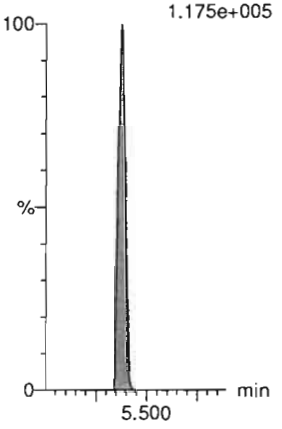
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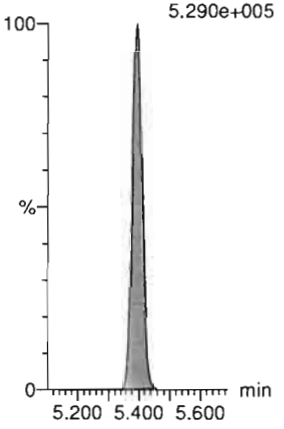
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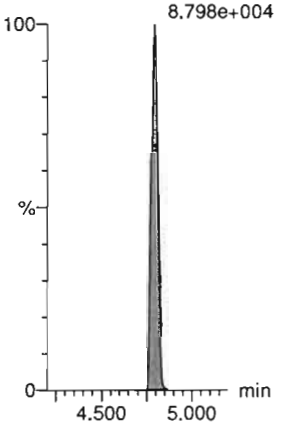
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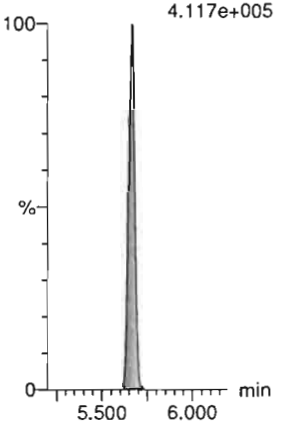
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13C8-PFOS-EIS



13C2-PFDoA-EIS

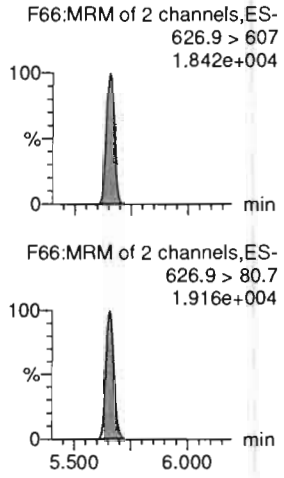


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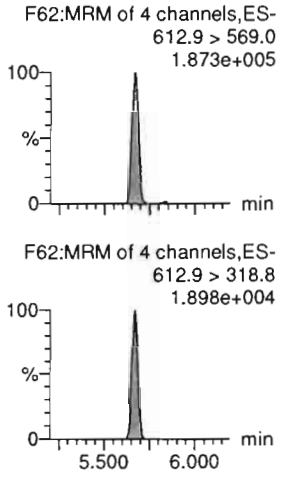
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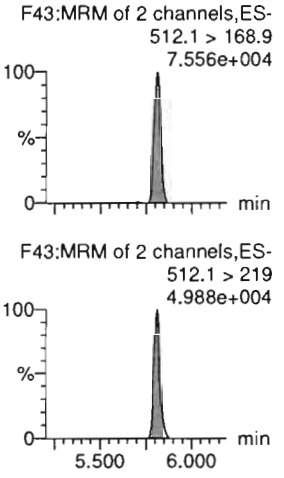
10:2 FTS



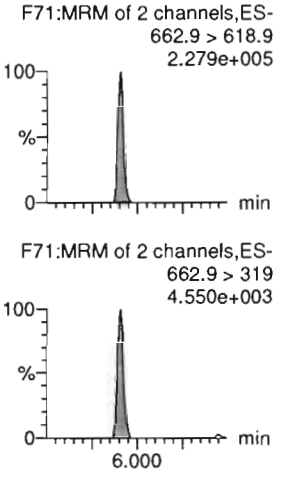
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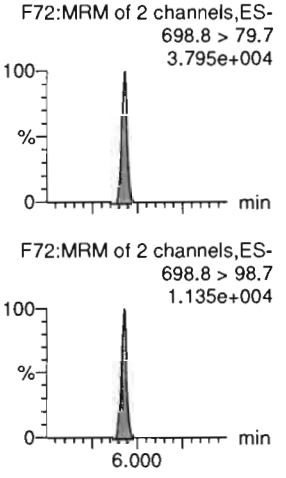
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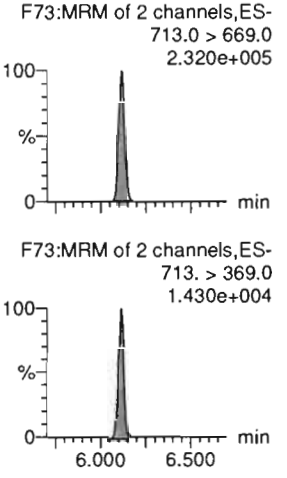
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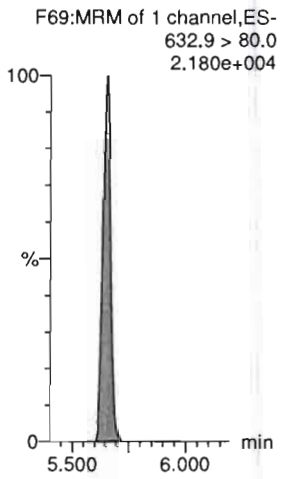
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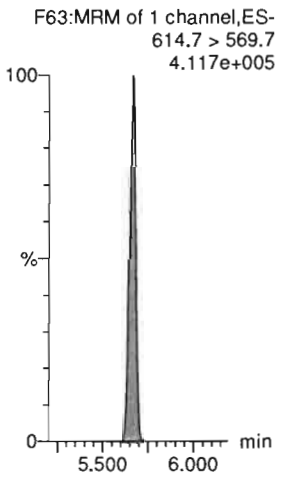
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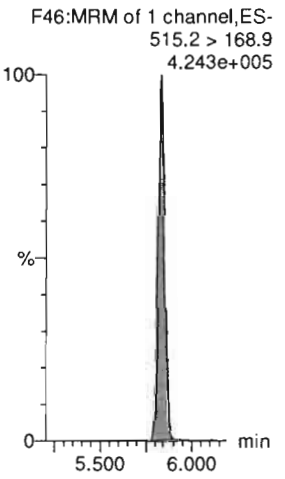
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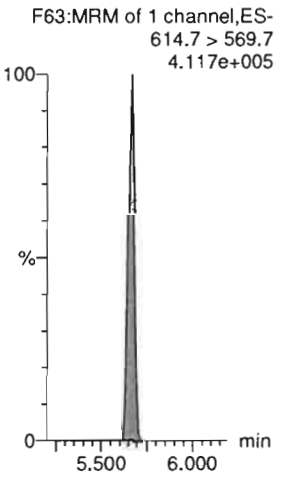
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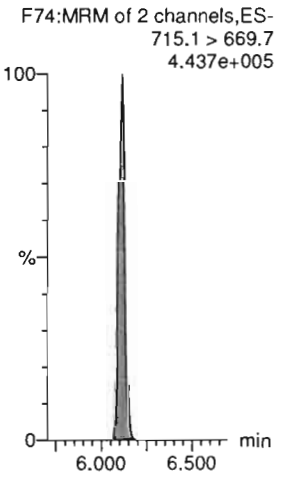
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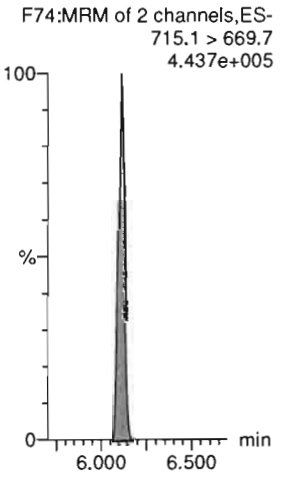
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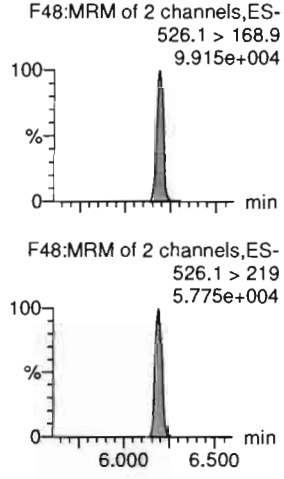


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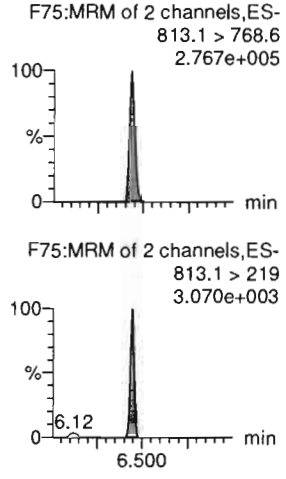
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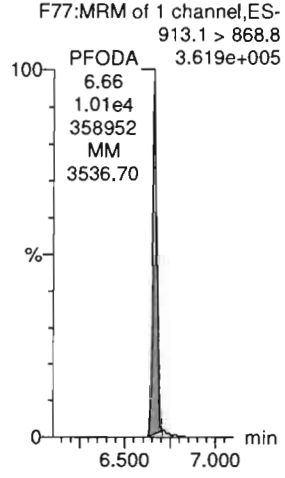
N-EtFOSA



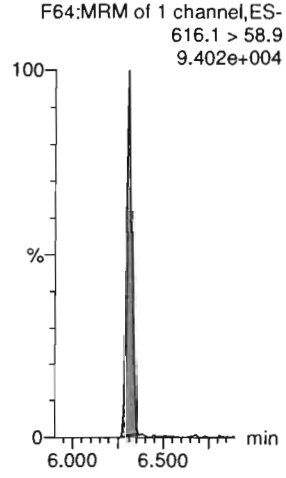
PFHxDA



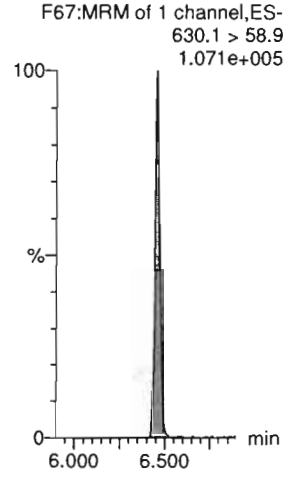
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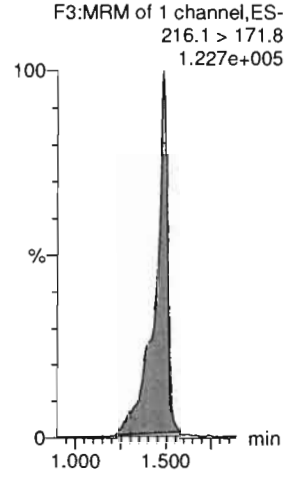
N-MeFOSE



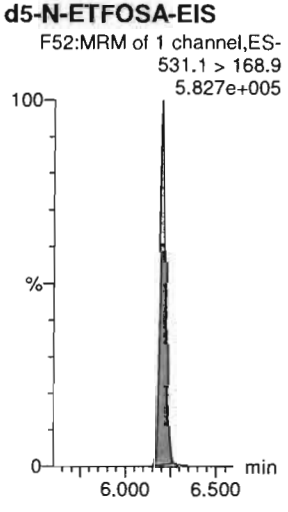
N-EtFOSE



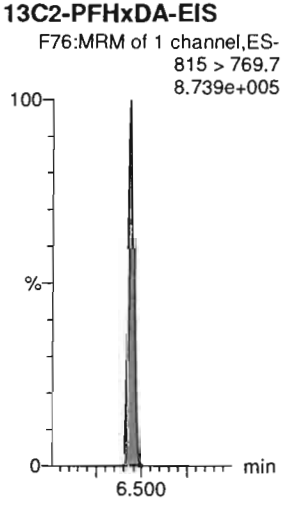
13C3-PFBA-RSD



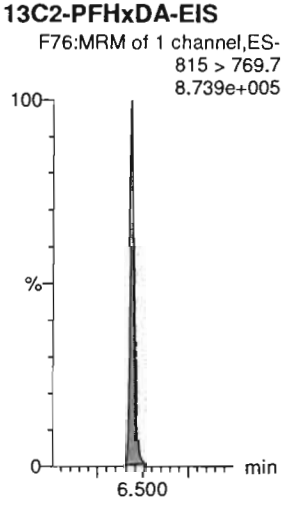
d5-N-ETFOSA-EIS



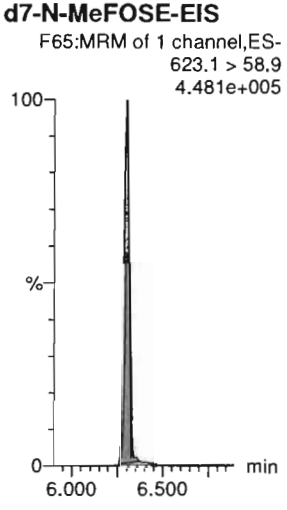
13C2-PFHxDA-EIS



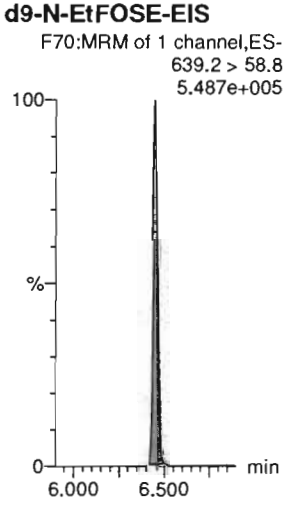
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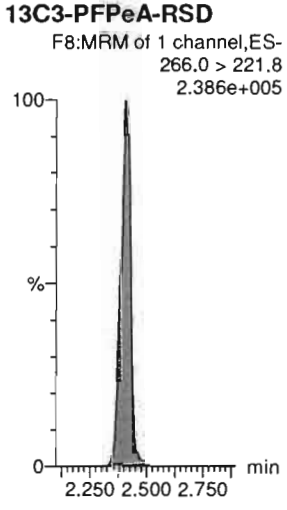
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

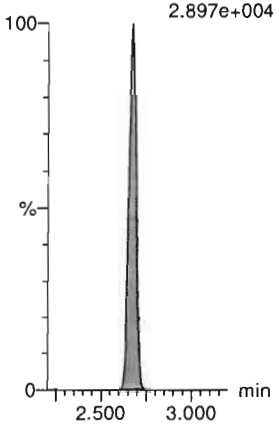


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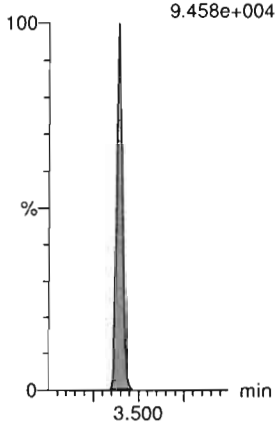
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Name: 200220P1-7, Date: 20-Feb-2020, Time: 18:27:04, ID: ST200220P1-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

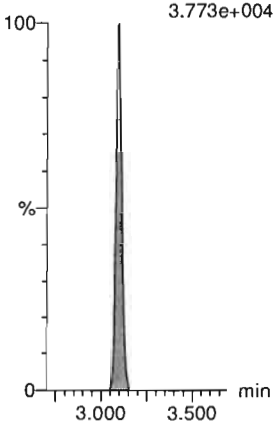
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.897e+004



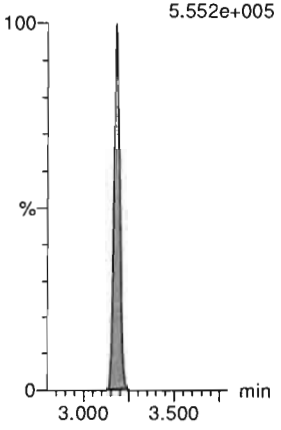
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
9.458e+004



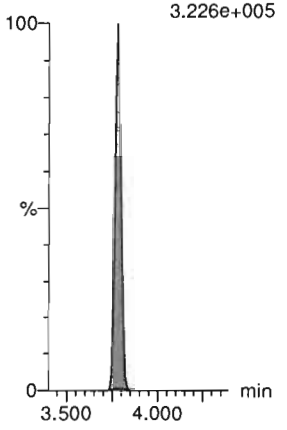
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.773e+004



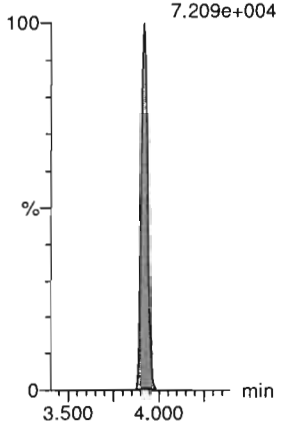
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.552e+005



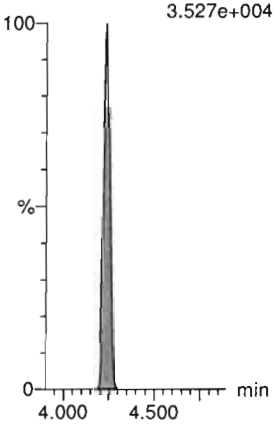
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.226e+005



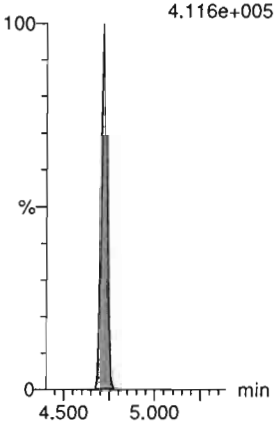
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.209e+004



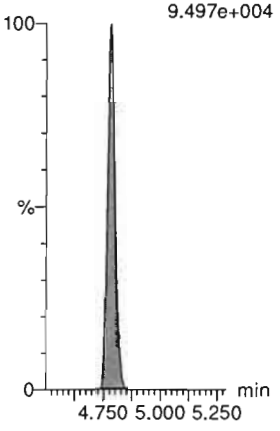
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.527e+004



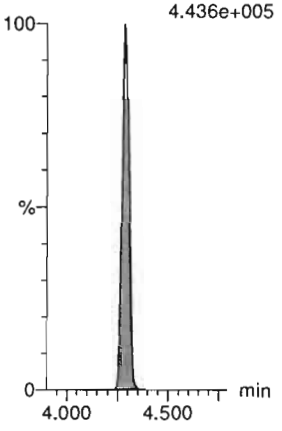
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.116e+005



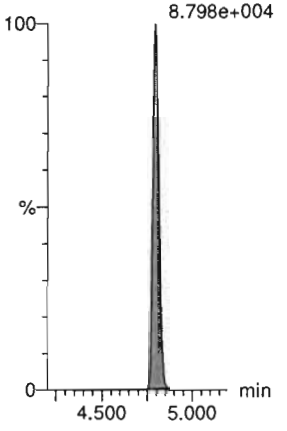
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.497e+004



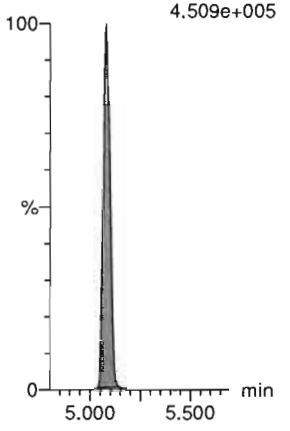
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.436e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.798e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.509e+005

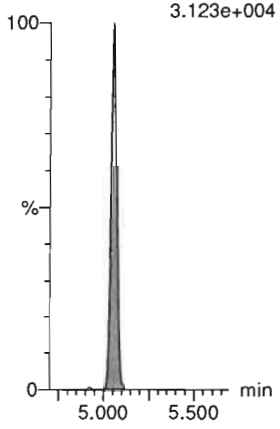


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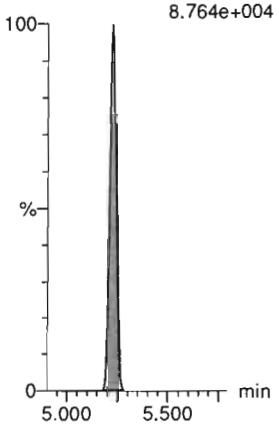
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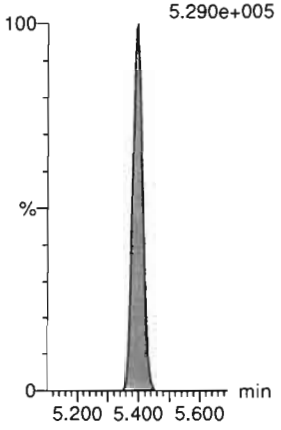
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.123e+004



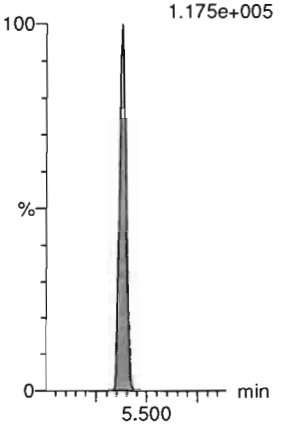
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.764e+004



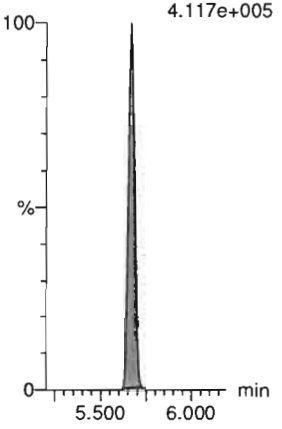
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.290e+005



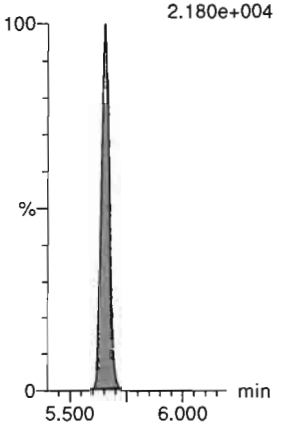
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.175e+005



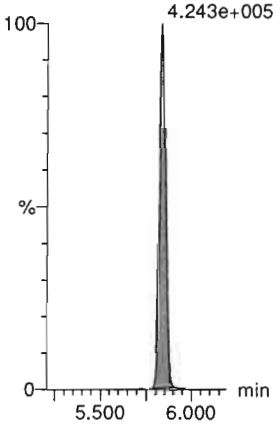
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.117e+005



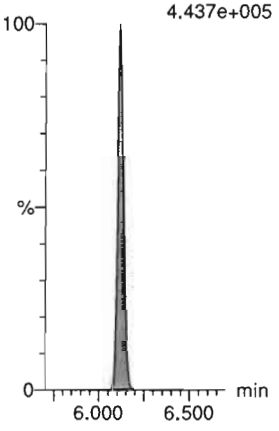
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.180e+004



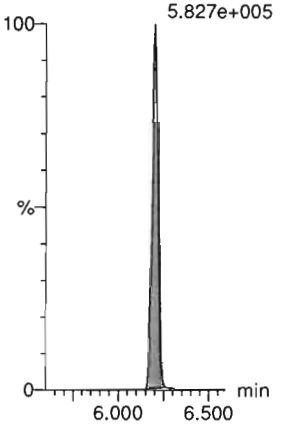
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F46:MRM of 1 channel,ES-
515.2 > 168.9
4.243e+005



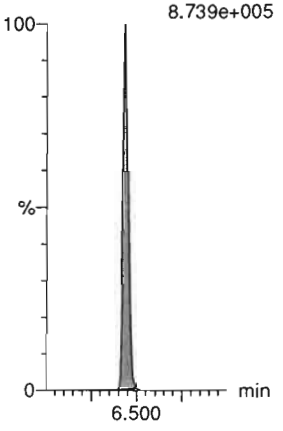
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.437e+005



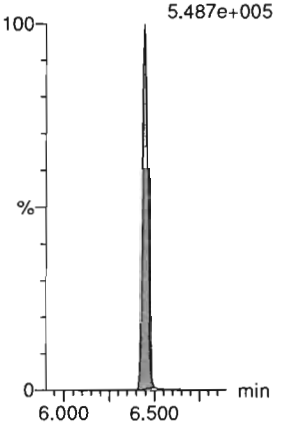
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.827e+005



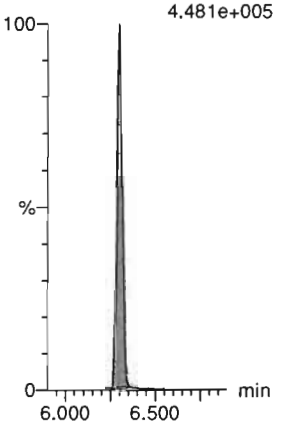
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.739e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
5.487e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
4.481e+005

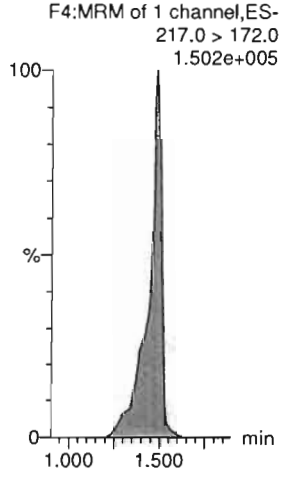


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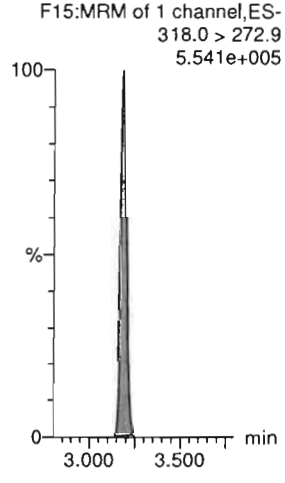
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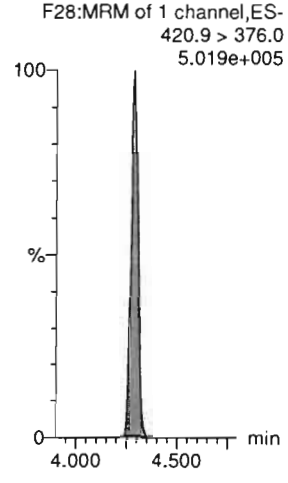
13C4-PFBA



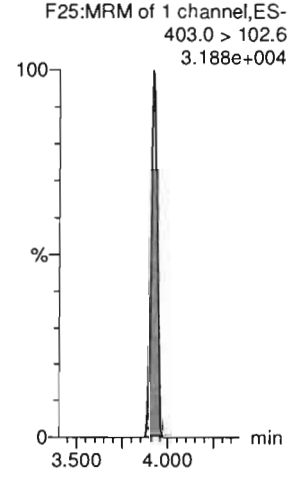
13C5-PFHxA



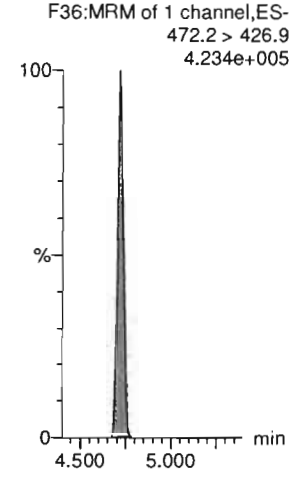
13C8-PFOA



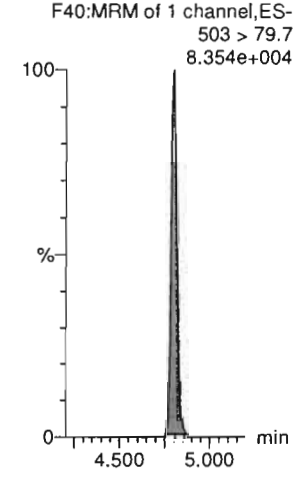
18O2-PFHxS



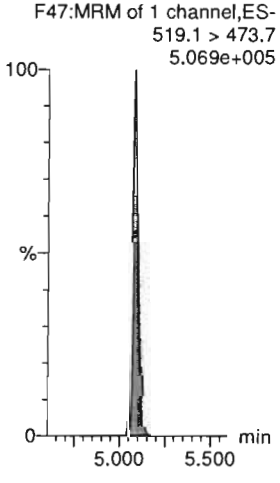
13C9-PFNA



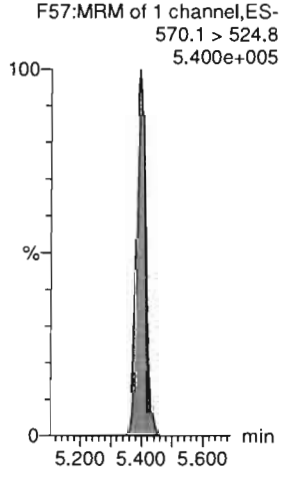
13C4-PFOS



13C6-PFDA



13C7-PFUdA

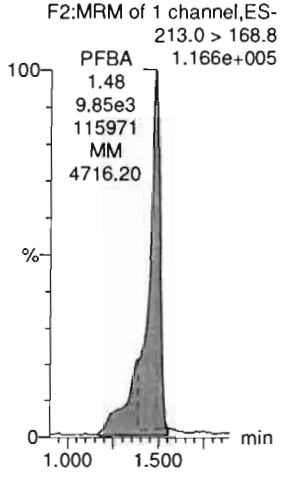


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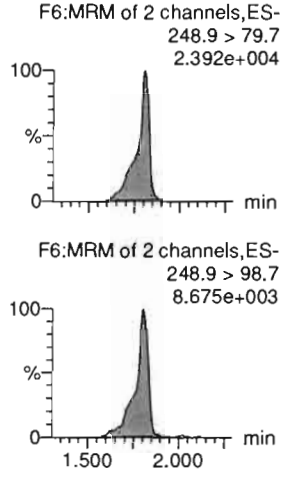
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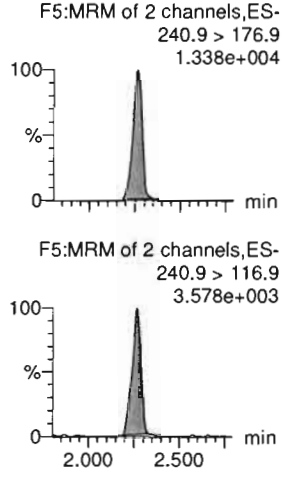
PFBA



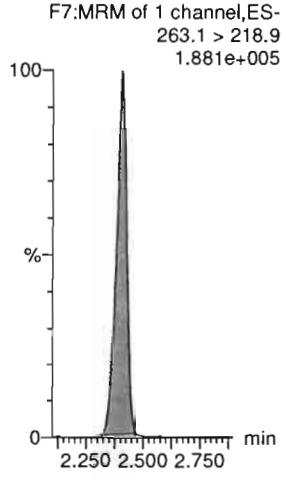
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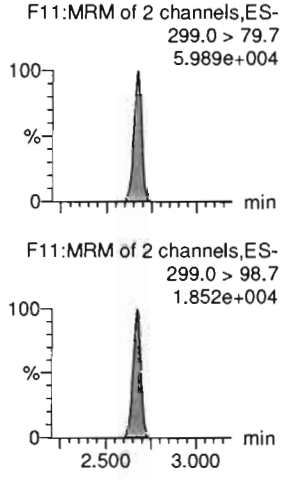
3:3 FTCA



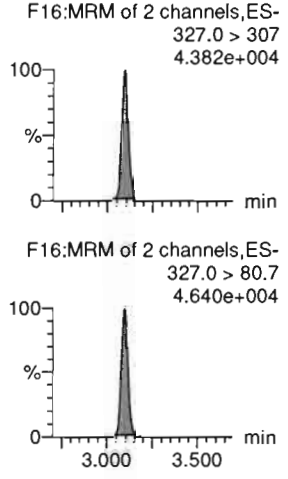
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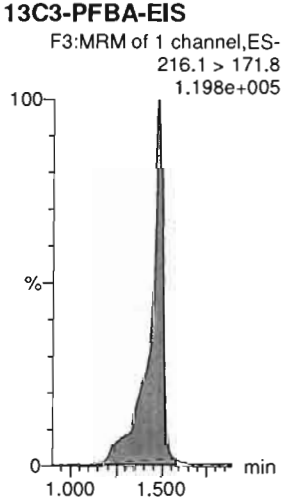
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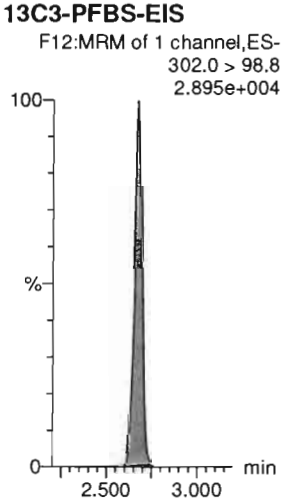
4:2 FTS



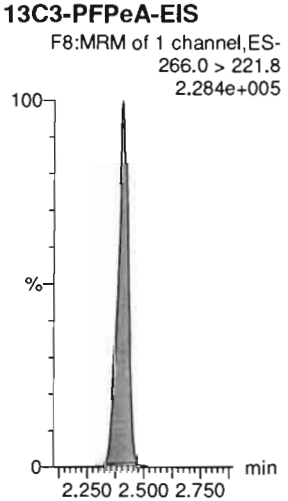
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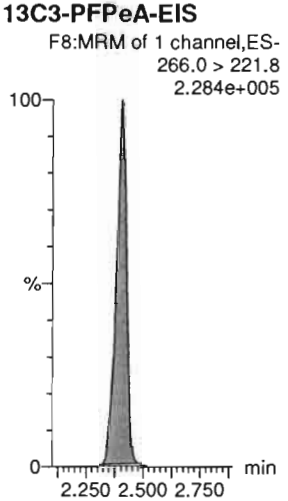
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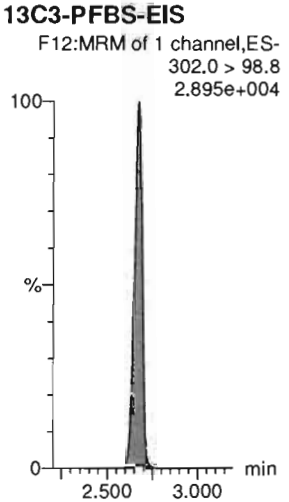
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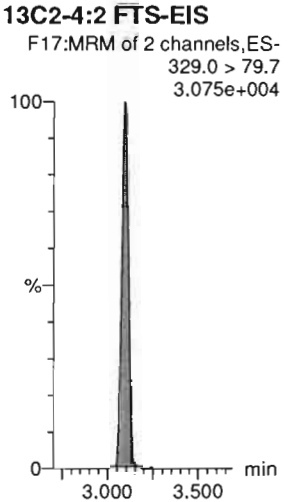
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

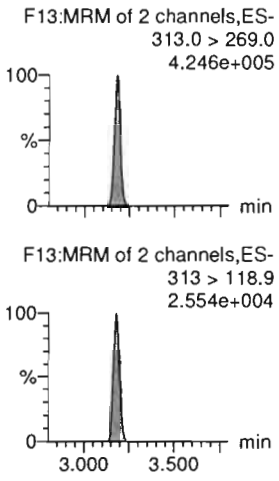


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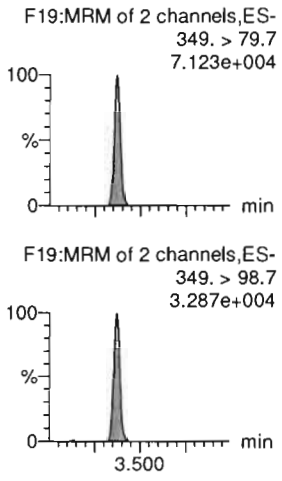
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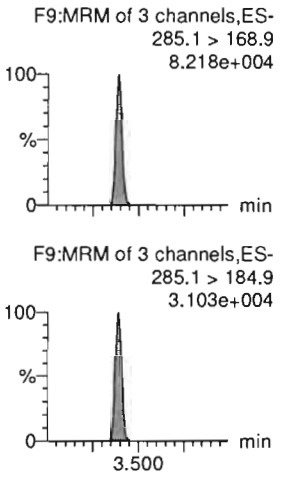
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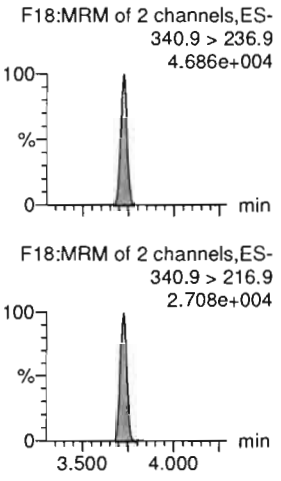
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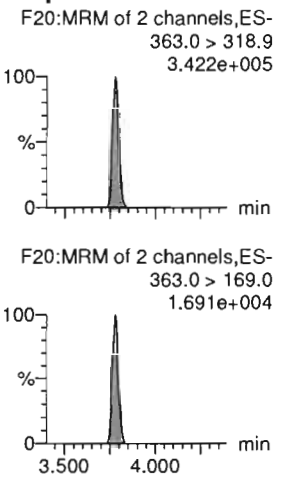
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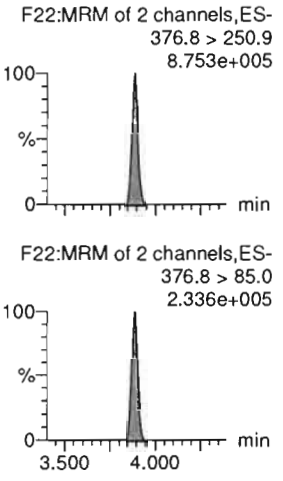
5:3 FTCA



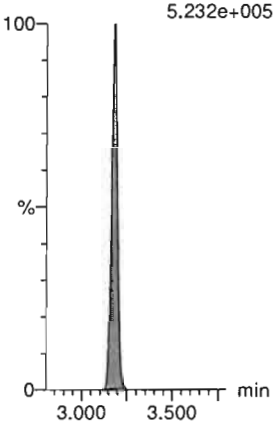
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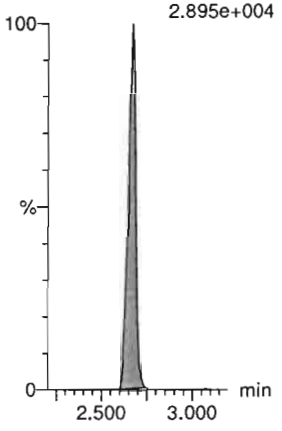
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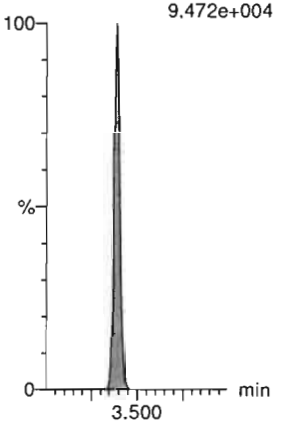
13C2-PFHxA-EIS



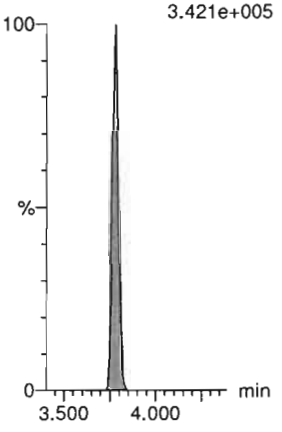
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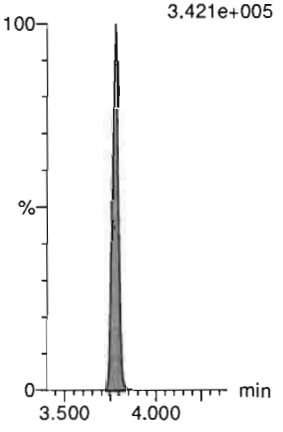
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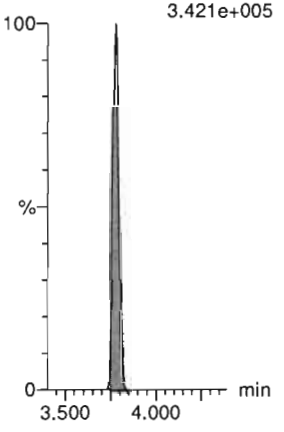
13C4-PFHpA-EIS



13C4-PFHpA-EIS



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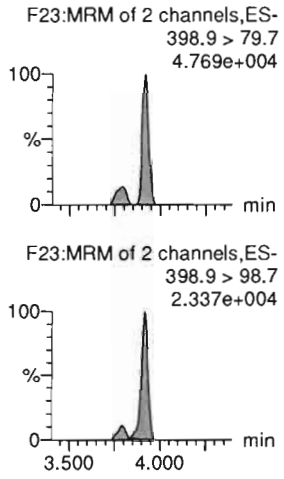


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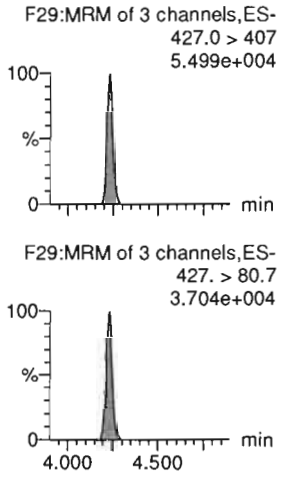
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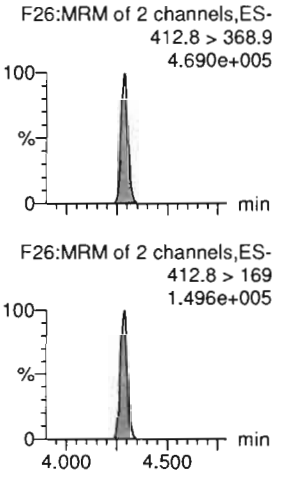
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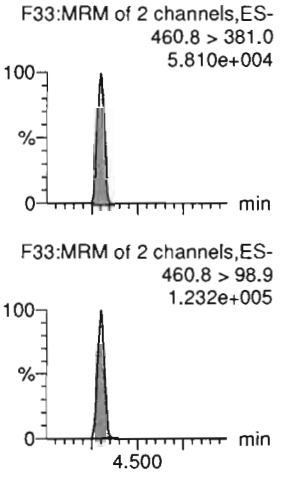
6:2 FTS



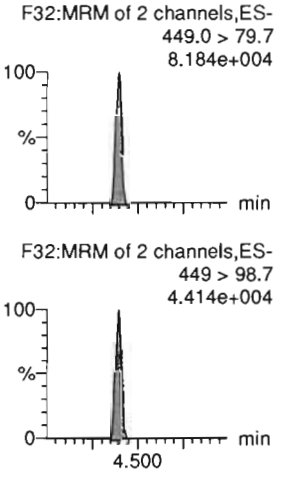
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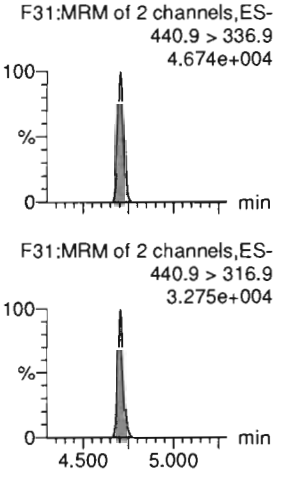
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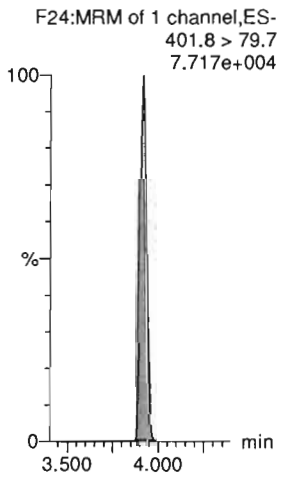
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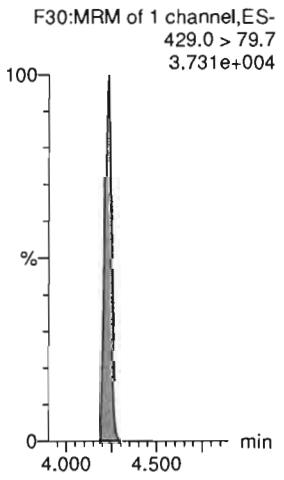
7:3 FTCA



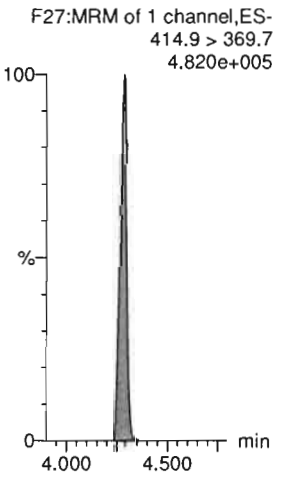
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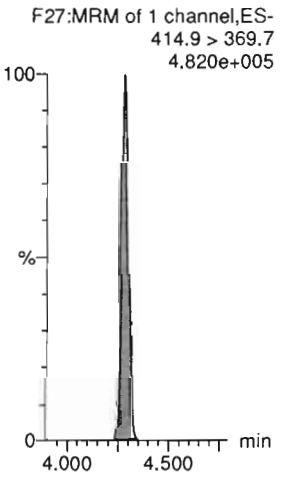
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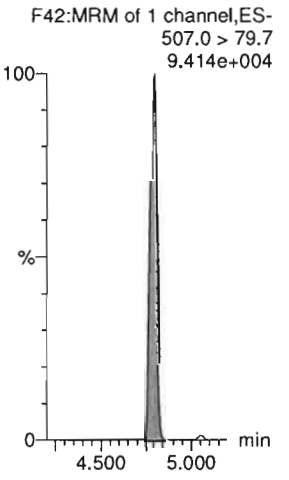
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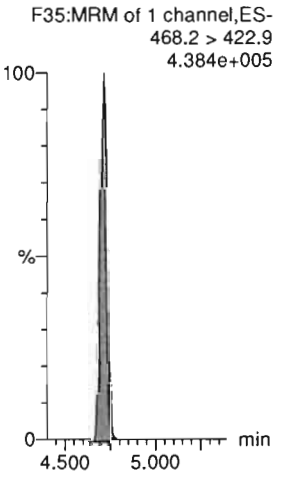
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

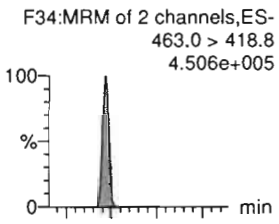


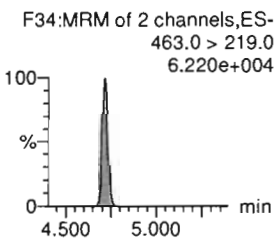
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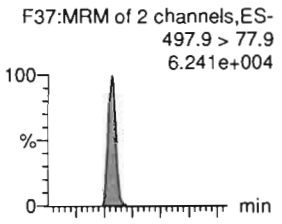
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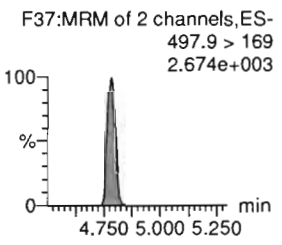
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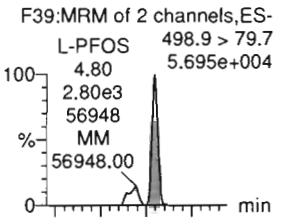


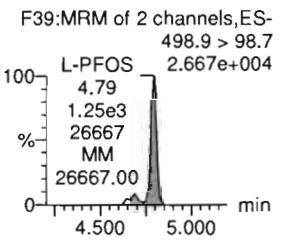
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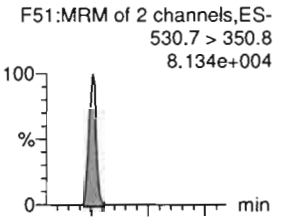


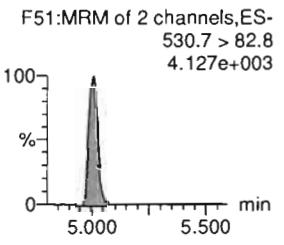
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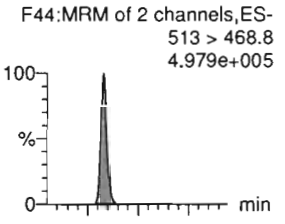


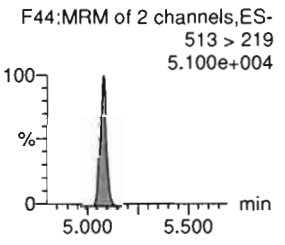
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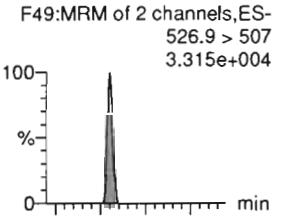


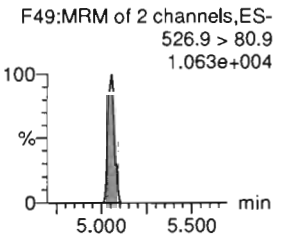
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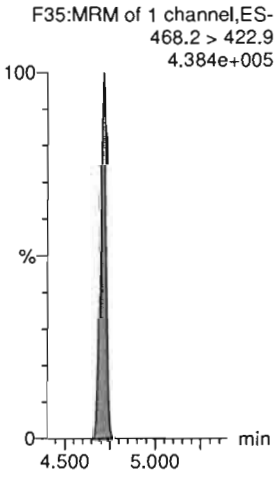


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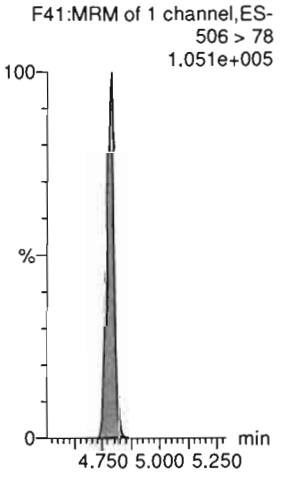




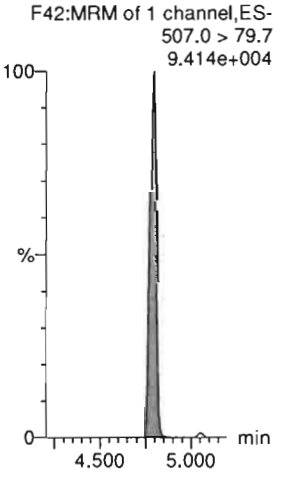
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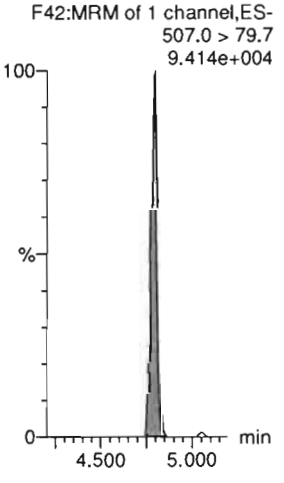
13C8-PFOSA-EIS



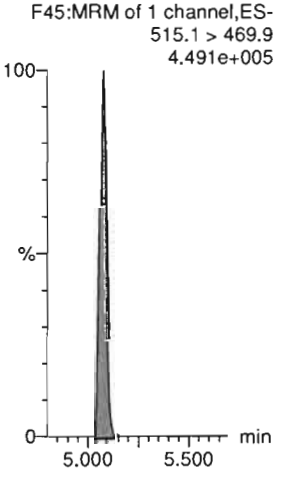
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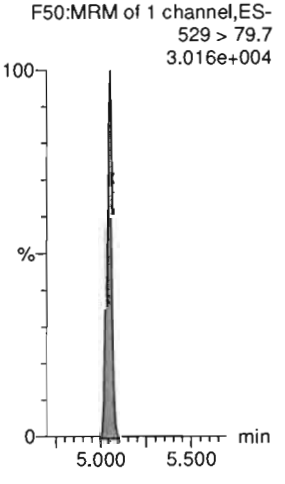
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

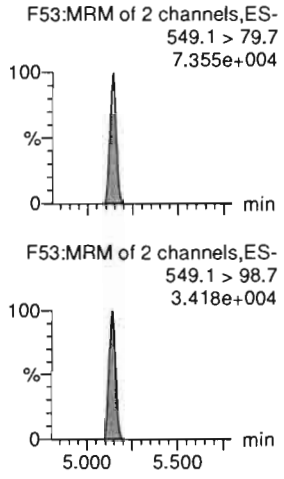


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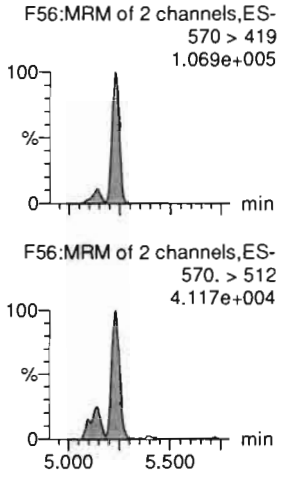
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Name: 200220P1-8, Date: 20-Feb-2020, Time: 18:37:32, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

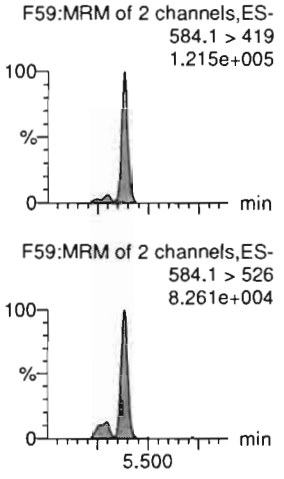
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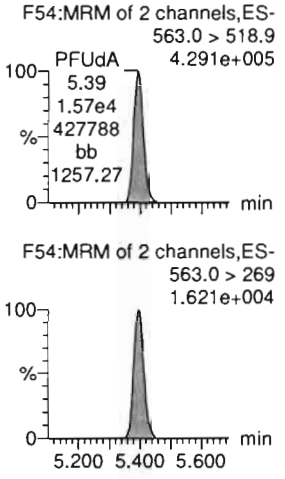
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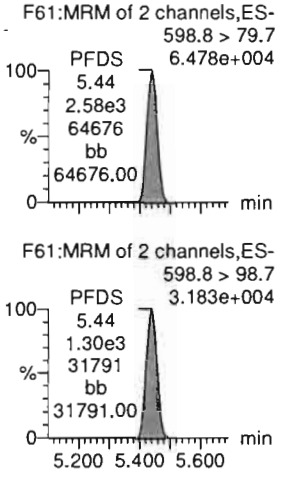
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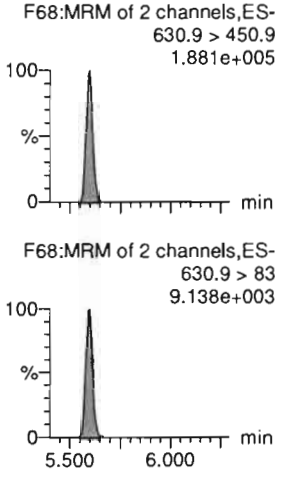
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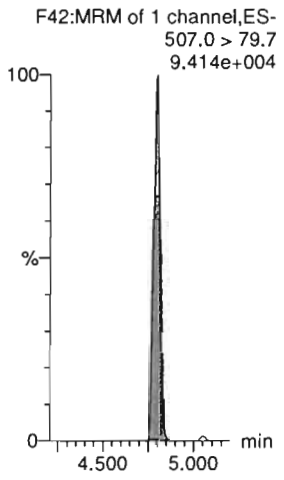
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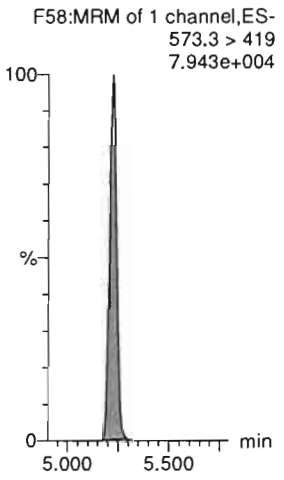
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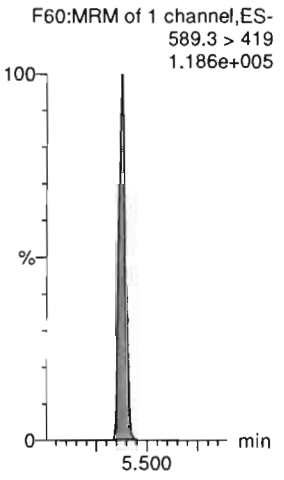
13C8-PFOS-EIS



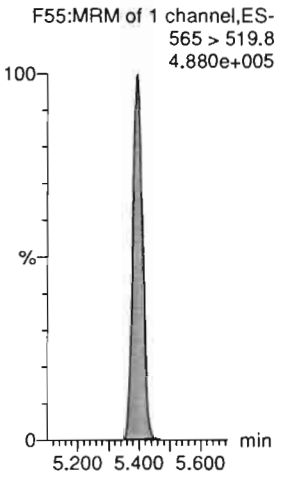
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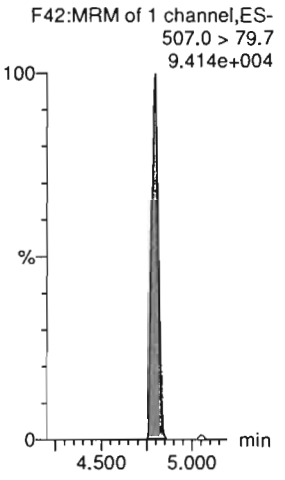
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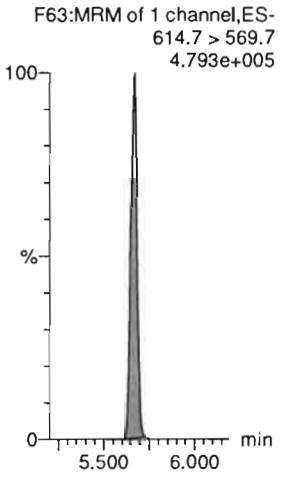
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13C8-PFOS-EIS



13C2-PFDoA-EIS

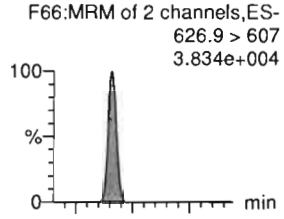


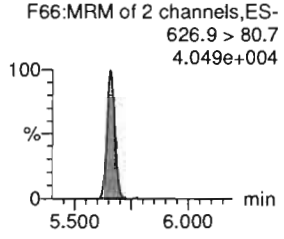
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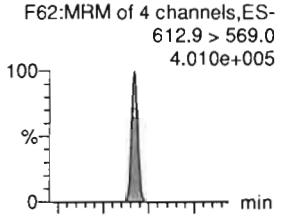
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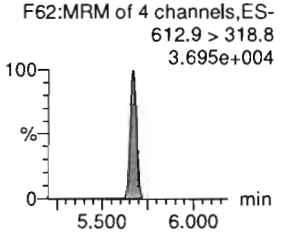
10:2 FTS



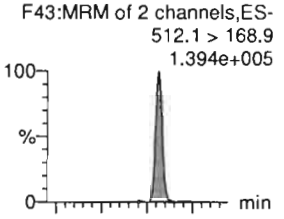


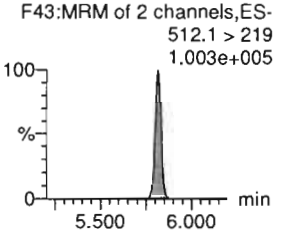
PFDoA



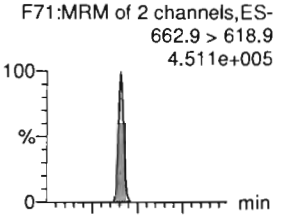


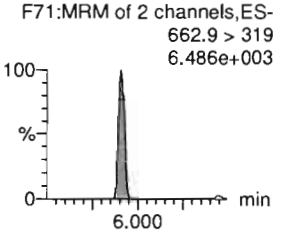
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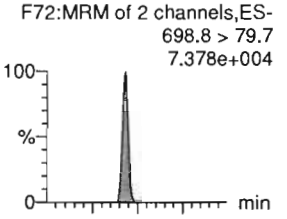


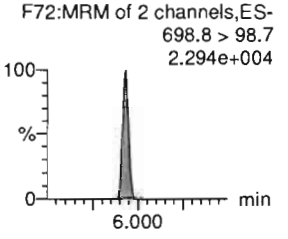
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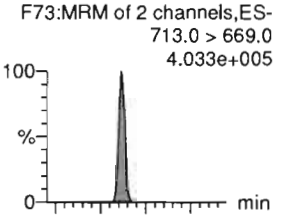


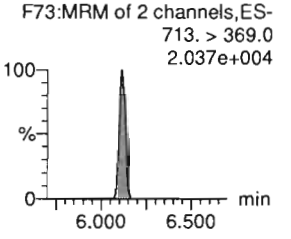
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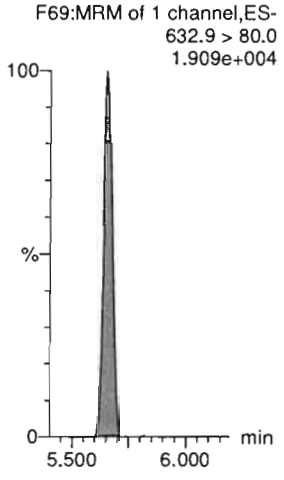


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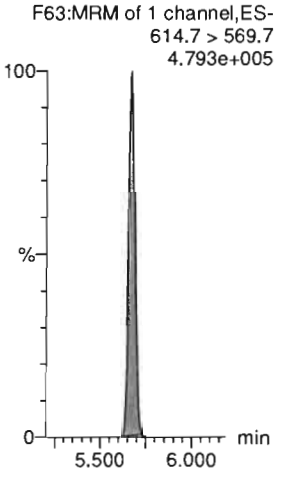




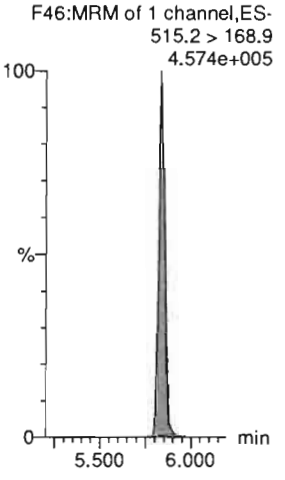
13C2-10:2 FTS-EIS



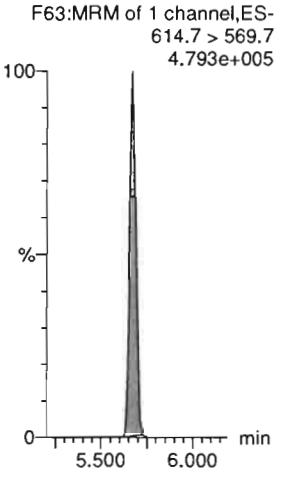
13C2-PFDoA-EIS



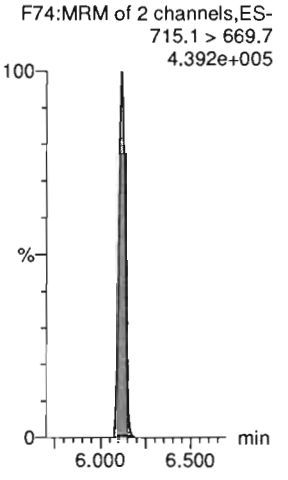
d3-N-MeFOSA-EIS



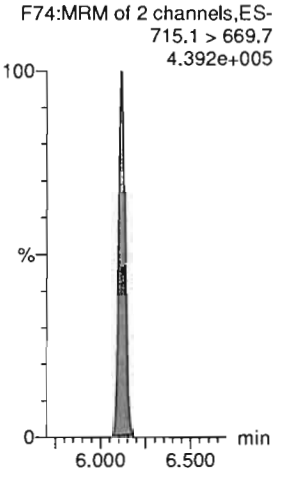
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

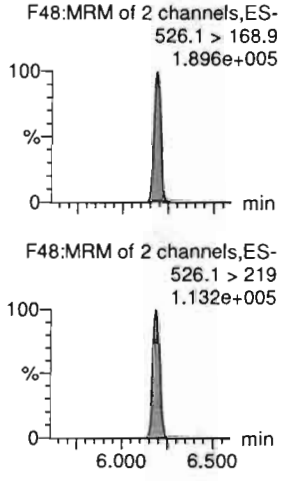


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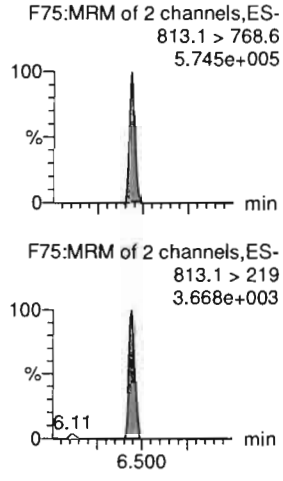
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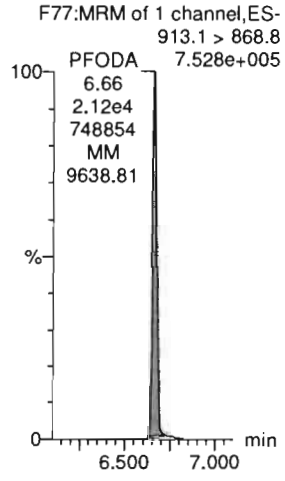
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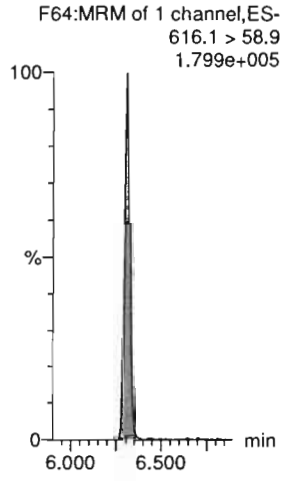
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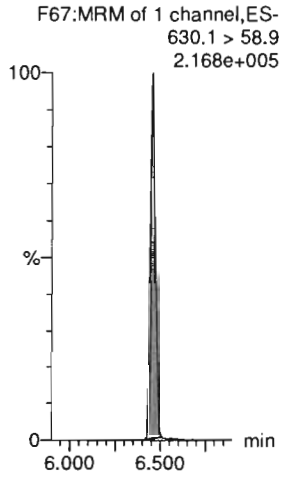
PFODA



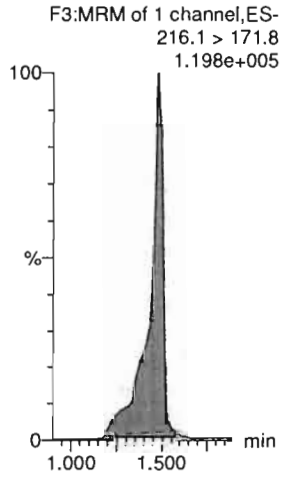
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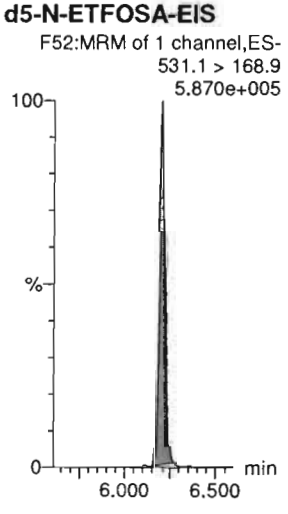
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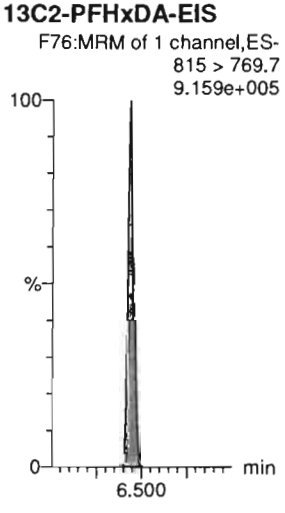
13C3-PFBA-RSD



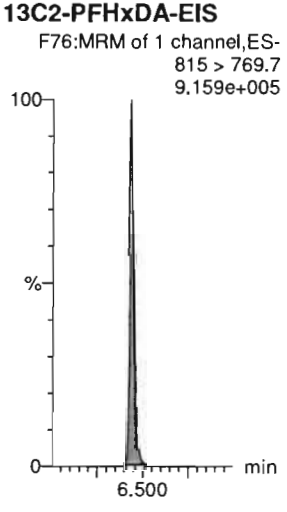
d5-N-ETFOSA-EIS



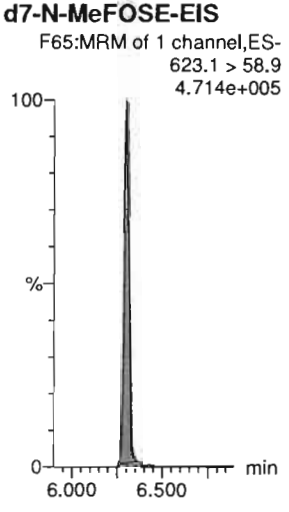
13C2-PFHxDA-EIS



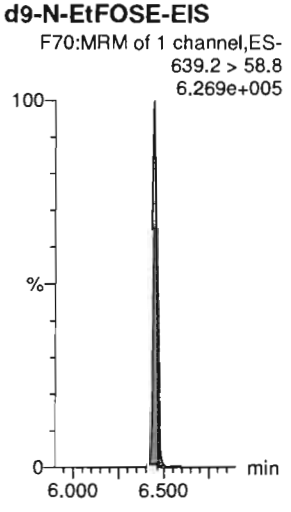
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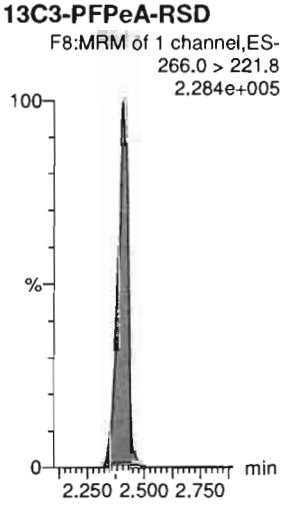
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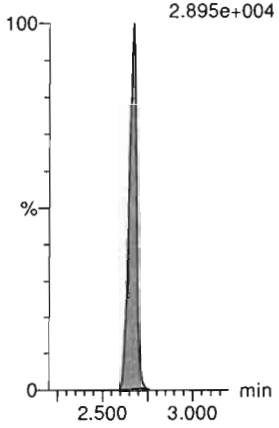


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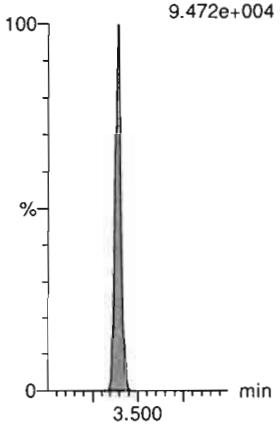
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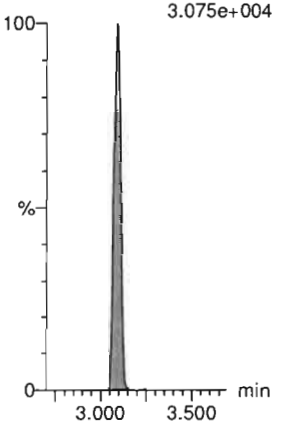
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F12:MRM of 1 channel,ES-
302.0 > 98.8
2.895e+004



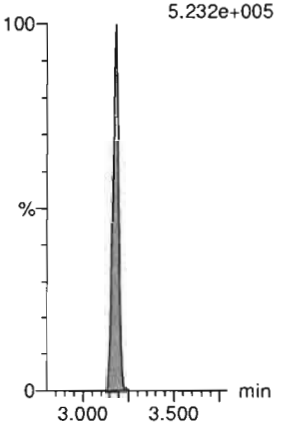
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
9.472e+004



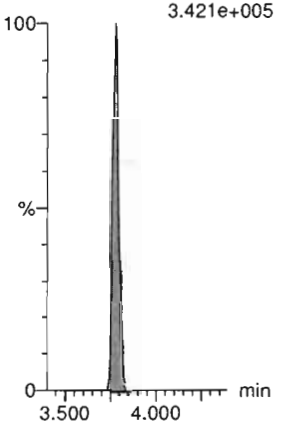
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.075e+004



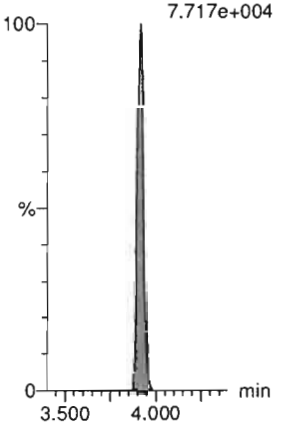
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F14:MRM of 1 channel,ES-
315.0 > 270.0
5.232e+005



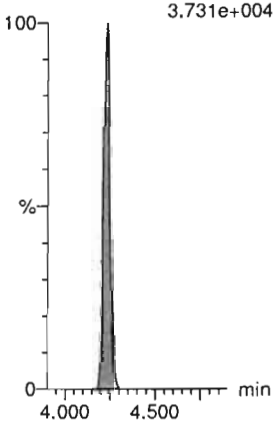
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.421e+005



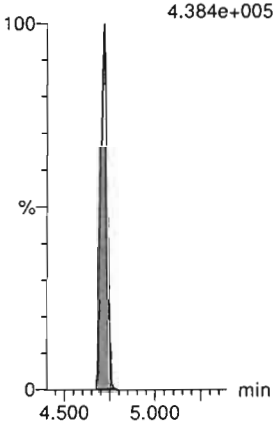
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.717e+004



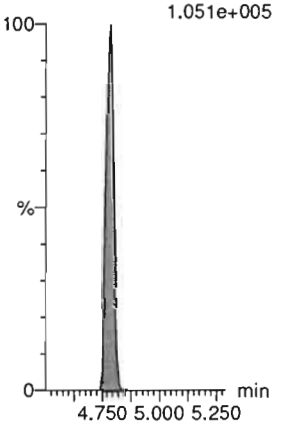
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.731e+004



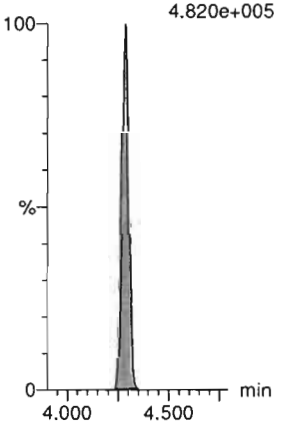
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.384e+005



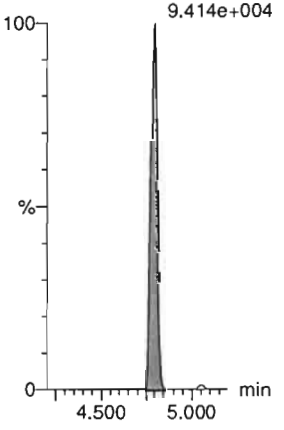
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.051e+005



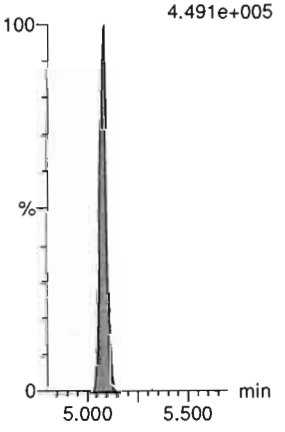
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.820e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.414e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.491e+005

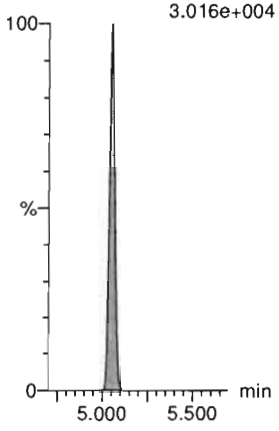


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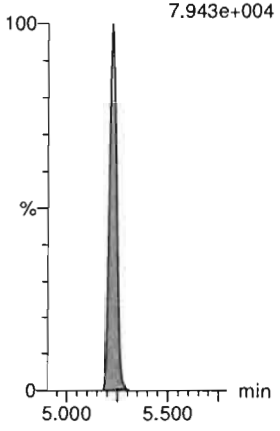
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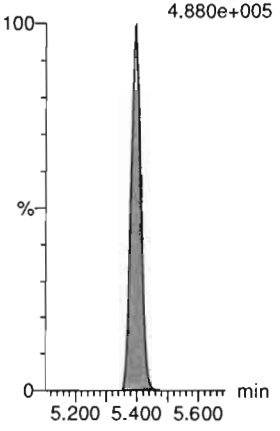
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.016e+004



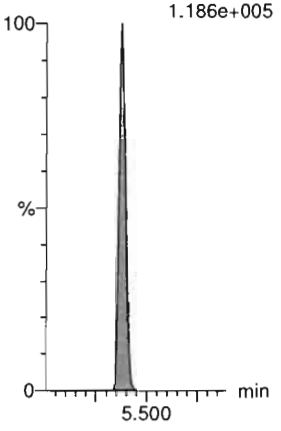
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
7.943e+004



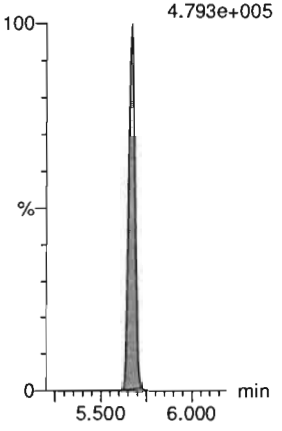
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
4.880e+005



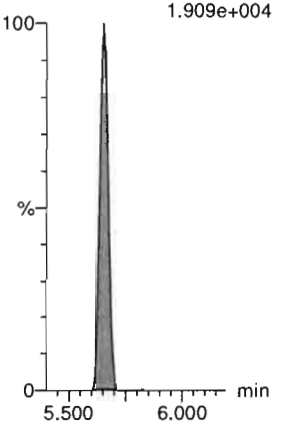
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.186e+005



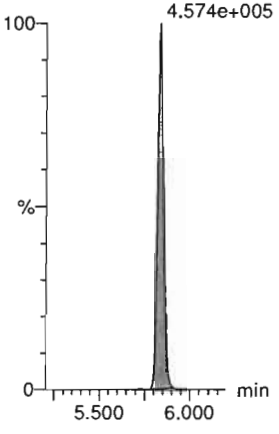
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.793e+005



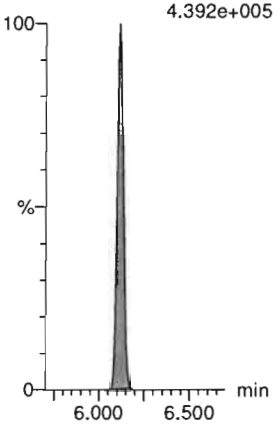
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
1.909e+004



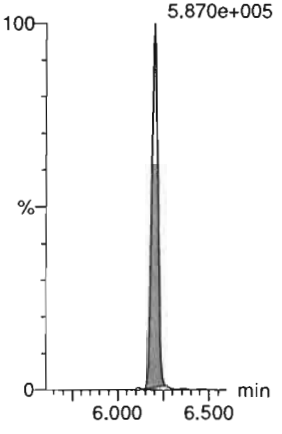
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.574e+005



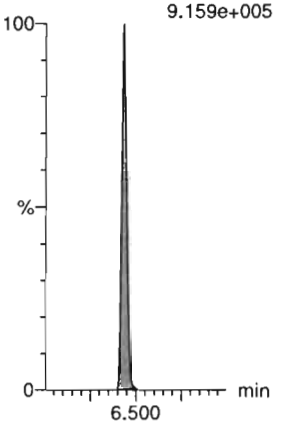
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.392e+005



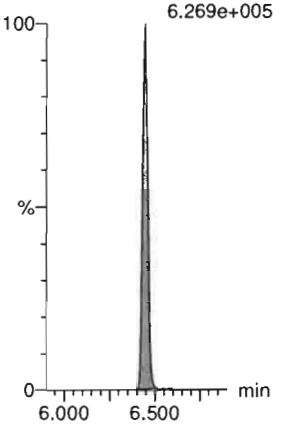
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.870e+005



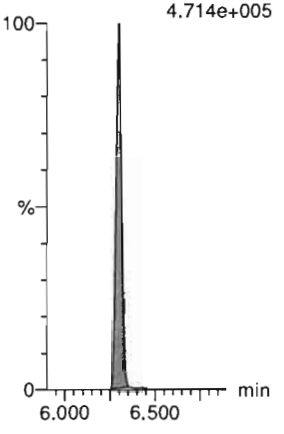
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.159e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.269e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
4.714e+005

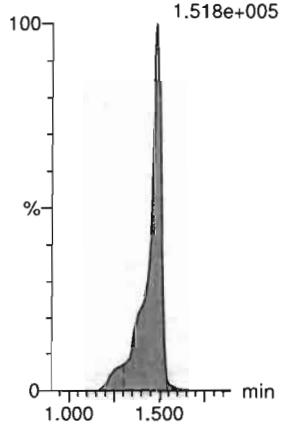


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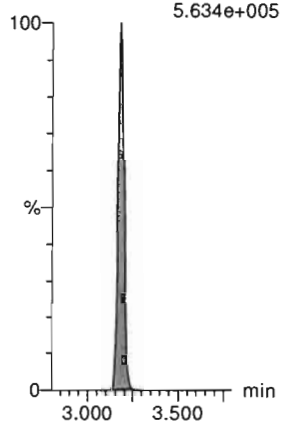
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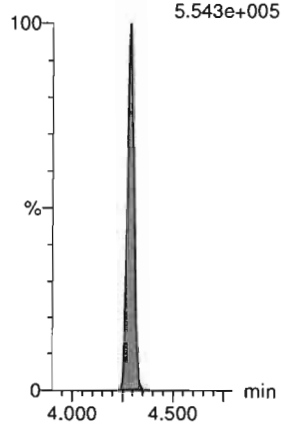
13C4-PFBA



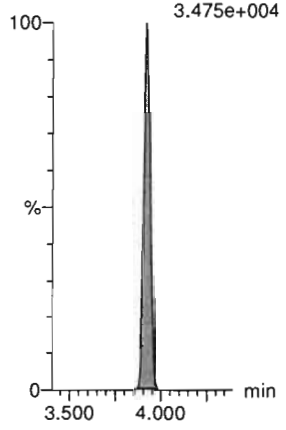
13C5-PFHxA



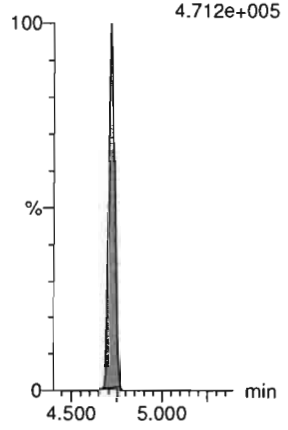
13C8-PFOA



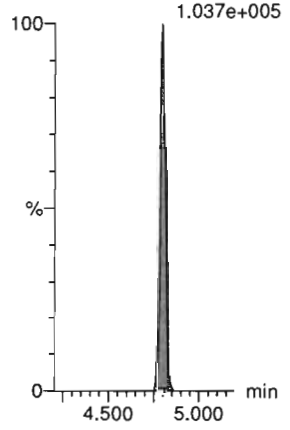
18O2-PFHxS



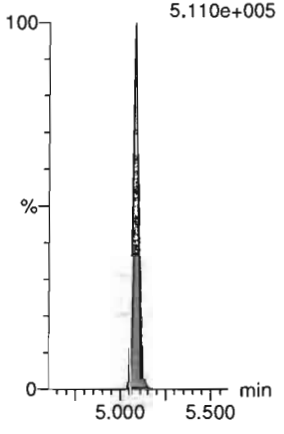
13C9-PFNA



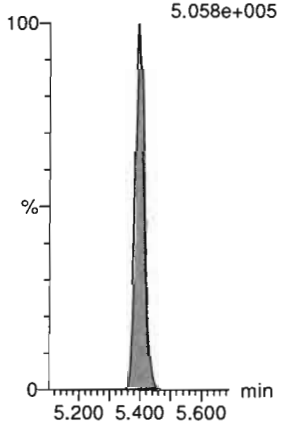
13C4-PFOS



13C6-PFDA



13C7-PFUdA

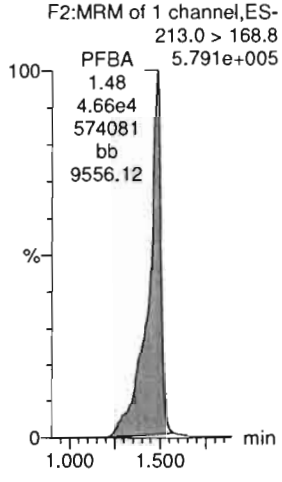


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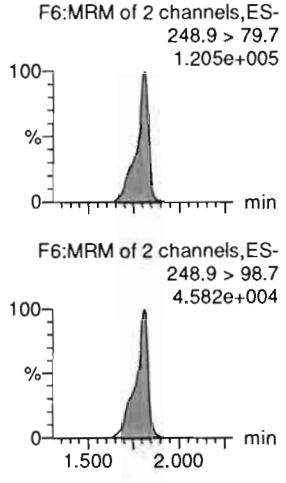
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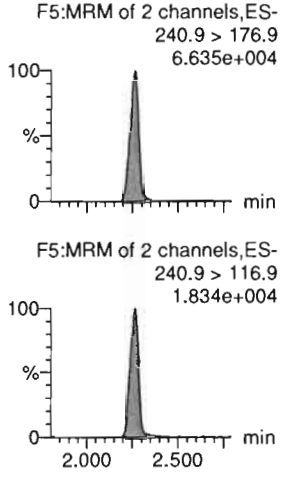
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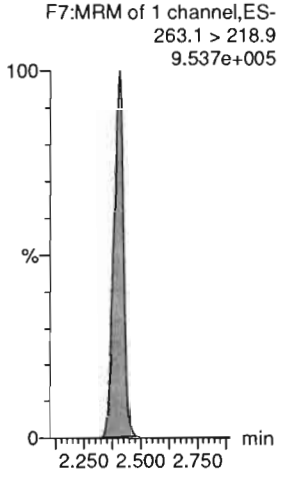
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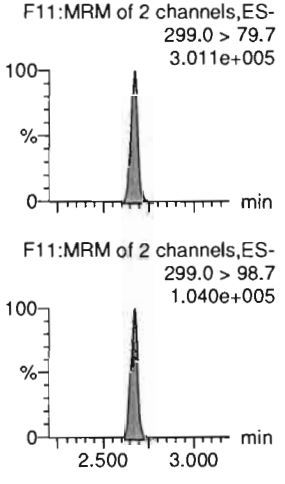
3:3 FTCA



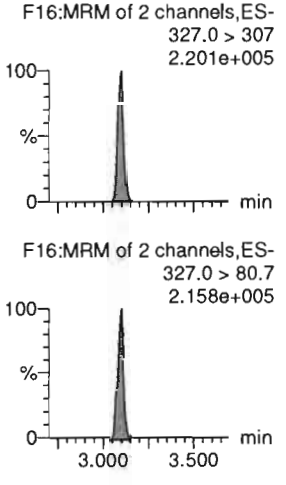
PFPeA



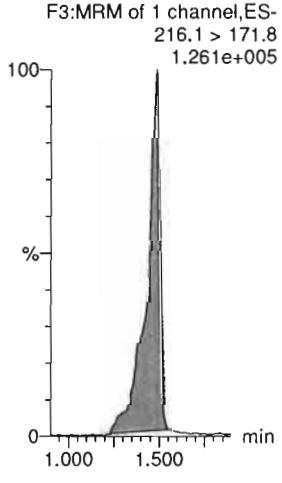
PFBS



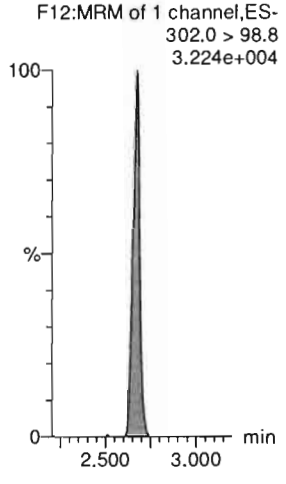
4:2 FTS



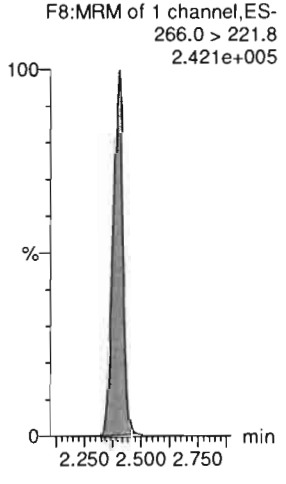
13C3-PFBA-EIS



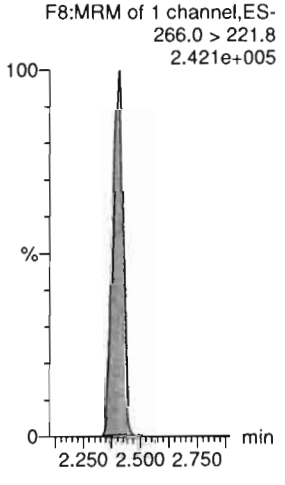
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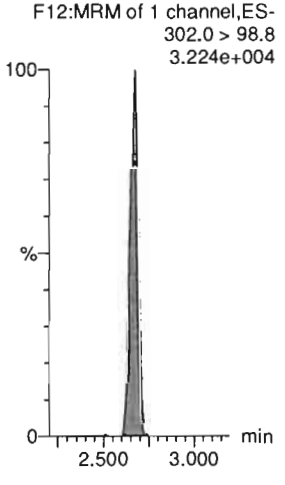
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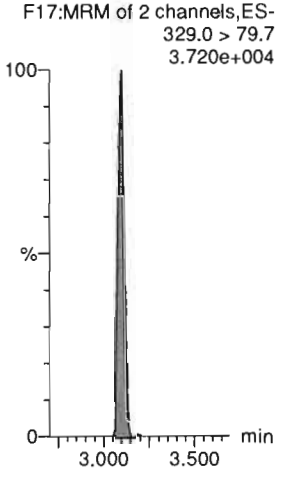
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

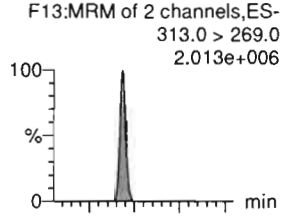


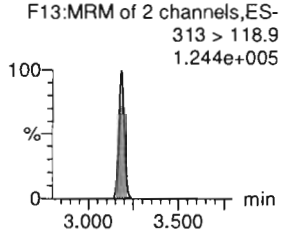
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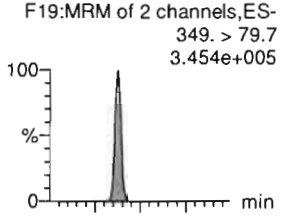
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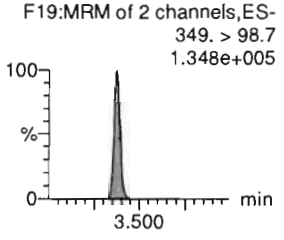
PFHxA



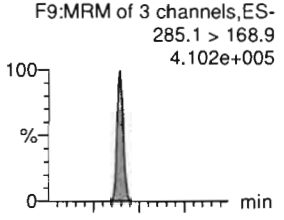


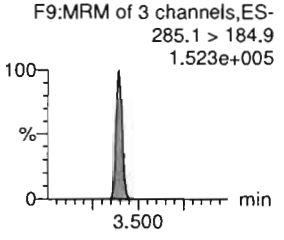
PFPeS



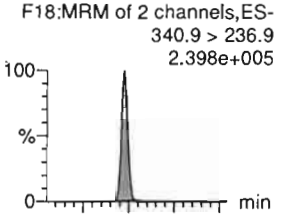


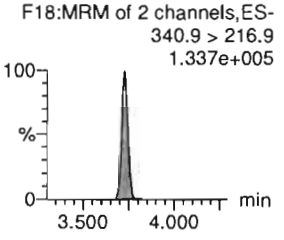
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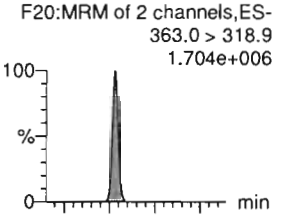


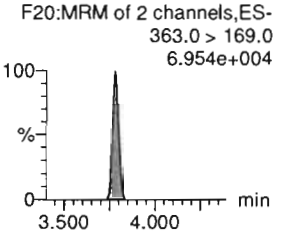
5:3 FTCA



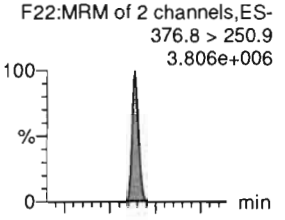


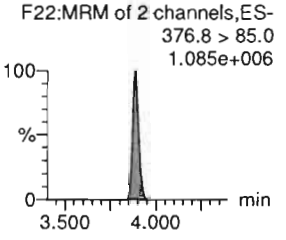
PFHpA



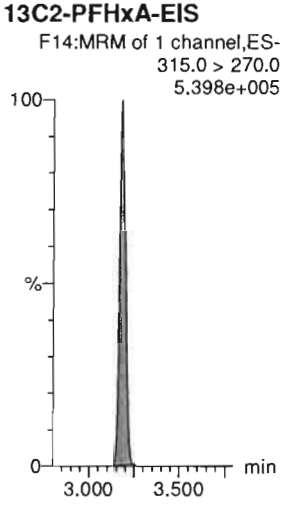


ADONA

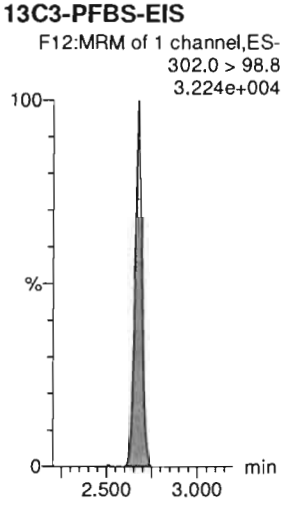




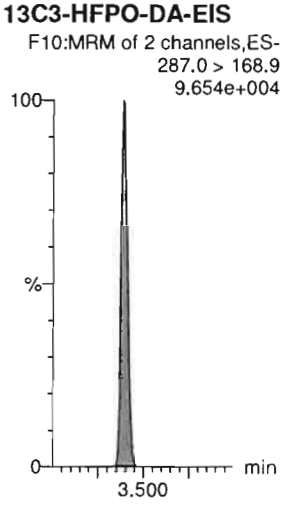
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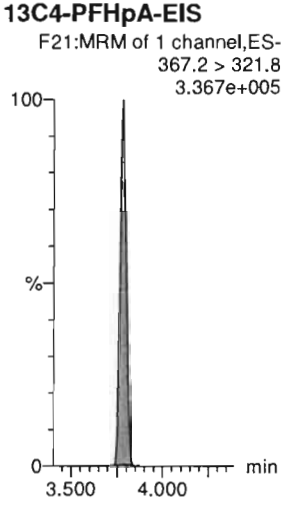
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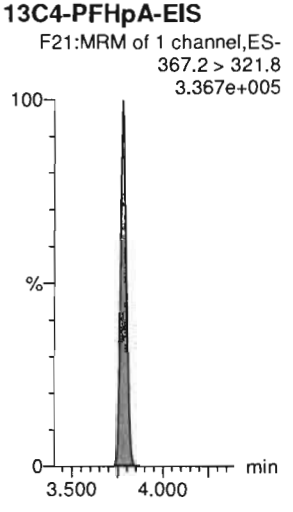
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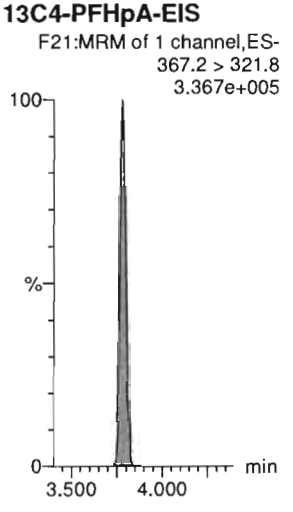
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13C4-PFHpA-EIS



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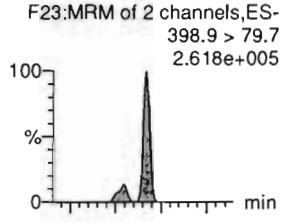


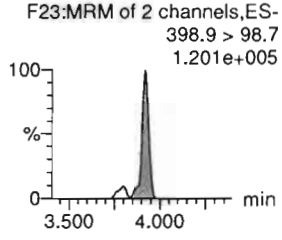
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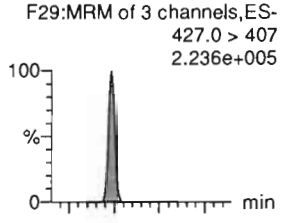
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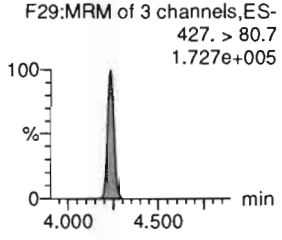
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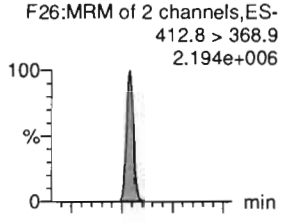


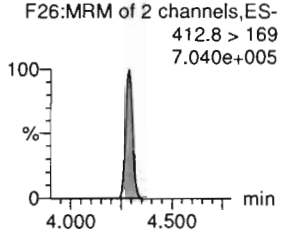
6:2 FTS



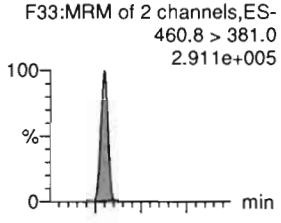


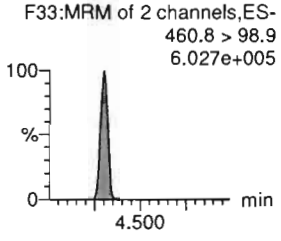
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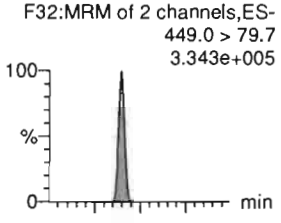


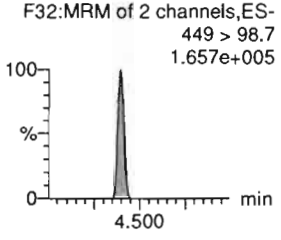
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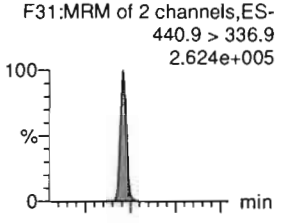


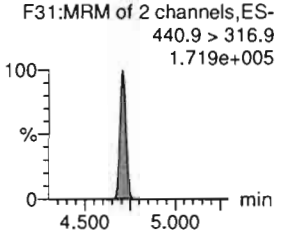
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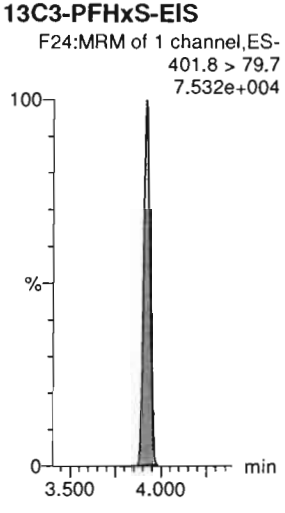


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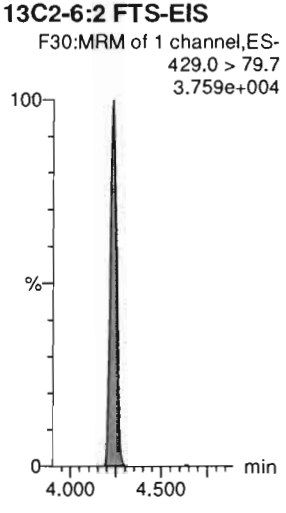




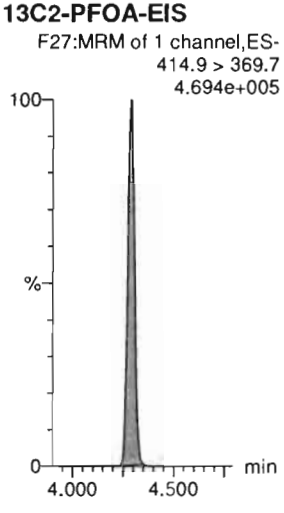
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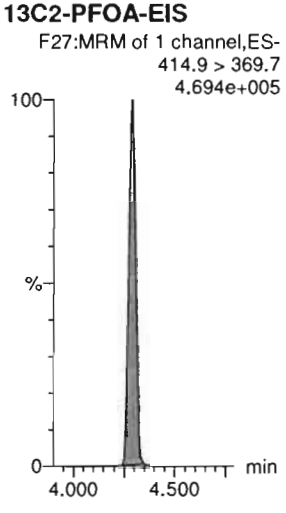
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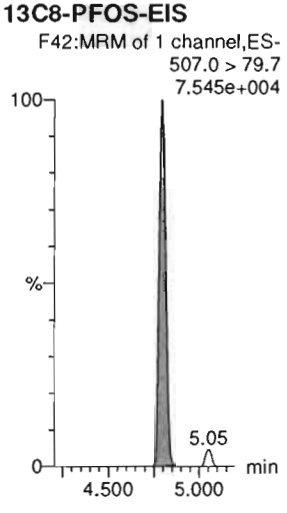
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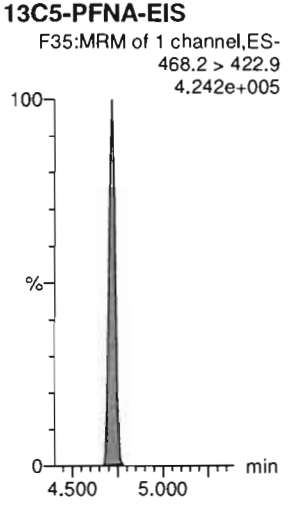
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13C8-PFOS-EIS



13C5-PFNA-EIS

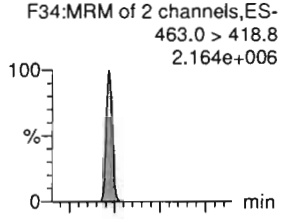


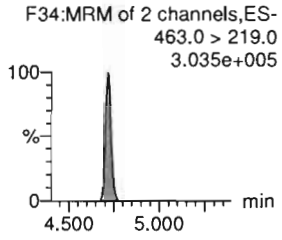
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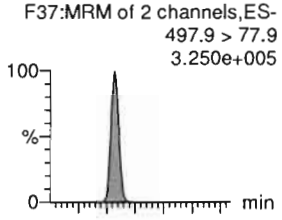
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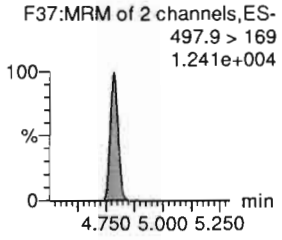
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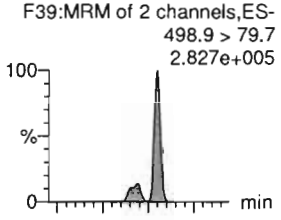


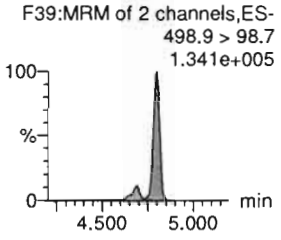
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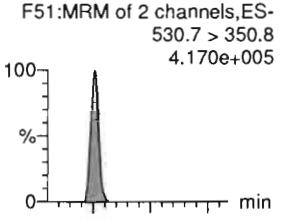


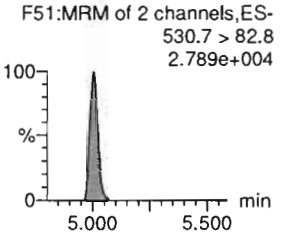
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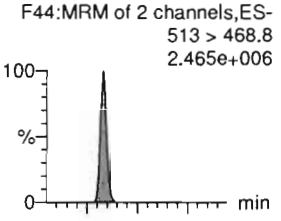


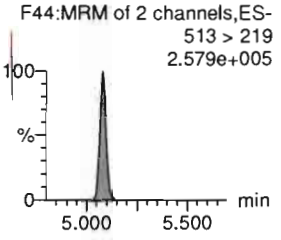
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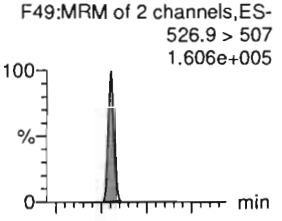


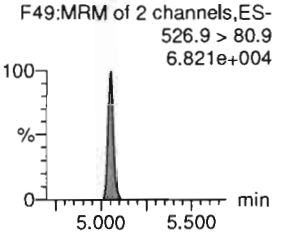
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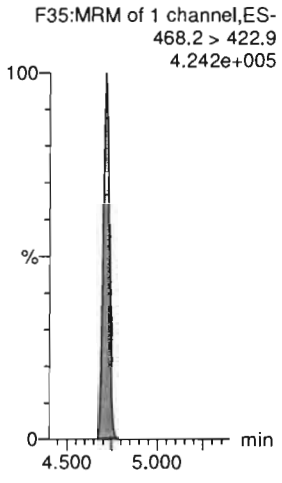


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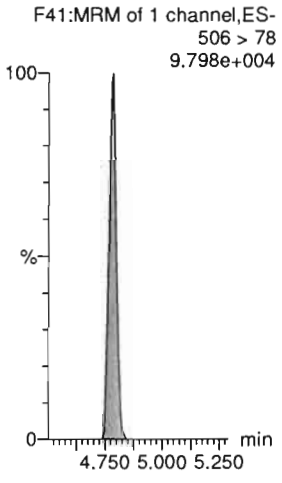




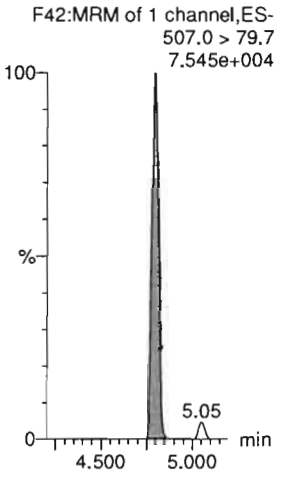
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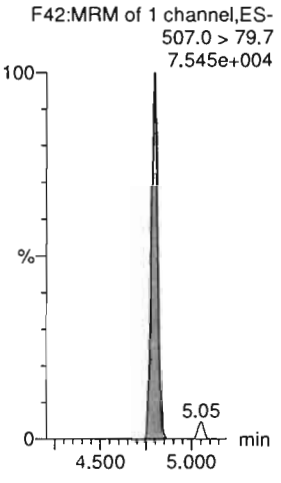
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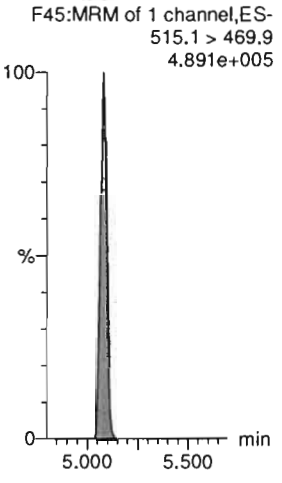
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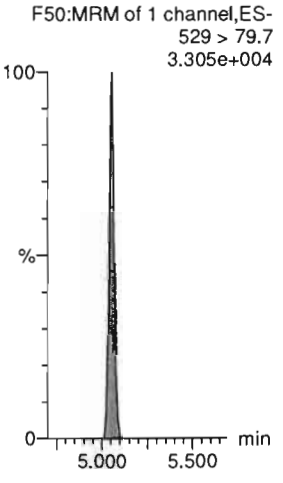
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

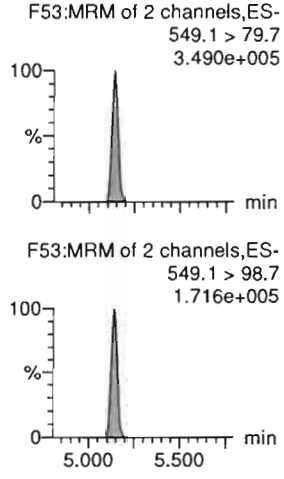


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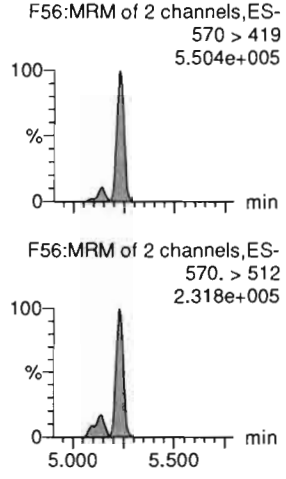
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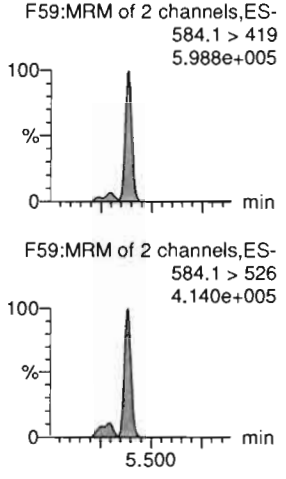
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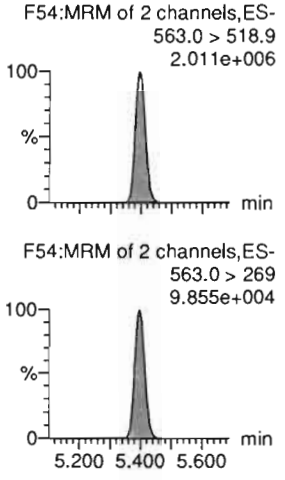
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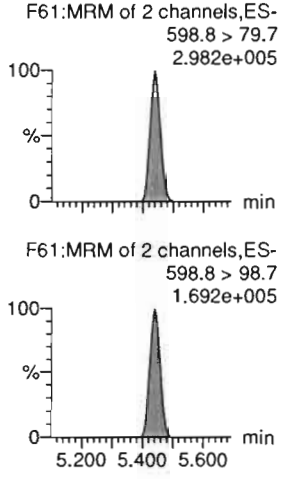
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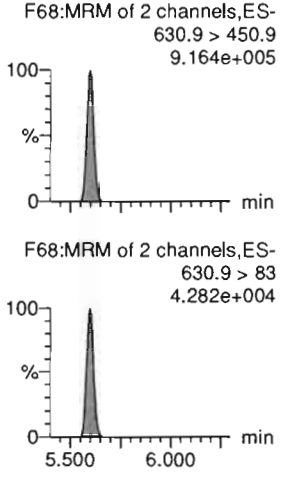
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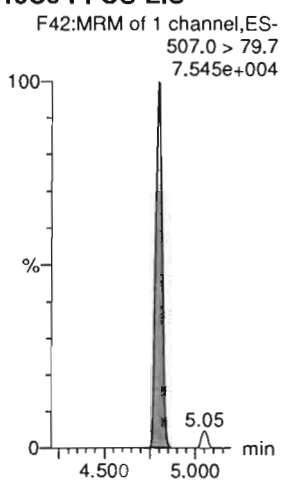
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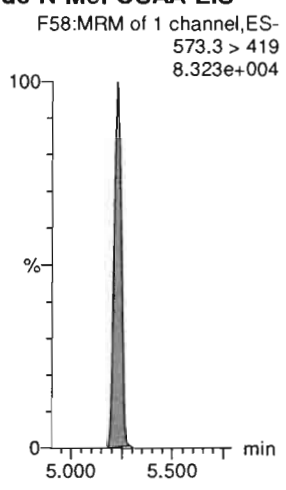
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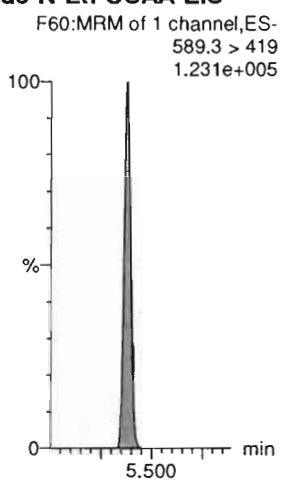
13C8-PFOS-EIS



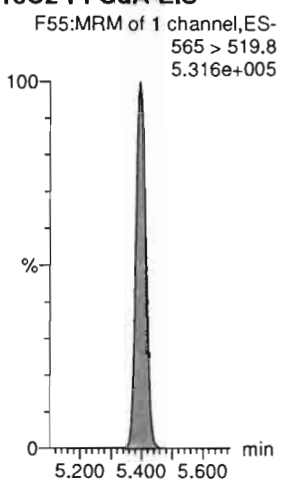
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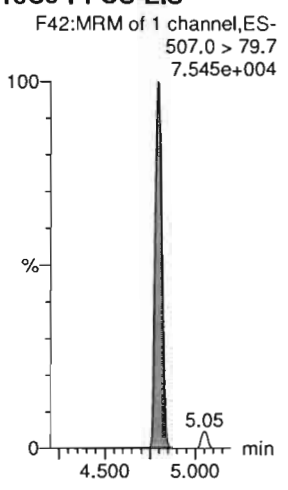
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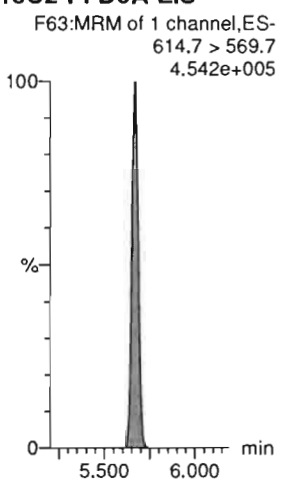
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13C8-PFOS-EIS



13C2-PFDoA-EIS

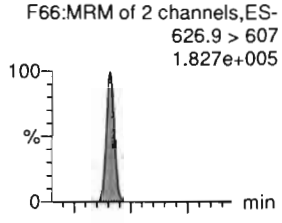


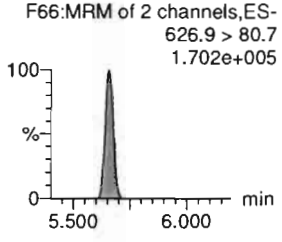
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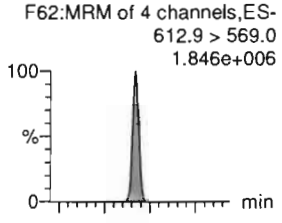
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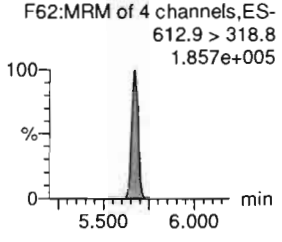
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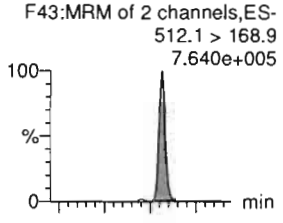


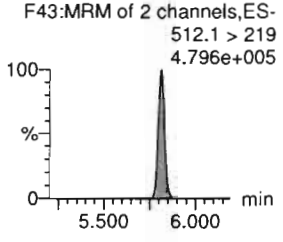
PFDoA



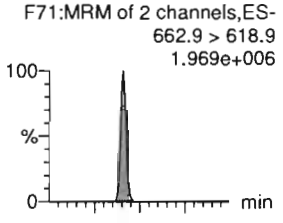


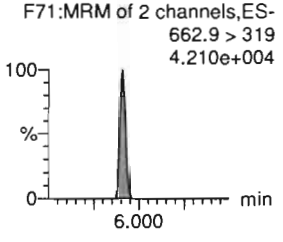
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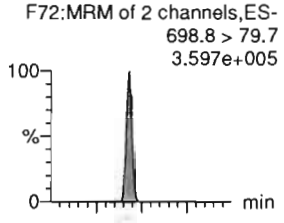


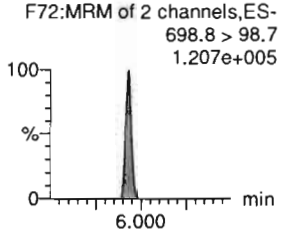
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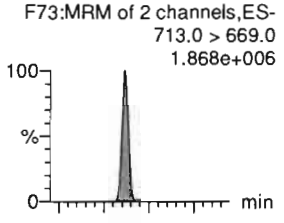


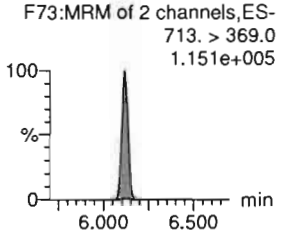
PFDoS



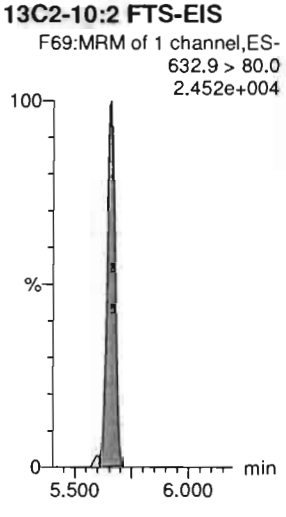


PFTeDA

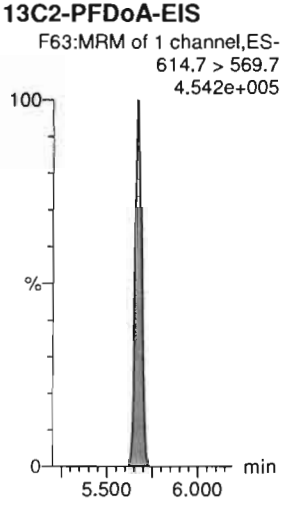




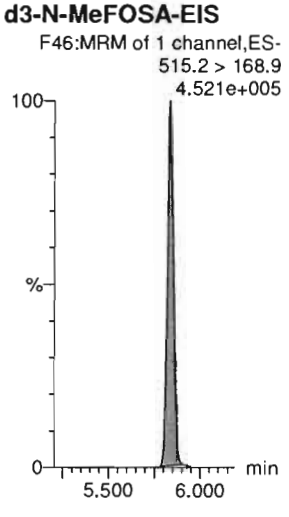
13C2-10:2 FTS-EIS



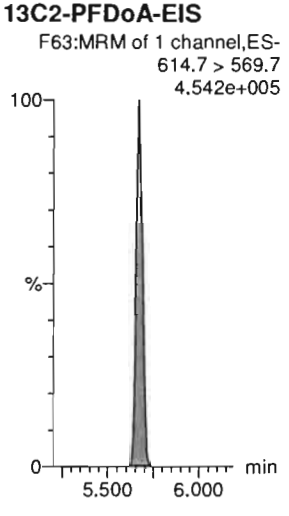
13C2-PFDoA-EIS



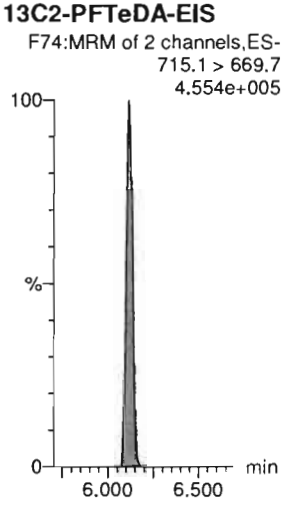
d3-N-MeFOSA-EIS



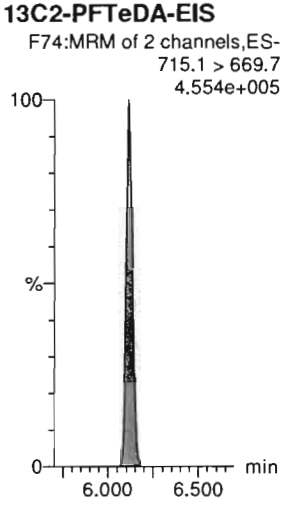
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

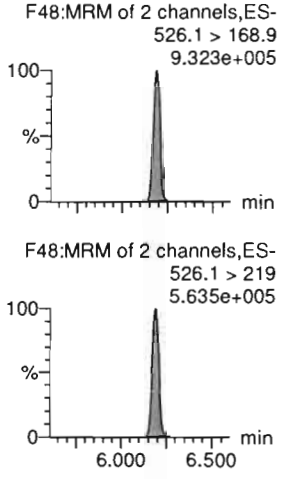


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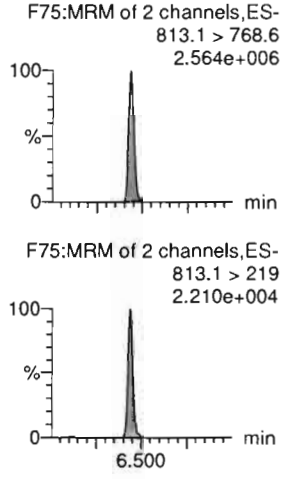
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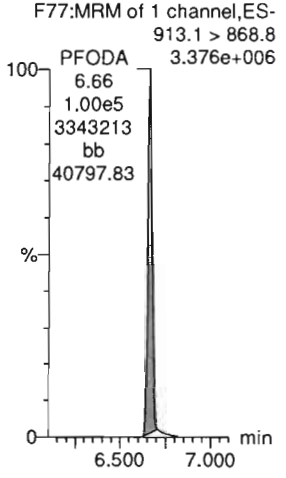
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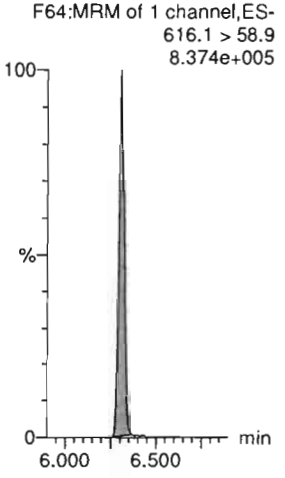
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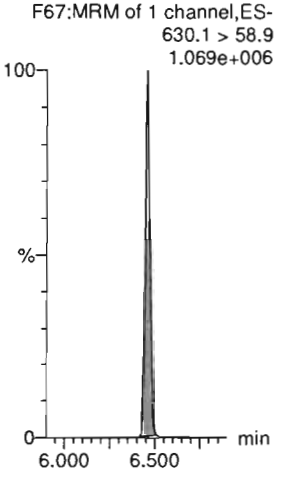
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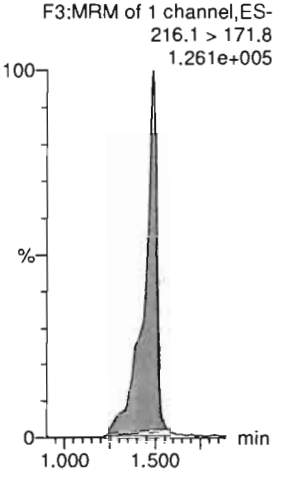
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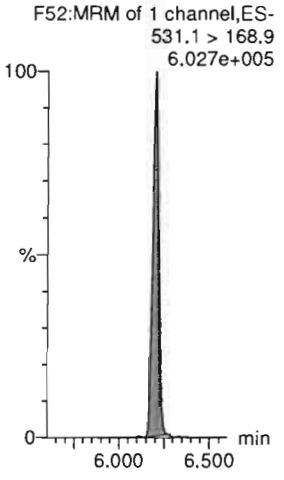
N-EtFOSE



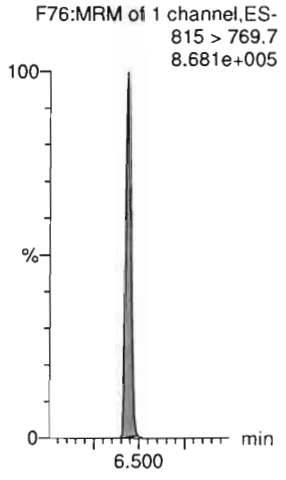
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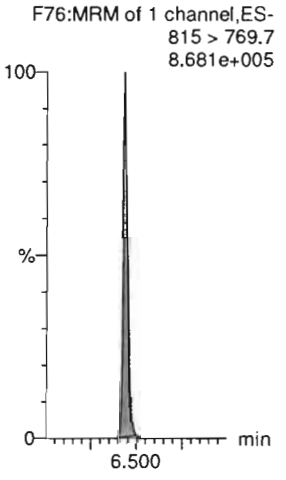
d5-N-ETFOSA-EIS



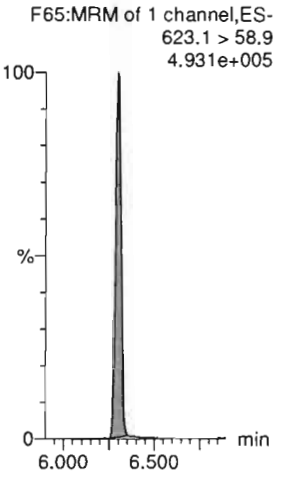
13C2-PFHxDA-EIS



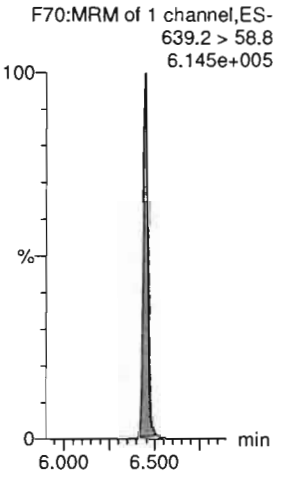
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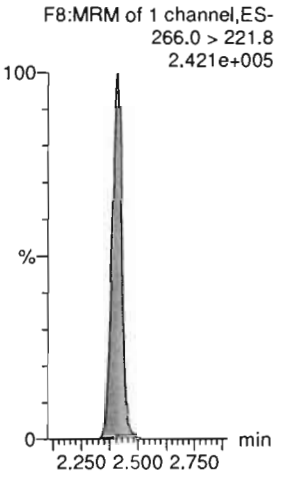
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

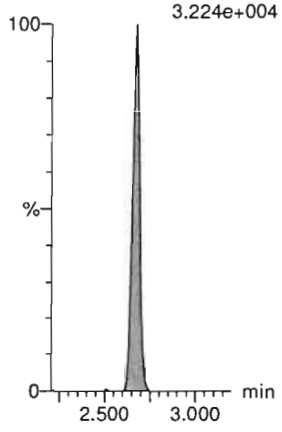


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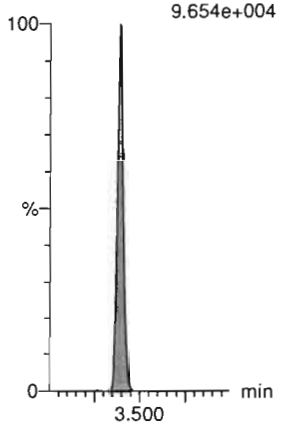
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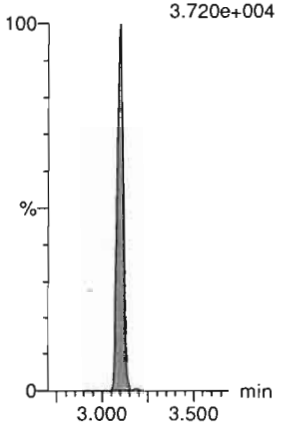
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.224e+004



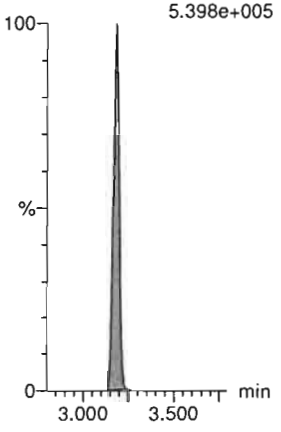
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
9.654e+004



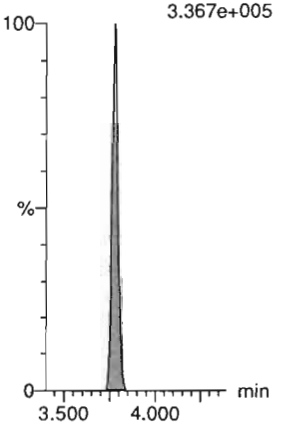
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.720e+004



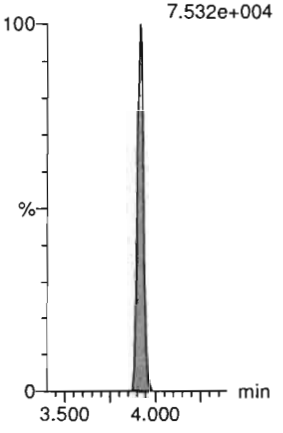
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.398e+005



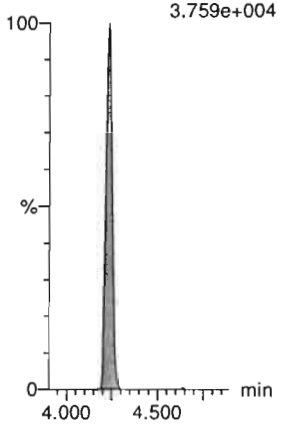
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.367e+005



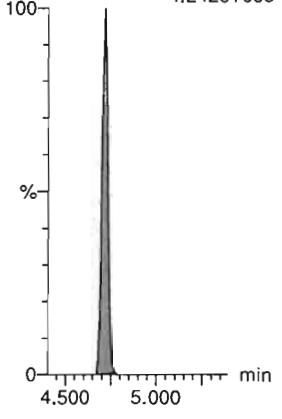
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.532e+004



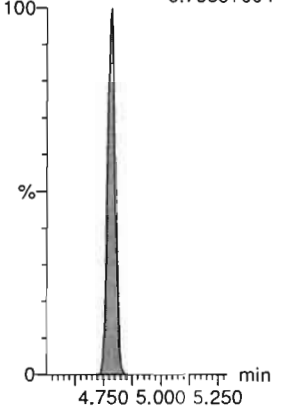
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.759e+004



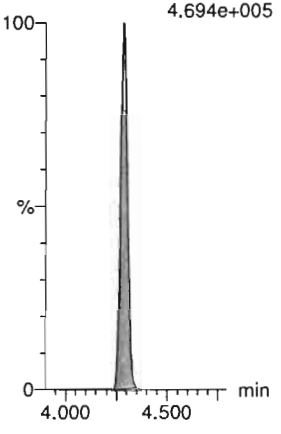
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.242e+005



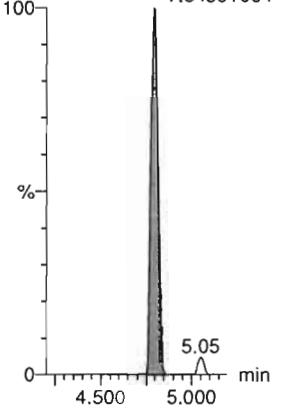
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.798e+004



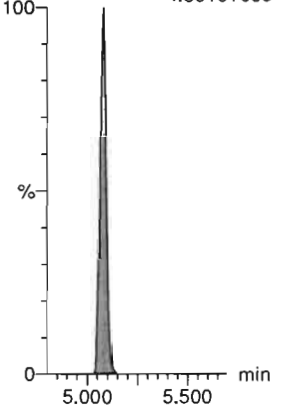
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.694e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
7.545e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.891e+005

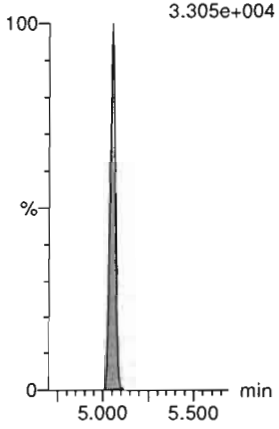


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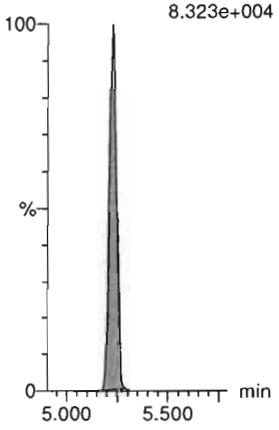
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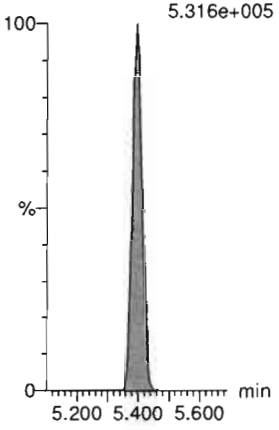
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.305e+004



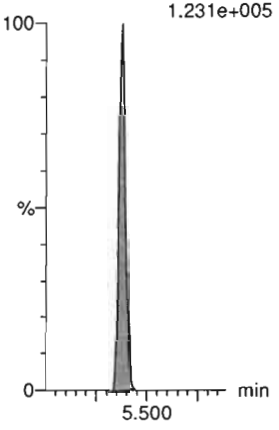
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.323e+004



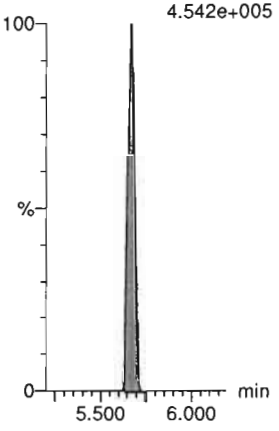
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.316e+005



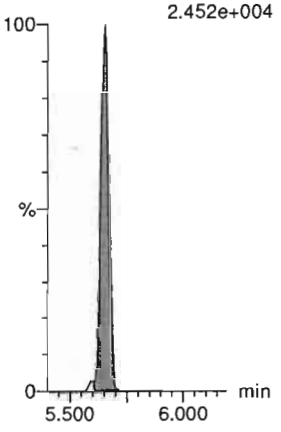
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.231e+005



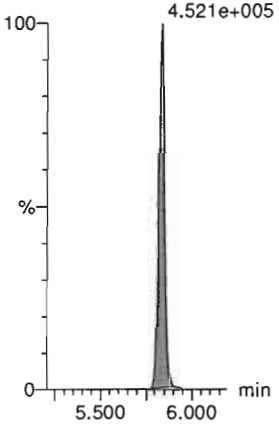
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.542e+005



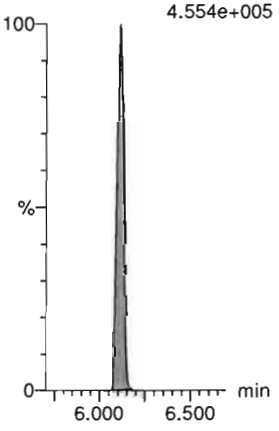
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.452e+004



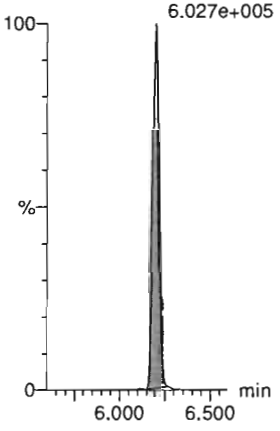
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.521e+005



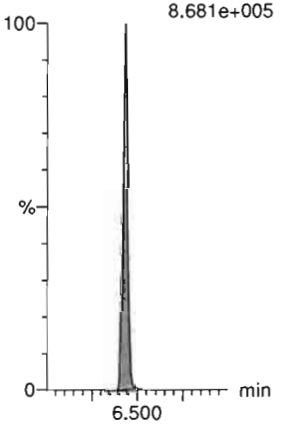
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.554e+005



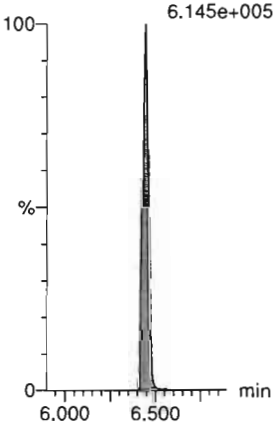
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.027e+005



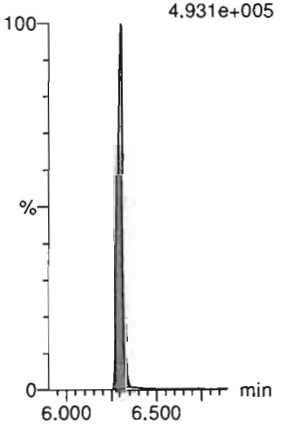
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.681e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.145e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
4.931e+005

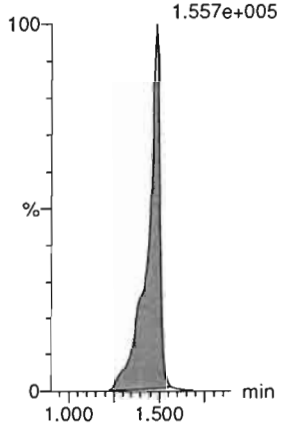


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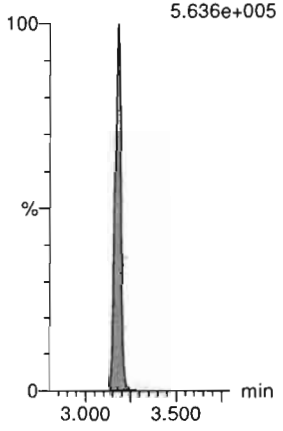
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Name: 200220P1-9, Date: 20-Feb-2020, Time: 18:48:04, ID: ST200220P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

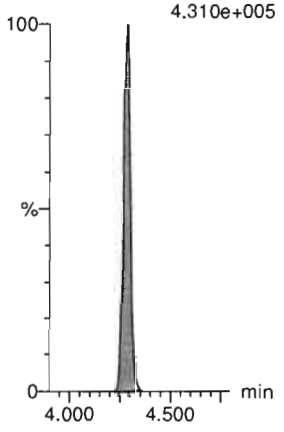
13C4-PFBA



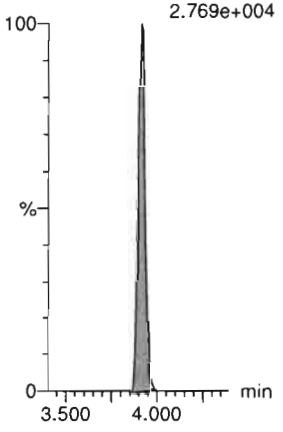
13C5-PFHxA



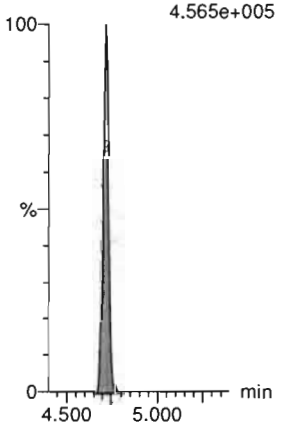
13C8-PFOA



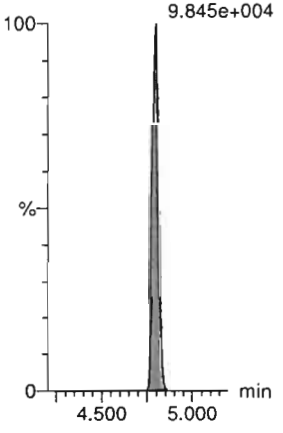
18O2-PFHxS



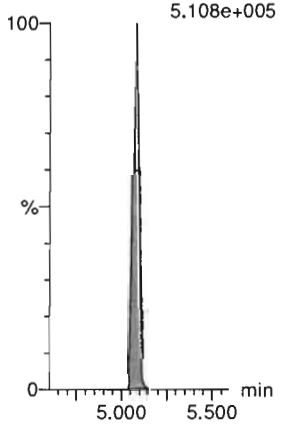
13C9-PFNA



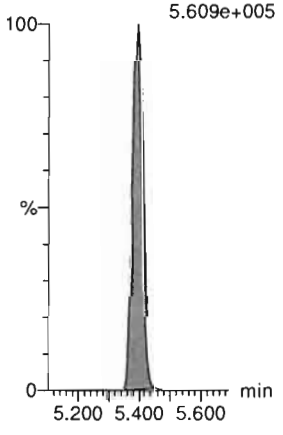
13C4-PFOS



13C6-PFDA



13C7-PFUdA

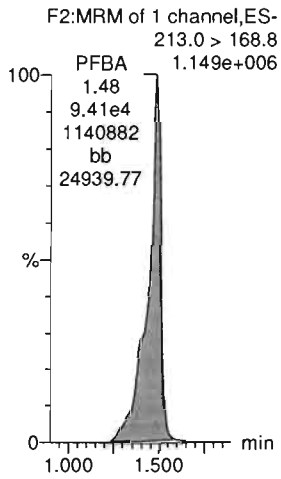


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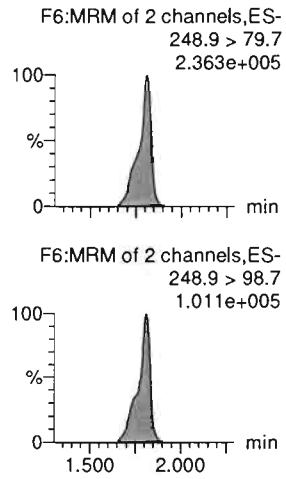
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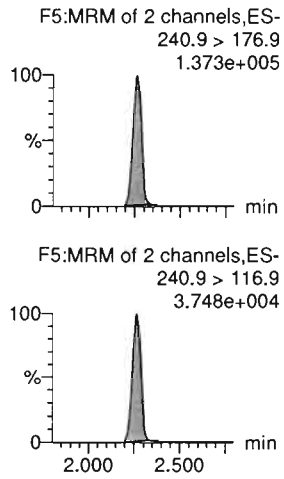
PFBA



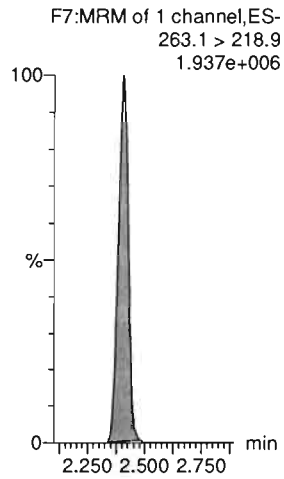
PFPrS



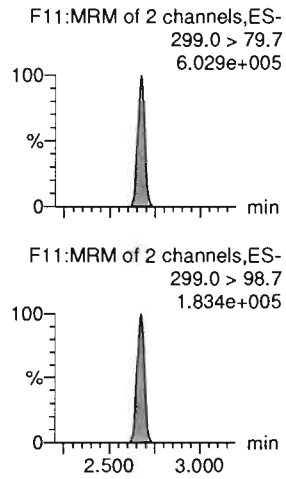
3:3 FTCA



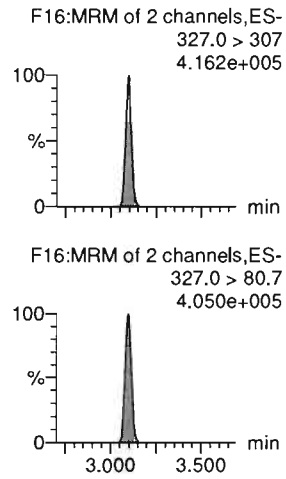
PFPeA



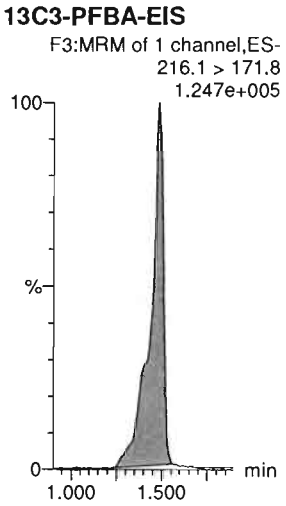
PFBS



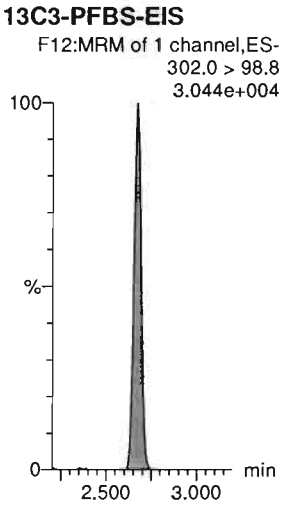
4:2 FTS



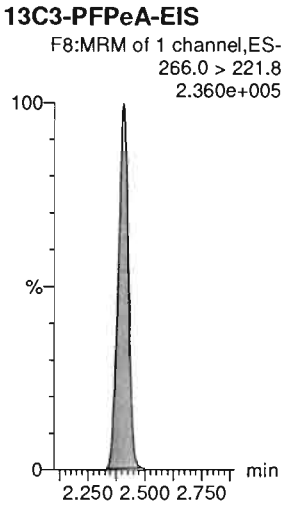
13C3-PFBA-EIS



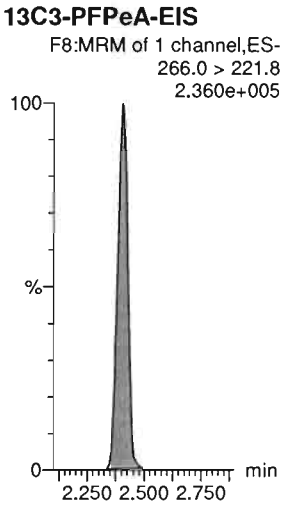
13C3-PFBS-EIS



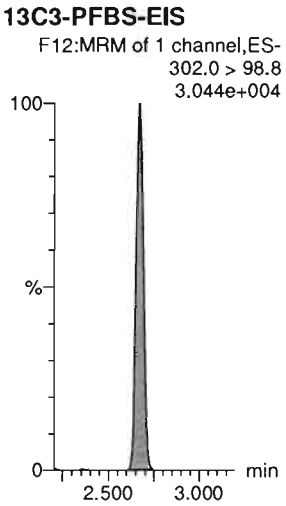
13C3-PFPeA-EIS



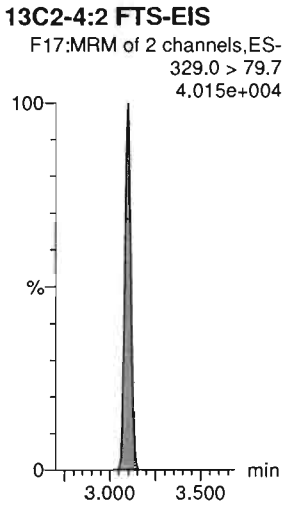
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

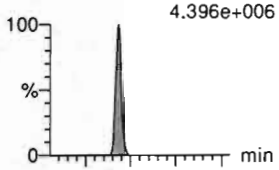


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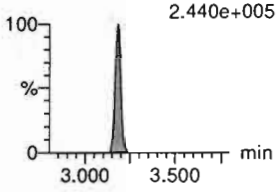
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Name: 200220P1-10, Date: 20-Feb-2020, Time: 18:58:35, ID: ST200220P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

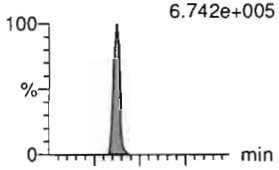
PFHxA
F13:MRM of 2 channels,ES-
313.0 > 269.0
4.396e+006



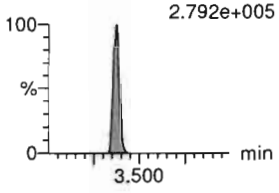
F13:MRM of 2 channels,ES-
313 > 118.9
2.440e+005



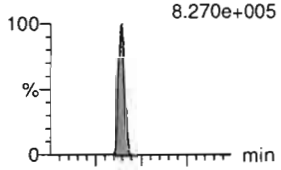
PFPeS
F19:MRM of 2 channels,ES-
349. > 79.7
6.742e+005



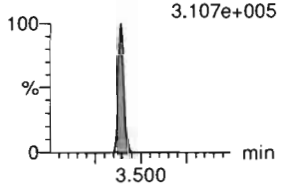
F19:MRM of 2 channels,ES-
349. > 98.7
2.792e+005



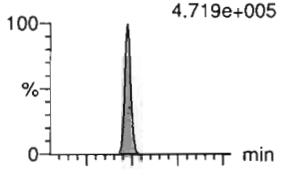
HFPO-DA
F9:MRM of 3 channels,ES-
285.1 > 168.9
8.270e+005



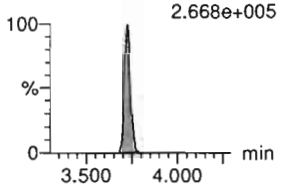
F9:MRM of 3 channels,ES-
285.1 > 184.9
3.107e+005



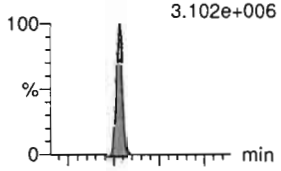
5:3 FTCA
F18:MRM of 2 channels,ES-
340.9 > 236.9
4.719e+005



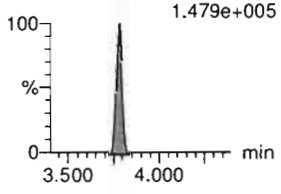
F18:MRM of 2 channels,ES-
340.9 > 216.9
2.668e+005



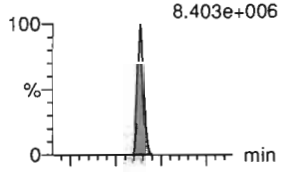
PFHpA
F20:MRM of 2 channels,ES-
363.0 > 318.9
3.102e+006



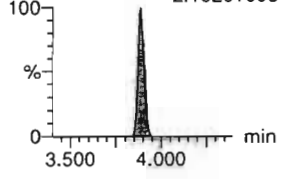
F20:MRM of 2 channels,ES-
363.0 > 169.0
1.479e+005



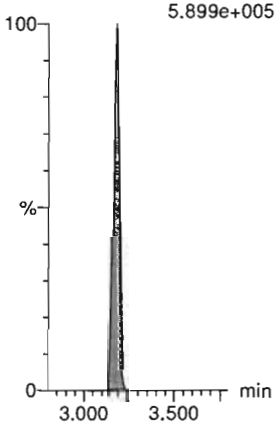
ADONA
F22:MRM of 2 channels,ES-
376.8 > 250.9
8.403e+006



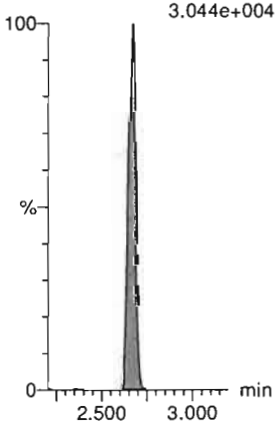
F22:MRM of 2 channels,ES-
376.8 > 85.0
2.152e+006



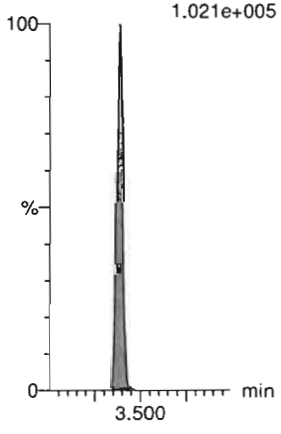
13C2-PFHxA-EIS
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.899e+005



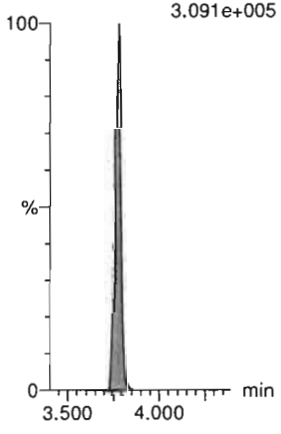
13C3-PFBS-EIS
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.044e+004



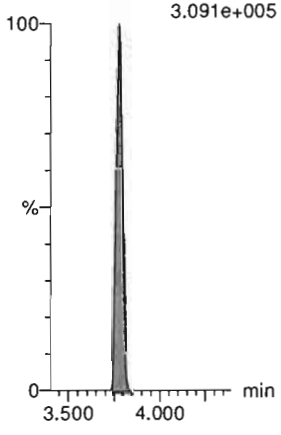
13C3-HFPO-DA-EIS
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.021e+005



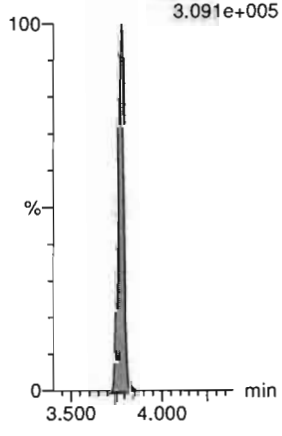
13C4-PFHpA-EIS
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.091e+005



13C4-PFHpA-EIS
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.091e+005



13C4-PFHpA-EIS
F21:MRM of 1 channel,ES-
367.2 > 321.8
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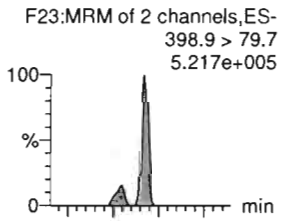


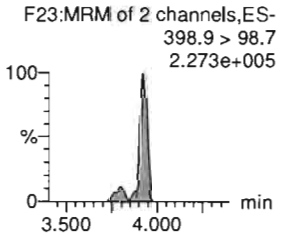
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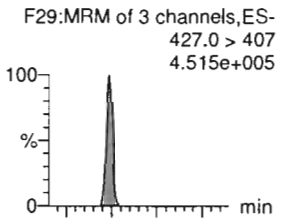
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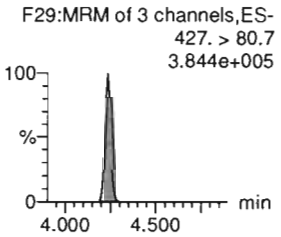
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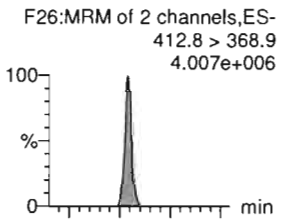


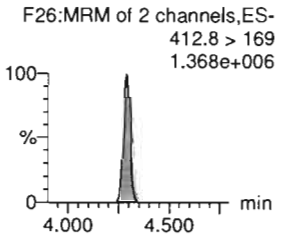
6:2 FTS



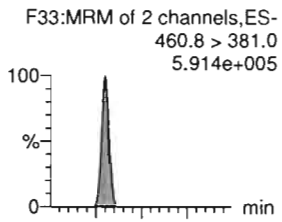


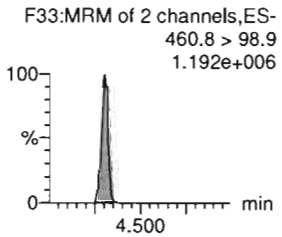
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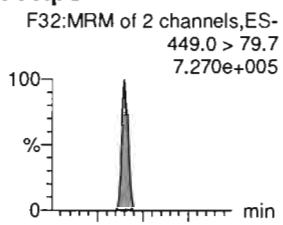


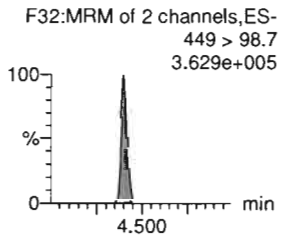
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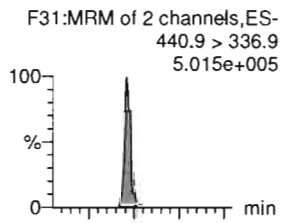


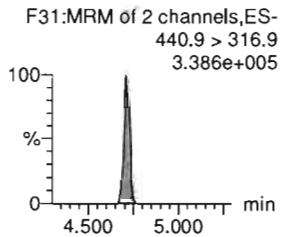
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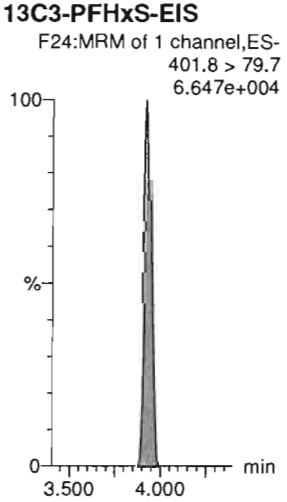


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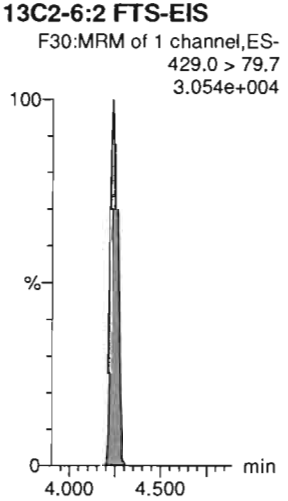




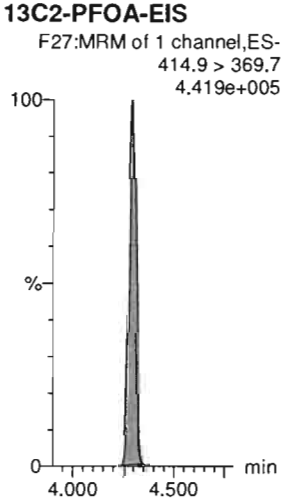
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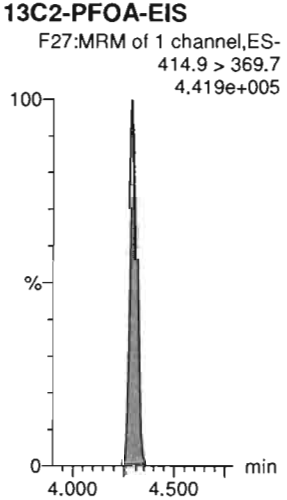
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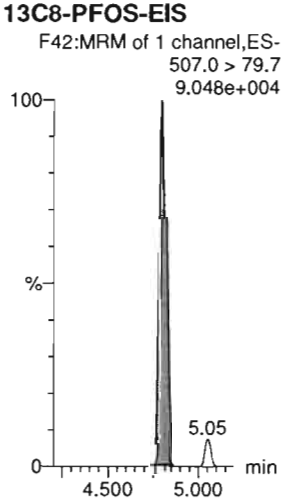
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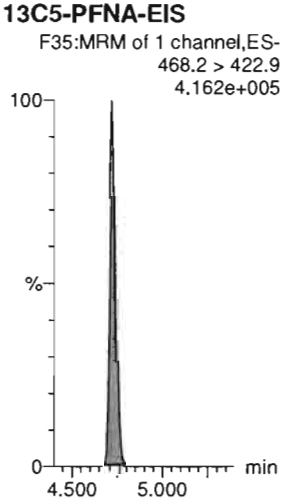
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13C8-PFOS-EIS



13C5-PFNA-EIS

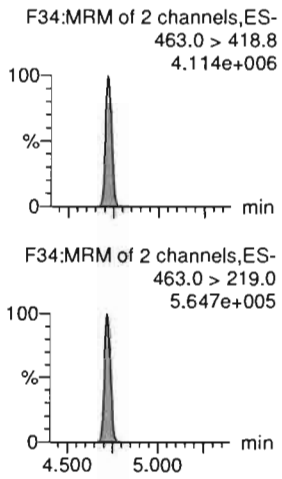


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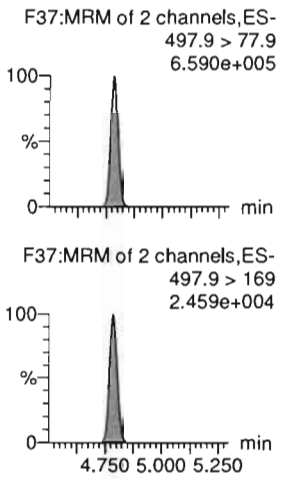
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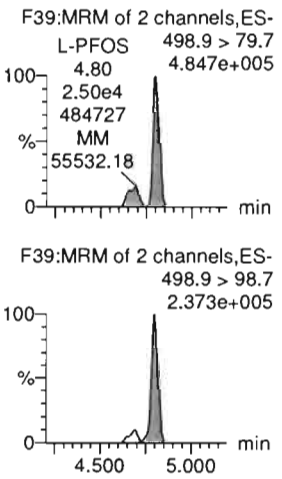
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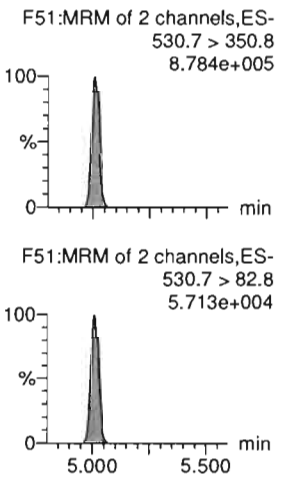
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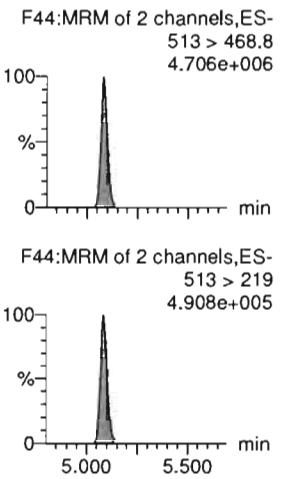
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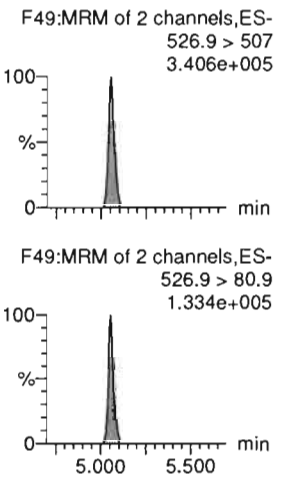
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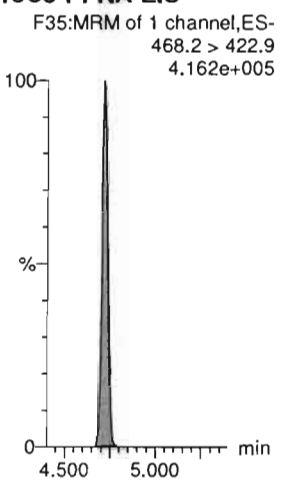
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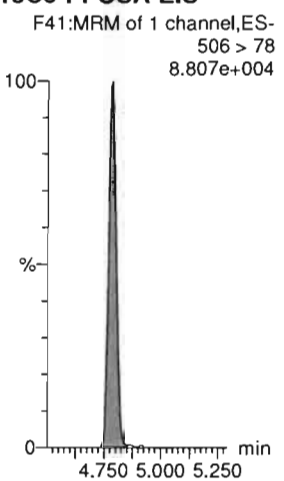
8:2 FTS



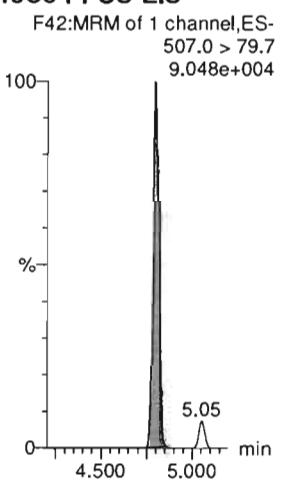
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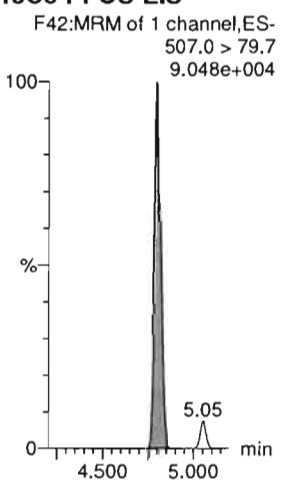
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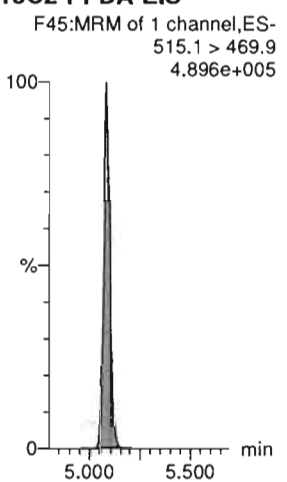
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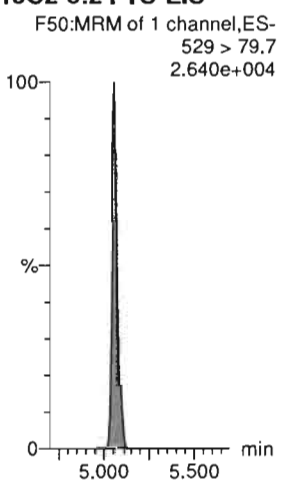
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13C2-PFDA-EIS



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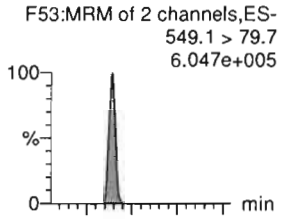


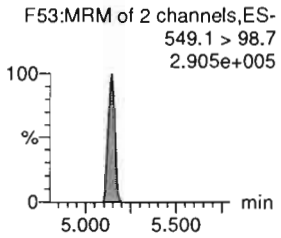
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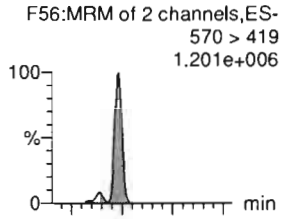
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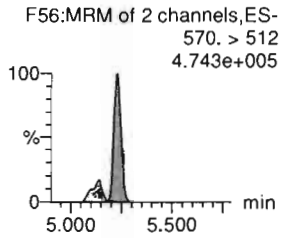
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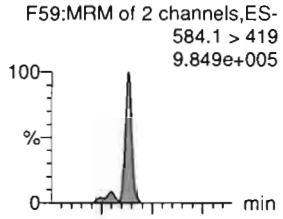


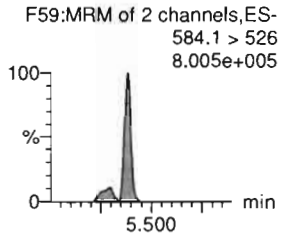
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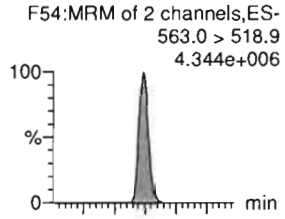


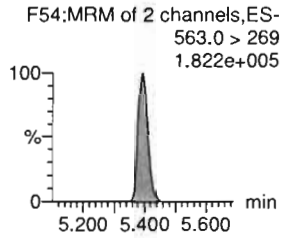
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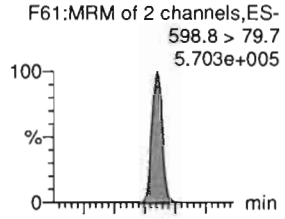


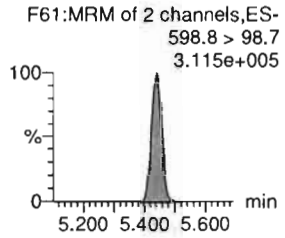
PFUdA



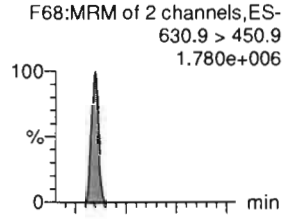


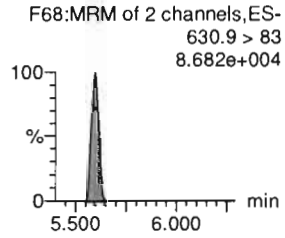
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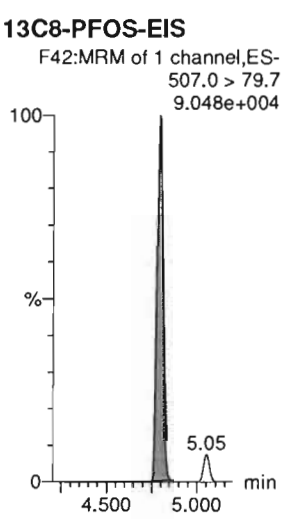


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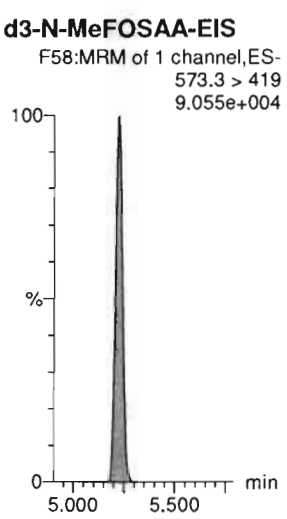




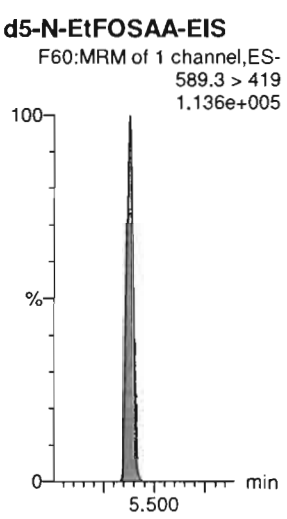
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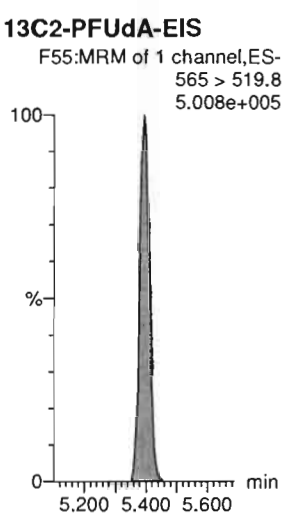
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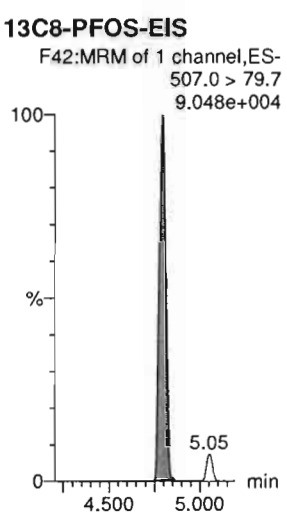
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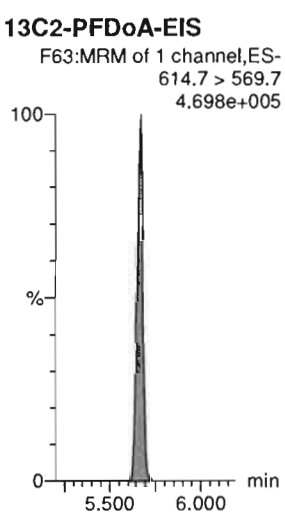
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13C8-PFOS-EIS



13C2-PFDoA-EIS

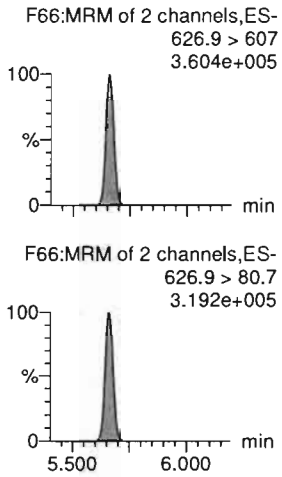


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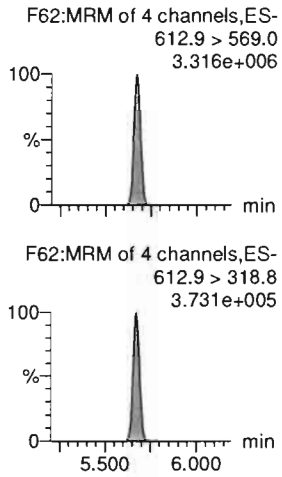
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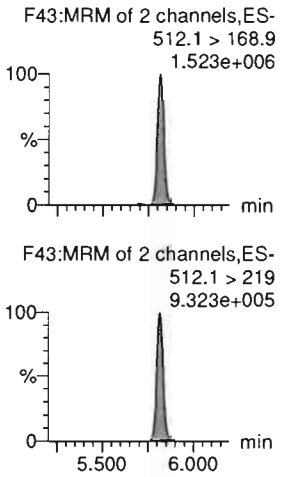
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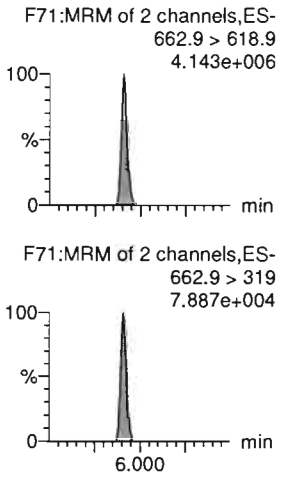
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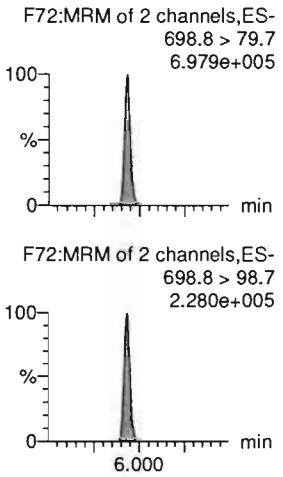
N-MeFOSA



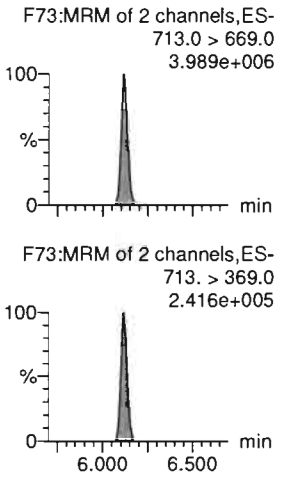
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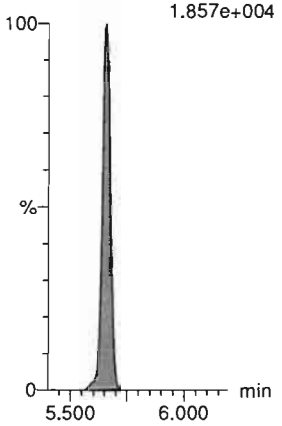
PFDoS



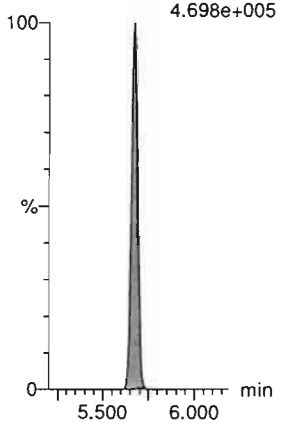
PFTeDA



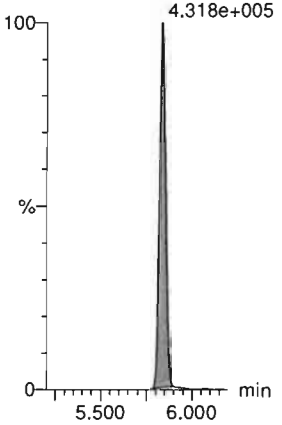
13C2-10:2 FTS-EIS



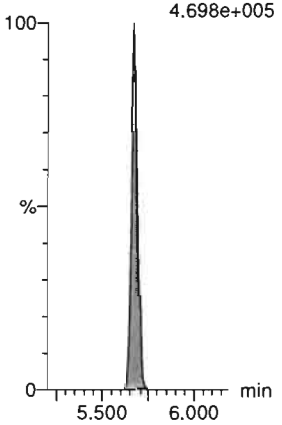
13C2-PFDoA-EIS



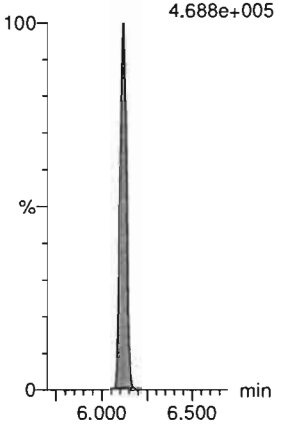
d3-N-MeFOSA-EIS



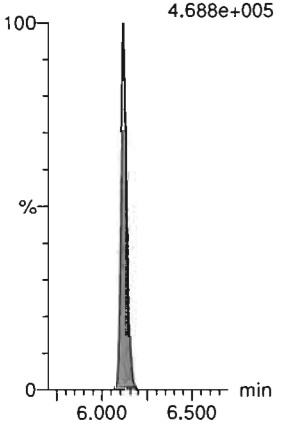
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

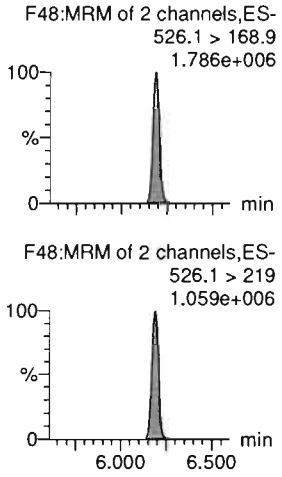


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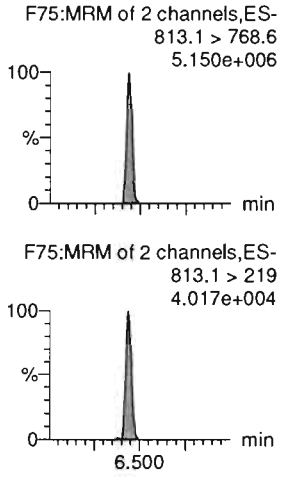
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Name: 200220P1-10, Date: 20-Feb-2020, Time: 18:58:35, ID: ST200220P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

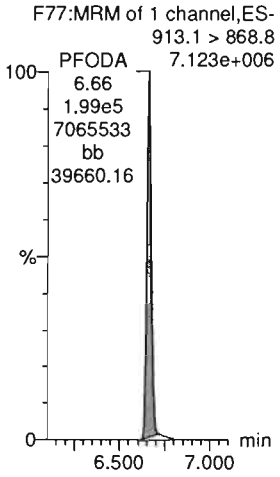
N-EtFOSA



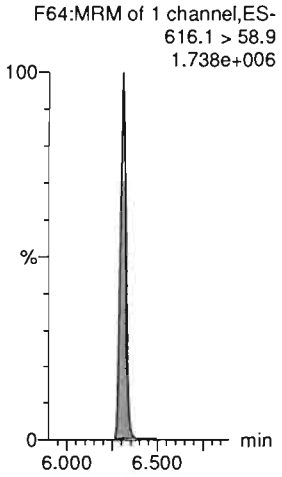
PFHxDA



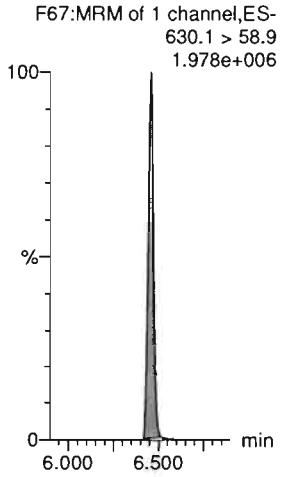
PFODA



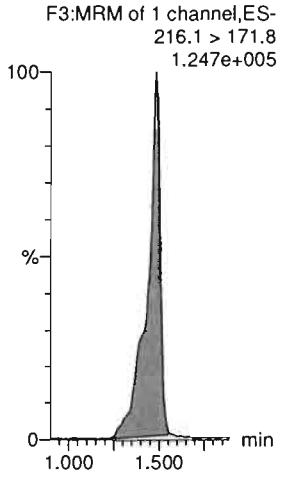
N-MeFOSE



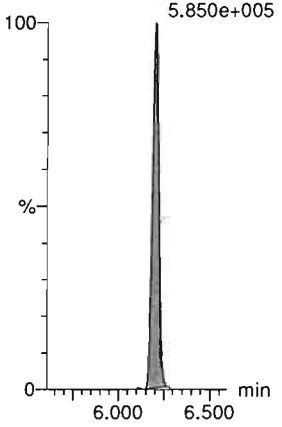
N-EtFOSE



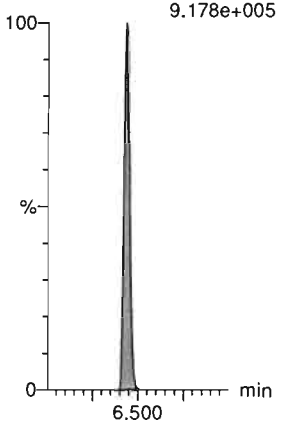
13C3-PFBA-RSD



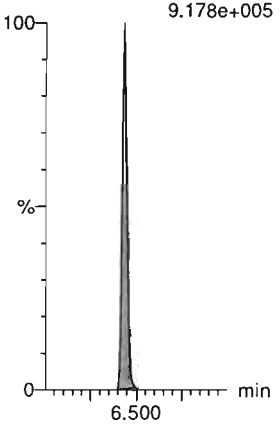
d5-N-ETFOSA-EIS



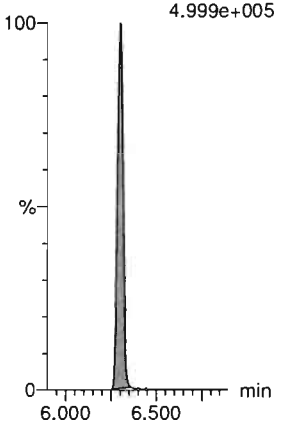
13C2-PFHxDA-EIS



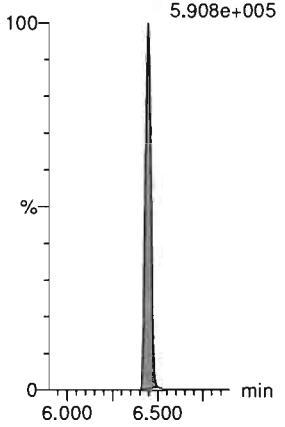
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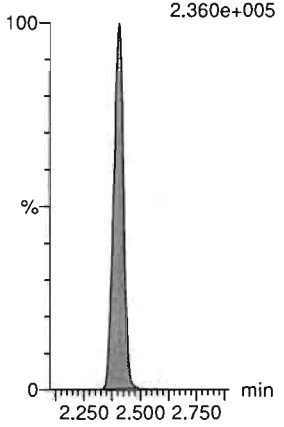
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

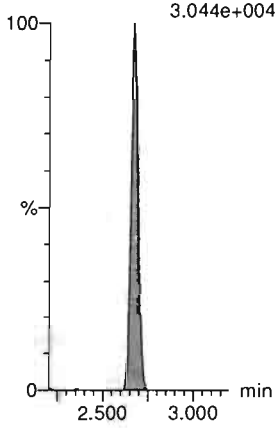


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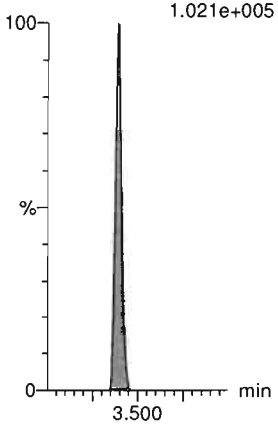
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Name: 200220P1-10, Date: 20-Feb-2020, Time: 18:58:35, ID: ST200220P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

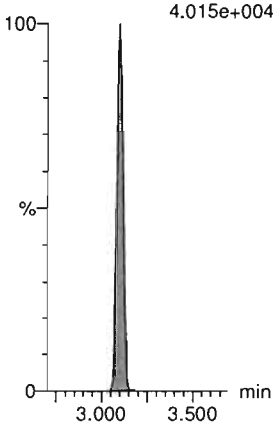
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.044e+004



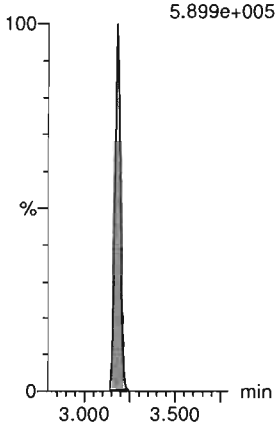
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.021e+005



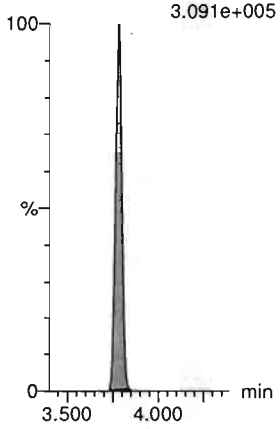
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.015e+004



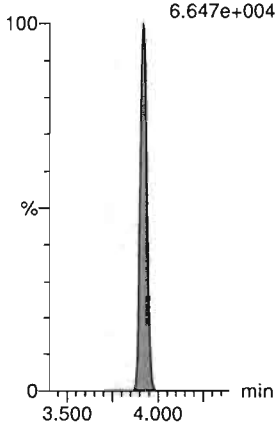
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.899e+005



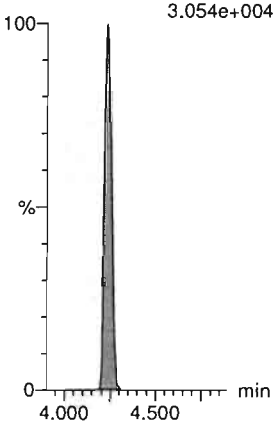
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.091e+005



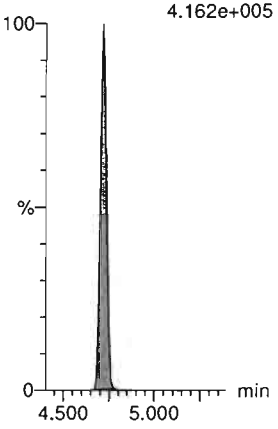
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
6.647e+004



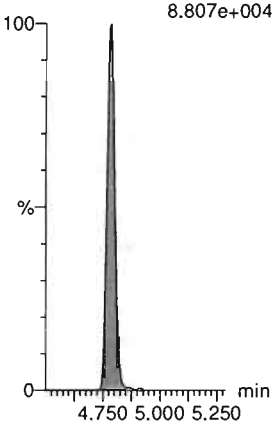
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.054e+004



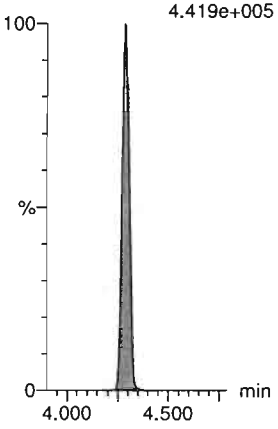
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.162e+005



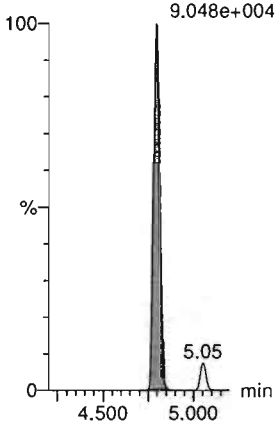
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
8.807e+004



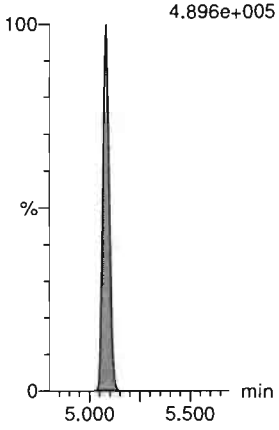
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.419e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.048e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.896e+005

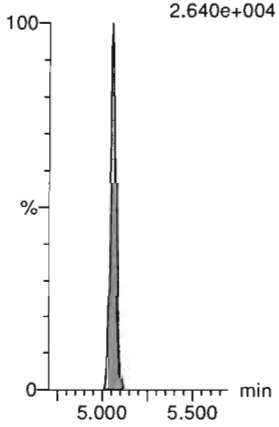


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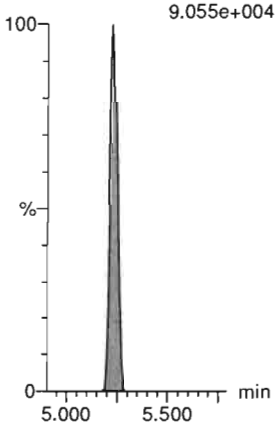
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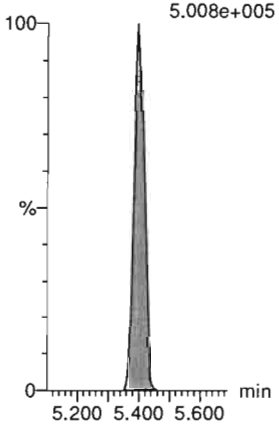
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.640e+004



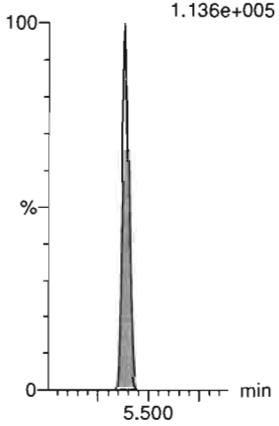
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
9.055e+004



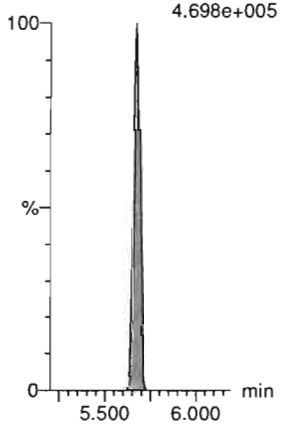
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.008e+005



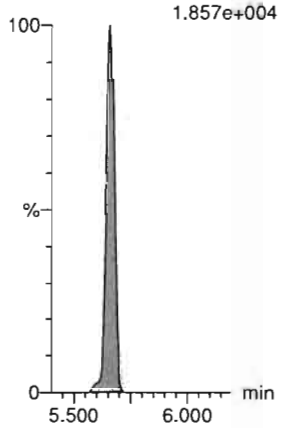
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.136e+005



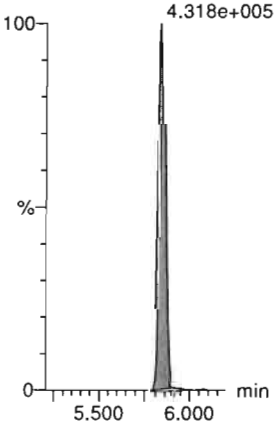
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.698e+005



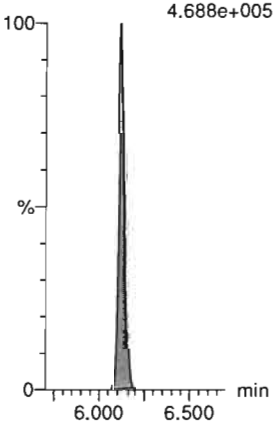
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
1.857e+004



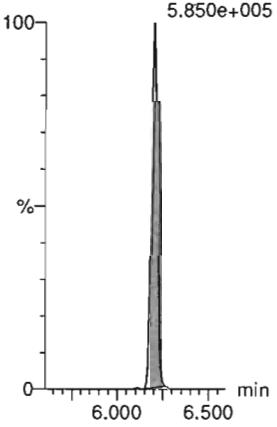
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.318e+005



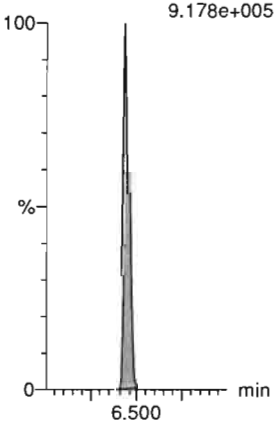
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.688e+005



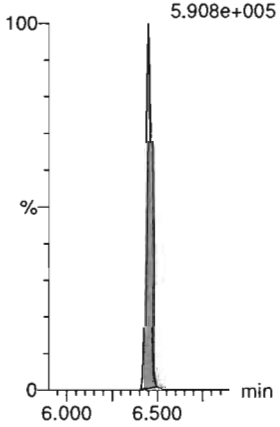
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.850e+005



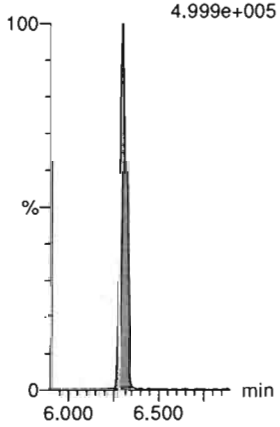
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.178e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
5.908e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
4.999e+005

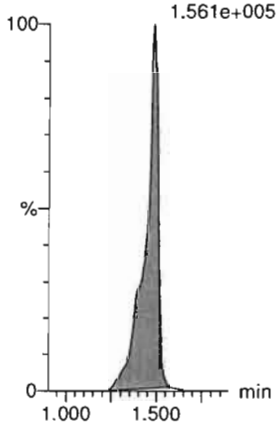


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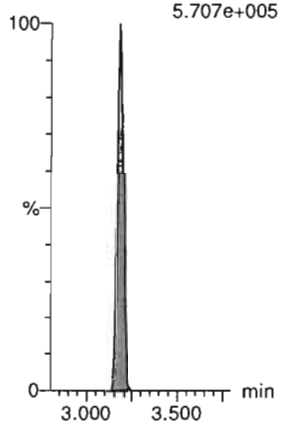
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Name: 200220P1-10, Date: 20-Feb-2020, Time: 18:58:35, ID: ST200220P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

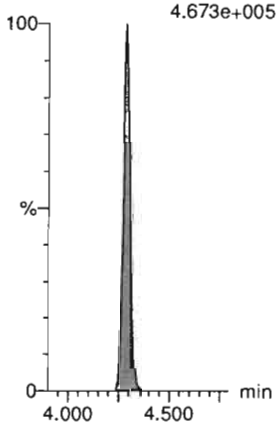
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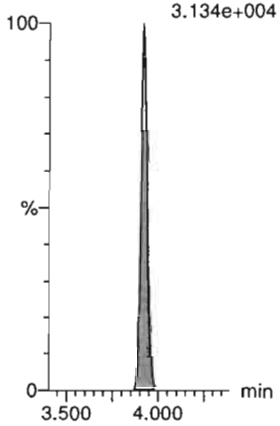
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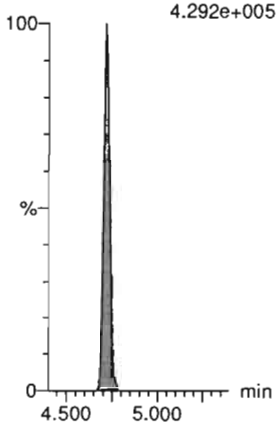
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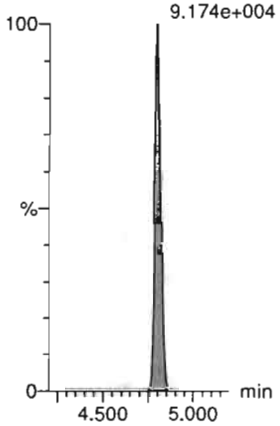
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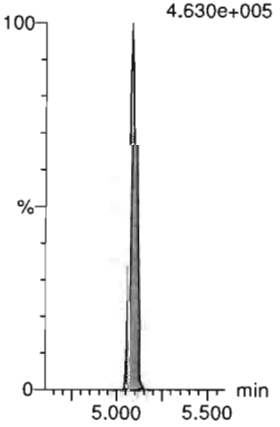
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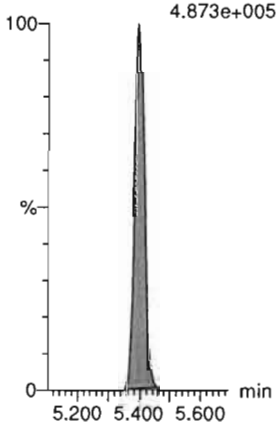
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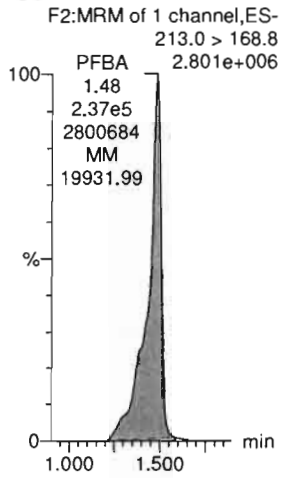


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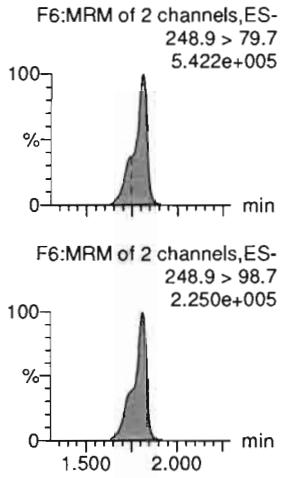
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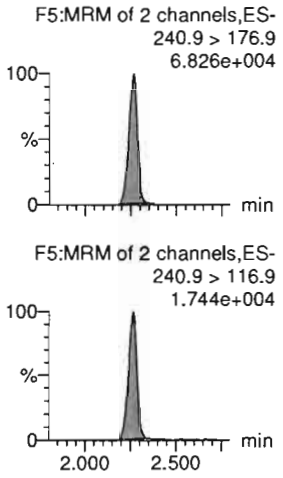
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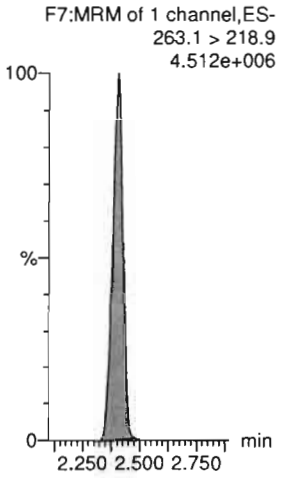
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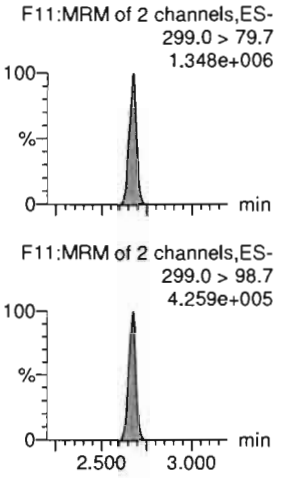
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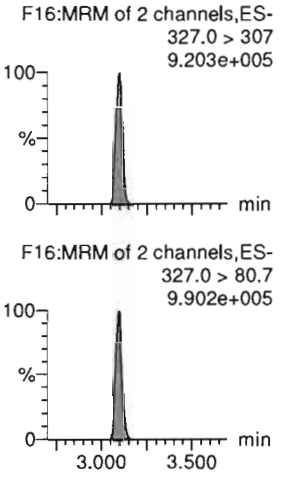
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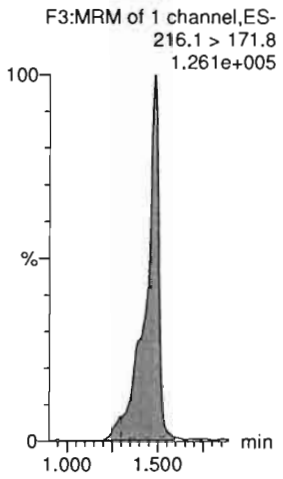
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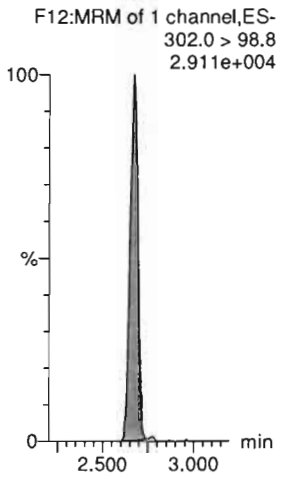
4:2 FTS



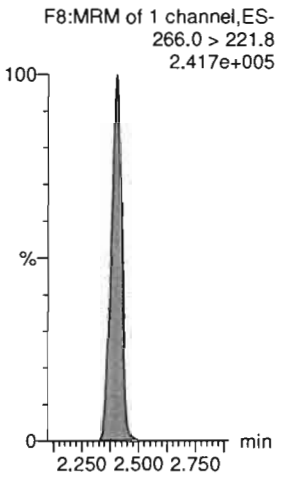
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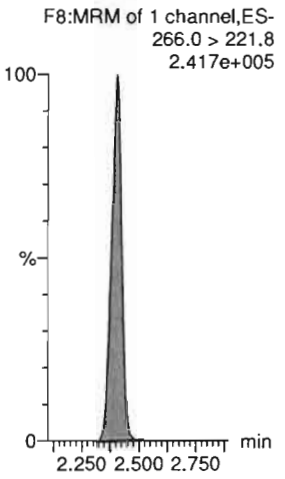
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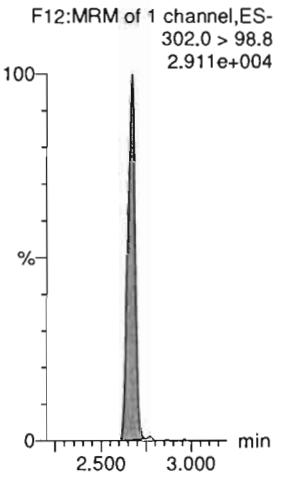
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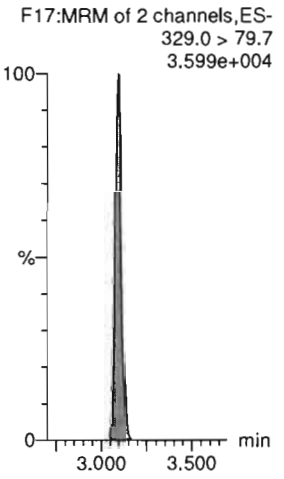
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

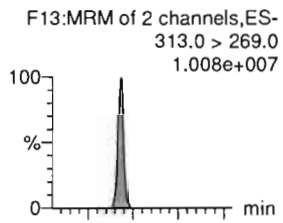


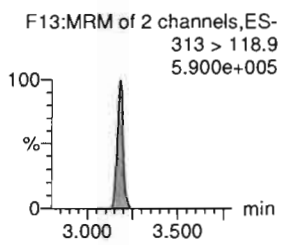
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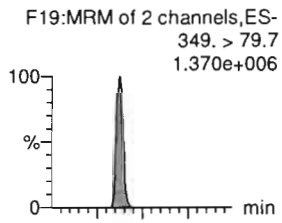
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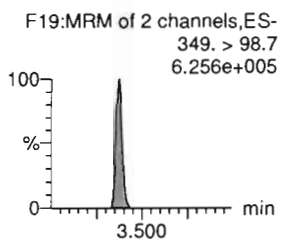
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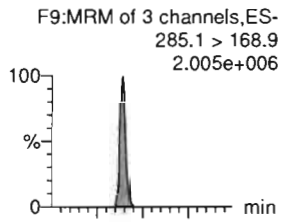


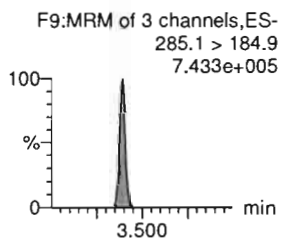
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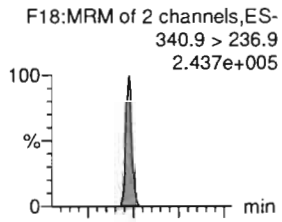


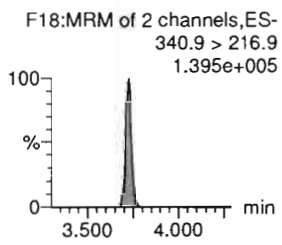
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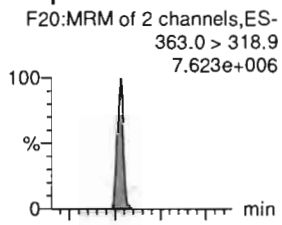


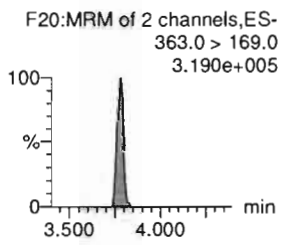
5:3 FTCA



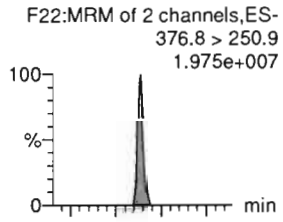


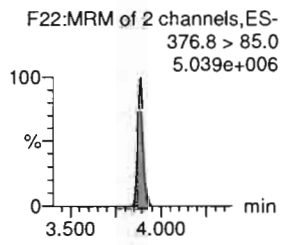
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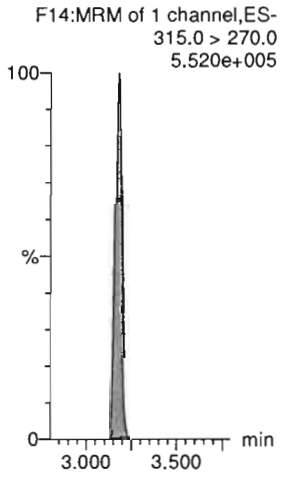


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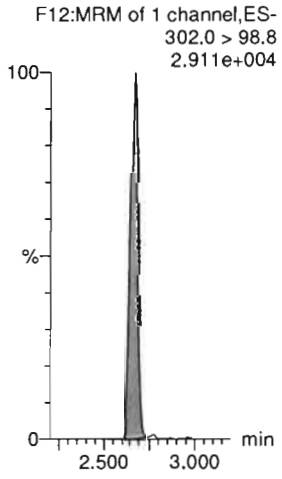




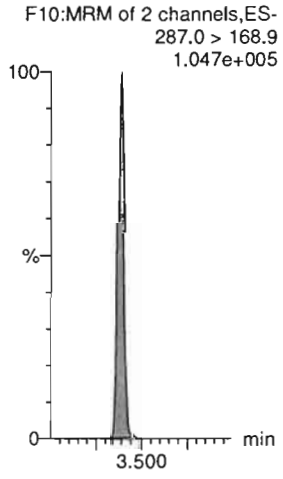
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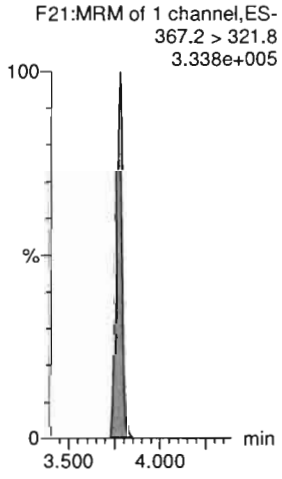
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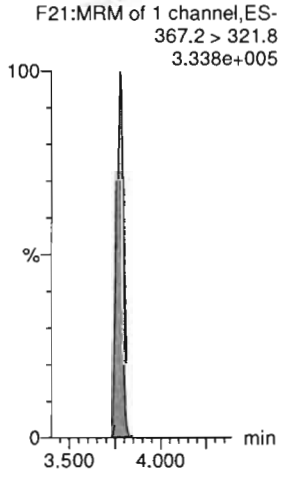
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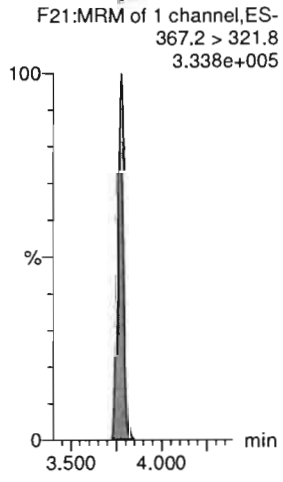
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

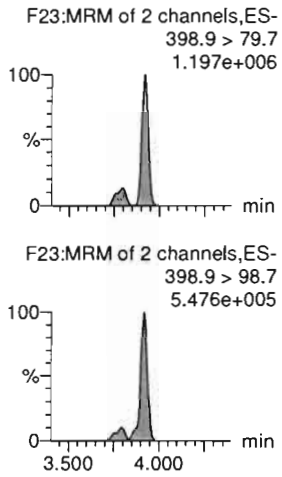


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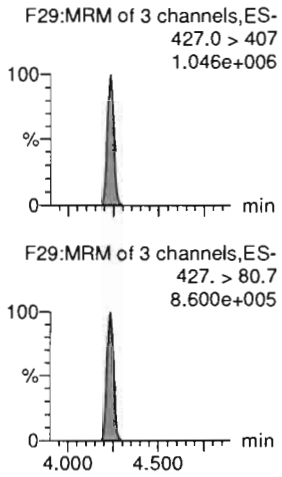
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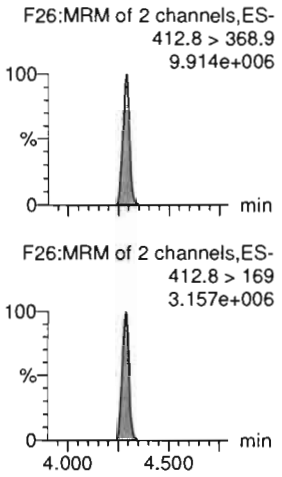
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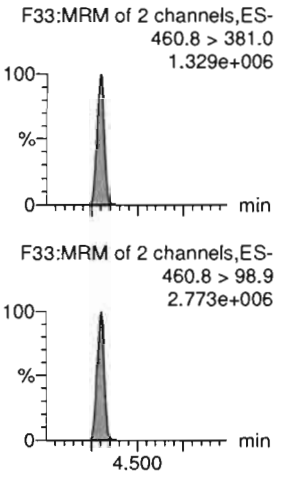
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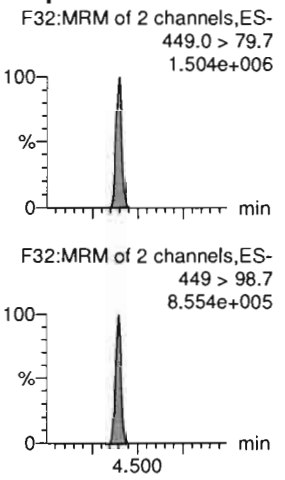
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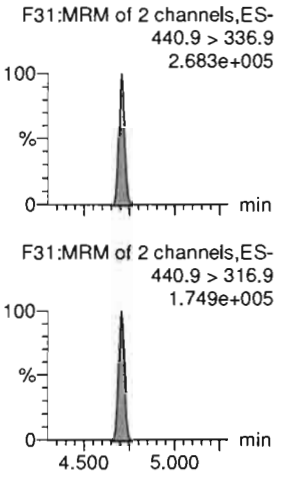
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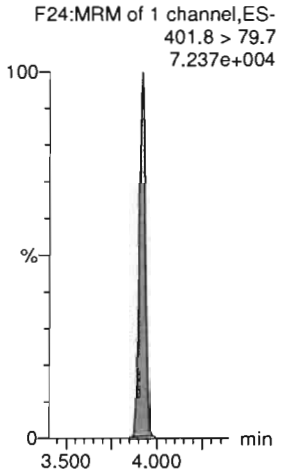
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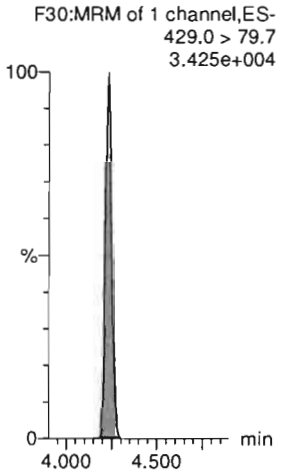
7:3 FTCA



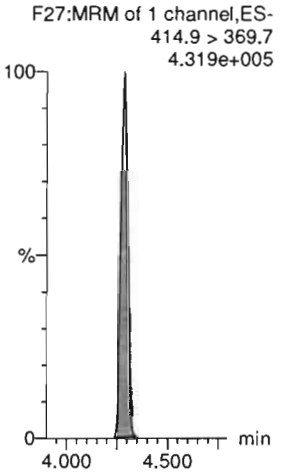
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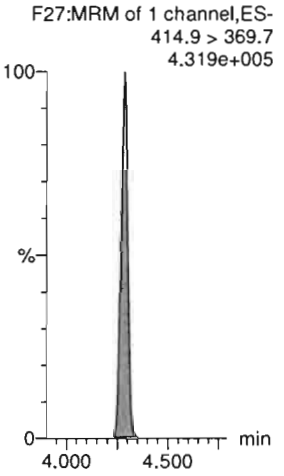
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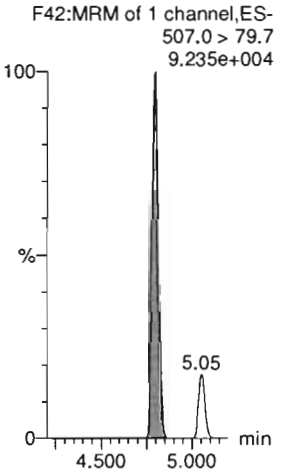
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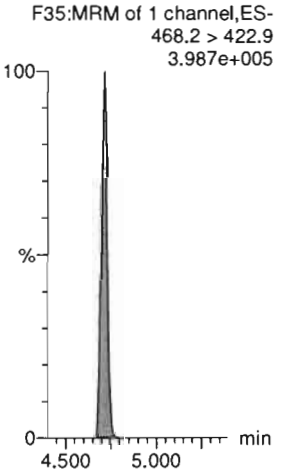
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13C8-PFOS-EIS



13C5-PFNA-EIS

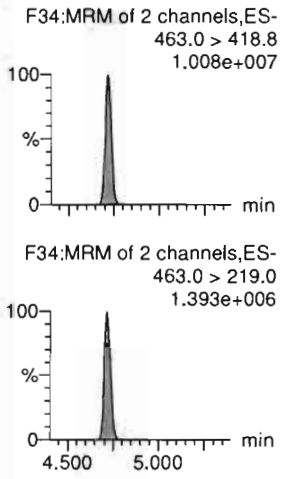


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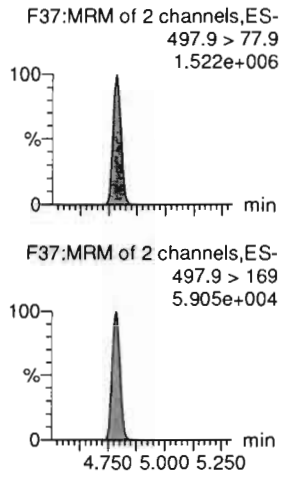
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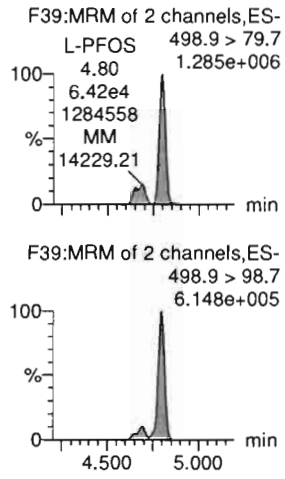
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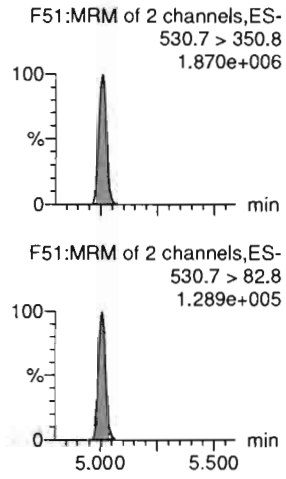
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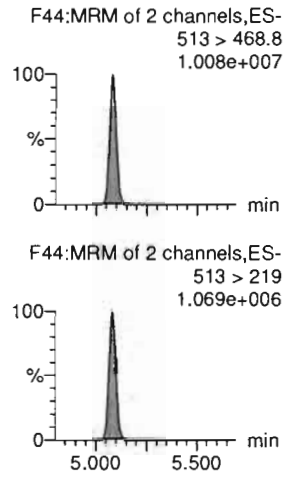
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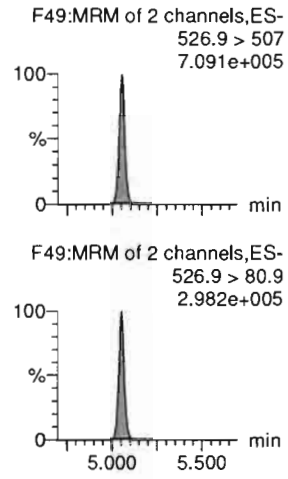
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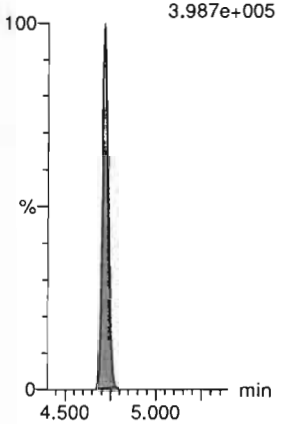
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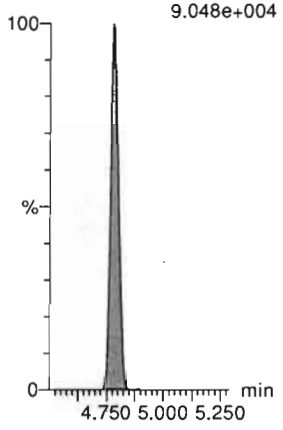
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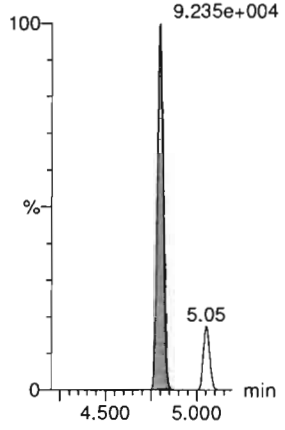
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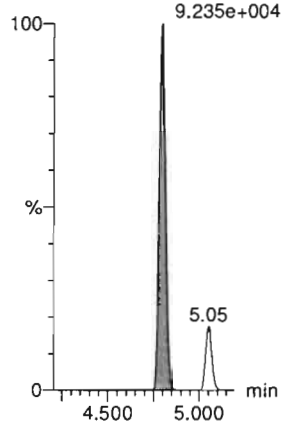
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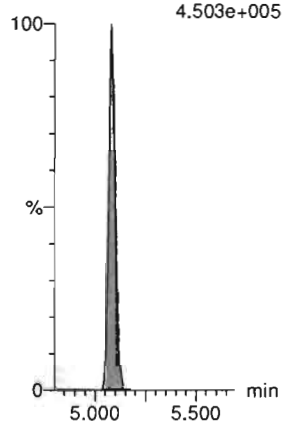
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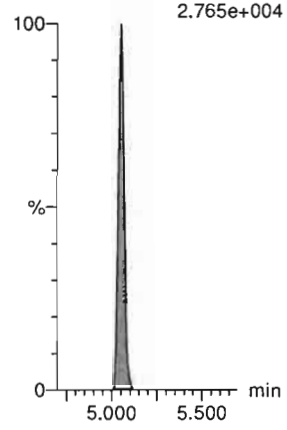
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

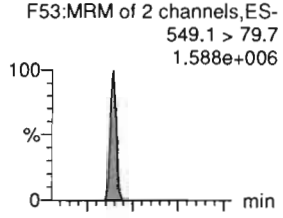


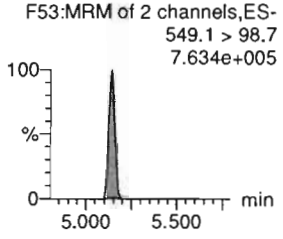
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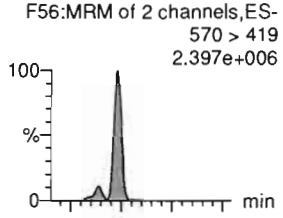
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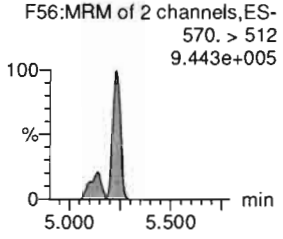
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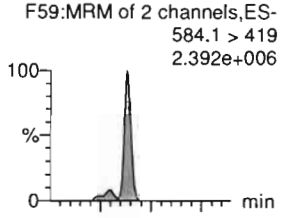


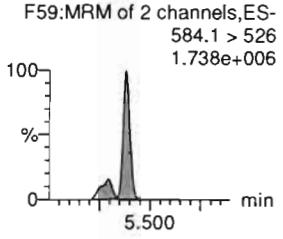
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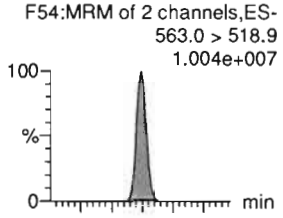


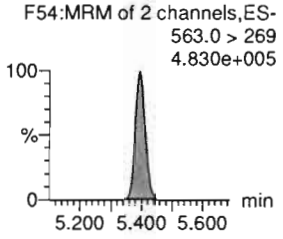
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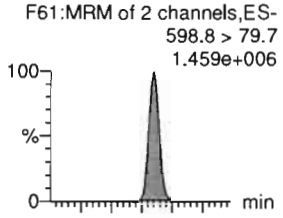


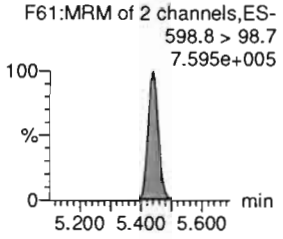
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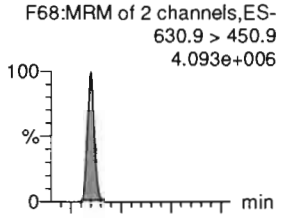


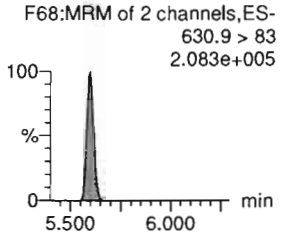
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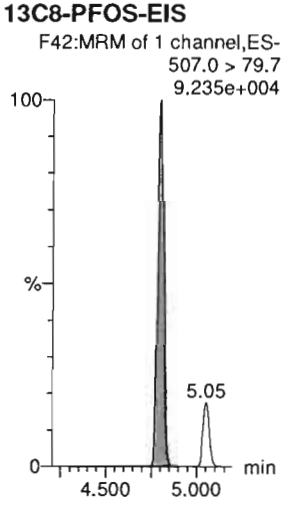


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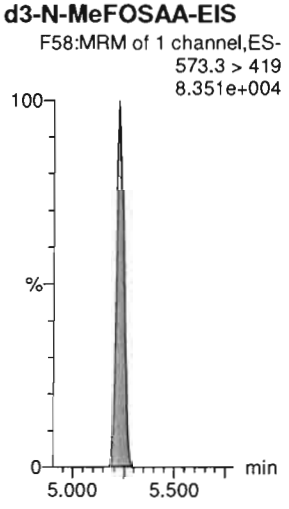




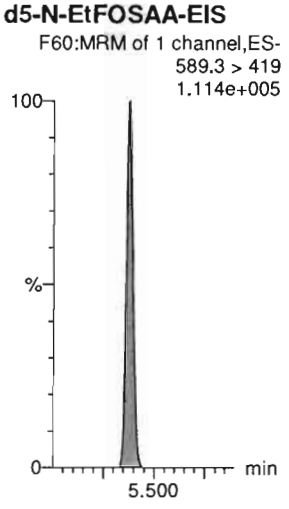
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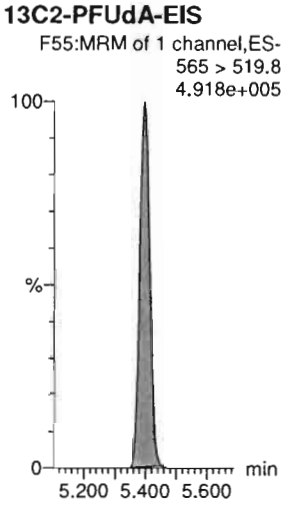
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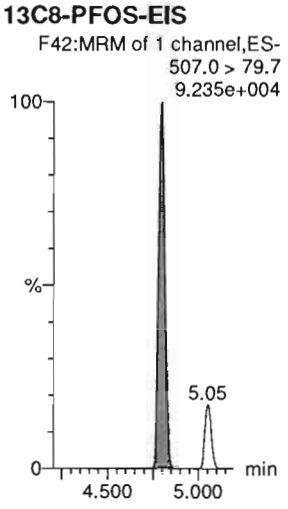
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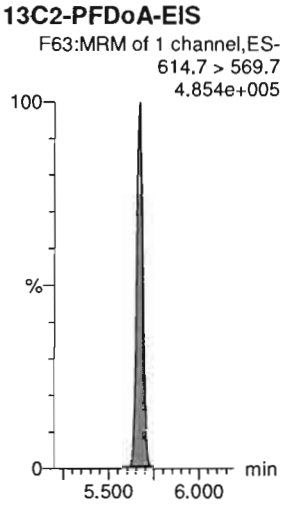
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

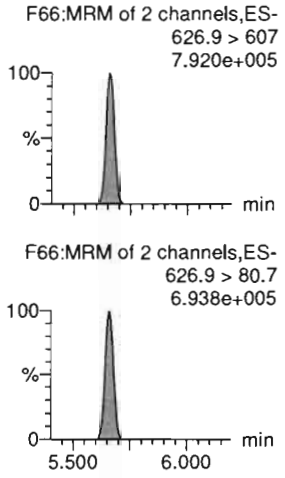


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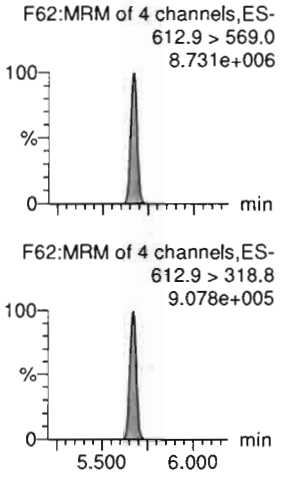
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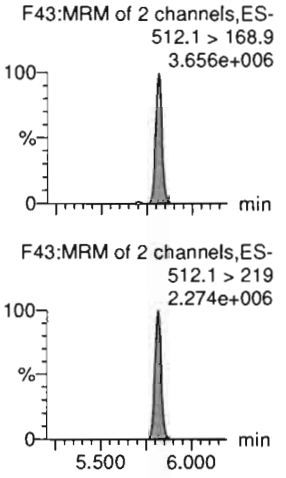
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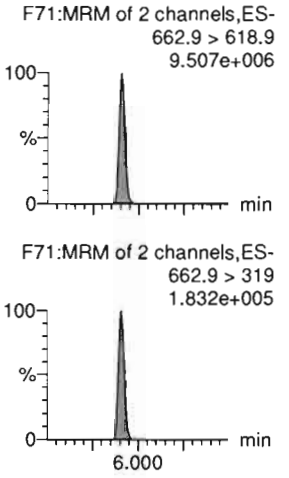
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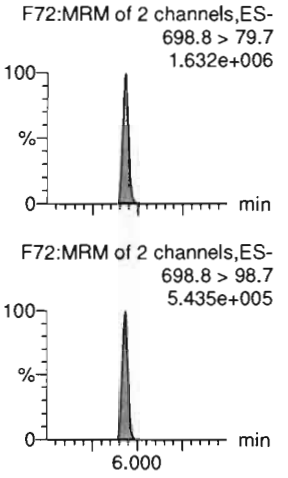
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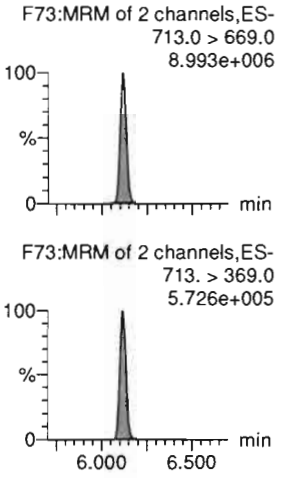
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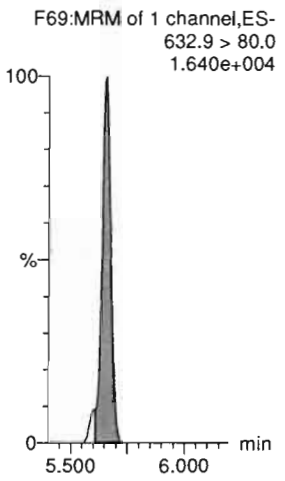
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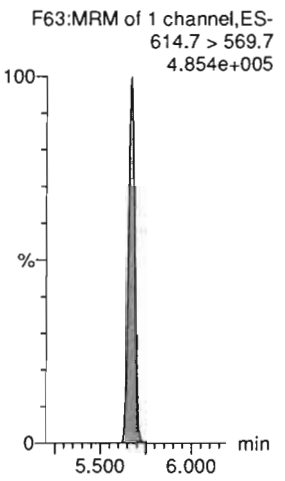
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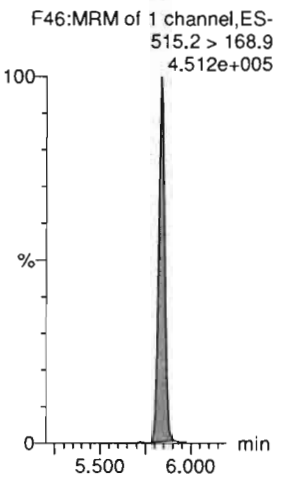
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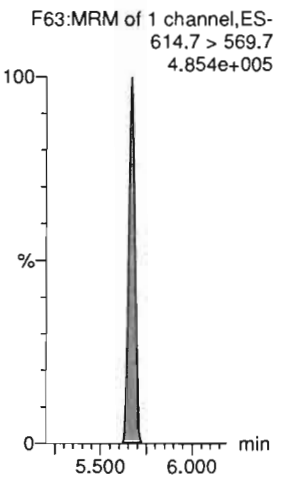
13C2-PFDoA-EIS



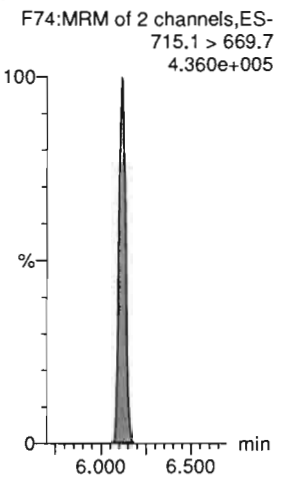
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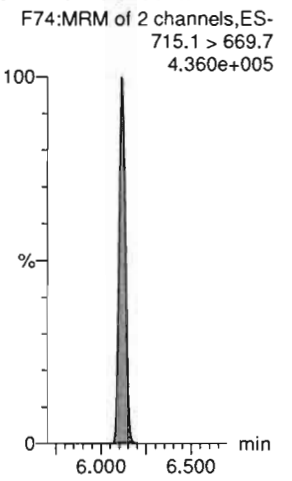
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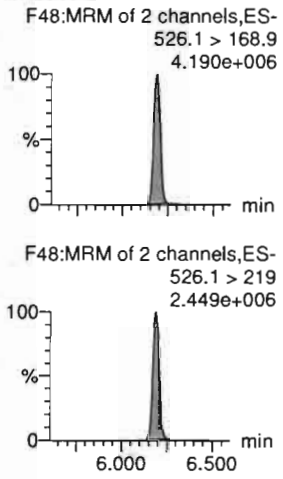


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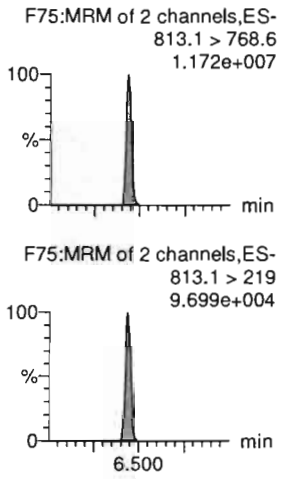
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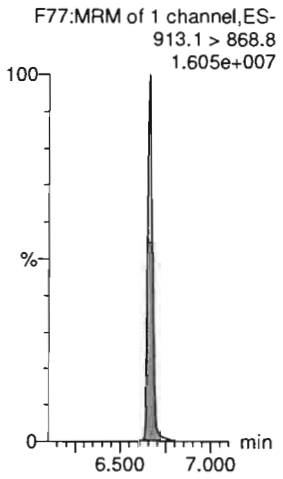
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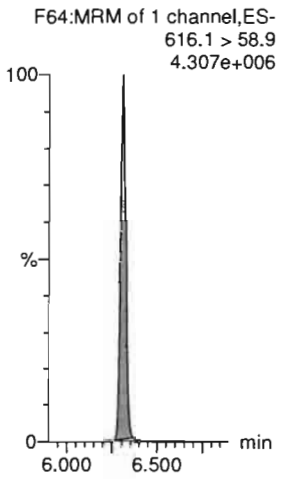
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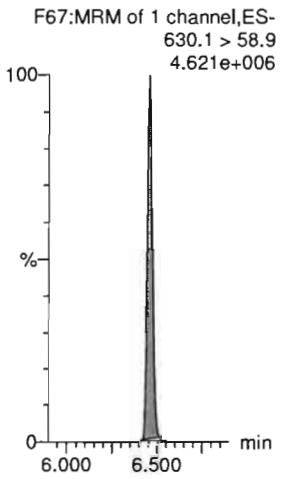
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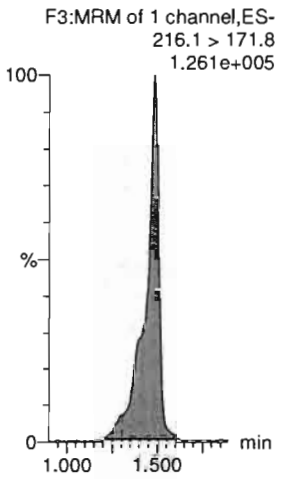
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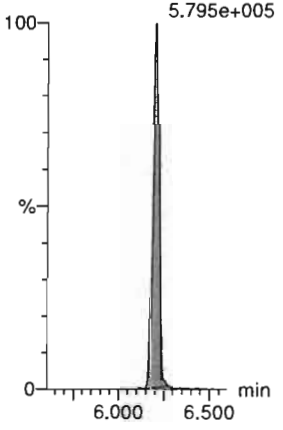
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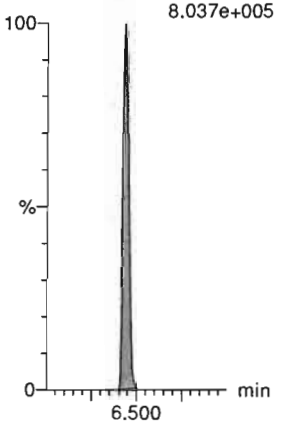
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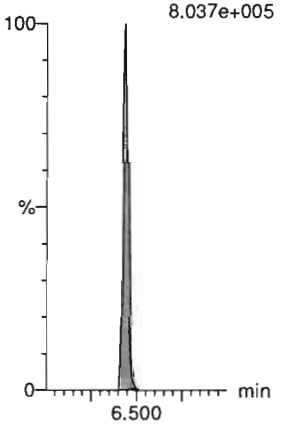
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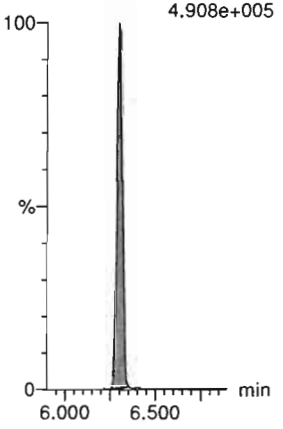
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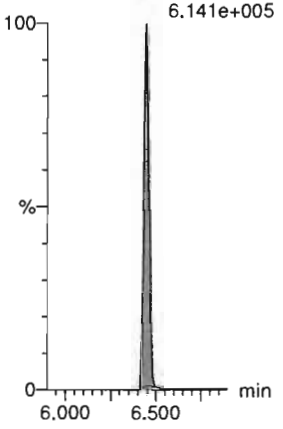
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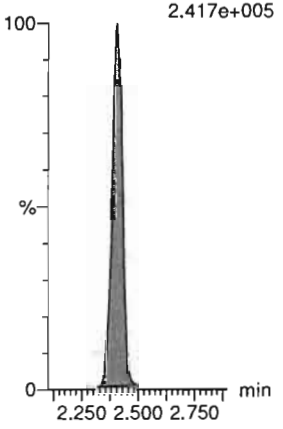
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d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

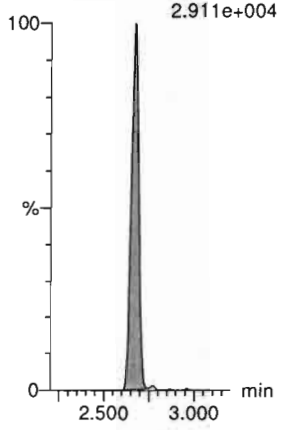


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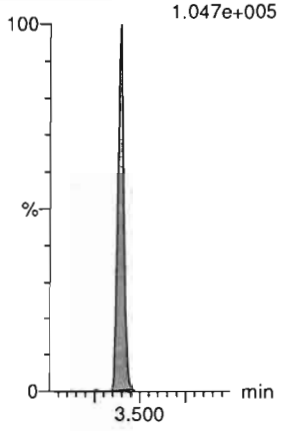
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Name: 200220P1-11, Date: 20-Feb-2020, Time: 19:09:05, ID: ST200220P1-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

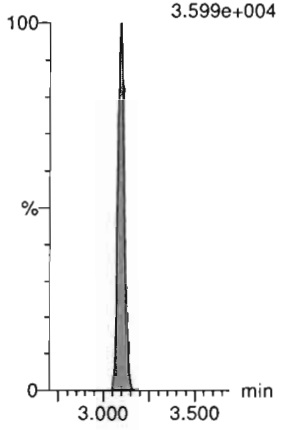
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.911e+004



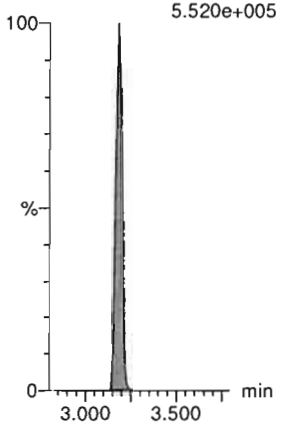
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.047e+005



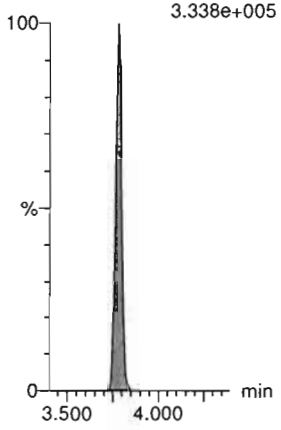
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.599e+004



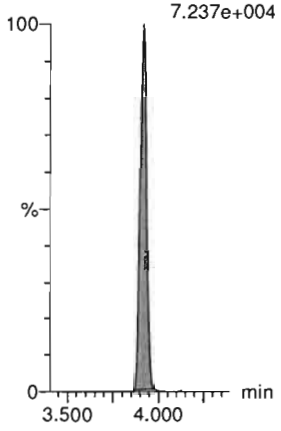
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.520e+005



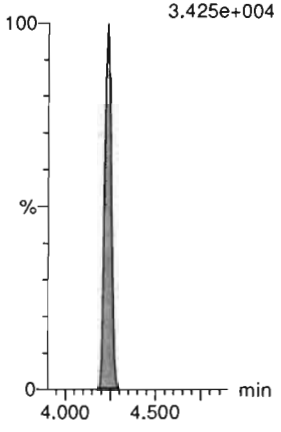
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.338e+005



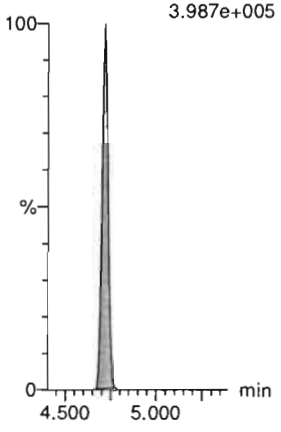
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.237e+004



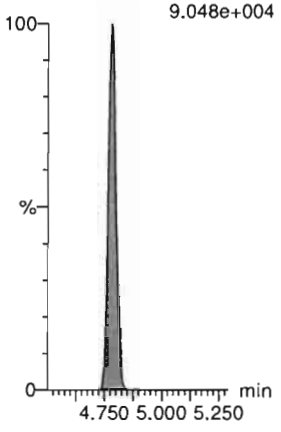
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.425e+004



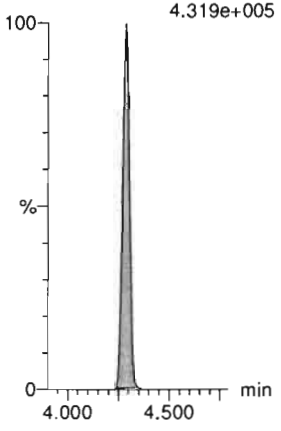
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
3.987e+005



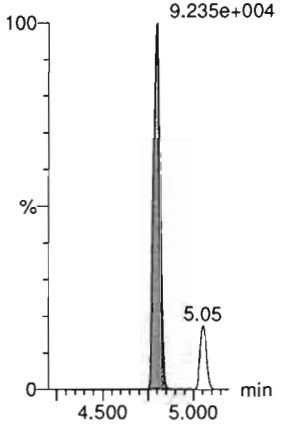
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.048e+004



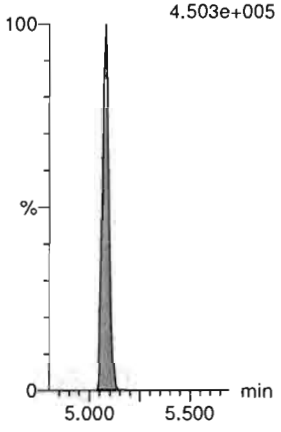
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.319e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.235e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.503e+005

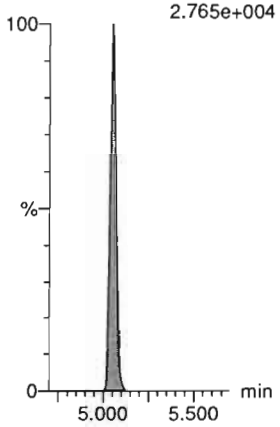


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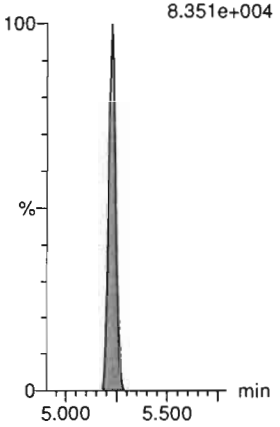
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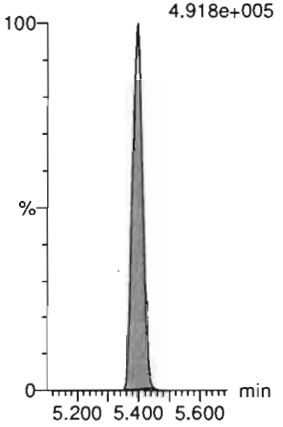
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.765e+004



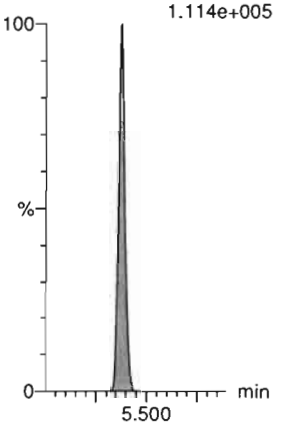
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.351e+004



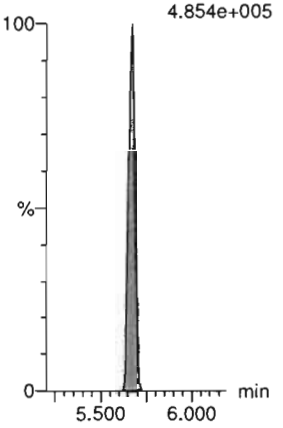
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
4.918e+005



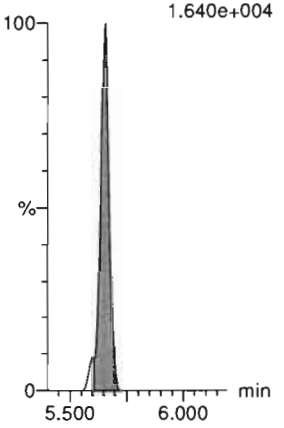
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.114e+005



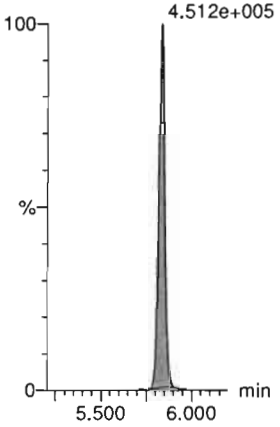
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.854e+005



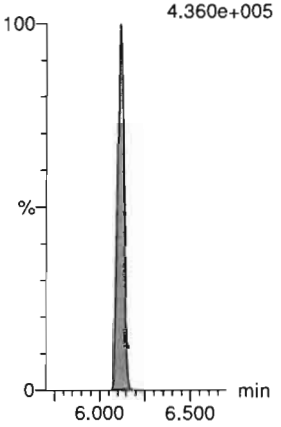
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
1.640e+004



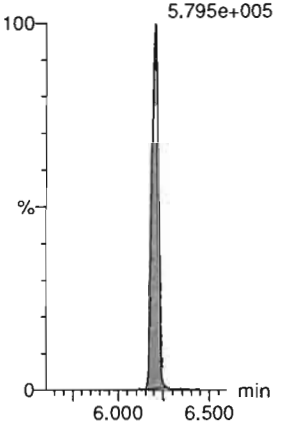
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.512e+005



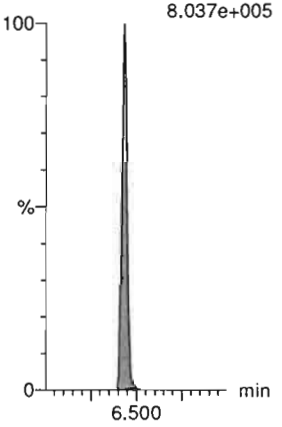
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.360e+005



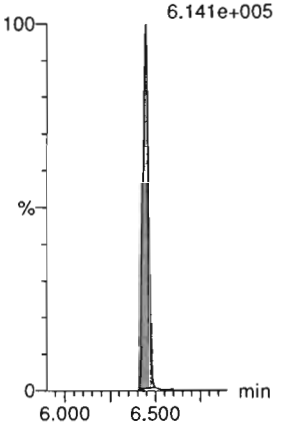
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.795e+005



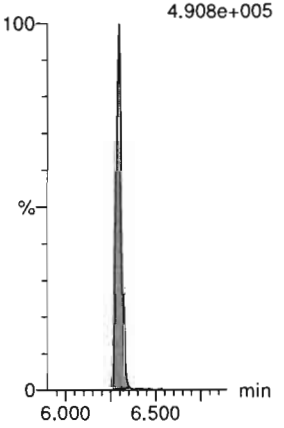
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.037e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.141e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
4.908e+005

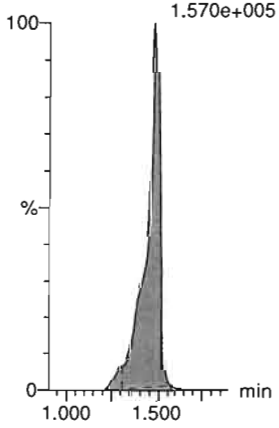


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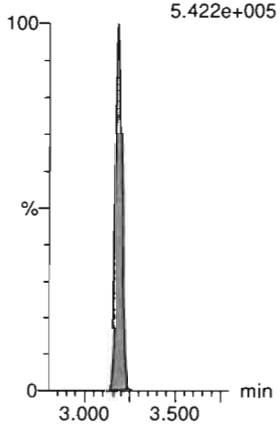
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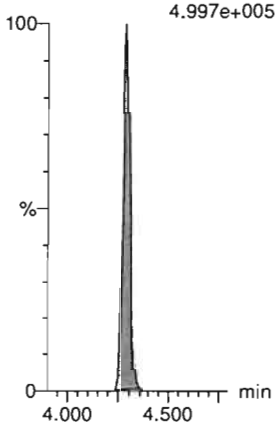
13C4-PFBA



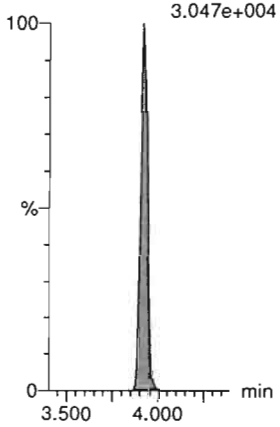
13C5-PFHxA



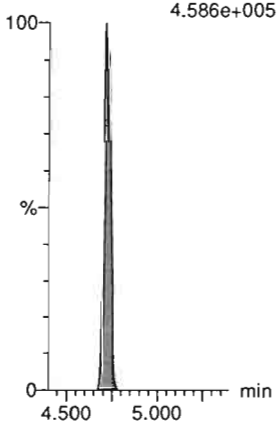
13C8-PFOA



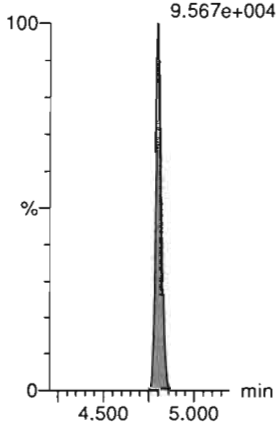
18O2-PFHxS



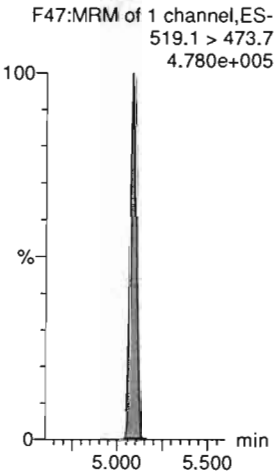
13C9-PFNA



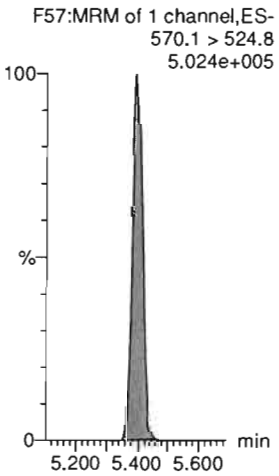
13C4-PFOS



13C6-PFDA



13C7-PFUdA

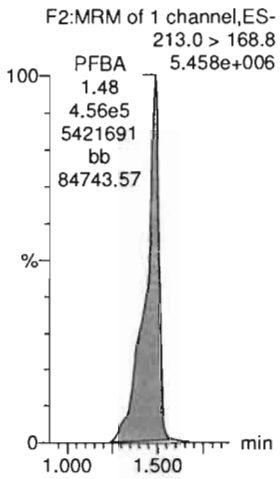


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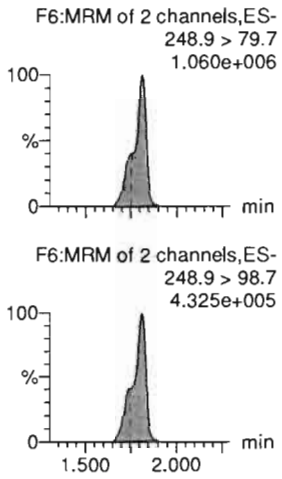
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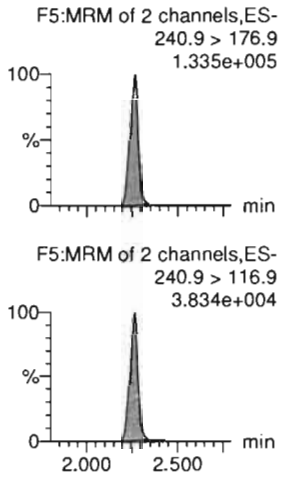
PFBA



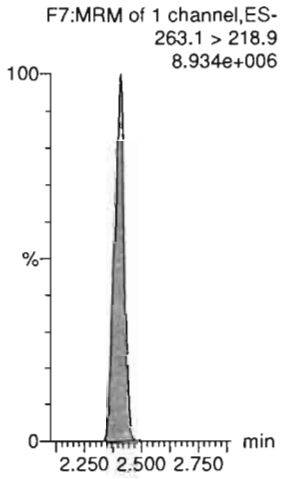
PFPrS



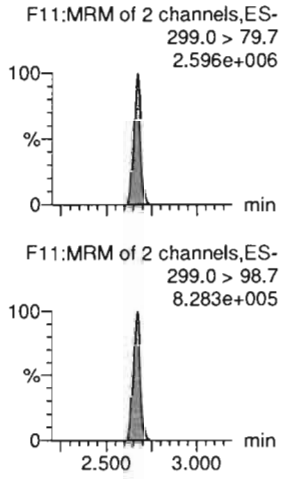
3:3 FTCA



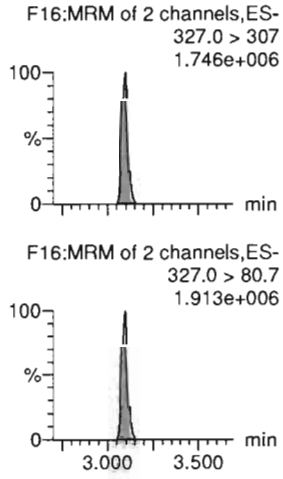
PFPeA



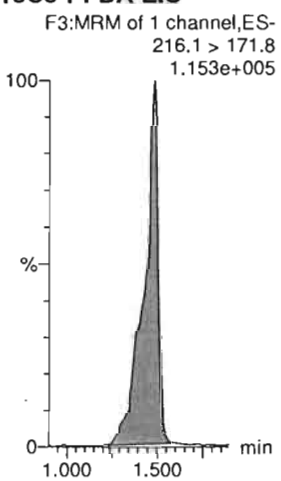
PFBS



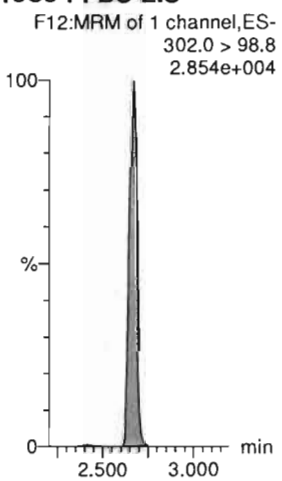
4:2 FTS



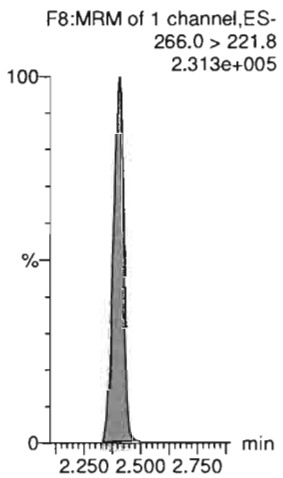
13C3-PFBA-EIS



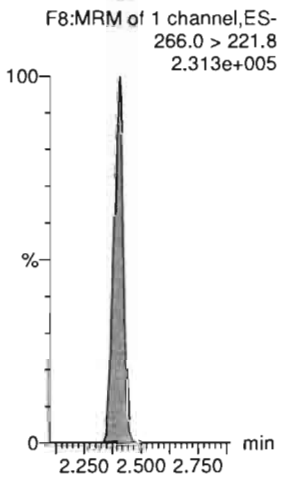
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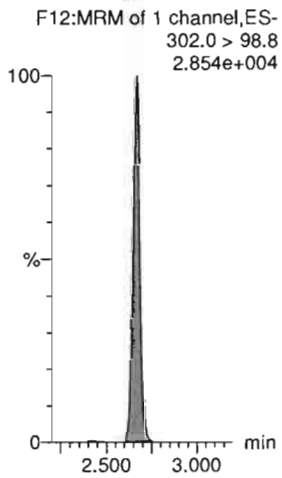
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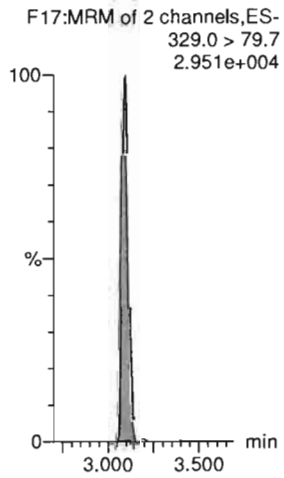
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

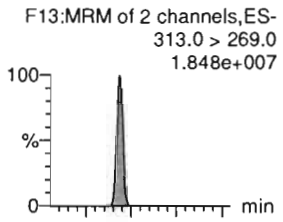


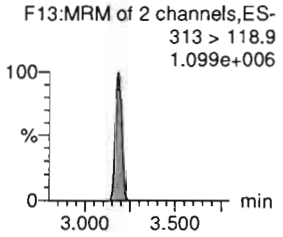
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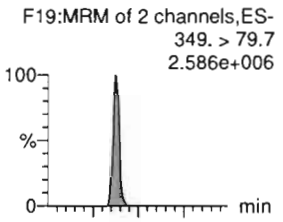
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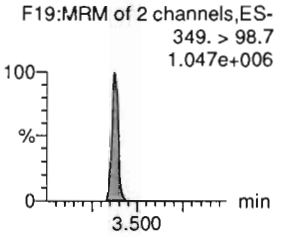
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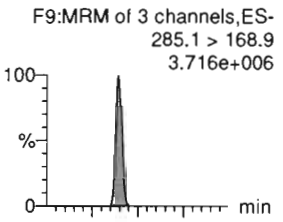


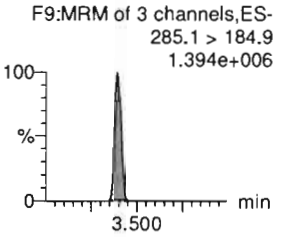
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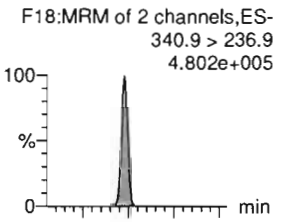


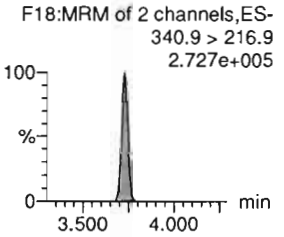
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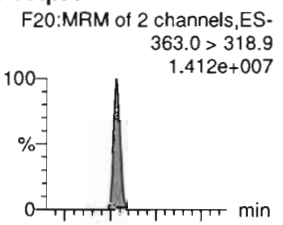


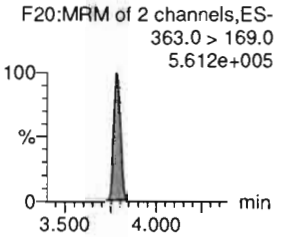
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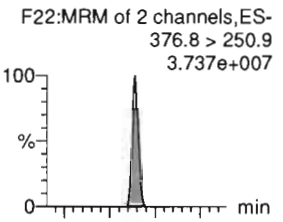


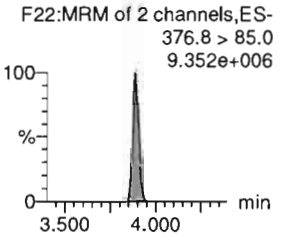
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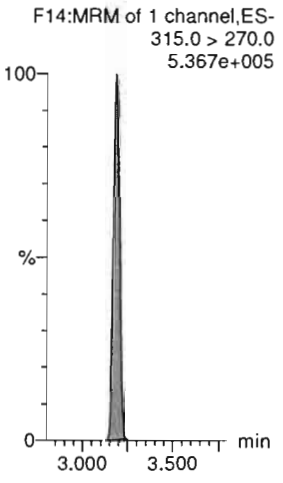


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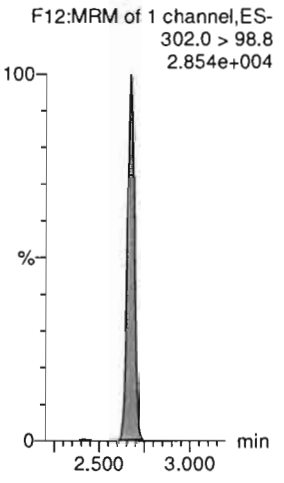




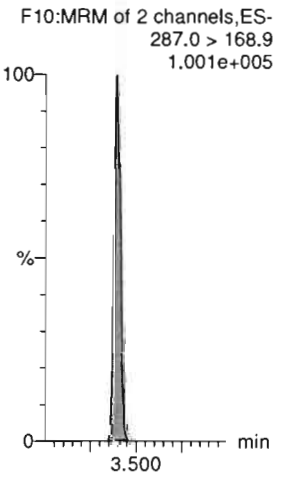
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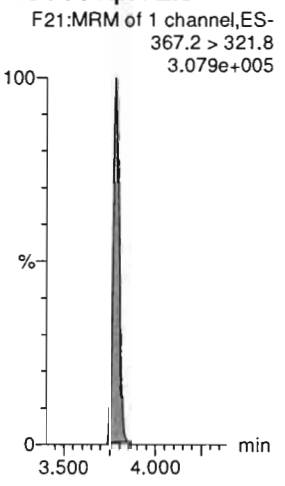
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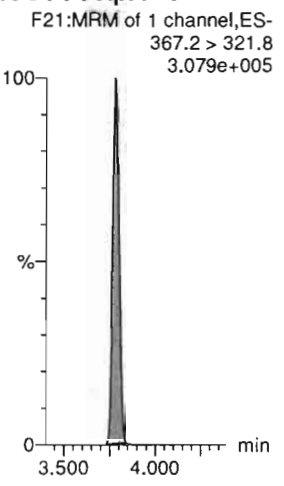
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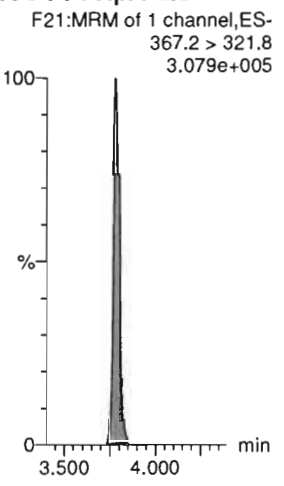
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13C4-PFHpA-EIS



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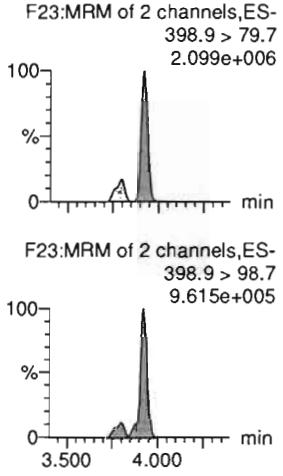


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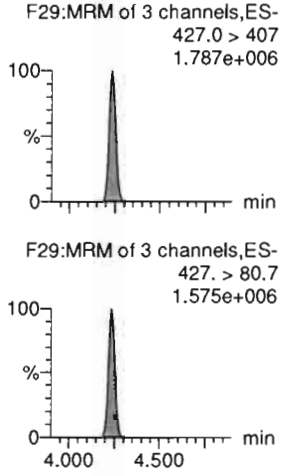
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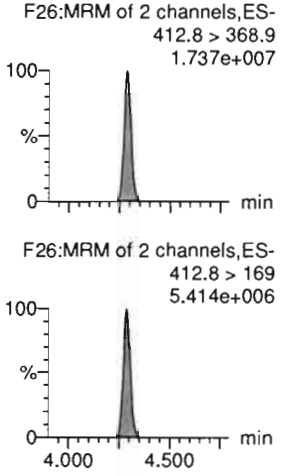
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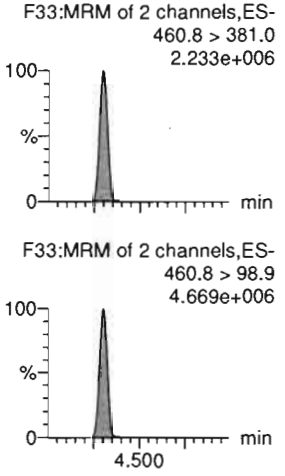
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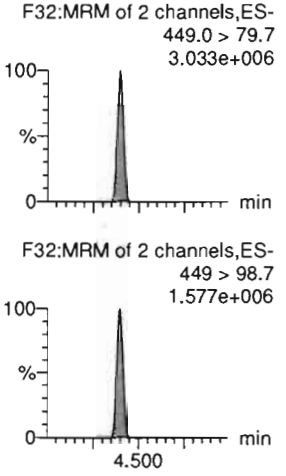
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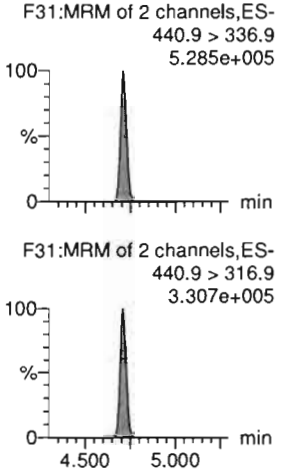
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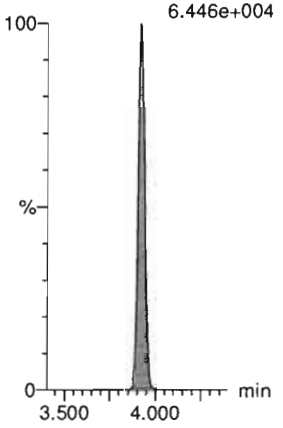
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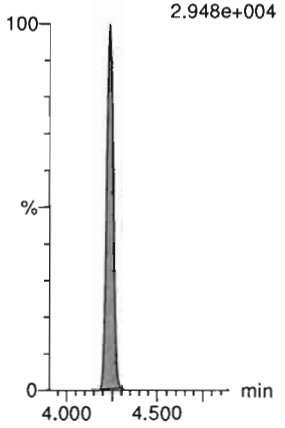
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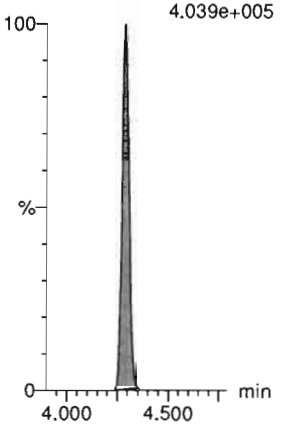
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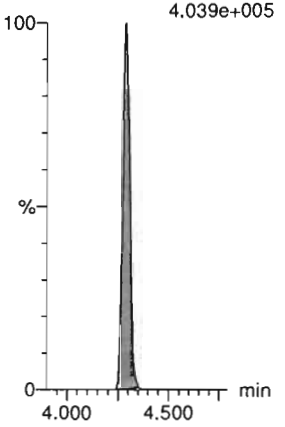
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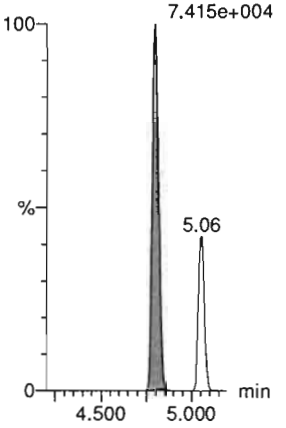
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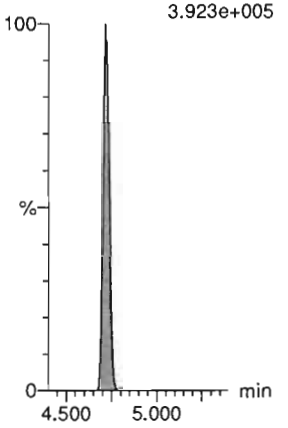
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13C8-PFOS-EIS



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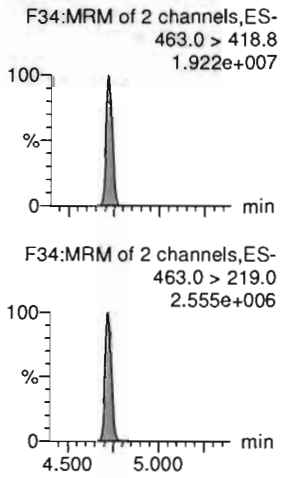


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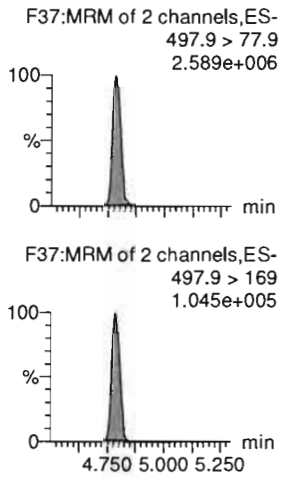
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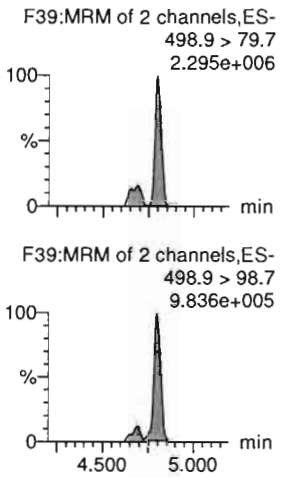
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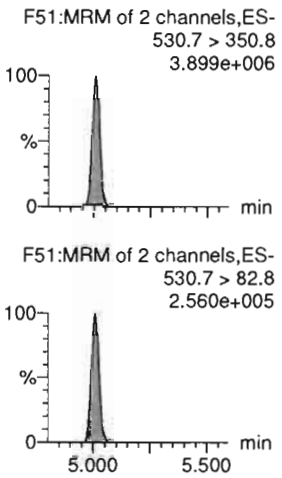
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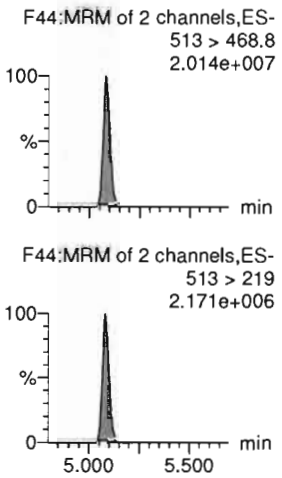
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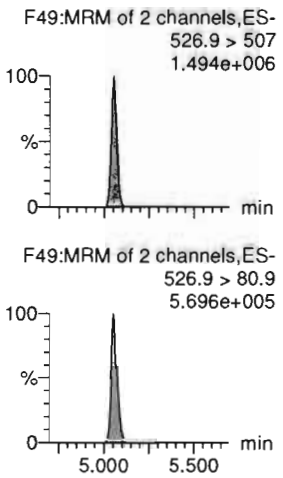
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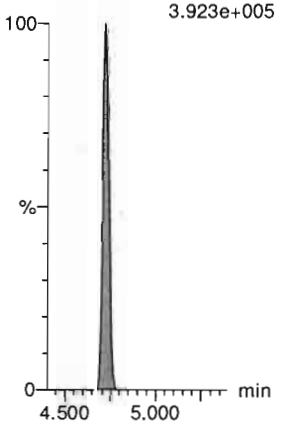
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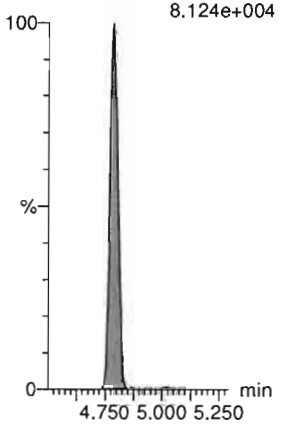
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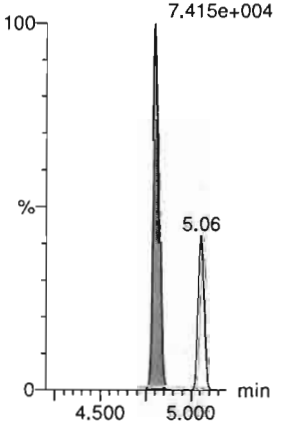
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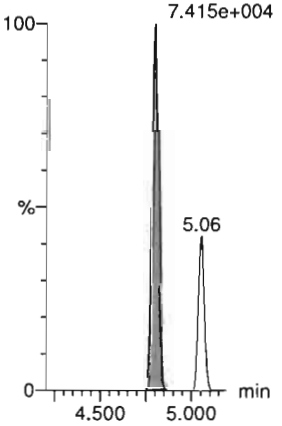
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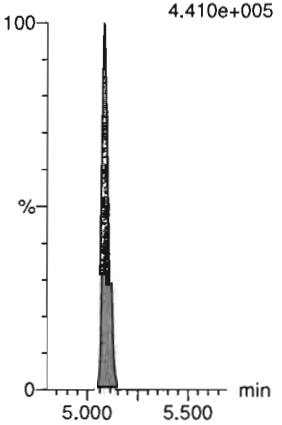
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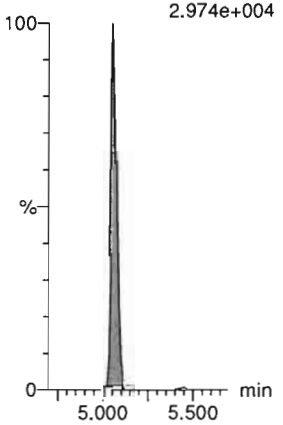
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13C2-PFDA-EIS



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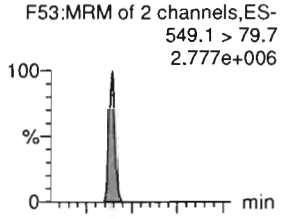


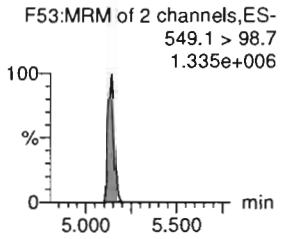
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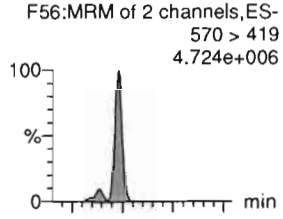
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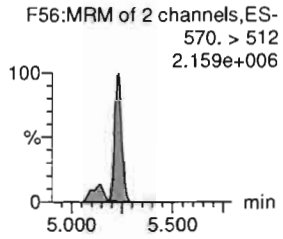
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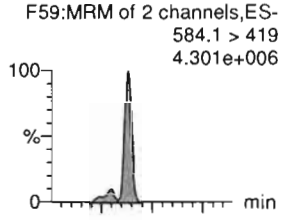


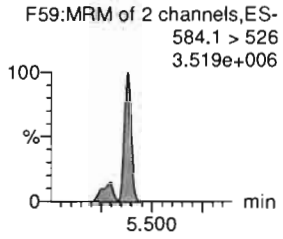
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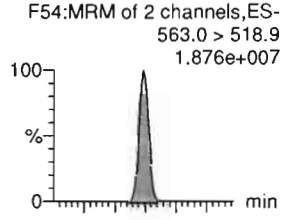


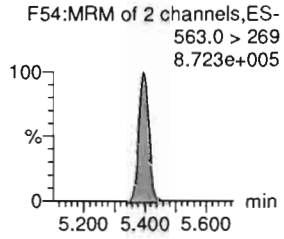
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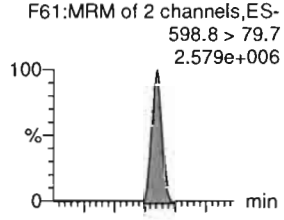


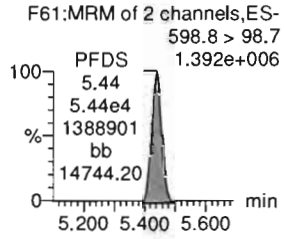
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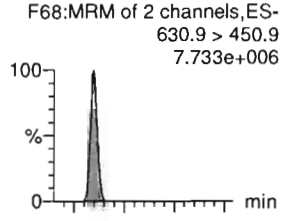


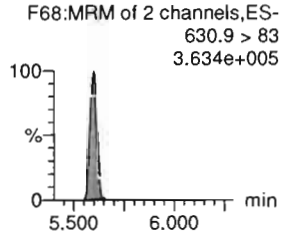
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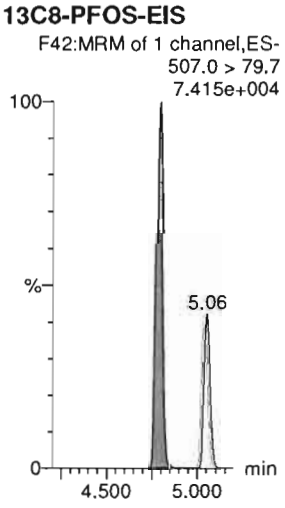


11Cl-PF30UdS

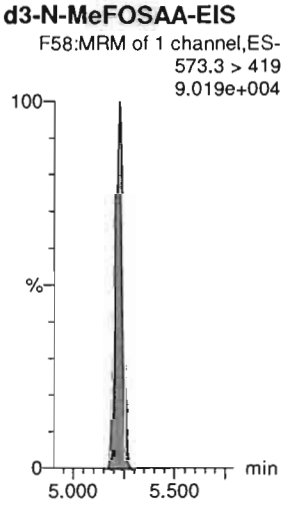




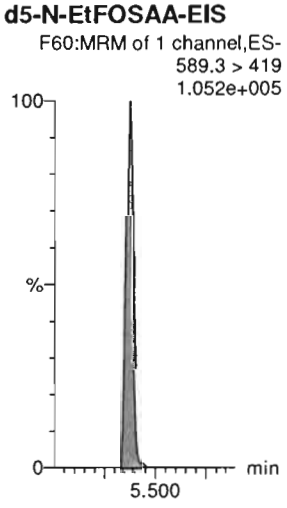
13C8-PFOS-EIS



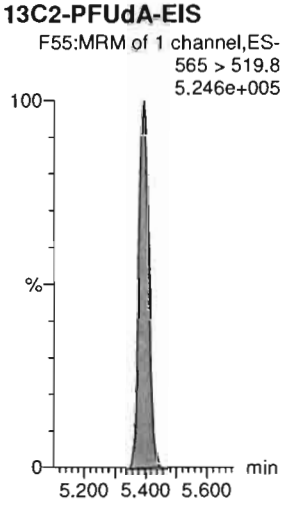
d3-N-MeFOSAA-EIS



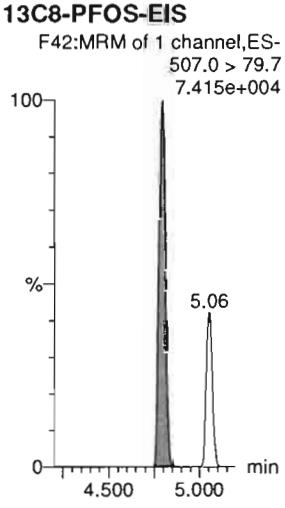
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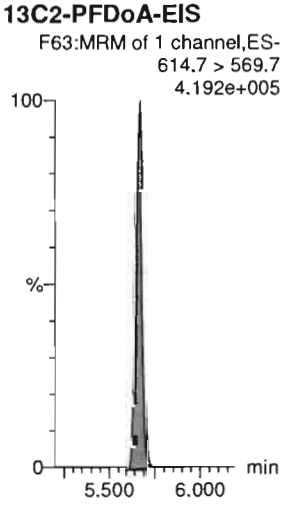
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

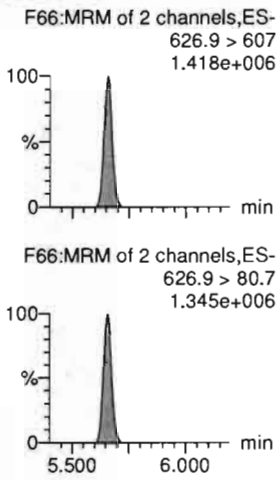


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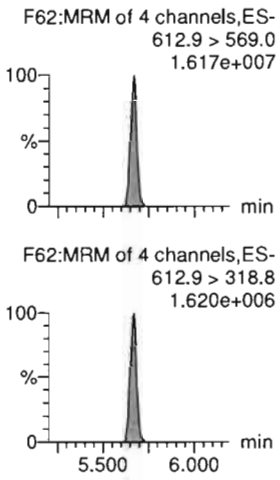
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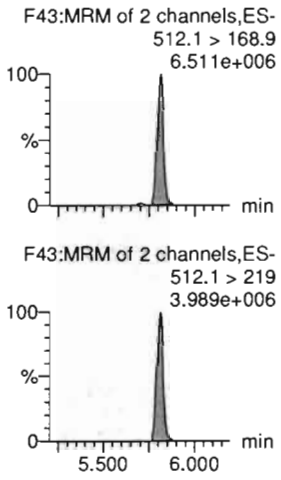
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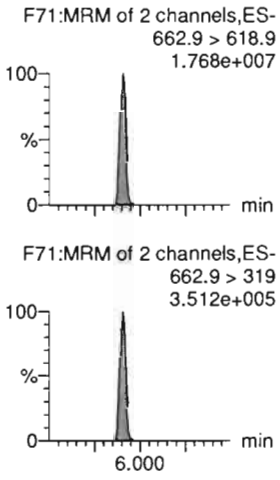
PFDoA



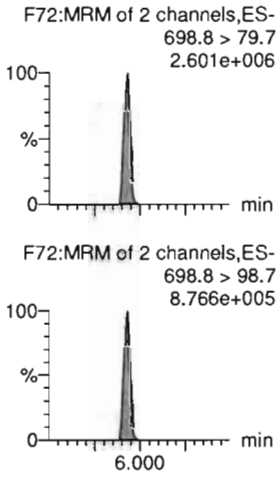
N-MeFOSA



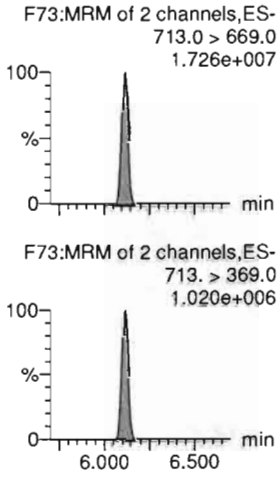
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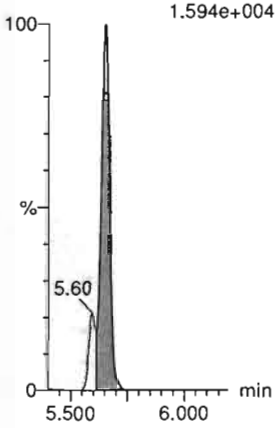
PFDoS



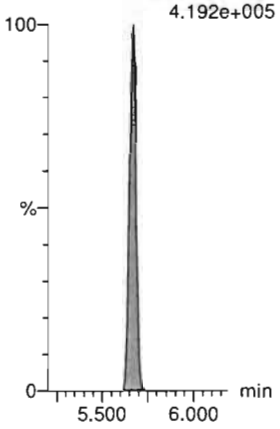
PFTeDA



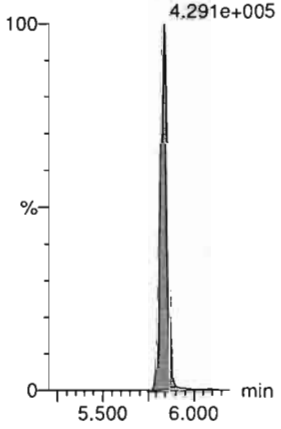
13C2-10:2 FTS-EIS



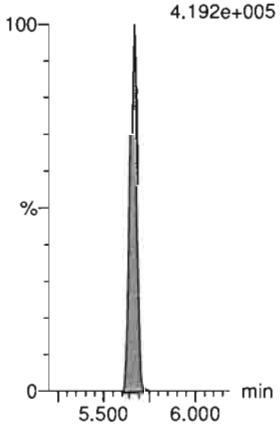
13C2-PFDoA-EIS



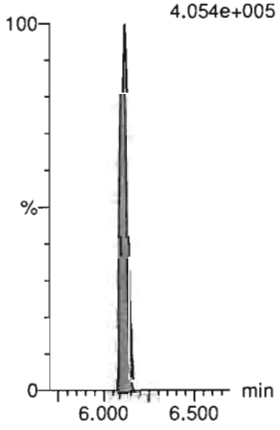
d3-N-MeFOSA-EIS



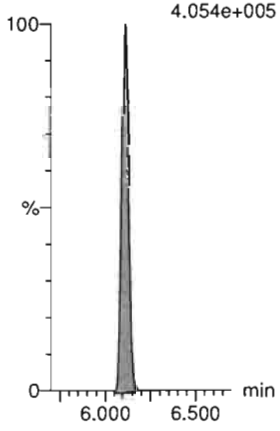
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

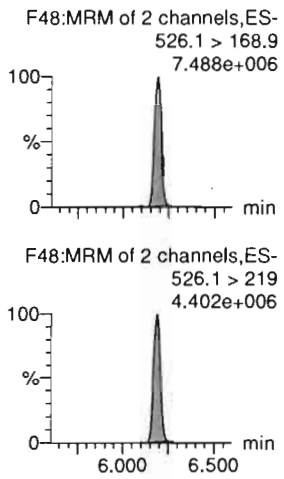


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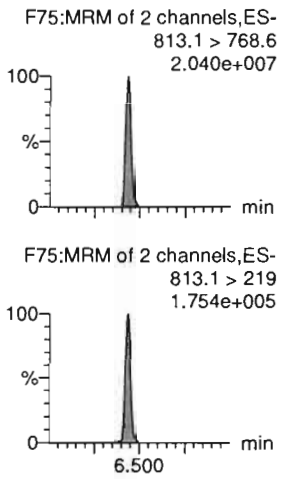
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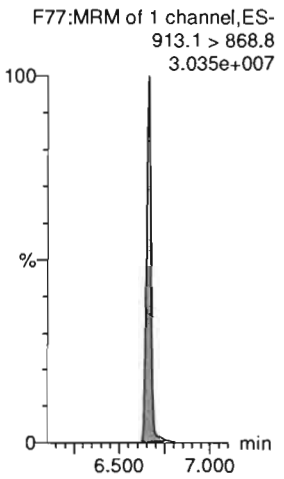
N-EtFOSA



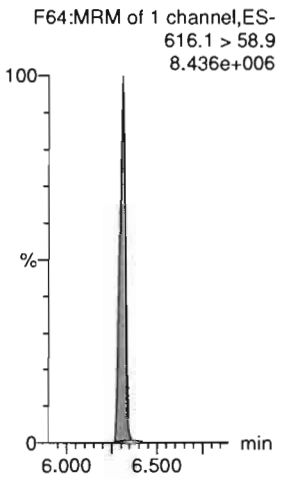
PFHxDA



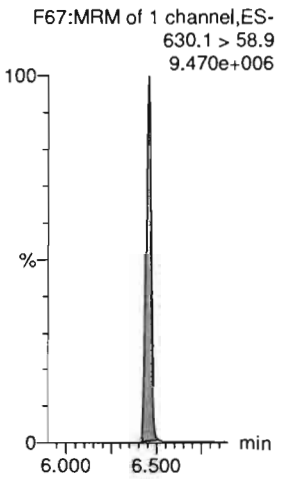
PFODA



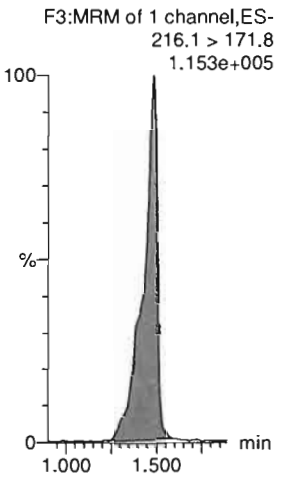
N-MeFOSE



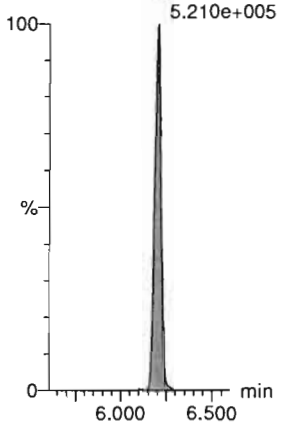
N-EtFOSE



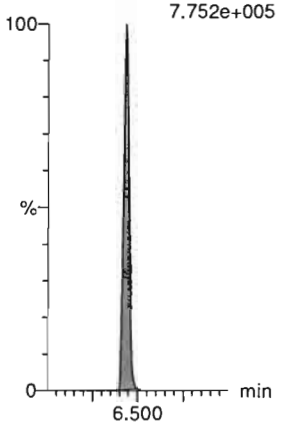
13C3-PFBA-RSD



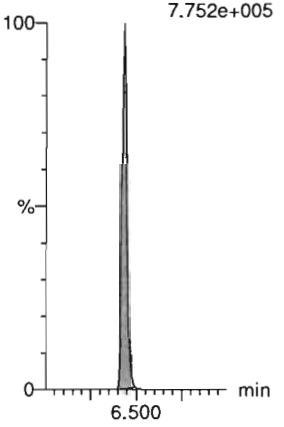
d5-N-ETFOSA-EIS



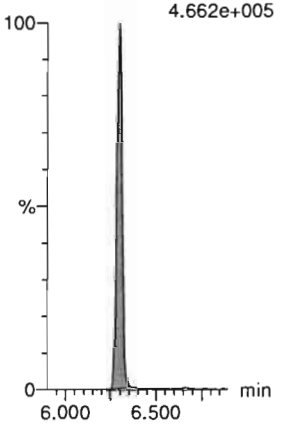
13C2-PFHxDA-EIS



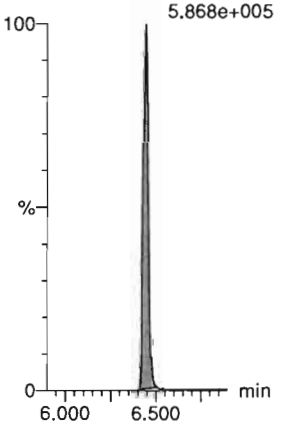
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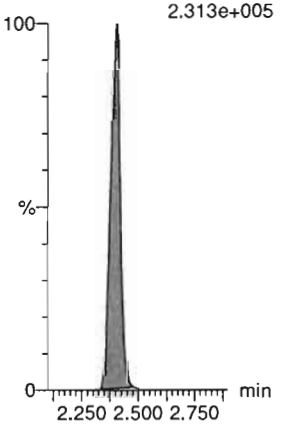
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

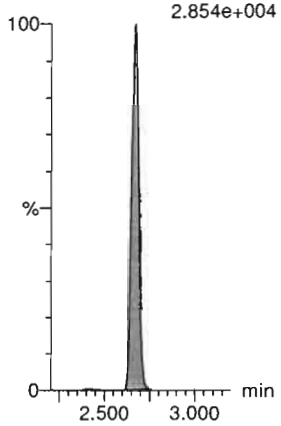


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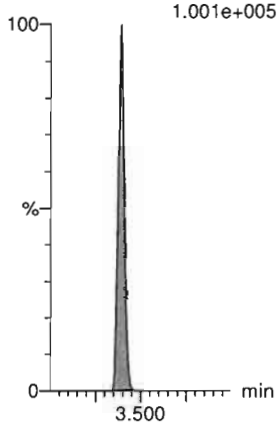
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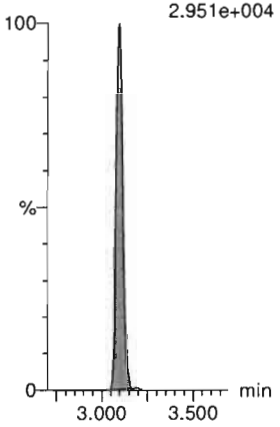
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.854e+004



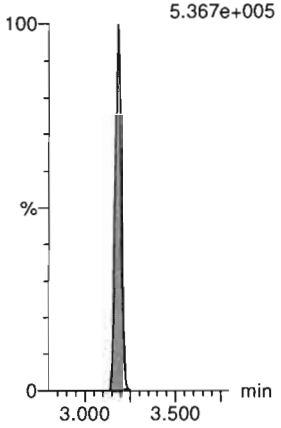
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.001e+005



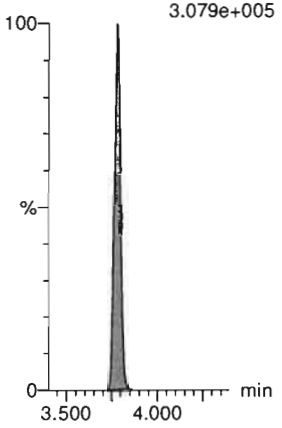
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
2.951e+004



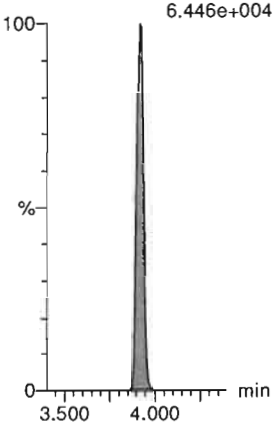
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.367e+005



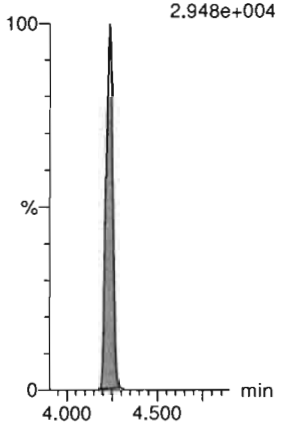
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.079e+005



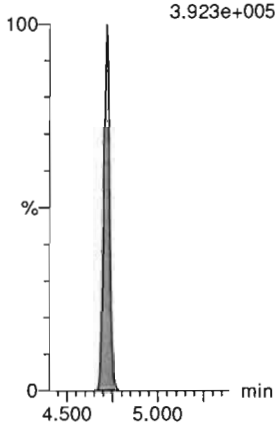
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
6.446e+004



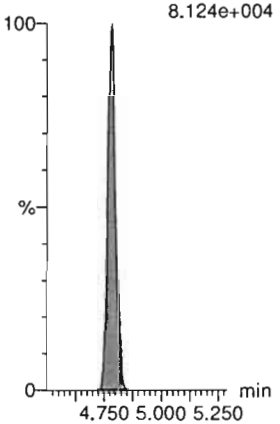
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
2.948e+004



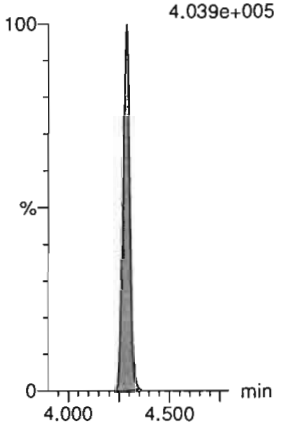
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
3.923e+005



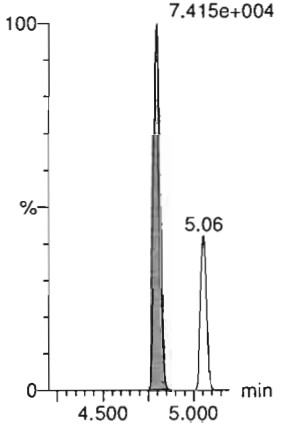
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
8.124e+004



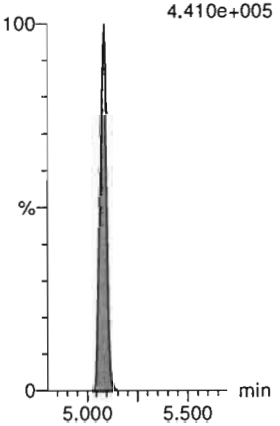
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.039e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
7.415e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.410e+005

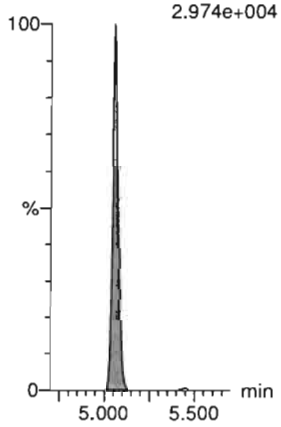


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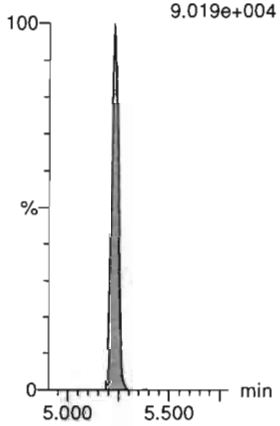
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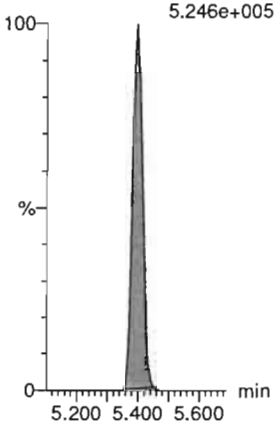
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.974e+004



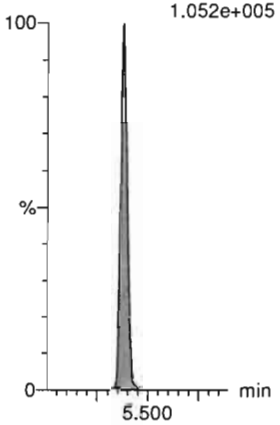
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
9.019e+004



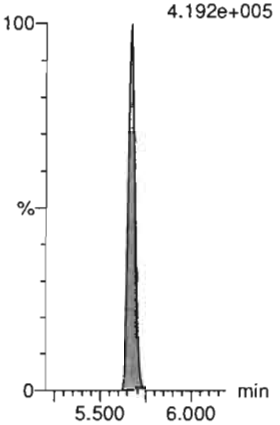
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.246e+005



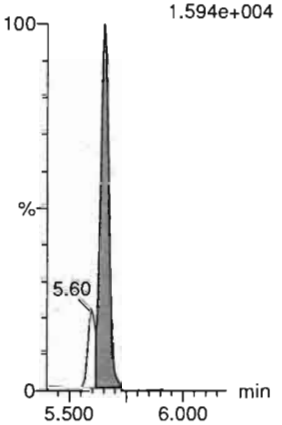
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.052e+005



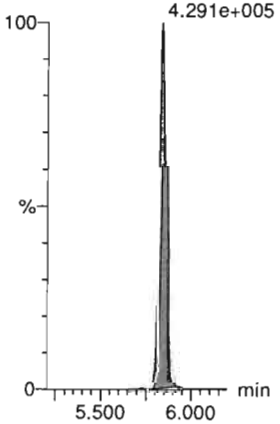
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.192e+005



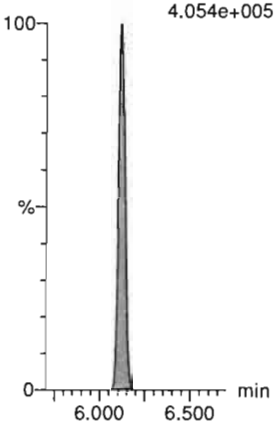
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
1.594e+004



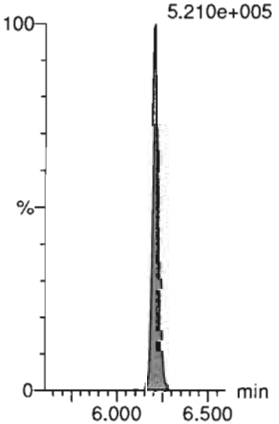
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.291e+005



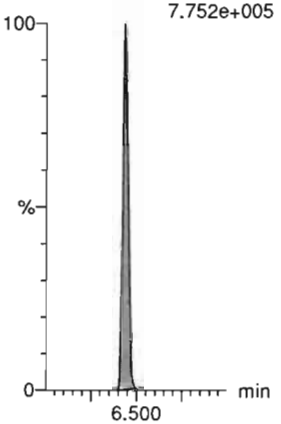
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.054e+005



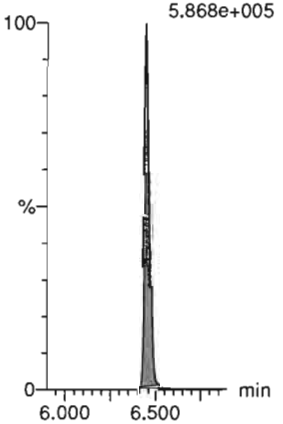
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.210e+005



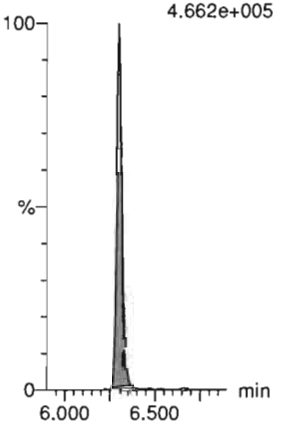
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
7.752e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
5.868e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
4.662e+005

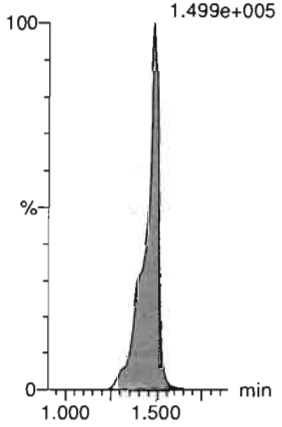


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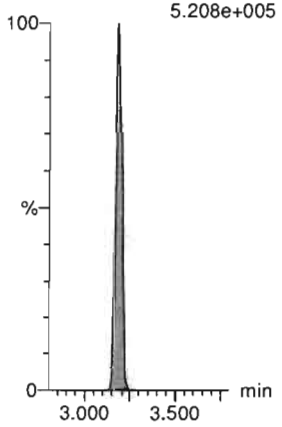
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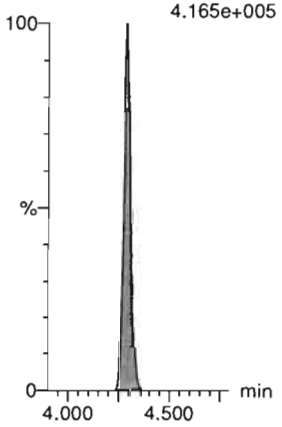
13C4-PFBA



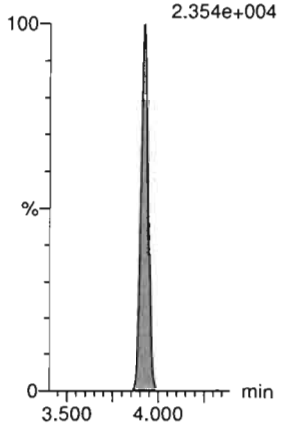
13C5-PFHxA



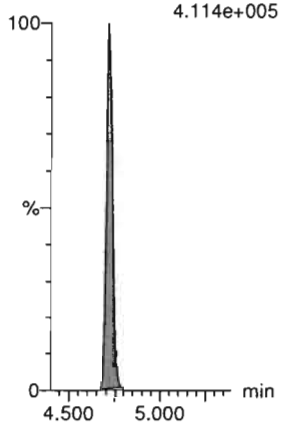
13C8-PFOA



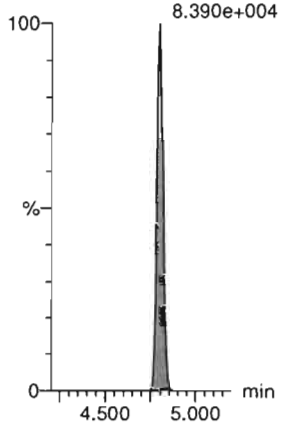
18O2-PFHxS



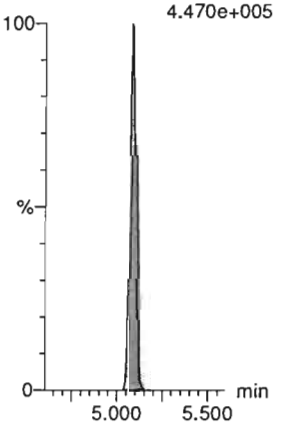
13C9-PFNA



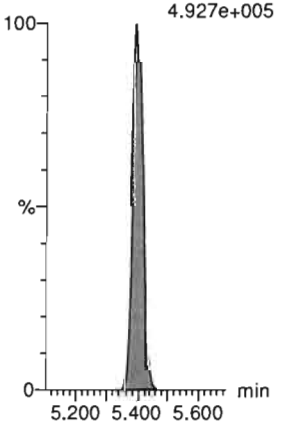
13C4-PFOS



13C6-PFDA



13C7-PFUdA



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(A) not in ICV

JOP 02/21/20

Name: 200220P1-14, Date: 20-Feb-2020, Time: 19:40:36, ID: ICV200220P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	9635.294	10086.306	1.00	1.48	11.941	10.000	10.7	106.6	NO		
2	2	PFPrS	248.9 > 79.7		1429.316	1.00			10.000		(A)	NO		YES
3	3	3:3 FTCA	240.9 > 176.9		12701.368	1.00			10.000		↓	NO		YES
4	4	PFPeA	263.1 > 218.9	10506.403	12701.368	1.00	2.41	10.340	10.000	10.6	106.0	NO		
5	5	PFBS	299.0 > 79.7	2607.590	1429.316	1.00	2.67	22.805	10.000	9.90	99.0	NO	3.171	NO
6	6	4:2 FTS	327.0 > 307	1789.749	1608.412	1.00	3.10	13.909	9.360	8.53	91.2	NO	1.094	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	10086.306		1.00	1.49	10086.306	12.500	12.2	97.9	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1429.316		1.00	2.67	1429.316	12.500	12.5	99.9	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	12701.368		1.00	2.40	12701.368	12.500	13.5	107.7	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	12701.368		1.00	2.40	12701.368	12.500	13.5	107.7	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1429.316		1.00	2.67	1429.316	12.500	12.5	99.9	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1608.412		1.00	3.10	1608.412	12.500	14.8	118.3	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	16754.170	21194.129	1.00	3.18	9.881	10.000	11.1	110.7	NO	16.188	NO
15	8	PFPeS	349.>79.7	2517.662	1429.316	1.00	3.38	22.018	9.360	10.6	113.2	NO	2.020	NO
16	9	HFPO-DA	285.1 > 168.9	3274.167	3713.180	1.00	3.39	11.022	10.000	10.6	106.2	NO	2.547	NO
17	10	5:3 FTCA	340.9 > 236.9		13209.952	1.00			10.000			NO		YES
18	11	PFHpA	363.0 > 318.9	13378.735	13209.952	1.00	3.78	12.660	10.000	10.2	101.5	NO	22.660	NO
19	12	ADONA	376.8 > 250.9	33492.980	13209.952	1.00	3.89	31.693	10.000	10.2	102.1	NO	3.972	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	21194.129		1.00	3.19	21194.129	12.500	13.0	103.6	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1429.316		1.00	2.67	1429.316	12.500	12.5	99.9	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3713.180		1.00	3.39	3713.180	12.500	12.7	101.3	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	13209.952		1.00	3.78	13209.952	12.500	11.9	95.5	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	13209.952		1.00	3.78	13209.952	12.500	11.9	95.5	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	13209.952		1.00	3.78	13209.952	12.500	11.9	95.5	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2326.188	2883.571	1.00	3.92	10.084	9.120	9.04	99.1	NO	2.092	NO
28	15	6:2 FTS	427.0 > 407	2020.026	1289.273	1.00	4.23	19.585	9.480	12.3	129.6	NO	1.147	NO
29	16	L-PFOA	412.8 > 368.9	18478.604	18813.371	1.00	4.29	12.278	10.000	10.2	101.6	NO	2.965	NO
30	18	PFecHS	460.8 > 381.0		18813.371	1.00			10.000		(A)	NO		YES
31	19	PFHpS	449.0 > 79.7	2713.997	3330.650	1.00	4.40	10.186	9.480	9.46	99.8	NO	2.023	NO
32	20	7:3 FTCA	440.9 > 336.9		16657.646	1.00			10.000		(A)	NO		YES
33	61	13C3-PFHxS-EIS	401.8 > 79.7	2883.571		1.00	3.92	2883.571	12.500	11.4	91.3	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1289.273		1.00	4.23	1289.273	12.500	10.6	84.9	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	18813.371		1.00	4.29	18813.371	12.500	12.3	98.6	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	18813.371		1.00	4.29	18813.371	12.500	12.3	98.6	NO		

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Name: 200220P1-14, Date: 20-Feb-2020, Time: 19:40:36, ID: ICV200220P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	71	13C8-PFOS-EIS	507.0 > 79.7	3330.650		1.00	4.80	3330.650	12.500	11.3	90.1	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	16657.646		1.00	4.72	16657.646	12.500	12.1	97.0	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	17610.291	16657.646	1.00	4.72	13.215	10.000	10.7	106.8	NO	7.996	NO
41	22	PFOSA	497.9 > 77.9	2504.439	3737.408	1.00	4.79	8.376	10.000	9.37	93.7	NO	25.396	NO
42	23	L-PFOS	498.9 > 79.7	2385.938	3330.650	1.00	4.80	8.954	9.280	9.68	104.3	NO	2.486	NO
43	25	9Cl-PF30NS	530.7 > 350.8	3269.076	3330.650	1.00	5.01	12.269	9.280	10.6	114.0	NO	19.127	NO
44	26	PFDA	513 > 468.8	19067.611	18155.527	1.00	5.08	13.128	10.000	10.7	106.6	NO	10.239	NO
45	27	8:2 FTS	526.9 > 507	1270.531	1119.594	1.00	5.06	14.185	9.600	9.76	101.7	NO	2.346	YES
46	65	13C5-PFNA-EIS	468.2 > 422.9	16657.646		1.00	4.72	16657.646	12.500	12.1	97.0	NO		
47	67	13C8-PFOSA-EIS	506 > 78	3737.408		1.00	4.78	3737.408	12.500	11.6	92.5	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3330.650		1.00	4.80	3330.650	12.500	11.3	90.1	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3330.650		1.00	4.80	3330.650	12.500	11.3	90.1	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	18155.527		1.00	5.08	18155.527	12.500	13.4	107.1	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1119.594		1.00	5.06	1119.594	12.500	13.0	104.2	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	2506.160	3330.650	1.00	5.14	9.406	9.600	10.3	106.8	NO	2.298	NO
54	29	L-MeFOSAA	570 > 419	5587.347	3699.965	1.00	5.23	18.876	10.000	9.93	99.3	NO	1.865	NO
55	31	L-EtFOSAA	584.1 > 419	5048.889	5009.155	1.00	5.38	12.599	10.000	10.0	100.0	NO	1.255	NO
56	33	PFUdA	563.0 > 518.9	16074.241	20769.344	1.00	5.39	9.674	10.000	9.22	92.2	NO	21.634	NO
57	34	PFDS	598.8 > 79.7	2221.750	3330.650	1.00	5.44	8.338	9.600	10.3	107.5	NO	1.707	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	6922.639	18142.209	1.00	5.60	4.770	9.440	10.5	111.0	NO	20.731	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3330.650		1.00	4.80	3330.650	12.500	11.3	90.1	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	3699.965		1.00	5.23	3699.965	12.500	14.1	112.6	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	5009.155		1.00	5.38	5009.155	12.500	13.9	111.0	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	20769.344		1.00	5.39	20769.344	12.500	14.7	117.3	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3330.650		1.00	4.80	3330.650	12.500	11.3	90.1	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	18142.209		1.00	5.67	18142.209	12.500	11.5	92.3	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607			1.00			10.000			NO		YES
67	37	PFDoA	612.9 > 569.0	14821.646	18142.209	1.00	5.67	10.212	10.000	10.6	106.0	NO	9.105	NO
68	38	N-MeFOSA	512.1 > 168.9		17786.949	1.00			9.600			NO		YES
69	39	PFTrDA	662.9 > 618.9	17359.354	18142.209	1.00	5.91	11.961	10.000	12.1	120.9	NO	46.228	NO
70	40	PFDoS	698.8 > 79.7		18539.273	1.00			10.000			NO		YES
71	41	PFTeDA	713.0 > 669.0	17298.035	18539.273	1.00	6.12	11.663	10.000	11.1	111.3	NO	17.914	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0			1.00			10.000			NO		

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Name: 200220P1-14, Date: 20-Feb-2020, Time: 19:40:36, ID: ICV200220P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83	13C2-PFDoA-EIS	614.7 > 569.7	18142.209		1.00	5.67	18142.209	12.500	11.5	92.3	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	17786.949		1.00	5.84	17786.949	149.200	147	98.5	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	18142.209		1.00	5.67	18142.209	12.500	11.5	92.3	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	18539.273		1.00	6.12	18539.273	12.500	12.9	103.0	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	18539.273		1.00	6.12	18539.273	12.500	12.9	103.0	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9		23731.000	1.00			9.600			NO		YES
80	43	PFHxDA	813.1 > 768.6		28203.727	1.00			10.000			NO		YES
81	44	PFODA	913.1 > 868.8		28203.727	1.00			10.000			NO		
82	45	N-MeFOSE	616.1 > 58.9	6.535	17229.533	1.00	6.08	0.057	9.600			NO		
83	46	N-EtFOSE	630.1 > 58.9		19867.580	1.00			9.600			NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	23731.000		1.00	6.20	23731.000	149.200	151	101.4	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	28203.727		1.00	6.44	28203.727	12.500	12.0	96.0	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	28203.727		1.00	6.44	28203.727	12.500	12.0	96.0	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	17229.533		1.00	6.30	17229.533	149.200	154	103.0	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	19867.580		1.00	6.45	19867.580	149.200	142	95.0	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3330.650		1.00	4.80	3330.650	12.500	11.3	90.1	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	10195.643	12646.554	1.00	1.49	10.077	12.500	12.8	102.1	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	12831.285	21325.498	1.00	2.40	7.521	12.500	13.3	106.5	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	1429.316	1187.816	1.00	2.67	15.041	12.500	13.4	107.2	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	3713.180	21325.498	1.00	3.39	2.176	12.500	12.2	97.3	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1608.412	1187.816	1.00	3.10	16.926	12.500	14.2	113.7	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	21194.129	21325.498	1.00	3.19	12.423	12.500	12.7	101.6	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	13209.952	21325.498	1.00	3.78	7.743	12.500	12.7	101.4	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	2883.571	1187.816	1.00	3.92	30.345	12.500	12.8	102.1	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1280.849	3784.076	1.00	4.23	4.231	12.500	11.2	89.6	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	16657.646	17634.207	1.00	4.72	11.808	12.500	12.6	100.9	NO		
101	68	13C8-PFOSA-RSD	506 > 78	3737.408	20904.109	1.00	4.78	2.235	12.500	11.7	93.6	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	18813.371	21758.156	1.00	4.29	10.808	12.500	11.8	94.3	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3330.650	3784.076	1.00	4.80	11.002	12.500	11.8	94.1	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	18155.527	19955.916	1.00	5.08	11.372	12.500	12.0	96.1	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1119.594	3784.076	1.00	5.06	3.698	12.500	12.7	101.6	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	3699.965	20904.109	1.00	5.23	2.212	12.500	12.9	102.8	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	20769.344	20904.109	1.00	5.39	12.419	12.500	12.3	98.6	NO		

Dataset: D:\PFAS5.PRO\RESULTS\200220P1\200220P1-ICV.qld

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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82	d5-N-EtFOSAA-RSD	589.3 > 419	5009.155	20904.109	1.00	5.38	2.995	12.500	13.3	106.2	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	18142.209	19955.916	1.00	5.67	11.364	12.500	11.4	91.0	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0		3784.076	1.00			10.000			NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	18032.967	20904.109	1.00	5.84	10.783	149.200	142	95.1	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	18539.273	20904.109	1.00	6.12	11.086	12.500	11.5	91.6	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	23731.000	20904.109	1.00	6.20	14.190	149.200	140	94.0	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	28203.727	20904.109	1.00	6.44	16.865	12.500	11.2	89.7	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	17229.533	20904.109	1.00	6.30	10.303	149.200	139	93.0	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	19867.580	20904.109	1.00	6.45	11.880	149.200	137	91.9	NO		
119	99	13C4-PFBA	217.0 > 172.0	12646.554	12646.554	1.00	1.49	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	21325.498	21325.498	1.00	3.18	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	21758.156	21758.156	1.00	4.29	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1187.816	1187.816	1.00	3.92	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	17634.207	17634.207	1.00	4.72	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	3784.076	3784.076	1.00	4.80	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	19955.916	19955.916	1.00	5.08	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	20904.109	20904.109	1.00	5.40	12.500	12.500	12.5	100.0	NO		

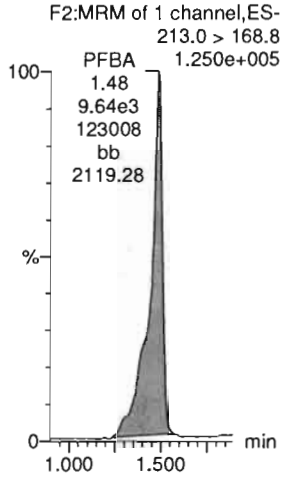
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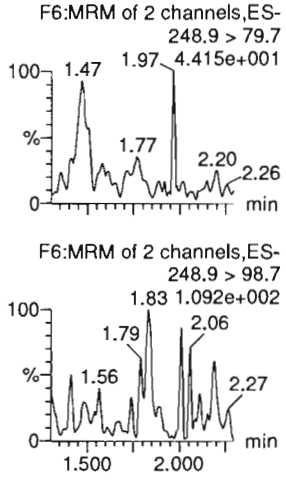
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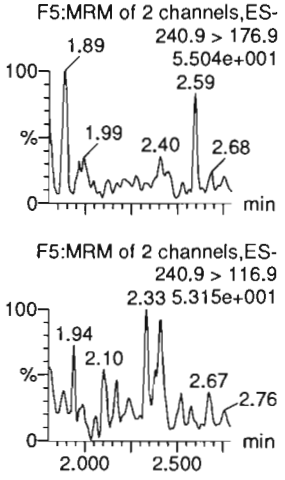
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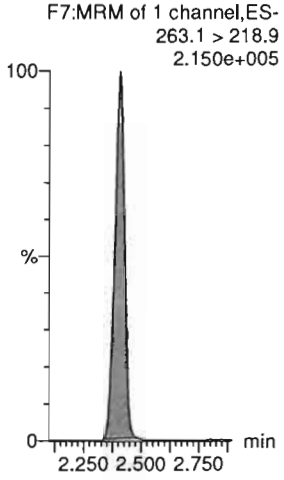
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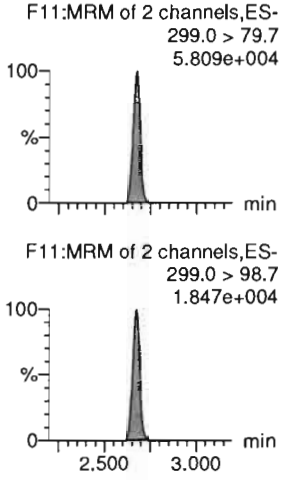
3:3 FTCA



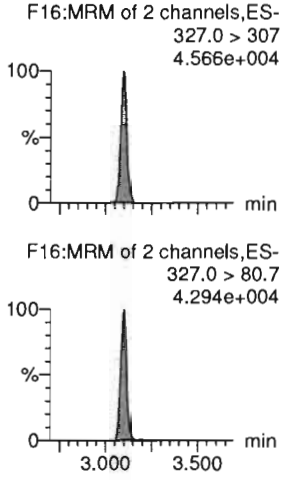
PFPeA



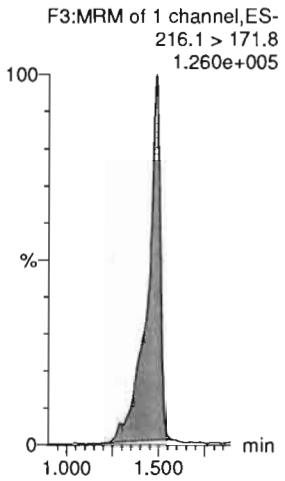
PFBS



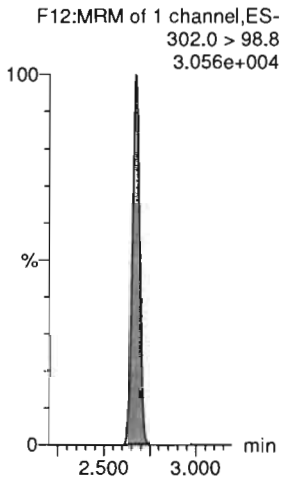
4:2 FTS



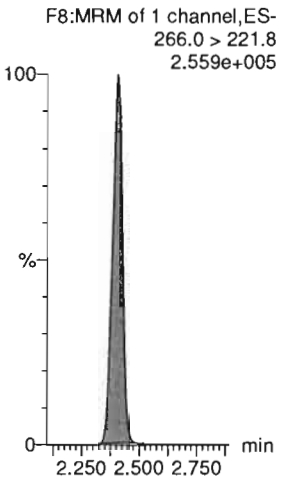
13C3-PFBA-EIS



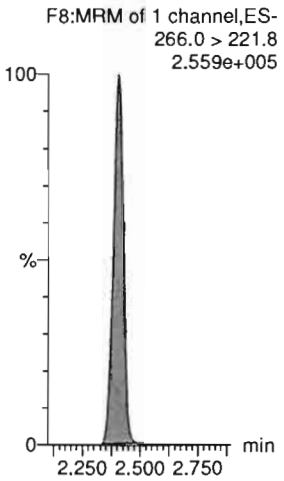
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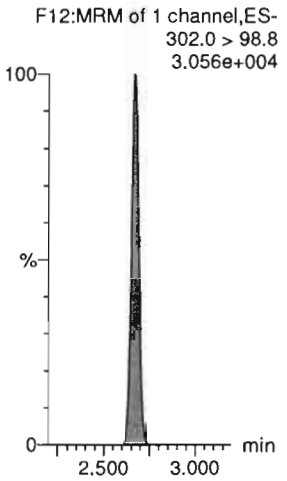
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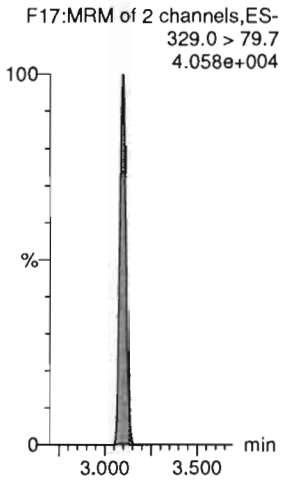
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

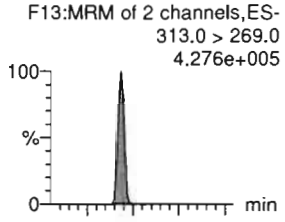


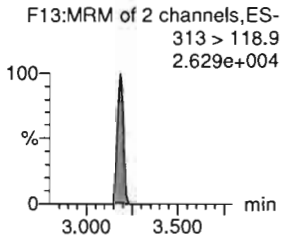
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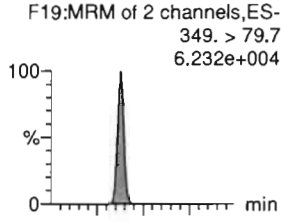
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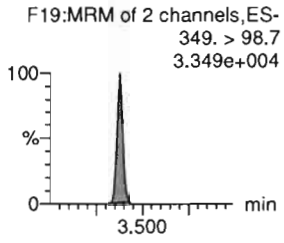
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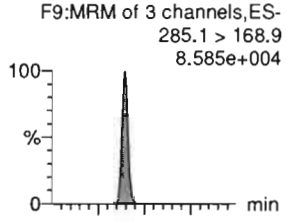


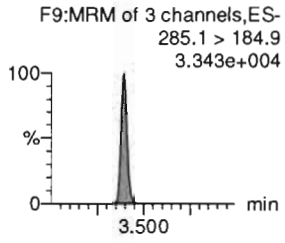
PFPeS



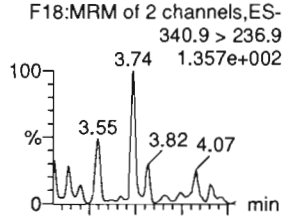


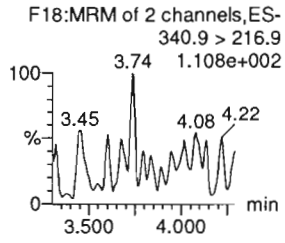
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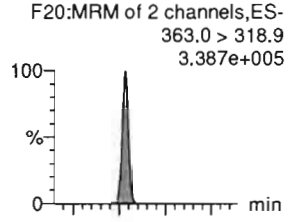


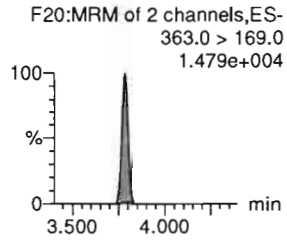
5:3 FTCA



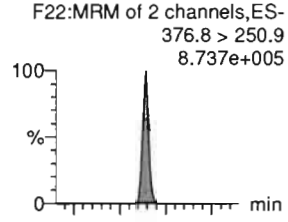


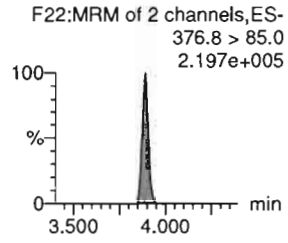
PFHpA



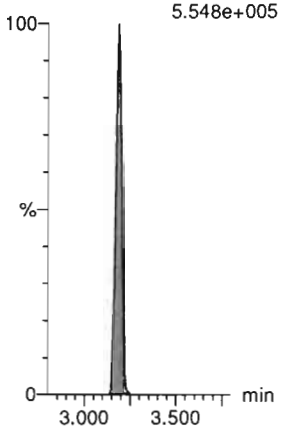


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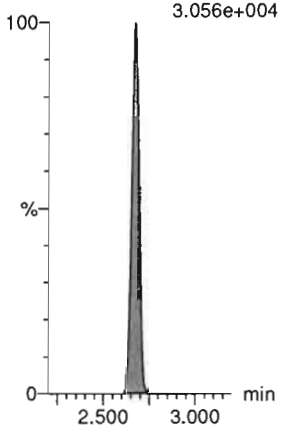




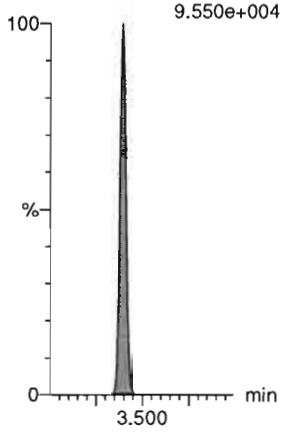
13C2-PFHxA-EIS



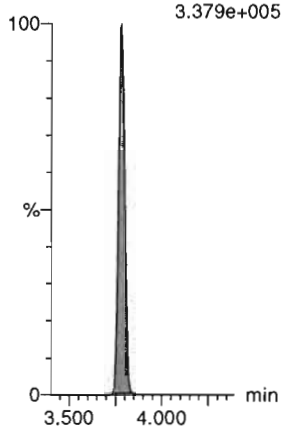
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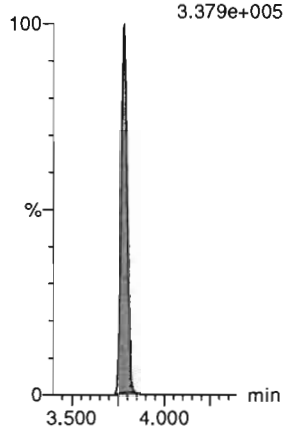
13C3-HFPO-DA-EIS



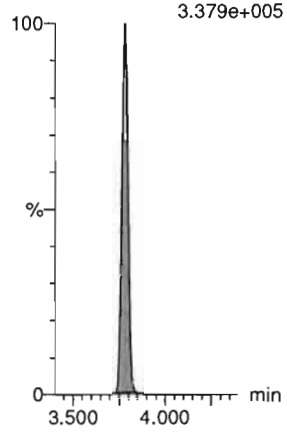
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

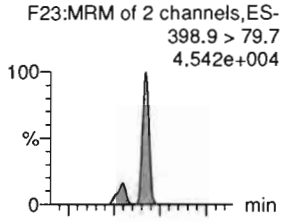


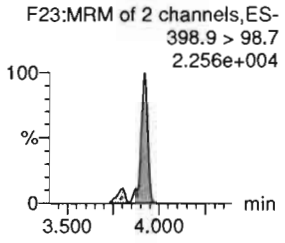
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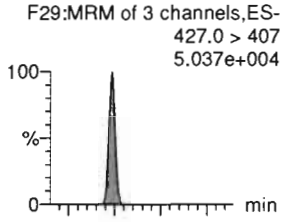
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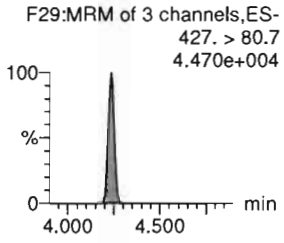
L-PFHxS



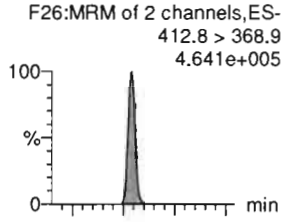


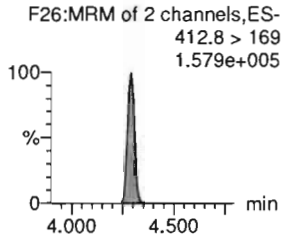
6:2 FTS



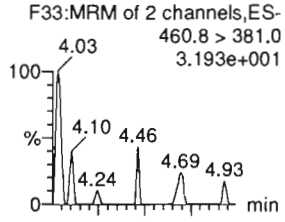


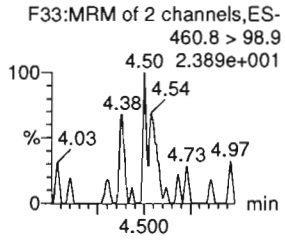
L-PFOA



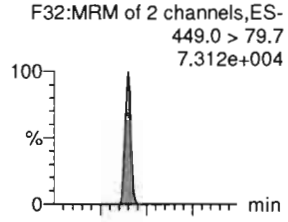


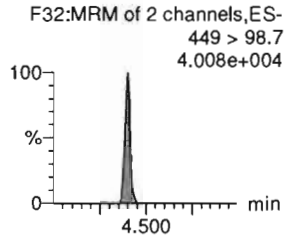
PFEChS



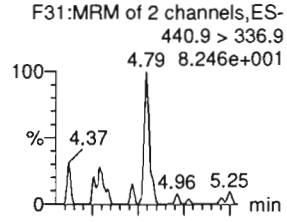


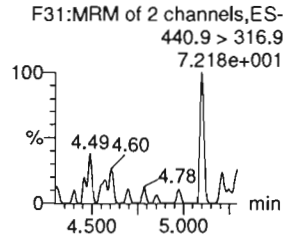
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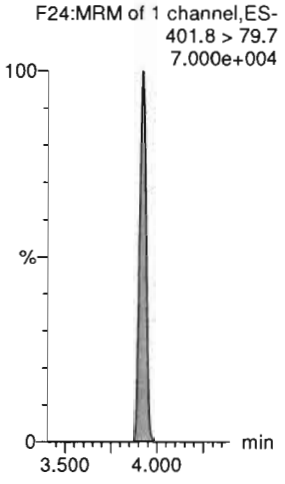


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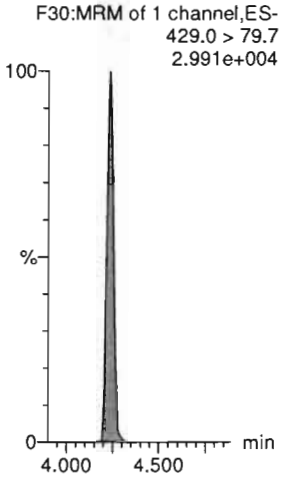




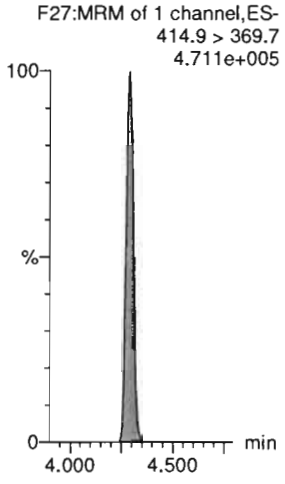
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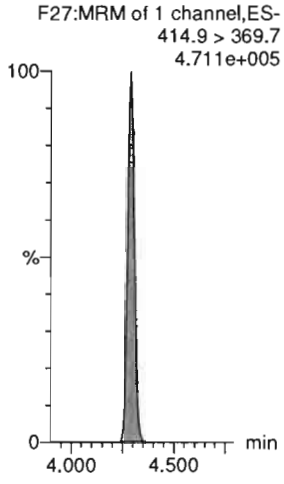
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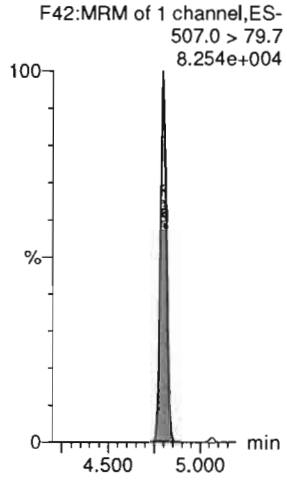
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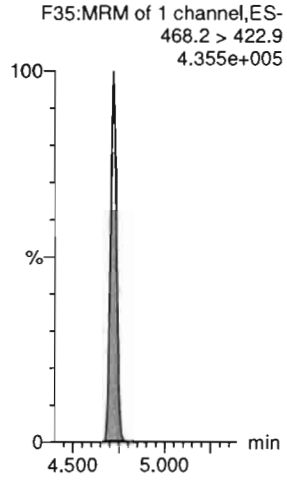
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13C8-PFOS-EIS



13C5-PFNA-EIS

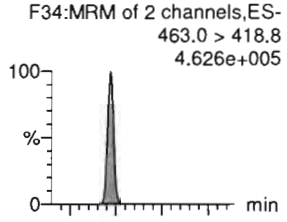


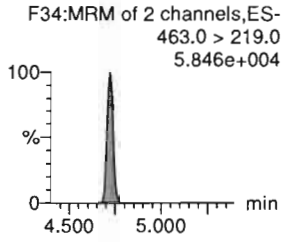
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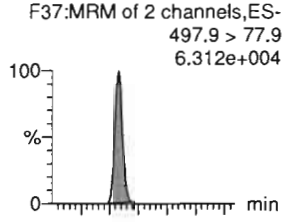
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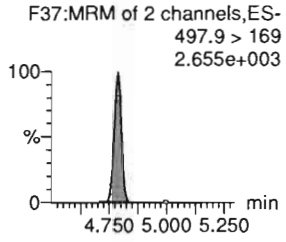
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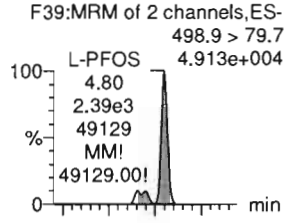


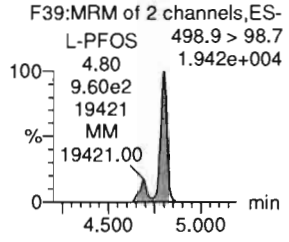
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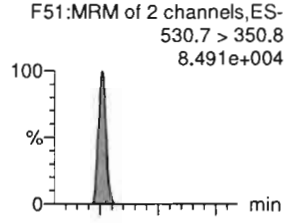


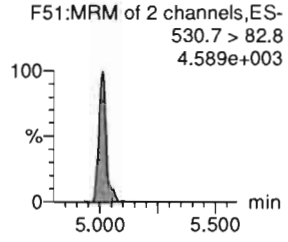
L-PFOS



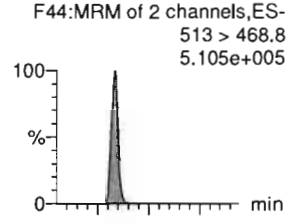


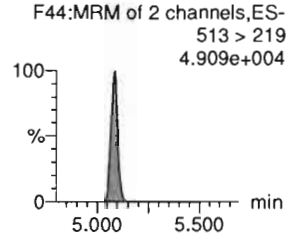
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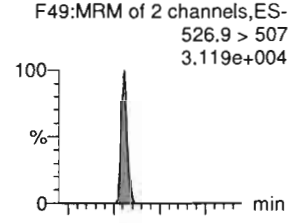


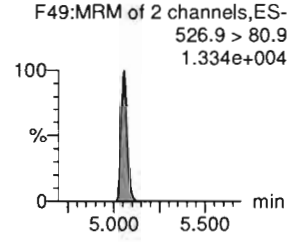
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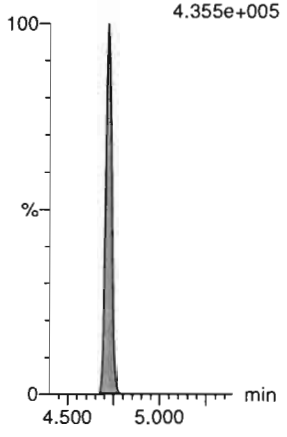


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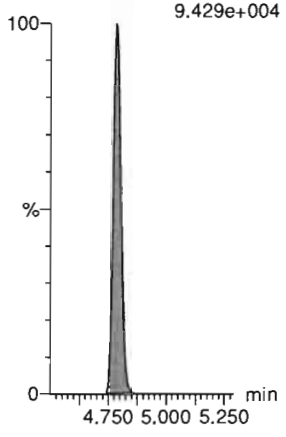




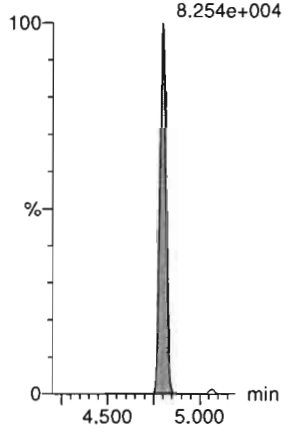
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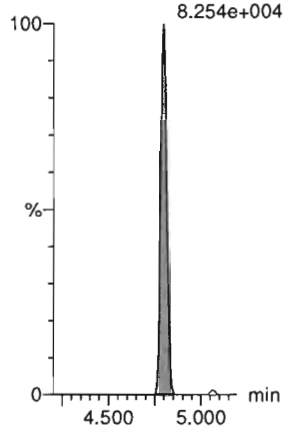
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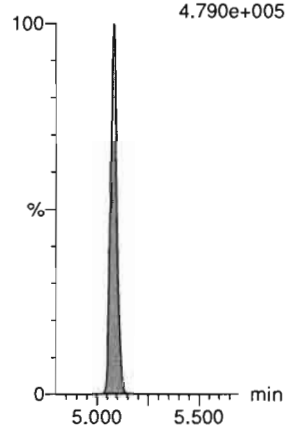
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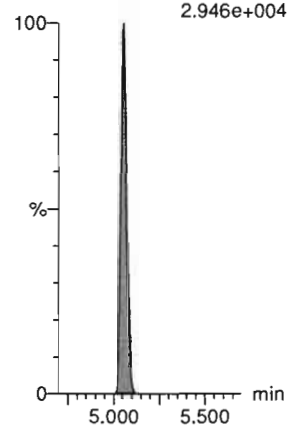
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13C2-PFDA-EIS



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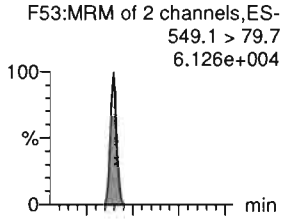


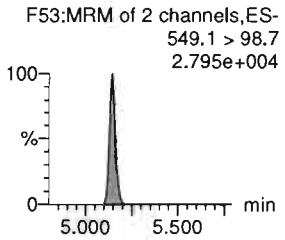
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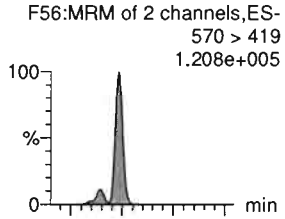
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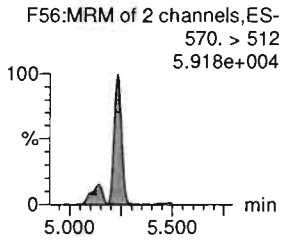
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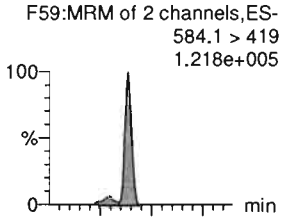


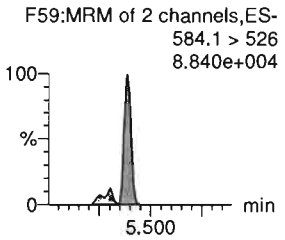
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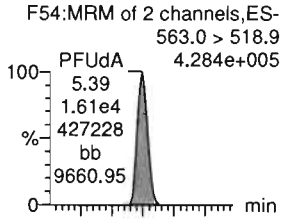


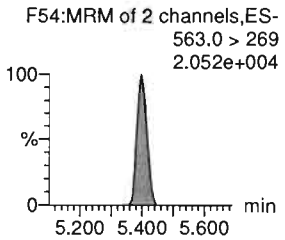
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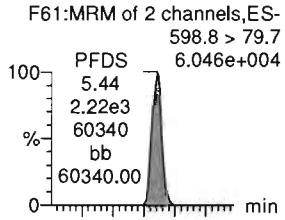


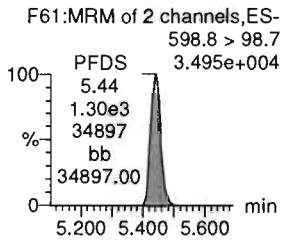
PFUdA



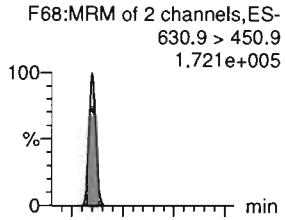


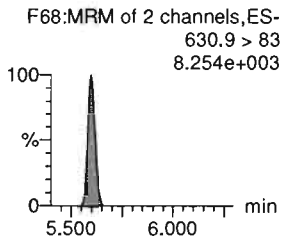
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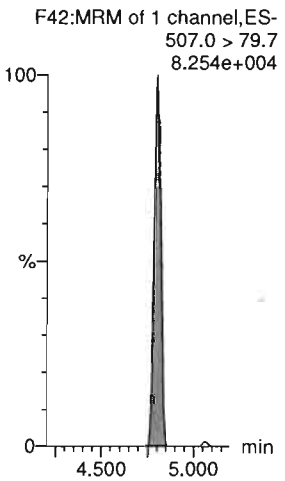


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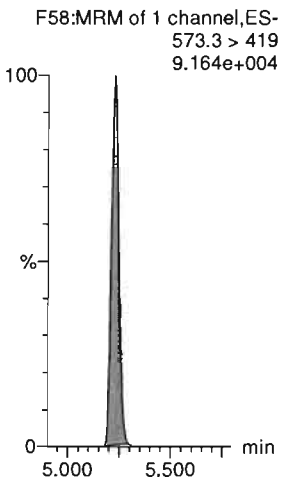




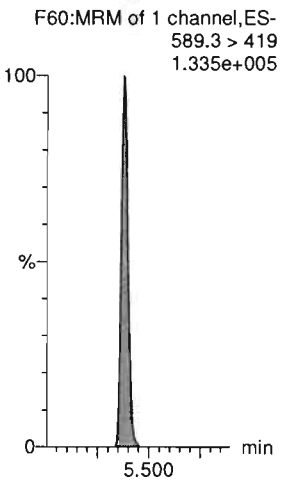
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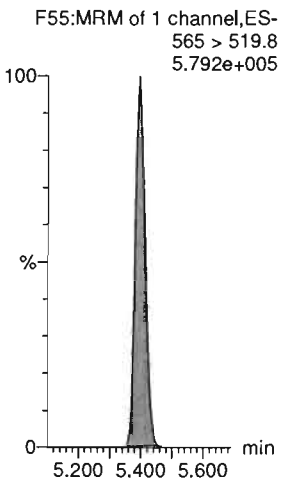
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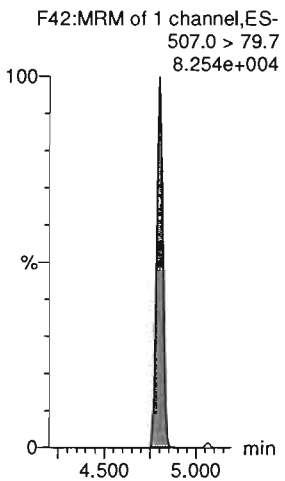
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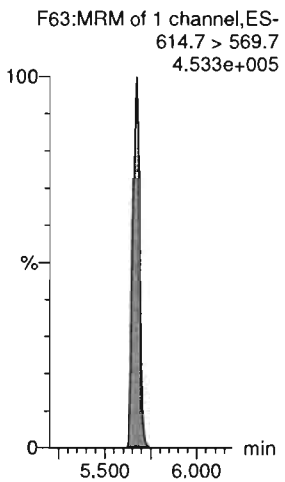
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13C8-PFOS-EIS



13C2-PFDoA-EIS

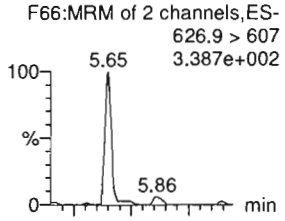


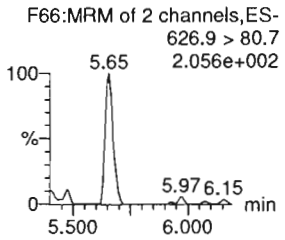
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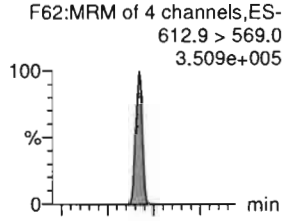
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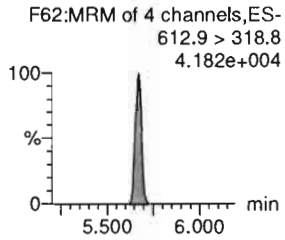
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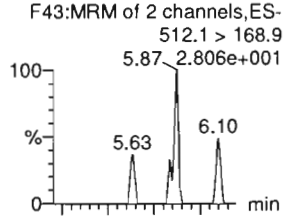


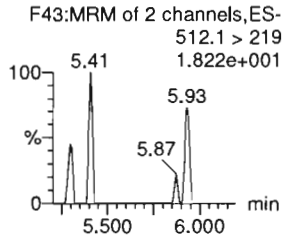
PFDoA



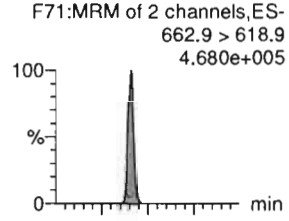


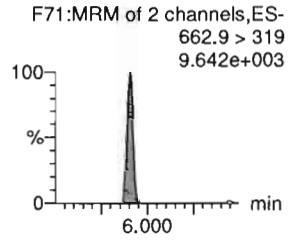
N-MeFOSA



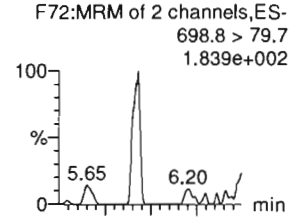


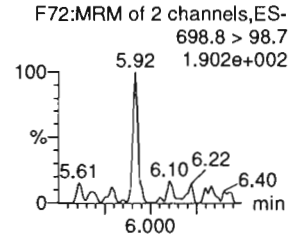
PFTrDA



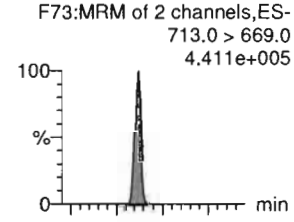


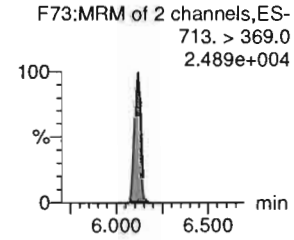
PFDoS



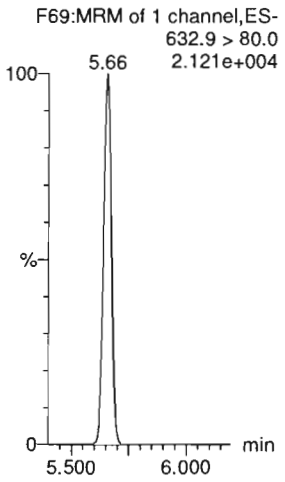


PFTeDA

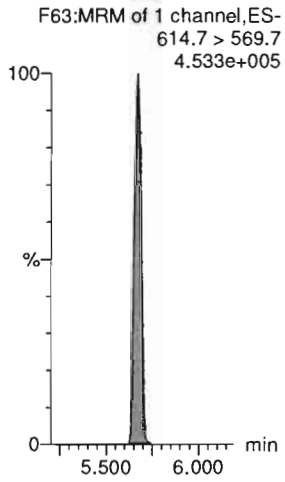




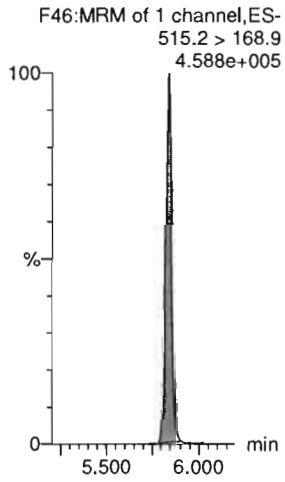
13C2-10:2 FTS-EIS



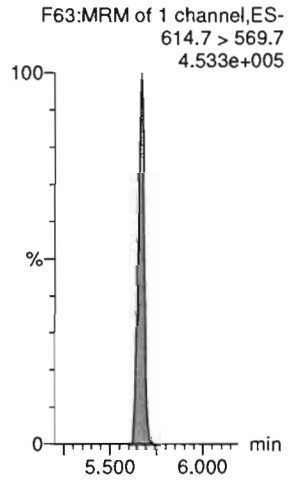
13C2-PFDoA-EIS



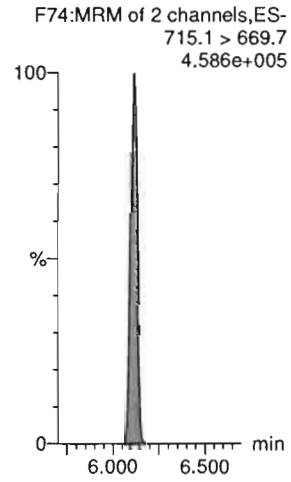
d3-N-MeFOSA-EIS



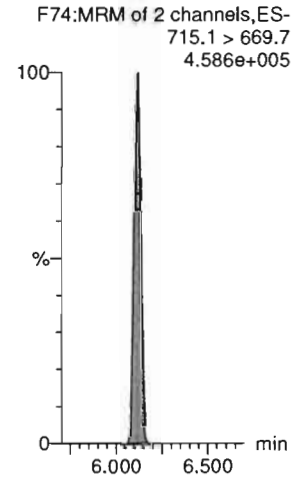
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

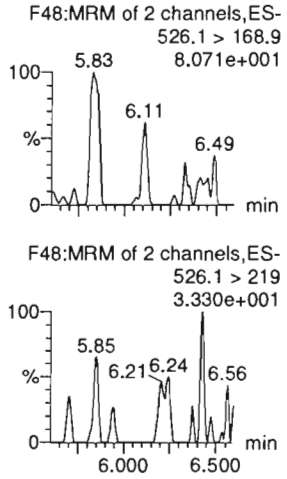


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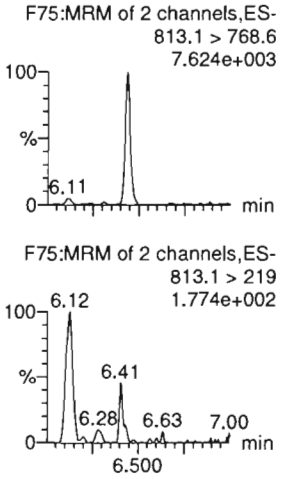
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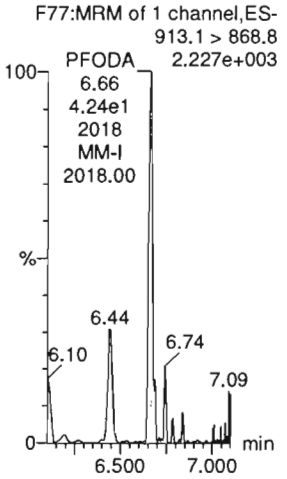
N-EtFOSA



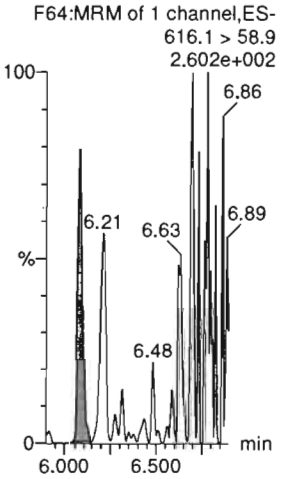
PFHxDA



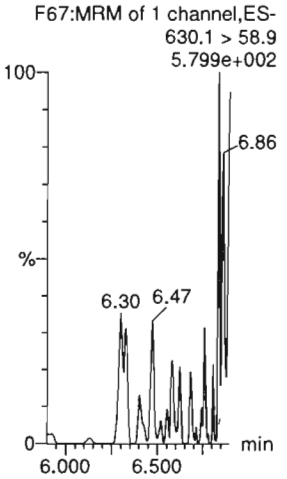
PFODA



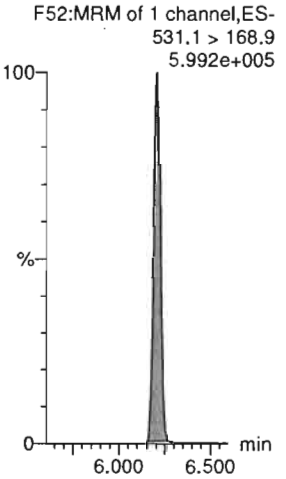
N-MeFOSE



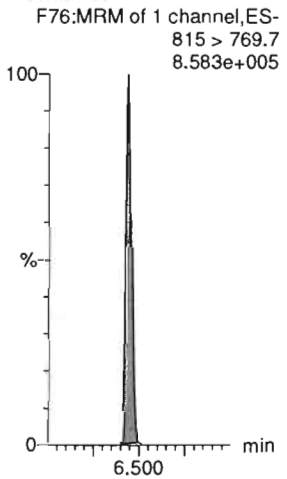
N-EtFOSE



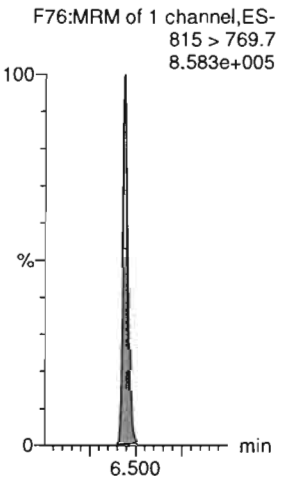
d5-N-ETFOSA-EIS



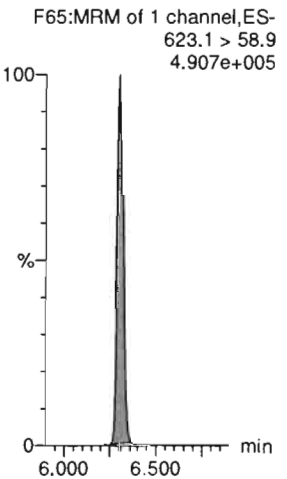
13C2-PFHxDA-EIS



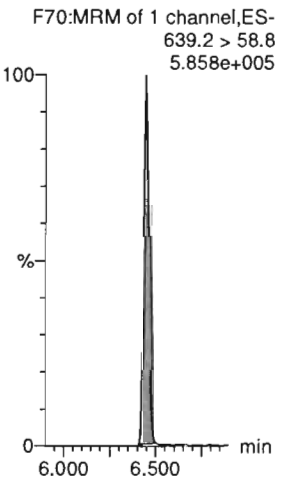
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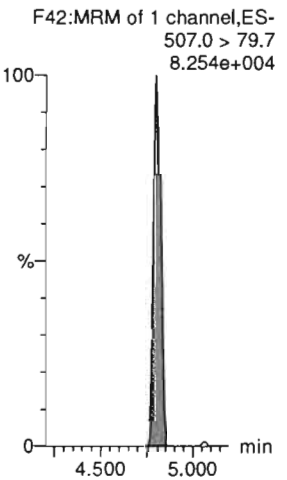
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS

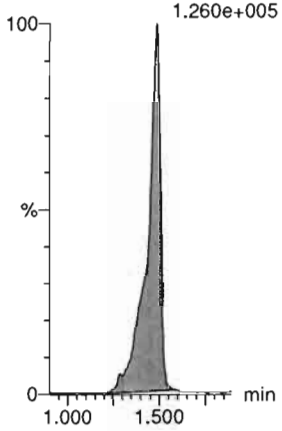


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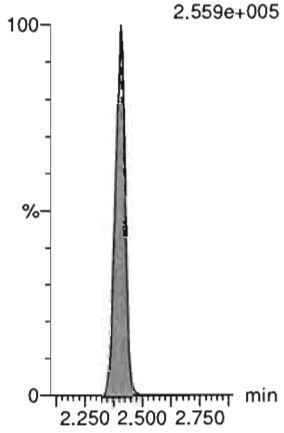
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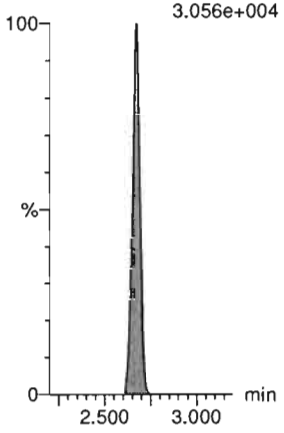
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.260e+005



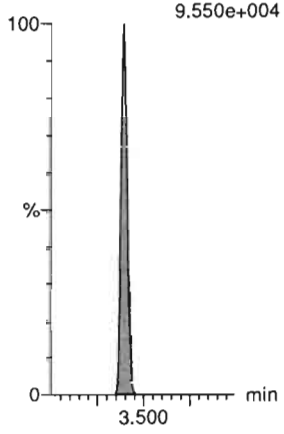
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.559e+005



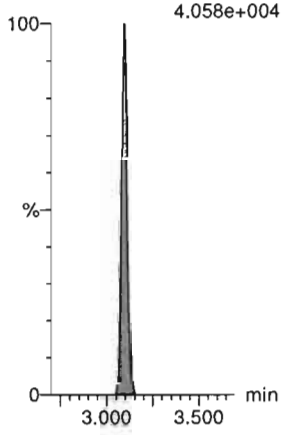
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.056e+004



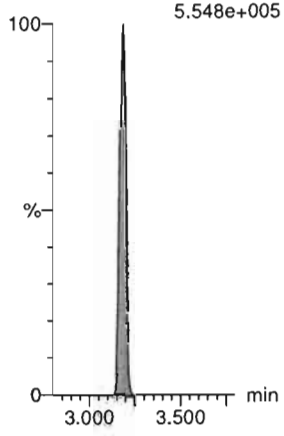
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
9.550e+004



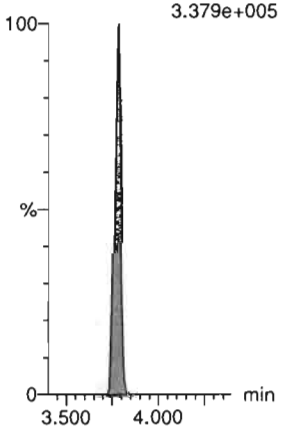
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.058e+004



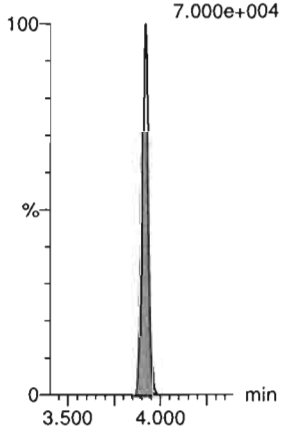
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.548e+005



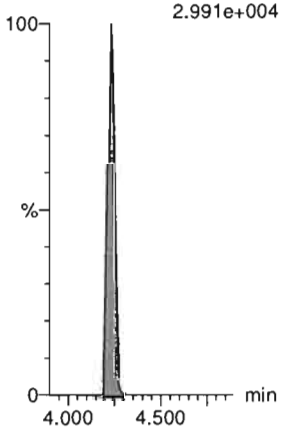
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.379e+005



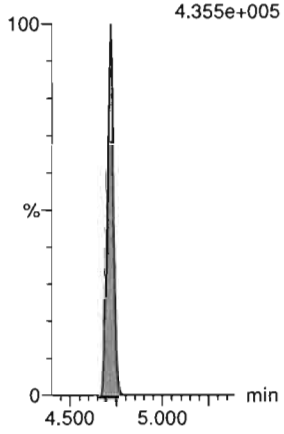
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.000e+004



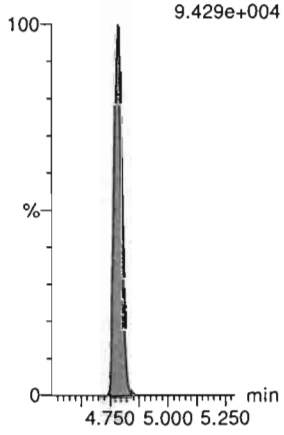
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
2.991e+004



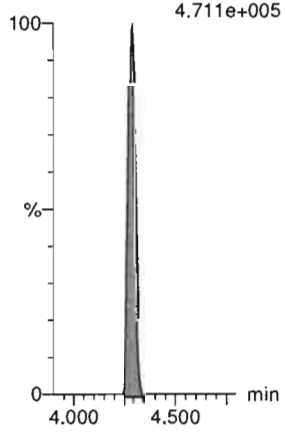
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.355e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.429e+004



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.711e+005

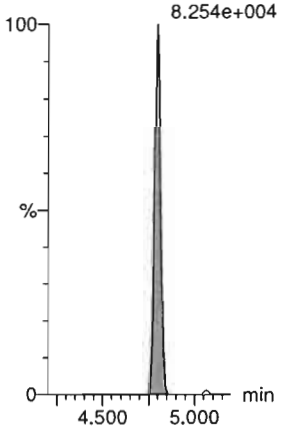


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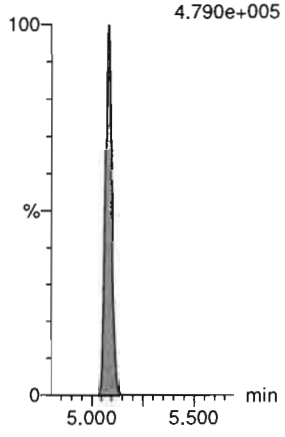
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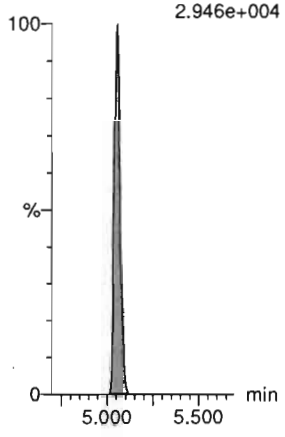
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.254e+004



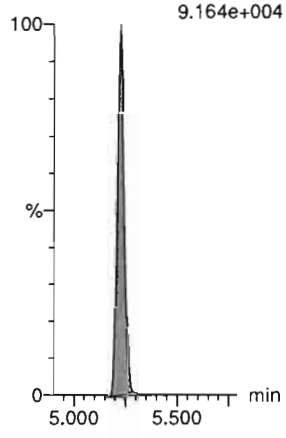
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.790e+005



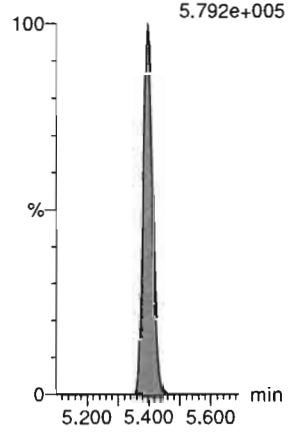
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.946e+004



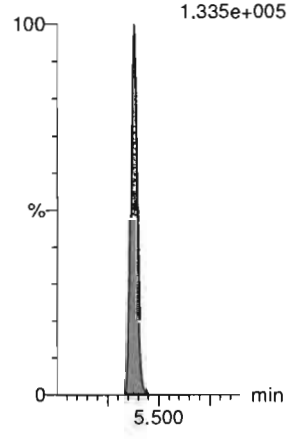
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
9.164e+004



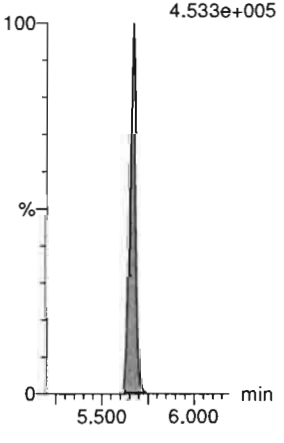
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.792e+005



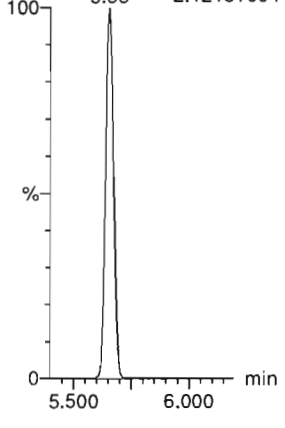
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.335e+005



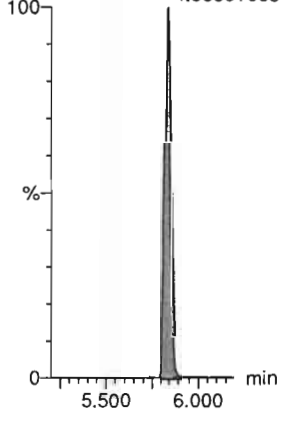
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.533e+005



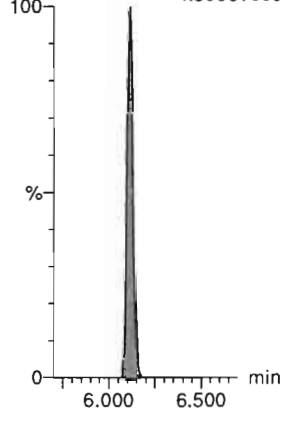
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
5.66
2.121e+004



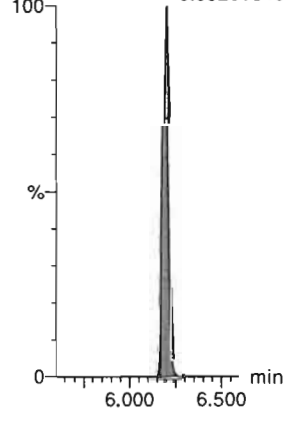
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.588e+005



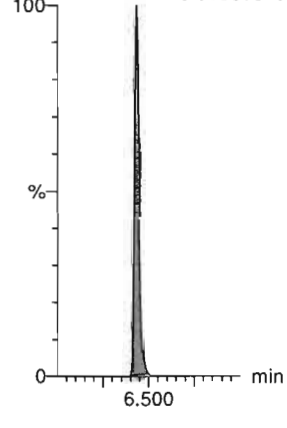
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.586e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.992e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.583e+005

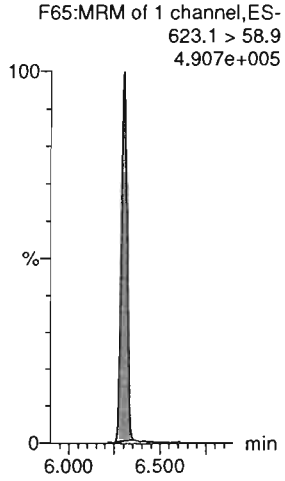


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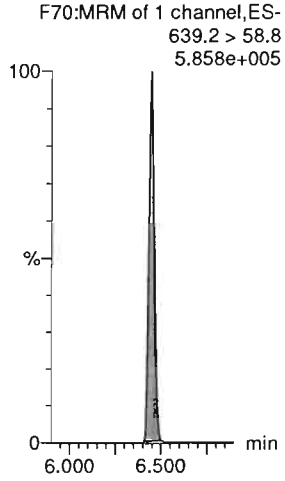
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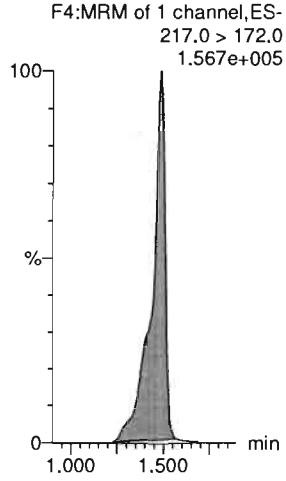
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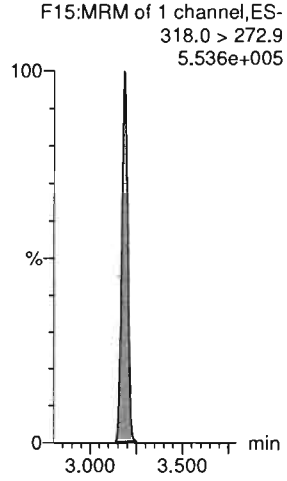
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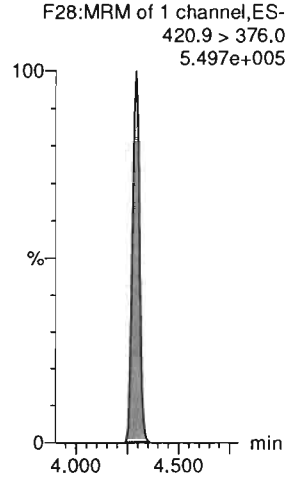
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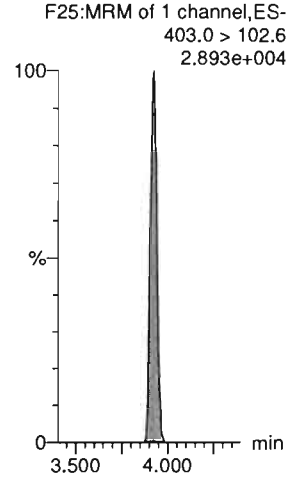
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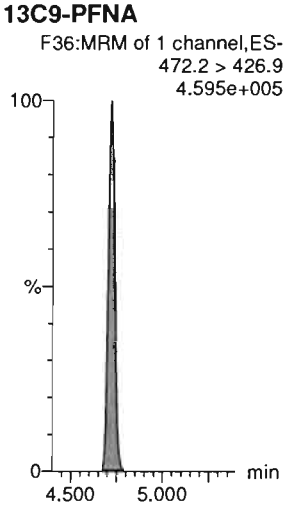
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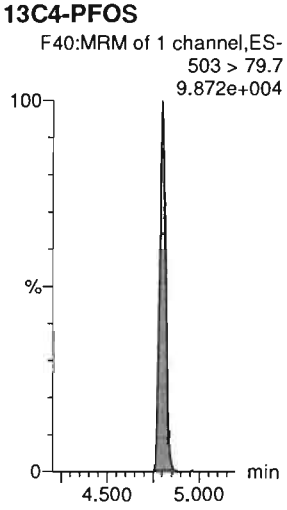
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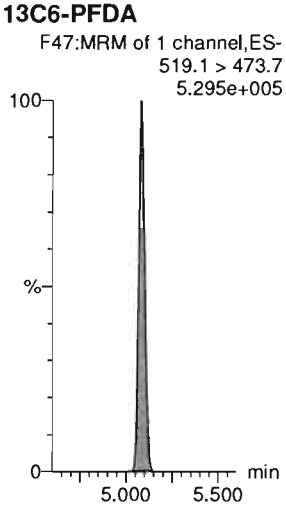
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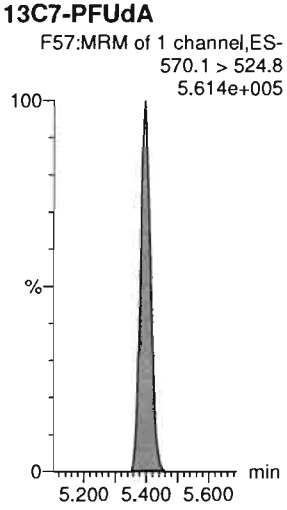
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13C7-PFUdA



Vista Analytical Laboratory

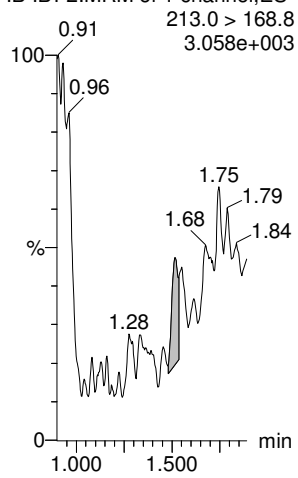
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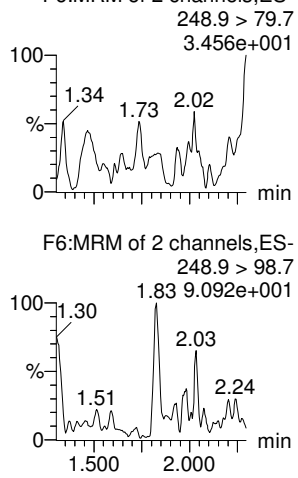
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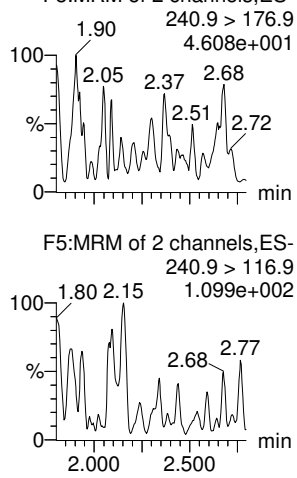
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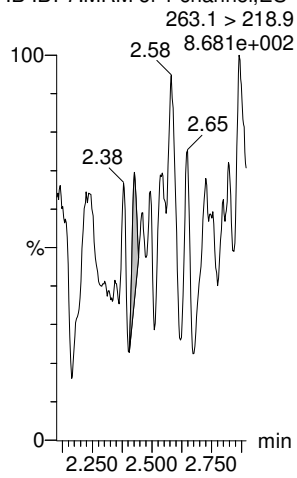
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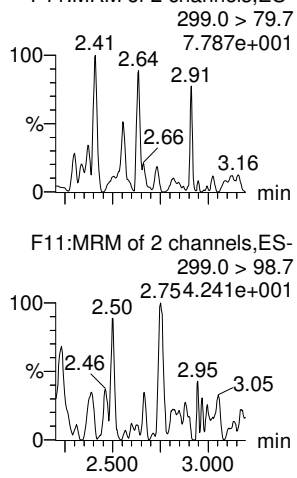
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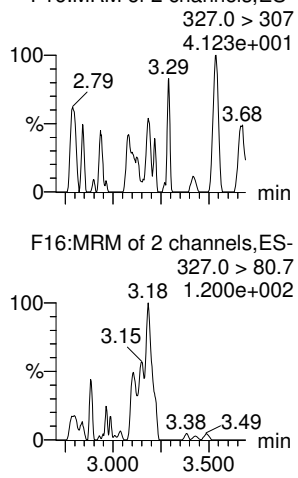
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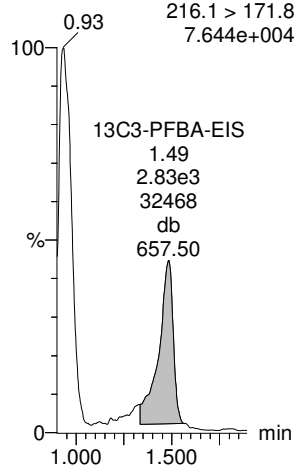
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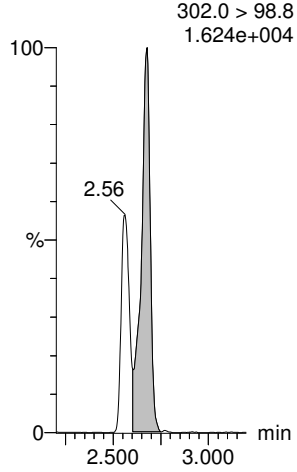
4:2 FTS



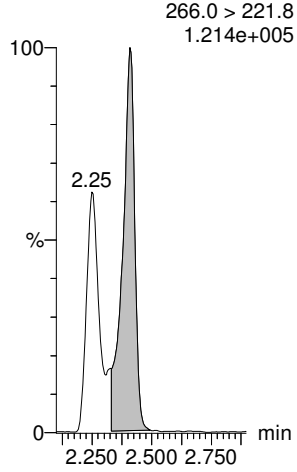
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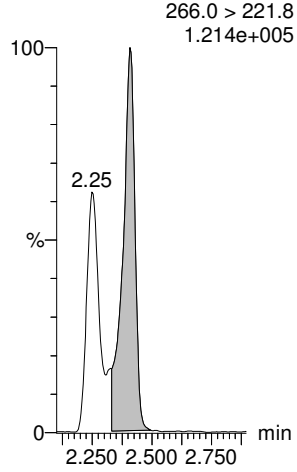
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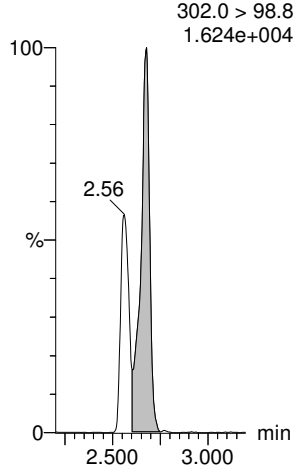
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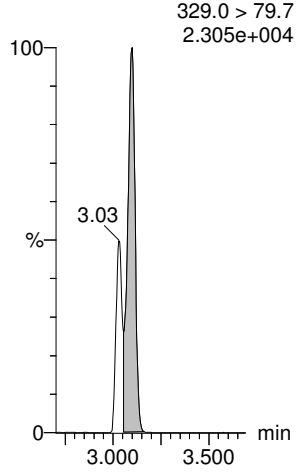
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

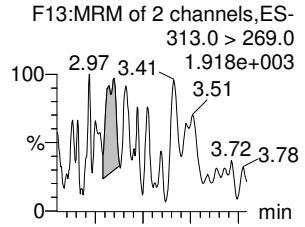


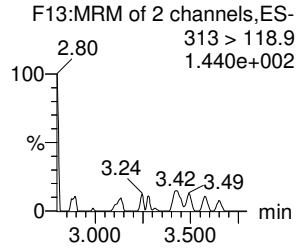
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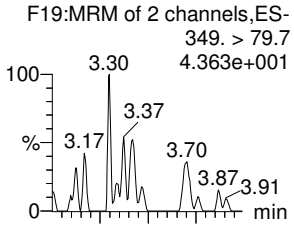
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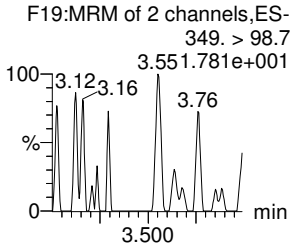
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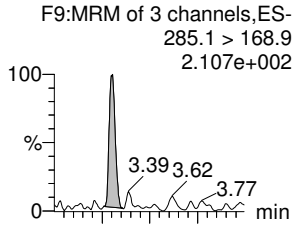


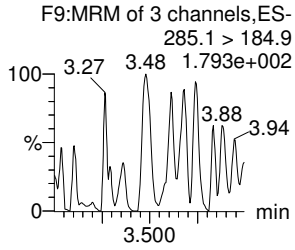
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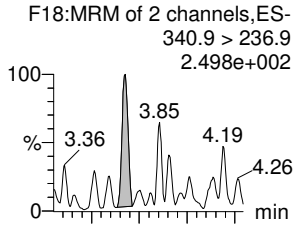


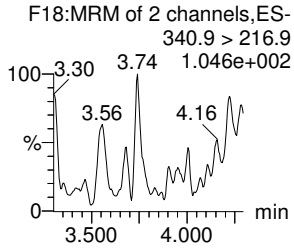
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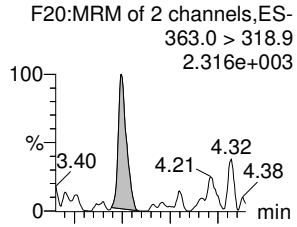


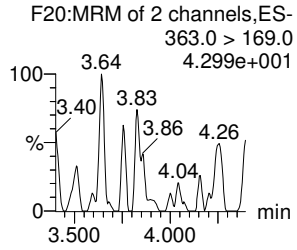
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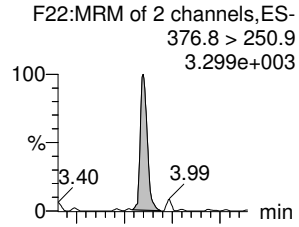


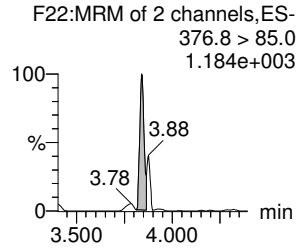
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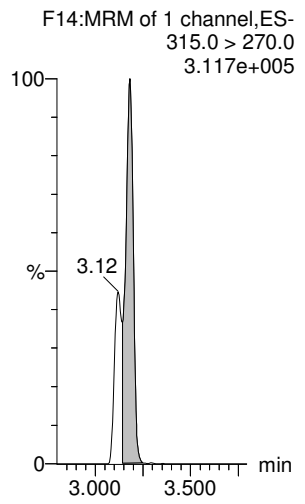


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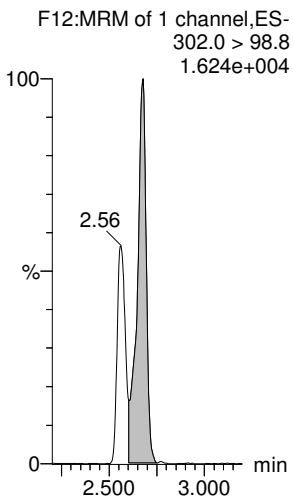




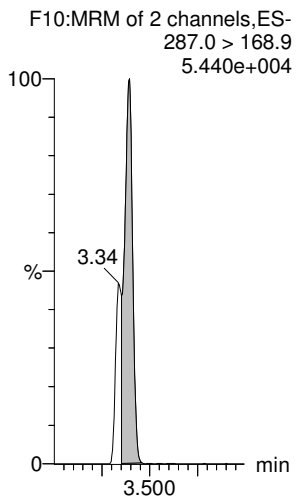
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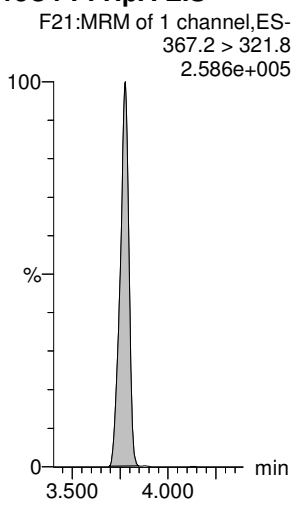
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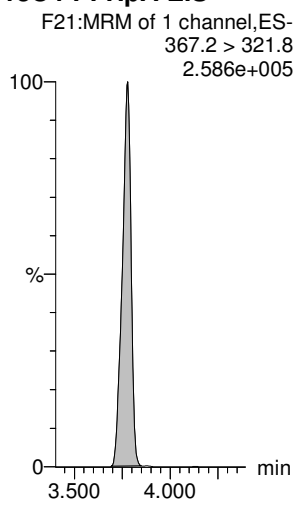
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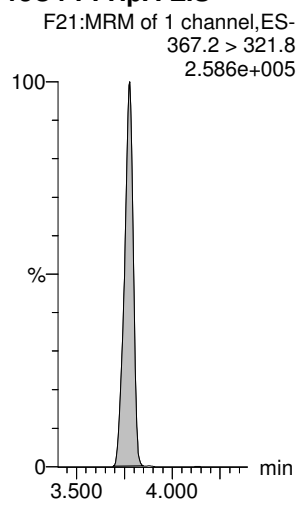
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13C4-PFHpA-EIS



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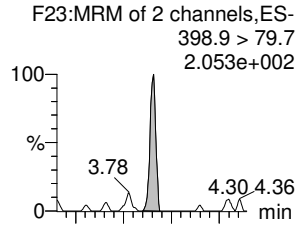


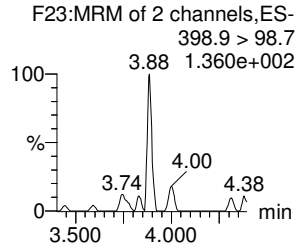
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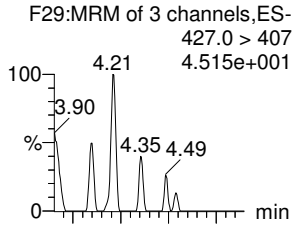
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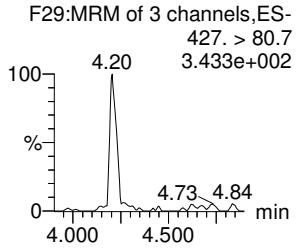
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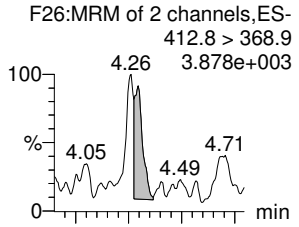


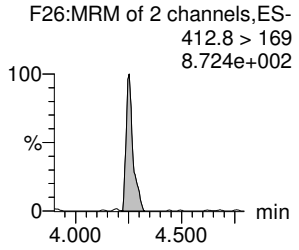
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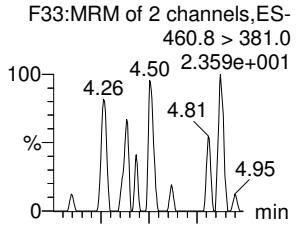


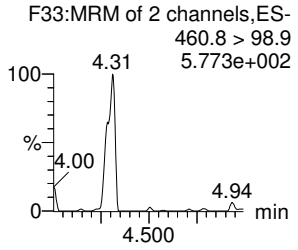
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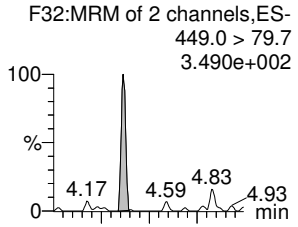


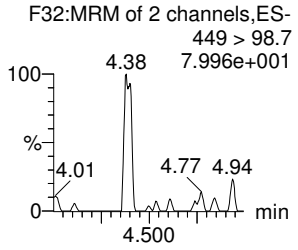
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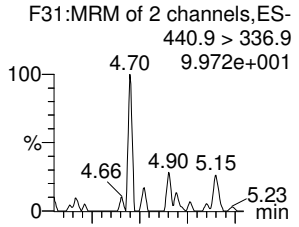


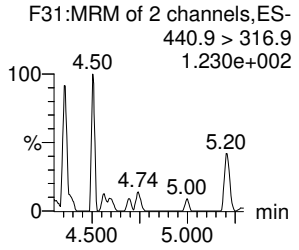
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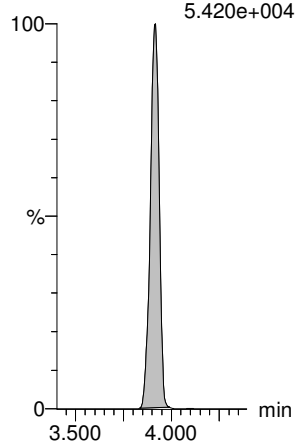


7:3 FTCA

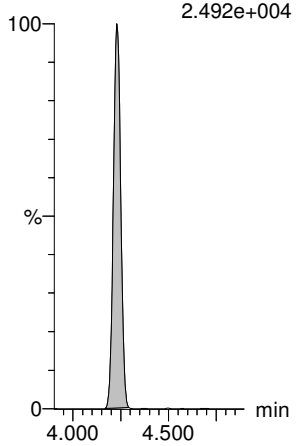




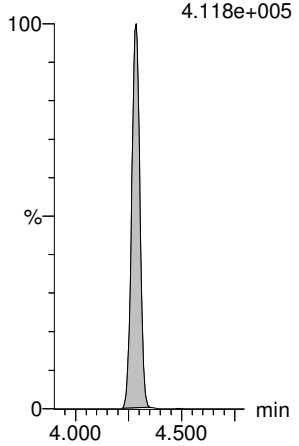
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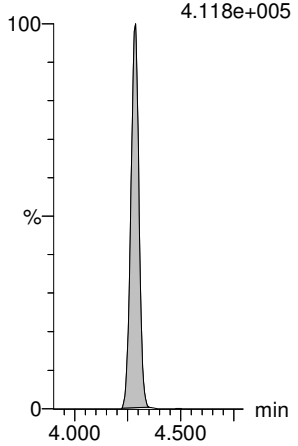
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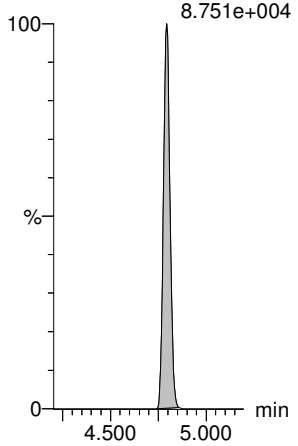
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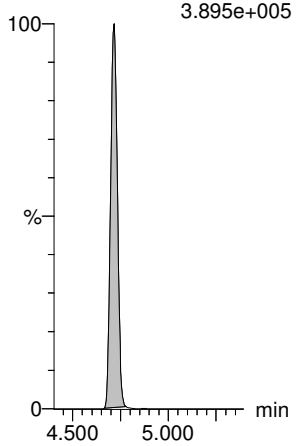
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13C8-PFOS-EIS



13C5-PFNA-EIS

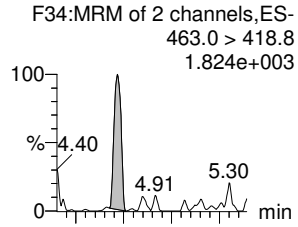


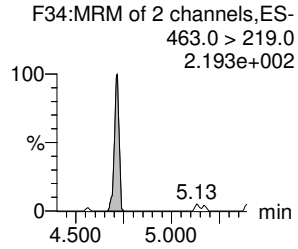
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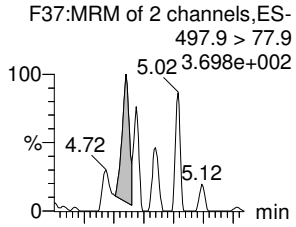
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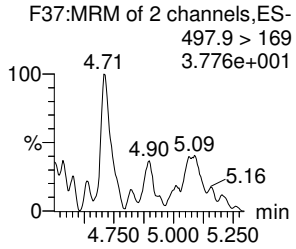
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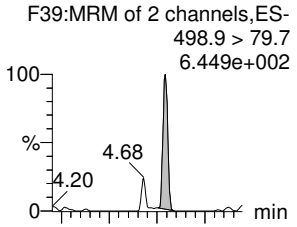


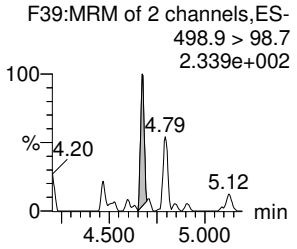
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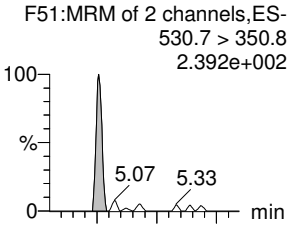


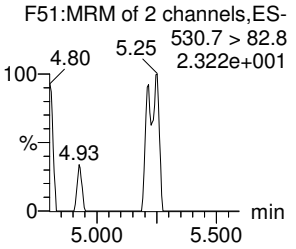
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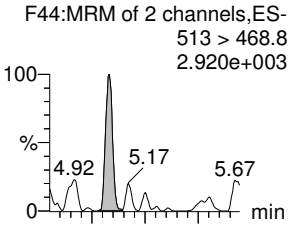


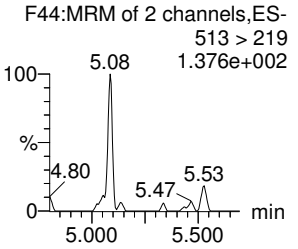
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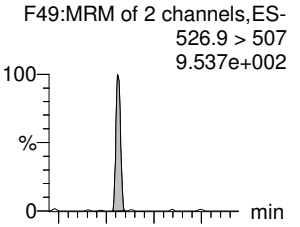


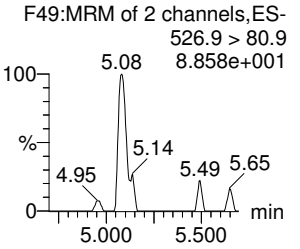
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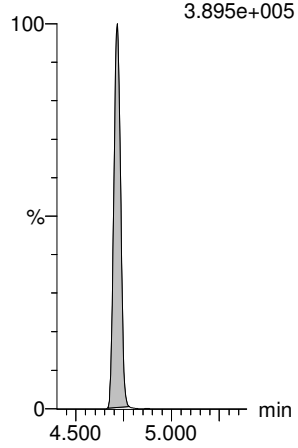


8:2 FTS

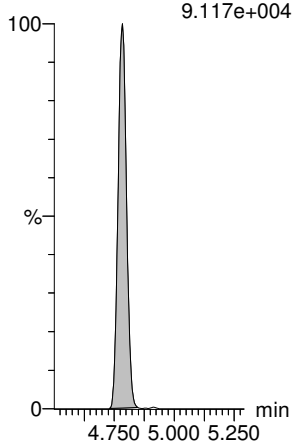




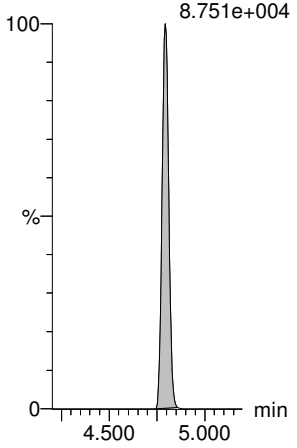
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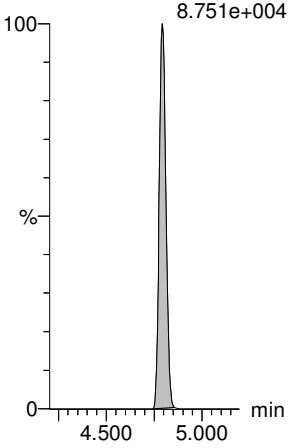
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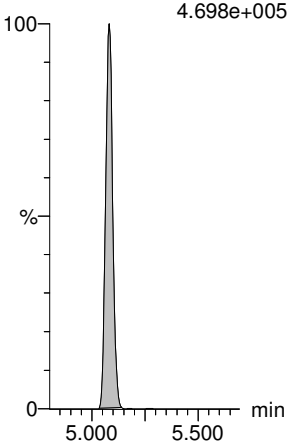
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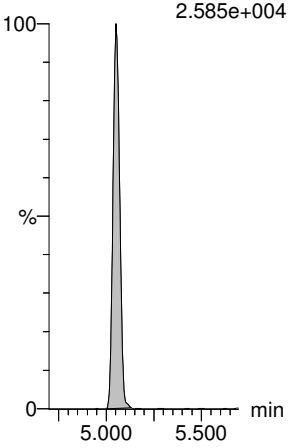
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

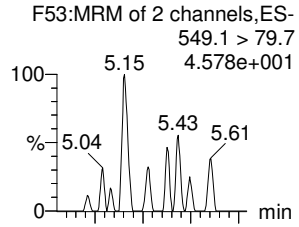


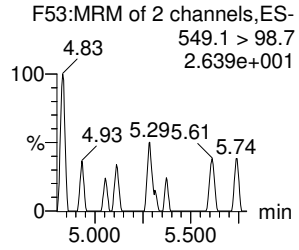
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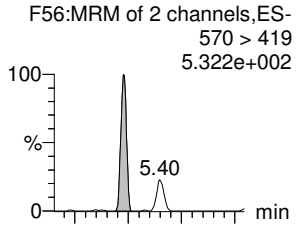
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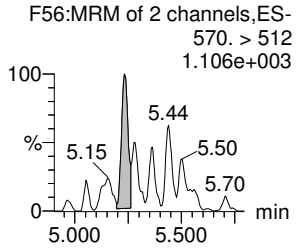
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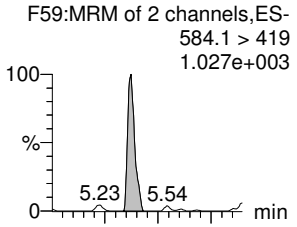


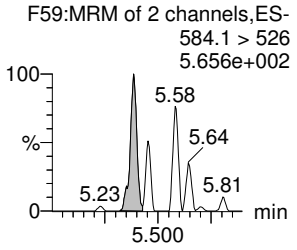
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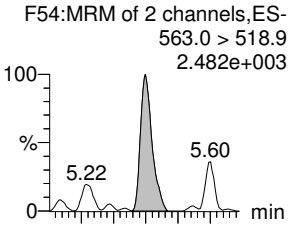


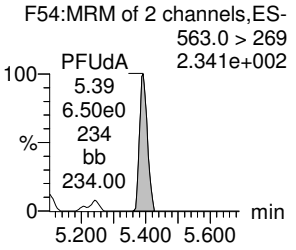
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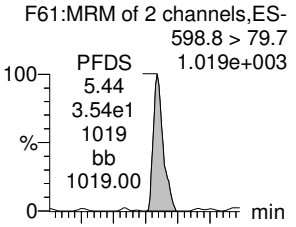


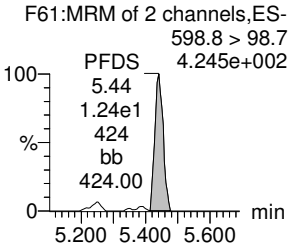
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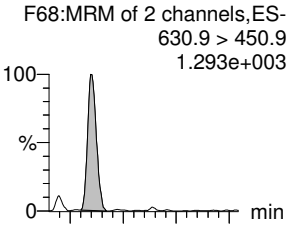


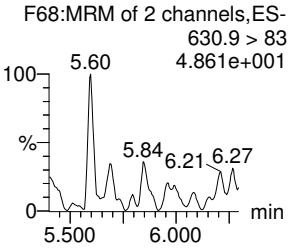
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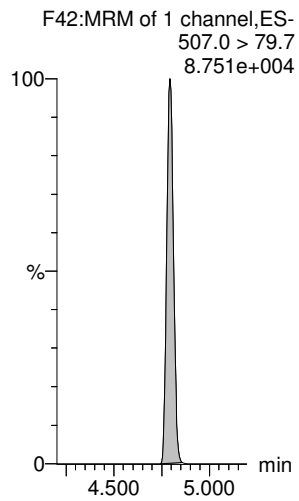


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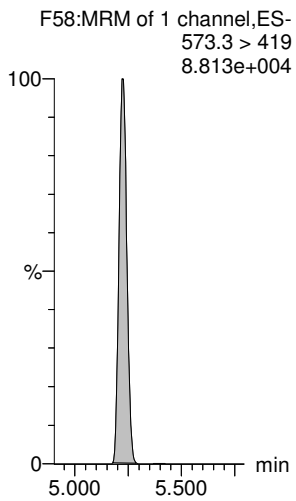




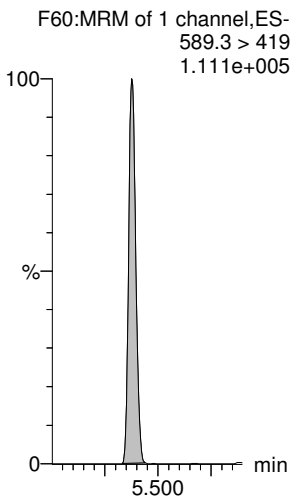
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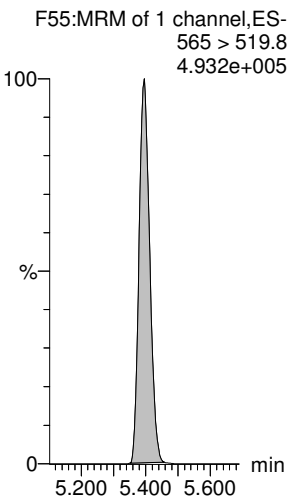
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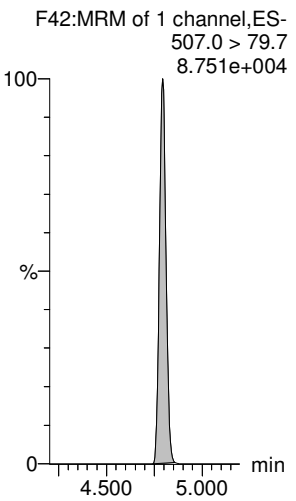
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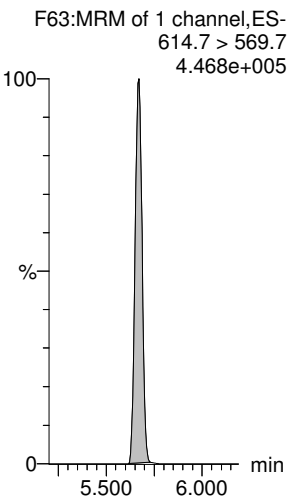
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13C8-PFOS-EIS



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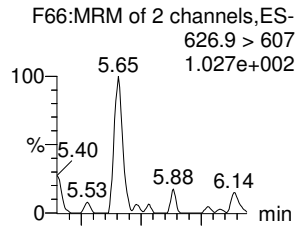


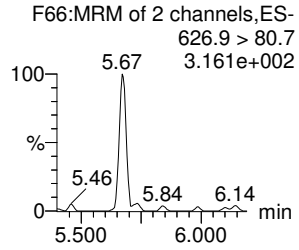
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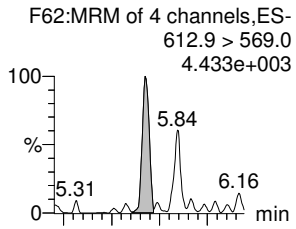
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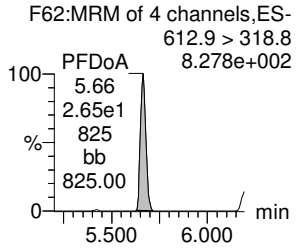
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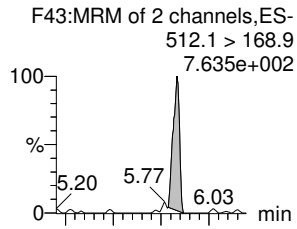


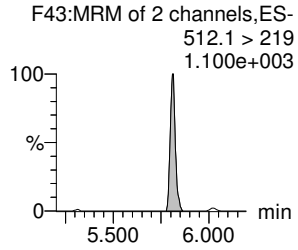
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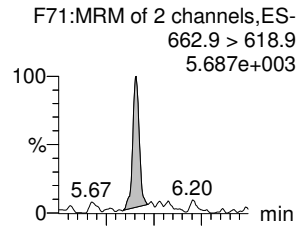


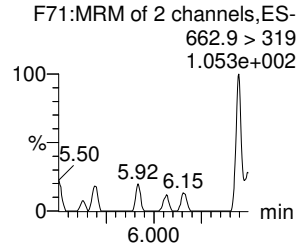
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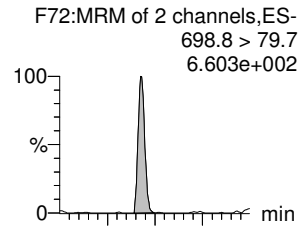


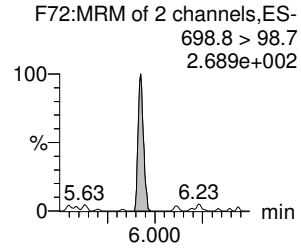
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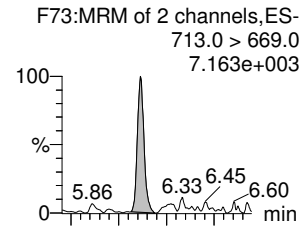


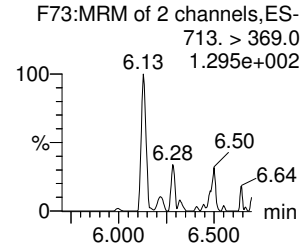
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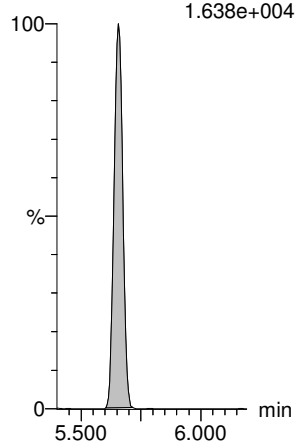


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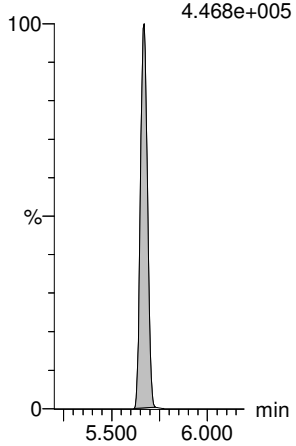




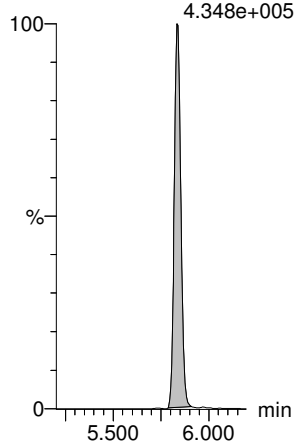
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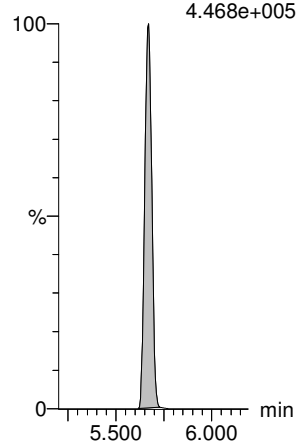
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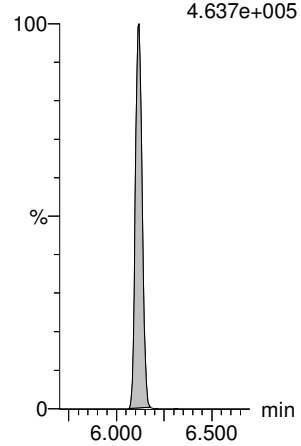
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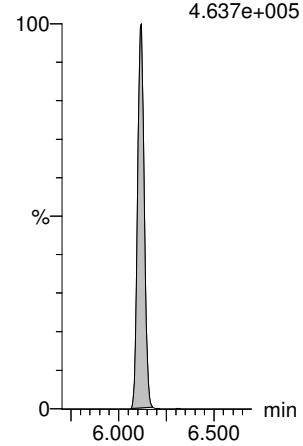
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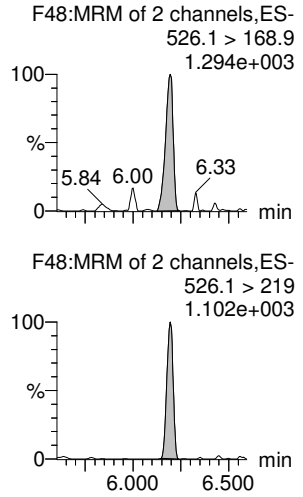


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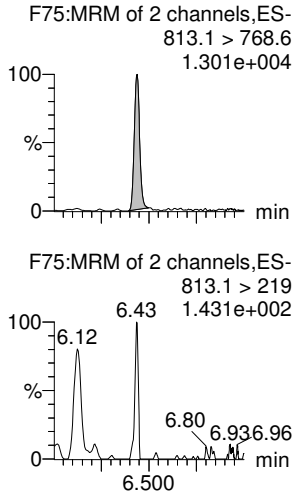
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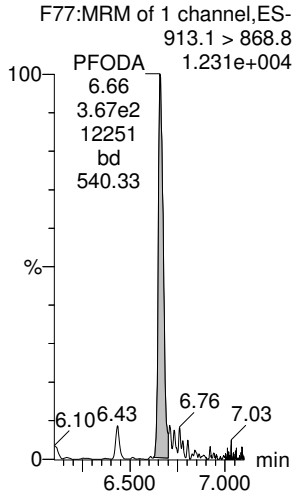
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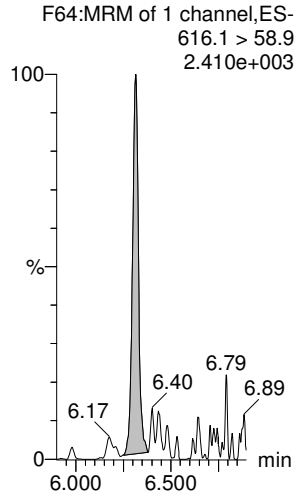
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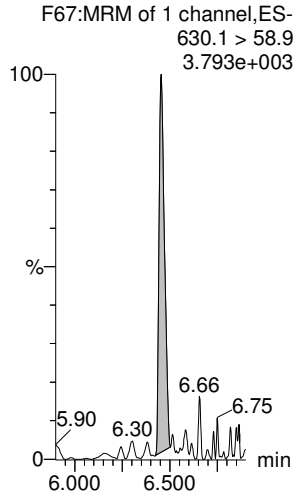
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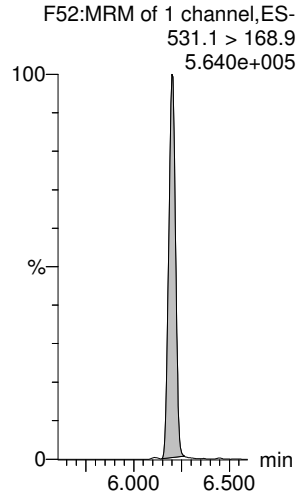
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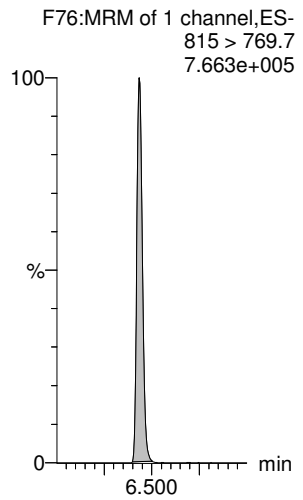
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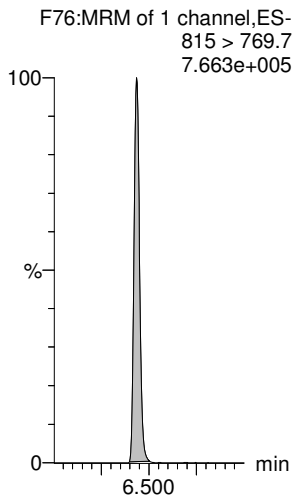
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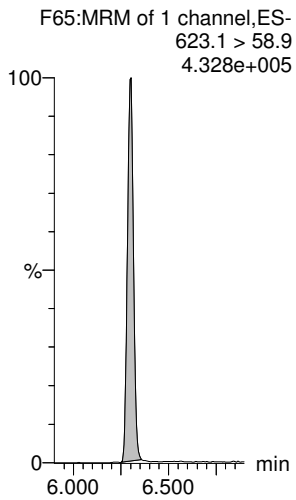
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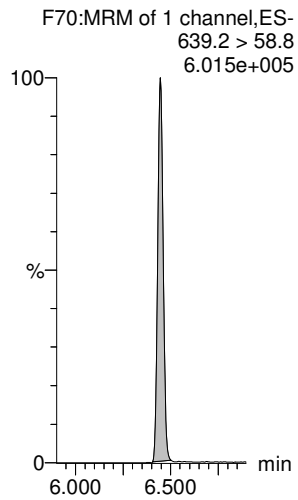
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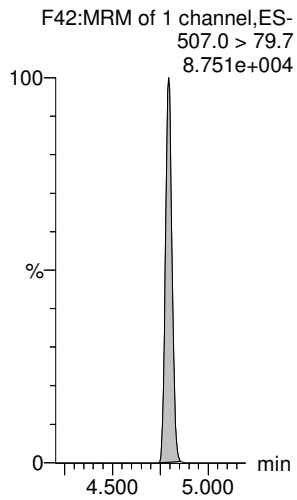
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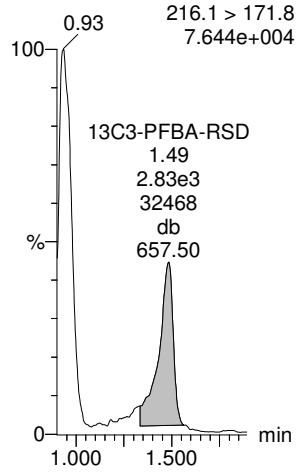


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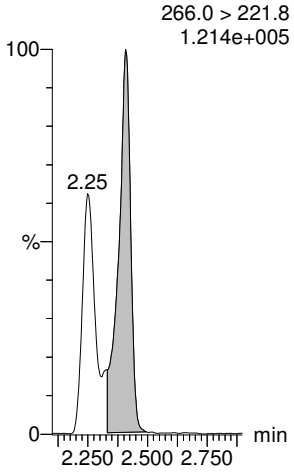
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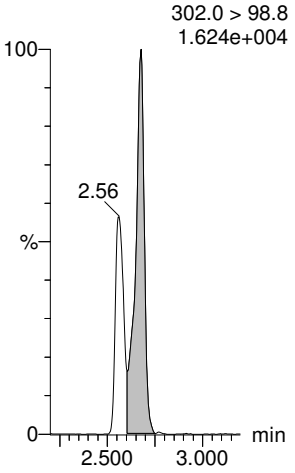
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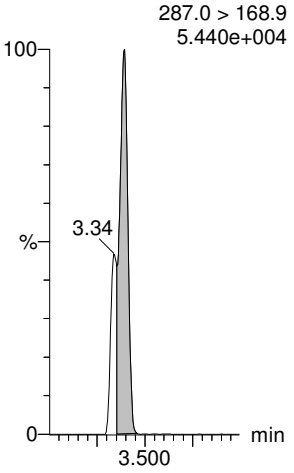
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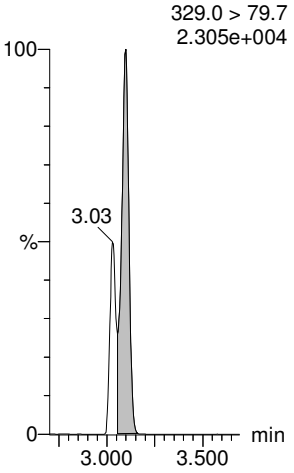
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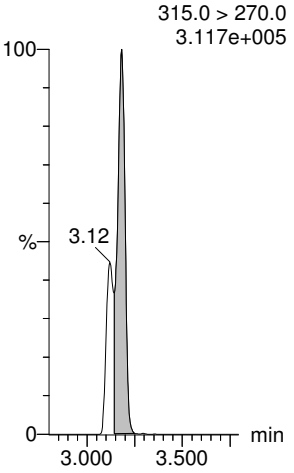
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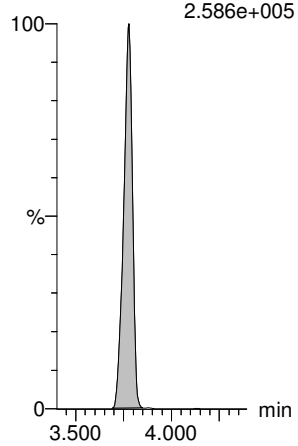
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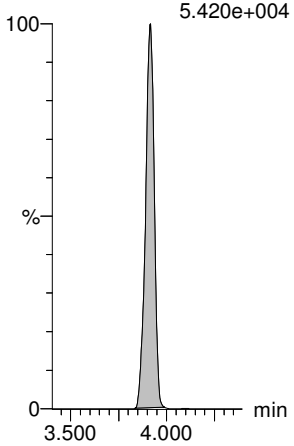
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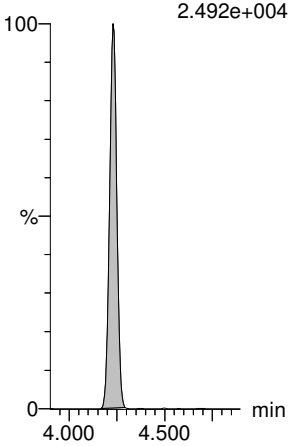
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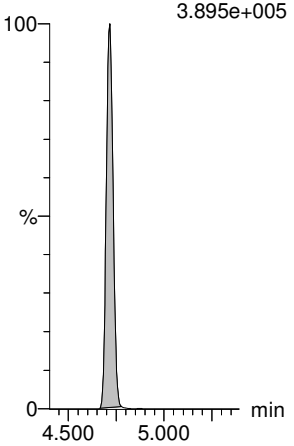
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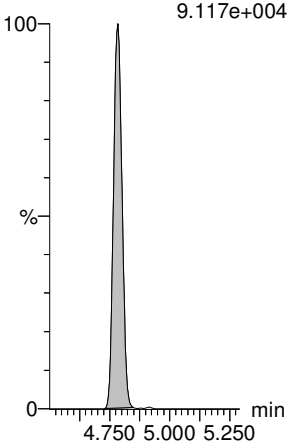
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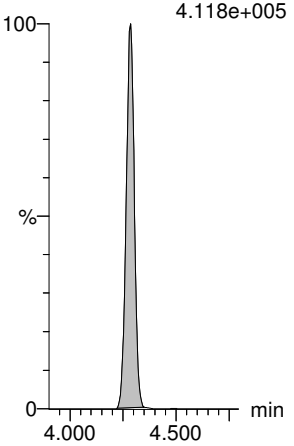
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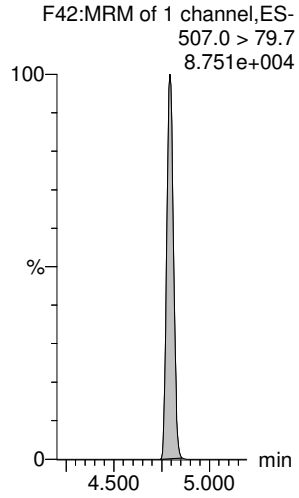


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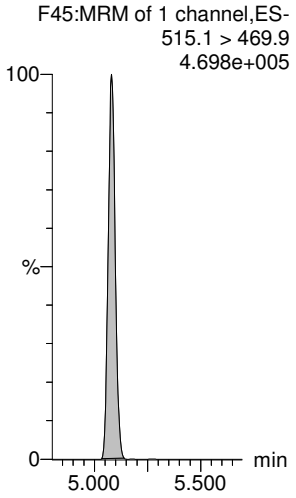
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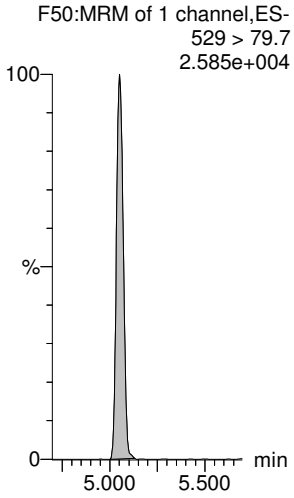
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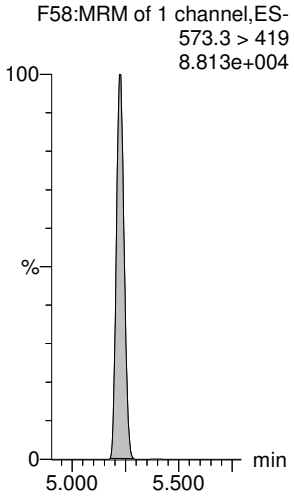
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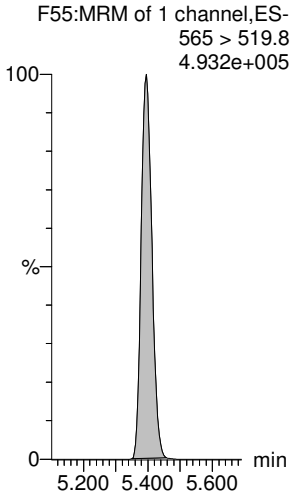
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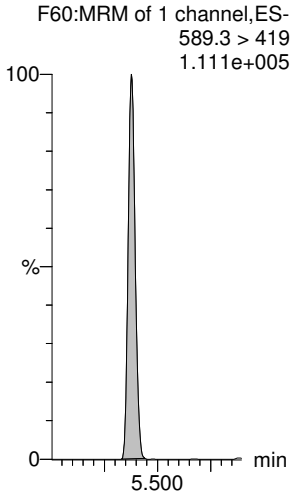
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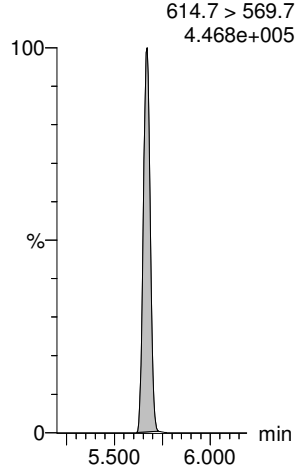
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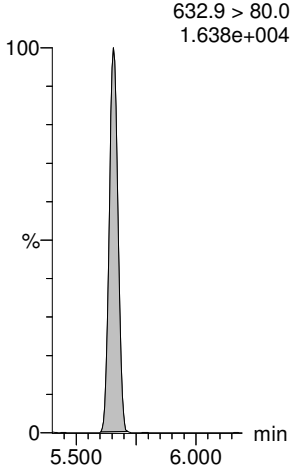
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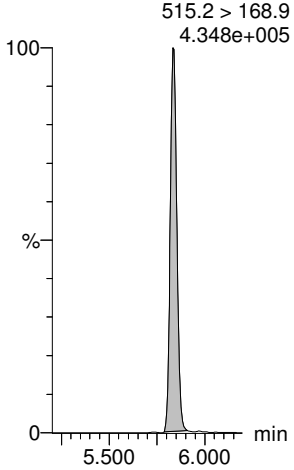
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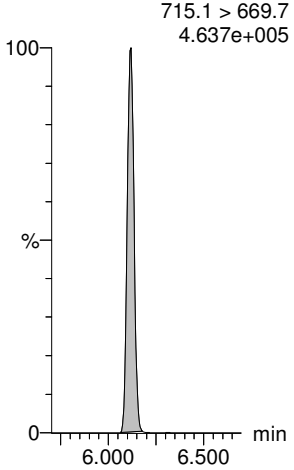
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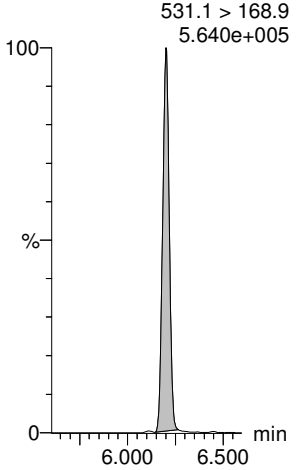
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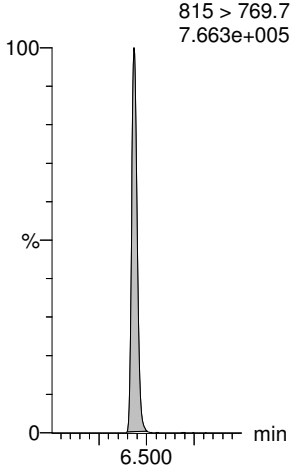
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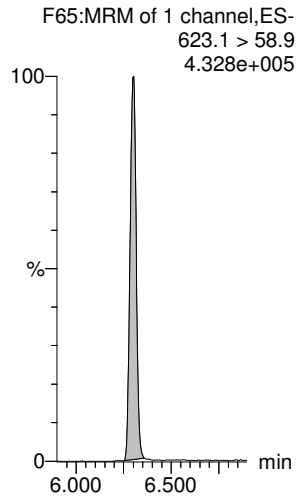


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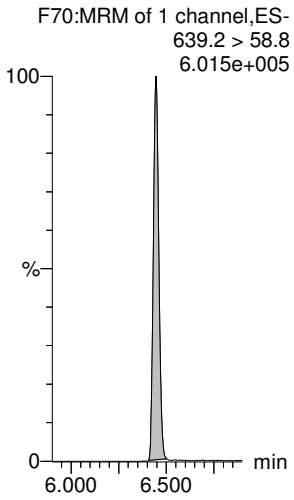
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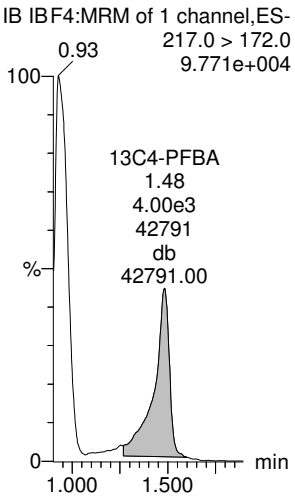
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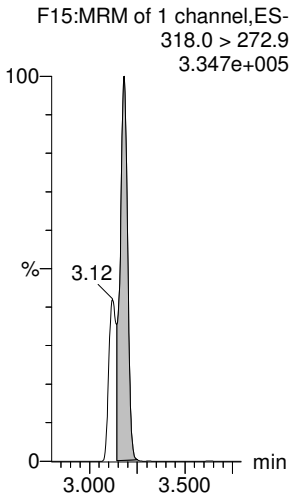
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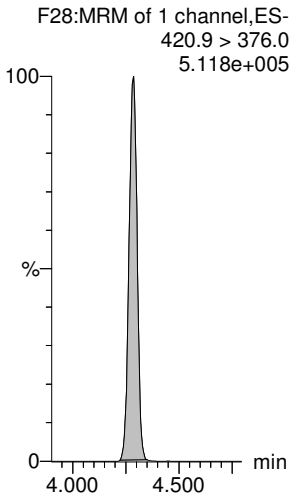
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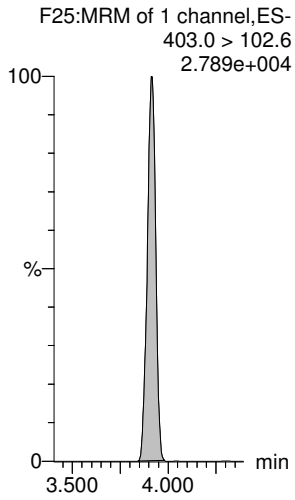
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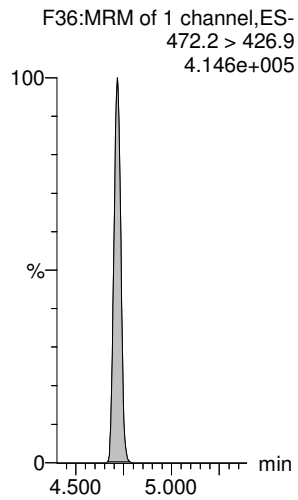
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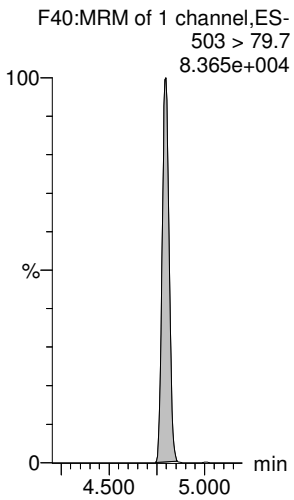
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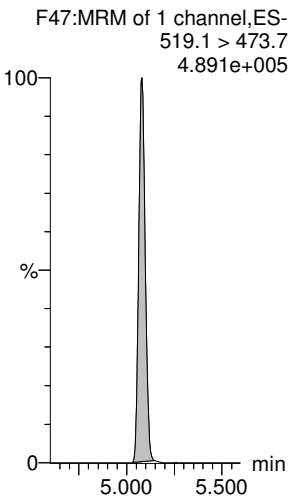
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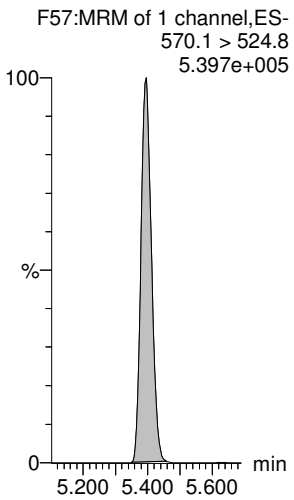
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Dataset: Untitled

Last Altered: Friday, February 21, 2020 11:45:42 Pacific Standard Time
Printed: Friday, February 21, 2020 11:47:45 Pacific Standard Time

Name: 200220P1-13, Date: 20-Feb-2020, Time: 19:30:05, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	31.824	2834.986	1.00	1.51	0.140		0.248		NO		
2	2	PFPrS	248.9 > 79.7		864.655	1.00						NO		YES
3	3	3:3 FTCA	240.9 > 176.9		7024.297	1.00						NO		YES
4	4	PFPeA	263.1 > 218.9	5.847	7024.297	1.00	2.43	0.010				NO		
5	5	PFBS	299.0 > 79.7		864.655	1.00						NO		YES
6	6	4:2 FTS	327.0 > 307		1025.108	1.00						NO		YES
7	47	13C3-PFBA-EIS	216.1 > 171.8	2834.986		1.00	1.49	2834.986	12.500	3.44	27.5	YES		
8	51	13C3-PFBS-EIS	302.0 > 98.8	864.655		1.00	2.68	864.655	12.500	7.55	60.4	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	7024.297		1.00	2.41	7024.297	12.500	7.45	59.6	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	7024.297		1.00	2.41	7024.297	12.500	7.45	59.6	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	864.655		1.00	2.68	864.655	12.500	7.55	60.4	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1025.108		1.00	3.10	1025.108	12.500	9.43	75.4	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	77.982	14203.249	1.00	3.10	0.069		0.00188		NO		YES
15	8	PFPeS	349.>79.7		864.655	1.00						NO		YES
16	9	HFPO-DA	285.1 > 168.9	7.289	2636.307	1.00	3.30	0.035				NO		YES
17	10	5:3 FTCA	340.9 > 236.9	8.709	13500.765	1.00	3.68	0.008		0.0752		NO		YES
18	11	PFHpA	363.0 > 318.9	112.199	13500.765	1.00	3.75	0.104		0.0217		NO		YES
19	12	ADONA	376.8 > 250.9	135.600	13500.765	1.00	3.85	0.126				NO	4.593	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	14203.249		1.00	3.18	14203.249	12.500	8.68	69.4	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	864.655		1.00	2.68	864.655	12.500	7.55	60.4	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	2636.307		1.00	3.39	2636.307	12.500	8.99	72.0	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	13500.765		1.00	3.78	13500.765	12.500	12.2	97.6	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	13500.765		1.00	3.78	13500.765	12.500	12.2	97.6	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	13500.765		1.00	3.78	13500.765	12.500	12.2	97.6	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	6.979	2838.588	1.00	3.91	0.031				NO		YES
28	15	6:2 FTS	427.0 > 407		1102.104	1.00						NO		YES
29	16	L-PFOA	412.8 > 368.9	138.428	18027.979	1.00	4.30	0.096		0.00266		NO	4.310	NO
30	18	PFecHS	460.8 > 381.0		18027.979	1.00						NO		YES
31	19	PFHpS	449.0 > 79.7	9.055	3475.157	1.00	4.36	0.033		0.0837		NO		YES
32	20	7:3 FTCA	440.9 > 336.9		15570.243	1.00						NO		YES
33	61	13C3-PFHxS-EIS	401.8 > 79.7	2838.588		1.00	3.92	2838.588	12.500	11.2	89.9	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1102.104		1.00	4.23	1102.104	12.500	9.07	72.6	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	18027.979		1.00	4.29	18027.979	12.500	11.8	94.4	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	18027.979		1.00	4.29	18027.979	12.500	11.8	94.4	NO		

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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	71	13C8-PFOS-EIS	507.0 > 79.7	3475.157		1.00	4.79	3475.157	12.500	11.7	94.0	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	15570.243		1.00	4.72	15570.243	12.500	11.3	90.7	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	75.063	15570.243	1.00	4.72	0.060		0.0002...		NO	12.521	YES
41	22	PFOSA	497.9 > 77.9	11.899	3678.810	1.00	4.80	0.040		0.0637		NO		YES
42	23	L-PFOS	498.9 > 79.7	17.999	3475.157	1.00	4.79	0.065		0.0730		NO	3.563	YES
43	25	9Cl-PF30NS	530.7 > 350.8	6.496	3475.157	1.00	5.01	0.023		0.0254		NO		YES
44	26	PFDA	513 > 468.8	110.693	17857.156	1.00	5.08	0.077		0.00362		NO		YES
45	27	8:2 FTS	526.9 > 507	26.669	1054.832	1.00	5.06	0.316		0.360		NO		YES
46	65	13C5-PFNA-EIS	468.2 > 422.9	15570.243		1.00	4.72	15570.243	12.500	11.3	90.7	NO		
47	67	13C8-PFOSA-EIS	506 > 78	3678.810		1.00	4.78	3678.810	12.500	11.4	91.1	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3475.157		1.00	4.79	3475.157	12.500	11.7	94.0	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3475.157		1.00	4.79	3475.157	12.500	11.7	94.0	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	17857.156		1.00	5.08	17857.156	12.500	13.2	105.3	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1054.832		1.00	5.05	1054.832	12.500	12.3	98.2	NO		
52	-1													
53	28	PFNS	549.1 > 79.7		3475.157	1.00						NO		YES
54	29	L-MeFOSAA	570 > 419	16.108	3690.109	1.00	5.23	0.055		0.0317		NO	0.414	YES
55	31	L-EtFOSAA	584.1 > 419	39.562	4190.298	1.00	5.37	0.118		0.0345		NO	2.011	YES
56	33	PFUdA	563.0 > 518.9	103.046	18565.443	1.00	5.40	0.069		0.0777		NO	15.848	NO
57	34	PFDS	598.8 > 79.7	35.439	3475.157	1.00	5.44	0.127		0.118		NO	2.848	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	61.168	18517.162	1.00	5.60	0.041				NO		YES
59	71	13C8-PFOS-EIS	507.0 > 79.7	3475.157		1.00	4.79	3475.157	12.500	11.7	94.0	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	3690.109		1.00	5.22	3690.109	12.500	14.0	112.3	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	4190.298		1.00	5.38	4190.298	12.500	11.6	92.9	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	18565.443		1.00	5.39	18565.443	12.500	13.1	104.9	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3475.157		1.00	4.79	3475.157	12.500	11.7	94.0	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	18517.162		1.00	5.67	18517.162	12.500	11.8	94.2	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607		688.921	1.00						NO		YES
67	37	PFDoA	612.9 > 569.0	182.969	18517.162	1.00	5.68	0.124				NO	6.911	NO
68	38	N-MeFOSA	512.1 > 168.9	28.521	16860.805	1.00	5.83	0.252		0.0998		NO	0.842	NO
69	39	PFTrDA	662.9 > 618.9	210.955	18517.162	1.00	5.91	0.142		0.0333		NO		YES
70	40	PFDoS	698.8 > 79.7	25.677	18754.758	1.00	5.92	0.017		0.0889		NO	3.039	NO
71	41	PFTeDA	713.0 > 669.0	287.497	18754.758	1.00	6.11	0.192		0.127		NO		YES
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	688.921		1.00	5.66	688.921	12.500	10.3	82.6	NO		

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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83	13C2-PFDoA-EIS	614.7 > 569.7	18517.162		1.00	5.67	18517.162	12.500	11.8	94.2	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	16860.805		1.00	5.83	16860.805	149.200	139	93.3	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	18517.162		1.00	5.67	18517.162	12.500	11.8	94.2	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	18754.758		1.00	6.12	18754.758	12.500	13.0	104.2	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	18754.758		1.00	6.12	18754.758	12.500	13.0	104.2	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	58.120	22512.211	1.00	6.19	0.385		0.350		NO	1.427	NO
80	43	PFHxDA	813.1 > 768.6	417.085	25505.473	1.00	6.44	0.204		0.125		NO		YES
81	44	PFODA	913.1 > 868.8	366.883	25505.473	1.00	6.66	0.180		0.200		NO		
82	45	N-MeFOSE	616.1 > 58.9	83.540	15521.402	1.00	6.31	0.803		0.329		NO		
83	46	N-EtFOSE	630.1 > 58.9	119.845	19186.887	1.00	6.46	0.932		0.958		NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	22512.211		1.00	6.20	22512.211	149.200	143	96.1	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	25505.473		1.00	6.43	25505.473	12.500	10.9	86.9	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	25505.473		1.00	6.43	25505.473	12.500	10.9	86.9	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	15521.402		1.00	6.30	15521.402	149.200	138	92.8	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	19186.887		1.00	6.45	19186.887	149.200	137	91.8	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3475.157		1.00	4.79	3475.157	12.500	11.7	94.0	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	2834.986	4003.940	1.00	1.49	8.851	12.500	11.2	89.6	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	7024.297	15103.579	1.00	2.41	5.813	12.500	10.3	82.3	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	864.655	1389.390	1.00	2.68	7.779	12.500	6.93	55.4	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	2636.307	15103.579	1.00	3.39	2.182	12.500	12.2	97.6	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1025.108	1389.390	1.00	3.10	9.223	12.500	7.75	62.0	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	14203.249	15103.579	1.00	3.18	11.755	12.500	12.0	96.1	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	13500.765	15103.579	1.00	3.78	11.173	12.500	18.3	146.3	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	2838.588	1389.390	1.00	3.92	25.538	12.500	10.7	85.9	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1102.104	3518.320	1.00	4.23	3.916	12.500	10.4	83.0	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	15570.243	16952.029	1.00	4.72	11.481	12.500	12.3	98.1	NO		
101	68	13C8-PFOSA-RSD	506 > 78	3678.810	19943.203	1.00	4.78	2.306	12.500	12.1	96.6	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	18027.979	22134.828	1.00	4.29	10.181	12.500	11.1	88.8	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3475.157	3518.320	1.00	4.79	12.347	12.500	13.2	105.6	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	17857.156	19077.539	1.00	5.08	11.700	12.500	12.4	98.9	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1054.832	3518.320	1.00	5.05	3.748	12.500	12.9	103.0	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	3690.109	19943.203	1.00	5.22	2.313	12.500	13.4	107.5	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	18565.443	19943.203	1.00	5.39	11.636	12.500	11.5	92.4	NO		

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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82	d5-N-EtFOSAA-RSD	589.3 > 419	4190.298	19943.203	1.00	5.38	2.626	12.500	11.6	93.1	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	18517.162	19077.539	1.00	5.67	12.133	12.500	12.1	97.1	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	688.921	3518.320	1.00	5.66	2.448	12.500	10.4	83.2	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	16860.805	19943.203	1.00	5.83	10.568	149.200	139	93.2	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	18754.758	19943.203	1.00	6.12	11.755	12.500	12.1	97.1	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	22512.211	19943.203	1.00	6.20	14.110	149.200	139	93.4	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	25505.473	19943.203	1.00	6.43	15.986	12.500	10.6	85.0	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	15521.402	19943.203	1.00	6.30	9.729	149.200	131	87.8	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	19186.887	19943.203	1.00	6.45	12.026	149.200	139	93.0	NO		
119	99	13C4-PFBA	217.0 > 172.0	4003.940	4003.940	1.00	1.48	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	15103.579	15103.579	1.00	3.18	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	22134.828	22134.828	1.00	4.29	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1389.390	1389.390	1.00	3.91	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	16952.029	16952.029	1.00	4.72	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	3518.320	3518.320	1.00	4.80	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	19077.539	19077.539	1.00	5.08	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	19943.203	19943.203	1.00	5.40	12.500	12.500	12.5	100.0	NO		

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Low points
PFNA 0.5
PFDS
PFTrDA
PFDoS
9Cl-PF3ONS 1.0
10:2 FTS
8:2 FTS 2.0

High points
3:3 FTCA 100
5:3 FTCA
7:3 FTCA

PFNs not valid

RK 2/26/20
2/26/2020

Method: P:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022520.mdb 26 Feb 2020 11:36:08
Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-25-20.cdb 26 Feb 2020 11:25:03

Compound name: PFBA
Correlation coefficient: r = 0.999793, r^2 = 0.999585
Calibration curve: 1.10726 * x + 0.0852146
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	1.42	251.559	9872.161	0.319	0.2	-15.7	NO	1.000	NO	bb
2	2	200225P1-4	Standard	0.500	1.42	439.612	9951.374	0.552	0.4	-15.6	NO	1.000	NO	bb
3	3	200225P1-5	Standard	1.000	1.42	1109.572	10533.185	1.317	1.1	11.2	NO	1.000	NO	bb
4	4	200225P1-6	Standard	2.000	1.42	2038.873	10658.726	2.391	2.1	4.1	NO	1.000	NO	bb
5	5	200225P1-7	Standard	5.000	1.42	5143.872	10773.149	5.968	5.3	6.3	NO	1.000	NO	bb
6	6	200225P1-8	Standard	10.000	1.42	10631.475	11177.676	11.889	10.7	6.6	NO	1.000	NO	bb
7	7	200225P1-9	Standard	50.000	1.42	50046.164	11035.579	56.687	51.1	2.2	NO	1.000	NO	bb
8	8	200225P1-10	Standard	100.000	1.42	106591.211	11651.084	114.358	103.2	3.2	NO	1.000	NO	bb
9	9	200225P1-11	Standard	250.000	1.42	241177.609	11160.096	270.134	243.9	-2.4	NO	1.000	NO	bb
10	10	200225P1-12	Standard	500.000	1.42	487071.875	10979.427	554.528	500.7	0.1	NO	1.000	NO	bb

Compound name: PFPrS
Correlation coefficient: r = 0.999715, r^2 = 0.999431
Calibration curve: 1.65319 * x + -0.00618218
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	1.74	34.731	1408.205	0.308	0.2	-23.9	NO	0.999	NO	bb
2	2	200225P1-4	Standard	0.500	1.75	100.188	1358.158	0.922	0.6	12.3	NO	0.999	NO	MM
3	3	200225P1-5	Standard	1.000	1.75	205.334	1522.097	1.686	1.0	2.4	NO	0.999	NO	MM
4	4	200225P1-6	Standard	2.000	1.74	369.582	1551.953	2.977	1.8	-9.8	NO	0.999	NO	bb
5	5	200225P1-7	Standard	5.000	1.74	1050.319	1433.439	9.159	5.5	10.9	NO	0.999	NO	bb
6	6	200225P1-8	Standard	10.000	1.74	2054.670	1500.538	17.116	10.4	3.6	NO	0.999	NO	bb
7	7	200225P1-9	Standard	50.000	1.75	9997.262	1530.989	81.624	49.4	-1.2	NO	0.999	NO	bb
8	8	200225P1-10	Standard	100.000	1.75	21068.074	1504.221	175.075	105.9	5.9	NO	0.999	NO	bb
9	9	200225P1-11	Standard	250.000	1.74	45765.277	1395.008	410.081	248.1	-0.8	NO	0.999	NO	bb
10	10	200225P1-12	Standard	500.000	1.74	89382.742	1362.782	819.855	495.9	-0.8	NO	0.999	NO	bb

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Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.999447
Calibration curve: 6.20578e-005 * x^2 + 0.0762417 * x + 0.00385416
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	2.20	24.067	12501.022	0.024	0.3	6.0	NO	0.999	NO	bb
2	2	200225P1-4	Standard	0.500	2.20	43.714	12270.164	0.045	0.5	6.7	NO	0.999	NO	bb
3	3	200225P1-5	Standard	1.000	2.20	87.024	13581.839	0.080	1.0	-0.1	NO	0.999	NO	bb
4	4	200225P1-6	Standard	2.000	2.20	159.950	12997.605	0.154	2.0	-1.8	NO	0.999	NO	bb
5	5	200225P1-7	Standard	5.000	2.20	454.582	13570.021	0.419	5.4	8.4	NO	0.999	NO	bb
6	6	200225P1-8	Standard	10.000	2.20	901.412	14147.710	0.796	10.3	3.1	NO	0.999	NO	bb
7	7	200225P1-9	Standard	50.000	2.20	4349.683	14067.085	3.865	48.7	-2.6	NO	0.999	NO	bb
8	8	200225P1-10	Standard	100.000	2.20	9372.919	14119.896	8.298	100.6	0.6	NO	0.999	NO	bb
9	9	200225P1-11	Standard	250.000	2.20	4452.209	12998.085	4.282	53.8	-78.5	YES	0.999	NO	bbX
10	10	200225P1-12	Standard	500.000	2.20	8717.536	13078.697	8.332	100.9	-79.8	YES	0.999	NO	bbX

Compound name: PFPeA
Coefficient of Determination: R^2 = 0.999596
Calibration curve: -5.10583e-005 * x^2 + 0.975868 * x + 0.0396465
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	2.35	259.623	12501.022	0.260	0.2	-9.8	NO	1.000	NO	bb
2	2	200225P1-4	Standard	0.500	2.34	554.083	12270.164	0.564	0.5	7.6	NO	1.000	NO	bb
3	3	200225P1-5	Standard	1.000	2.34	1124.376	13581.839	1.035	1.0	2.0	NO	1.000	NO	bb
4	4	200225P1-6	Standard	2.000	2.34	2243.757	12997.605	2.158	2.2	8.5	NO	1.000	NO	bb
5	5	200225P1-7	Standard	5.000	2.34	5681.469	13570.021	5.233	5.3	6.5	NO	1.000	NO	bb
6	6	200225P1-8	Standard	10.000	2.34	11192.529	14147.710	9.889	10.1	1.0	NO	1.000	NO	bb
7	7	200225P1-9	Standard	50.000	2.34	54158.324	14067.085	48.125	49.4	-1.2	NO	1.000	NO	bb
8	8	200225P1-10	Standard	100.000	2.35	113797.125	14119.896	100.742	103.8	3.8	NO	1.000	NO	bb
9	9	200225P1-11	Standard	250.000	2.34	244207.125	12998.085	234.849	243.7	-2.5	NO	1.000	NO	bb
10	10	200225P1-12	Standard	500.000	2.35	499626.188	13078.697	477.519	502.5	0.5	NO	1.000	NO	bb

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Compound name: PFBS
Correlation coefficient: r = 0.998996, r^2 = 0.997993
Calibration curve: 2.30898 * x + 0.0728009
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	2.62	56.385	1408.205	0.501	0.2	-25.9	NO	0.998	NO	bb
2	2	200225P1-4	Standard	0.500	2.62	131.499	1358.158	1.210	0.5	-1.5	NO	0.998	NO	bb
3	3	200225P1-5	Standard	1.000	2.62	296.173	1522.097	2.432	1.0	2.2	NO	0.998	NO	bb
4	4	200225P1-6	Standard	2.000	2.62	617.726	1551.953	4.975	2.1	6.2	NO	0.998	NO	bb
5	5	200225P1-7	Standard	5.000	2.62	1524.157	1433.439	13.291	5.7	14.5	NO	0.998	NO	bb
6	6	200225P1-8	Standard	10.000	2.62	2879.698	1500.538	23.989	10.4	3.6	NO	0.998	NO	bb
7	7	200225P1-9	Standard	50.000	2.62	15113.940	1530.989	123.400	53.4	6.8	NO	0.998	NO	bb
8	8	200225P1-10	Standard	100.000	2.62	30759.455	1504.221	255.610	110.7	10.7	NO	0.998	NO	bb
9	9	200225P1-11	Standard	250.000	2.62	63297.770	1395.008	567.181	245.6	-1.8	NO	0.998	NO	bb
10	10	200225P1-12	Standard	500.000	2.62	123142.719	1362.782	1129.516	489.2	-2.2	NO	0.998	NO	bb

Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.999367
Calibration curve: -0.000434108 * x^2 + 1.38843 * x + -0.178318
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	3.05	29.600	1753.283	0.211	0.3	12.2	NO	0.999	NO	bb
2	2	200225P1-4	Standard	0.500	3.04	73.153	1601.853	0.571	0.5	7.9	NO	0.999	NO	bb
3	3	200225P1-5	Standard	1.000	3.04	158.563	1829.602	1.083	0.9	-9.1	NO	0.999	NO	bb
4	4	200225P1-6	Standard	2.000	3.04	291.394	1688.643	2.157	1.7	-15.9	NO	0.999	NO	bb
5	5	200225P1-7	Standard	5.000	3.04	1006.785	1677.821	7.501	5.5	10.8	NO	0.999	NO	MM
6	6	200225P1-8	Standard	10.000	3.04	1901.413	1863.165	12.757	9.3	-6.6	NO	0.999	NO	bb
7	7	200225P1-9	Standard	50.000	3.04	9683.509	1822.118	66.430	48.7	-2.6	NO	0.999	NO	bb
8	8	200225P1-10	Standard	100.000	3.04	18633.348	1658.604	140.429	104.7	4.7	NO	0.999	NO	bb
9	9	200225P1-11	Standard	250.000	3.04	38064.813	1513.540	314.369	245.4	-1.9	NO	0.999	NO	bb
10	10	200225P1-12	Standard	500.000	3.04	72026.602	1533.288	587.191	501.8	0.4	NO	0.999	NO	bb

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Compound name: PFHxA
Correlation coefficient: r = 0.999532, r^2 = 0.999064
Calibration curve: 0.893131 * x + 0.0844687
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	0.250	3.13	408.921	20600.543	0.248	0.2	-26.7	NO	0.999	NO	bb
2	2 200225P1-4	Standard	0.500	3.13	868.738	20141.500	0.539	0.5	1.8	NO	0.999	NO	bb
3	3 200225P1-5	Standard	1.000	3.13	2081.999	22269.994	1.169	1.2	21.4	NO	0.999	NO	bb
4	4 200225P1-6	Standard	2.000	3.13	3485.344	21692.803	2.008	2.2	7.7	NO	0.999	NO	bb
5	5 200225P1-7	Standard	5.000	3.13	9025.080	21797.625	5.175	5.7	14.0	NO	0.999	NO	bb
6	6 200225P1-8	Standard	10.000	3.13	18079.037	22434.781	10.073	11.2	11.8	NO	0.999	NO	bb
7	7 200225P1-9	Standard	50.000	3.13	85265.031	22617.182	47.124	52.7	5.3	NO	0.999	NO	bb
8	8 200225P1-10	Standard	100.000	3.13	184612.094	24636.209	93.669	104.8	4.8	NO	0.999	NO	bb
9	9 200225P1-11	Standard	250.000	3.13	394941.938	22282.359	221.555	248.0	-0.8	NO	0.999	NO	bb
10	10 200225P1-12	Standard	500.000	3.13	766067.313	21770.824	439.847	492.4	-1.5	NO	0.999	NO	bb

Compound name: PFPeS
Coefficient of Determination: R^2 = 0.999064
Calibration curve: -0.000730443 * x^2 + 2.38201 * x + -0.0672473
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	0.250	3.34	74.246	1408.205	0.659	0.3	22.0	NO	0.999	NO	bb
2	2 200225P1-4	Standard	0.500	3.34	84.241	1358.158	0.775	0.4	-29.2	NO	0.999	NO	bb
3	3 200225P1-5	Standard	1.000	3.32	259.810	1522.097	2.134	0.9	-7.6	NO	0.999	NO	bb
4	4 200225P1-6	Standard	2.000	3.32	511.543	1551.953	4.120	1.8	-12.1	NO	0.999	NO	bb
5	5 200225P1-7	Standard	5.000	3.32	1463.007	1433.439	12.758	5.4	7.9	NO	0.999	NO	bb
6	6 200225P1-8	Standard	10.000	3.32	2960.002	1500.538	24.658	10.4	4.1	NO	0.999	NO	bb
7	7 200225P1-9	Standard	50.000	3.32	14794.395	1530.989	120.791	51.6	3.1	NO	0.999	NO	bb
8	8 200225P1-10	Standard	100.000	3.32	28802.242	1504.221	239.345	103.8	3.8	NO	0.999	NO	bb
9	9 200225P1-11	Standard	250.000	3.32	58911.777	1395.008	527.880	239.2	-4.3	NO	0.999	NO	bb
10	10 200225P1-12	Standard	500.000	3.32	110896.992	1362.782	1017.193	505.4	1.1	NO	0.999	NO	bb

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Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.999495
Calibration curve: -0.000187555 * x^2 + 0.995843 * x + 0.017923
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	3.35	52.057	3378.505	0.193	0.2	-29.8	NO	0.999	NO	bb
2	2	200225P1-4	Standard	0.500	3.34	164.853	3609.127	0.571	0.6	11.1	NO	0.999	NO	bb
3	3	200225P1-5	Standard	1.000	3.34	330.065	3804.277	1.085	1.1	7.1	NO	0.999	NO	bb
4	4	200225P1-6	Standard	2.000	3.34	618.137	3980.255	1.941	1.9	-3.4	NO	0.999	NO	bb
5	5	200225P1-7	Standard	5.000	3.34	1683.543	3826.282	5.500	5.5	10.2	NO	0.999	NO	bb
6	6	200225P1-8	Standard	10.000	3.34	3467.524	3927.562	11.036	11.1	10.9	NO	0.999	NO	bb
7	7	200225P1-9	Standard	50.000	3.34	16440.258	4045.775	50.795	51.5	3.0	NO	0.999	NO	bb
8	8	200225P1-10	Standard	100.000	3.34	35654.125	4556.917	97.802	100.1	0.1	NO	0.999	NO	bb
9	9	200225P1-11	Standard	250.000	3.34	76661.898	4140.616	231.433	243.6	-2.6	NO	0.999	NO	bb
10	10	200225P1-12	Standard	500.000	3.34	152800.328	4209.138	453.776	503.4	0.7	NO	0.999	NO	bb

Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.999699
Calibration curve: 1.76506e-005 * x^2 + 0.186062 * x + -0.00829431
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	3.68	46.139	14315.611	0.040	0.3	4.4	NO	1.000	NO	bb
2	2	200225P1-4	Standard	0.500	3.67	84.125	13755.051	0.076	0.5	-8.9	NO	1.000	NO	bb
3	3	200225P1-5	Standard	1.000	3.67	198.046	15124.546	0.164	0.9	-7.6	NO	1.000	NO	bb
4	4	200225P1-6	Standard	2.000	3.67	470.692	15091.041	0.390	2.1	7.0	NO	1.000	NO	bb
5	5	200225P1-7	Standard	5.000	3.67	1156.000	15019.074	0.962	5.2	4.3	NO	1.000	NO	bb
6	6	200225P1-8	Standard	10.000	3.67	2335.252	15418.089	1.893	10.2	2.1	NO	1.000	NO	MM
7	7	200225P1-9	Standard	50.000	3.67	11314.848	15402.855	9.182	49.2	-1.7	NO	1.000	NO	bb
8	8	200225P1-10	Standard	100.000	3.67	24340.861	16144.262	18.846	100.4	0.4	NO	1.000	NO	bb
9	9	200225P1-11	Standard	250.000	3.67	11122.743	14336.560	9.698	51.9	-79.2	YES	1.000	NO	bbX
10	10	200225P1-12	Standard	500.000	3.67	22914.650	14353.899	19.955	106.2	-78.8	YES	1.000	NO	bbX

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Compound name: PFHpA
Coefficient of Determination: R^2 = 0.999835
Calibration curve: -0.000213241 * x^2 + 1.2385 * x + 0.0521085
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	3.73	325.110	14315.611	0.284	0.2	-25.1	NO	1.000	NO	bb
2	2	200225P1-4	Standard	0.500	3.72	830.759	13755.051	0.755	0.6	13.5	NO	1.000	NO	MM
3	3	200225P1-5	Standard	1.000	3.72	1537.658	15124.546	1.271	1.0	-1.6	NO	1.000	NO	MM
4	4	200225P1-6	Standard	2.000	3.72	3162.798	15091.041	2.620	2.1	3.7	NO	1.000	NO	bb
5	5	200225P1-7	Standard	5.000	3.72	7984.577	15019.074	6.645	5.3	6.6	NO	1.000	NO	bb
6	6	200225P1-8	Standard	10.000	3.72	15772.457	15418.089	12.787	10.3	3.0	NO	1.000	NO	bb
7	7	200225P1-9	Standard	50.000	3.73	75329.375	15402.855	61.133	49.7	-0.5	NO	1.000	NO	bb
8	8	200225P1-10	Standard	100.000	3.73	159716.875	16144.262	123.664	101.6	1.6	NO	1.000	NO	bb
9	9	200225P1-11	Standard	250.000	3.72	335124.125	14336.560	292.194	246.3	-1.5	NO	1.000	NO	bb
10	10	200225P1-12	Standard	500.000	3.72	651910.188	14353.899	567.712	501.7	0.3	NO	1.000	NO	bb

Compound name: ADONA
Coefficient of Determination: R^2 = 0.999654
Calibration curve: -0.00033118 * x^2 + 2.85271 * x + 0.0577579
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	3.84	804.333	14315.611	0.702	0.2	-9.6	NO	1.000	NO	bb
2	2	200225P1-4	Standard	0.500	3.83	1657.521	13755.051	1.506	0.5	1.6	NO	1.000	NO	bb
3	3	200225P1-5	Standard	1.000	3.83	3447.736	15124.546	2.849	1.0	-2.1	NO	1.000	NO	bb
4	4	200225P1-6	Standard	2.000	3.83	7266.229	15091.041	6.019	2.1	4.5	NO	1.000	NO	bb
5	5	200225P1-7	Standard	5.000	3.83	17935.957	15019.074	14.928	5.2	4.3	NO	1.000	NO	bb
6	6	200225P1-8	Standard	10.000	3.83	37234.676	15418.089	30.187	10.6	5.7	NO	1.000	NO	bb
7	7	200225P1-9	Standard	50.000	3.83	167793.672	15402.855	136.171	48.0	-4.0	NO	1.000	NO	bb
8	8	200225P1-10	Standard	100.000	3.83	356669.906	16144.262	276.158	97.9	-2.1	NO	1.000	NO	bb
9	9	200225P1-11	Standard	250.000	3.83	811379.125	14336.560	707.439	255.5	2.2	NO	1.000	NO	bb
10	10	200225P1-12	Standard	500.000	3.83	1536289.125	14353.899	1337.867	497.7	-0.5	NO	1.000	NO	bb

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Compound name: L-PFHxS
Correlation coefficient: r = 0.999271, r^2 = 0.998543
Calibration curve: 1.01885 * x + 0.0424708
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	3.87	76.970	3089.414	0.311	0.3	5.6	NO	0.999	NO	MM
2	2	200225P1-4	Standard	0.500	3.86	129.879	3233.223	0.502	0.5	-9.8	NO	0.999	NO	MM
3	3	200225P1-5	Standard	1.000	3.86	260.478	3312.404	0.983	0.9	-7.7	NO	0.999	NO	MM
4	4	200225P1-6	Standard	2.000	3.87	506.015	3236.657	1.954	1.9	-6.2	NO	0.999	NO	MM
5	5	200225P1-7	Standard	5.000	3.86	1492.745	3307.574	5.641	5.5	9.9	NO	0.999	NO	MM
6	6	200225P1-8	Standard	10.000	3.86	2706.336	3416.446	9.902	9.7	-3.2	NO	0.999	NO	MM
7	7	200225P1-9	Standard	50.000	3.86	13853.379	3190.156	54.282	53.2	6.5	NO	0.999	NO	MM
8	8	200225P1-10	Standard	100.000	3.86	30621.656	3452.222	110.877	108.8	8.8	NO	0.999	NO	MM
9	9	200225P1-11	Standard	250.000	3.86	64861.746	3280.190	247.172	242.6	-3.0	NO	0.999	NO	MM
10	10	200225P1-12	Standard	500.000	3.86	122824.227	3040.974	504.872	495.5	-0.9	NO	0.999	NO	MM

Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.997864
Calibration curve: -0.000277268 * x^2 + 1.56695 * x + 0.134499
Response type: Internal Std (Ref 63), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	4.18	59.670	1250.351	0.597	0.3	18.0	NO	0.998	NO	bb
2	2	200225P1-4	Standard	0.500	4.18	85.714	1319.649	0.812	0.4	-13.5	NO	0.998	NO	bb
3	3	200225P1-5	Standard	1.000	4.18	209.655	1355.616	1.933	1.1	14.8	NO	0.998	NO	bb
4	4	200225P1-6	Standard	2.000	4.17	465.777	1587.204	3.668	2.3	12.8	NO	0.998	NO	bb
5	5	200225P1-7	Standard	5.000	4.17	897.850	1543.772	7.270	4.6	-8.9	NO	0.998	NO	bb
6	6	200225P1-8	Standard	10.000	4.18	2133.570	1534.965	17.375	11.0	10.2	NO	0.998	NO	bb
7	7	200225P1-9	Standard	50.000	4.18	9310.367	1552.968	74.940	48.1	-3.7	NO	0.998	NO	bb
8	8	200225P1-10	Standard	100.000	4.18	22085.416	1647.530	167.565	109.0	9.0	NO	0.998	NO	bb
9	9	200225P1-11	Standard	250.000	4.18	39580.113	1393.243	355.108	236.4	-5.4	NO	0.998	NO	bb
10	10	200225P1-12	Standard	500.000	4.18	85141.984	1474.945	721.569	505.6	1.1	NO	0.998	NO	bb

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Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.999126
Calibration curve: -0.000157489 * x^2 + 1.13112 * x + 0.114857
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	4.24	503.119	18905.670	0.333	0.2	-23.0	NO	0.999	NO	bb
2	2	200225P1-4	Standard	0.500	4.23	996.054	19025.869	0.654	0.5	-4.6	NO	0.999	NO	bd
3	3	200225P1-5	Standard	1.000	4.23	2011.736	19788.479	1.271	1.0	2.2	NO	0.999	NO	bb
4	4	200225P1-6	Standard	2.000	4.23	4166.273	21544.221	2.417	2.0	1.8	NO	0.999	NO	bb
5	5	200225P1-7	Standard	5.000	4.23	11167.409	20464.119	6.821	5.9	18.7	NO	0.999	NO	bb
6	6	200225P1-8	Standard	10.000	4.23	18678.193	19919.584	11.721	10.3	2.8	NO	0.999	NO	db
7	7	200225P1-9	Standard	50.000	4.23	94867.516	20725.129	57.218	50.8	1.7	NO	0.999	NO	bb
8	8	200225P1-10	Standard	100.000	4.23	199573.672	21582.922	115.585	103.6	3.6	NO	0.999	NO	bb
9	9	200225P1-11	Standard	250.000	4.23	434959.406	20718.783	262.419	239.9	-4.0	NO	0.999	NO	bb
10	10	200225P1-12	Standard	500.000	4.23	764072.625	17996.074	530.722	504.5	0.9	NO	0.999	NO	bb

Compound name: PFecHS
Coefficient of Determination: R^2 = 0.996153
Calibration curve: 4.46408e-005 * x^2 + 0.147633 * x + 0.0114163
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	4.25	72.448	18905.670	0.048	0.2	-1.2	NO	0.996	NO	bb
2	2	200225P1-4	Standard	0.500	4.25	118.703	19025.869	0.078	0.5	-9.8	NO	0.996	NO	bb
3	3	200225P1-5	Standard	1.000	4.24	263.136	19788.479	0.166	1.0	4.8	NO	0.996	NO	bb
4	4	200225P1-6	Standard	2.000	4.24	509.567	21544.221	0.296	1.9	-3.8	NO	0.996	NO	bb
5	5	200225P1-7	Standard	5.000	4.24	1340.190	20464.119	0.819	5.5	9.2	NO	0.996	NO	bb
6	6	200225P1-8	Standard	10.000	4.24	2933.219	19919.584	1.841	12.3	23.4	NO	0.996	NO	MM
7	7	200225P1-9	Standard	50.000	4.24	13468.983	20725.129	8.124	54.1	8.1	NO	0.996	NO	bb
8	8	200225P1-10	Standard	100.000	4.25	28229.432	21582.922	16.349	107.2	7.2	NO	0.996	NO	bb
9	9	200225P1-11	Standard	250.000	4.24	59663.828	20718.783	35.996	228.0	-8.8	NO	0.996	NO	bb
10	10	200225P1-12	Standard	500.000	4.24	124604.023	17996.074	86.549	508.1	1.6	NO	0.996	NO	bb

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Compound name: PFHpS
Coefficient of Determination: R^2 = 0.999533
Calibration curve: -1.97849e-005 * x^2 + 0.928406 * x + 0.0131066
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	4.35	47.931	3392.257	0.177	0.2	-29.6	NO	1.000	NO	bb
2	2	200225P1-4	Standard	0.500	4.34	138.523	3412.653	0.507	0.5	6.5	NO	1.000	NO	bb
3	3	200225P1-5	Standard	1.000	4.35	266.151	3819.392	0.871	0.9	-7.6	NO	1.000	NO	bb
4	4	200225P1-6	Standard	2.000	4.34	570.152	3246.941	2.195	2.4	17.5	NO	1.000	NO	bb
5	5	200225P1-7	Standard	5.000	4.34	1578.352	3799.922	5.192	5.6	11.6	NO	1.000	NO	bb
6	6	200225P1-8	Standard	10.000	4.34	3018.898	3646.993	10.347	11.1	11.3	NO	1.000	NO	bb
7	7	200225P1-9	Standard	50.000	4.34	14246.896	4032.981	44.157	47.6	-4.8	NO	1.000	NO	bb
8	8	200225P1-10	Standard	100.000	4.34	29885.527	3990.603	93.612	101.0	1.0	NO	1.000	NO	bb
9	9	200225P1-11	Standard	250.000	4.34	65846.547	3581.742	229.799	248.8	-0.5	NO	1.000	NO	bb
10	10	200225P1-12	Standard	500.000	4.34	125758.219	3418.734	459.813	500.6	0.1	NO	1.000	NO	bb

Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.998547
Calibration curve: 8.1341e-005 * x^2 + 0.155084 * x + -0.0133127
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	4.66	26.776	17239.375	0.019	0.2	-15.6	NO	0.999	NO	bb
2	2	200225P1-4	Standard	0.500	4.65	86.818	16726.338	0.065	0.5	0.8	NO	0.999	NO	bb
3	3	200225P1-5	Standard	1.000	4.66	212.802	19469.943	0.137	1.0	-3.4	NO	0.999	NO	bb
4	4	200225P1-6	Standard	2.000	4.65	471.534	17698.107	0.333	2.2	11.5	NO	0.999	NO	bb
5	5	200225P1-7	Standard	5.000	4.65	1164.208	19189.289	0.758	5.0	-0.7	NO	0.999	NO	bb
6	6	200225P1-8	Standard	10.000	4.65	2554.036	18650.008	1.712	11.1	10.6	NO	0.999	NO	bb
7	7	200225P1-9	Standard	50.000	4.66	12022.045	19754.828	7.607	47.9	-4.1	NO	0.999	NO	bb
8	8	200225P1-10	Standard	100.000	4.66	25325.600	19232.490	16.460	100.9	0.9	NO	0.999	NO	bb
9	9	200225P1-11	Standard	250.000	4.66	12172.553	18824.725	8.083	50.8	-79.7	YES	0.999	NO	bbX
10	10	200225P1-12	Standard	500.000	4.65	24093.377	17270.096	17.439	106.6	-78.7	YES	0.999	NO	bbX

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Compound name: PFNA
Correlation coefficient: r = 0.999628, r^2 = 0.999256
Calibration curve: 1.17976 * x + 0.155189
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	4.68	331.835	17239.375	0.241	0.1	-71.0	YES	0.999	NO	bbX
2	2	200225P1-4	Standard	0.500	4.67	1024.462	16726.338	0.766	0.5	3.5	NO	0.999	NO	bb
3	3	200225P1-5	Standard	1.000	4.67	1911.482	19469.943	1.227	0.9	-9.1	NO	0.999	NO	bb
4	4	200225P1-6	Standard	2.000	4.67	3983.001	17698.107	2.813	2.3	12.6	NO	0.999	NO	bb
5	5	200225P1-7	Standard	5.000	4.67	9800.355	19189.289	6.384	5.3	5.6	NO	0.999	NO	bb
6	6	200225P1-8	Standard	10.000	4.67	20052.207	18650.008	13.440	11.3	12.6	NO	0.999	NO	bb
7	7	200225P1-9	Standard	50.000	4.67	92364.797	19754.828	58.444	49.4	-1.2	NO	0.999	NO	bb
8	8	200225P1-10	Standard	100.000	4.67	190532.734	19232.490	123.835	104.8	4.8	NO	0.999	NO	bb
9	9	200225P1-11	Standard	250.000	4.67	432450.375	18824.725	287.156	243.3	-2.7	NO	0.999	NO	bb
10	10	200225P1-12	Standard	500.000	4.67	816446.938	17270.096	590.940	500.8	0.2	NO	0.999	NO	bb

Compound name: PFOSA
Coefficient of Determination: R^2 = 0.998293
Calibration curve: 2.22748e-005 * x^2 + 0.82094 * x + -0.0255848
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	4.74	42.189	4235.302	0.125	0.2	-26.9	NO	0.998	NO	bb
2	2	200225P1-4	Standard	0.500	4.73	153.339	4234.348	0.453	0.6	16.5	NO	0.998	NO	bb
3	3	200225P1-5	Standard	1.000	4.73	309.915	4865.226	0.796	1.0	0.1	NO	0.998	NO	bb
4	4	200225P1-6	Standard	2.000	4.73	626.369	4669.988	1.677	2.1	3.7	NO	0.998	NO	bb
5	5	200225P1-7	Standard	5.000	4.73	1663.491	4849.630	4.288	5.3	5.1	NO	0.998	NO	bb
6	6	200225P1-8	Standard	10.000	4.73	3077.013	4697.788	8.187	10.0	0.0	NO	0.998	NO	bb
7	7	200225P1-9	Standard	50.000	4.73	15662.475	4952.633	39.531	48.1	-3.8	NO	0.998	NO	bb
8	8	200225P1-10	Standard	100.000	4.73	33165.664	4614.442	89.842	109.1	9.1	NO	0.998	NO	bb
9	9	200225P1-11	Standard	250.000	4.73	65960.297	4190.781	196.742	238.1	-4.7	NO	0.998	NO	bb
10	10	200225P1-12	Standard	500.000	4.73	139279.953	4149.340	419.585	504.2	0.8	NO	0.998	NO	bb

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Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.999204
Calibration curve: -1.248e-005 * x^2 + 0.936367 * x + -0.00626015
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	4.77	46.241	3392.257	0.170	0.2	-24.5	NO	0.999	NO	MM
2	2	200225P1-4	Standard	0.500	4.74	115.939	3412.653	0.425	0.5	-8.0	NO	0.999	NO	MM
3	3	200225P1-5	Standard	1.000	4.75	270.562	3819.392	0.885	1.0	-4.8	NO	0.999	NO	MM
4	4	200225P1-6	Standard	2.000	4.75	569.972	3246.941	2.194	2.4	17.5	NO	0.999	NO	MM
5	5	200225P1-7	Standard	5.000	4.75	1552.437	3799.922	5.107	5.5	9.2	NO	0.999	NO	MM
6	6	200225P1-8	Standard	10.000	4.75	3132.146	3646.993	10.735	11.5	14.7	NO	0.999	NO	MM
7	7	200225P1-9	Standard	50.000	4.75	14143.180	4032.981	43.836	46.9	-6.3	NO	0.999	NO	MM
8	8	200225P1-10	Standard	100.000	4.75	30848.615	3990.603	96.629	103.3	3.3	NO	0.999	NO	MM
9	9	200225P1-11	Standard	250.000	4.75	65811.383	3581.742	229.677	246.1	-1.6	NO	0.999	NO	MM
10	10	200225P1-12	Standard	500.000	4.75	127589.477	3418.734	466.508	501.6	0.3	NO	0.999	NO	MM

Compound name: 9Cl-PF30NS
Coefficient of Determination: R^2 = 0.999619
Calibration curve: -0.000173604 * x^2 + 0.991244 * x + 0.177624
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	4.97	55.418	3392.257	0.204	0.0	-89.3	YES	1.000	NO	bbX
2	2	200225P1-4	Standard	0.500	4.96	60.848	3412.653	0.223	0.0	-90.9	YES	1.000	NO	bbX
3	3	200225P1-5	Standard	1.000	4.96	351.945	3819.392	1.152	1.0	-1.7	NO	1.000	NO	bb
4	4	200225P1-6	Standard	2.000	4.96	574.381	3246.941	2.211	2.1	2.6	NO	1.000	NO	bb
5	5	200225P1-7	Standard	5.000	4.96	1389.860	3799.922	4.572	4.4	-11.3	NO	1.000	NO	bb
6	6	200225P1-8	Standard	10.000	4.96	3202.594	3646.993	10.977	10.9	9.2	NO	1.000	NO	bb
7	7	200225P1-9	Standard	50.000	4.96	15993.421	4032.981	49.571	50.3	0.5	NO	1.000	NO	bb
8	8	200225P1-10	Standard	100.000	4.96	31843.514	3990.603	99.745	102.3	2.3	NO	1.000	NO	bb
9	9	200225P1-11	Standard	250.000	4.96	66602.328	3581.742	232.437	244.8	-2.1	NO	1.000	NO	bb
10	10	200225P1-12	Standard	500.000	4.96	124243.469	3418.734	454.274	502.3	0.5	NO	1.000	NO	bb

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Compound name: PFDA
Coefficient of Determination: R^2 = 0.999769
Calibration curve: -0.000263391 * x^2 + 1.17334 * x + 0.0663551
Response type: Internal Std (Ref 73), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	0.250	5.04	457.555	17688.168	0.323	0.2	-12.4	NO	1.000	NO	bb
2	2 200225P1-4	Standard	0.500	5.04	1071.675	18158.623	0.738	0.6	14.5	NO	1.000	NO	bb
3	3 200225P1-5	Standard	1.000	5.04	2163.829	20772.906	1.302	1.1	5.3	NO	1.000	NO	bb
4	4 200225P1-6	Standard	2.000	5.04	4021.795	20265.523	2.481	2.1	2.9	NO	1.000	NO	bb
5	5 200225P1-7	Standard	5.000	5.04	9888.414	20194.920	6.121	5.2	3.3	NO	1.000	NO	bb
6	6 200225P1-8	Standard	10.000	5.04	21045.451	20439.703	12.870	10.9	9.4	NO	1.000	NO	bb
7	7 200225P1-9	Standard	50.000	5.04	97994.969	20732.352	59.083	50.9	1.8	NO	1.000	NO	bb
8	8 200225P1-10	Standard	100.000	5.04	188368.891	20899.775	112.662	98.1	-1.9	NO	1.000	NO	bb
9	9 200225P1-11	Standard	250.000	5.04	450311.469	20424.217	275.599	248.7	-0.5	NO	1.000	NO	bb
10	10 200225P1-12	Standard	500.000	5.04	862822.438	20667.172	521.856	501.1	0.2	NO	1.000	NO	bb

Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.996459
Calibration curve: -0.000340371 * x^2 + 1.34102 * x + -0.893418
Response type: Internal Std (Ref 75), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	0.250	5.02	31.988	1235.022	0.324	0.9	263.1	YES	0.996	NO	bbX
2	2 200225P1-4	Standard	0.500	5.00	40.994	1045.851	0.490	1.0	106.4	YES	0.996	NO	bbX
3	3 200225P1-5	Standard	1.000	5.01	186.388	1194.706	1.950	2.1	112.2	YES	0.996	NO	bbX
4	4 200225P1-6	Standard	2.000	5.02	192.389	1265.179	1.901	2.1	4.2	NO	0.996	NO	bb
5	5 200225P1-7	Standard	5.000	5.01	547.248	1294.409	5.285	4.6	-7.8	NO	0.996	NO	bb
6	6 200225P1-8	Standard	10.000	5.01	1349.860	1277.157	13.212	10.5	5.5	NO	0.996	NO	bb
7	7 200225P1-9	Standard	50.000	5.01	7535.736	1364.021	69.058	52.9	5.7	NO	0.996	NO	bb
8	8 200225P1-10	Standard	100.000	5.01	12873.406	1417.279	113.540	87.3	-12.7	NO	0.996	NO	bb
9	9 200225P1-11	Standard	250.000	5.01	32055.500	1207.879	331.733	266.0	6.4	NO	0.996	NO	bb
10	10 200225P1-12	Standard	500.000	5.01	59592.598	1288.608	578.071	493.6	-1.3	NO	0.996	NO	bb

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Compound name: PFNS
Correlation coefficient: r = 0.998965, r^2 = 0.997930
Calibration curve: 0.867271 * x + 0.295013
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

Excluded RK 2/26/20

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	5.10	49.022	3392.257	0.181			NO	0.998	NO	bbXI
2	2	200225P1-4	Standard	0.500	5.10	112.890	3412.653	0.413	0.1	-72.7	YES	0.998	NO	bbX
3	3	200225P1-5	Standard	1.000	5.10	256.200	3819.392	0.838	0.6	-37.3	YES	0.998	NO	bb
4	4	200225P1-6	Standard	2.000	5.09	700.913	3246.941	2.698	2.8	38.6	YES	0.998	NO	MM
5	5	200225P1-7	Standard	5.000	5.10	1528.818	3799.922	5.029	5.5	9.2	NO	0.998	NO	bb
6	6	200225P1-8	Standard	10.000	5.09	3037.604	3646.993	10.411	11.7	16.6	NO	0.998	NO	bb
7	7	200225P1-9	Standard	50.000	5.10	14384.352	4032.981	44.583	51.1	2.1	NO	0.998	NO	bb
8	8	200225P1-10	Standard	100.000	5.10	29223.545	3990.603	91.539	105.2	5.2	NO	0.998	NO	bb
9	9	200225P1-11	Standard	250.000	5.10	63943.840	3581.742	223.159	257.0	2.8	NO	0.998	NO	bb
10	10	200225P1-12	Standard	500.000	5.10	114939.531	3418.734	420.256	484.2	-3.2	NO	0.998	NO	bb

Compound name: L-MeFOSAA
Coefficient of Determination: R^2 = 0.997934
Calibration curve: -0.000651587 * x^2 + 1.94487 * x + -0.0570901
Response type: Internal Std (Ref 77), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	5.20	103.931	3174.144	0.409	0.2	-4.1	NO	0.998	NO	MM
2	2	200225P1-4	Standard	0.500	5.19	242.740	3469.963	0.874	0.5	-4.2	NO	0.998	NO	MM
3	3	200225P1-5	Standard	1.000	5.19	583.899	3495.821	2.088	1.1	10.3	NO	0.998	NO	MM
4	4	200225P1-6	Standard	2.000	5.19	1202.032	3645.388	4.122	2.2	7.5	NO	0.998	NO	MM
5	5	200225P1-7	Standard	5.000	5.18	2796.907	3633.896	9.621	5.0	-0.3	NO	0.998	NO	MM
6	6	200225P1-8	Standard	10.000	5.18	5463.069	4128.875	16.539	8.6	-14.4	NO	0.998	NO	MM
7	7	200225P1-9	Standard	50.000	5.19	29074.631	4188.330	86.773	45.3	-9.3	NO	0.998	NO	MM
8	8	200225P1-10	Standard	100.000	5.19	62112.598	4211.558	184.352	98.0	-2.0	NO	0.998	NO	MM
9	9	200225P1-11	Standard	250.000	5.19	137669.156	3648.913	471.610	266.3	6.5	NO	0.998	NO	MM
10	10	200225P1-12	Standard	500.000	5.19	258157.016	4043.613	798.039	491.2	-1.8	NO	0.998	NO	MM

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Method: P:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022520.mdb 26 Feb 2020 11:36:08
Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-25-20.cdb 26 Feb 2020 11:25:03

Compound name: L-EtFOSAA
Correlation coefficient: r = 0.999424, r^2 = 0.998848
Calibration curve: 1.19224 * x + 0.0364651
Response type: Internal Std (Ref 81), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	0.250	5.34	93.380	4635.703	0.252	0.2	-27.8	NO	0.999	NO	MM
2	2 200225P1-4	Standard	0.500	5.34	265.956	4671.362	0.712	0.6	13.3	NO	0.999	NO	MM
3	3 200225P1-5	Standard	1.000	5.34	502.087	5361.517	1.171	1.0	-4.9	NO	0.999	NO	MM
4	4 200225P1-6	Standard	2.000	5.34	1099.765	5107.157	2.692	2.2	11.4	NO	0.999	NO	MM
5	5 200225P1-7	Standard	5.000	5.34	2735.706	5470.047	6.252	5.2	4.3	NO	0.999	NO	MM
6	6 200225P1-8	Standard	10.000	5.34	4993.793	4941.707	12.632	10.6	5.6	NO	0.999	NO	MM
7	7 200225P1-9	Standard	50.000	5.34	25926.740	5109.596	63.427	53.2	6.3	NO	0.999	NO	MM
8	8 200225P1-10	Standard	100.000	5.34	54543.426	5321.571	128.119	107.4	7.4	NO	0.999	NO	MM
9	9 200225P1-11	Standard	250.000	5.34	116866.383	5012.692	291.426	244.4	-2.2	NO	0.999	NO	MM
10	10 200225P1-12	Standard	500.000	5.34	213568.469	4532.038	589.052	494.0	-1.2	NO	0.999	NO	MM

Compound name: PFUdA
Correlation coefficient: r = 0.998904, r^2 = 0.997808
Calibration curve: 0.920819 * x + 0.155174
Response type: Internal Std (Ref 79), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	0.250	5.36	544.443	18802.816	0.362	0.2	-10.2	NO	0.998	NO	bb
2	2 200225P1-4	Standard	0.500	5.35	841.646	20783.641	0.506	0.4	-23.8	NO	0.998	NO	bb
3	3 200225P1-5	Standard	1.000	5.35	1894.715	23235.645	1.019	0.9	-6.2	NO	0.998	NO	bb
4	4 200225P1-6	Standard	2.000	5.35	3511.903	22555.502	1.946	1.9	-2.7	NO	0.998	NO	bb
5	5 200225P1-7	Standard	5.000	5.35	9796.873	23655.426	5.177	5.5	9.1	NO	0.998	NO	bb
6	6 200225P1-8	Standard	10.000	5.35	18472.082	20213.629	11.423	12.2	22.4	NO	0.998	NO	bb
7	7 200225P1-9	Standard	50.000	5.35	88697.039	22435.588	49.418	53.5	7.0	NO	0.998	NO	bb
8	8 200225P1-10	Standard	100.000	5.35	184083.938	22887.840	100.536	109.0	9.0	NO	0.998	NO	bb
9	9 200225P1-11	Standard	250.000	5.35	405860.625	22758.658	222.916	241.9	-3.2	NO	0.998	NO	bb
10	10 200225P1-12	Standard	500.000	5.35	776508.125	21367.789	454.252	493.1	-1.4	NO	0.998	NO	bb

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Compound name: PFDS
Correlation coefficient: r = 0.999800, r^2 = 0.999601
Calibration curve: 0.767019 * x + 0.0116423
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	5.40	79.096	3392.257	0.291	0.4	45.9	YES	1.000	NO	bbX
2	2	200225P1-4	Standard	0.500	5.40	84.478	3412.653	0.309	0.4	-22.4	NO	1.000	NO	bb
3	3	200225P1-5	Standard	1.000	5.40	244.893	3819.392	0.801	1.0	3.0	NO	1.000	NO	bb
4	4	200225P1-6	Standard	2.000	5.40	402.231	3246.941	1.548	2.0	0.2	NO	1.000	NO	bb
5	5	200225P1-7	Standard	5.000	5.40	1288.323	3799.922	4.238	5.5	10.2	NO	1.000	NO	bb
6	6	200225P1-8	Standard	10.000	5.40	2517.942	3646.993	8.630	11.2	12.4	NO	1.000	NO	bb
7	7	200225P1-9	Standard	50.000	5.40	12173.148	4032.981	37.730	49.2	-1.6	NO	1.000	NO	bb
8	8	200225P1-10	Standard	100.000	5.40	25147.697	3990.603	78.772	102.7	2.7	NO	1.000	NO	bb
9	9	200225P1-11	Standard	250.000	5.40	54217.523	3581.742	189.215	246.7	-1.3	NO	1.000	NO	bb
10	10	200225P1-12	Standard	500.000	5.40	104850.586	3418.734	383.368	499.8	-0.0	NO	1.000	NO	bb

Compound name: 11Cl-PF30UdS
Correlation coefficient: r = 0.999589, r^2 = 0.999178
Calibration curve: 0.454613 * x + 0.0281832
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	5.56	187.509	19794.912	0.118	0.2	-20.6	NO	0.999	NO	bb
2	2	200225P1-4	Standard	0.500	5.56	355.033	17291.875	0.257	0.5	0.5	NO	0.999	NO	bb
3	3	200225P1-5	Standard	1.000	5.55	848.483	20924.223	0.507	1.1	5.3	NO	0.999	NO	MM
4	4	200225P1-6	Standard	2.000	5.56	1669.959	20403.285	1.023	2.2	9.4	NO	0.999	NO	bb
5	5	200225P1-7	Standard	5.000	5.56	4216.296	19895.336	2.649	5.8	15.3	NO	0.999	NO	bb
6	6	200225P1-8	Standard	10.000	5.56	8267.603	21078.160	4.903	10.7	7.2	NO	0.999	NO	bb
7	7	200225P1-9	Standard	50.000	5.56	39484.668	20754.656	23.781	52.2	4.5	NO	0.999	NO	bb
8	8	200225P1-10	Standard	100.000	5.56	82890.117	21822.719	47.479	104.4	4.4	NO	0.999	NO	bb
9	9	200225P1-11	Standard	250.000	5.56	186889.469	20369.846	114.685	252.2	0.9	NO	0.999	NO	bb
10	10	200225P1-12	Standard	500.000	5.56	327780.250	18409.998	222.556	489.5	-2.1	NO	0.999	NO	bb

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Compound name: 10:2 FTS
Correlation coefficient: r = 0.998945, r^2 = 0.997890
Calibration curve: 2.19744 * x + 0.426867
Response type: Internal Std (Ref 85), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	5.62	46.767	1004.549	0.582	0.1	-71.8	YES	0.998	NO	bbX
2	2	200225P1-4	Standard	0.500	5.62	45.970	877.858	0.655	0.1	-79.3	YES	0.998	NO	bbX
3	3	200225P1-5	Standard	1.000	5.62	178.349	1029.995	2.164	0.8	-20.9	NO	0.998	NO	bb
4	4	200225P1-6	Standard	2.000	5.61	464.011	986.869	5.877	2.5	24.0	NO	0.998	NO	bb
5	5	200225P1-7	Standard	5.000	5.61	739.347	863.880	10.698	4.7	-6.5	NO	0.998	NO	bb
6	6	200225P1-8	Standard	10.000	5.61	1678.809	899.490	23.330	10.4	4.2	NO	0.998	NO	bb
7	7	200225P1-9	Standard	50.000	5.61	7987.114	851.594	117.238	53.2	6.3	NO	0.998	NO	bb
8	8	200225P1-10	Standard	100.000	5.61	17130.980	1017.819	210.388	95.5	-4.5	NO	0.998	NO	bb
9	9	200225P1-11	Standard	250.000	5.61	35756.695	862.033	518.494	235.8	-5.7	NO	0.998	NO	bb
10	10	200225P1-12	Standard	500.000	5.61	62127.332	685.745	1132.479	515.2	3.0	NO	0.998	NO	bb

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999585
Calibration curve: -0.000140726 * x^2 + 1.07719 * x + 0.077473
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	5.64	593.686	19794.912	0.375	0.3	10.4	NO	1.000	NO	bb
2	2	200225P1-4	Standard	0.500	5.62	947.643	17291.875	0.685	0.6	12.8	NO	1.000	NO	bb
3	3	200225P1-5	Standard	1.000	5.62	1787.508	20924.223	1.068	0.9	-8.0	NO	1.000	NO	MM
4	4	200225P1-6	Standard	2.000	5.63	3915.553	20403.285	2.399	2.2	7.8	NO	1.000	NO	bb
5	5	200225P1-7	Standard	5.000	5.63	9412.472	19895.336	5.914	5.4	8.4	NO	1.000	NO	bb
6	6	200225P1-8	Standard	10.000	5.63	17203.012	21078.160	10.202	9.4	-5.9	NO	1.000	NO	bb
7	7	200225P1-9	Standard	50.000	5.63	92027.055	20754.656	55.426	51.7	3.5	NO	1.000	NO	bb
8	8	200225P1-10	Standard	100.000	5.63	188755.781	21822.719	108.119	101.6	1.6	NO	1.000	NO	bb
9	9	200225P1-11	Standard	250.000	5.63	414706.250	20369.846	254.485	244.0	-2.4	NO	1.000	NO	bb
10	10	200225P1-12	Standard	500.000	5.63	745256.063	18409.998	506.013	502.7	0.5	NO	1.000	NO	bb

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Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.999583
Calibration curve: -5.69994e-005 * x^2 + 1.0553 * x + -0.0250783
Response type: Internal Std (Ref 87), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	1.250	5.74	144.805	18385.910	1.175	1.1	-9.0	NO	1.000	NO	bb
2	2	200225P1-4	Standard	2.500	5.74	315.843	18984.031	2.482	2.4	-4.9	NO	1.000	NO	bb
3	3	200225P1-5	Standard	5.000	5.74	732.130	20984.184	5.206	5.0	-0.8	NO	1.000	NO	bb
4	4	200225P1-6	Standard	10.000	5.74	1435.152	20764.477	10.312	9.8	-2.0	NO	1.000	NO	bb
5	5	200225P1-7	Standard	25.000	5.74	3851.416	20656.791	27.818	26.4	5.7	NO	1.000	NO	bb
6	6	200225P1-8	Standard	50.000	5.74	8076.269	21116.357	57.064	54.3	8.5	NO	1.000	NO	bb
7	7	200225P1-9	Standard	250.000	5.74	37439.641	21394.961	261.089	250.8	0.3	NO	1.000	NO	bb
8	8	200225P1-10	Standard	500.000	5.74	80771.094	22915.986	525.879	512.5	2.5	NO	1.000	NO	bb
9	9	200225P1-11	Standard	1250.000	5.74	170242.203	21205.846	1197.789	1214.7	-2.8	NO	1.000	NO	bb
10	10	200225P1-12	Standard	2500.000	5.74	324194.531	21072.350	2295.417	2517.5	0.7	NO	1.000	NO	bb

Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.999093
Calibration curve: 1.12175e-006 * x^2 + 1.08591 * x + 0.374825
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	5.87	537.969	19794.912	0.340			NO	0.999	NO	bbXI
2	2	200225P1-4	Standard	0.500	5.87	1220.636	17291.875	0.882	0.5	-6.5	NO	0.999	NO	bb
3	3	200225P1-5	Standard	1.000	5.87	2002.379	20924.223	1.196	0.8	-24.4	NO	0.999	NO	bb
4	4	200225P1-6	Standard	2.000	5.87	4230.163	20403.285	2.592	2.0	2.1	NO	0.999	NO	bb
5	5	200225P1-7	Standard	5.000	5.87	10647.867	19895.336	6.690	5.8	16.3	NO	0.999	NO	bb
6	6	200225P1-8	Standard	10.000	5.87	20937.168	21078.160	12.416	11.1	10.9	NO	0.999	NO	bb
7	7	200225P1-9	Standard	50.000	5.87	92226.523	20754.656	55.546	50.8	1.6	NO	0.999	NO	bb
8	8	200225P1-10	Standard	100.000	5.87	195963.422	21822.719	112.247	103.0	3.0	NO	0.999	NO	bb
9	9	200225P1-11	Standard	250.000	5.87	426230.313	20369.846	261.557	240.5	-3.8	NO	0.999	NO	bb
10	10	200225P1-12	Standard	500.000	5.87	807121.875	18409.998	548.019	504.1	0.8	NO	0.999	NO	bb

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Compound name: PFDoS
Coefficient of Determination: R^2 = 0.999202
Calibration curve: -4.44146e-005 * x^2 + 0.161935 * x + 0.00601354
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	5.90	21.233	23904.145	0.011	0.0	-87.4	YES	0.999	NO	bbX
2	2	200225P1-4	Standard	0.500	5.89	149.160	20899.578	0.089	0.5	2.8	NO	0.999	NO	bb
3	3	200225P1-5	Standard	1.000	5.89	326.647	23536.283	0.173	1.0	3.4	NO	0.999	NO	bb
4	4	200225P1-6	Standard	2.000	5.89	580.527	22335.166	0.325	2.0	-1.5	NO	0.999	NO	bb
5	5	200225P1-7	Standard	5.000	5.89	1462.156	23810.332	0.768	4.7	-5.8	NO	0.999	NO	bb
6	6	200225P1-8	Standard	10.000	5.89	3003.140	23705.125	1.584	9.8	-2.3	NO	0.999	NO	bb
7	7	200225P1-9	Standard	50.000	5.89	14830.561	23014.939	8.055	50.4	0.8	NO	0.999	NO	bb
8	8	200225P1-10	Standard	100.000	5.89	31653.822	23827.521	16.606	105.6	5.6	NO	0.999	NO	bb
9	9	200225P1-11	Standard	250.000	5.89	61548.113	21136.031	36.400	240.6	-3.8	NO	0.999	NO	bb
10	10	200225P1-12	Standard	500.000	5.89	115091.773	20449.318	70.352	504.1	0.8	NO	0.999	NO	bb

Compound name: PFTeDA
Correlation coefficient: r = 0.999213, r^2 = 0.998426
Calibration curve: 0.946667 * x + 0.0579059
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	6.08	477.552	23904.145	0.250	0.2	-19.0	NO	0.998	NO	bb
2	2	200225P1-4	Standard	0.500	6.08	944.693	20899.578	0.565	0.5	7.1	NO	0.998	NO	MM
3	3	200225P1-5	Standard	1.000	6.08	1971.794	23536.283	1.047	1.0	4.5	NO	0.998	NO	bb
4	4	200225P1-6	Standard	2.000	6.08	3860.449	22335.166	2.161	2.2	11.1	NO	0.998	NO	bb
5	5	200225P1-7	Standard	5.000	6.08	10577.326	23810.332	5.553	5.8	16.1	NO	0.998	NO	bb
6	6	200225P1-8	Standard	10.000	6.08	18747.641	23705.125	9.886	10.4	3.8	NO	0.998	NO	bb
7	7	200225P1-9	Standard	50.000	6.08	85487.188	23014.939	46.430	49.0	-2.0	NO	0.998	NO	bb
8	8	200225P1-10	Standard	100.000	6.08	193038.250	23827.521	101.269	106.9	6.9	NO	0.998	NO	bb
9	9	200225P1-11	Standard	250.000	6.08	379475.656	21136.031	224.425	237.0	-5.2	NO	0.998	NO	bb
10	10	200225P1-12	Standard	500.000	6.08	783200.375	20449.318	478.745	505.7	1.1	NO	0.998	NO	bb

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Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999776
Calibration curve: -4.37352e-005 * x^2 + 1.0291 * x + 0.393476
Response type: Internal Std (Ref 91), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	1.250	6.15	208.553	23419.826	1.329	0.9	-27.3	NO	1.000	NO	bb
2	2	200225P1-4	Standard	2.500	6.14	512.089	23933.094	3.192	2.7	8.8	NO	1.000	NO	bb
3	3	200225P1-5	Standard	5.000	6.14	1003.737	25590.486	5.852	5.3	6.1	NO	1.000	NO	bb
4	4	200225P1-6	Standard	10.000	6.14	1945.755	25775.242	11.263	10.6	5.7	NO	1.000	NO	bb
5	5	200225P1-7	Standard	25.000	6.14	4870.803	27285.506	26.634	25.5	2.1	NO	1.000	NO	bb
6	6	200225P1-8	Standard	50.000	6.14	9589.706	26960.850	53.069	51.3	2.6	NO	1.000	NO	bb
7	7	200225P1-9	Standard	250.000	6.14	46161.355	26238.824	262.484	257.5	3.0	NO	1.000	NO	bb
8	8	200225P1-10	Standard	500.000	6.14	95860.039	28234.779	506.550	502.6	0.5	NO	1.000	NO	bb
9	9	200225P1-11	Standard	1250.000	6.14	201542.813	25151.254	1195.574	1225.2	-2.0	NO	1.000	NO	bb
10	10	200225P1-12	Standard	2500.000	6.14	368161.094	23779.672	2309.941	2512.5	0.5	NO	1.000	NO	bb

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999460
Calibration curve: -0.000122127 * x^2 + 0.737678 * x + 0.157258
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	6.41	753.043	32718.949	0.288	0.2	-29.3	NO	0.999	NO	bb
2	2	200225P1-4	Standard	0.500	6.40	1211.264	30851.906	0.491	0.5	-9.6	NO	0.999	NO	bb
3	3	200225P1-5	Standard	1.000	6.40	2498.671	32443.676	0.963	1.1	9.2	NO	0.999	NO	bb
4	4	200225P1-6	Standard	2.000	6.41	4652.971	31620.527	1.839	2.3	14.1	NO	0.999	NO	bb
5	5	200225P1-7	Standard	5.000	6.40	11228.415	34460.848	4.073	5.3	6.3	NO	0.999	NO	bb
6	6	200225P1-8	Standard	10.000	6.40	20775.832	32395.119	8.017	10.7	6.7	NO	0.999	NO	bb
7	7	200225P1-9	Standard	50.000	6.40	98060.156	31727.350	38.634	52.6	5.2	NO	0.999	NO	bb
8	8	200225P1-10	Standard	100.000	6.41	211525.328	36623.570	72.196	99.3	-0.7	NO	0.999	NO	bb
9	9	200225P1-11	Standard	250.000	6.40	436039.063	31588.863	172.545	243.5	-2.6	NO	0.999	NO	bb
10	10	200225P1-12	Standard	500.000	6.41	797207.938	29260.670	340.563	503.4	0.7	NO	0.999	NO	bb

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Compound name: PFODA
Coefficient of Determination: R^2 = 0.999550
Calibration curve: -6.40276e-006 * x^2 + 0.881896 * x + 0.0287076
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	0.250	6.64	583.234	32718.949	0.223	0.2	-12.0	NO	1.000	NO	bb
2	2	200225P1-4	Standard	0.500	6.63	1104.625	30851.906	0.448	0.5	-5.0	NO	1.000	NO	bd
3	3	200225P1-5	Standard	1.000	6.63	2355.217	32443.676	0.907	1.0	-0.4	NO	1.000	NO	bb
4	4	200225P1-6	Standard	2.000	6.63	5138.837	31620.527	2.031	2.3	13.5	NO	1.000	NO	bd
5	5	200225P1-7	Standard	5.000	6.63	13186.104	34460.848	4.783	5.4	7.8	NO	1.000	NO	bb
6	6	200225P1-8	Standard	10.000	6.63	24421.926	32395.119	9.423	10.7	6.5	NO	1.000	NO	bb
7	7	200225P1-9	Standard	50.000	6.63	116767.883	31727.350	46.004	52.2	4.3	NO	1.000	NO	bb
8	8	200225P1-10	Standard	100.000	6.63	258772.859	36623.570	88.322	100.2	0.2	NO	1.000	NO	bb
9	9	200225P1-11	Standard	250.000	6.63	541393.813	31588.863	214.234	243.3	-2.7	NO	1.000	NO	bb
10	10	200225P1-12	Standard	500.000	6.63	1034823.875	29260.670	442.071	503.1	0.6	NO	1.000	NO	bb

Compound name: N-MeFOSE
Correlation coefficient: r = 0.997589, r^2 = 0.995184
Calibration curve: 1.07295 * x + 0.022575
Response type: Internal Std (Ref 95), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	1.250	6.30	123.446	17691.047	1.041	0.9	-24.1	NO	0.995	NO	bb
2	2	200225P1-4	Standard	2.500	6.30	310.259	17581.641	2.633	2.4	-2.7	NO	0.995	NO	bb
3	3	200225P1-5	Standard	5.000	6.29	675.737	19041.301	5.295	4.9	-1.7	NO	0.995	NO	bb
4	4	200225P1-6	Standard	10.000	6.29	1452.987	18451.818	11.749	10.9	9.3	NO	0.995	NO	bb
5	5	200225P1-7	Standard	25.000	6.29	3410.557	18629.246	27.315	25.4	1.7	NO	0.995	NO	bb
6	6	200225P1-8	Standard	50.000	6.29	7090.701	18021.730	58.703	54.7	9.4	NO	0.995	NO	bb
7	7	200225P1-9	Standard	250.000	6.29	36033.684	19080.988	281.758	262.6	5.0	NO	0.995	NO	bb
8	8	200225P1-10	Standard	500.000	6.29	80229.258	20077.549	596.199	555.6	11.1	NO	0.995	NO	bb
9	9	200225P1-11	Standard	1250.000	6.29	167555.297	20780.801	1202.997	1121.2	-10.3	NO	0.995	NO	bb
10	10	200225P1-12	Standard	2500.000	6.29	348097.469	18944.963	2741.422	2555.0	2.2	NO	0.995	NO	bb

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Compound name: N-EtFOSE
Correlation coefficient: r = 0.999471, r^2 = 0.998943
Calibration curve: 0.98218 * x + 0.297158
Response type: Internal Std (Ref 97), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	1.250	6.45	180.219	19924.037	1.350	1.1	-14.3	NO	0.999	NO	bb
2	2 200225P1-4	Standard	2.500	6.44	371.980	21132.717	2.626	2.4	-5.1	NO	0.999	NO	MM
3	3 200225P1-5	Standard	5.000	6.44	798.631	22095.117	5.393	5.2	3.8	NO	0.999	NO	bb
4	4 200225P1-6	Standard	10.000	6.44	1454.679	21809.131	9.952	9.8	-1.7	NO	0.999	NO	bb
5	5 200225P1-7	Standard	25.000	6.44	4005.540	22094.990	27.048	27.2	8.9	NO	0.999	NO	bb
6	6 200225P1-8	Standard	50.000	6.44	7915.414	22275.373	53.017	53.7	7.4	NO	0.999	NO	bb
7	7 200225P1-9	Standard	250.000	6.44	37896.887	22478.264	251.541	255.8	2.3	NO	0.999	NO	bb
8	8 200225P1-10	Standard	500.000	6.44	80644.219	23963.234	502.107	510.9	2.2	NO	0.999	NO	bb
9	9 200225P1-11	Standard	1250.000	6.44	183635.031	23505.465	1165.616	1186.5	-5.1	NO	0.999	NO	bb
10	10 200225P1-12	Standard	2500.000	6.44	373089.125	22299.754	2496.211	2541.2	1.6	NO	0.999	NO	bb

Compound name: 13C3-PFBA-EIS
Response Factor: 894.214
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	1.42	9872.161		9872.161	11.0	-11.7	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	1.42	9951.374		9951.374	11.1	-11.0	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	1.42	10533.185		10533.185	11.8	-5.8	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	1.42	10658.726		10658.726	11.9	-4.6	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	1.42	10773.149		10773.149	12.0	-3.6	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	1.42	11177.676		11177.676	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	1.42	11035.579		11035.579	12.3	-1.3	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	1.42	11651.084		11651.084	13.0	4.2	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	1.42	11160.096		11160.096	12.5	-0.2	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	1.42	10979.427		10979.427	12.3	-1.8	NO		NO	bbX

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Compound name: 13C3-PFBA-RSD
Response Factor: 0.799885
RRF SD: 0.00658297, Relative SD: 0.82299
Response type: Internal Std (Ref 99), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	1.42	9872.161	12266.709	10.060	12.6	0.6	NO		NO	bb
2	2 200225P1-4	Standard	12.500	1.42	9951.374	12331.454	10.087	12.6	0.9	NO		NO	bb
3	3 200225P1-5	Standard	12.500	1.42	10533.185	13320.676	9.884	12.4	-1.1	NO		NO	bb
4	4 200225P1-6	Standard	12.500	1.42	10658.726	13219.248	10.079	12.6	0.8	NO		NO	bb
5	5 200225P1-7	Standard	12.500	1.42	10773.149	13469.415	9.998	12.5	-0.0	NO		NO	bb
6	6 200225P1-8	Standard	12.500	1.42	11177.676	14016.627	9.968	12.5	-0.3	NO		NO	bb
7	7 200225P1-9	Standard	12.500	1.42	11035.579	13947.172	9.891	12.4	-1.1	NO		NO	bb
8	8 200225P1-10	Standard	12.500	1.42	11651.084	14579.886	9.989	12.5	-0.1	NO		NO	bb
9	9 200225P1-11	Standard	12.500	1.42	11160.096	13803.979	10.106	12.6	1.1	NO		NO	bb
10	10 200225P1-12	Standard	12.500	1.42	10979.427	13829.581	9.924	12.4	-0.7	NO		NO	bb

Compound name: 13C3-PFPeA-EIS
Response Factor: 1131.82
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	2.34	12501.022		12501.022	11.0	-11.6	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	2.34	12270.164		12270.164	10.8	-13.3	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	2.34	13581.839		13581.839	12.0	-4.0	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	2.34	12997.605		12997.605	11.5	-8.1	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	2.34	13570.021		13570.021	12.0	-4.1	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	2.34	14147.710		14147.710	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	2.34	14067.085		14067.085	12.4	-0.6	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	2.34	14119.896		14119.896	12.5	-0.2	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	2.34	12998.085		12998.085	11.5	-8.1	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	2.35	13078.697		13078.697	11.6	-7.6	NO		NO	bbX

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Compound name: 13C3-PFPeA-RSD
Response Factor: 0.58948
RRF SD: 0.0172638, Relative SD: 2.92865
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	12.500	2.34	12501.022	21026.791	7.432	12.6	0.9	NO		NO	bb
2	2	200225P1-4	Standard	12.500	2.34	12270.164	21114.680	7.264	12.3	-1.4	NO		NO	bb
3	3	200225P1-5	Standard	12.500	2.34	13581.839	23180.252	7.324	12.4	-0.6	NO		NO	bb
4	4	200225P1-6	Standard	12.500	2.34	12997.605	21748.432	7.470	12.7	1.4	NO		NO	bb
5	5	200225P1-7	Standard	12.500	2.34	13570.021	22122.477	7.668	13.0	4.1	NO		NO	bb
6	6	200225P1-8	Standard	12.500	2.34	14147.710	24673.588	7.167	12.2	-2.7	NO		NO	bb
7	7	200225P1-9	Standard	12.500	2.34	14067.085	23036.369	7.633	12.9	3.6	NO		NO	bb
8	8	200225P1-10	Standard	12.500	2.34	14119.896	24870.381	7.097	12.0	-3.7	NO		NO	bb
9	9	200225P1-11	Standard	12.500	2.34	12998.085	22955.182	7.078	12.0	-3.9	NO		NO	bb
10	10	200225P1-12	Standard	12.500	2.35	13078.697	21647.338	7.552	12.8	2.5	NO		NO	bb

Compound name: 13C3-PFBS-EIS
Response Factor: 120.043
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	12.500	2.62	1408.205		1408.205	11.7	-6.2	NO		NO	bbX
2	2	200225P1-4	Standard	12.500	2.62	1358.158		1358.158	11.3	-9.5	NO		NO	bbX
3	3	200225P1-5	Standard	12.500	2.62	1522.097		1522.097	12.7	1.4	NO		NO	bbX
4	4	200225P1-6	Standard	12.500	2.62	1551.953		1551.953	12.9	3.4	NO		NO	bbX
5	5	200225P1-7	Standard	12.500	2.61	1433.439		1433.439	11.9	-4.5	NO		NO	bbX
6	6	200225P1-8	Standard	12.500	2.62	1500.538		1500.538	12.5	0.0	NO		NO	bb
7	7	200225P1-9	Standard	12.500	2.62	1530.989		1530.989	12.8	2.0	NO		NO	bbX
8	8	200225P1-10	Standard	12.500	2.62	1504.221		1504.221	12.5	0.2	NO		NO	bbX
9	9	200225P1-11	Standard	12.500	2.61	1395.008		1395.008	11.6	-7.0	NO		NO	bbX
10	10	200225P1-12	Standard	12.500	2.62	1362.782		1362.782	11.4	-9.2	NO		NO	bbX

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Compound name: 13C3-PFBS-RSD
Response Factor: 1.12694
RRF SD: 0.108089, Relative SD: 9.59142
Response type: Internal Std (Ref 101), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	2.62	1408.205	1002.938	17.551	15.6	24.6	NO		NO	bb
2	2 200225P1-4	Standard	12.500	2.62	1358.158	1233.002	13.769	12.2	-2.3	NO		NO	bb
3	3 200225P1-5	Standard	12.500	2.62	1522.097	1410.673	13.487	12.0	-4.3	NO		NO	bb
4	4 200225P1-6	Standard	12.500	2.62	1551.953	1330.276	14.583	12.9	3.5	NO		NO	bb
5	5 200225P1-7	Standard	12.500	2.61	1433.439	1261.312	14.206	12.6	0.8	NO		NO	bb
6	6 200225P1-8	Standard	12.500	2.62	1500.538	1378.876	13.603	12.1	-3.4	NO		NO	bb
7	7 200225P1-9	Standard	12.500	2.62	1530.989	1316.816	14.533	12.9	3.2	NO		NO	bb
8	8 200225P1-10	Standard	12.500	2.62	1504.221	1449.444	12.972	11.5	-7.9	NO		NO	bb
9	9 200225P1-11	Standard	12.500	2.61	1395.008	1340.803	13.005	11.5	-7.7	NO		NO	bb
10	10 200225P1-12	Standard	12.500	2.62	1362.782	1294.671	13.158	11.7	-6.6	NO		NO	bb

Compound name: 13C3-HFPO-DA-EIS
Response Factor: 314.205
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	3.34	3378.505		3378.505	10.8	-14.0	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	3.34	3609.127		3609.127	11.5	-8.1	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	3.34	3804.277		3804.277	12.1	-3.1	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	3.34	3980.255		3980.255	12.7	1.3	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	3.34	3826.282		3826.282	12.2	-2.6	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	3.34	3927.562		3927.562	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	3.34	4045.775		4045.775	12.9	3.0	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	3.34	4556.917		4556.917	14.5	16.0	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	3.34	4140.616		4140.616	13.2	5.4	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	3.34	4209.138		4209.138	13.4	7.2	NO		NO	bbX

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Compound name: 13C3-HFPO-DA-RSD
Response Factor: 0.174455
RRF SD: 0.0112091, Relative SD: 6.4252
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	12.500	3.34	3378.505	21026.791	2.008	11.5	-7.9	NO		NO	bb
2	2	200225P1-4	Standard	12.500	3.34	3609.127	21114.680	2.137	12.2	-2.0	NO		NO	bb
3	3	200225P1-5	Standard	12.500	3.34	3804.277	23180.252	2.051	11.8	-5.9	NO		NO	bb
4	4	200225P1-6	Standard	12.500	3.34	3980.255	21748.432	2.288	13.1	4.9	NO		NO	bb
5	5	200225P1-7	Standard	12.500	3.34	3826.282	22122.477	2.162	12.4	-0.9	NO		NO	bb
6	6	200225P1-8	Standard	12.500	3.34	3927.562	24673.588	1.990	11.4	-8.8	NO		NO	bb
7	7	200225P1-9	Standard	12.500	3.34	4045.775	23036.369	2.195	12.6	0.7	NO		NO	bb
8	8	200225P1-10	Standard	12.500	3.34	4556.917	24870.381	2.290	13.1	5.0	NO		NO	bb
9	9	200225P1-11	Standard	12.500	3.34	4140.616	22955.182	2.255	12.9	3.4	NO		NO	bb
10	10	200225P1-12	Standard	12.500	3.34	4209.138	21647.338	2.431	13.9	11.5	NO		NO	bb

Compound name: 13C2-4:2 FTS-EIS
Response Factor: 149.053
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	12.500	3.04	1753.283		1753.283	11.8	-5.9	NO		NO	bbX
2	2	200225P1-4	Standard	12.500	3.04	1601.853		1601.853	10.7	-14.0	NO		NO	bbX
3	3	200225P1-5	Standard	12.500	3.04	1829.602		1829.602	12.3	-1.8	NO		NO	bbX
4	4	200225P1-6	Standard	12.500	3.04	1688.643		1688.643	11.3	-9.4	NO		NO	bbX
5	5	200225P1-7	Standard	12.500	3.04	1677.821		1677.821	11.3	-9.9	NO		NO	bbX
6	6	200225P1-8	Standard	12.500	3.04	1863.165		1863.165	12.5	0.0	NO		NO	bb
7	7	200225P1-9	Standard	12.500	3.04	1822.118		1822.118	12.2	-2.2	NO		NO	bbX
8	8	200225P1-10	Standard	12.500	3.04	1658.604		1658.604	11.1	-11.0	NO		NO	bbX
9	9	200225P1-11	Standard	12.500	3.04	1513.540		1513.540	10.2	-18.8	NO		NO	bbX
10	10	200225P1-12	Standard	12.500	3.04	1533.288		1533.288	10.3	-17.7	NO		NO	bbX

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Compound name: 13C2-4:2 FTS-RSD
Response Factor: 1.31363
RRF SD: 0.175562, Relative SD: 13.3647
Response type: Internal Std (Ref 101), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	3.04	1753.283	1002.938	21.852	16.6	33.1	NO		NO	bb
2	2 200225P1-4	Standard	12.500	3.04	1601.853	1233.002	16.239	12.4	-1.1	NO		NO	bb
3	3 200225P1-5	Standard	12.500	3.04	1829.602	1410.673	16.212	12.3	-1.3	NO		NO	bb
4	4 200225P1-6	Standard	12.500	3.04	1688.643	1330.276	15.867	12.1	-3.4	NO		NO	bb
5	5 200225P1-7	Standard	12.500	3.04	1677.821	1261.312	16.628	12.7	1.3	NO		NO	bb
6	6 200225P1-8	Standard	12.500	3.04	1863.165	1378.876	16.890	12.9	2.9	NO		NO	bb
7	7 200225P1-9	Standard	12.500	3.04	1822.118	1316.816	17.297	13.2	5.3	NO		NO	bb
8	8 200225P1-10	Standard	12.500	3.04	1658.604	1449.444	14.304	10.9	-12.9	NO		NO	bb
9	9 200225P1-11	Standard	12.500	3.04	1513.540	1340.803	14.110	10.7	-14.1	NO		NO	bb
10	10 200225P1-12	Standard	12.500	3.04	1533.288	1294.671	14.804	11.3	-9.8	NO		NO	bb

Compound name: 13C2-PFHxA-EIS
Response Factor: 1794.78
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	3.13	20600.543		20600.543	11.5	-8.2	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	3.13	20141.500		20141.500	11.2	-10.2	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	3.13	22269.994		22269.994	12.4	-0.7	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	3.13	21692.803		21692.803	12.1	-3.3	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	3.13	21797.625		21797.625	12.1	-2.8	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	3.13	22434.781		22434.781	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	3.13	22617.182		22617.182	12.6	0.8	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	3.13	24636.209		24636.209	13.7	9.8	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	3.13	22282.359		22282.359	12.4	-0.7	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	3.13	21770.824		21770.824	12.1	-3.0	NO		NO	bbX

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Compound name: 13C2-PFHxA-RSD
Response Factor: 0.973517
RRF SD: 0.0275493, Relative SD: 2.82987
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	3.13	20600.543	21026.791	12.247	12.6	0.6	NO		NO	bb
2	2 200225P1-4	Standard	12.500	3.13	20141.500	21114.680	11.924	12.2	-2.0	NO		NO	bb
3	3 200225P1-5	Standard	12.500	3.13	22269.994	23180.252	12.009	12.3	-1.3	NO		NO	bb
4	4 200225P1-6	Standard	12.500	3.13	21692.803	21748.432	12.468	12.8	2.5	NO		NO	bb
5	5 200225P1-7	Standard	12.500	3.13	21797.625	22122.477	12.316	12.7	1.2	NO		NO	bb
6	6 200225P1-8	Standard	12.500	3.13	22434.781	24673.588	11.366	11.7	-6.6	NO		NO	bb
7	7 200225P1-9	Standard	12.500	3.13	22617.182	23036.369	12.273	12.6	0.9	NO		NO	bb
8	8 200225P1-10	Standard	12.500	3.13	24636.209	24870.381	12.382	12.7	1.8	NO		NO	bb
9	9 200225P1-11	Standard	12.500	3.13	22282.359	22955.182	12.134	12.5	-0.3	NO		NO	bb
10	10 200225P1-12	Standard	12.500	3.13	21770.824	21647.338	12.571	12.9	3.3	NO		NO	bb

Compound name: 13C4-PFHpA-EIS
Response Factor: 1233.45
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	3.73	14315.611		14315.611	11.6	-7.2	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	3.72	13755.051		13755.051	11.2	-10.8	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	3.72	15124.546		15124.546	12.3	-1.9	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	3.72	15091.041		15091.041	12.2	-2.1	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	3.72	15019.074		15019.074	12.2	-2.6	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	3.72	15418.089		15418.089	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	3.72	15402.855		15402.855	12.5	-0.1	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	3.73	16144.262		16144.262	13.1	4.7	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	3.72	14336.560		14336.560	11.6	-7.0	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	3.72	14353.899		14353.899	11.6	-6.9	NO		NO	bbX

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Compound name: 13C4-PFHpA-RSD
Response Factor: 0.658782
RRF SD: 0.0229663, Relative SD: 3.48617
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	12.500	3.73	14315.611	21026.791	8.510	12.9	3.3	NO		NO	bb
2	2	200225P1-4	Standard	12.500	3.72	13755.051	21114.680	8.143	12.4	-1.1	NO		NO	bb
3	3	200225P1-5	Standard	12.500	3.72	15124.546	23180.252	8.156	12.4	-1.0	NO		NO	bb
4	4	200225P1-6	Standard	12.500	3.72	15091.041	21748.432	8.674	13.2	5.3	NO		NO	bb
5	5	200225P1-7	Standard	12.500	3.72	15019.074	22122.477	8.486	12.9	3.1	NO		NO	bb
6	6	200225P1-8	Standard	12.500	3.72	15418.089	24673.588	7.811	11.9	-5.1	NO		NO	bb
7	7	200225P1-9	Standard	12.500	3.72	15402.855	23036.369	8.358	12.7	1.5	NO		NO	bb
8	8	200225P1-10	Standard	12.500	3.73	16144.262	24870.381	8.114	12.3	-1.5	NO		NO	bb
9	9	200225P1-11	Standard	12.500	3.72	14336.560	22955.182	7.807	11.9	-5.2	NO		NO	bb
10	10	200225P1-12	Standard	12.500	3.72	14353.899	21647.338	8.288	12.6	0.7	NO		NO	bb

Compound name: 13C3-PFHxS-EIS
Response Factor: 273.316
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	12.500	3.87	3089.414		3089.414	11.3	-9.6	NO		NO	bbX
2	2	200225P1-4	Standard	12.500	3.86	3233.223		3233.223	11.8	-5.4	NO		NO	bbX
3	3	200225P1-5	Standard	12.500	3.86	3312.404		3312.404	12.1	-3.0	NO		NO	bbX
4	4	200225P1-6	Standard	12.500	3.86	3236.657		3236.657	11.8	-5.3	NO		NO	bbX
5	5	200225P1-7	Standard	12.500	3.86	3307.574		3307.574	12.1	-3.2	NO		NO	bbX
6	6	200225P1-8	Standard	12.500	3.86	3416.446		3416.446	12.5	0.0	NO		NO	bb
7	7	200225P1-9	Standard	12.500	3.86	3190.156		3190.156	11.7	-6.6	NO		NO	bbX
8	8	200225P1-10	Standard	12.500	3.86	3452.222		3452.222	12.6	1.0	NO		NO	bbX
9	9	200225P1-11	Standard	12.500	3.86	3280.190		3280.190	12.0	-4.0	NO		NO	bbX
10	10	200225P1-12	Standard	12.500	3.86	3040.974		3040.974	11.1	-11.0	NO		NO	bbX

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Compound name: 13C3-PFHxS-RSD
Response Factor: 2.51835
RRF SD: 0.220378, Relative SD: 8.7509
Response type: Internal Std (Ref 101), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	3.87	3089.414	1002.938	38.505	15.3	22.3	NO		NO	bb
2	2 200225P1-4	Standard	12.500	3.86	3233.223	1233.002	32.778	13.0	4.1	NO		NO	bb
3	3 200225P1-5	Standard	12.500	3.86	3312.404	1410.673	29.351	11.7	-6.8	NO		NO	bb
4	4 200225P1-6	Standard	12.500	3.86	3236.657	1330.276	30.413	12.1	-3.4	NO		NO	bb
5	5 200225P1-7	Standard	12.500	3.86	3307.574	1261.312	32.779	13.0	4.1	NO		NO	bb
6	6 200225P1-8	Standard	12.500	3.86	3416.446	1378.876	30.971	12.3	-1.6	NO		NO	bb
7	7 200225P1-9	Standard	12.500	3.86	3190.156	1316.816	30.283	12.0	-3.8	NO		NO	bb
8	8 200225P1-10	Standard	12.500	3.86	3452.222	1449.444	29.772	11.8	-5.4	NO		NO	bb
9	9 200225P1-11	Standard	12.500	3.86	3280.190	1340.803	30.580	12.1	-2.9	NO		NO	bb
10	10 200225P1-12	Standard	12.500	3.86	3040.974	1294.671	29.360	11.7	-6.7	NO		NO	bb

Compound name: 13C2-6:2 FTS-EIS
Response Factor: 122.797
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	4.18	1250.351		1250.351	10.2	-18.5	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	4.18	1319.649		1319.649	10.7	-14.0	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	4.18	1355.616		1355.616	11.0	-11.7	NO		NO	bdX
4	4 200225P1-6	Standard	12.500	4.17	1587.204		1587.204	12.9	3.4	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	4.17	1543.772		1543.772	12.6	0.6	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	4.17	1534.965		1534.965	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	4.18	1552.968		1552.968	12.6	1.2	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	4.18	1647.530		1647.530	13.4	7.3	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	4.18	1393.243		1393.243	11.3	-9.2	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	4.18	1474.945		1474.945	12.0	-3.9	NO		NO	bbX

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Compound name: 13C2-6:2 FTS-RSD
Response Factor: 0.384457
RRF SD: 0.0445393, Relative SD: 11.585
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	4.18	1250.351	3783.710	4.131	10.7	-14.0	NO		NO	bb
2	2 200225P1-4	Standard	12.500	4.18	1319.649	3695.773	4.463	11.6	-7.1	NO		NO	bb
3	3 200225P1-5	Standard	12.500	4.18	1355.616	3791.307	4.469	11.6	-7.0	NO		NO	bd
4	4 200225P1-6	Standard	12.500	4.17	1587.204	3236.887	6.129	15.9	27.5	NO		NO	bb
5	5 200225P1-7	Standard	12.500	4.17	1543.772	4232.745	4.559	11.9	-5.1	NO		NO	bb
6	6 200225P1-8	Standard	12.500	4.17	1534.965	3902.713	4.916	12.8	2.3	NO		NO	bb
7	7 200225P1-9	Standard	12.500	4.18	1552.968	4223.934	4.596	12.0	-4.4	NO		NO	bb
8	8 200225P1-10	Standard	12.500	4.18	1647.530	4363.684	4.719	12.3	-1.8	NO		NO	bb
9	9 200225P1-11	Standard	12.500	4.18	1393.243	3634.562	4.792	12.5	-0.3	NO		NO	bb
10	10 200225P1-12	Standard	12.500	4.18	1474.945	3490.466	5.282	13.7	9.9	NO		NO	bb

Compound name: 13C5-PFNA-EIS
Response Factor: 1492
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	4.67	17239.375		17239.375	11.6	-7.6	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	4.67	16726.338		16726.338	11.2	-10.3	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	4.67	19469.943		19469.943	13.0	4.4	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	4.67	17698.107		17698.107	11.9	-5.1	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	4.67	19189.289		19189.289	12.9	2.9	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	4.67	18650.008		18650.008	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	4.67	19754.828		19754.828	13.2	5.9	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	4.67	19232.490		19232.490	12.9	3.1	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	4.67	18824.725		18824.725	12.6	0.9	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	4.67	17270.096		17270.096	11.6	-7.4	NO		NO	bbX

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Compound name: 13C5-PFNA-RSD
Response Factor: 0.937983
RRF SD: 0.0315373, Relative SD: 3.36224
Response type: Internal Std (Ref 103), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	12.500	4.67	17239.375	19086.615	11.290	12.0	-3.7	NO		NO	bb
2	2	200225P1-4	Standard	12.500	4.67	16726.338	18558.656	11.266	12.0	-3.9	NO		NO	bb
3	3	200225P1-5	Standard	12.500	4.67	19469.943	20561.016	11.837	12.6	1.0	NO		NO	bb
4	4	200225P1-6	Standard	12.500	4.67	17698.107	18224.971	12.139	12.9	3.5	NO		NO	bb
5	5	200225P1-7	Standard	12.500	4.67	19189.289	19280.119	12.441	13.3	6.1	NO		NO	bb
6	6	200225P1-8	Standard	12.500	4.67	18650.008	20431.225	11.410	12.2	-2.7	NO		NO	bb
7	7	200225P1-9	Standard	12.500	4.67	19754.828	20764.564	11.892	12.7	1.4	NO		NO	bb
8	8	200225P1-10	Standard	12.500	4.67	19232.490	21059.193	11.416	12.2	-2.6	NO		NO	bb
9	9	200225P1-11	Standard	12.500	4.67	18824.725	20309.342	11.586	12.4	-1.2	NO		NO	bb
10	10	200225P1-12	Standard	12.500	4.67	17270.096	18033.258	11.971	12.8	2.1	NO		NO	bb

Compound name: 13C8-PFOSA-EIS
Response Factor: 375.823
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	12.500	4.73	4235.302		4235.302	11.3	-9.8	NO		NO	bbX
2	2	200225P1-4	Standard	12.500	4.73	4234.348		4234.348	11.3	-9.9	NO		NO	bbX
3	3	200225P1-5	Standard	12.500	4.73	4865.226		4865.226	12.9	3.6	NO		NO	bbX
4	4	200225P1-6	Standard	12.500	4.73	4669.988		4669.988	12.4	-0.6	NO		NO	bbX
5	5	200225P1-7	Standard	12.500	4.73	4849.630		4849.630	12.9	3.2	NO		NO	bbX
6	6	200225P1-8	Standard	12.500	4.73	4697.788		4697.788	12.5	0.0	NO		NO	bb
7	7	200225P1-9	Standard	12.500	4.73	4952.633		4952.633	13.2	5.4	NO		NO	bbX
8	8	200225P1-10	Standard	12.500	4.73	4614.442		4614.442	12.3	-1.8	NO		NO	bbX
9	9	200225P1-11	Standard	12.500	4.73	4190.781		4190.781	11.2	-10.8	NO		NO	bbX
10	10	200225P1-12	Standard	12.500	4.73	4149.340		4149.340	11.0	-11.7	NO		NO	bbX

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Compound name: 13C8-PFOSA-RSD
Response Factor: 0.21001
RRF SD: 0.0157948, Relative SD: 7.52098
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	4.73	4235.302	19831.211	2.670	12.7	1.7	NO		NO	bb
2	2 200225P1-4	Standard	12.500	4.73	4234.348	20433.932	2.590	12.3	-1.3	NO		NO	bb
3	3 200225P1-5	Standard	12.500	4.73	4865.226	23449.227	2.593	12.3	-1.2	NO		NO	bb
4	4 200225P1-6	Standard	12.500	4.73	4669.988	21906.523	2.665	12.7	1.5	NO		NO	bb
5	5 200225P1-7	Standard	12.500	4.73	4849.630	23637.857	2.565	12.2	-2.3	NO		NO	bb
6	6 200225P1-8	Standard	12.500	4.73	4697.788	22421.760	2.619	12.5	-0.2	NO		NO	bb
7	7 200225P1-9	Standard	12.500	4.73	4952.633	19698.072	3.143	15.0	19.7	NO		NO	bb
8	8 200225P1-10	Standard	12.500	4.73	4614.442	23404.813	2.464	11.7	-6.1	NO		NO	bb
9	9 200225P1-11	Standard	12.500	4.73	4190.781	21266.988	2.463	11.7	-6.2	NO		NO	bb
10	10 200225P1-12	Standard	12.500	4.73	4149.340	20920.873	2.479	11.8	-5.6	NO		NO	bb

Compound name: 13C2-PFOA-EIS
Response Factor: 1593.57
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	4.24	18905.670		18905.670	11.9	-5.1	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	4.23	19025.869		19025.869	11.9	-4.5	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	4.23	19788.479		19788.479	12.4	-0.7	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	4.23	21544.221		21544.221	13.5	8.2	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	4.23	20464.119		20464.119	12.8	2.7	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	4.23	19919.584		19919.584	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	4.23	20725.129		20725.129	13.0	4.0	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	4.23	21582.922		21582.922	13.5	8.4	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	4.23	20718.783		20718.783	13.0	4.0	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	4.23	17996.074		17996.074	11.3	-9.7	NO		NO	bbX

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Compound name: 13C2-PFOA-RSD
Response Factor: 0.922223
RRF SD: 0.0497235, Relative SD: 5.39169
Response type: Internal Std (Ref 102), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	4.24	18905.670	20999.771	11.253	12.2	-2.4	NO		NO	bb
2	2 200225P1-4	Standard	12.500	4.23	19025.869	21350.887	11.139	12.1	-3.4	NO		NO	bb
3	3 200225P1-5	Standard	12.500	4.23	19788.479	21723.881	11.386	12.3	-1.2	NO		NO	bb
4	4 200225P1-6	Standard	12.500	4.23	21544.221	21038.039	12.801	13.9	11.0	NO		NO	bb
5	5 200225P1-7	Standard	12.500	4.23	20464.119	23013.834	11.115	12.1	-3.6	NO		NO	bb
6	6 200225P1-8	Standard	12.500	4.23	19919.584	22838.305	10.903	11.8	-5.4	NO		NO	bb
7	7 200225P1-9	Standard	12.500	4.23	20725.129	23687.217	10.937	11.9	-5.1	NO		NO	bb
8	8 200225P1-10	Standard	12.500	4.23	21582.922	23445.688	11.507	12.5	-0.2	NO		NO	bb
9	9 200225P1-11	Standard	12.500	4.23	20718.783	21333.131	12.140	13.2	5.3	NO		NO	bb
10	10 200225P1-12	Standard	12.500	4.23	17996.074	18595.418	12.097	13.1	4.9	NO		NO	bb

Compound name: 13C8-PFOS-EIS
Response Factor: 291.759
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	4.76	3392.257		3392.257	11.6	-7.0	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	4.75	3412.653		3412.653	11.7	-6.4	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	4.75	3819.392		3819.392	13.1	4.7	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	4.75	3246.941		3246.941	11.1	-11.0	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	4.75	3799.922		3799.922	13.0	4.2	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	4.75	3646.993		3646.993	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	4.75	4032.981		4032.981	13.8	10.6	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	4.75	3990.603		3990.603	13.7	9.4	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	4.75	3581.742		3581.742	12.3	-1.8	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	4.75	3418.734		3418.734	11.7	-6.3	NO		NO	bdX

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Compound name: 13C8-PFOS-RSD
Response Factor: 0.949633
RRF SD: 0.0422002, Relative SD: 4.44385
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	4.76	3392.257	3783.710	11.207	11.8	-5.6	NO		NO	bb
2	2 200225P1-4	Standard	12.500	4.75	3412.653	3695.773	11.542	12.2	-2.8	NO		NO	bb
3	3 200225P1-5	Standard	12.500	4.75	3819.392	3791.307	12.593	13.3	6.1	NO		NO	bb
4	4 200225P1-6	Standard	12.500	4.75	3246.941	3236.887	12.539	13.2	5.6	NO		NO	bb
5	5 200225P1-7	Standard	12.500	4.75	3799.922	4232.745	11.222	11.8	-5.5	NO		NO	bb
6	6 200225P1-8	Standard	12.500	4.75	3646.993	3902.713	11.681	12.3	-1.6	NO		NO	bb
7	7 200225P1-9	Standard	12.500	4.75	4032.981	4223.934	11.935	12.6	0.5	NO		NO	bb
8	8 200225P1-10	Standard	12.500	4.75	3990.603	4363.684	11.431	12.0	-3.7	NO		NO	bb
9	9 200225P1-11	Standard	12.500	4.75	3581.742	3634.562	12.318	13.0	3.8	NO		NO	bb
10	10 200225P1-12	Standard	12.500	4.75	3416.804	3490.466	12.236	12.9	3.1	NO		NO	MM

Compound name: 13C2-PFDA-EIS
Response Factor: 1635.18
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	5.04	17688.168		17688.168	10.8	-13.5	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	5.04	18158.623		18158.623	11.1	-11.2	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	5.04	20772.906		20772.906	12.7	1.6	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	5.04	20265.523		20265.523	12.4	-0.9	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	5.04	20194.920		20194.920	12.4	-1.2	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	5.04	20439.703		20439.703	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	5.04	20732.352		20732.352	12.7	1.4	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	5.04	20899.775		20899.775	12.8	2.3	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	5.04	20424.217		20424.217	12.5	-0.1	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	5.04	20667.172		20667.172	12.6	1.1	NO		NO	bbX

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Compound name: 13C2-PFDA-RSD
Response Factor: 0.96525
RRF SD: 0.0533989, Relative SD: 5.53213
Response type: Internal Std (Ref 105), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	5.04	17688.168	18849.785	11.730	12.2	-2.8	NO		NO	bb
2	2 200225P1-4	Standard	12.500	5.04	18158.623	20255.420	11.206	11.6	-7.1	NO		NO	bb
3	3 200225P1-5	Standard	12.500	5.04	20772.906	21458.498	12.101	12.5	0.3	NO		NO	bb
4	4 200225P1-6	Standard	12.500	5.04	20265.523	21545.986	11.757	12.2	-2.6	NO		NO	bb
5	5 200225P1-7	Standard	12.500	5.04	20194.920	20125.918	12.543	13.0	4.0	NO		NO	bb
6	6 200225P1-8	Standard	12.500	5.04	20439.703	21679.625	11.785	12.2	-2.3	NO		NO	bb
7	7 200225P1-9	Standard	12.500	5.04	20732.352	22313.967	11.614	12.0	-3.7	NO		NO	bb
8	8 200225P1-10	Standard	12.500	5.04	20899.775	19321.385	13.521	14.0	12.1	NO		NO	bb
9	9 200225P1-11	Standard	12.500	5.04	20424.217	21719.578	11.754	12.2	-2.6	NO		NO	bb
10	10 200225P1-12	Standard	12.500	5.04	20667.172	20429.818	12.645	13.1	4.8	NO		NO	bb

Compound name: 13C2-8:2 FTS-EIS
Response Factor: 102.173
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	5.02	1235.022		1235.022	12.1	-3.3	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	5.01	1045.851		1045.851	10.2	-18.1	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	5.01	1194.706		1194.706	11.7	-6.5	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	5.01	1265.179		1265.179	12.4	-0.9	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	5.01	1294.409		1294.409	12.7	1.4	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	5.01	1277.157		1277.157	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	5.00	1364.021		1364.021	13.4	6.8	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	5.01	1417.279		1417.279	13.9	11.0	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	5.01	1207.879		1207.879	11.8	-5.4	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	5.01	1288.608		1288.608	12.6	0.9	NO		NO	bbX

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Compound name: 13C2-8:2 FTS-RSD
Response Factor: 0.329765
RRF SD: 0.0304758, Relative SD: 9.24165
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	5.02	1235.022	3783.710	4.080	12.4	-1.0	NO		NO	bb
2	2 200225P1-4	Standard	12.500	5.01	1045.851	3695.773	3.537	10.7	-14.2	NO		NO	bb
3	3 200225P1-5	Standard	12.500	5.01	1194.706	3791.307	3.939	11.9	-4.4	NO		NO	bb
4	4 200225P1-6	Standard	12.500	5.01	1265.179	3236.887	4.886	14.8	18.5	NO		NO	bb
5	5 200225P1-7	Standard	12.500	5.01	1294.409	4232.745	3.823	11.6	-7.3	NO		NO	bb
6	6 200225P1-8	Standard	12.500	5.01	1277.157	3902.713	4.091	12.4	-0.8	NO		NO	bb
7	7 200225P1-9	Standard	12.500	5.00	1364.021	4223.934	4.037	12.2	-2.1	NO		NO	bb
8	8 200225P1-10	Standard	12.500	5.01	1417.279	4363.684	4.060	12.3	-1.5	NO		NO	bb
9	9 200225P1-11	Standard	12.500	5.01	1207.879	3634.562	4.154	12.6	0.8	NO		NO	bb
10	10 200225P1-12	Standard	12.500	5.01	1288.608	3490.466	4.615	14.0	12.0	NO		NO	bb

Compound name: d3-N-MeFOSAA-EIS
Response Factor: 330.31
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	5.19	3174.144		3174.144	9.6	-23.1	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	5.18	3469.963		3469.963	10.5	-16.0	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	5.18	3495.821		3495.821	10.6	-15.3	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	5.18	3645.388		3645.388	11.0	-11.7	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	5.18	3633.896		3633.896	11.0	-12.0	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	5.18	4128.875		4128.875	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	5.18	4188.330		4188.330	12.7	1.4	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	5.18	4211.558		4211.558	12.8	2.0	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	5.18	3648.913		3648.913	11.0	-11.6	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	5.18	4043.613		4043.613	12.2	-2.1	NO		NO	bbX

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Compound name: d3-N-MeFOSAA-RSD
Response Factor: 0.174066
RRF SD: 0.0191752, Relative SD: 11.016
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	5.19	3174.144	19831.211	2.001	11.5	-8.0	NO		NO	bb
2	2 200225P1-4	Standard	12.500	5.18	3469.963	20433.932	2.123	12.2	-2.4	NO		NO	bb
3	3 200225P1-5	Standard	12.500	5.18	3495.821	23449.227	1.864	10.7	-14.4	NO		NO	bb
4	4 200225P1-6	Standard	12.500	5.18	3645.388	21906.523	2.080	11.9	-4.4	NO		NO	bb
5	5 200225P1-7	Standard	12.500	5.18	3633.896	23637.857	1.922	11.0	-11.7	NO		NO	bb
6	6 200225P1-8	Standard	12.500	5.18	4128.875	22421.760	2.302	13.2	5.8	NO		NO	bb
7	7 200225P1-9	Standard	12.500	5.18	4188.330	19698.072	2.658	15.3	22.2	NO		NO	bb
8	8 200225P1-10	Standard	12.500	5.18	4211.558	23404.813	2.249	12.9	3.4	NO		NO	bb
9	9 200225P1-11	Standard	12.500	5.18	3648.913	21266.988	2.145	12.3	-1.4	NO		NO	bb
10	10 200225P1-12	Standard	12.500	5.18	4043.613	20920.873	2.416	13.9	11.0	NO		NO	bb

Compound name: 13C2-PFUdA-EIS
Response Factor: 1617.09
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	5.36	18802.816		18802.816	11.6	-7.0	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	5.35	20783.641		20783.641	12.9	2.8	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	5.35	23235.645		23235.645	14.4	15.0	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	5.35	22555.502		22555.502	13.9	11.6	NO		NO	MMX
5	5 200225P1-7	Standard	12.500	5.35	23655.426		23655.426	14.6	17.0	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	5.35	20213.629		20213.629	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	5.35	22435.588		22435.588	13.9	11.0	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	5.35	22887.840		22887.840	14.2	13.2	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	5.35	22758.658		22758.658	14.1	12.6	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	5.35	21367.789		21367.789	13.2	5.7	NO		NO	bbX

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Compound name: 13C2-PFUdA-RSD
Response Factor: 1.00832
RRF SD: 0.0645663, Relative SD: 6.40333
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	5.36	18802.816	19831.211	11.852	11.8	-6.0	NO		NO	bb
2	2 200225P1-4	Standard	12.500	5.35	20783.641	20433.932	12.714	12.6	0.9	NO		NO	bb
3	3 200225P1-5	Standard	12.500	5.35	23235.645	23449.227	12.386	12.3	-1.7	NO		NO	bb
4	4 200225P1-6	Standard	12.500	5.35	22266.717	21906.523	12.706	12.6	0.8	NO		NO	MM
5	5 200225P1-7	Standard	12.500	5.35	23655.426	23637.857	12.509	12.4	-0.8	NO		NO	bb
6	6 200225P1-8	Standard	12.500	5.35	20213.629	22421.760	11.269	11.2	-10.6	NO		NO	bb
7	7 200225P1-9	Standard	12.500	5.35	22435.588	19698.072	14.237	14.1	13.0	NO		NO	bb
8	8 200225P1-10	Standard	12.500	5.35	22887.840	23404.813	12.224	12.1	-3.0	NO		NO	bb
9	9 200225P1-11	Standard	12.500	5.35	22758.658	21266.988	13.377	13.3	6.1	NO		NO	bb
10	10 200225P1-12	Standard	12.500	5.35	21367.789	20920.873	12.767	12.7	1.3	NO		NO	bb

Compound name: d5-N-EtFOSAA-EIS
Response Factor: 395.337
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	5.34	4635.703		4635.703	11.7	-6.2	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	5.34	4671.362		4671.362	11.8	-5.5	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	5.33	5361.517		5361.517	13.6	8.5	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	5.33	5107.157		5107.157	12.9	3.3	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	5.33	5470.047		5470.047	13.8	10.7	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	5.33	4941.707		4941.707	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	5.34	5109.596		5109.596	12.9	3.4	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	5.33	5321.571		5321.571	13.5	7.7	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	5.33	5012.692		5012.692	12.7	1.4	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	5.33	4532.038		4532.038	11.5	-8.3	NO		NO	bbX

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Compound name: d5-N-EtFOSAA-RSD
Response Factor: 0.231505
RRF SD: 0.0114583, Relative SD: 4.94948
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	5.34	4635.703	19831.211	2.922	12.6	1.0	NO		NO	bb
2	2 200225P1-4	Standard	12.500	5.34	4671.362	20433.932	2.858	12.3	-1.3	NO		NO	bb
3	3 200225P1-5	Standard	12.500	5.33	5361.517	23449.227	2.858	12.3	-1.2	NO		NO	bb
4	4 200225P1-6	Standard	12.500	5.33	5107.157	21906.523	2.914	12.6	0.7	NO		NO	bb
5	5 200225P1-7	Standard	12.500	5.33	5470.047	23637.857	2.893	12.5	-0.0	NO		NO	bb
6	6 200225P1-8	Standard	12.500	5.33	4941.707	22421.760	2.755	11.9	-4.8	NO		NO	bb
7	7 200225P1-9	Standard	12.500	5.34	5109.596	19698.072	3.242	14.0	12.0	NO		NO	bb
8	8 200225P1-10	Standard	12.500	5.33	5321.571	23404.813	2.842	12.3	-1.8	NO		NO	bb
9	9 200225P1-11	Standard	12.500	5.33	5012.692	21266.988	2.946	12.7	1.8	NO		NO	bb
10	10 200225P1-12	Standard	12.500	5.33	4532.038	20920.873	2.708	11.7	-6.4	NO		NO	bb

Compound name: 13C2-PFDoA-EIS
Response Factor: 1686.25
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	5.63	19794.912		19794.912	11.7	-6.1	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	5.63	17291.875		17291.875	10.3	-18.0	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	5.62	20924.223		20924.223	12.4	-0.7	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	5.63	20403.285		20403.285	12.1	-3.2	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	5.62	19895.336		19895.336	11.8	-5.6	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	5.62	21078.160		21078.160	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	5.62	20754.656		20754.656	12.3	-1.5	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	5.63	21822.719		21822.719	12.9	3.5	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	5.63	20369.846		20369.846	12.1	-3.4	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	5.63	18409.998		18409.998	10.9	-12.7	NO		NO	bbX

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Compound name: 13C2-PFDoA-RSD
Response Factor: 0.968527
RRF SD: 0.0771921, Relative SD: 7.97005
Response type: Internal Std (Ref 105), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	5.63	19794.912	18849.785	13.127	13.6	8.4	NO		NO	bb
2	2 200225P1-4	Standard	12.500	5.63	17291.875	20255.420	10.671	11.0	-11.9	NO		NO	bb
3	3 200225P1-5	Standard	12.500	5.62	20924.223	21458.498	12.189	12.6	0.7	NO		NO	bb
4	4 200225P1-6	Standard	12.500	5.63	20403.285	21545.986	11.837	12.2	-2.2	NO		NO	bb
5	5 200225P1-7	Standard	12.500	5.62	19895.336	20125.918	12.357	12.8	2.1	NO		NO	bb
6	6 200225P1-8	Standard	12.500	5.62	21078.160	21679.625	12.153	12.5	0.4	NO		NO	bb
7	7 200225P1-9	Standard	12.500	5.62	20754.656	22313.967	11.626	12.0	-4.0	NO		NO	bb
8	8 200225P1-10	Standard	12.500	5.63	21822.719	19321.385	14.118	14.6	16.6	NO		NO	bb
9	9 200225P1-11	Standard	12.500	5.63	20369.846	21719.578	11.723	12.1	-3.2	NO		NO	bb
10	10 200225P1-12	Standard	12.500	5.63	18409.998	20429.818	11.264	11.6	-7.0	NO		NO	bb

Compound name: 13C2-10:2 FTS-EIS
Response Factor: 71.9592
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	5.62	1004.549		1004.549	14.0	11.7	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	5.61	877.858		877.858	12.2	-2.4	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	5.61	1029.995		1029.995	14.3	14.5	NO		NO	MMX
4	4 200225P1-6	Standard	12.500	5.61	986.869		986.869	13.7	9.7	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	5.61	863.880		863.880	12.0	-4.0	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	5.61	899.490		899.490	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	5.61	851.594		851.594	11.8	-5.3	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	5.61	1017.819		1017.819	14.1	13.2	NO		NO	dbX
9	9 200225P1-11	Standard	12.500	5.61	862.033		862.033	12.0	-4.2	NO		NO	dbX
10	10 200225P1-12	Standard	12.500	5.61	685.745		685.745	9.5	-23.8	NO		NO	dbX

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Compound name: 13C2-10:2 FTS-RSD
Response Factor: 0.238298
RRF SD: 0.0344216, Relative SD: 14.4448
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	5.62	1004.549	3783.710	3.319	13.9	11.4	NO		NO	bb
2	2 200225P1-4	Standard	12.500	5.61	877.858	3695.773	2.969	12.5	-0.3	NO		NO	bb
3	3 200225P1-5	Standard	12.500	5.61	1031.251	3791.307	3.400	14.3	14.1	NO		NO	MM
4	4 200225P1-6	Standard	12.500	5.61	986.869	3236.887	3.811	16.0	27.9	NO		NO	bb
5	5 200225P1-7	Standard	12.500	5.61	863.880	4232.745	2.551	10.7	-14.4	NO		NO	bb
6	6 200225P1-8	Standard	12.500	5.61	899.490	3902.713	2.881	12.1	-3.3	NO		NO	bb
7	7 200225P1-9	Standard	12.500	5.61	851.594	4223.934	2.520	10.6	-15.4	NO		NO	bb
8	8 200225P1-10	Standard	12.500	5.61	1017.819	4363.684	2.916	12.2	-2.1	NO		NO	db
9	9 200225P1-11	Standard	12.500	5.61	862.033	3634.562	2.965	12.4	-0.5	NO		NO	db
10	10 200225P1-12	Standard	12.500	5.61	685.745	3490.466	2.456	10.3	-17.6	NO		NO	db

Compound name: d3-N-MeFOSA-EIS
Response Factor: 141.531
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	149.200	5.77	18385.910		18385.910	129.9	-12.9	NO		NO	bbX
2	2 200225P1-4	Standard	149.200	5.76	18984.031		18984.031	134.1	-10.1	NO		NO	bbX
3	3 200225P1-5	Standard	149.200	5.76	20984.184		20984.184	148.3	-0.6	NO		NO	bbX
4	4 200225P1-6	Standard	149.200	5.76	20764.477		20764.477	146.7	-1.7	NO		NO	bbX
5	5 200225P1-7	Standard	149.200	5.76	20656.791		20656.791	146.0	-2.2	NO		NO	bbX
6	6 200225P1-8	Standard	149.200	5.76	21116.357		21116.357	149.2	0.0	NO		NO	bb
7	7 200225P1-9	Standard	149.200	5.76	21394.961		21394.961	151.2	1.3	NO		NO	bbX
8	8 200225P1-10	Standard	149.200	5.77	22915.986		22915.986	161.9	8.5	NO		NO	bbX
9	9 200225P1-11	Standard	149.200	5.77	21205.846		21205.846	149.8	0.4	NO		NO	bbX
10	10 200225P1-12	Standard	149.200	5.77	21072.350		21072.350	148.9	-0.2	NO		NO	bbX

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Compound name: d3-N-MeFOSA-RSD
Response Factor: 0.0802966
RRF SD: 0.00515231, Relative SD: 6.4166
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	149.200	5.77	18385.910	19831.211	11.589	144.3	-3.3	NO		NO	bb
2	2 200225P1-4	Standard	149.200	5.76	18984.031	20433.932	11.613	144.6	-3.1	NO		NO	bb
3	3 200225P1-5	Standard	149.200	5.76	20984.184	23449.227	11.186	139.3	-6.6	NO		NO	bb
4	4 200225P1-6	Standard	149.200	5.76	20764.477	21906.523	11.848	147.6	-1.1	NO		NO	bb
5	5 200225P1-7	Standard	149.200	5.76	20656.791	23637.857	10.924	136.0	-8.8	NO		NO	bb
6	6 200225P1-8	Standard	149.200	5.76	21116.357	22421.760	11.772	146.6	-1.7	NO		NO	bb
7	7 200225P1-9	Standard	149.200	5.76	21394.961	19698.072	13.577	169.1	13.3	NO		NO	bb
8	8 200225P1-10	Standard	149.200	5.77	22915.986	23404.813	12.239	152.4	2.2	NO		NO	bb
9	9 200225P1-11	Standard	149.200	5.77	21205.846	21266.988	12.464	155.2	4.0	NO		NO	bb
10	10 200225P1-12	Standard	149.200	5.77	21072.350	20920.873	12.591	156.8	5.1	NO		NO	bb

Compound name: 13C2-PFTeDA-EIS
Response Factor: 1896.41
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	6.08	23904.145		23904.145	12.6	0.8	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	6.08	20899.578		20899.578	11.0	-11.8	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	6.08	23536.283		23536.283	12.4	-0.7	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	6.08	22335.166		22335.166	11.8	-5.8	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	6.08	23810.332		23810.332	12.6	0.4	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	6.08	23705.125		23705.125	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	6.08	23014.939		23014.939	12.1	-2.9	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	6.08	23827.521		23827.521	12.6	0.5	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	6.08	21136.031		21136.031	11.1	-10.8	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	6.08	20449.318		20449.318	10.8	-13.7	NO		NO	bbX

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Compound name: 13C2-PFTeDA-RSD
Response Factor: 1.04737
RRF SD: 0.076891, Relative SD: 7.34132
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	12.500	6.08	23904.145	19831.211	15.067	14.4	15.1	NO		NO	bb
2	2	200225P1-4	Standard	12.500	6.08	20899.578	20433.932	12.785	12.2	-2.3	NO		NO	bb
3	3	200225P1-5	Standard	12.500	6.08	23536.283	23449.227	12.546	12.0	-4.2	NO		NO	bb
4	4	200225P1-6	Standard	12.500	6.08	22335.166	21906.523	12.745	12.2	-2.7	NO		NO	bb
5	5	200225P1-7	Standard	12.500	6.08	23810.332	23637.857	12.591	12.0	-3.8	NO		NO	bb
6	6	200225P1-8	Standard	12.500	6.08	23705.125	22421.760	13.215	12.6	0.9	NO		NO	bb
7	7	200225P1-9	Standard	12.500	6.08	23014.939	19698.072	14.605	13.9	11.6	NO		NO	bb
8	8	200225P1-10	Standard	12.500	6.08	23827.521	23404.813	12.726	12.2	-2.8	NO		NO	bb
9	9	200225P1-11	Standard	12.500	6.08	21136.031	21266.988	12.423	11.9	-5.1	NO		NO	bb
10	10	200225P1-12	Standard	12.500	6.08	20449.318	20920.873	12.218	11.7	-6.7	NO		NO	bb

Compound name: d5-N-ETFOSA-EIS
Response Factor: 180.703
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	149.200	6.16	23419.826		23419.826	129.6	-13.1	NO		NO	bbX
2	2	200225P1-4	Standard	149.200	6.15	23933.094		23933.094	132.4	-11.2	NO		NO	bbX
3	3	200225P1-5	Standard	149.200	6.16	25590.486		25590.486	141.6	-5.1	NO		NO	bbX
4	4	200225P1-6	Standard	149.200	6.15	25775.242		25775.242	142.6	-4.4	NO		NO	bbX
5	5	200225P1-7	Standard	149.200	6.16	27285.506		27285.506	151.0	1.2	NO		NO	bbX
6	6	200225P1-8	Standard	149.200	6.15	26960.850		26960.850	149.2	0.0	NO		NO	bb
7	7	200225P1-9	Standard	149.200	6.16	26238.824		26238.824	145.2	-2.7	NO		NO	bbX
8	8	200225P1-10	Standard	149.200	6.16	28234.779		28234.779	156.2	4.7	NO		NO	bbX
9	9	200225P1-11	Standard	149.200	6.16	25151.254		25151.254	139.2	-6.7	NO		NO	bbX
10	10	200225P1-12	Standard	149.200	6.16	23779.672		23779.672	131.6	-11.8	NO		NO	bbX

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Compound name: d5-N-ETFOSA-RSD
Response Factor: 0.0991503
RRF SD: 0.00520209, Relative SD: 5.24667
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	149.200	6.16	23419.826	19831.211	14.762	148.9	-0.2	NO		NO	bb
2	2 200225P1-4	Standard	149.200	6.15	23933.094	20433.932	14.641	147.7	-1.0	NO		NO	bb
3	3 200225P1-5	Standard	149.200	6.16	25590.486	23449.227	13.641	137.6	-7.8	NO		NO	bb
4	4 200225P1-6	Standard	149.200	6.15	25775.242	21906.523	14.708	148.3	-0.6	NO		NO	bb
5	5 200225P1-7	Standard	149.200	6.16	27285.506	23637.857	14.429	145.5	-2.5	NO		NO	bb
6	6 200225P1-8	Standard	149.200	6.15	26960.850	22421.760	15.031	151.6	1.6	NO		NO	bb
7	7 200225P1-9	Standard	149.200	6.16	26238.824	19698.072	16.651	167.9	12.6	NO		NO	bb
8	8 200225P1-10	Standard	149.200	6.16	28234.779	23404.813	15.080	152.1	1.9	NO		NO	bb
9	9 200225P1-11	Standard	149.200	6.16	25151.254	21266.988	14.783	149.1	-0.1	NO		NO	bb
10	10 200225P1-12	Standard	149.200	6.16	23779.672	20920.873	14.208	143.3	-4.0	NO		NO	bb

Compound name: 13C2-PFHxDA-EIS
Response Factor: 2591.61
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	6.41	32718.949		32718.949	12.6	1.0	NO		NO	bbX
2	2 200225P1-4	Standard	12.500	6.40	30851.906		30851.906	11.9	-4.8	NO		NO	bbX
3	3 200225P1-5	Standard	12.500	6.40	32443.676		32443.676	12.5	0.1	NO		NO	bbX
4	4 200225P1-6	Standard	12.500	6.40	31620.527		31620.527	12.2	-2.4	NO		NO	bbX
5	5 200225P1-7	Standard	12.500	6.40	34460.848		34460.848	13.3	6.4	NO		NO	bbX
6	6 200225P1-8	Standard	12.500	6.40	32395.119		32395.119	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	6.40	31727.350		31727.350	12.2	-2.1	NO		NO	bbX
8	8 200225P1-10	Standard	12.500	6.40	36623.570		36623.570	14.1	13.1	NO		NO	bbX
9	9 200225P1-11	Standard	12.500	6.40	31588.863		31588.863	12.2	-2.5	NO		NO	bbX
10	10 200225P1-12	Standard	12.500	6.41	29260.670		29260.670	11.3	-9.7	NO		NO	bbX

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Compound name: 13C2-PFHxDA-RSD
Response Factor: 1.49488
RRF SD: 0.0887014, Relative SD: 5.93367
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	6.41	32718.949	19831.211	20.623	13.8	10.4	NO		NO	bb
2	2 200225P1-4	Standard	12.500	6.40	30851.906	20433.932	18.873	12.6	1.0	NO		NO	bb
3	3 200225P1-5	Standard	12.500	6.40	32443.676	23449.227	17.295	11.6	-7.4	NO		NO	bb
4	4 200225P1-6	Standard	12.500	6.40	31620.527	21906.523	18.043	12.1	-3.4	NO		NO	bb
5	5 200225P1-7	Standard	12.500	6.40	34460.848	23637.857	18.223	12.2	-2.5	NO		NO	bb
6	6 200225P1-8	Standard	12.500	6.40	32395.119	22421.760	18.060	12.1	-3.3	NO		NO	bb
7	7 200225P1-9	Standard	12.500	6.40	31727.350	19698.072	20.134	13.5	7.7	NO		NO	bb
8	8 200225P1-10	Standard	12.500	6.40	36623.570	23404.813	19.560	13.1	4.7	NO		NO	bb
9	9 200225P1-11	Standard	12.500	6.40	31588.863	21266.988	18.567	12.4	-0.6	NO		NO	bb
10	10 200225P1-12	Standard	12.500	6.41	29260.670	20920.873	17.483	11.7	-6.4	NO		NO	bb

Compound name: d7-N-MeFOSE-EIS
Response Factor: 120.789
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	149.200	6.29	17691.047		17691.047	146.5	-1.8	NO		NO	bbX
2	2 200225P1-4	Standard	149.200	6.29	17581.641		17581.641	145.6	-2.4	NO		NO	bbX
3	3 200225P1-5	Standard	149.200	6.29	19041.301		19041.301	157.6	5.7	NO		NO	bbX
4	4 200225P1-6	Standard	149.200	6.29	18451.818		18451.818	152.8	2.4	NO		NO	MMX
5	5 200225P1-7	Standard	149.200	6.28	18629.246		18629.246	154.2	3.4	NO		NO	MMX
6	6 200225P1-8	Standard	149.200	6.29	18021.730		18021.730	149.2	0.0	NO		NO	bb
7	7 200225P1-9	Standard	149.200	6.28	19080.988		19080.988	158.0	5.9	NO		NO	bbX
8	8 200225P1-10	Standard	149.200	6.29	20077.549		20077.549	166.2	11.4	NO		NO	bbX
9	9 200225P1-11	Standard	149.200	6.28	20780.801		20780.801	172.0	15.3	NO		NO	bbX
10	10 200225P1-12	Standard	149.200	6.28	18944.963		18944.963	156.8	5.1	NO		NO	bbX

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Compound name: d7-N-MeFOSE-RSD
Response Factor: 0.072866
RRF SD: 0.00560797, Relative SD: 7.69628
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	149.200	6.29	17691.047	19831.211	11.151	153.0	2.6	NO		NO	bb
2	2	200225P1-4	Standard	149.200	6.29	17581.641	20433.932	10.755	147.6	-1.1	NO		NO	bb
3	3	200225P1-5	Standard	149.200	6.29	19041.301	23449.227	10.150	139.3	-6.6	NO		NO	bb
4	4	200225P1-6	Standard	149.200	6.29	18459.666	21906.523	10.533	144.6	-3.1	NO		NO	MM
5	5	200225P1-7	Standard	149.200	6.28	18370.014	23637.857	9.714	133.3	-10.6	NO		NO	bb
6	6	200225P1-8	Standard	149.200	6.29	18021.730	22421.760	10.047	137.9	-7.6	NO		NO	bb
7	7	200225P1-9	Standard	149.200	6.28	19080.988	19698.072	12.108	166.2	11.4	NO		NO	bb
8	8	200225P1-10	Standard	149.200	6.29	20077.549	23404.813	10.723	147.2	-1.4	NO		NO	bb
9	9	200225P1-11	Standard	149.200	6.28	20780.801	21266.988	12.214	167.6	12.3	NO		NO	bb
10	10	200225P1-12	Standard	149.200	6.28	18944.963	20920.873	11.319	155.3	4.1	NO		NO	bb

Compound name: d9-N-EtFOSE-EIS
Response Factor: 149.299
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	149.200	6.44	19924.037		19924.037	133.5	-10.6	NO		NO	bbX
2	2	200225P1-4	Standard	149.200	6.43	21132.717		21132.717	141.5	-5.1	NO		NO	bbX
3	3	200225P1-5	Standard	149.200	6.43	22095.117		22095.117	148.0	-0.8	NO		NO	bbX
4	4	200225P1-6	Standard	149.200	6.43	21809.131		21809.131	146.1	-2.1	NO		NO	bbX
5	5	200225P1-7	Standard	149.200	6.43	22094.990		22094.990	148.0	-0.8	NO		NO	bbX
6	6	200225P1-8	Standard	149.200	6.43	22275.373		22275.373	149.2	0.0	NO		NO	MM
7	7	200225P1-9	Standard	149.200	6.43	22478.264		22478.264	150.6	0.9	NO		NO	bbX
8	8	200225P1-10	Standard	149.200	6.43	23963.234		23963.234	160.5	7.6	NO		NO	bbX
9	9	200225P1-11	Standard	149.200	6.43	23505.465		23505.465	157.4	5.5	NO		NO	bbX
10	10	200225P1-12	Standard	149.200	6.43	22299.754		22299.754	149.4	0.1	NO		NO	bbX

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Compound name: d9-N-EtFOSE-RSD
Response Factor: 0.0858012
RRF SD: 0.00551082, Relative SD: 6.42278
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	149.200	6.44	19924.037	19831.211	12.559	146.4	-1.9	NO		NO	bb
2	2	200225P1-4	Standard	149.200	6.43	21132.717	20433.932	12.927	150.7	1.0	NO		NO	bb
3	3	200225P1-5	Standard	149.200	6.43	22095.117	23449.227	11.778	137.3	-8.0	NO		NO	bb
4	4	200225P1-6	Standard	149.200	6.43	21809.131	21906.523	12.444	145.0	-2.8	NO		NO	bb
5	5	200225P1-7	Standard	149.200	6.43	22094.990	23637.857	11.684	136.2	-8.7	NO		NO	bb
6	6	200225P1-8	Standard	149.200	6.43	22279.467	22421.760	12.421	144.8	-3.0	NO		NO	MM
7	7	200225P1-9	Standard	149.200	6.43	22478.264	19698.072	14.264	166.2	11.4	NO		NO	bb
8	8	200225P1-10	Standard	149.200	6.43	23963.234	23404.813	12.798	149.2	-0.0	NO		NO	bb
9	9	200225P1-11	Standard	149.200	6.43	23505.465	21266.988	13.816	161.0	7.9	NO		NO	bb
10	10	200225P1-12	Standard	149.200	6.43	22299.754	20920.873	13.324	155.3	4.1	NO		NO	bb

Compound name: 13C4-PFBA
Response Factor: 1
RRF SD: 1.28198e-016, Relative SD: 1.28198e-014
Response type: Internal Std (Ref 99), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200225P1-3	Standard	12.500	1.42	12266.709	12266.709	12.500	12.5	0.0	NO		NO	bb
2	2	200225P1-4	Standard	12.500	1.41	12331.454	12331.454	12.500	12.5	0.0	NO		NO	bb
3	3	200225P1-5	Standard	12.500	1.42	13320.676	13320.676	12.500	12.5	0.0	NO		NO	bb
4	4	200225P1-6	Standard	12.500	1.42	13219.248	13219.248	12.500	12.5	0.0	NO		NO	bb
5	5	200225P1-7	Standard	12.500	1.42	13469.415	13469.415	12.500	12.5	0.0	NO		NO	bb
6	6	200225P1-8	Standard	12.500	1.42	14016.627	14016.627	12.500	12.5	0.0	NO		NO	bb
7	7	200225P1-9	Standard	12.500	1.42	13947.172	13947.172	12.500	12.5	0.0	NO		NO	bb
8	8	200225P1-10	Standard	12.500	1.42	14579.886	14579.886	12.500	12.5	0.0	NO		NO	bb
9	9	200225P1-11	Standard	12.500	1.42	13803.979	13803.979	12.500	12.5	0.0	NO		NO	bb
10	10	200225P1-12	Standard	12.500	1.42	13829.581	13829.581	12.500	12.5	0.0	NO		NO	bb

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Compound name: 13C5-PFHxA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	3.13	21026.791	21026.791	12.500	12.5	0.0	NO		NO	bb
2	2 200225P1-4	Standard	12.500	3.13	21114.680	21114.680	12.500	12.5	0.0	NO		NO	bb
3	3 200225P1-5	Standard	12.500	3.13	23180.252	23180.252	12.500	12.5	0.0	NO		NO	bb
4	4 200225P1-6	Standard	12.500	3.13	21748.432	21748.432	12.500	12.5	0.0	NO		NO	bb
5	5 200225P1-7	Standard	12.500	3.13	22122.477	22122.477	12.500	12.5	0.0	NO		NO	bb
6	6 200225P1-8	Standard	12.500	3.13	24673.588	24673.588	12.500	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	3.13	23036.369	23036.369	12.500	12.5	0.0	NO		NO	bb
8	8 200225P1-10	Standard	12.500	3.13	24870.381	24870.381	12.500	12.5	0.0	NO		NO	bb
9	9 200225P1-11	Standard	12.500	3.13	22955.182	22955.182	12.500	12.5	0.0	NO		NO	bb
10	10 200225P1-12	Standard	12.500	3.13	21647.338	21647.338	12.500	12.5	0.0	NO		NO	bb

Compound name: 18O2-PFHxS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 101), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	3.87	1002.938	1002.938	12.500	12.5	0.0	NO		NO	bb
2	2 200225P1-4	Standard	12.500	3.86	1233.002	1233.002	12.500	12.5	0.0	NO		NO	bb
3	3 200225P1-5	Standard	12.500	3.86	1410.673	1410.673	12.500	12.5	0.0	NO		NO	bb
4	4 200225P1-6	Standard	12.500	3.86	1330.276	1330.276	12.500	12.5	0.0	NO		NO	bb
5	5 200225P1-7	Standard	12.500	3.86	1261.312	1261.312	12.500	12.5	0.0	NO		NO	bb
6	6 200225P1-8	Standard	12.500	3.86	1378.876	1378.876	12.500	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	3.86	1316.816	1316.816	12.500	12.5	0.0	NO		NO	bb
8	8 200225P1-10	Standard	12.500	3.86	1449.444	1449.444	12.500	12.5	0.0	NO		NO	bb
9	9 200225P1-11	Standard	12.500	3.86	1340.803	1340.803	12.500	12.5	0.0	NO		NO	bb
10	10 200225P1-12	Standard	12.500	3.86	1294.671	1294.671	12.500	12.5	0.0	NO		NO	bb

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Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 102), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	4.24	20999.771	20999.771	12.500	12.5	0.0	NO		NO	bb
2	2 200225P1-4	Standard	12.500	4.23	21350.887	21350.887	12.500	12.5	0.0	NO		NO	bb
3	3 200225P1-5	Standard	12.500	4.23	21723.881	21723.881	12.500	12.5	0.0	NO		NO	bb
4	4 200225P1-6	Standard	12.500	4.23	21038.039	21038.039	12.500	12.5	0.0	NO		NO	bb
5	5 200225P1-7	Standard	12.500	4.23	23013.834	23013.834	12.500	12.5	0.0	NO		NO	bb
6	6 200225P1-8	Standard	12.500	4.23	22838.305	22838.305	12.500	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	4.23	23687.217	23687.217	12.500	12.5	0.0	NO		NO	bb
8	8 200225P1-10	Standard	12.500	4.23	23445.688	23445.688	12.500	12.5	0.0	NO		NO	bd
9	9 200225P1-11	Standard	12.500	4.23	21333.131	21333.131	12.500	12.5	0.0	NO		NO	bb
10	10 200225P1-12	Standard	12.500	4.23	18595.418	18595.418	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 103), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	4.67	19086.615	19086.615	12.500	12.5	0.0	NO		NO	bb
2	2 200225P1-4	Standard	12.500	4.67	18558.656	18558.656	12.500	12.5	0.0	NO		NO	bb
3	3 200225P1-5	Standard	12.500	4.67	20561.016	20561.016	12.500	12.5	0.0	NO		NO	bb
4	4 200225P1-6	Standard	12.500	4.67	18224.971	18224.971	12.500	12.5	0.0	NO		NO	bb
5	5 200225P1-7	Standard	12.500	4.67	19280.119	19280.119	12.500	12.5	0.0	NO		NO	bb
6	6 200225P1-8	Standard	12.500	4.67	20431.225	20431.225	12.500	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	4.67	20764.564	20764.564	12.500	12.5	0.0	NO		NO	bb
8	8 200225P1-10	Standard	12.500	4.67	21059.193	21059.193	12.500	12.5	0.0	NO		NO	bb
9	9 200225P1-11	Standard	12.500	4.67	20309.342	20309.342	12.500	12.5	0.0	NO		NO	bb
10	10 200225P1-12	Standard	12.500	4.67	18033.258	18033.258	12.500	12.5	0.0	NO		NO	bb

Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 11:36:10 Pacific Standard Time
Printed: Wednesday, February 26, 2020 11:42:27 Pacific Standard Time

Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 1.04673e-016, Relative SD: 1.04673e-014
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	12.500	4.76	3783.710	3783.710	12.500	12.5	0.0	NO		NO	bb
2	2 200225P1-4	Standard	12.500	4.75	3695.773	3695.773	12.500	12.5	0.0	NO		NO	bb
3	3 200225P1-5	Standard	12.500	4.75	3791.307	3791.307	12.500	12.5	0.0	NO		NO	bb
4	4 200225P1-6	Standard	12.500	4.75	3236.887	3236.887	12.500	12.5	0.0	NO		NO	bb
5	5 200225P1-7	Standard	12.500	4.75	4232.745	4232.745	12.500	12.5	0.0	NO		NO	bb
6	6 200225P1-8	Standard	12.500	4.75	3902.713	3902.713	12.500	12.5	0.0	NO		NO	bb
7	7 200225P1-9	Standard	12.500	4.75	4223.934	4223.934	12.500	12.5	0.0	NO		NO	MM
8	8 200225P1-10	Standard	12.500	4.75	4363.684	4363.684	12.500	12.5	0.0	NO		NO	bb
9	9 200225P1-11	Standard	12.500	4.75	3634.562	3634.562	12.500	12.5	0.0	NO		NO	bb
10	10 200225P1-12	Standard	12.500	4.75	3490.466	3490.466	12.500	12.5	0.0	NO		NO	bb

Compound name: TDCA
No Calibration
Response type: External Std, Area
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200225P1-3	Standard	0.250							NO		NO	
2	2 200225P1-4	Standard	0.500							NO		NO	
3	3 200225P1-5	Standard	1.000							NO		NO	
4	4 200225P1-6	Standard	2.000							NO		NO	
5	5 200225P1-7	Standard	5.000							NO		NO	
6	6 200225P1-8	Standard	10.000							NO		NO	
7	7 200225P1-9	Standard	50.000							NO		NO	
8	8 200225P1-10	Standard	100.000							NO		NO	
9	9 200225P1-11	Standard	250.000							NO		NO	
10	10 200225P1-12	Standard	500.000							NO		NO	

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Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 11:36:10 Pacific Standard Time
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Method: P:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022520.mdb 26 Feb 2020 11:36:08
Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-25-20.cdb 26 Feb 2020 11:25:03

Name: 200225P1-3, Date: 25-Feb-2020, Time: 18:19:42, ID: ST200225P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

	#	Name	IS#	CoD	CoD Flag	%RSD
1	1	PFBA	47	0.9996	NO	
2	2	PFPrS	51	0.9994	NO	
3	3	3:3 FTCA	49	0.9994	NO	
4	4	PFPeA	49	0.9996	NO	
5	5	PFBS	51	0.9980	NO	
6	6	4:2 FTS	55	0.9994	NO	
7	7	PFHxA	57	0.9991	NO	
8	8	PFPeS	51	0.9991	NO	
9	9	HFPO-DA	53	0.9995	NO	
10	10	5:3 FTCA	59	0.9997	NO	
11	11	PFHpA	59	0.9998	NO	
12	12	ADONA	59	0.9997	NO	
13	13	L-PFHxS	61	0.9985	NO	
14	15	6:2 FTS	63	0.9979	NO	
15	16	L-PFOA	69	0.9991	NO	
16	18	PFecHS	69	0.9962	NO	
17	19	PFHpS	71	0.9995	NO	
18	20	7:3 FTCA	65	0.9985	NO	
19	21	PFNA	65	0.9993	NO	
20	22	PFOSA	67	0.9983	NO	
21	23	L-PFOS	71	0.9992	NO	
22	25	9Cl-PF30NS	71	0.9996	NO	
23	26	PFDA	73	0.9998	NO	
24	27	8:2 FTS	75	0.9965	NO	
25	~~28~~	~~PFNS~~	~~71~~	~~0.9979~~	~~NO~~	
26	29	L-MeFOSAA	77	0.9979	NO	

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Last Altered: Wednesday, February 26, 2020 11:36:10 Pacific Standard Time
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Method: P:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022520.mdb 26 Feb 2020 11:36:08
Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-25-20.cdb 26 Feb 2020 11:25:03

Name: 200225P1-3, Date: 25-Feb-2020, Time: 18:19:42, ID: ST200225P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

	#	Name	IS#	CoD	CoD Flag	%RSD
1	31	L-EtFOSAA	81	0.9988	NO	
2	33	PFUdA	79	0.9978	NO	
3	34	PFDS	71	0.9996	NO	
4	35	11Cl-PF30UdS	83	0.9992	NO	
5	36	10:2 FTS	85	0.9979	NO	
6	37	PFDoA	83	0.9996	NO	
7	38	N-MeFOSA	87	0.9996	NO	
8	39	PFTrDA	83	0.9991	NO	
9	40	PFDoS	89	0.9992	NO	
10	41	PFTeDA	89	0.9984	NO	
11	42	N-EtFOSA	91	0.9998	NO	
12	43	PFHxDA	93	0.9995	NO	
13	44	PFODA	93	0.9995	NO	
14	45	N-MeFOSE	95	0.9952	NO	
15	46	N-EtFOSE	97	0.9989	NO	
16	47	13C3-PFBA-EIS			NO	0.000
17	48	13C3-PFBA-RSD	99		NO	0.823
18	49	13C3-PFPeA-EIS			NO	0.000
19	50	13C3-PFPeA-RSD	100		NO	2.929
20	51	13C3-PFBS-EIS			NO	0.000
21	52	13C3-PFBS-RSD	101		NO	9.591
22	53	13C3-HFPO-DA-EIS			NO	0.000
23	54	13C3-HFPO-DA-RSD	100		NO	6.425
24	55	13C2-4:2 FTS-EIS			NO	0.000
25	56	13C2-4:2 FTS-RSD	101		NO	13.365
26	57	13C2-PFHxA-EIS			NO	0.000
27	58	13C2-PFHxA-RSD	100		NO	2.830
28	59	13C4-PFHpA-EIS			NO	0.000
29	60	13C4-PFHpA-RSD	100		NO	3.486
30	61	13C3-PFHxS-EIS			NO	0.000
31	62	13C3-PFHxS-RSD	101		NO	8.751
32	63	13C2-6:2 FTS-EIS			NO	0.000

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Last Altered: Wednesday, February 26, 2020 11:36:10 Pacific Standard Time
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Name: 200225P1-3, Date: 25-Feb-2020, Time: 18:19:42, ID: ST200225P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

	#	Name	IS#	CoD	CoD Flag	%RSD
33	64	13C2-6:2 FTS-RSD	104		NO	11.585
34	65	13C5-PFNA-EIS			NO	0.000
35	66	13C5-PFNA-RSD	103		NO	3.362
36	67	13C8-PFOSA-EIS			NO	0.000
37	68	13C8-PFOSA-RSD	106		NO	7.521
38	69	13C2-PFOA-EIS			NO	0.000
39	70	13C2-PFOA-RSD	102		NO	5.392
40	71	13C8-PFOS-EIS			NO	0.000
41	72	13C8-PFOS-RSD	104		NO	4.444
42	73	13C2-PFDA-EIS			NO	0.000
43	74	13C2-PFDA-RSD	105		NO	5.532
44	75	13C2-8:2 FTS-EIS			NO	0.000
45	76	13C2-8:2 FTS-RSD	104		NO	9.242
46	77	d3-N-MeFOSAA-EIS			NO	0.000
47	78	d3-N-MeFOSAA-RSD	106		NO	11.016
48	79	13C2-PFUdA-EIS			NO	0.000
49	80	13C2-PFUdA-RSD	106		NO	6.403
50	81	d5-N-EtFOSAA-EIS			NO	0.000
51	82	d5-N-EtFOSAA-RSD	106		NO	4.949
52	83	13C2-PFDoA-EIS			NO	0.000
53	84	13C2-PFDoA-RSD	105		NO	7.970
54	85	13C2-10:2 FTS-EIS			NO	0.000
55	86	13C2-10:2 FTS-RSD	104		NO	14.445
56	87	d3-N-MeFOSA-EIS			NO	0.000
57	88	d3-N-MeFOSA-RSD	106		NO	6.417
58	89	13C2-PFTeDA-EIS			NO	0.000
59	90	13C2-PFTeDA-RSD	106		NO	7.341
60	91	d5-N-ETFOSA-EIS			NO	0.000
61	92	d5-N-ETFOSA-RSD	106		NO	5.247
62	93	13C2-PFHxDA-EIS			NO	0.000
63	94	13C2-PFHxDA-RSD	106		NO	5.934
64	95	d7-N-MeFOSE-EIS			NO	0.000
65	96	d7-N-MeFOSE-RSD	106		NO	7.696
66	97	d9-N-EtFOSE-EIS			NO	0.000
67	98	d9-N-EtFOSE-RSD	106		NO	6.423
68	99	13C4-PFBA	99		NO	0.000

Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 11:36:10 Pacific Standard Time
Printed: Wednesday, February 26, 2020 11:40:34 Pacific Standard Time

Name: 200225P1-3, Date: 25-Feb-2020, Time: 18:19:42, ID: ST200225P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

	#	Name	IS#	CoD	CoD Flag	%RSD
69	1...	13C5-PFHxA	100		NO	0.000
70	1...	18O2-PFHxS	101		NO	0.000
71	1...	13C8-PFOA	102		NO	0.000
72	1...	13C9-PFNA	103		NO	0.000
73	1...	13C4-PFOS	104		NO	0.000
74	1...	TDCA			NO	

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Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-CRV.qld

Last Altered: Wednesday, February 26, 2020 11:36:10 Pacific Standard Time
Printed: Wednesday, February 26, 2020 11:47:01 Pacific Standard Time

Method: P:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022520.mdb 26 Feb 2020 11:36:08
Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-25-20.cdb 26 Feb 2020 11:25:03

Name: 200225P1-8, Date: 25-Feb-2020, Time: 19:12:14, ID: ST200225P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	PFBA	1.42	1.42			
2	PFPrS	1.76	1.74	2.395	2.395	NO
3	3:3 FTCA	2.20	2.20	3.660	3.660	NO
4	PFPeA	2.34	2.34			
5	PFBS	2.62	2.62	3.139	3.139	NO
6	4:2 FTS	3.04	3.04	0.899	0.899	NO
7	PFHxA	3.13	3.13	16.931	16.931	NO
8	PFPeS	3.31	3.32	2.432	2.432	NO
9	HFPO-DA	3.34	3.34	2.776	2.776	NO
10	5:3 FTCA	3.67	3.67	1.853	1.853	NO
11	PFHpA	3.72	3.72	33.693	33.693	NO
12	ADONA	3.81	3.83	4.296	4.296	NO
13	L-PFHxS	3.86	3.86	2.174	2.174	NO
14	6:2 FTS	4.17	4.18	1.229	1.229	NO
15	L-PFOA	4.23	4.23	2.800	2.800	NO
16	PFecHS	4.25	4.24	0.486	0.486	NO
17	PFHpS	4.35	4.34	2.025	2.025	NO
18	7:3 FTCA	4.66	4.65	1.539	1.539	NO
19	PFNA	4.67	4.67	9.406	9.406	NO
20	PFOSA	4.73	4.73	26.472	26.472	NO
21	L-PFOS	4.75	4.75	2.608	2.608	NO
22	9Cl-PF30NS	4.96	4.96	16.976	16.976	NO
23	PFDA	5.04	5.04	11.681	11.681	NO
24	8:2 FTS	5.01	5.01	2.559	2.559	NO
25	PFNS	5.09	5.09	2.122	2.122	NO
26	L-MeFOSAA	5.18	5.18	1.874	1.874	NO

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Dataset: P:\PFAS5.PRO\RESULTS\200225P1\200225P1-CRV.qld

Last Altered: Wednesday, February 26, 2020 11:36:10 Pacific Standard Time
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Method: P:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022520.mdb 26 Feb 2020 11:36:08
Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-25-20.cdb 26 Feb 2020 11:25:03

Name: 200225P1-8, Date: 25-Feb-2020, Time: 19:12:14, ID: ST200225P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	L-EtFOSAA	5.33	5.34	1.127	1.127	NO
2	PFUdA	5.35	5.35	23.768	23.768	NO
3	PFDS	5.38	5.40	2.050	2.050	NO
4	11Cl-PF30UdS	5.56	5.56	19.229	19.229	NO
5	10:2 FTS	5.61	5.61	0.992	0.992	NO
6	PFDoA	5.62	5.63	9.903	9.903	NO
7	N-MeFOSA	5.75	5.74	1.781	1.781	NO
8	PFTrDA	5.88	5.87	50.652	50.652	NO
9	PFDoS	5.88	5.89	3.011	3.011	NO
10	PFTeDA	6.08	6.08	17.346	17.346	NO
11	N-EtFOSA	6.13	6.14	1.652	1.652	NO
12	PFHxDA	6.40	6.40	155.012	155.012	NO
13	PFODA	6.61	6.63			
14	N-MeFOSE	6.29	6.29			
15	N-EtFOSE	6.43	6.44			
16	TDCA	4.59		0.000		

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Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 11:49:56 Pacific Standard Time
Printed: Wednesday, February 26, 2020 11:50:38 Pacific Standard Time

Method: P:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022520.mdb 26 Feb 2020 11:36:08
Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-25-20.cdb 26 Feb 2020 11:25:03

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
1	1	200225P1-2	IPA	25-Feb-20	18:09:11
2	2	200225P1-3	ST200225P1-1 PFC CS-2 20B1102	25-Feb-20	18:19:42
3	3	200225P1-4	ST200225P1-2 PFC CS-1 20B1103	25-Feb-20	18:30:13
4	4	200225P1-5	ST200225P1-3 PFC CS0 20B1104	25-Feb-20	18:40:42
5	5	200225P1-6	ST200225P1-4 PFC CS1 20B1105	25-Feb-20	18:51:13
6	6	200225P1-7	ST200225P1-5 PFC CS2 20B1106	25-Feb-20	19:01:42
7	7	200225P1-8	ST200225P1-6 PFC CS3 20B1107	25-Feb-20	19:12:14
8	8	200225P1-9	ST200225P1-7 PFC CS4 20B1108	25-Feb-20	19:22:44
9	9	200225P1-10	ST200225P1-8 PFC CS5 20B1109	25-Feb-20	19:33:15
10	10	200225P1-11	ST200225P1-9 PFC CS6 20B1110	25-Feb-20	19:43:44
11	11	200225P1-12	ST200225P1-10 PFC CS7 20B1111	25-Feb-20	19:54:16
12	12	200225P1-13	IB	25-Feb-20	20:04:45
13	13	200225P1-14	ICV200225P1-1 PFC ICV 20B1112	25-Feb-20	20:15:16
14	14	200225P1-15	IB	25-Feb-20	20:25:46

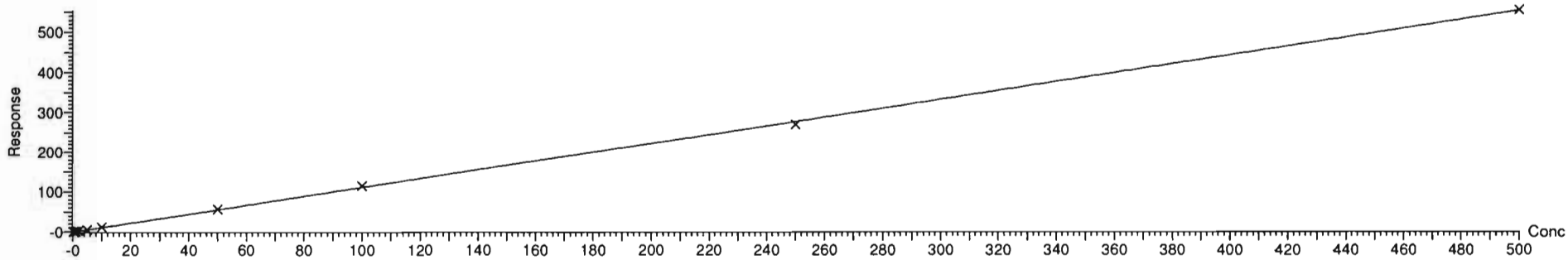
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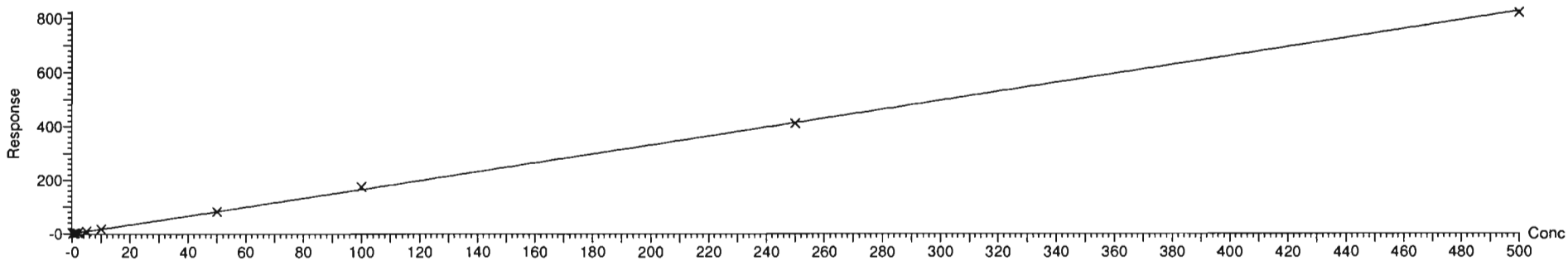
Last Altered: Wednesday, February 26, 2020 11:36:10 Pacific Standard Time
Printed: Wednesday, February 26, 2020 11:37:56 Pacific Standard Time

Method: P:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022520.mdb 26 Feb 2020 11:36:08
Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-25-20.cdb 26 Feb 2020 11:25:03

Compound name: PFBA
Correlation coefficient: r = 0.999793, r^2 = 0.999585
Calibration curve: 1.10726 * x + 0.0852146
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



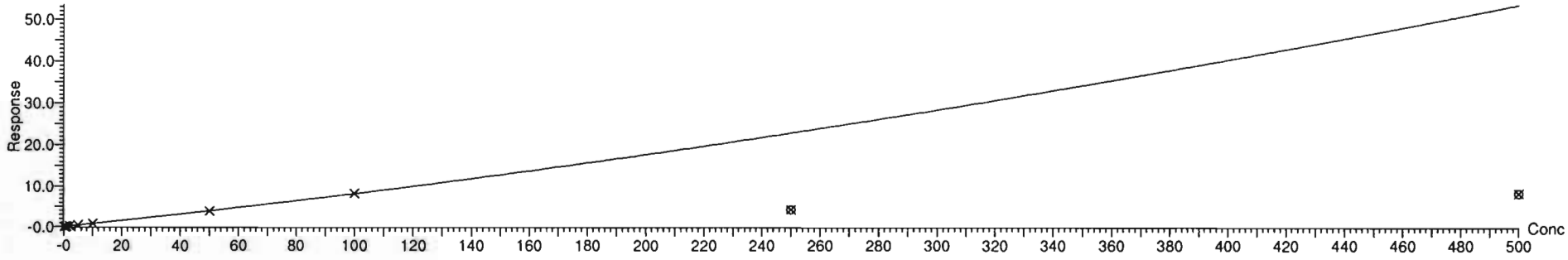
Compound name: PFPrS
Correlation coefficient: r = 0.999715, r^2 = 0.999431
Calibration curve: 1.65319 * x + -0.00618218
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



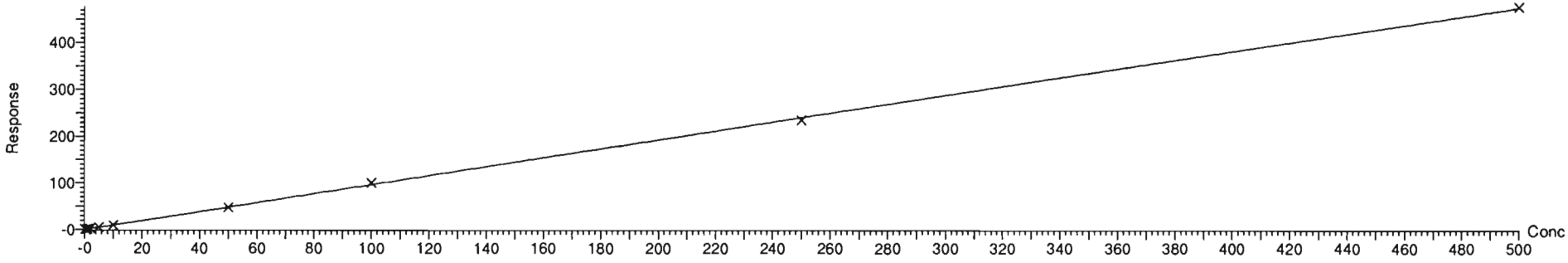
Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 11:36:10 Pacific Standard Time
Printed: Wednesday, February 26, 2020 11:37:56 Pacific Standard Time

Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.999447
Calibration curve: 6.20578e-005 * x^2 + 0.0762417 * x + 0.00385416
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



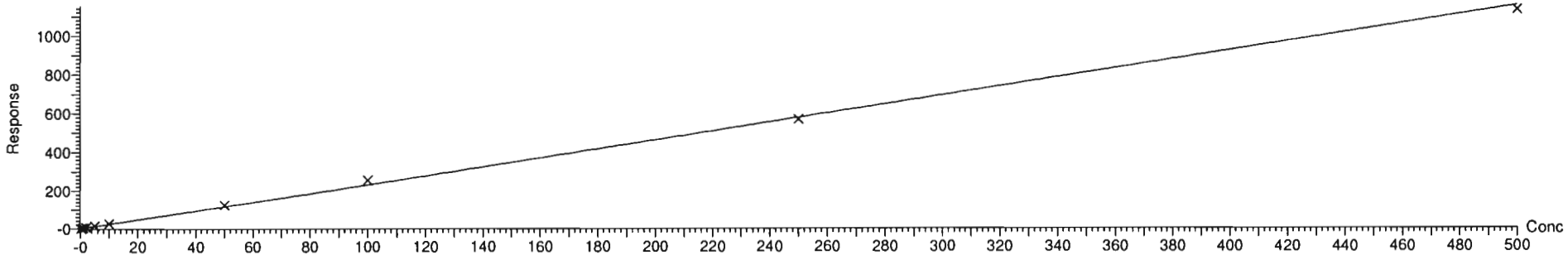
Compound name: PFPeA
Coefficient of Determination: R^2 = 0.999596
Calibration curve: -5.10583e-005 * x^2 + 0.975868 * x + 0.0396465
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



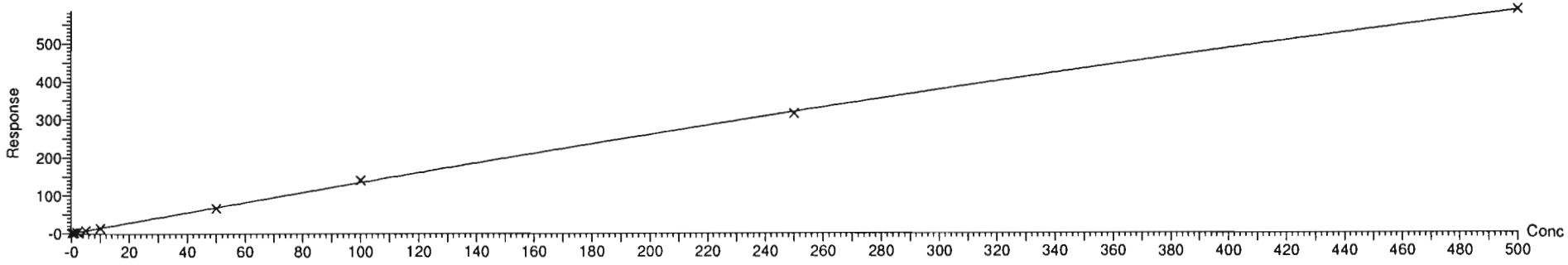
Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 11:36:10 Pacific Standard Time
Printed: Wednesday, February 26, 2020 11:37:56 Pacific Standard Time

Compound name: PFBS
Correlation coefficient: r = 0.998996, r^2 = 0.997993
Calibration curve: 2.30898 * x + 0.0728009
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



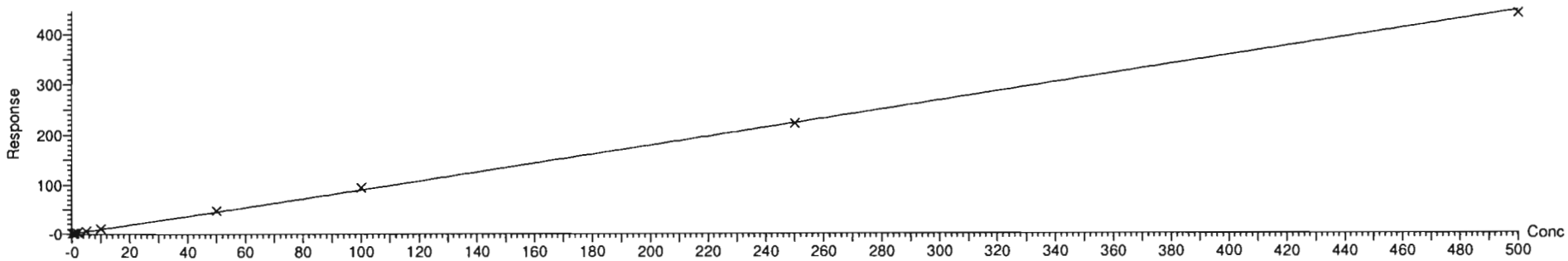
Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.999367
Calibration curve: -0.000434108 * x^2 + 1.38843 * x + -0.178318
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



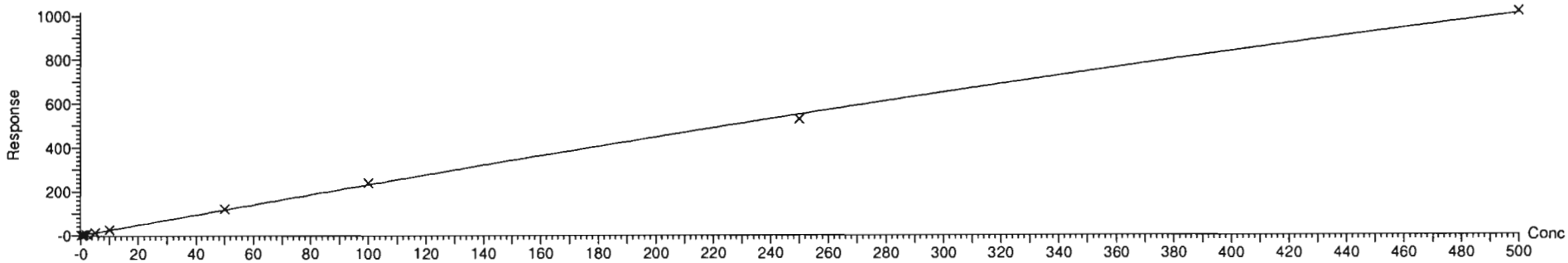
Dataset: Untitled

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Compound name: PFHxA
Correlation coefficient: r = 0.999532, r^2 = 0.999064
Calibration curve: 0.893131 * x + 0.0844687
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



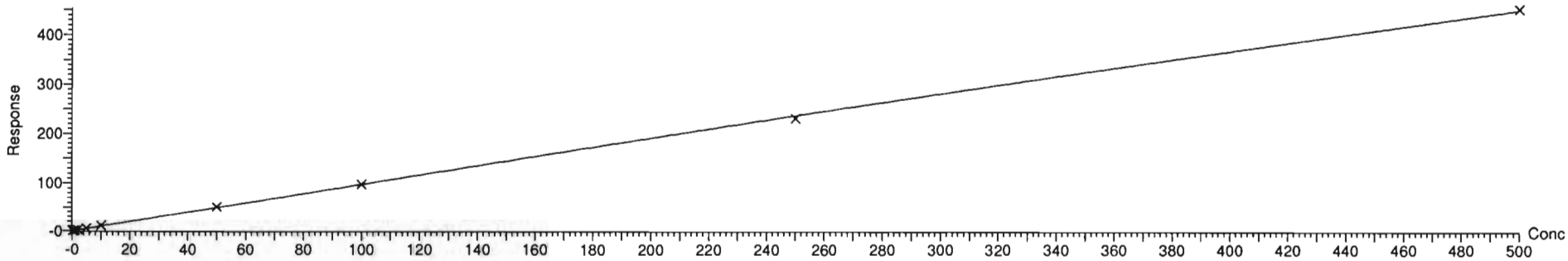
Compound name: PFPeS
Coefficient of Determination: R^2 = 0.999064
Calibration curve: -0.000730443 * x^2 + 2.38201 * x + -0.0672473
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



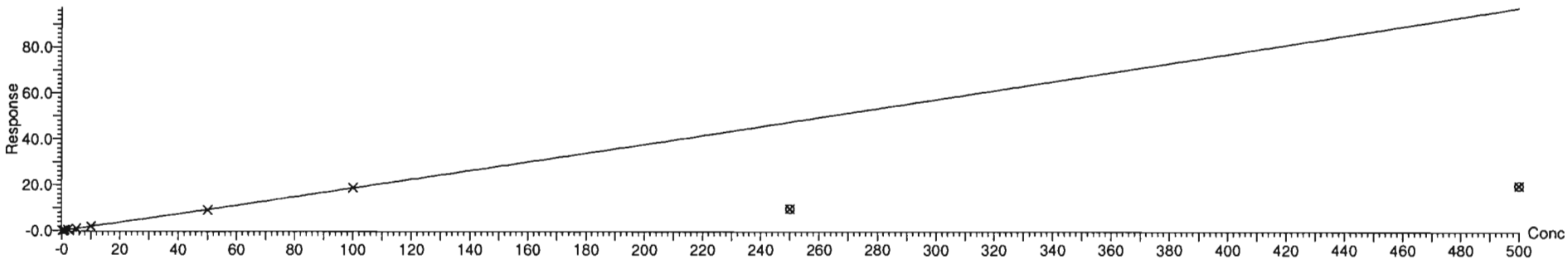
Dataset: Untitled

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Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.999495
Calibration curve: -0.000187555 * x^2 + 0.995843 * x + 0.017923
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



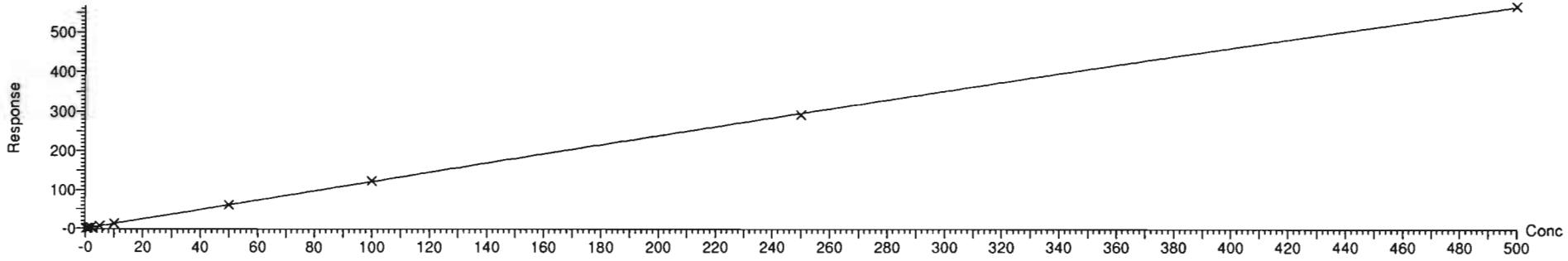
Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.999699
Calibration curve: 1.76506e-005 * x^2 + 0.186062 * x + -0.00829431
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



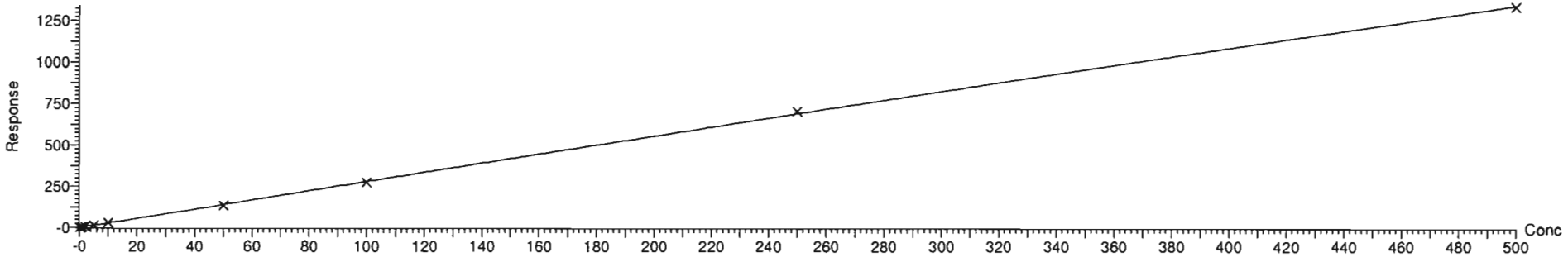
Dataset: Untitled

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Compound name: PFHpA
Coefficient of Determination: R^2 = 0.999835
Calibration curve: -0.000213241 * x^2 + 1.2385 * x + 0.0521085
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



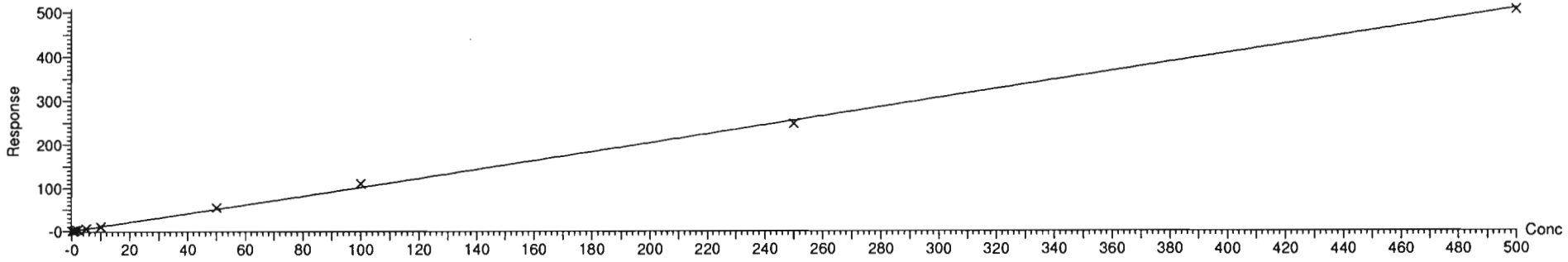
Compound name: ADONA
Coefficient of Determination: R^2 = 0.999654
Calibration curve: -0.00033118 * x^2 + 2.85271 * x + 0.0577579
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



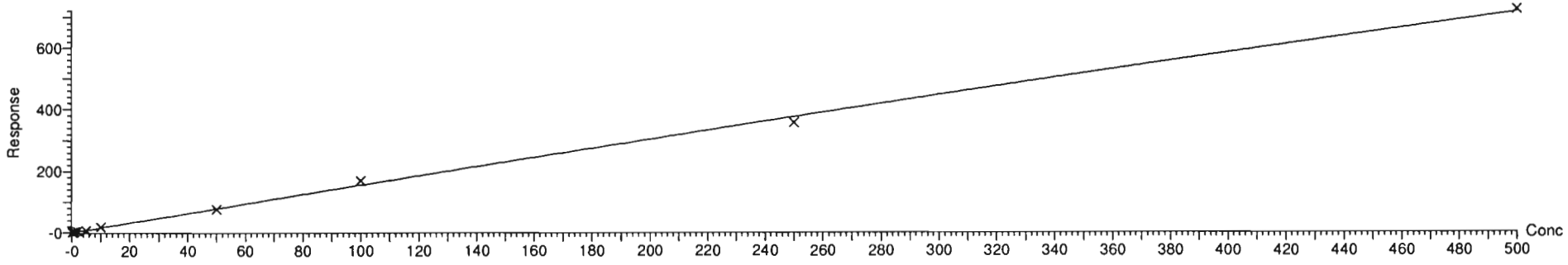
Dataset: Untitled

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Compound name: L-PFHxS
Correlation coefficient: r = 0.999271, r^2 = 0.998543
Calibration curve: 1.01885 * x + 0.0424708
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



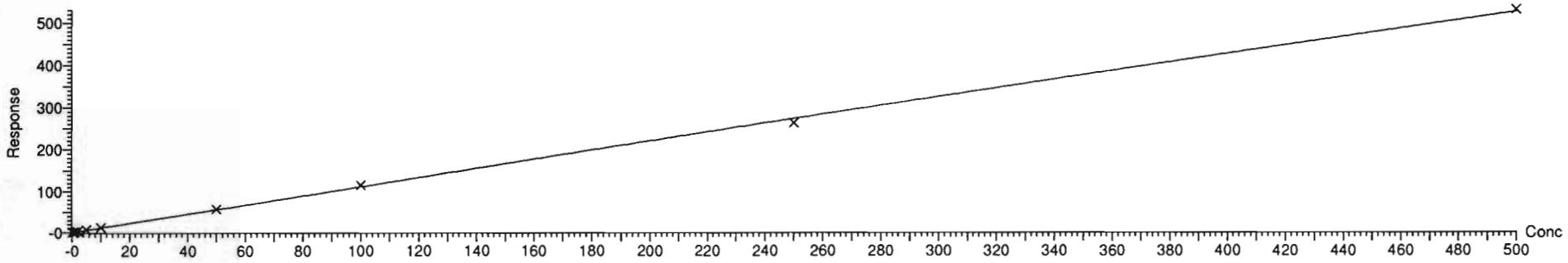
Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.997864
Calibration curve: -0.000277268 * x^2 + 1.56695 * x + 0.134499
Response type: Internal Std (Ref 63), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



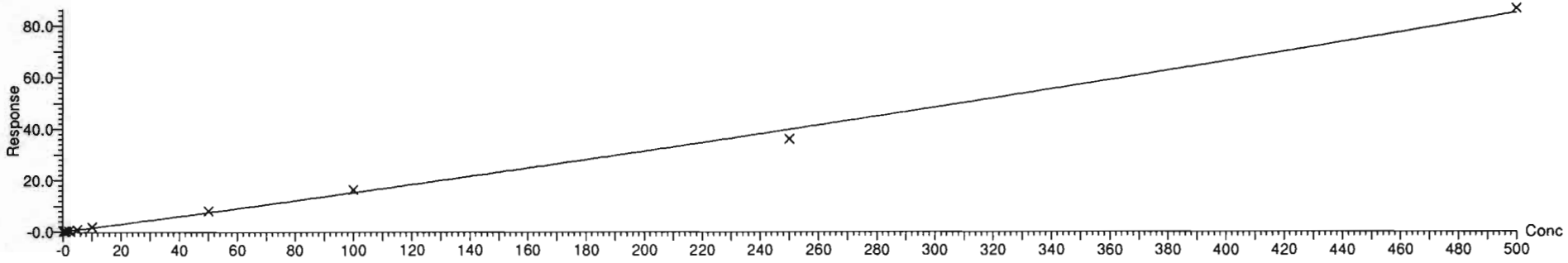
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Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.999126
Calibration curve: -0.000157489 * x^2 + 1.13112 * x + 0.114857
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



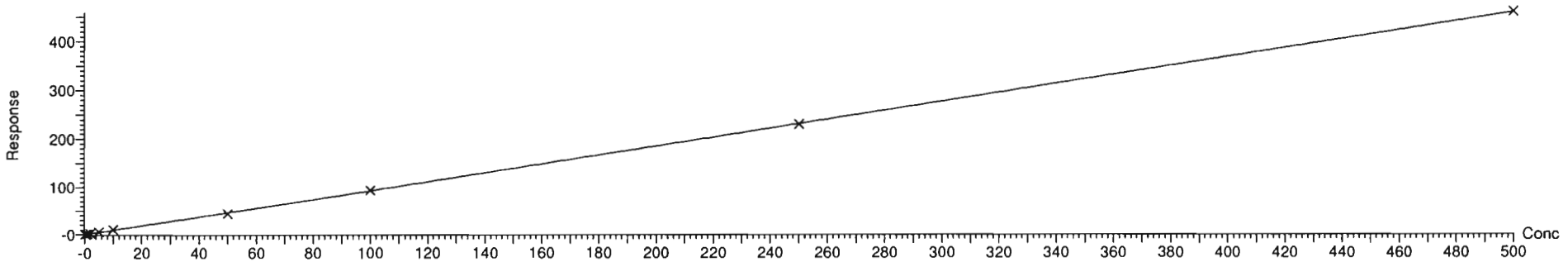
Compound name: PFecHS
Coefficient of Determination: R^2 = 0.996153
Calibration curve: 4.46408e-005 * x^2 + 0.147633 * x + 0.0114163
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



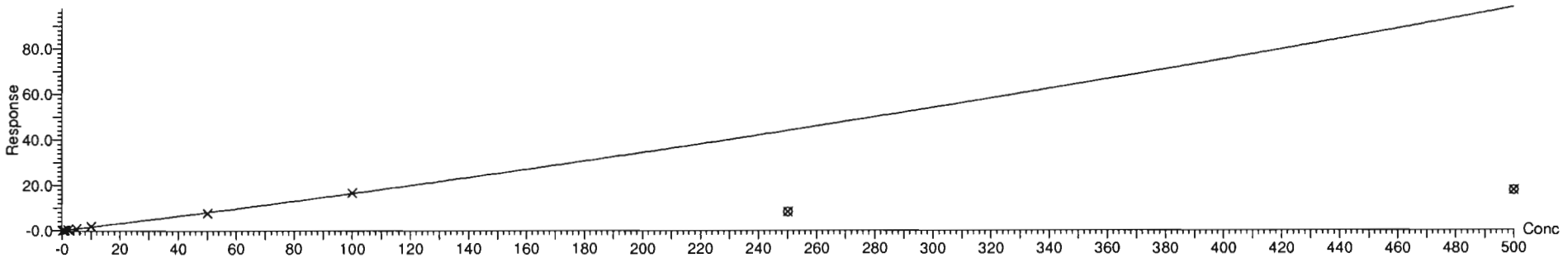
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Compound name: PFHpS
Coefficient of Determination: R^2 = 0.999533
Calibration curve: -1.97849e-005 * x^2 + 0.928406 * x + 0.0131066
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



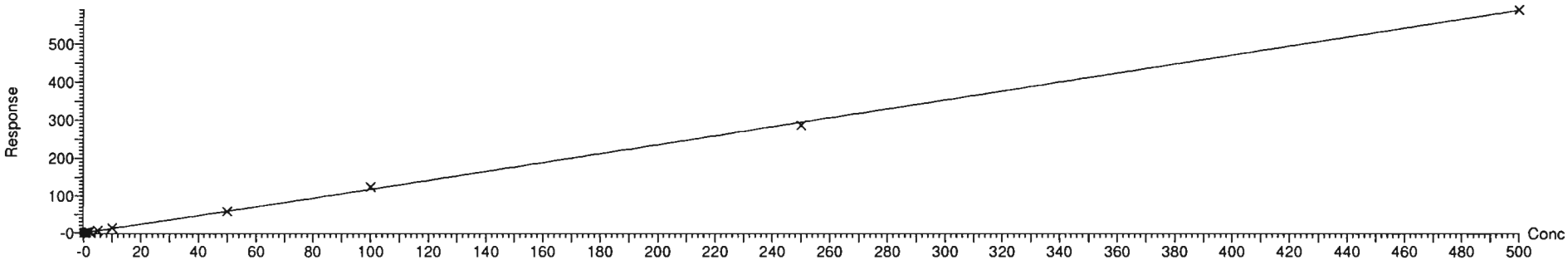
Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.998547
Calibration curve: 8.1341e-005 * x^2 + 0.155084 * x + -0.0133127
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



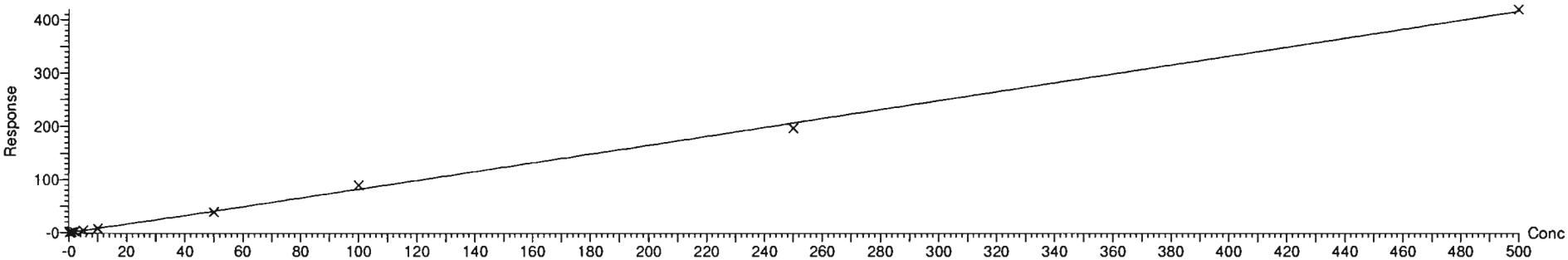
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Compound name: PFNA
Correlation coefficient: r = 0.999628, r^2 = 0.999256
Calibration curve: 1.17976 * x + 0.155189
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



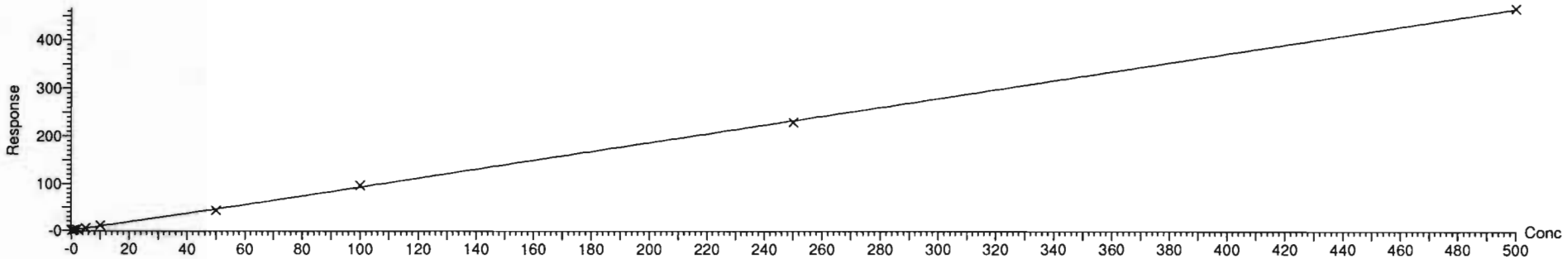
Compound name: PFOSA
Coefficient of Determination: R^2 = 0.998293
Calibration curve: 2.22748e-005 * x^2 + 0.82094 * x + -0.0255848
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



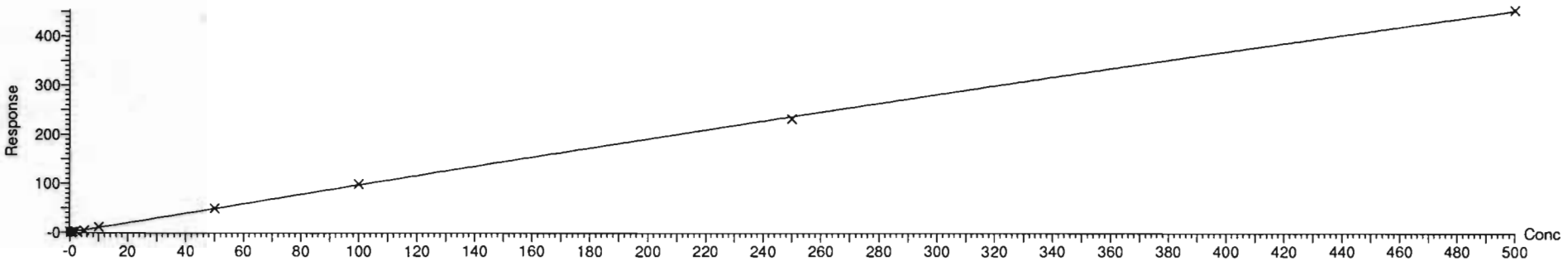
Dataset: Untitled

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Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.999204
Calibration curve: -1.248e-005 * x^2 + 0.936367 * x + -0.00626015
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



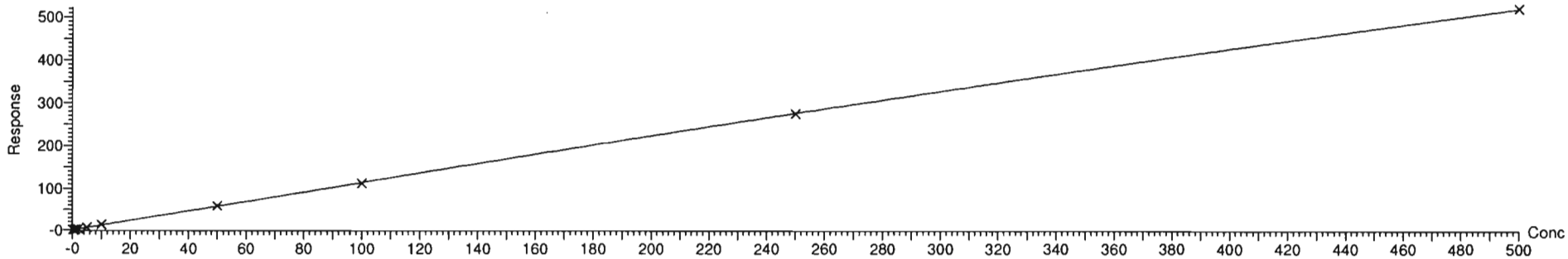
Compound name: 9CI-PF30NS
Coefficient of Determination: R^2 = 0.999619
Calibration curve: -0.000173604 * x^2 + 0.991244 * x + 0.177624
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



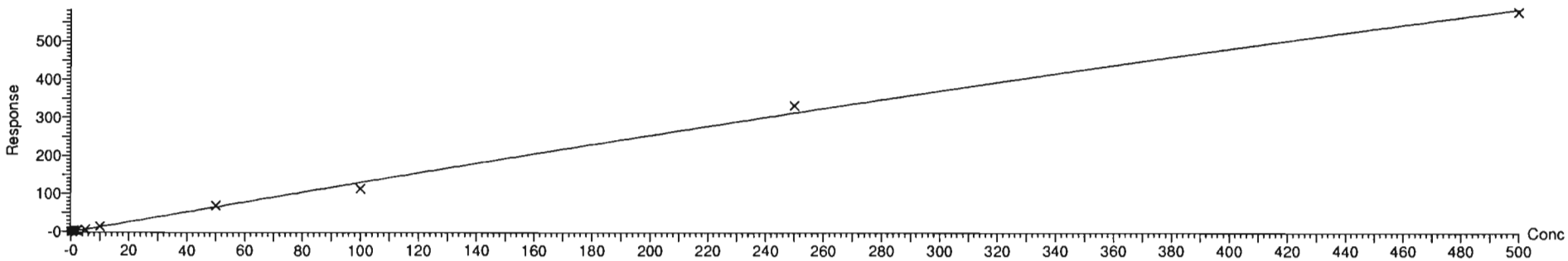
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Compound name: PFDA
Coefficient of Determination: R^2 = 0.999769
Calibration curve: -0.000263391 * x^2 + 1.17334 * x + 0.0663551
Response type: Internal Std (Ref 73), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



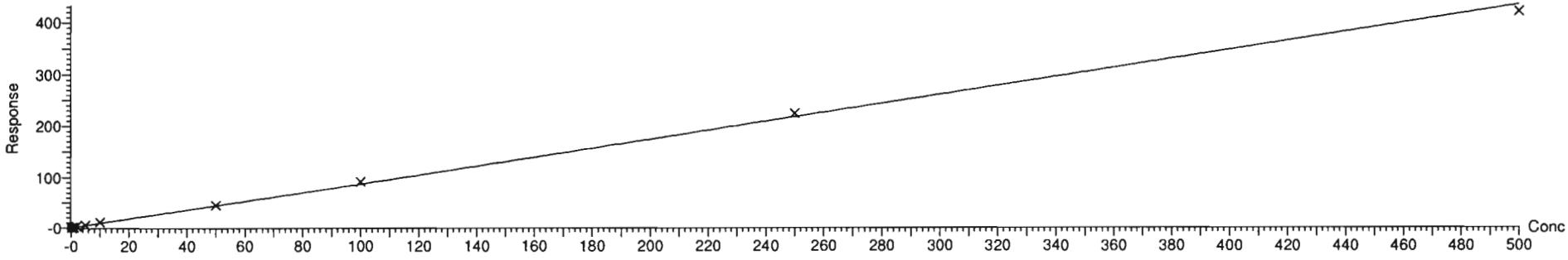
Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.996459
Calibration curve: -0.000340371 * x^2 + 1.34102 * x + -0.893418
Response type: Internal Std (Ref 75), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



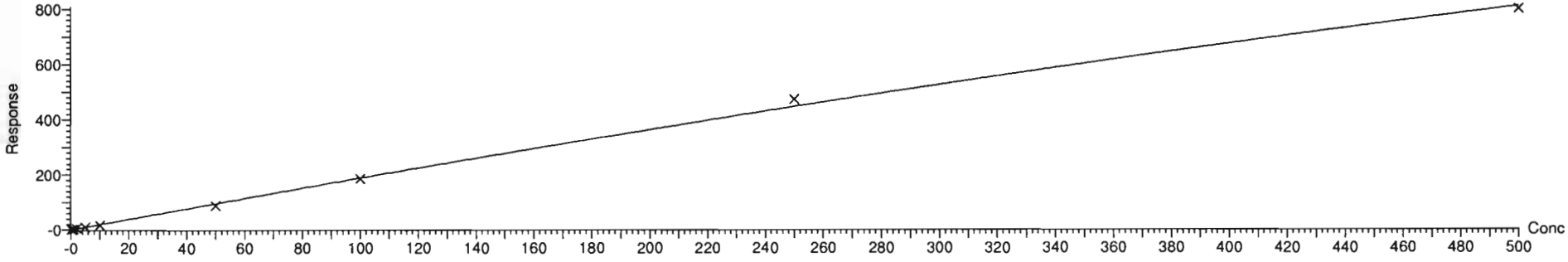
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Compound name: PFNS
Correlation coefficient: r = 0.998965, r^2 = 0.997930
Calibration curve: 0.867271 * x + 0.295013
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Compound name: L-MeFOSAA
Coefficient of Determination: R^2 = 0.997934
Calibration curve: -0.000651587 * x^2 + 1.94487 * x + -0.0570901
Response type: Internal Std (Ref 77), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



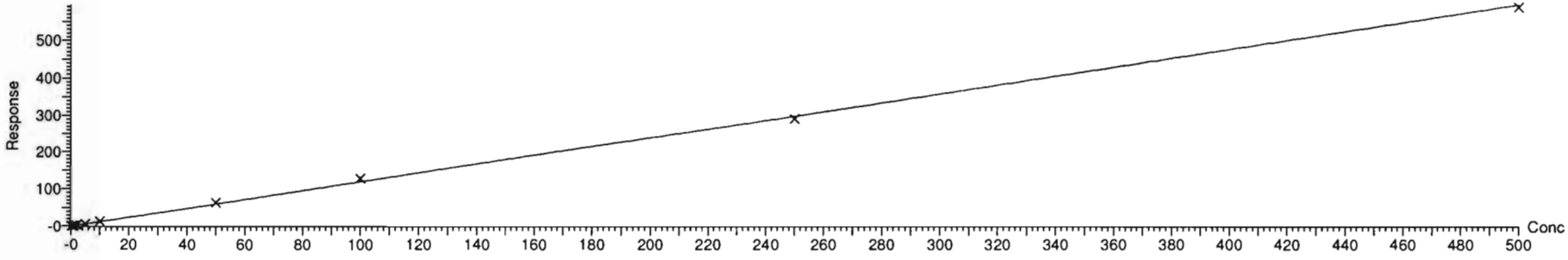
Vista Analytical Laboratory Q1

Dataset: Untitled

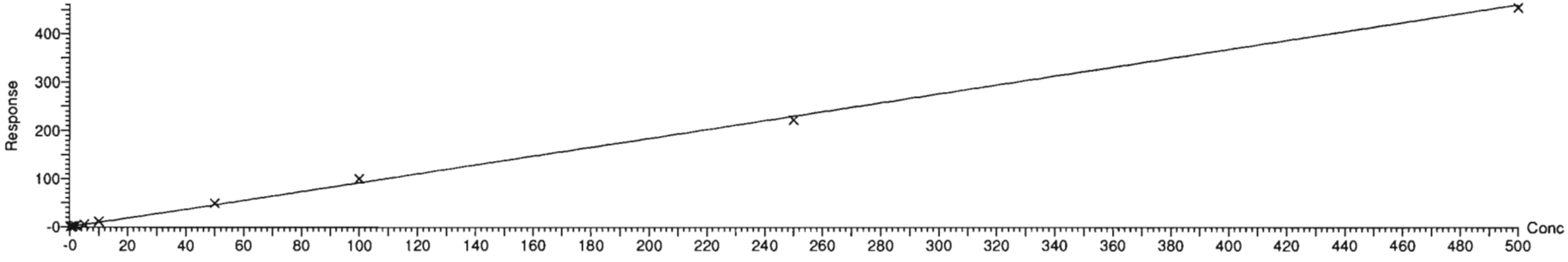
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Method: P:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022520.mdb 26 Feb 2020 11:36:08
Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-25-20.cdb 26 Feb 2020 11:25:03

Compound name: L-EtFOSAA
Correlation coefficient: r = 0.999424, r^2 = 0.998848
Calibration curve: 1.19224 * x + 0.0364651
Response type: Internal Std (Ref 81), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



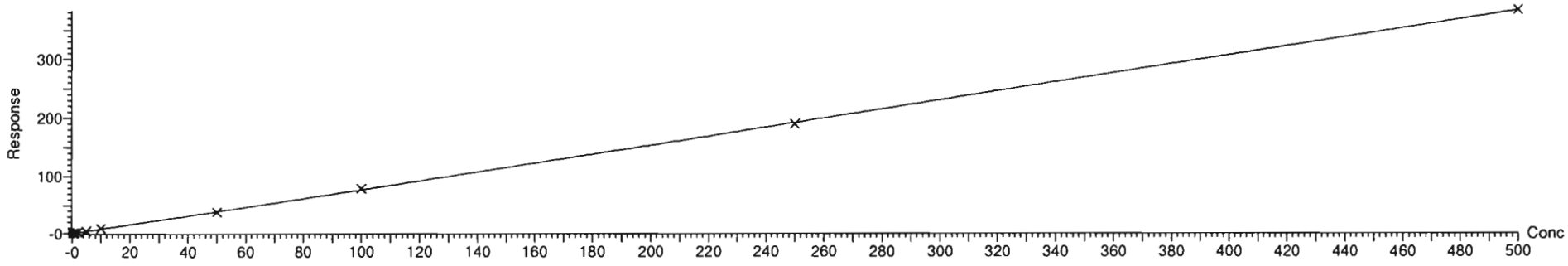
Compound name: PFUdA
Correlation coefficient: r = 0.998904, r^2 = 0.997808
Calibration curve: 0.920819 * x + 0.155174
Response type: Internal Std (Ref 79), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



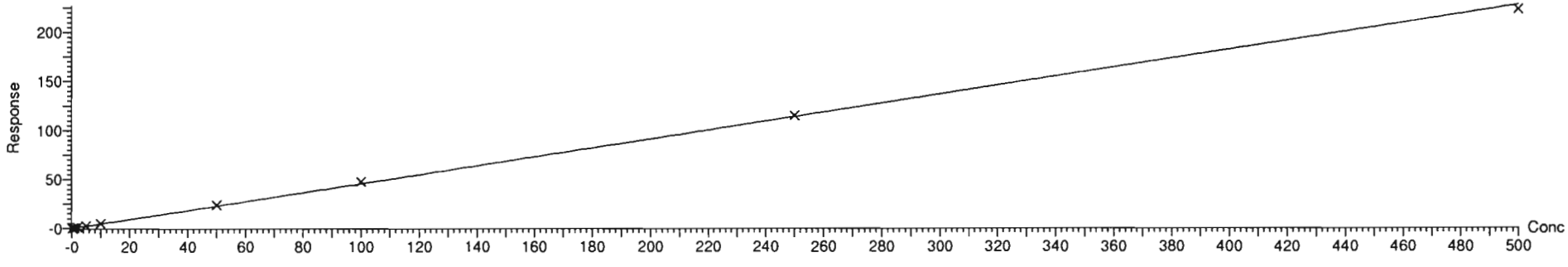
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Compound name: PFDS
Correlation coefficient: r = 0.999800, r^2 = 0.999601
Calibration curve: 0.767019 * x + 0.0116423
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



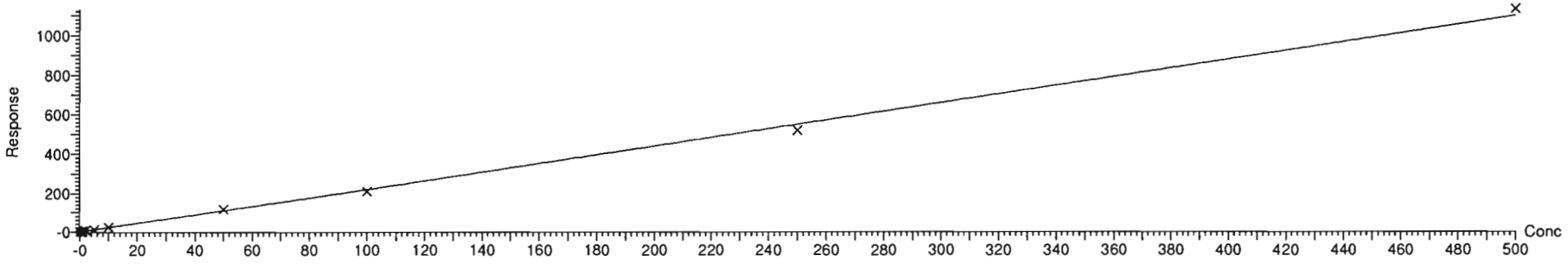
Compound name: 11Cl-PF30UdS
Correlation coefficient: r = 0.999589, r^2 = 0.999178
Calibration curve: 0.454613 * x + 0.0281832
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



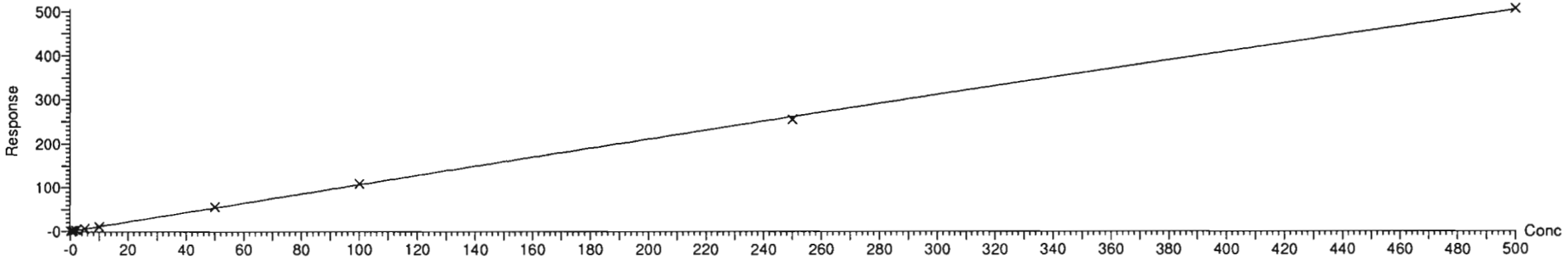
Dataset: Untitled

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Compound name: 10:2 FTS
Correlation coefficient: r = 0.998945, r^2 = 0.997890
Calibration curve: 2.19744 * x + 0.426867
Response type: Internal Std (Ref 85), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



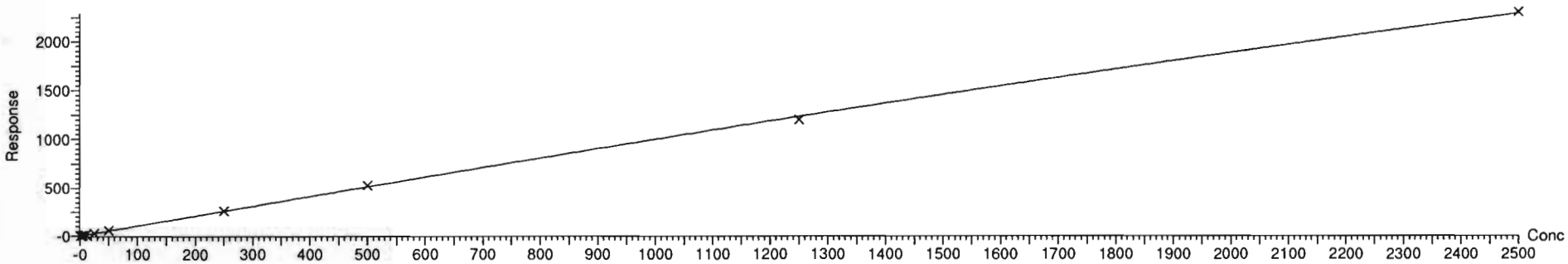
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999585
Calibration curve: -0.000140726 * x^2 + 1.07719 * x + 0.077473
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



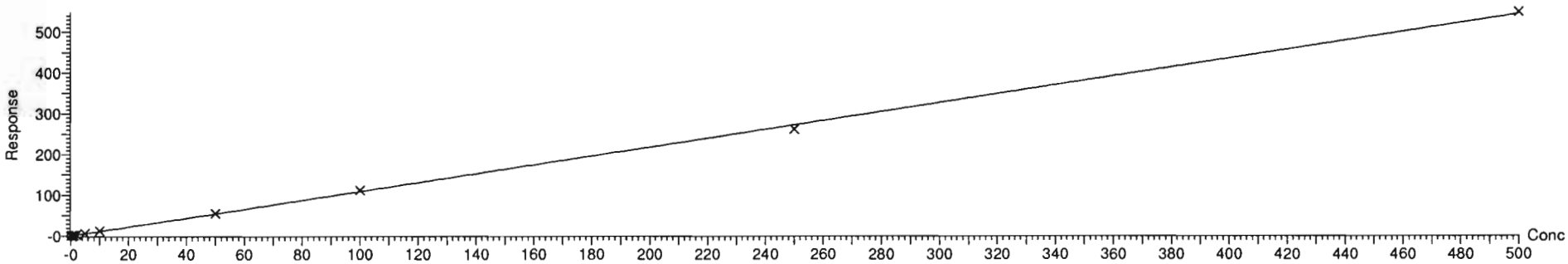
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Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.999583
Calibration curve: -5.69994e-005 * x^2 + 1.0553 * x + -0.0250783
Response type: Internal Std (Ref 87), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



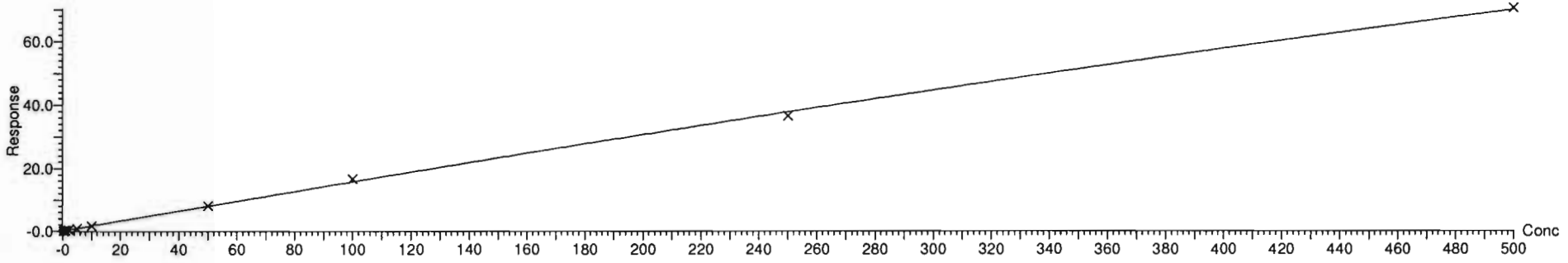
Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.999093
Calibration curve: 1.12175e-006 * x^2 + 1.08591 * x + 0.374825
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



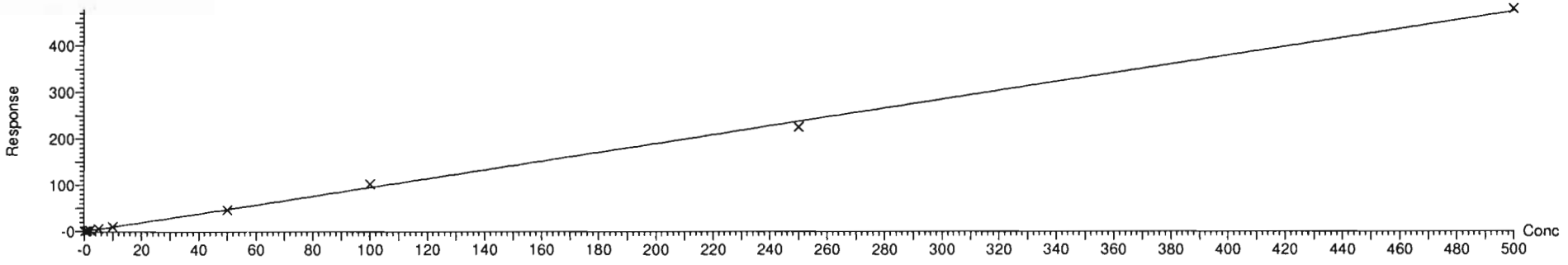
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Compound name: PFDoS
Coefficient of Determination: R^2 = 0.999202
Calibration curve: -4.44146e-005 * x^2 + 0.161935 * x + 0.00601354
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



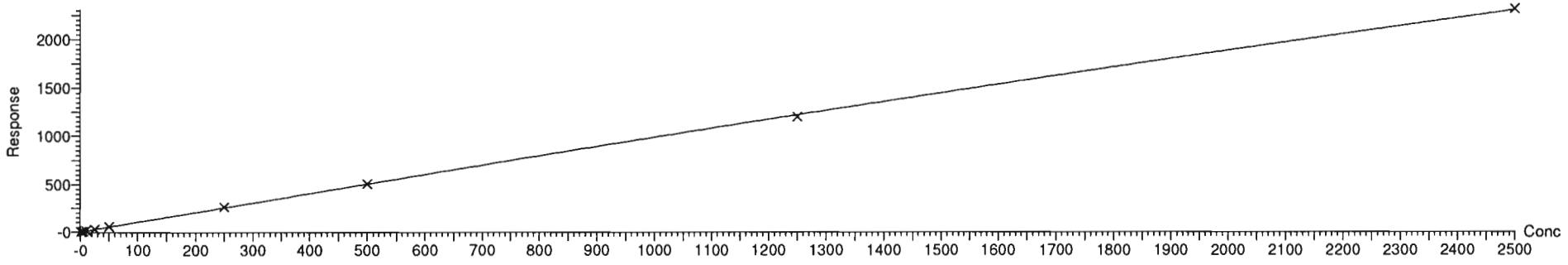
Compound name: PFTeDA
Correlation coefficient: r = 0.999213, r^2 = 0.998426
Calibration curve: 0.946667 * x + 0.0579059
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



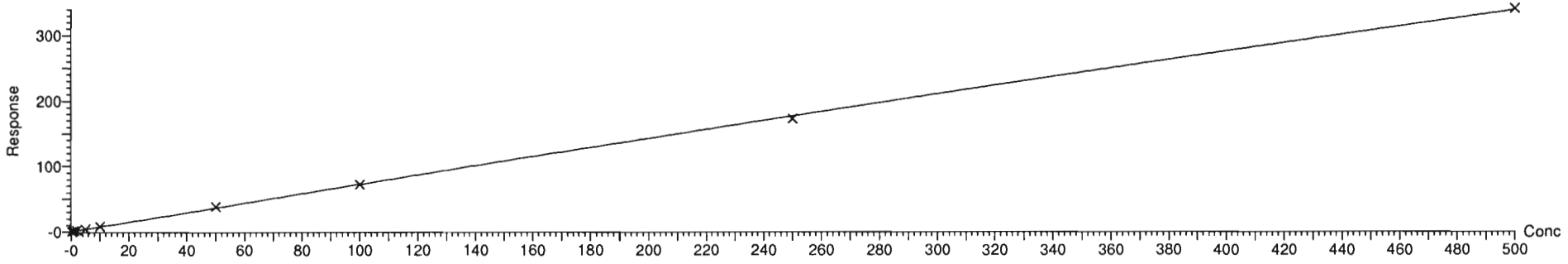
Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 11:36:10 Pacific Standard Time
Printed: Wednesday, February 26, 2020 11:38:29 Pacific Standard Time

Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999776
Calibration curve: -4.37352e-005 * x^2 + 1.0291 * x + 0.393476
Response type: Internal Std (Ref 91), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



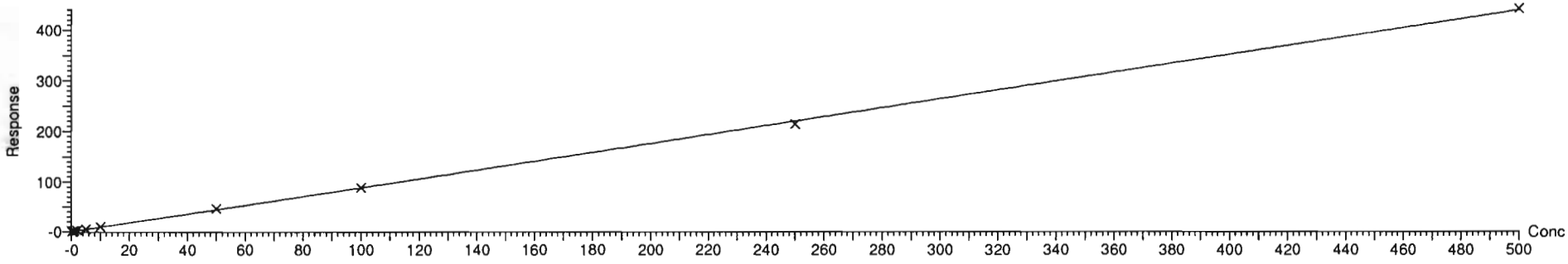
Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999460
Calibration curve: -0.000122127 * x^2 + 0.737678 * x + 0.157258
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



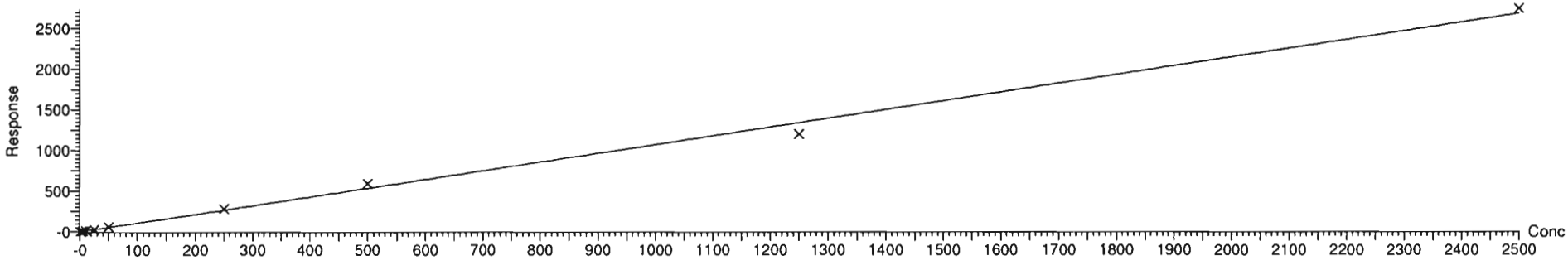
Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 11:36:10 Pacific Standard Time
Printed: Wednesday, February 26, 2020 11:38:29 Pacific Standard Time

Compound name: PFODA
Coefficient of Determination: R^2 = 0.999550
Calibration curve: -6.40276e-006 * x^2 + 0.881896 * x + 0.0287076
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



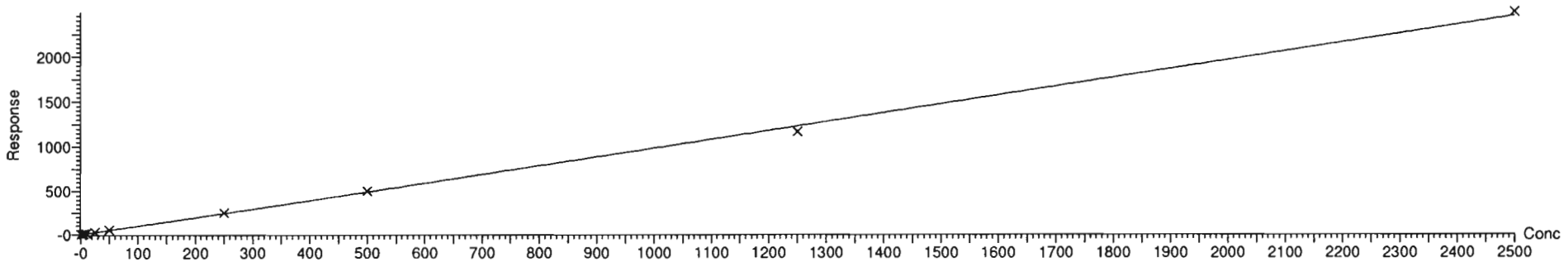
Compound name: N-MeFOSE
Correlation coefficient: r = 0.997589, r^2 = 0.995184
Calibration curve: 1.07295 * x + 0.022575
Response type: Internal Std (Ref 95), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 11:36:10 Pacific Standard Time
Printed: Wednesday, February 26, 2020 11:38:29 Pacific Standard Time

Compound name: N-EtFOSE
Correlation coefficient: r = 0.999471, r^2 = 0.998943
Calibration curve: 0.98218 * x + 0.297158
Response type: Internal Std (Ref 97), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Compound name: TDCA
No Calibration
Response type: External Std, Area
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



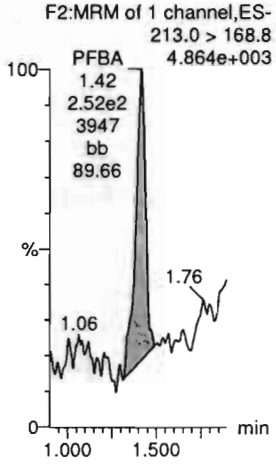
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Last Altered: Wednesday, February 26, 2020 10:17:23 Pacific Standard Time
Printed: Wednesday, February 26, 2020 10:18:42 Pacific Standard Time

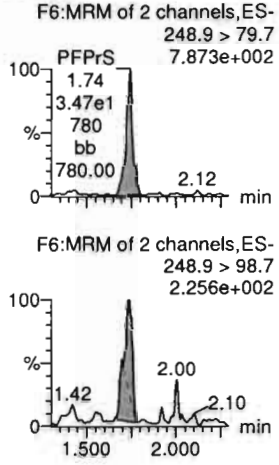
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Calibration: 26 Feb 2020 10:17:23

Name: 200225P1-3, Date: 25-Feb-2020, Time: 18:19:42, ID: ST200225P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

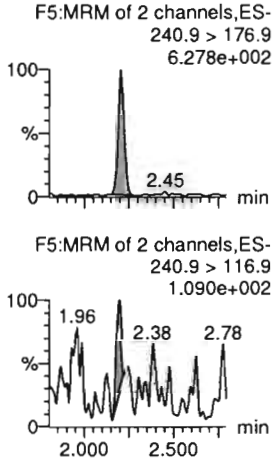
PFBA



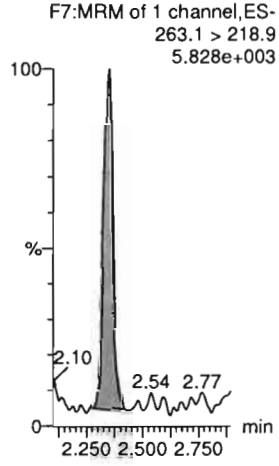
PFPrS



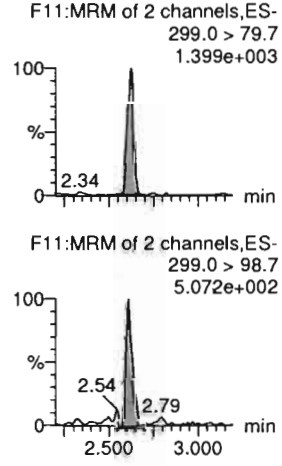
3:3 FTCA



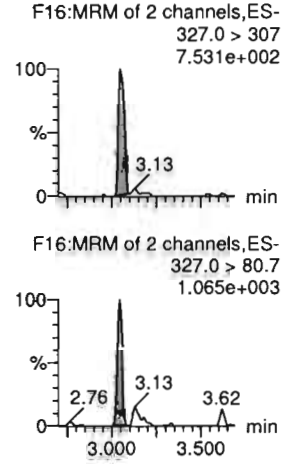
PFPeA



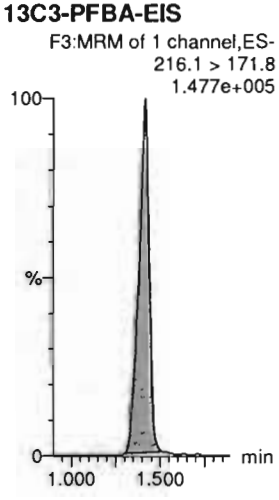
PFBS



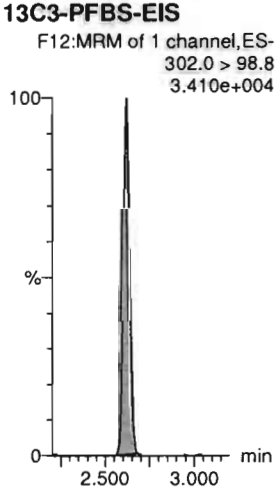
4:2 FTS



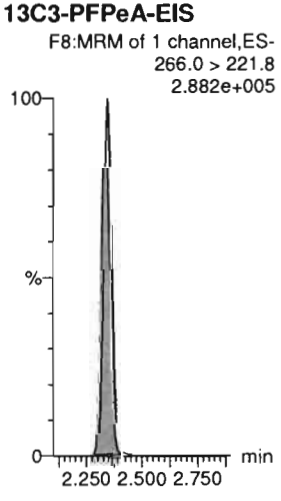
13C3-PFBA-EIS



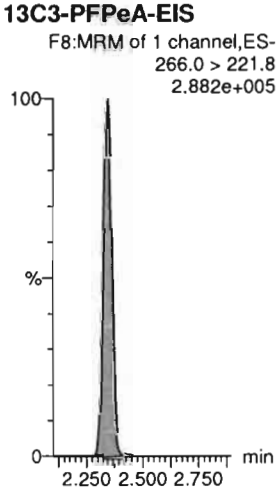
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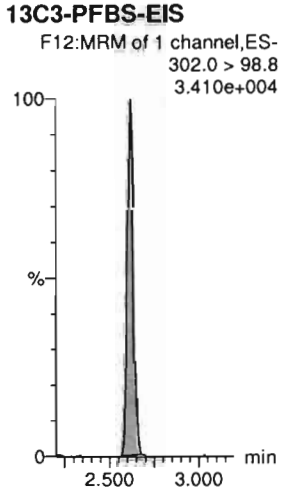
13C3-PFPeA-EIS



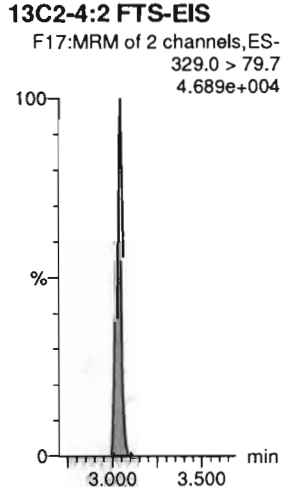
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

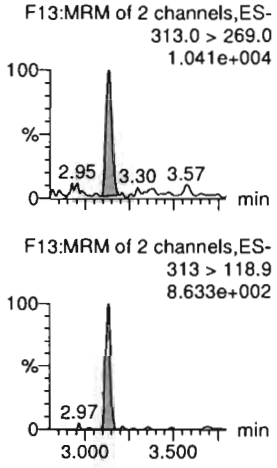


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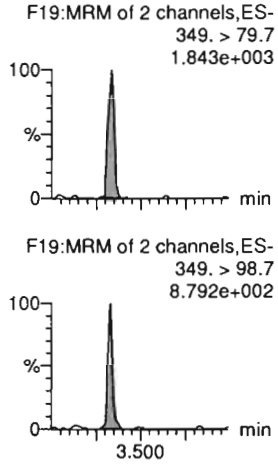
Last Altered: Wednesday, February 26, 2020 10:17:23 Pacific Standard Time
Printed: Wednesday, February 26, 2020 10:18:42 Pacific Standard Time

Name: 200225P1-3, Date: 25-Feb-2020, Time: 18:19:42, ID: ST200225P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

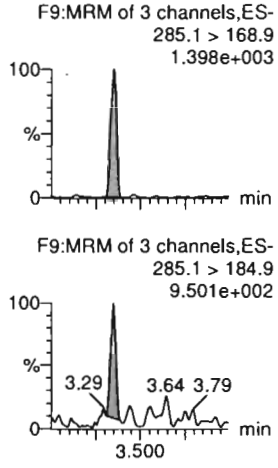
PFHxA



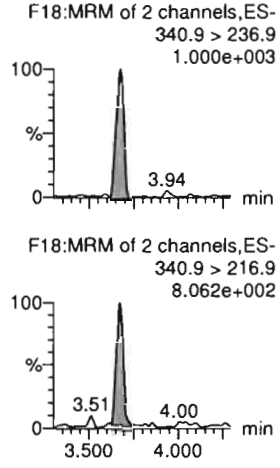
PFPeS



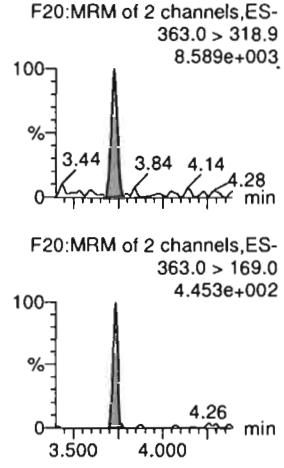
HFPO-DA



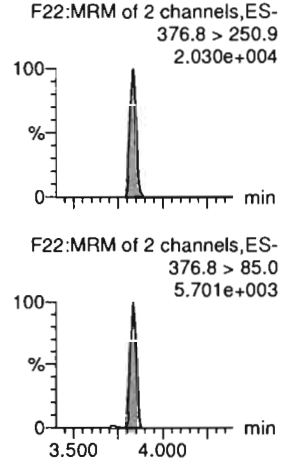
5:3 FTCA



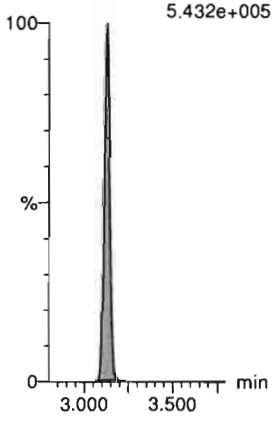
PFHpA



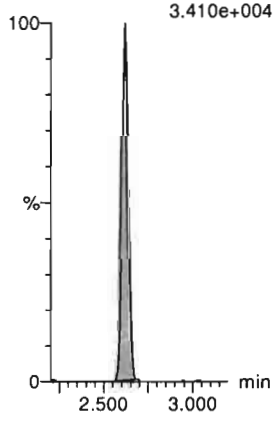
ADONA



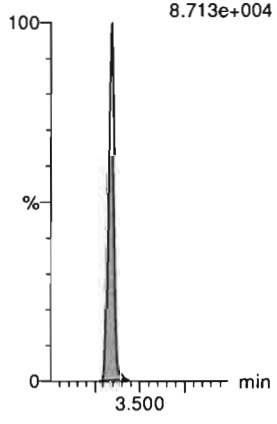
13C2-PFHxA-EIS



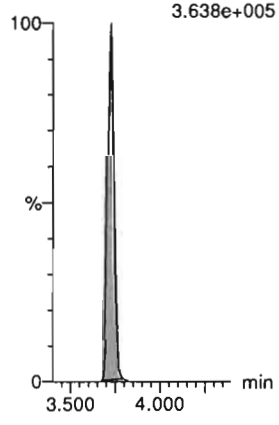
13C3-PFBS-EIS



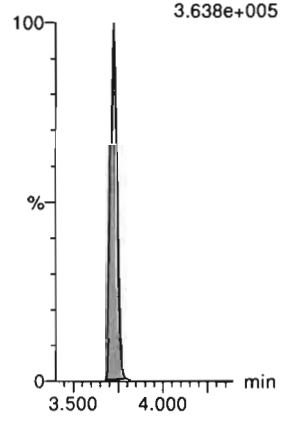
13C3-HFPO-DA-EIS



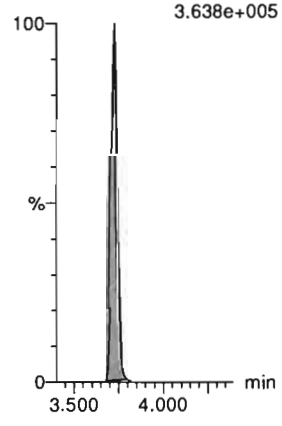
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

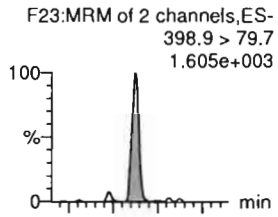


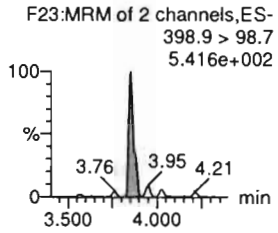
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Last Altered: Wednesday, February 26, 2020 10:17:23 Pacific Standard Time
Printed: Wednesday, February 26, 2020 10:18:42 Pacific Standard Time

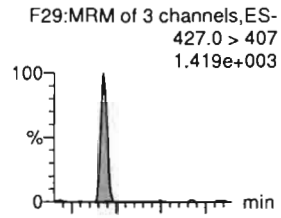
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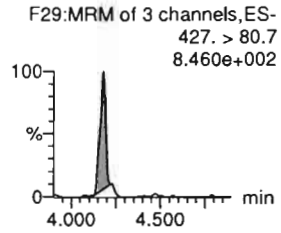
L-PFHxS



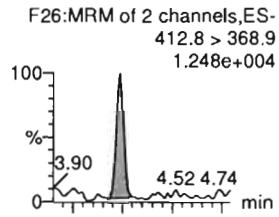


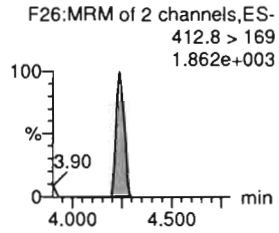
6:2 FTS



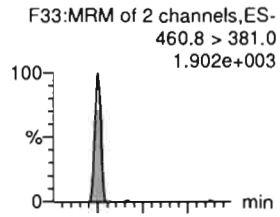


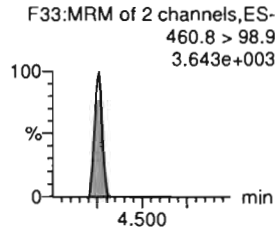
L-PFOA



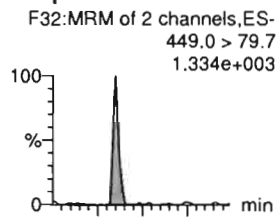


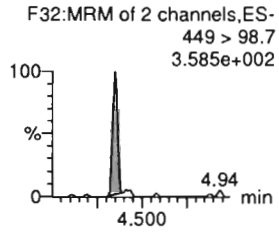
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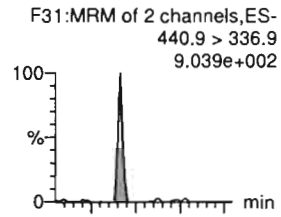


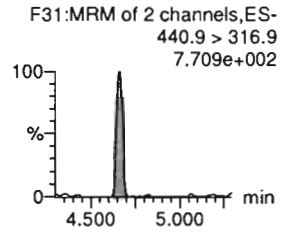
PFHpS



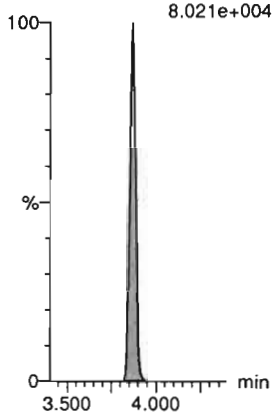


7:3 FTCA

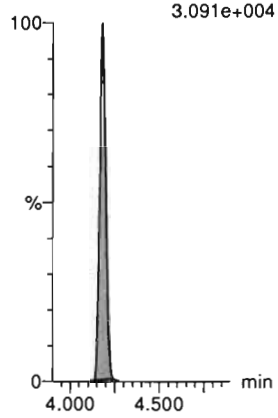




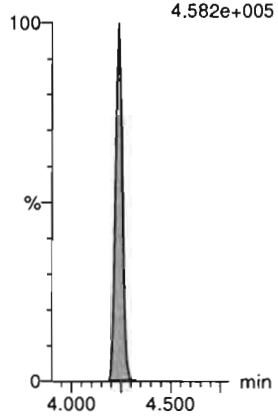
13C3-PFHxS-EIS



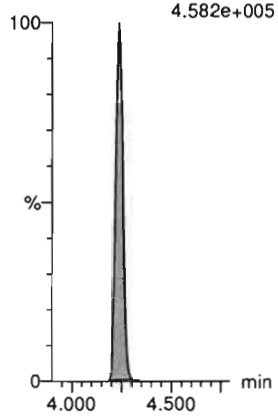
13C2-6:2 FTS-EIS



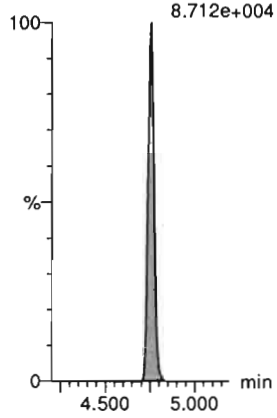
13C2-PFOA-EIS



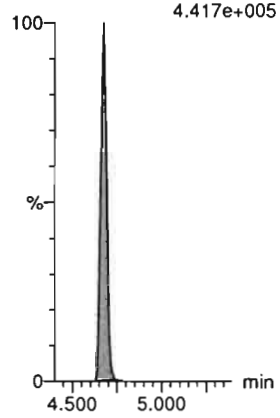
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

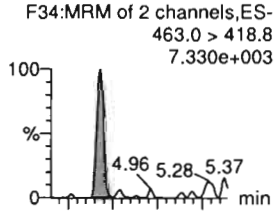


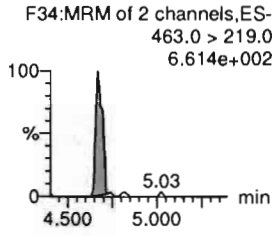
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Last Altered: Wednesday, February 26, 2020 10:17:23 Pacific Standard Time
Printed: Wednesday, February 26, 2020 10:18:42 Pacific Standard Time

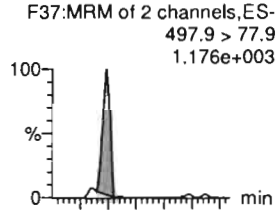
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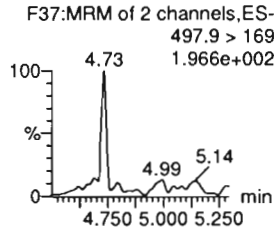
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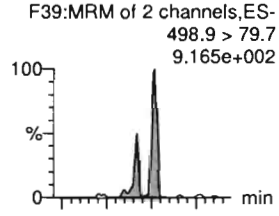


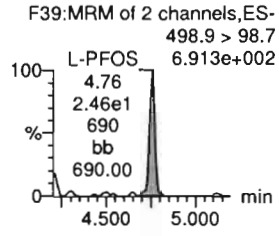
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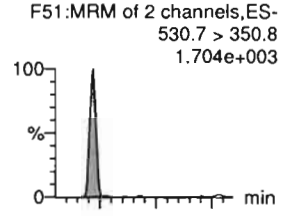


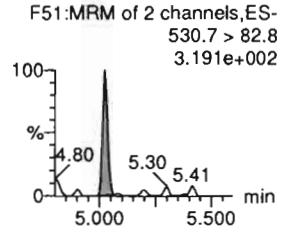
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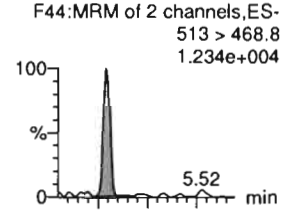


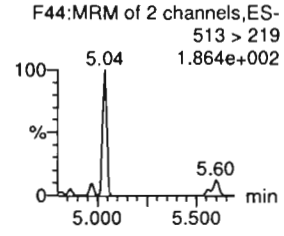
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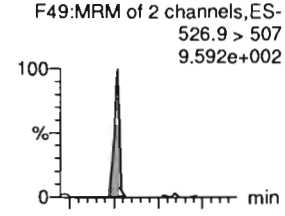


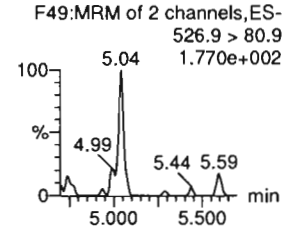
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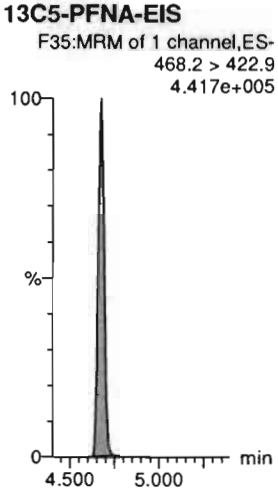


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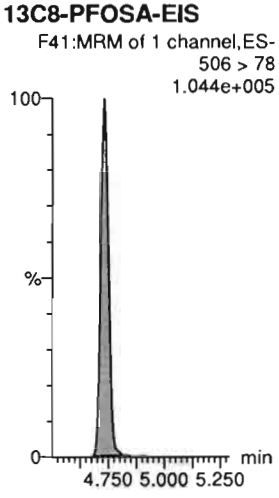




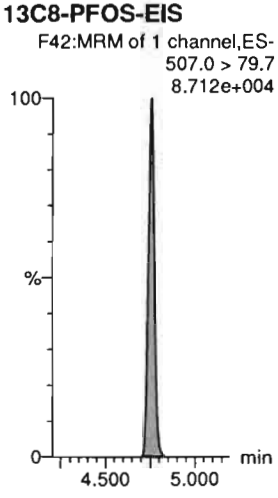
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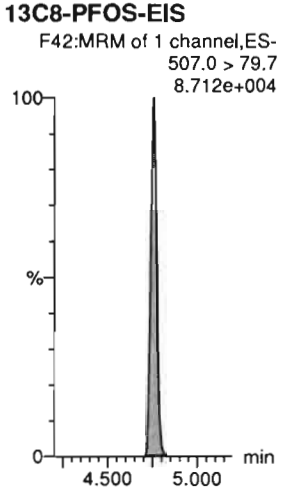
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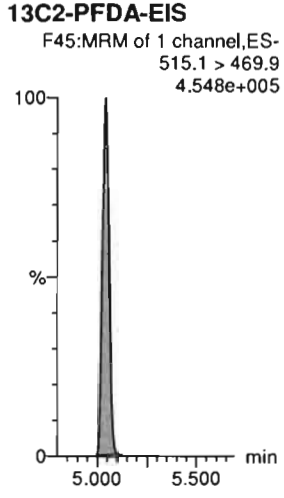
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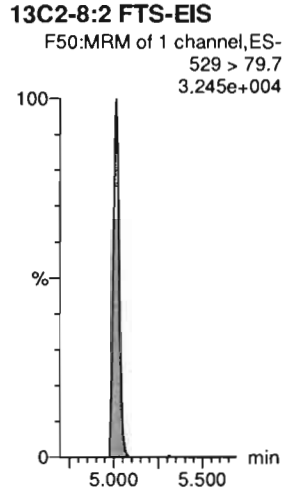
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

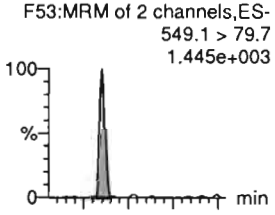


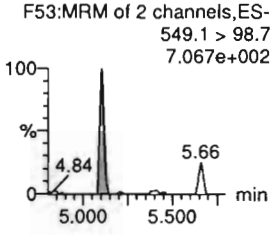
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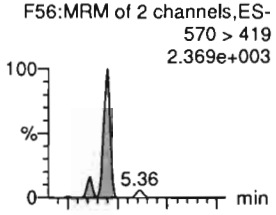
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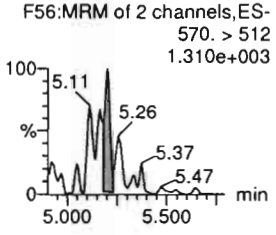
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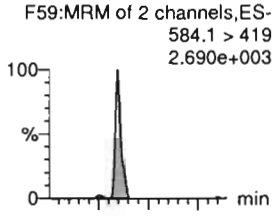


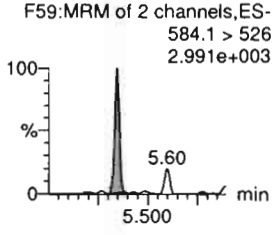
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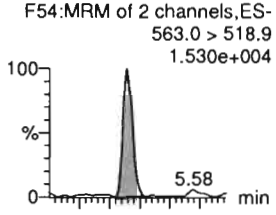


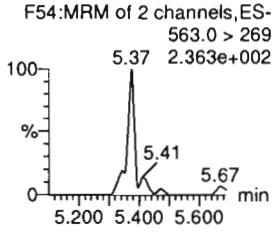
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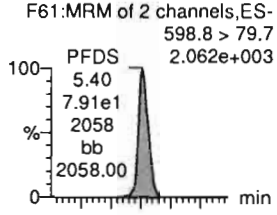


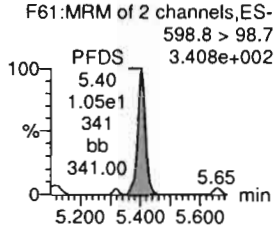
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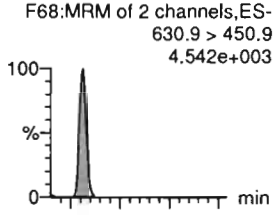


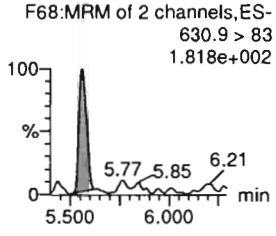
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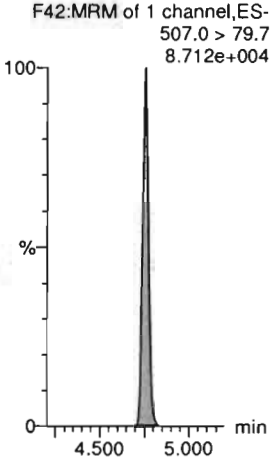


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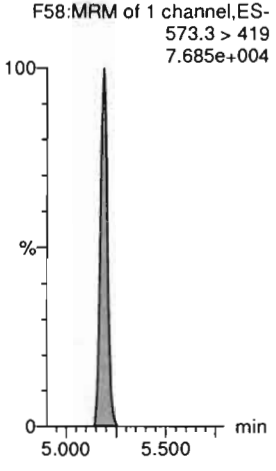




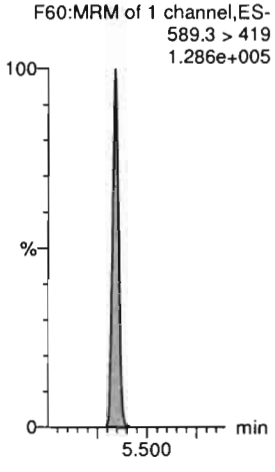
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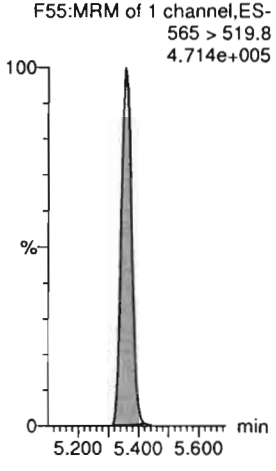
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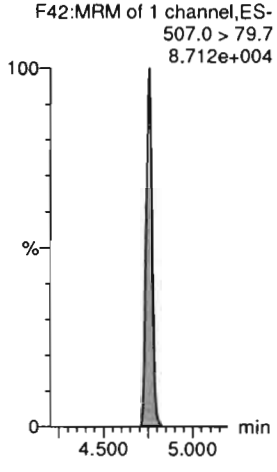
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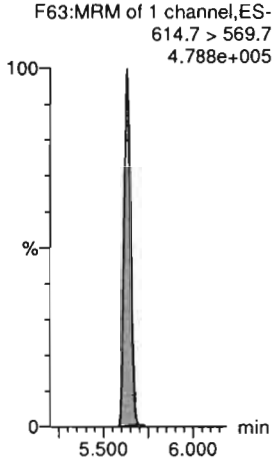
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13C8-PFOS-EIS



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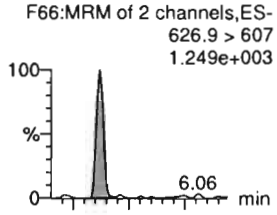


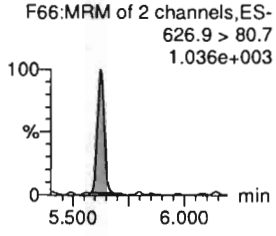
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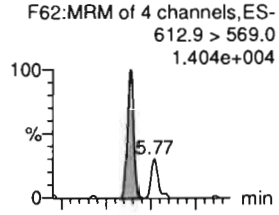
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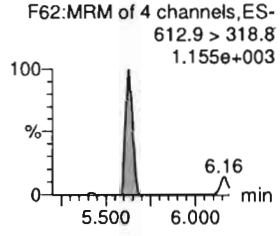
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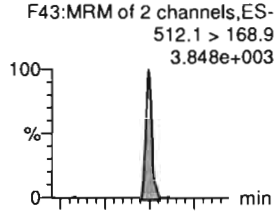


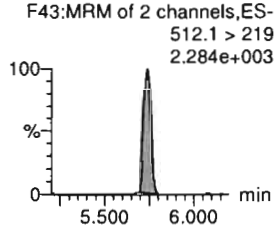
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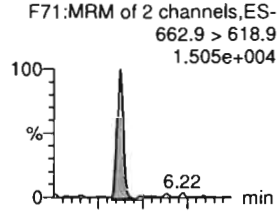


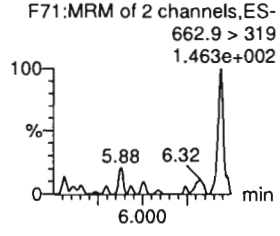
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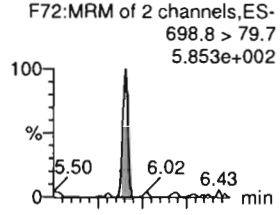


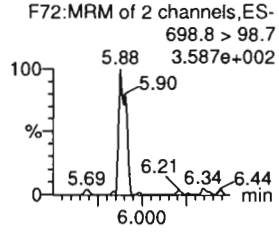
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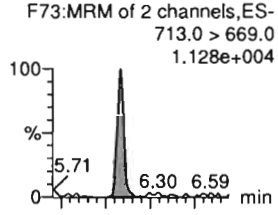


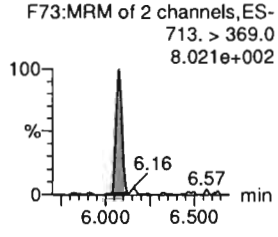
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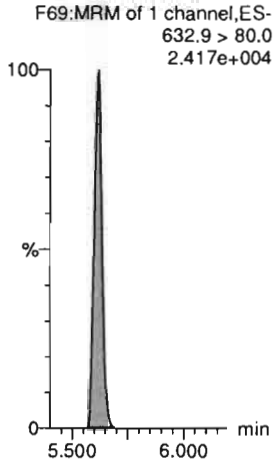


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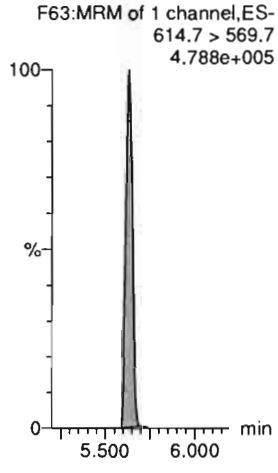




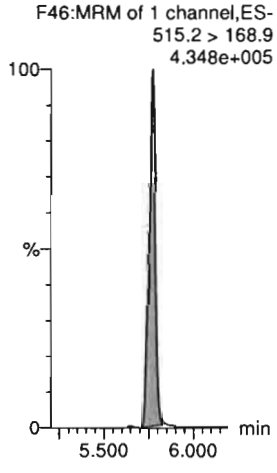
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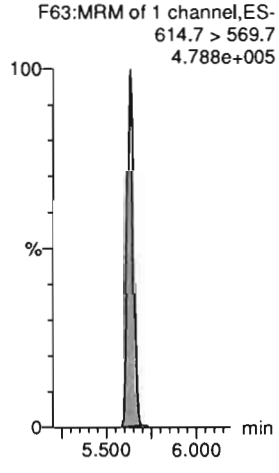
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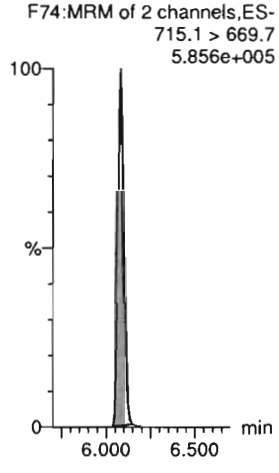
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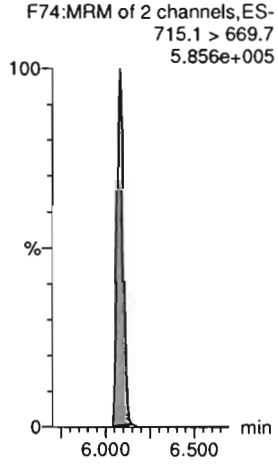
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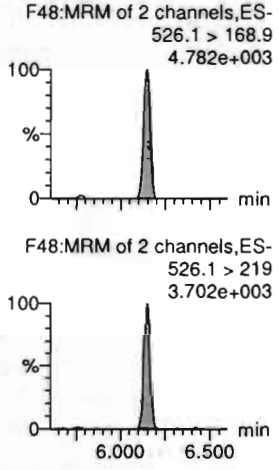


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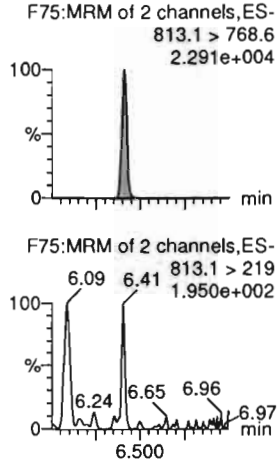
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Name: 200225P1-3, Date: 25-Feb-2020, Time: 18:19:42, ID: ST200225P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

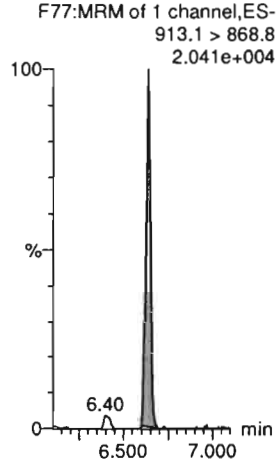
N-EtFOSA



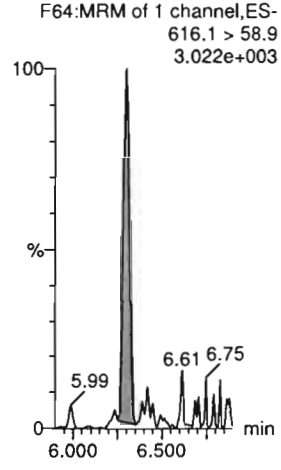
PFHxDA



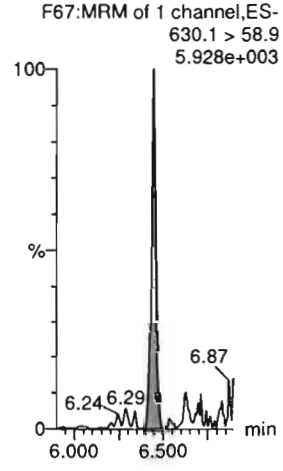
PFODA



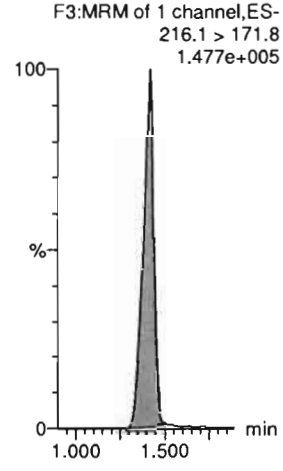
N-MeFOSE



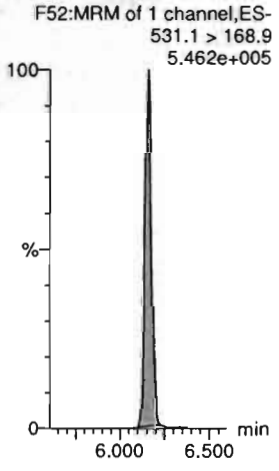
N-EtFOSE



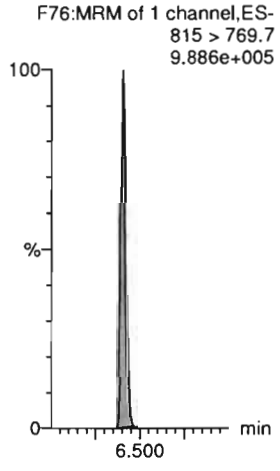
13C3-PFBA-RSD



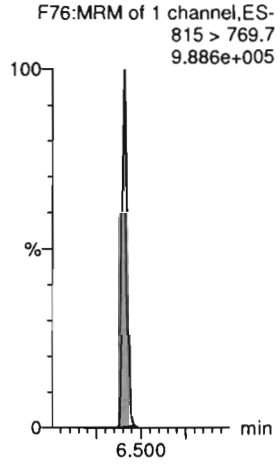
d5-N-ETFOSA-EIS



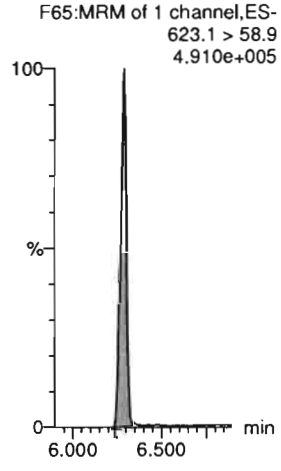
13C2-PFHxDA-EIS



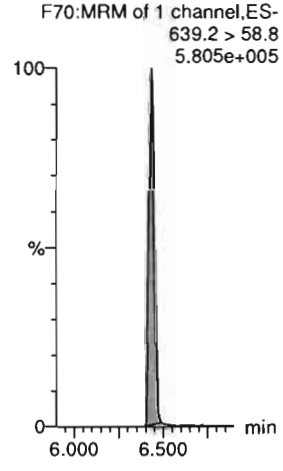
13C2-PFHxDA-EIS



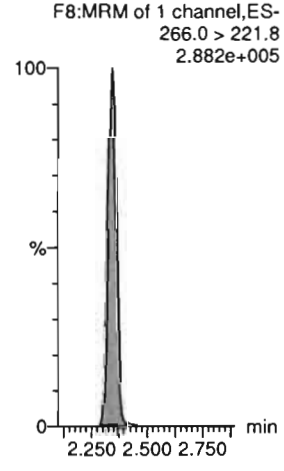
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

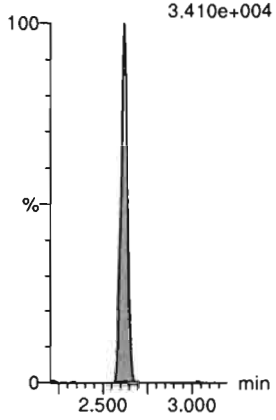


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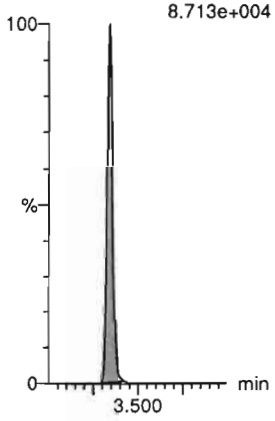
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Name: 200225P1-3, Date: 25-Feb-2020, Time: 18:19:42, ID: ST200225P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

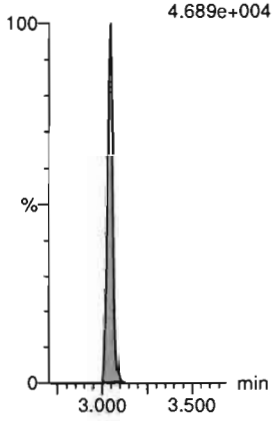
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.410e+004



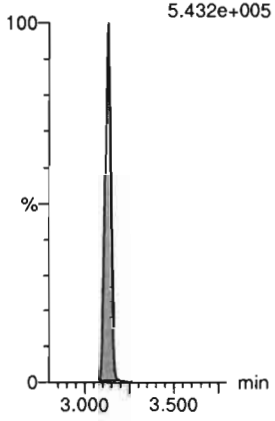
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
8.713e+004



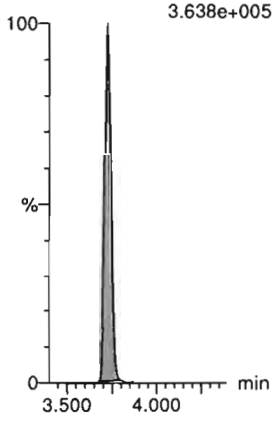
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.689e+004



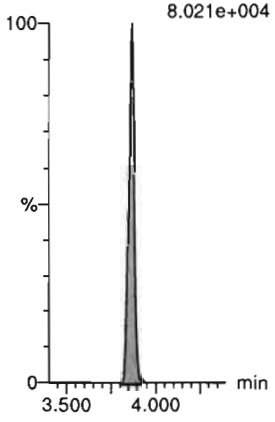
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.432e+005



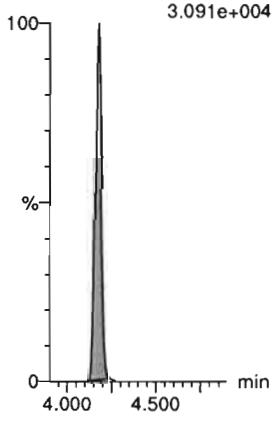
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.638e+005



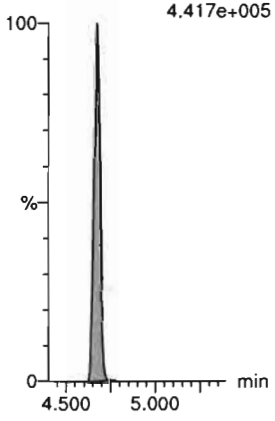
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.021e+004



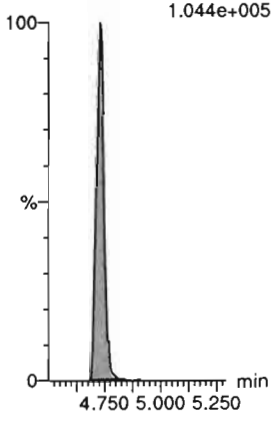
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.091e+004



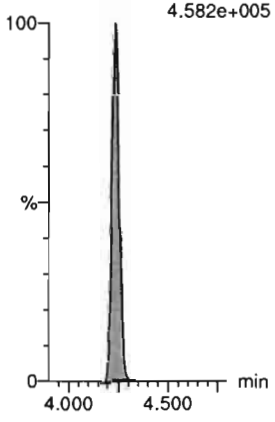
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.417e+005



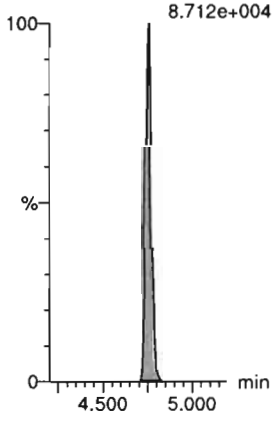
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.044e+005



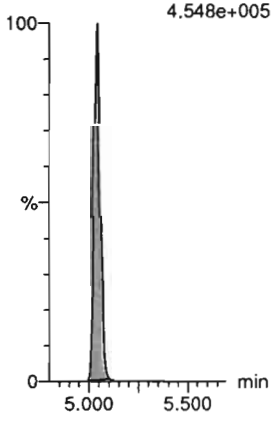
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.582e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.712e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.548e+005

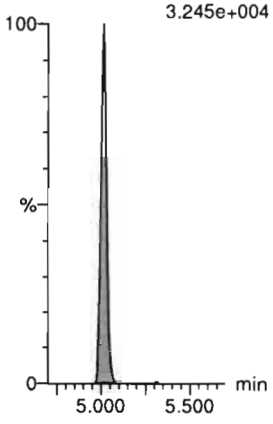


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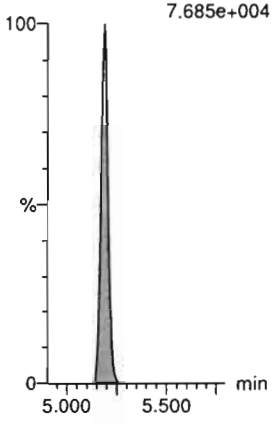
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Name: 200225P1-3, Date: 25-Feb-2020, Time: 18:19:42, ID: ST200225P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

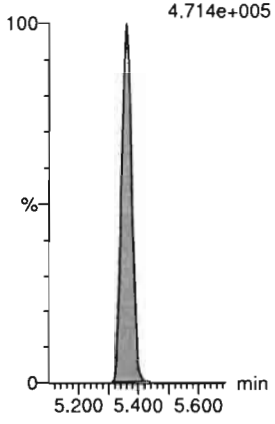
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.245e+004



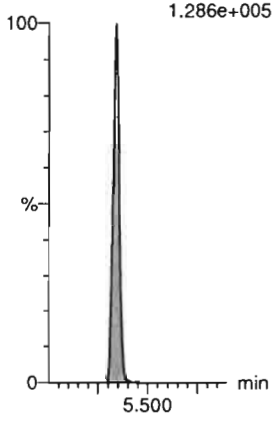
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
7.685e+004



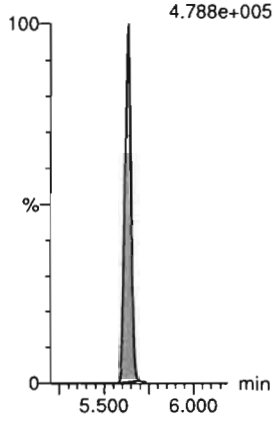
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
4.714e+005



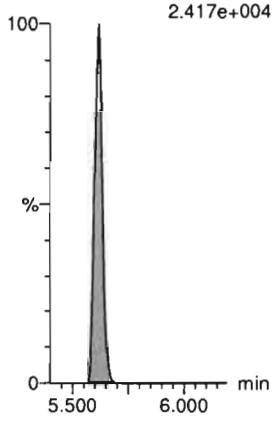
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F60:MRM of 1 channel,ES-
589.3 > 419
1.286e+005



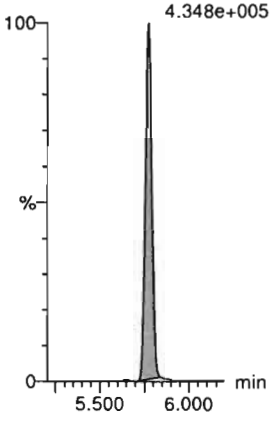
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.788e+005



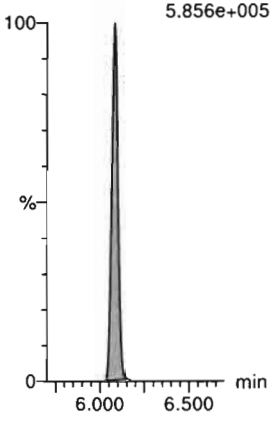
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.417e+004



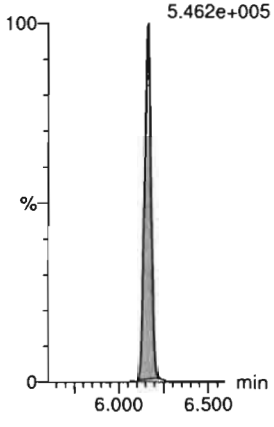
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.348e+005



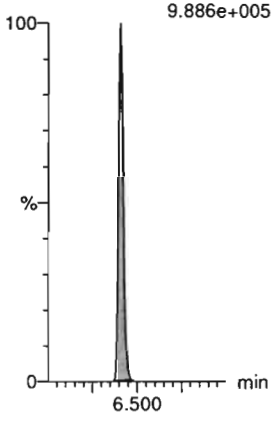
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F74:MRM of 2 channels,ES-
715.1 > 669.7
5.856e+005



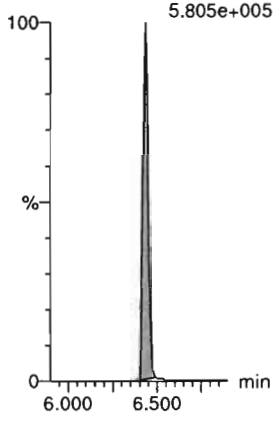
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.462e+005



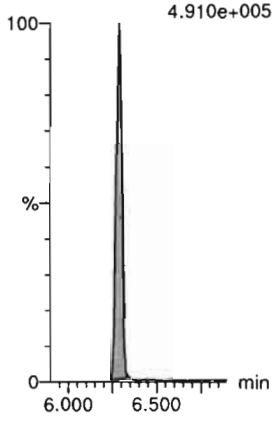
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.886e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
5.805e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
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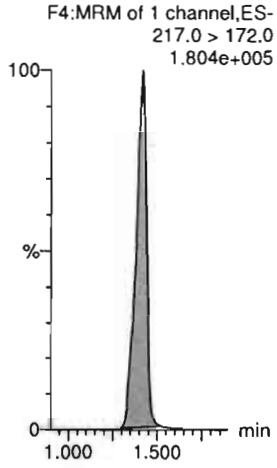


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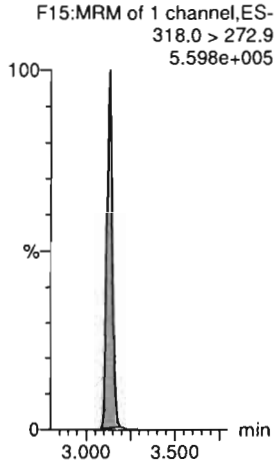
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Name: 200225P1-3, Date: 25-Feb-2020, Time: 18:19:42, ID: ST200225P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

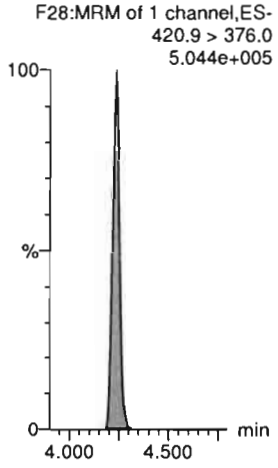
13C4-PFBA



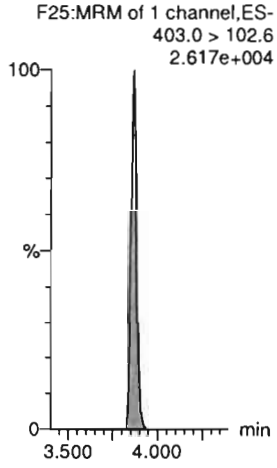
13C5-PFHxA



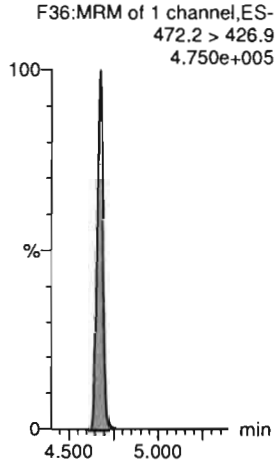
13C8-PFOA



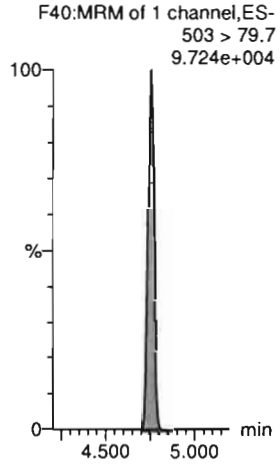
18O2-PFHxS



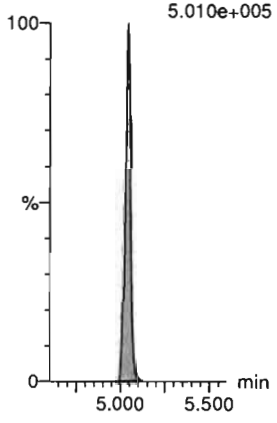
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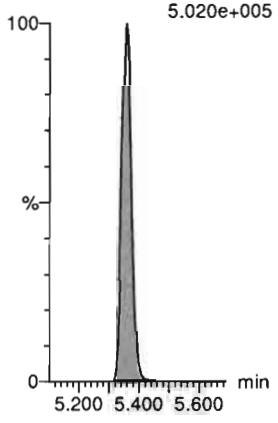
13C4-PFOS



13C6-PFDA



13C7-PFUdA

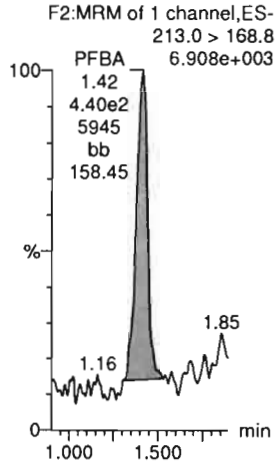


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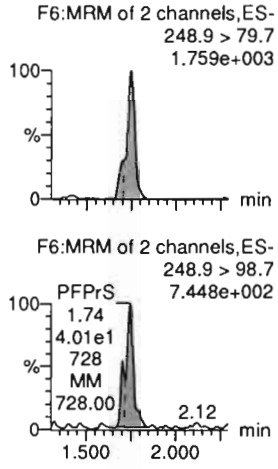
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Name: 200225P1-4, Date: 25-Feb-2020, Time: 18:30:13, ID: ST200225P1-2 PFC CS-1 20B1103, Description: PFC CS-1 20B1103

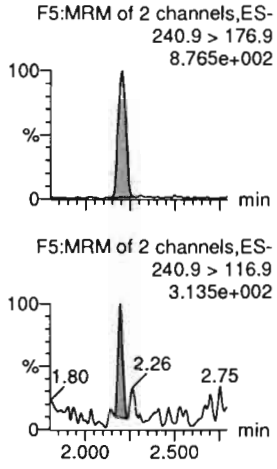
PFBA



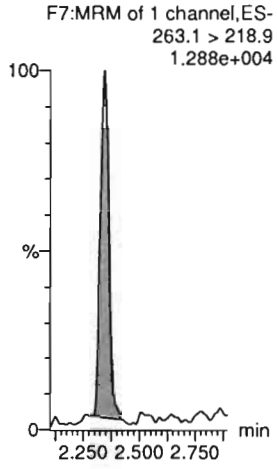
PFPrS



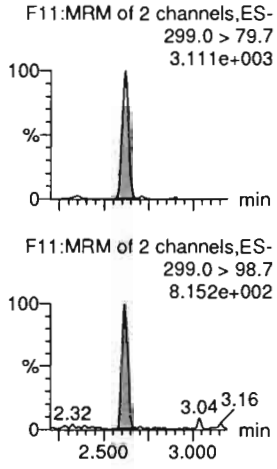
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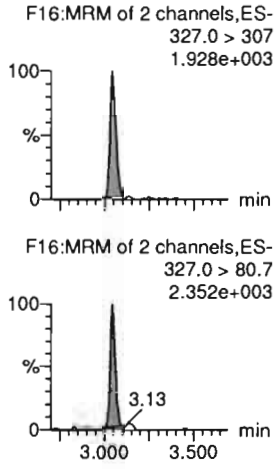
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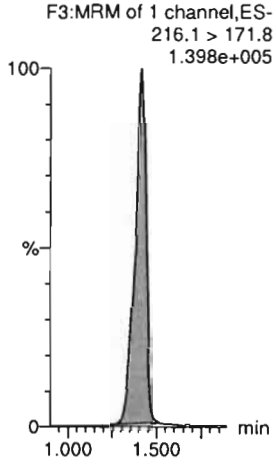
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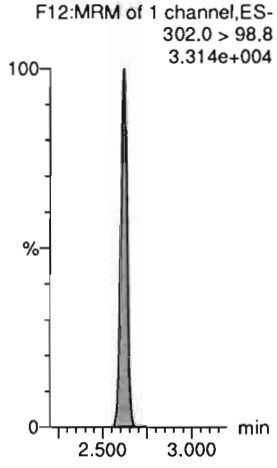
4:2 FTS



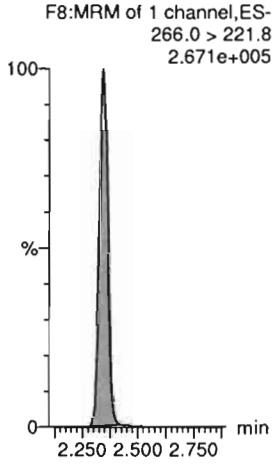
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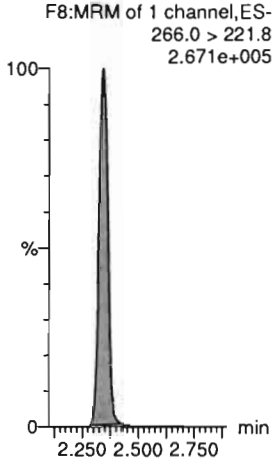
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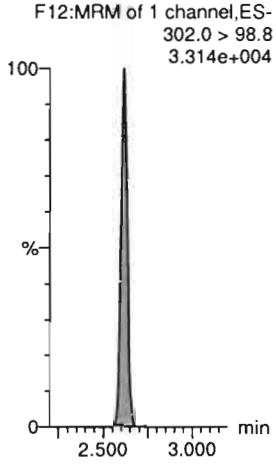
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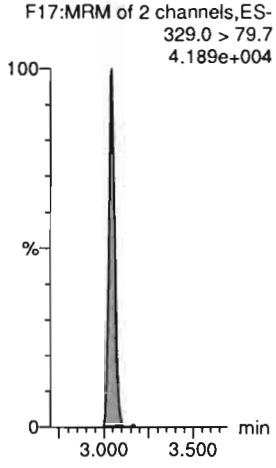
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13C3-PFBS-EIS



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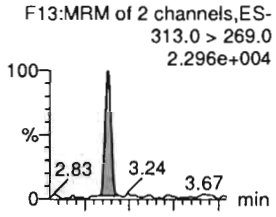


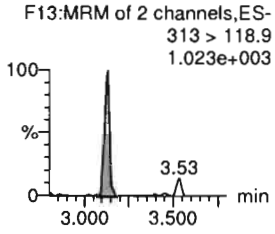
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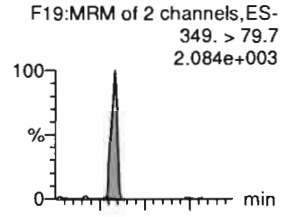
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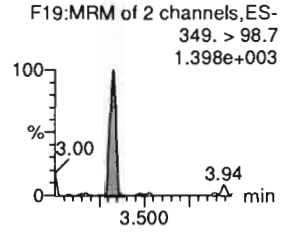
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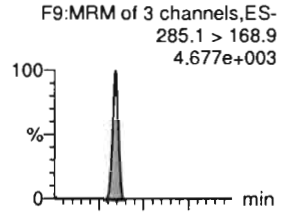


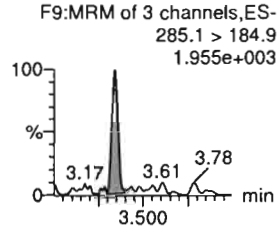
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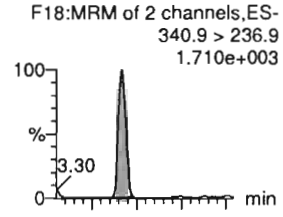


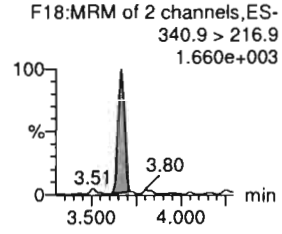
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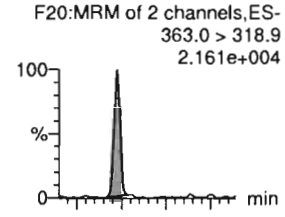


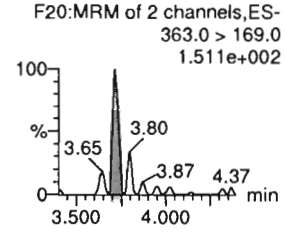
5:3 FTCA



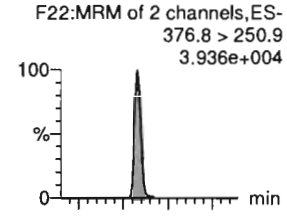


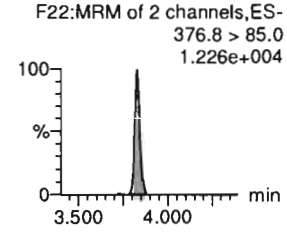
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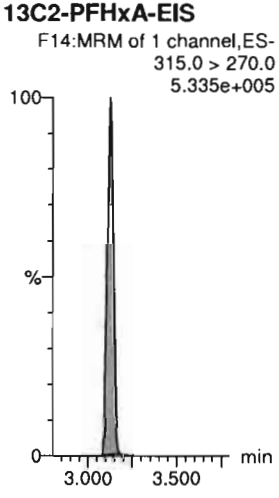


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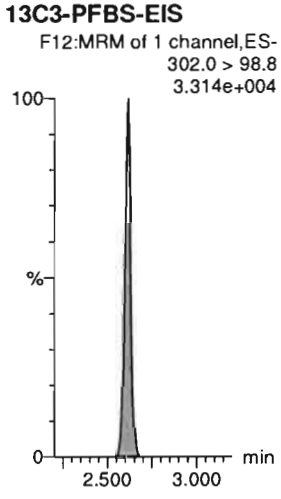




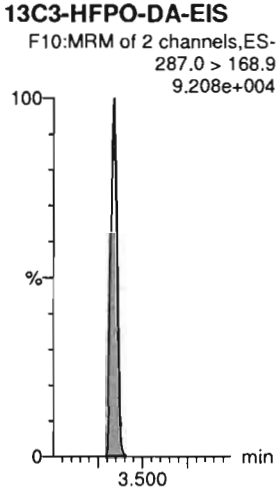
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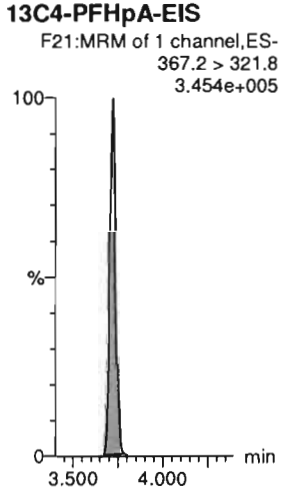
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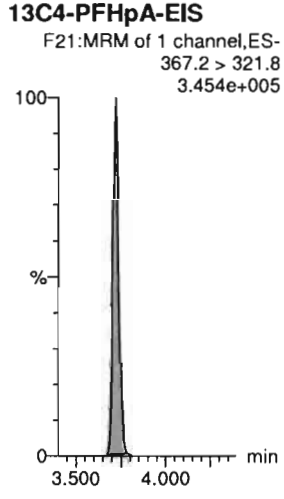
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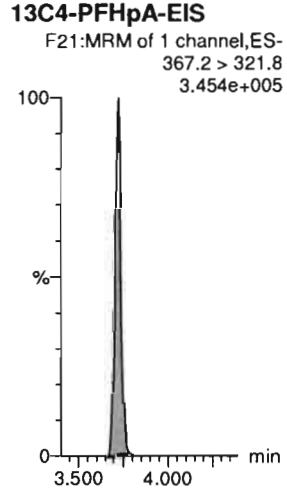
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13C4-PFHpA-EIS



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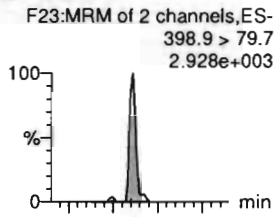


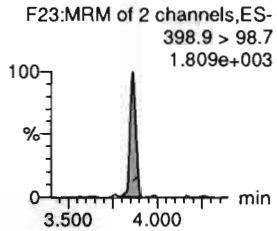
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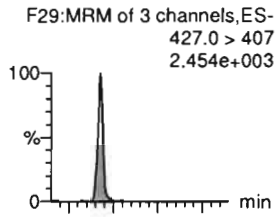
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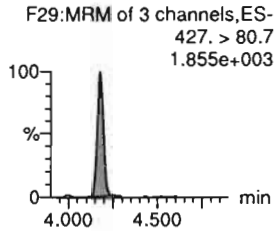
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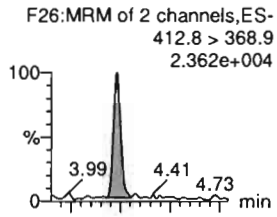


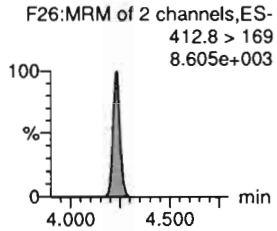
6:2 FTS



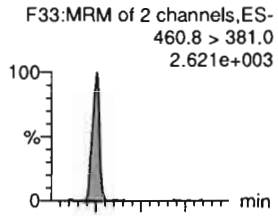


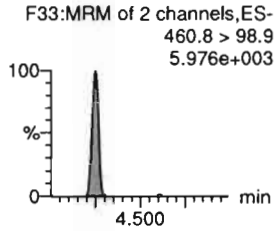
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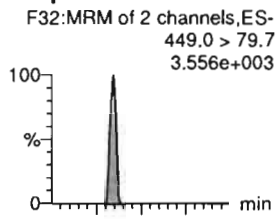


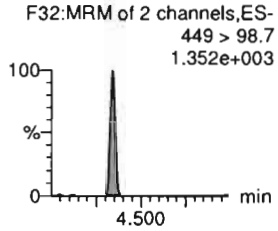
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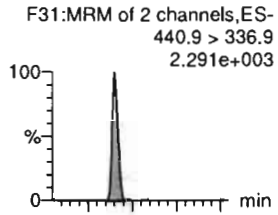


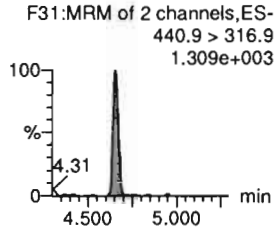
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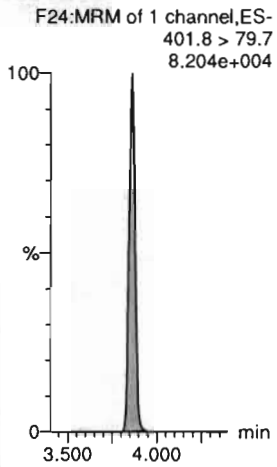


7:3 FTCA

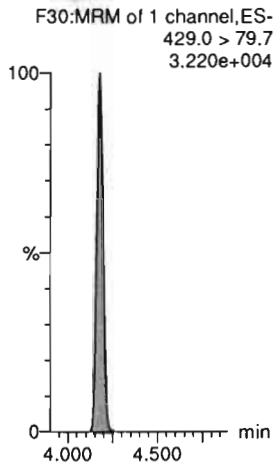




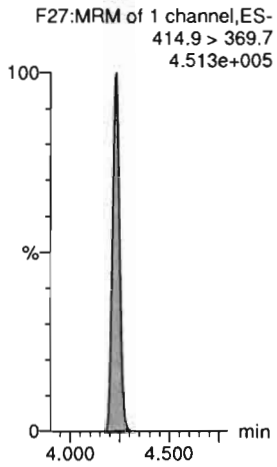
13C3-PFHxS-EIS



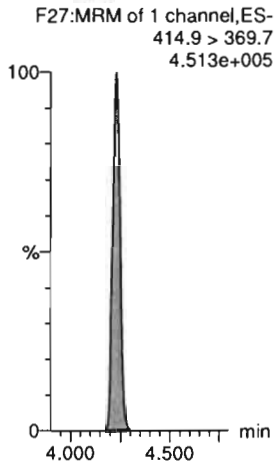
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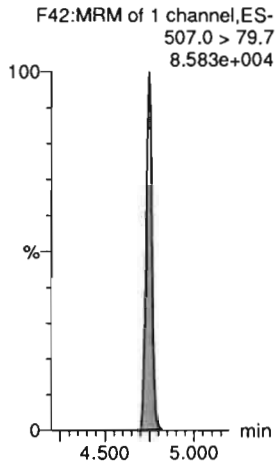
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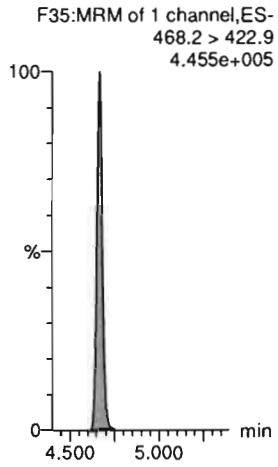
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13C8-PFOS-EIS



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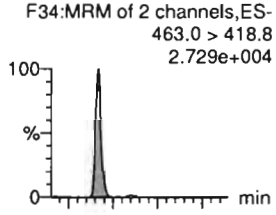


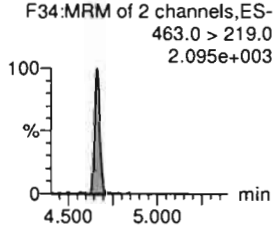
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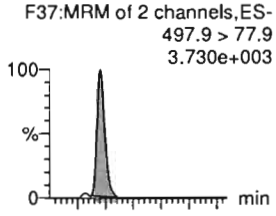
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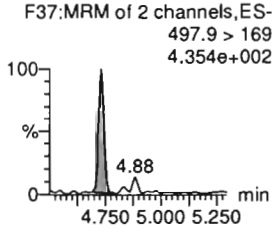
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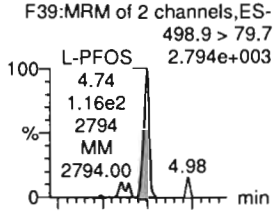


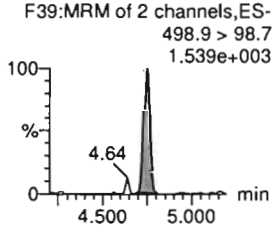
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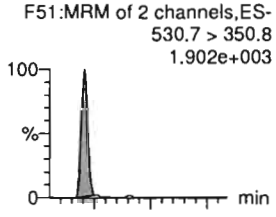


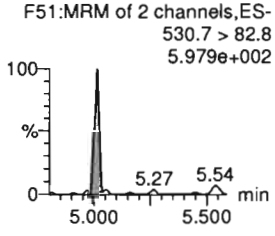
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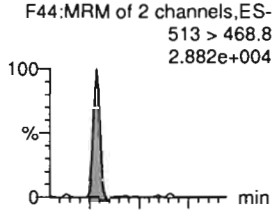


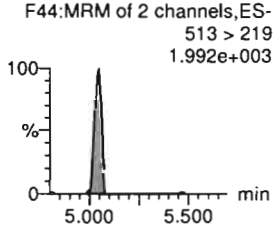
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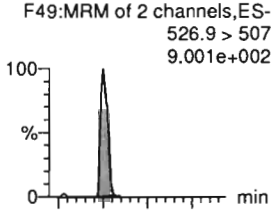


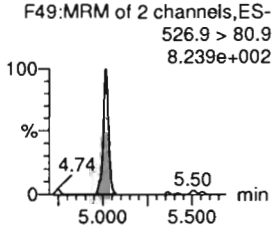
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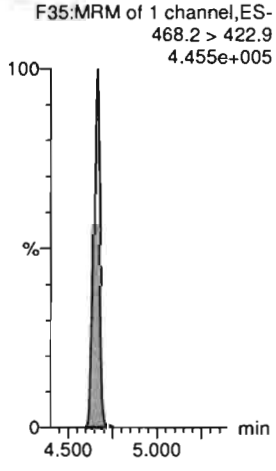


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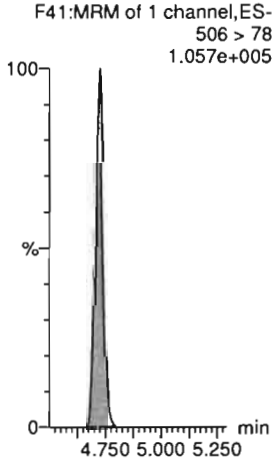




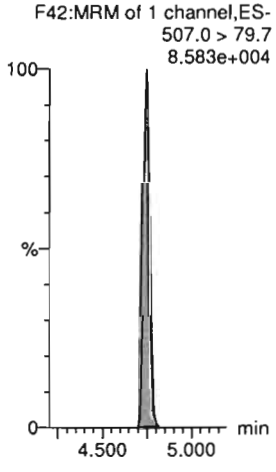
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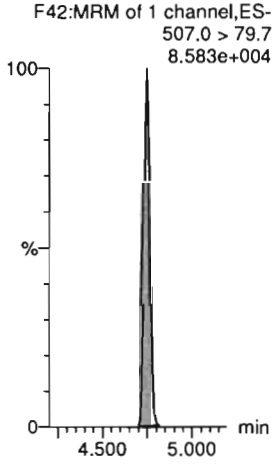
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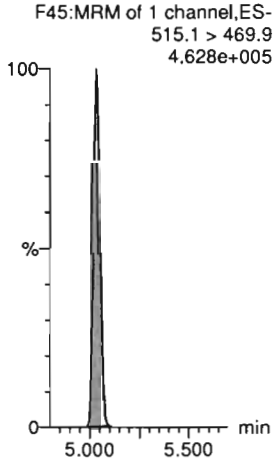
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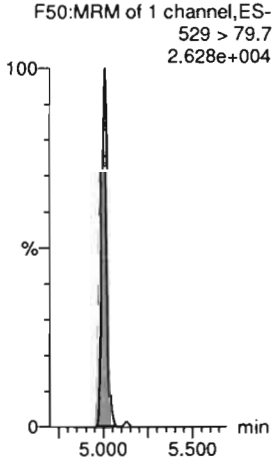
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

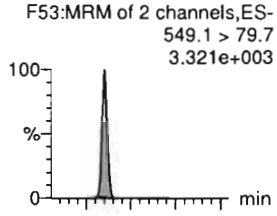


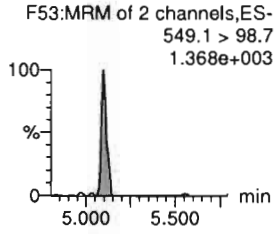
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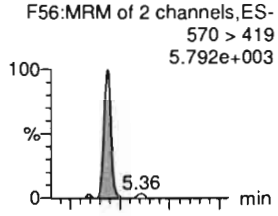
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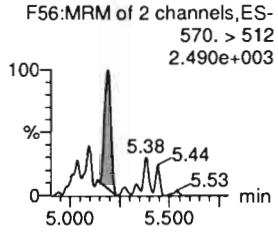
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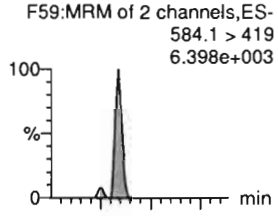


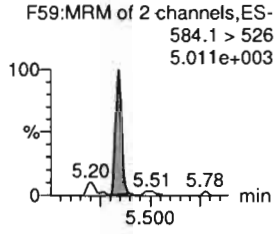
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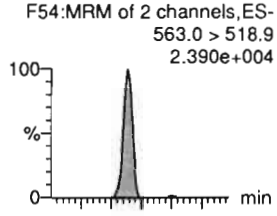


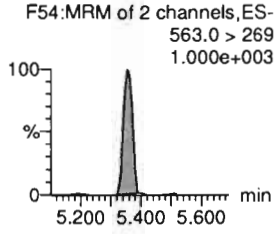
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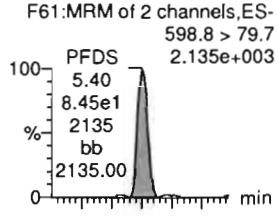


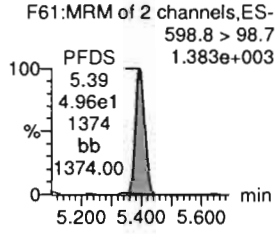
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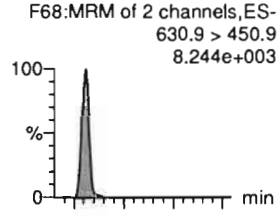


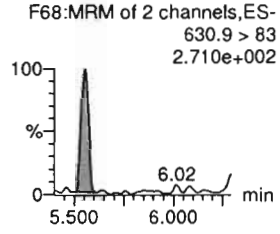
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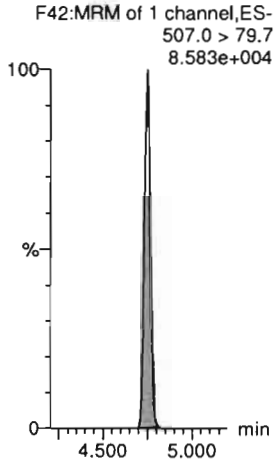


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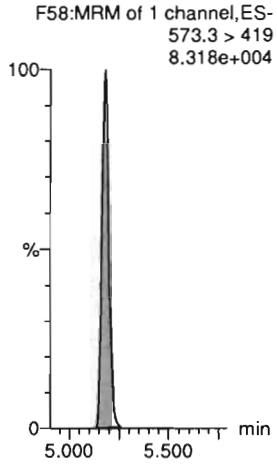




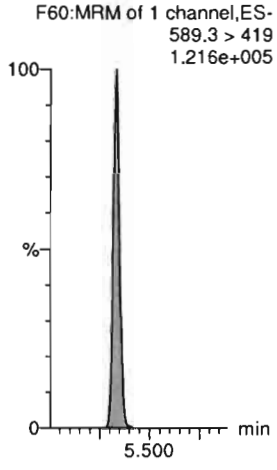
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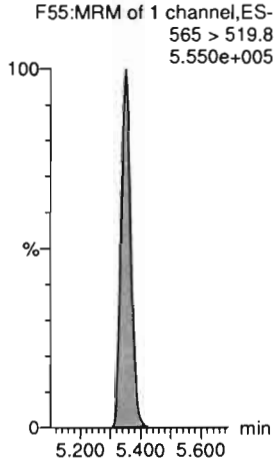
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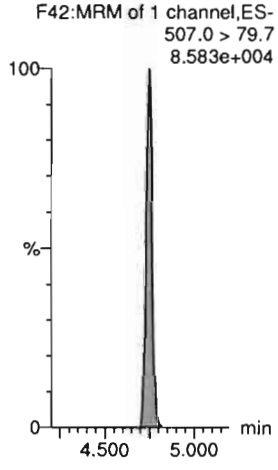
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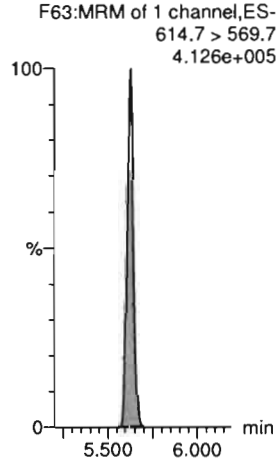
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13C8-PFOS-EIS



13C2-PFDoA-EIS

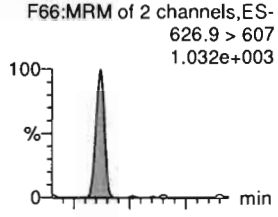


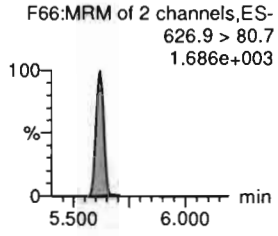
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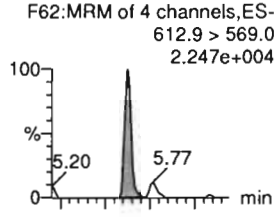
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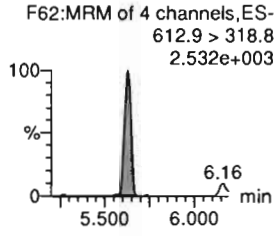
10:2 FTS



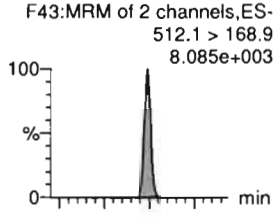


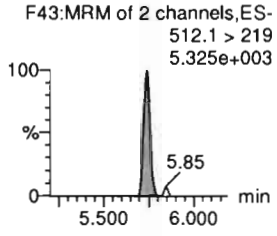
PFDoA



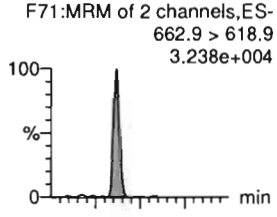


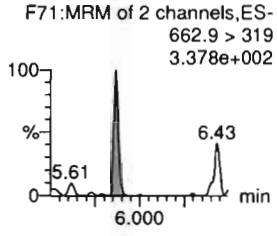
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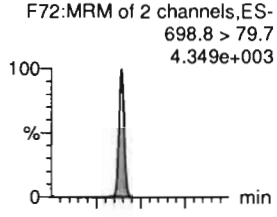


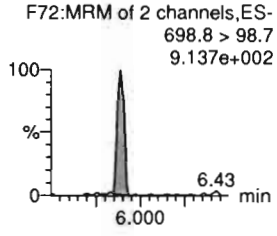
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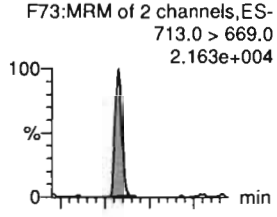


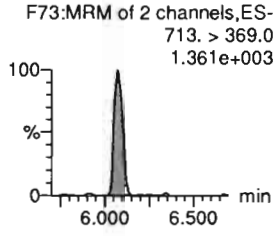
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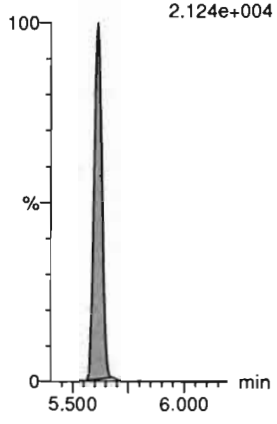


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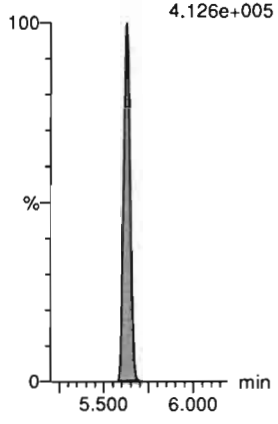




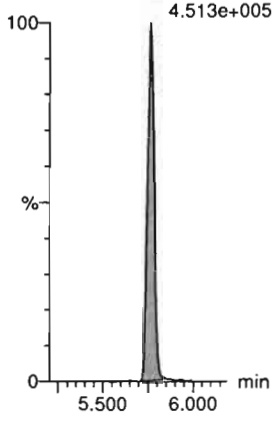
13C2-10:2 FTS-EIS



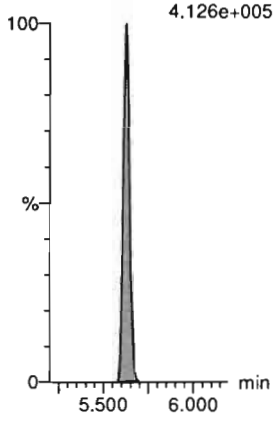
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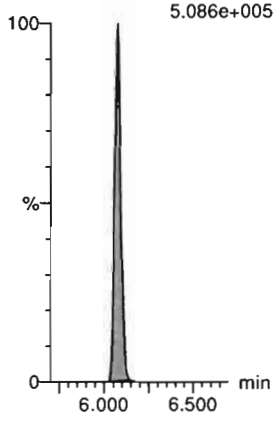
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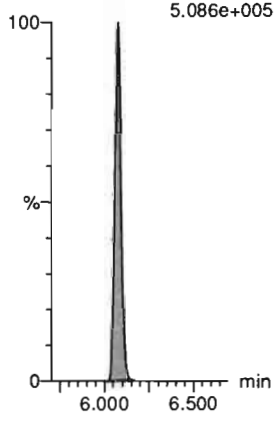
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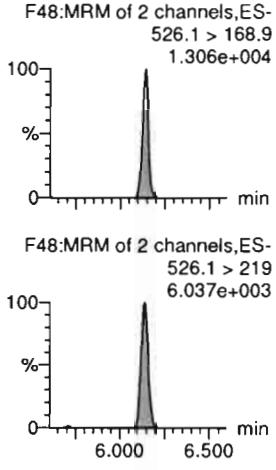


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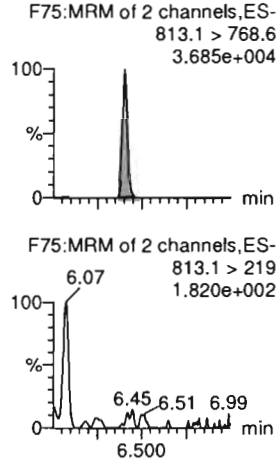
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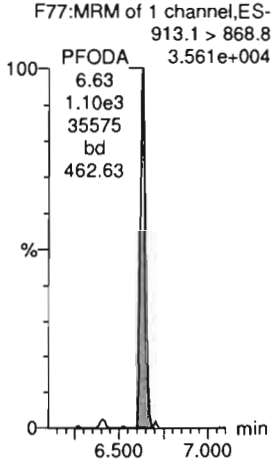
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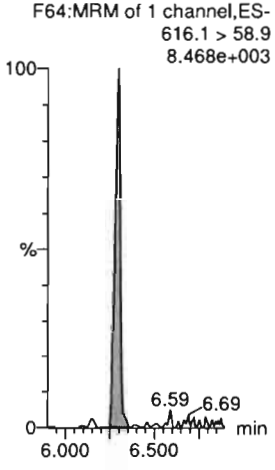
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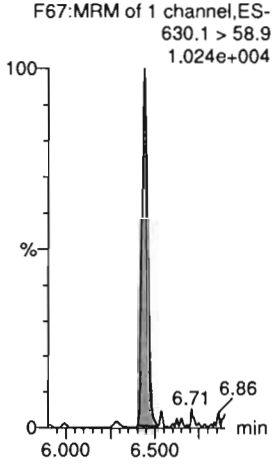
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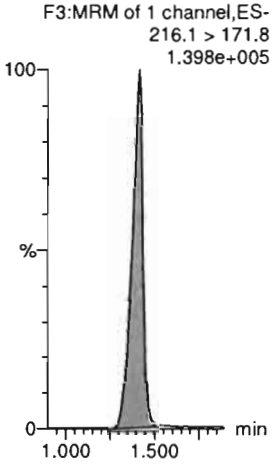
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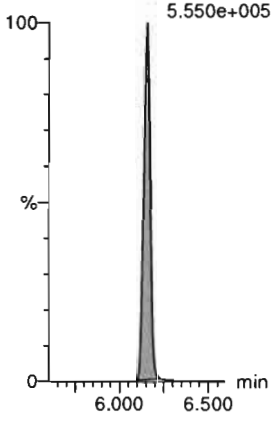
N-EtFOSE



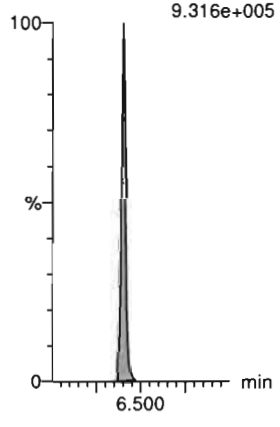
13C3-PFBA-RSD



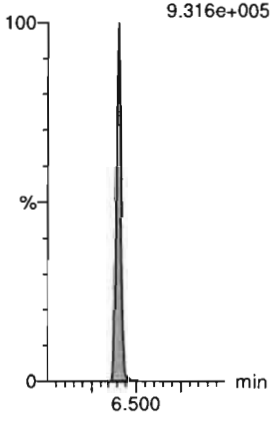
d5-N-ETFOSA-EIS



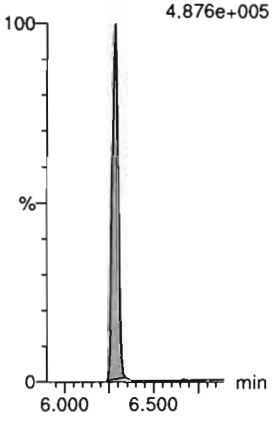
13C2-PFHxDA-EIS



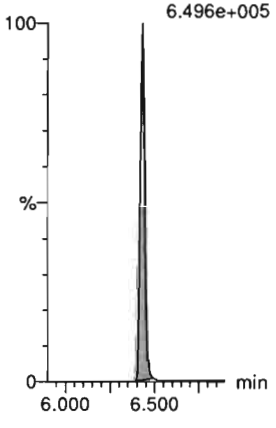
13C2-PFHxDA-EIS



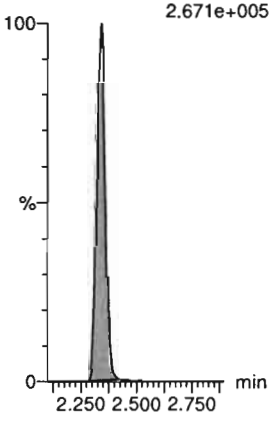
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

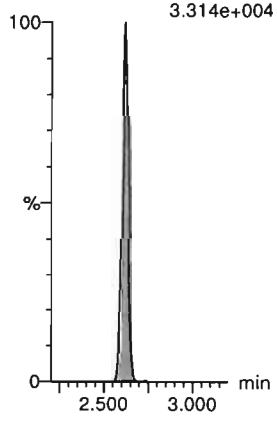


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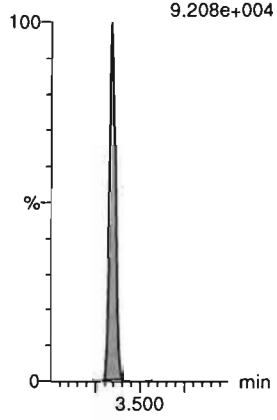
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Name: 200225P1-4, Date: 25-Feb-2020, Time: 18:30:13, ID: ST200225P1-2 PFC CS-1 20B1103, Description: PFC CS-1 20B1103

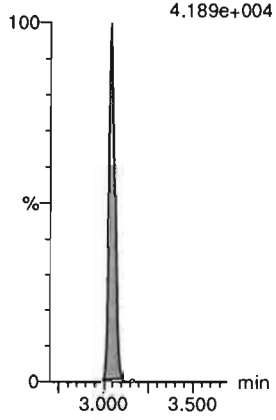
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.314e+004



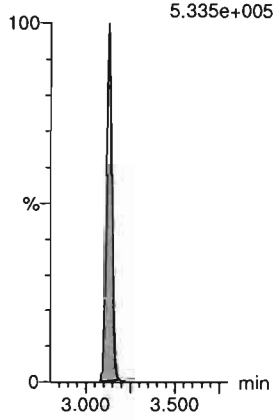
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
9.208e+004



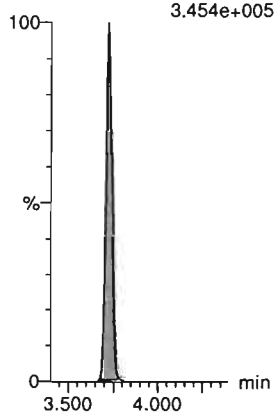
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.189e+004



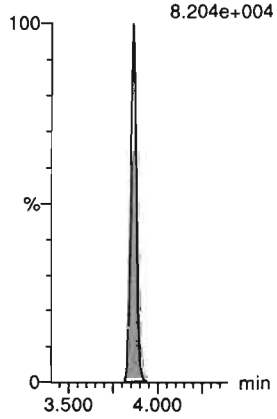
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.335e+005



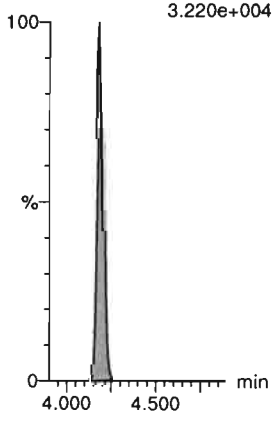
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.454e+005



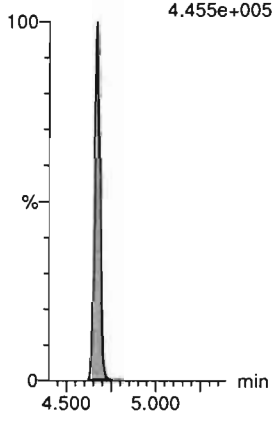
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.204e+004



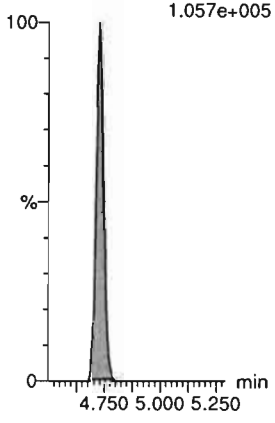
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.220e+004



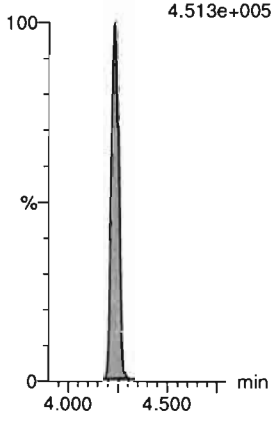
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.455e+005



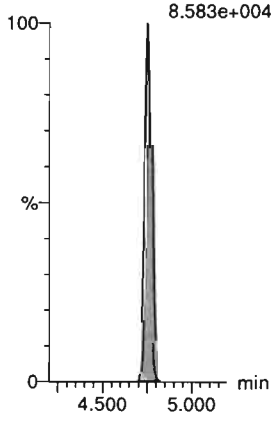
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.057e+005



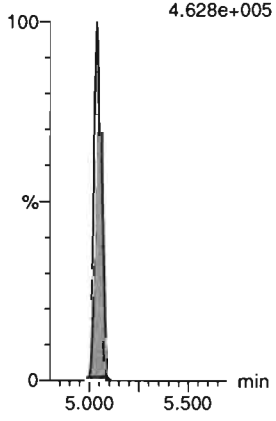
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.513e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.583e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.628e+005

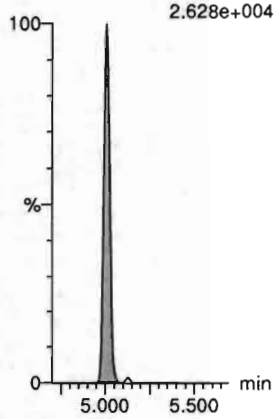


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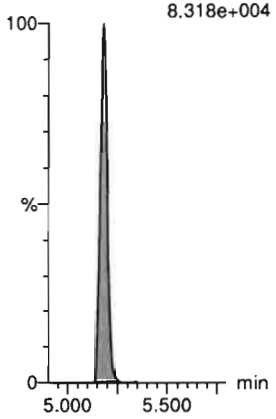
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Printed: Wednesday, February 26, 2020 10:18:42 Pacific Standard Time

Name: 200225P1-4, Date: 25-Feb-2020, Time: 18:30:13, ID: ST200225P1-2 PFC CS-1 20B1103, Description: PFC CS-1 20B1103

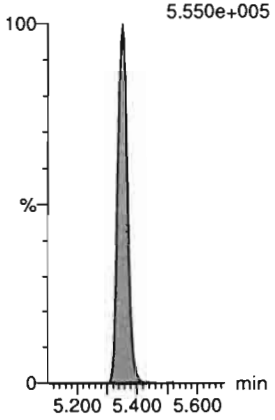
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.628e+004



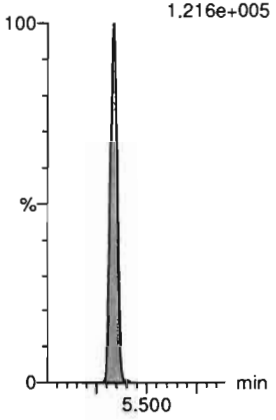
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.318e+004



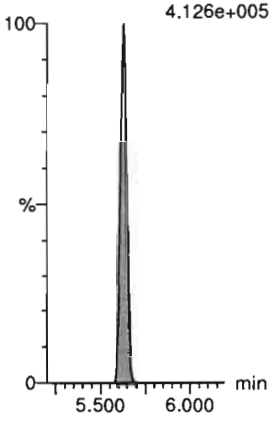
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.550e+005



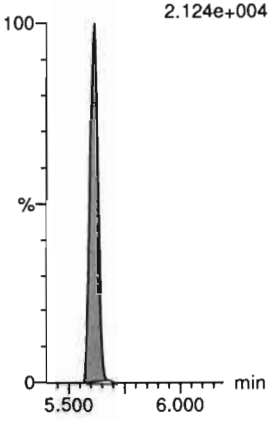
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.216e+005



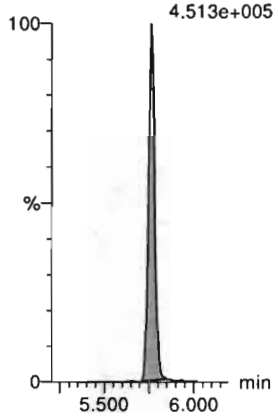
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.126e+005



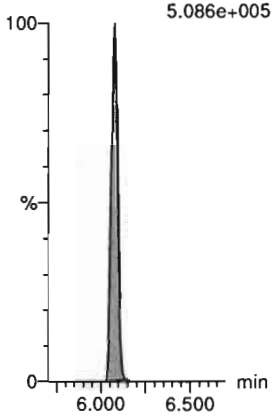
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.124e+004



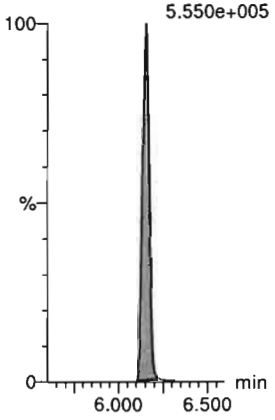
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.513e+005



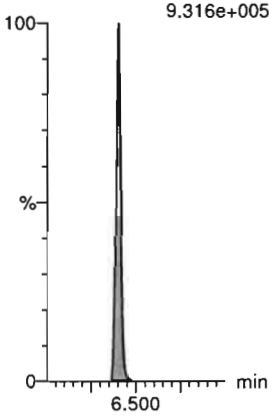
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F74:MRM of 2 channels,ES-
715.1 > 669.7
5.086e+005



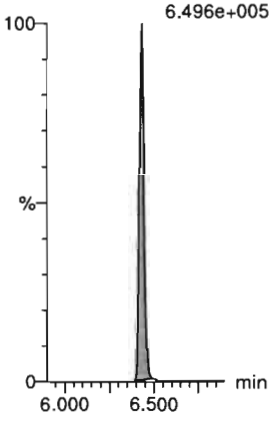
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.550e+005



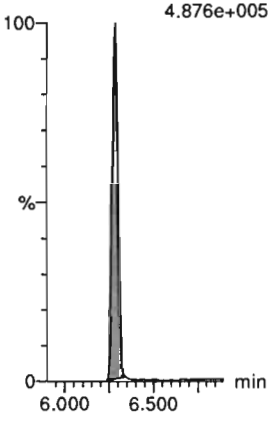
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.316e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.496e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
4.876e+005

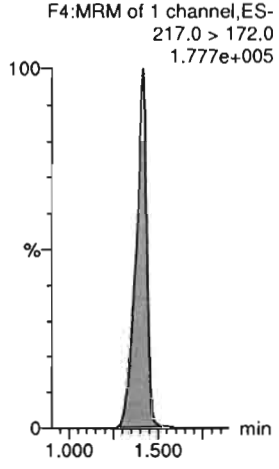


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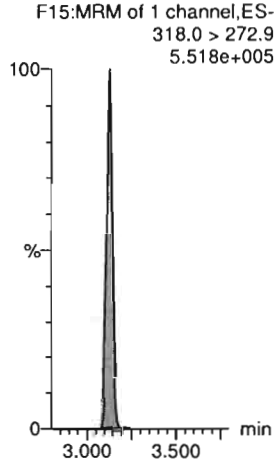
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Name: 200225P1-4, Date: 25-Feb-2020, Time: 18:30:13, ID: ST200225P1-2 PFC CS-1 20B1103, Description: PFC CS-1 20B1103

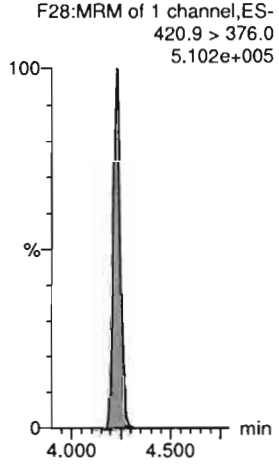
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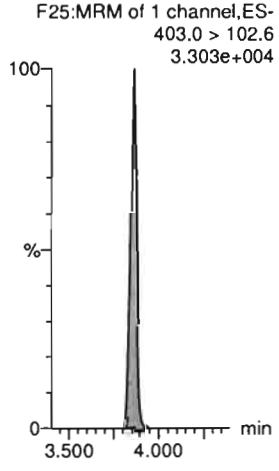
13C5-PFHxA



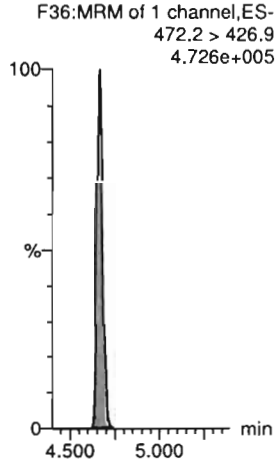
13C8-PFOA



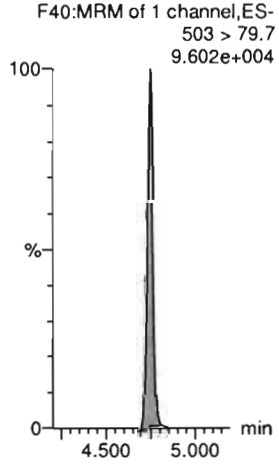
18O2-PFHxS



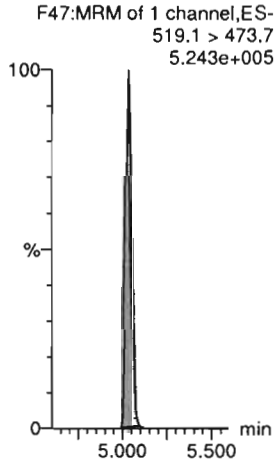
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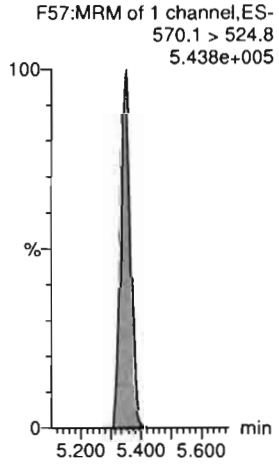
13C4-PFOS



13C6-PFDA



13C7-PFUdA

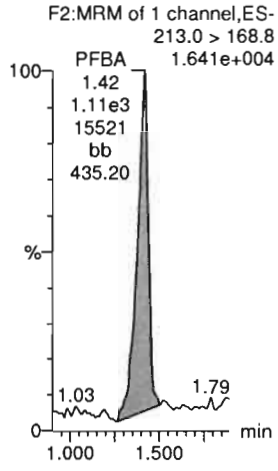


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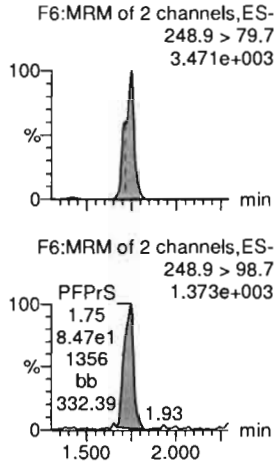
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Name: 200225P1-5, Date: 25-Feb-2020, Time: 18:40:42, ID: ST200225P1-3 PFC CS0 20B1104, Description: PFC CS0 20B1104

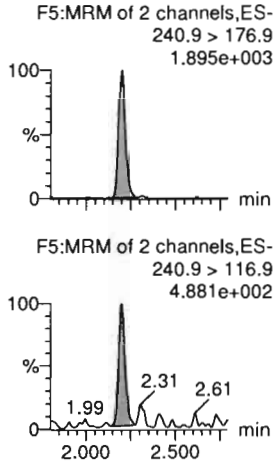
PFBA



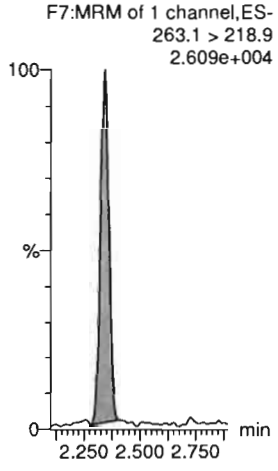
PFPrS



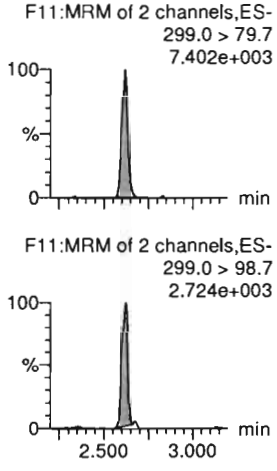
3:3 FTCA



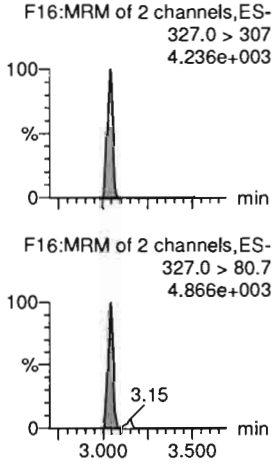
PFPeA



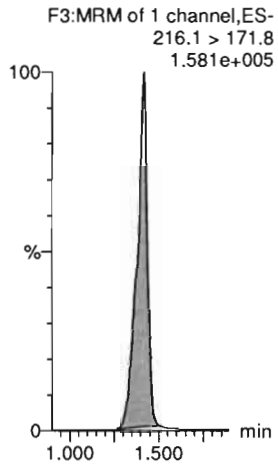
PFBS



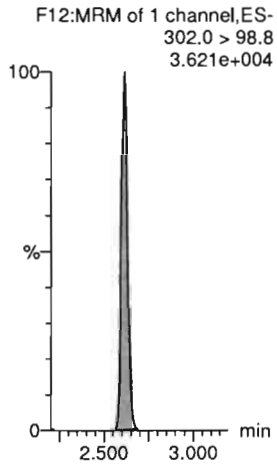
4:2 FTS



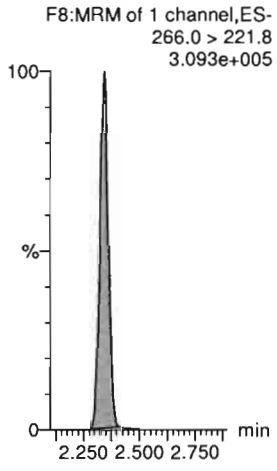
13C3-PFBA-EIS



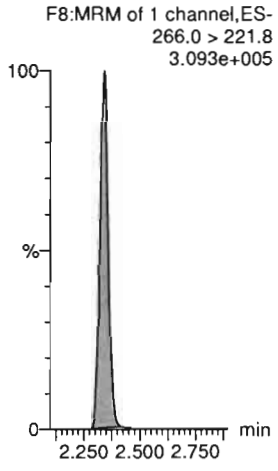
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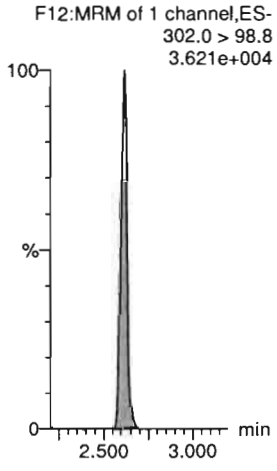
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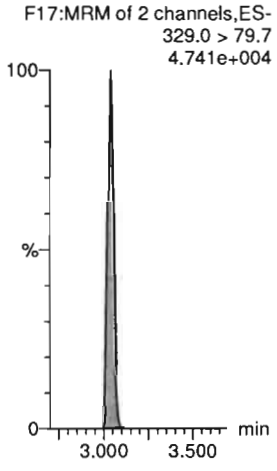
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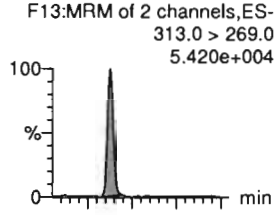


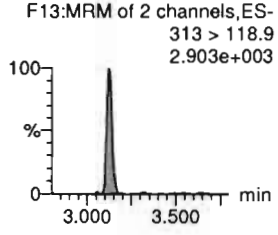
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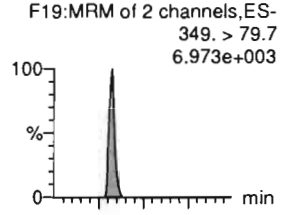
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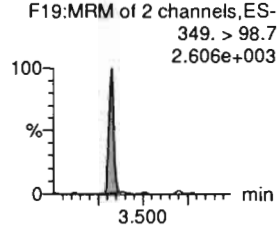
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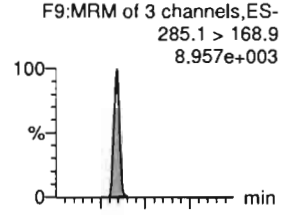


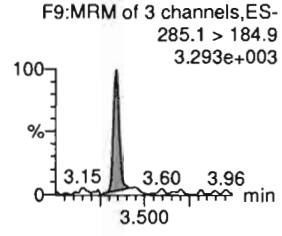
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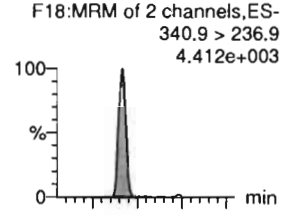


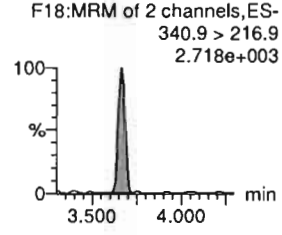
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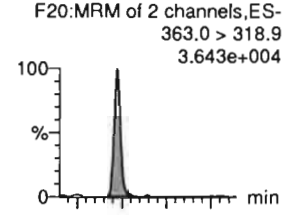


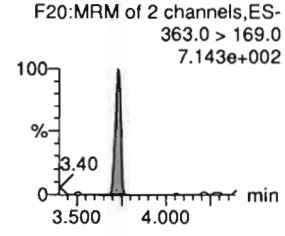
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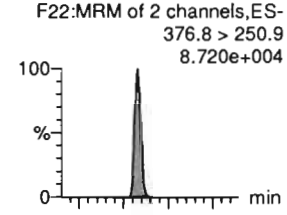


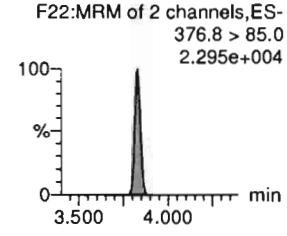
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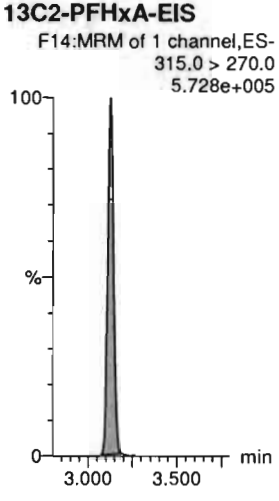


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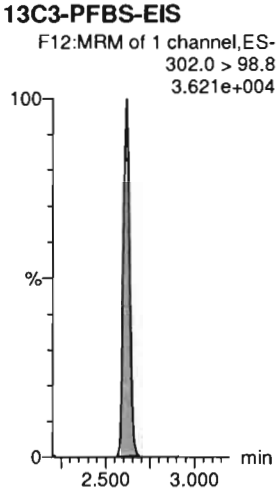




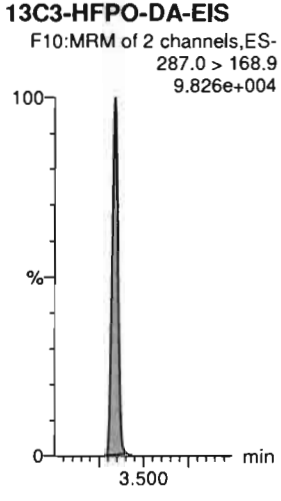
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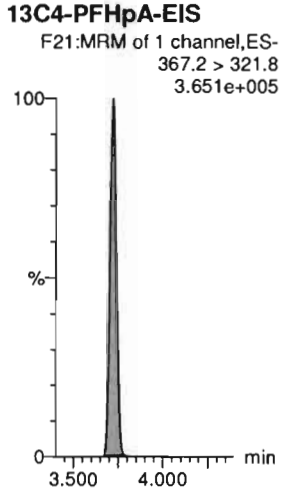
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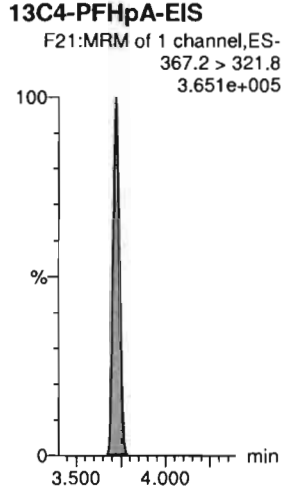
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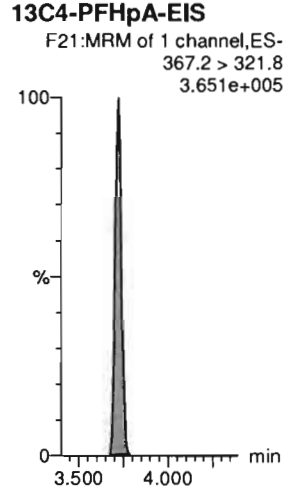
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13C4-PFHpA-EIS



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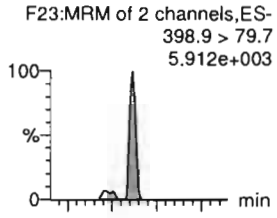


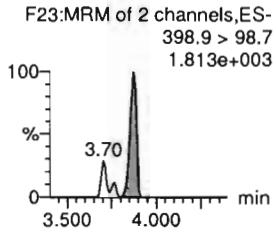
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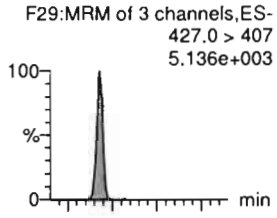
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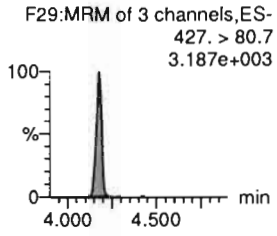
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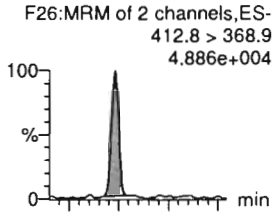


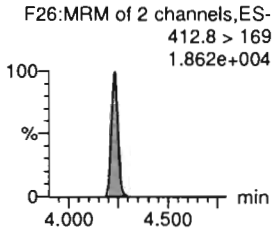
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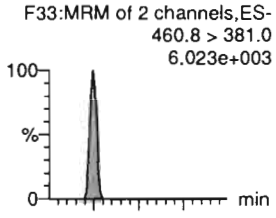


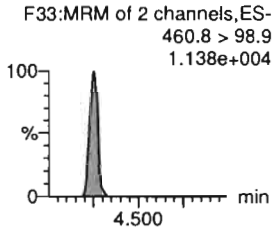
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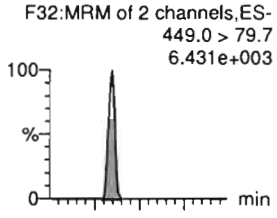


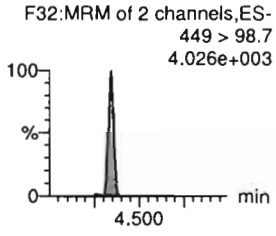
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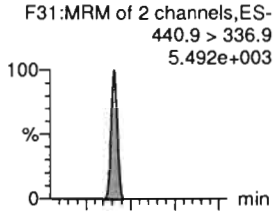


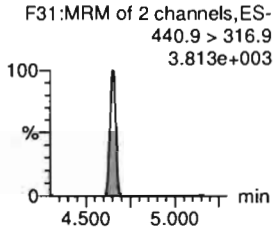
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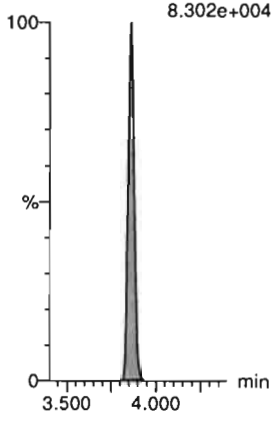


7:3 FTCA

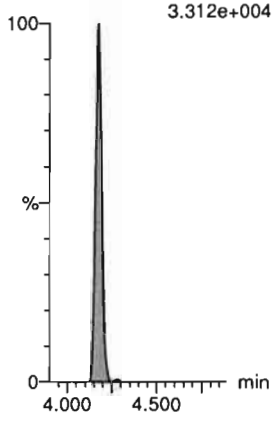




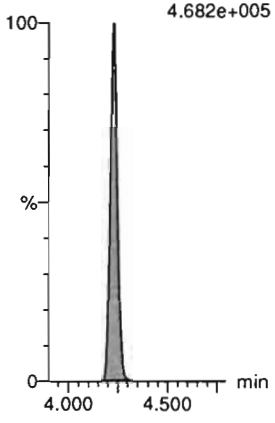
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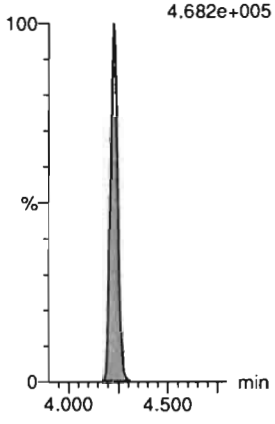
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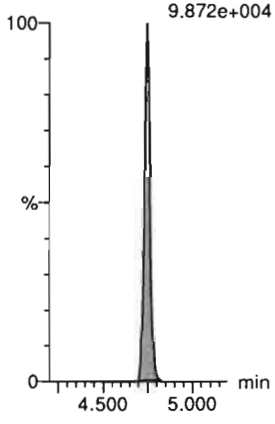
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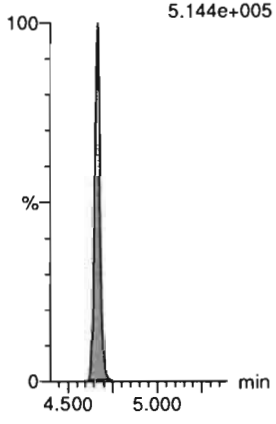
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13C8-PFOS-EIS



13C5-PFNA-EIS

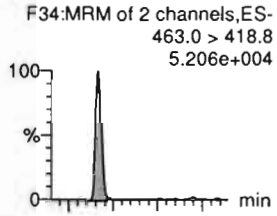


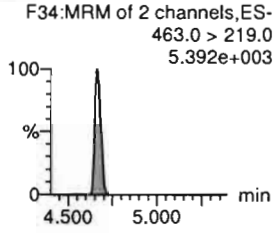
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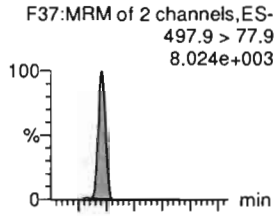
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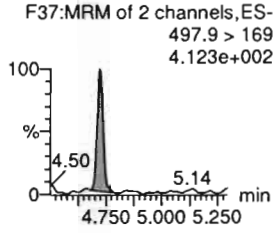
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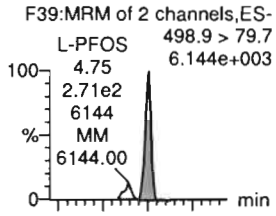


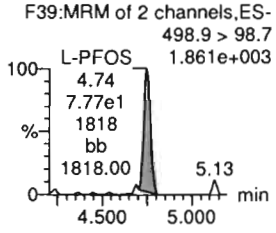
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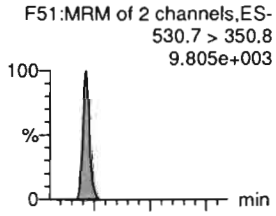


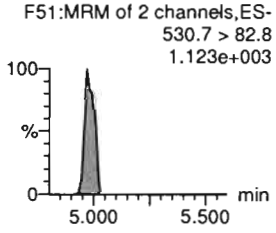
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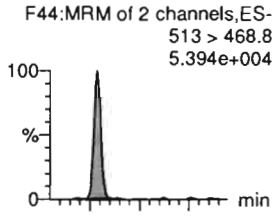


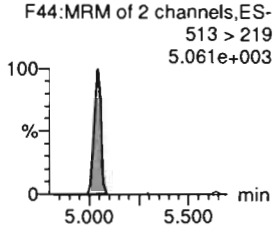
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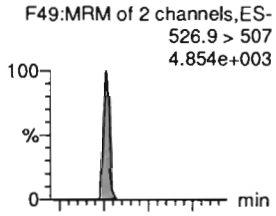


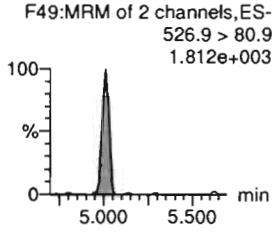
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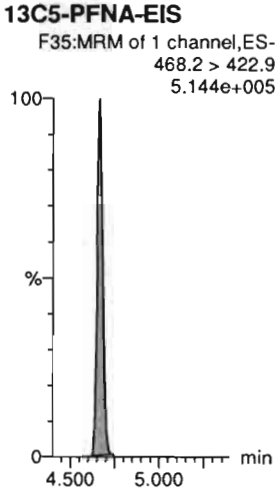


8:2 FTS

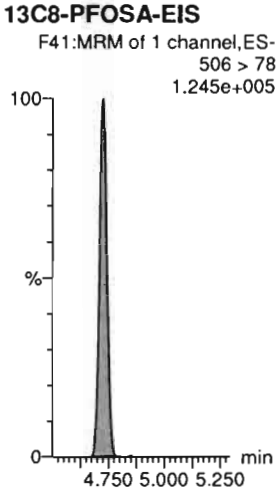




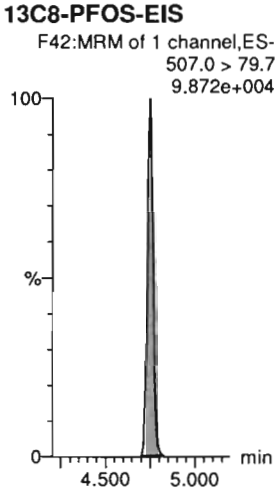
13C5-PFNA-EIS



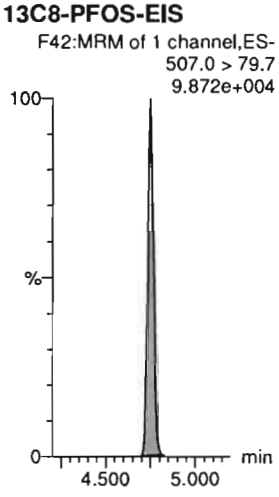
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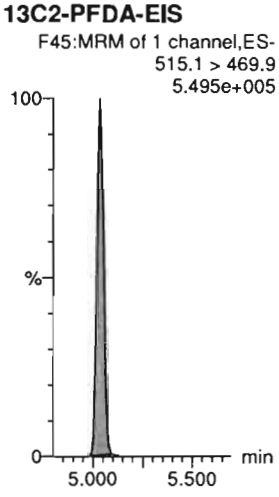
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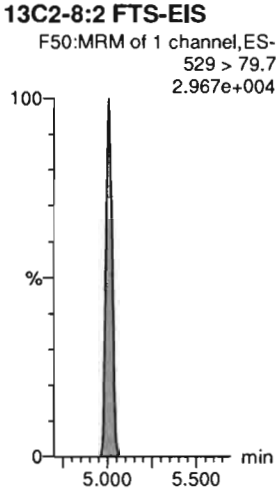
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

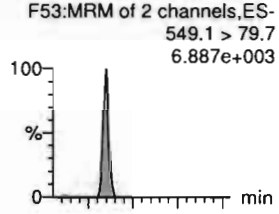


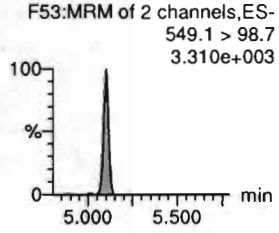
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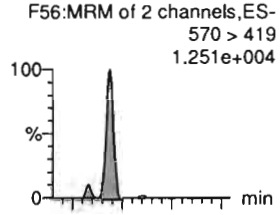
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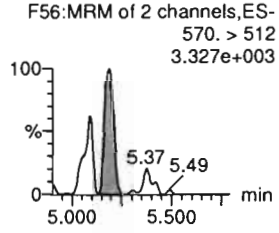
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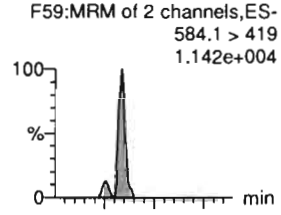


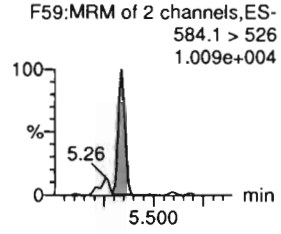
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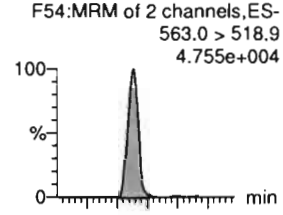


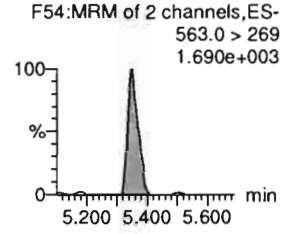
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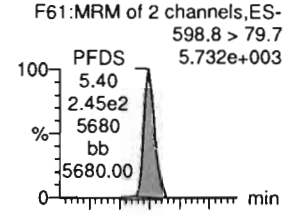


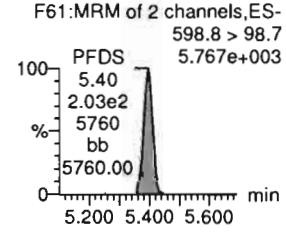
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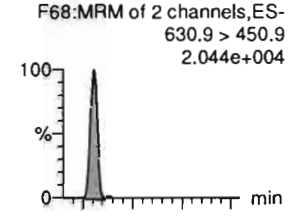


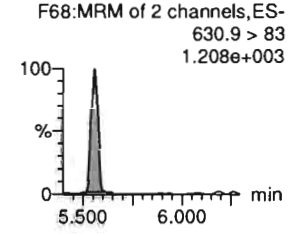
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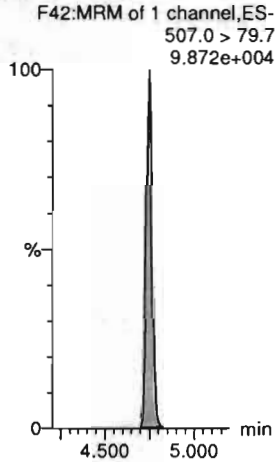


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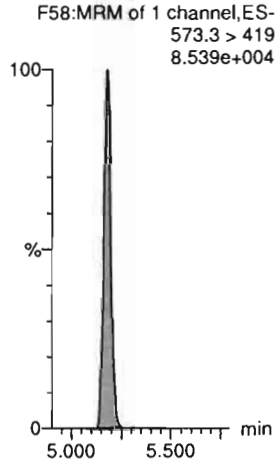




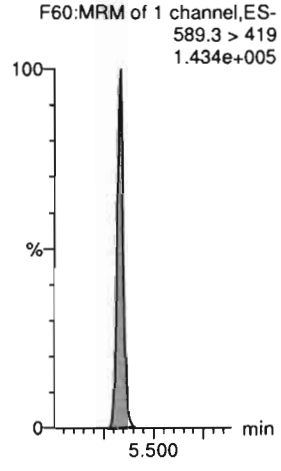
13C8-PFOS-EIS



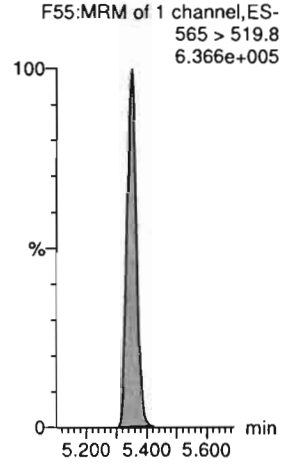
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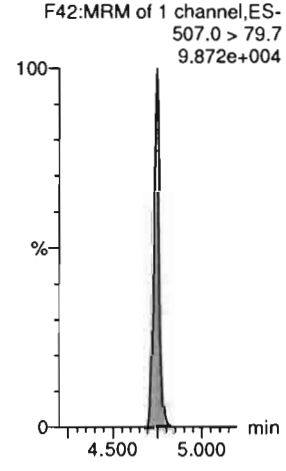
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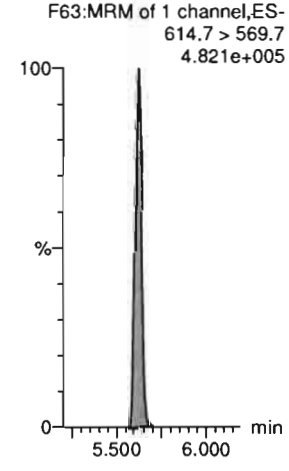
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

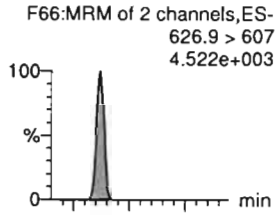


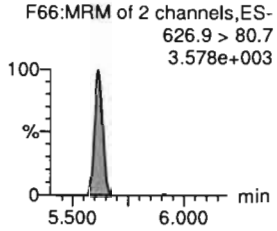
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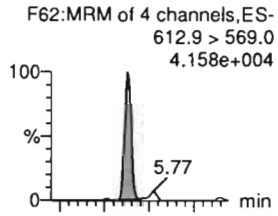
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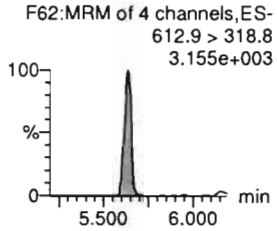
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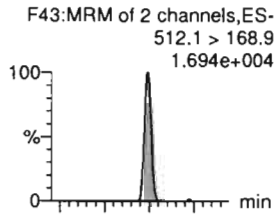


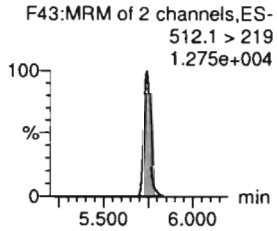
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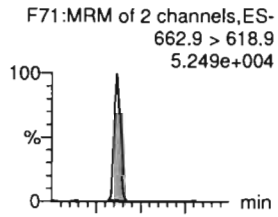


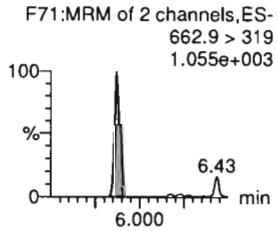
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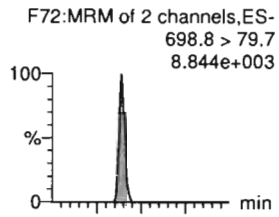


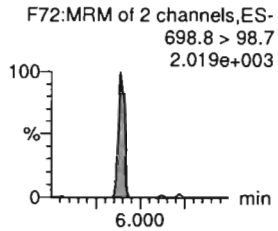
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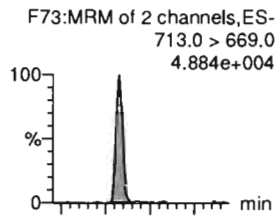


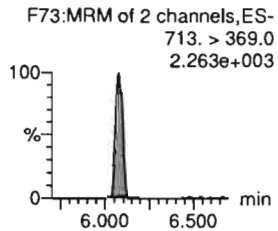
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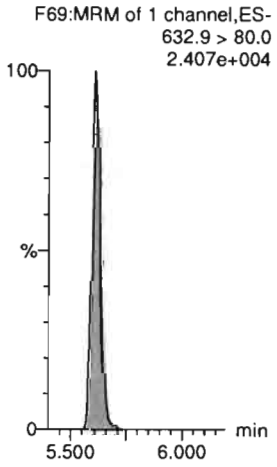


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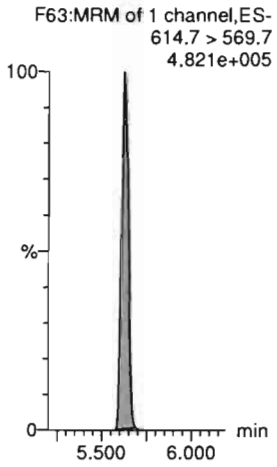




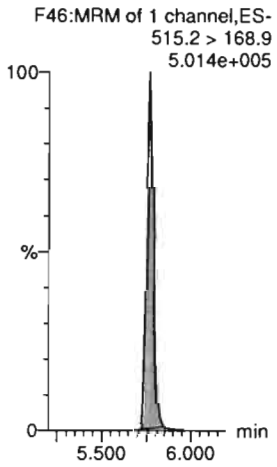
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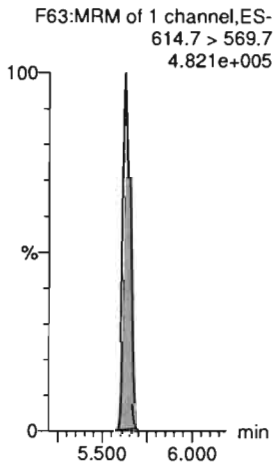
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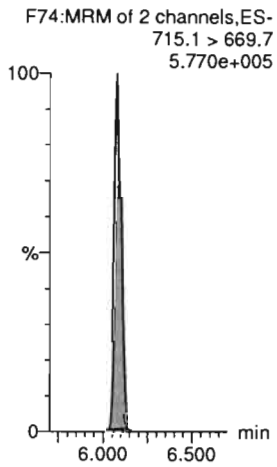
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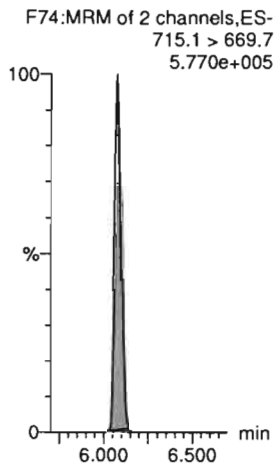
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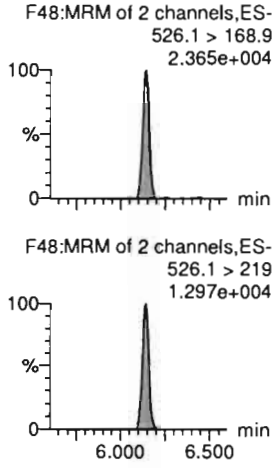


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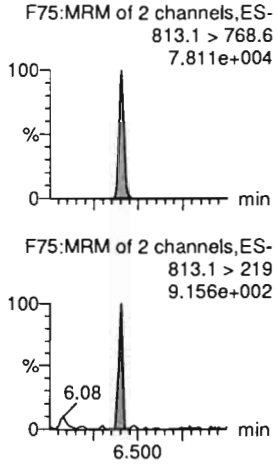
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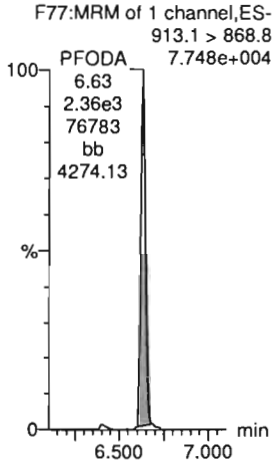
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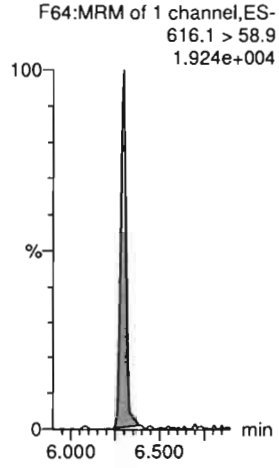
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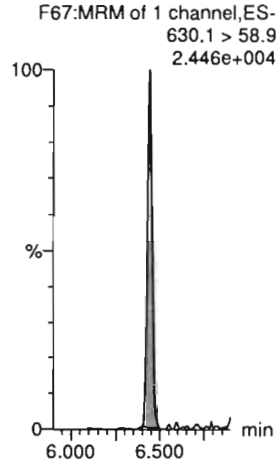
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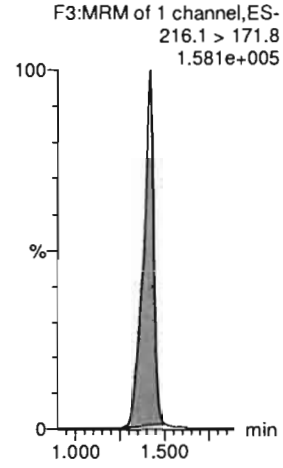
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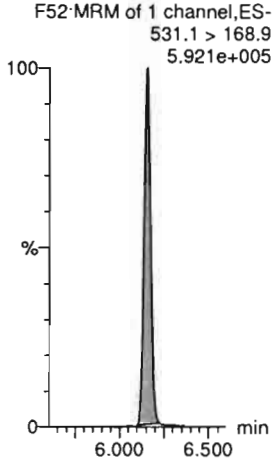
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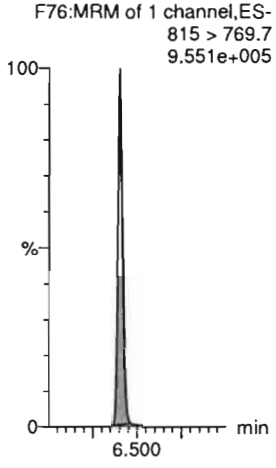
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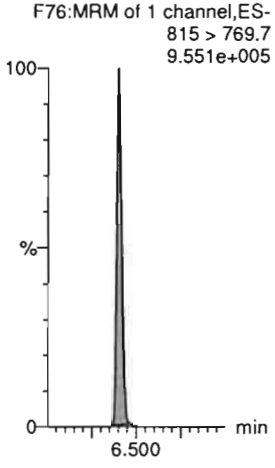
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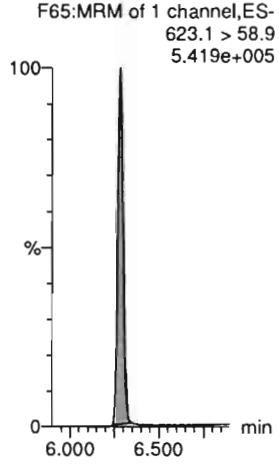
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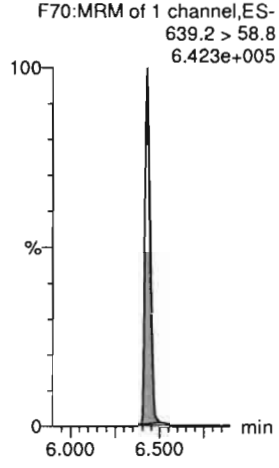
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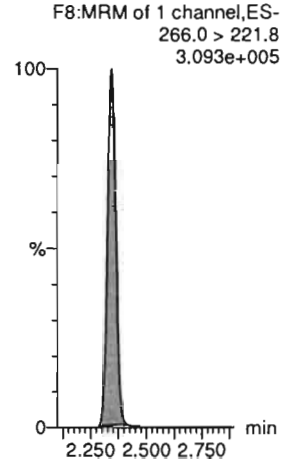
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d9-N-EtFOSE-EIS



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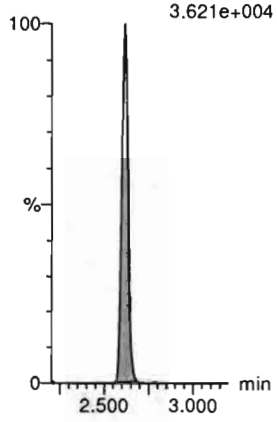


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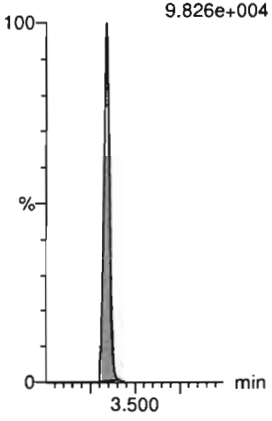
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Printed: Wednesday, February 26, 2020 10:18:42 Pacific Standard Time

Name: 200225P1-5, Date: 25-Feb-2020, Time: 18:40:42, ID: ST200225P1-3 PFC CS0 20B1104, Description: PFC CS0 20B1104

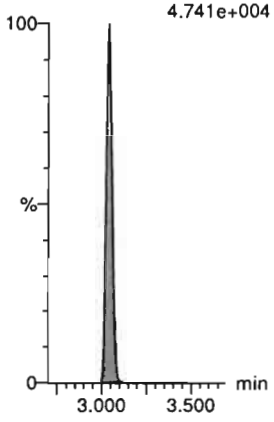
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.621e+004



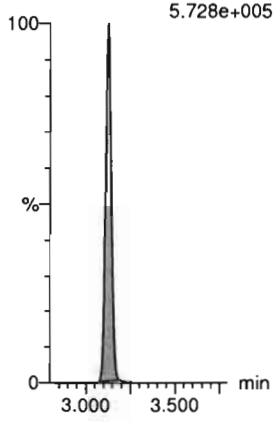
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
9.826e+004



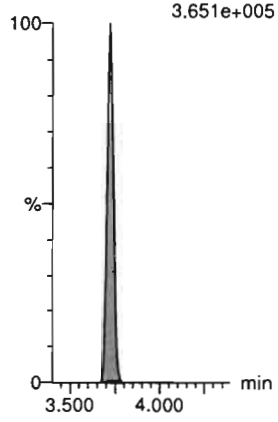
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.741e+004



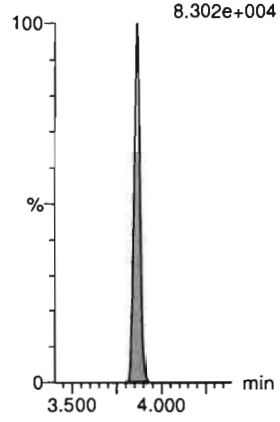
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.728e+005



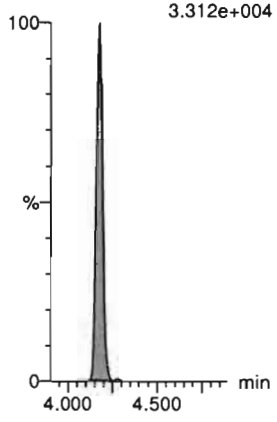
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.651e+005



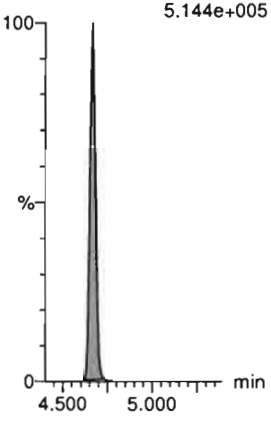
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.302e+004



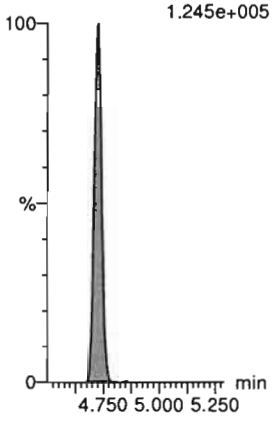
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.312e+004



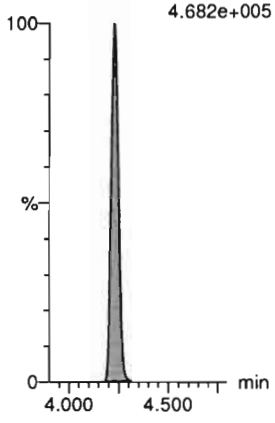
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.144e+005



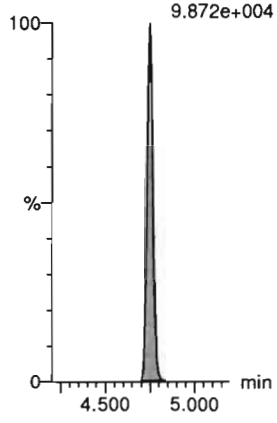
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.245e+005



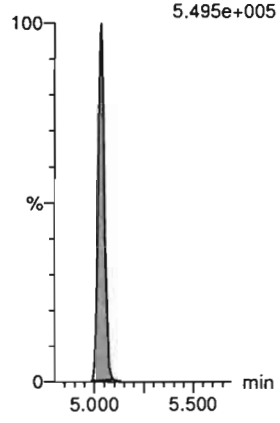
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.682e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.872e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.495e+005

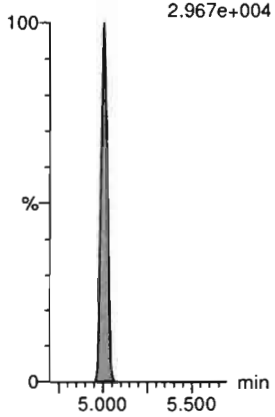


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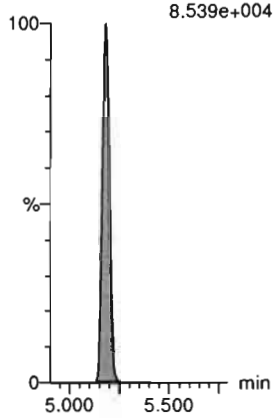
Last Altered: Wednesday, February 26, 2020 10:17:23 Pacific Standard Time
Printed: Wednesday, February 26, 2020 10:18:42 Pacific Standard Time

Name: 200225P1-5, Date: 25-Feb-2020, Time: 18:40:42, ID: ST200225P1-3 PFC CS0 20B1104, Description: PFC CS0 20B1104

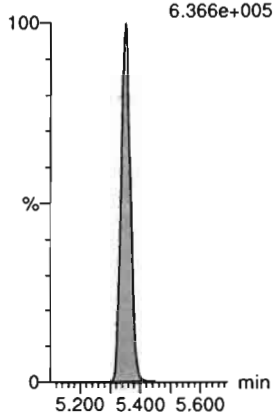
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.967e+004



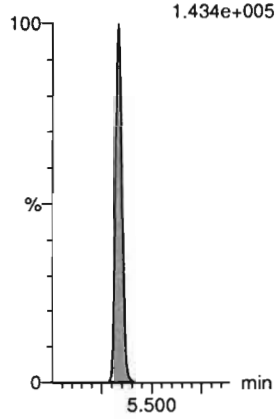
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F58:MRM of 1 channel,ES-
573.3 > 419
8.539e+004



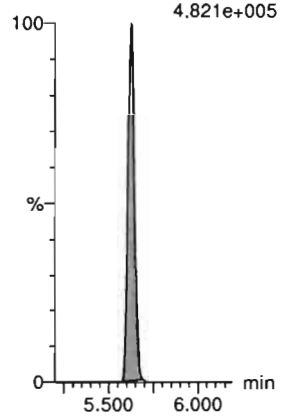
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.366e+005



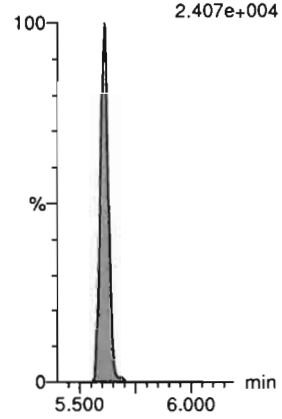
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.434e+005



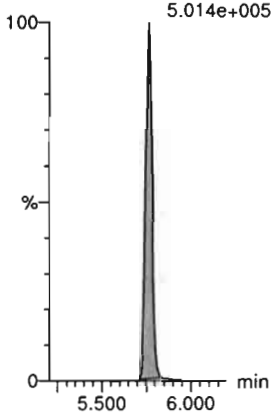
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.821e+005



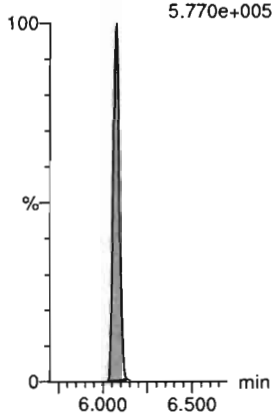
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.407e+004



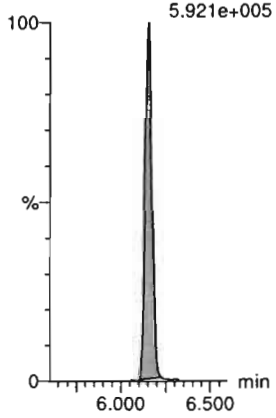
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.014e+005



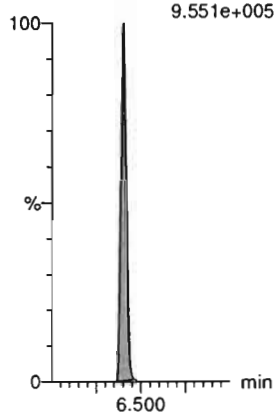
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.770e+005



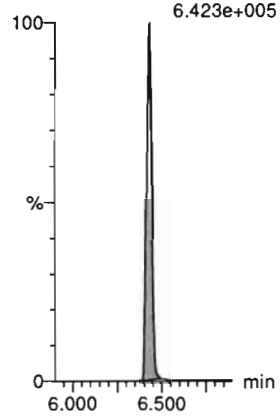
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.921e+005



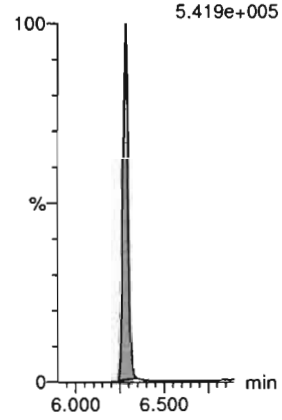
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.551e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.423e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.419e+005

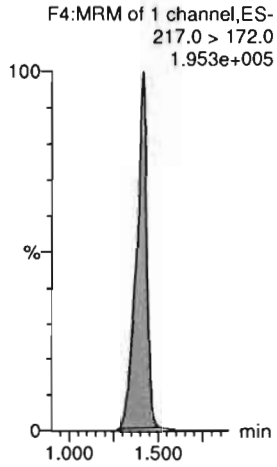


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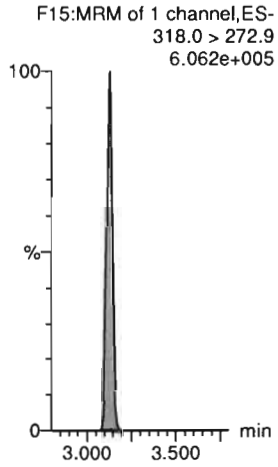
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Name: 200225P1-5, Date: 25-Feb-2020, Time: 18:40:42, ID: ST200225P1-3 PFC CS0 20B1104, Description: PFC CS0 20B1104

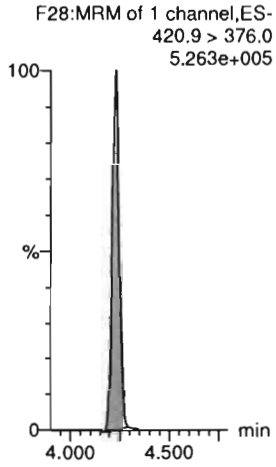
13C4-PFBA



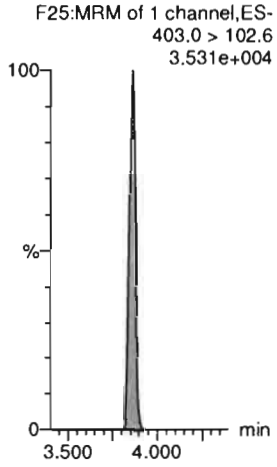
13C5-PFHxA



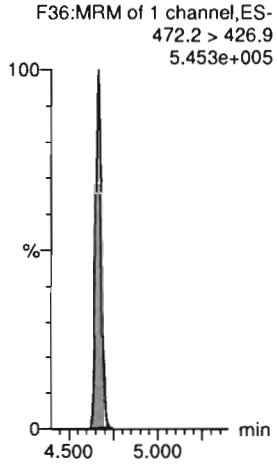
13C8-PFOA



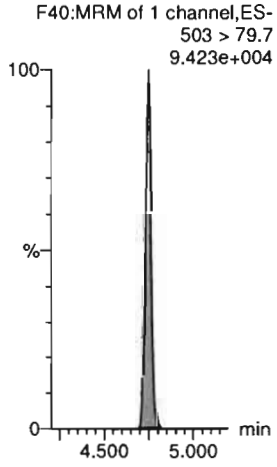
18O2-PFHxS



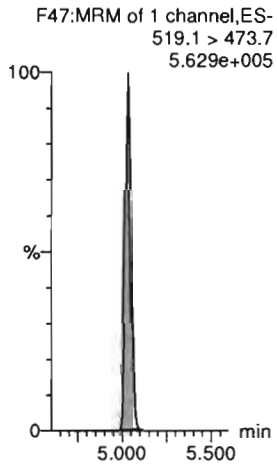
13C9-PFNA



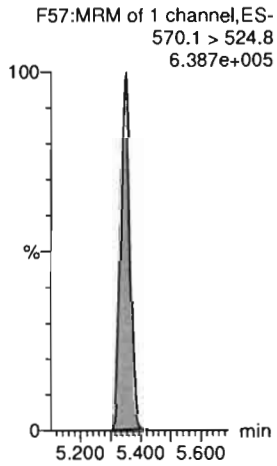
13C4-PFOS



13C6-PFDA



13C7-PFUdA

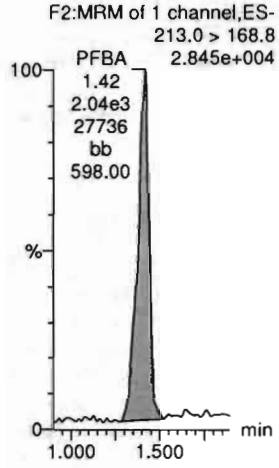


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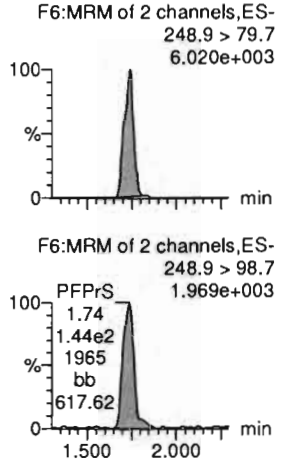
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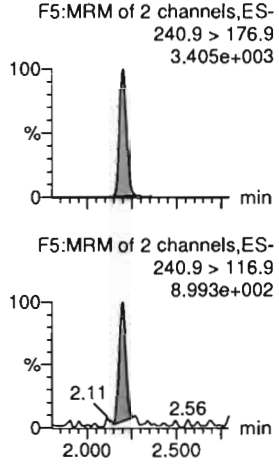
PFBA



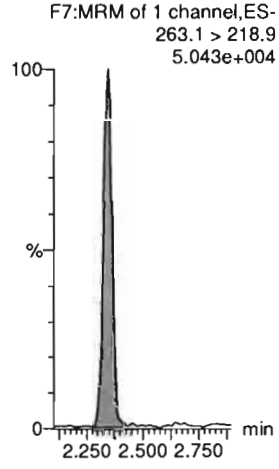
PFPrS



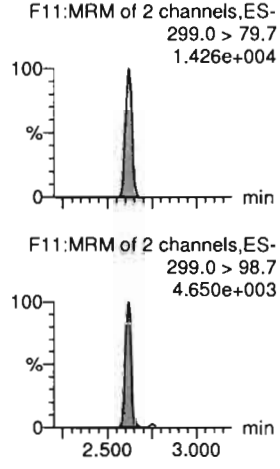
3:3 FTCA



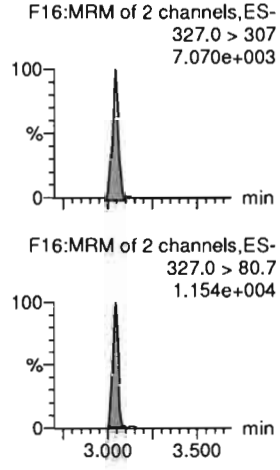
PFPeA



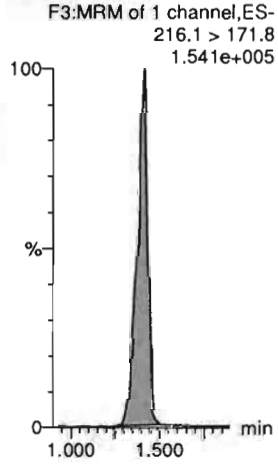
PFBS



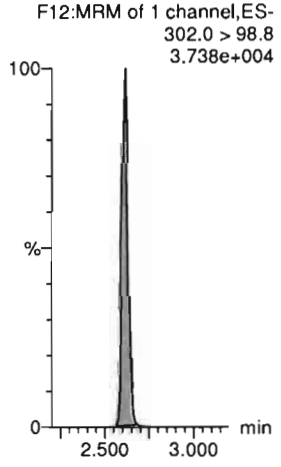
4:2 FTS



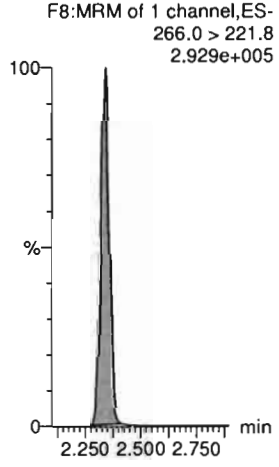
13C3-PFBA-EIS



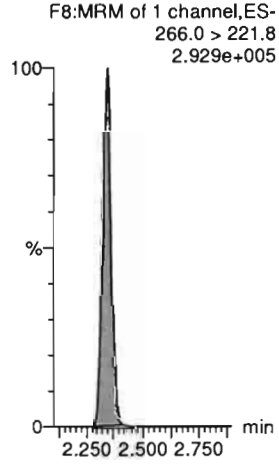
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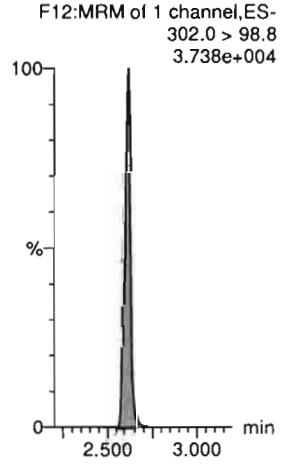
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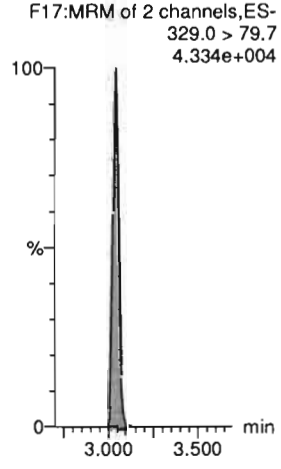
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

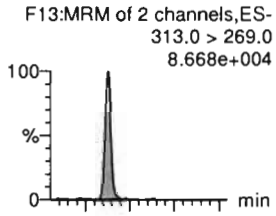


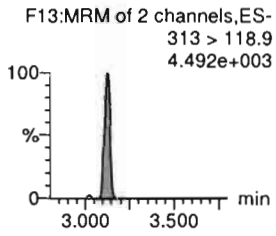
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Printed: Wednesday, February 26, 2020 10:18:42 Pacific Standard Time

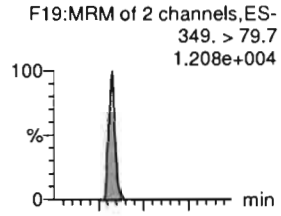
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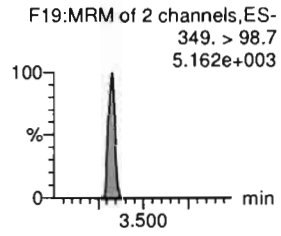
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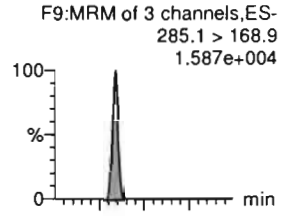


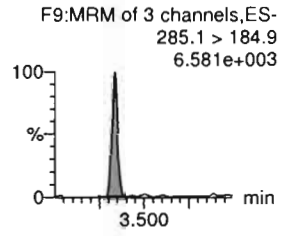
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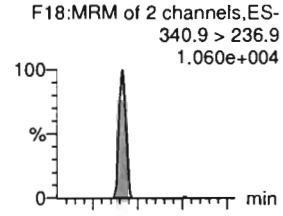


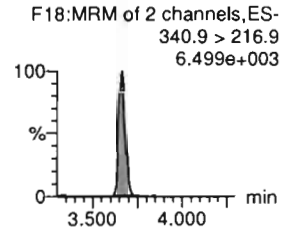
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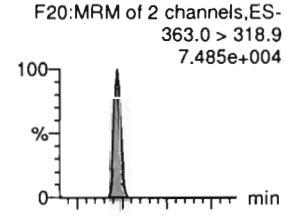


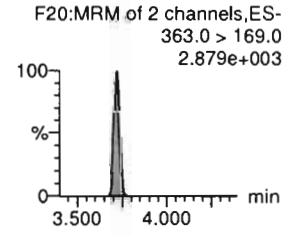
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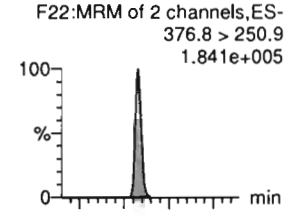


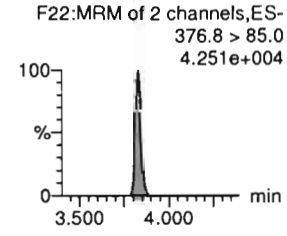
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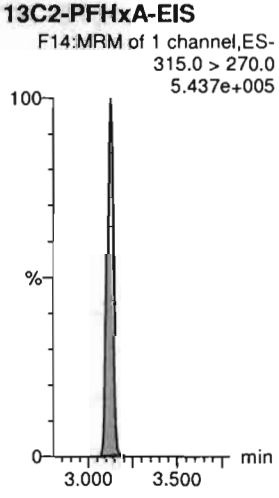


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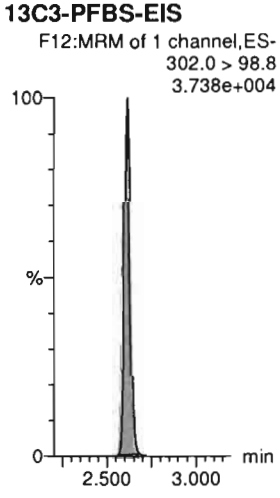




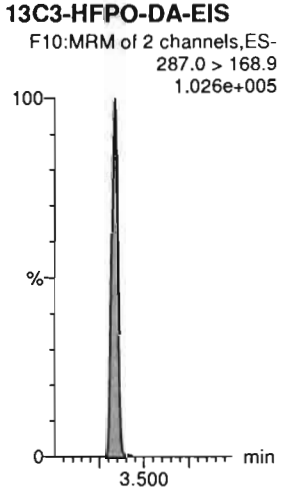
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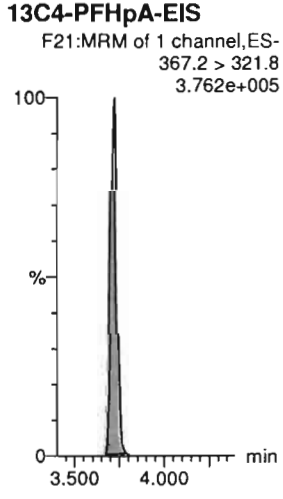
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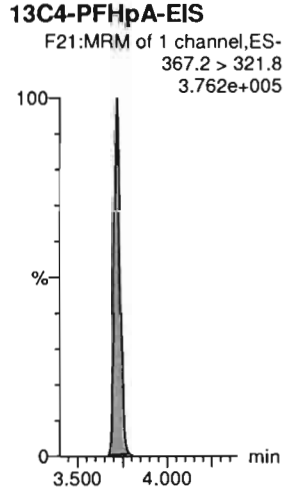
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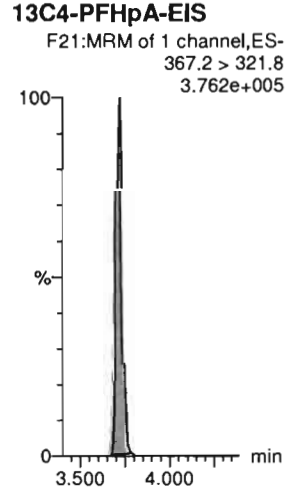
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13C4-PFHpA-EIS



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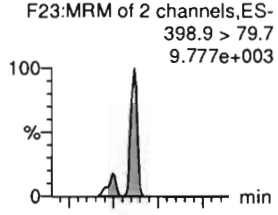


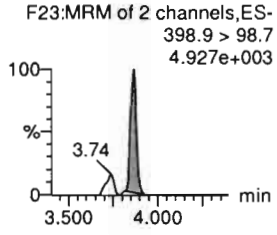
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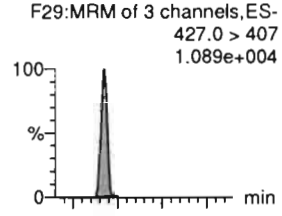
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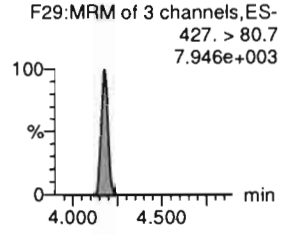
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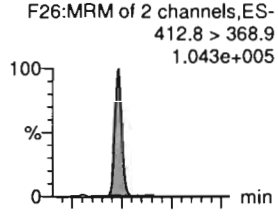


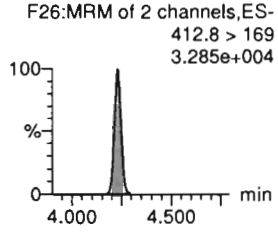
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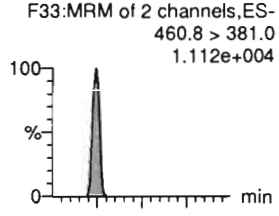


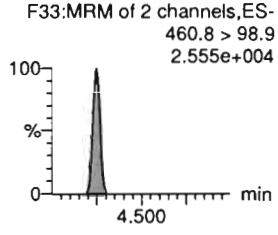
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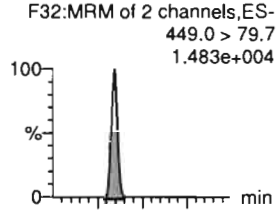


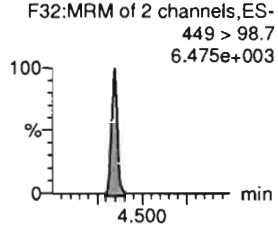
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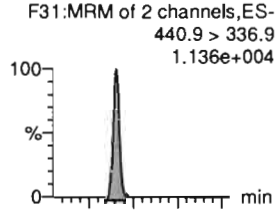


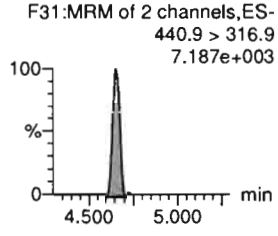
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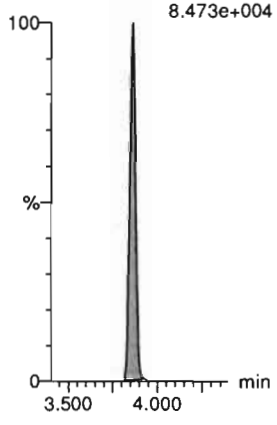


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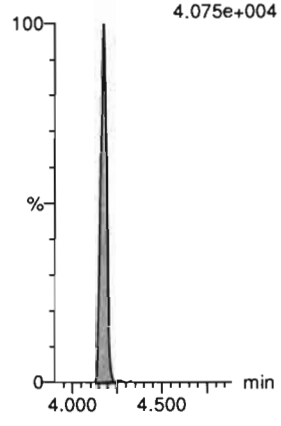




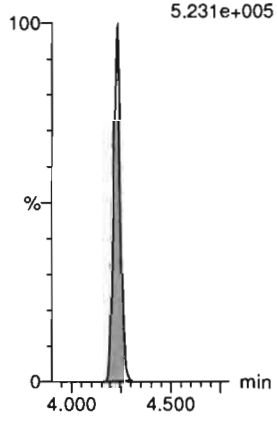
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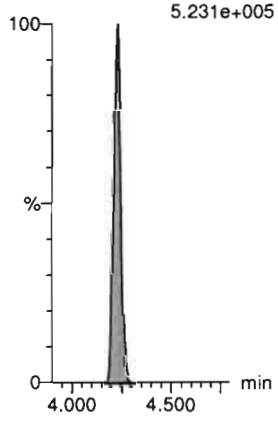
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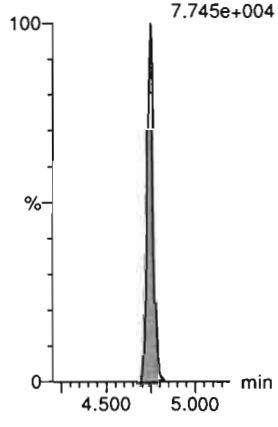
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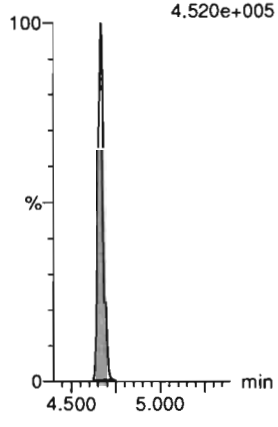
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13C8-PFOS-EIS



13C5-PFNA-EIS

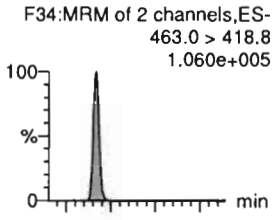


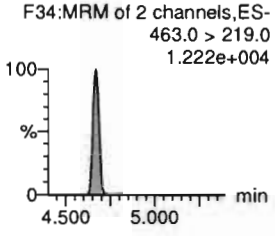
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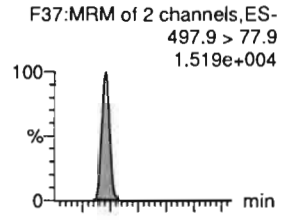
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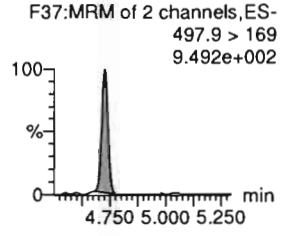
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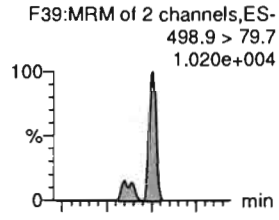


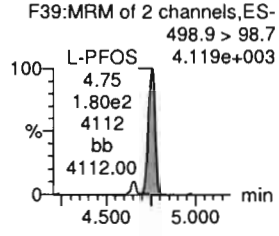
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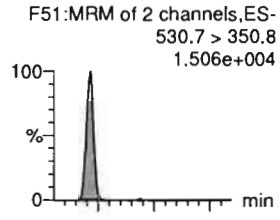


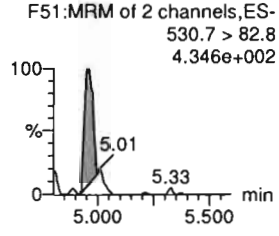
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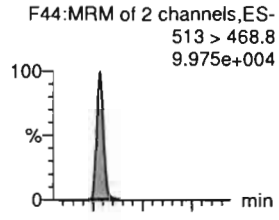


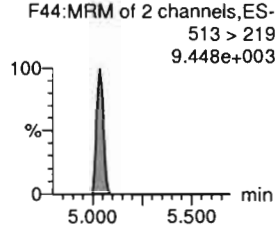
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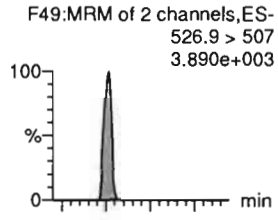


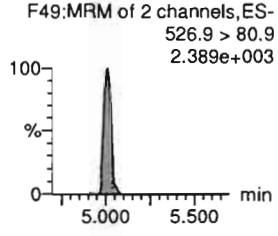
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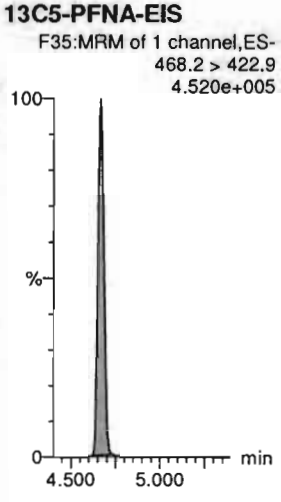


8:2 FTS

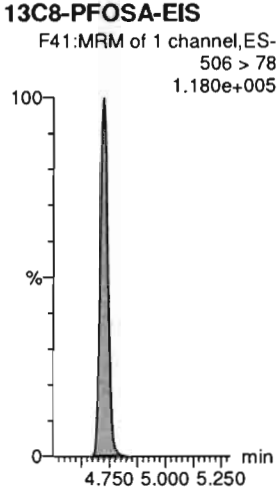




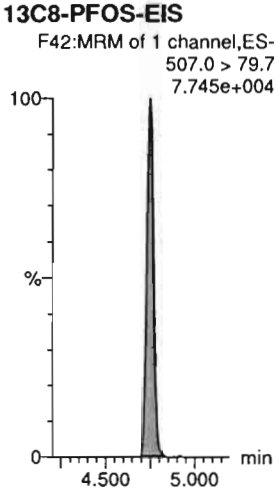
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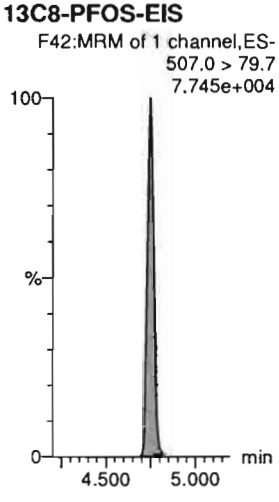
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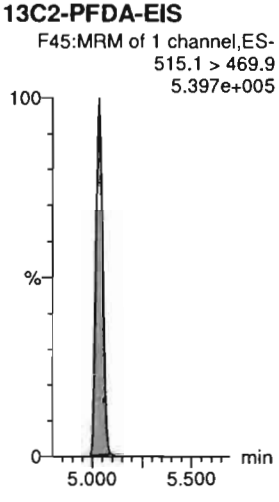
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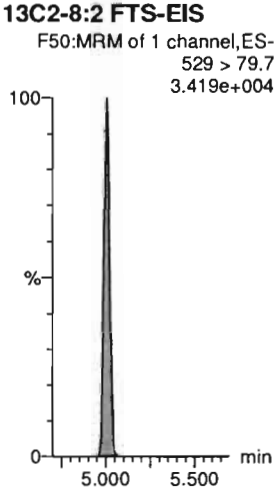
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

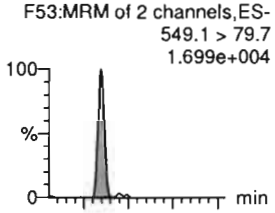


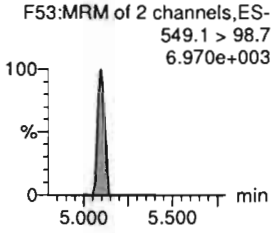
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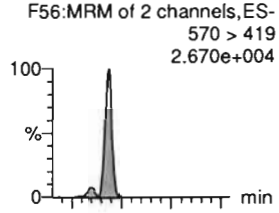
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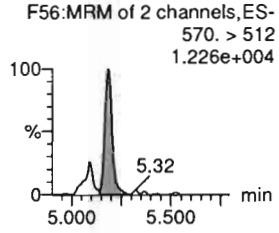
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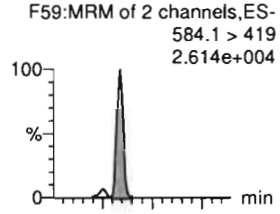


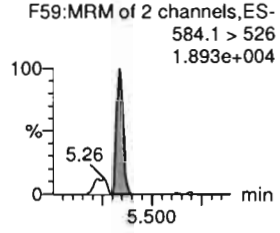
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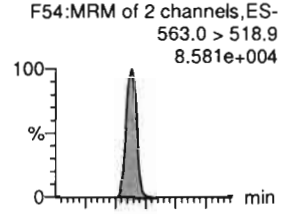


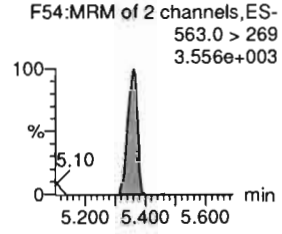
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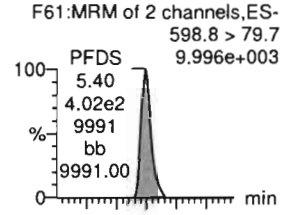


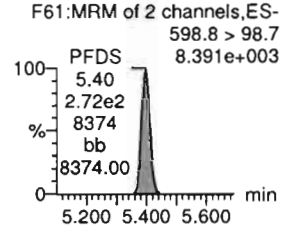
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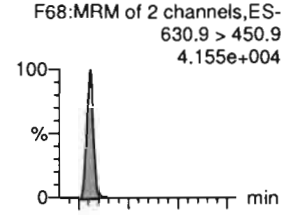


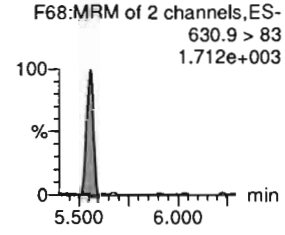
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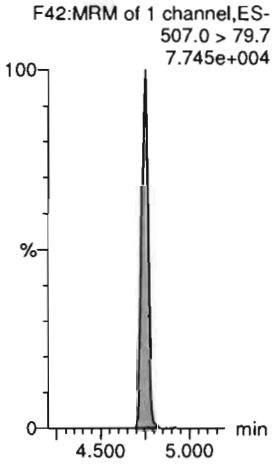


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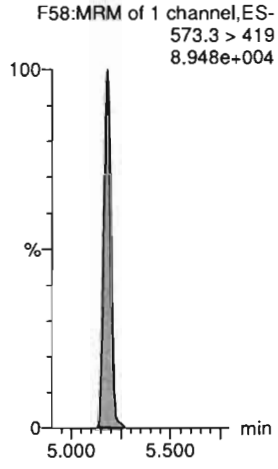




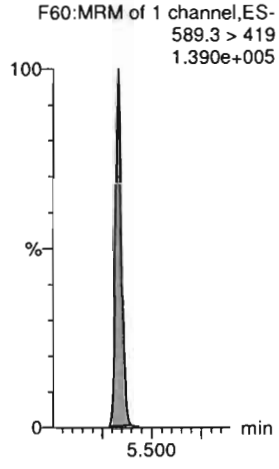
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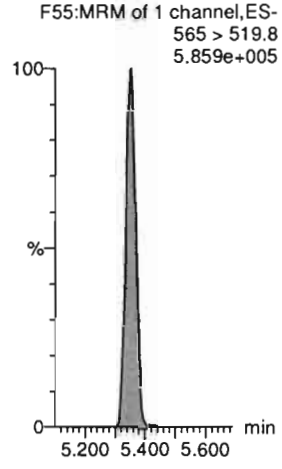
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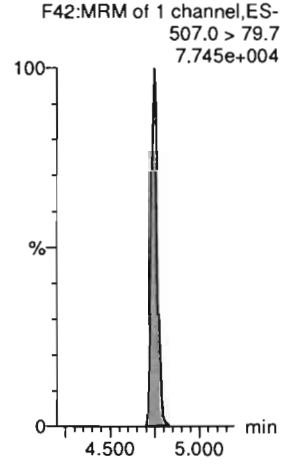
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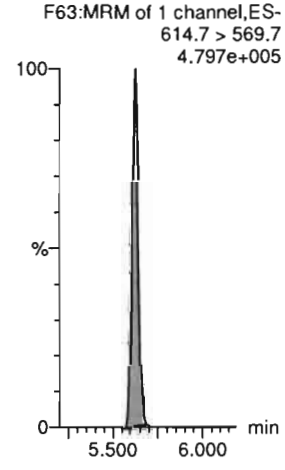
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13C8-PFOS-EIS



13C2-PFDoA-EIS

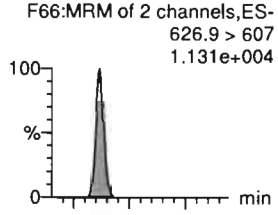


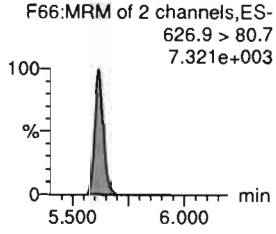
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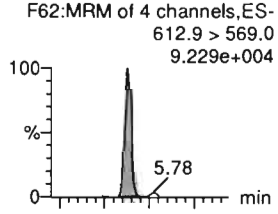
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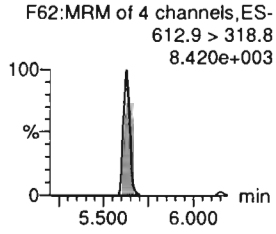
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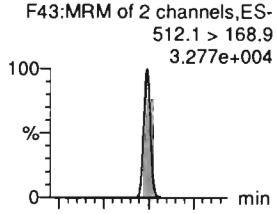


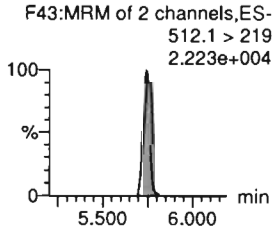
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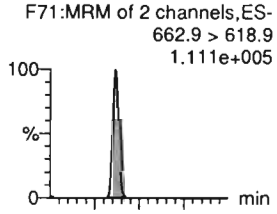


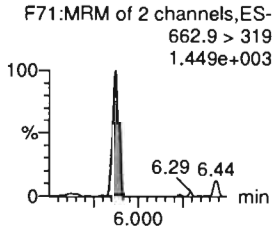
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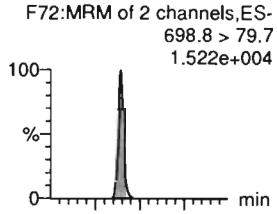


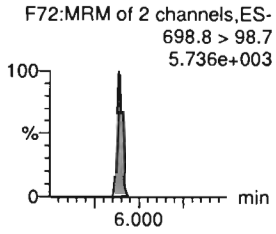
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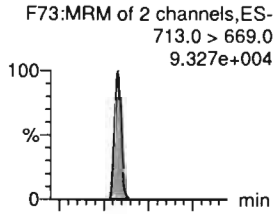


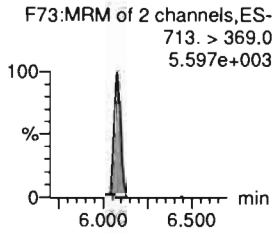
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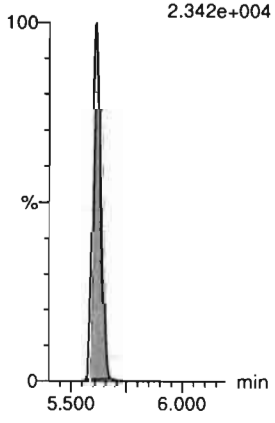


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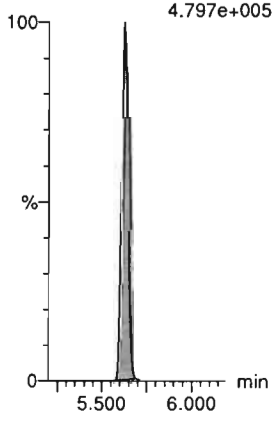




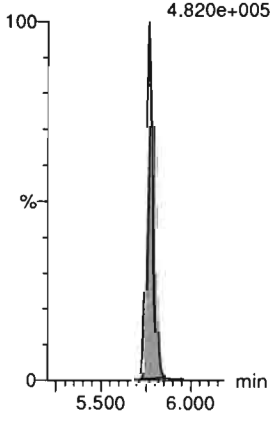
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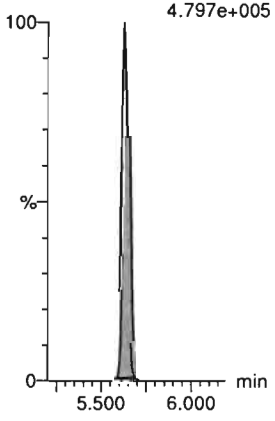
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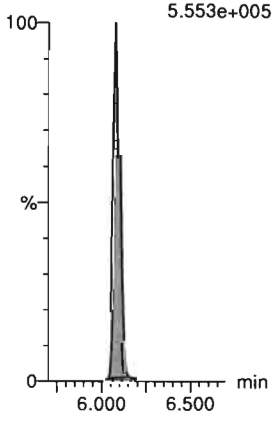
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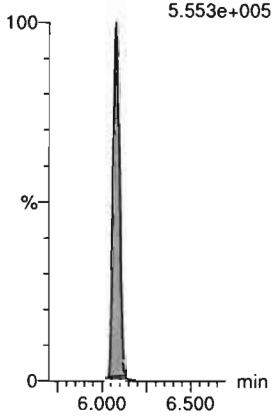
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

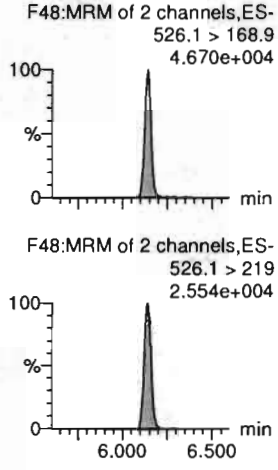


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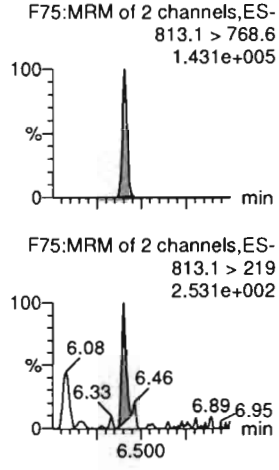
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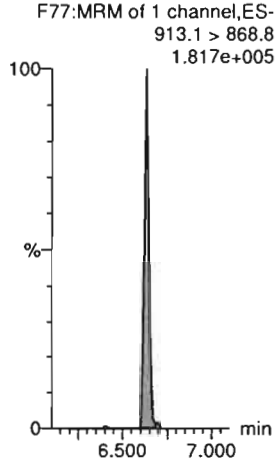
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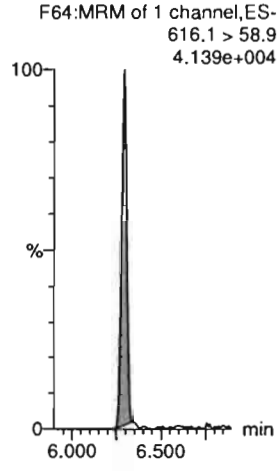
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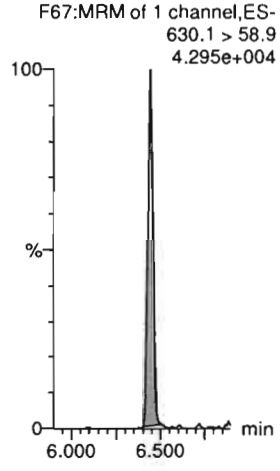
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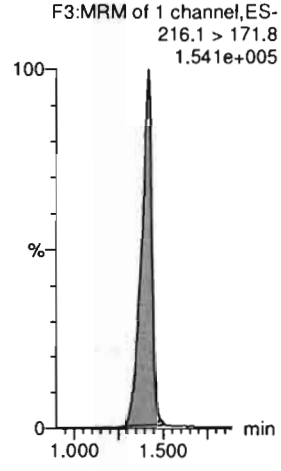
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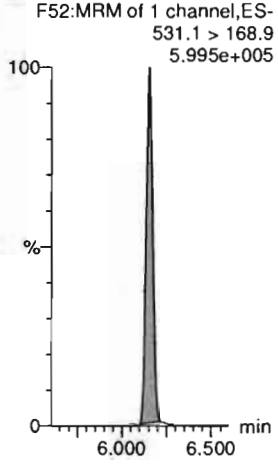
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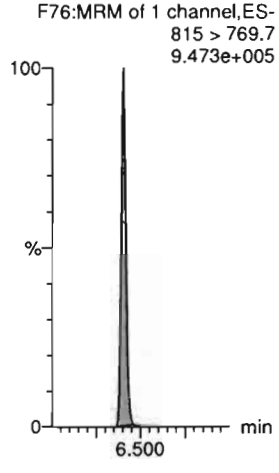
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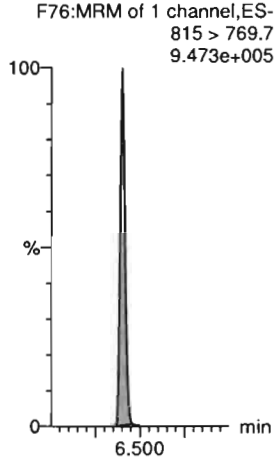
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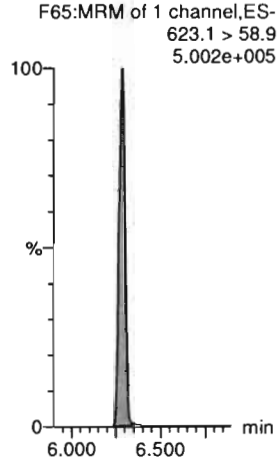
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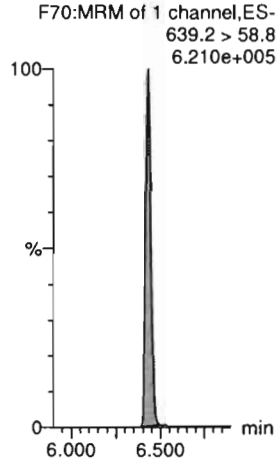
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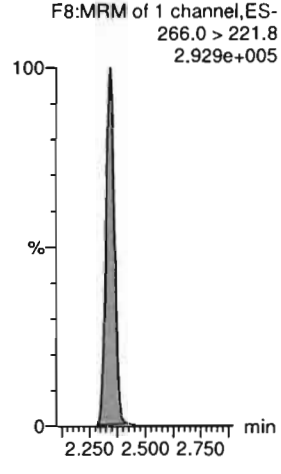
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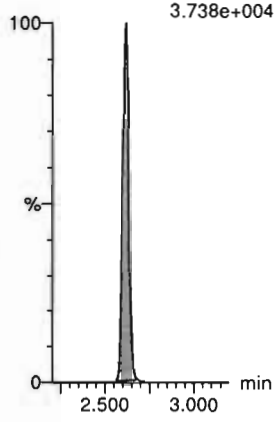


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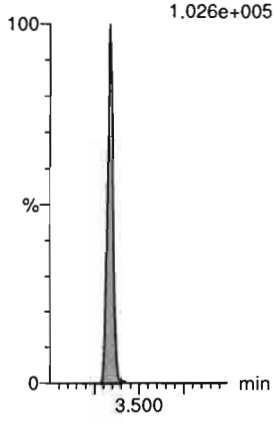
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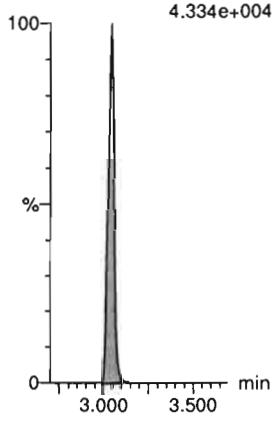
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
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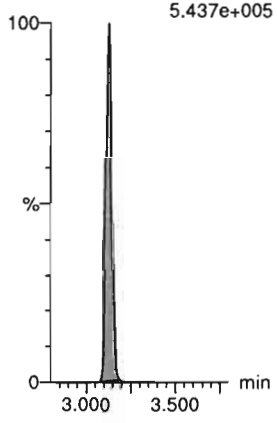
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F10:MRM of 2 channels,ES-
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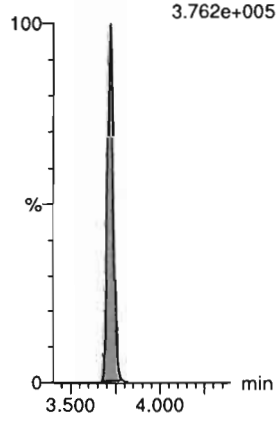
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F17:MRM of 2 channels,ES-
329.0 > 79.7
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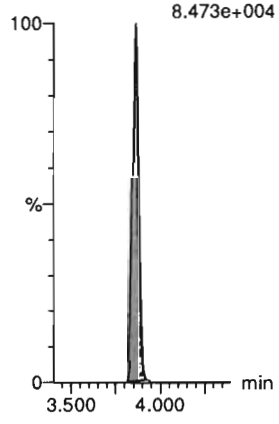
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F14:MRM of 1 channel,ES-
315.0 > 270.0
5.437e+005



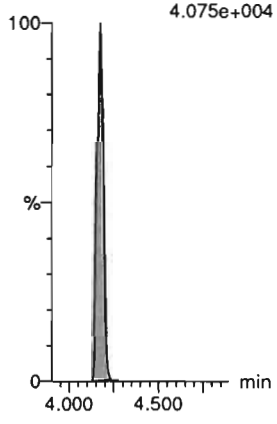
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.762e+005



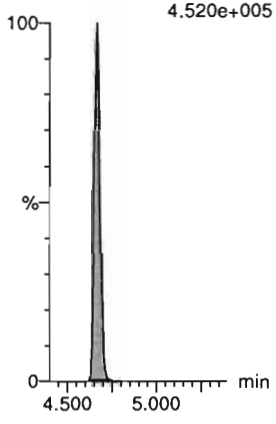
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.473e+004



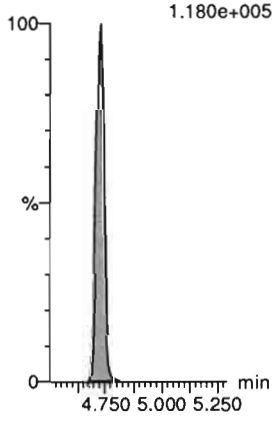
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.075e+004



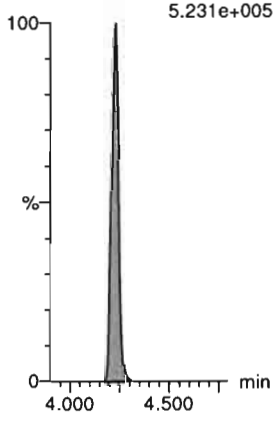
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.520e+005



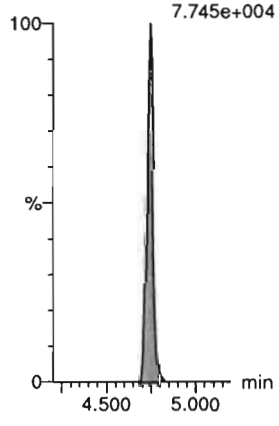
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.180e+005



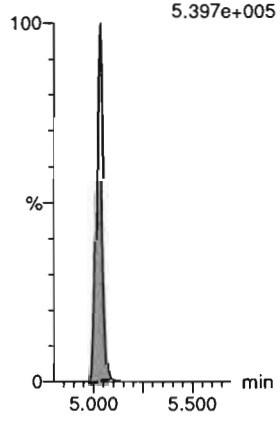
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.231e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
7.745e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.397e+005

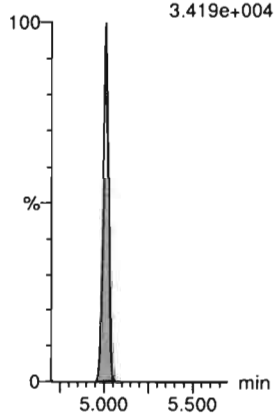


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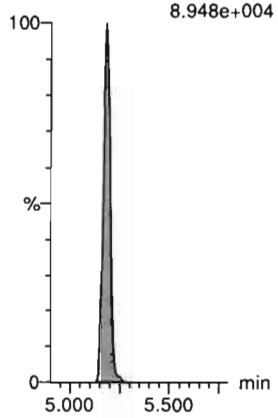
Last Altered: Wednesday, February 26, 2020 10:17:23 Pacific Standard Time
Printed: Wednesday, February 26, 2020 10:18:42 Pacific Standard Time

Name: 200225P1-6, Date: 25-Feb-2020, Time: 18:51:13, ID: ST200225P1-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

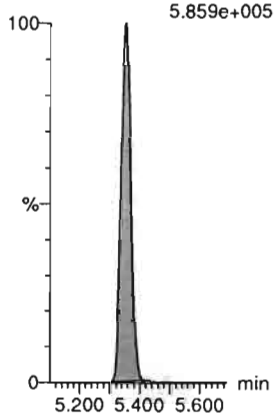
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.419e+004



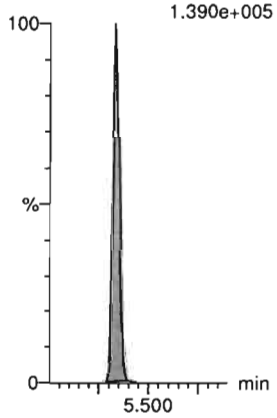
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.948e+004



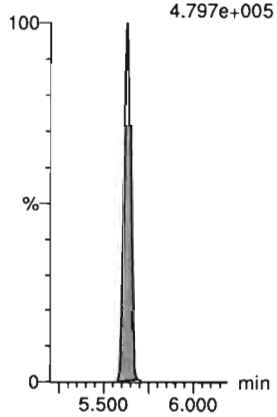
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.859e+005



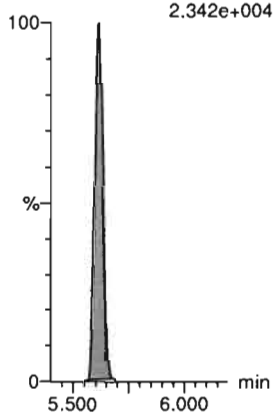
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.390e+005



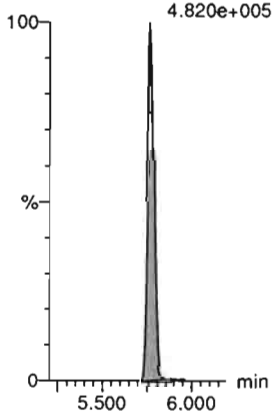
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.797e+005



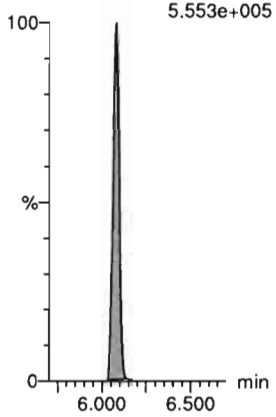
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.342e+004



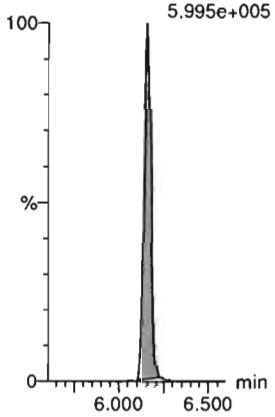
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.820e+005



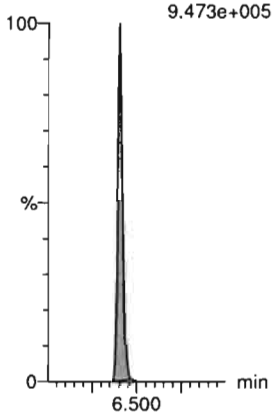
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.553e+005



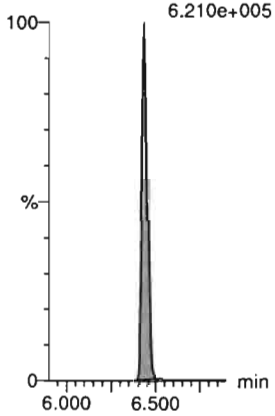
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.995e+005



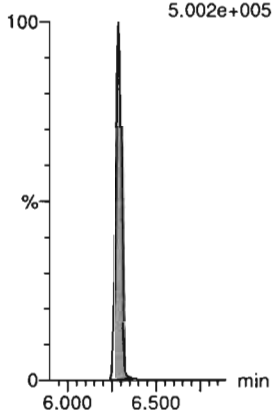
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.473e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.210e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.002e+005

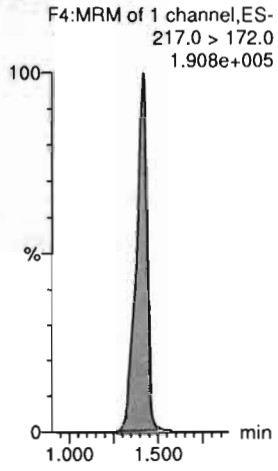


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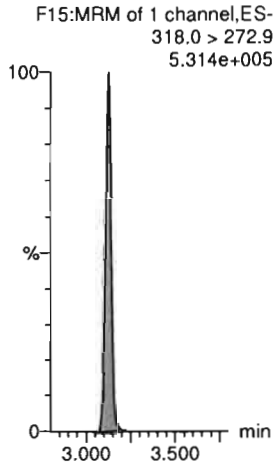
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Name: 200225P1-6, Date: 25-Feb-2020, Time: 18:51:13, ID: ST200225P1-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

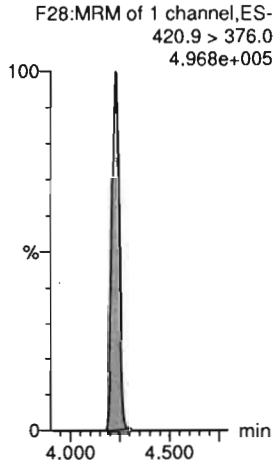
13C4-PFBA



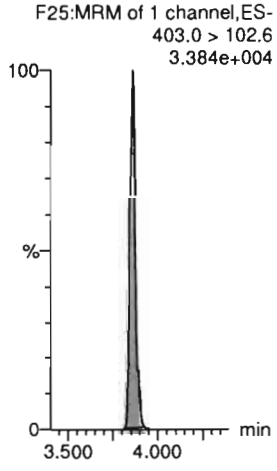
13C5-PFHxA



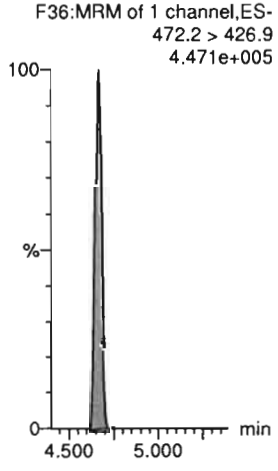
13C8-PFOA



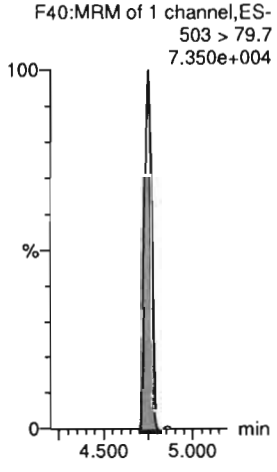
18O2-PFHxS



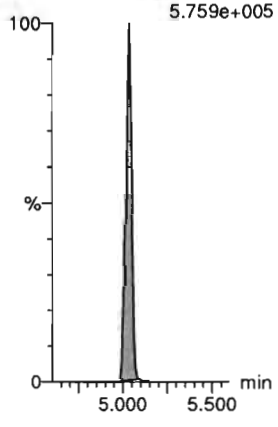
13C9-PFNA



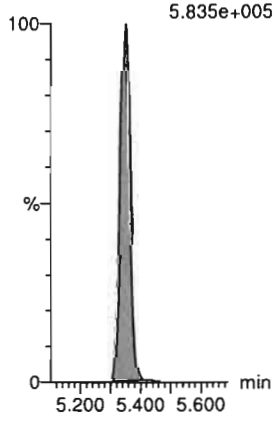
13C4-PFOS



13C6-PFDA



13C7-PFUdA

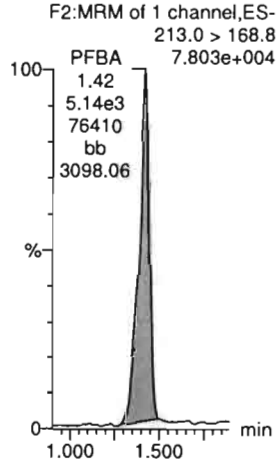


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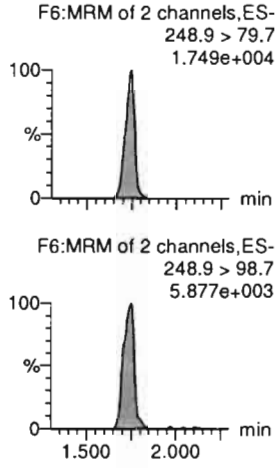
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Name: 200225P1-7, Date: 25-Feb-2020, Time: 19:01:42, ID: ST200225P1-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

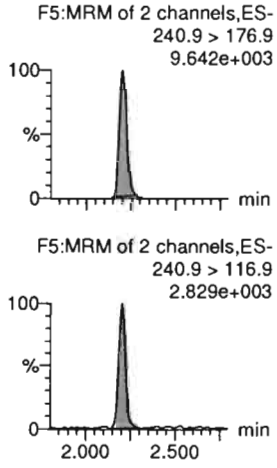
PFBA



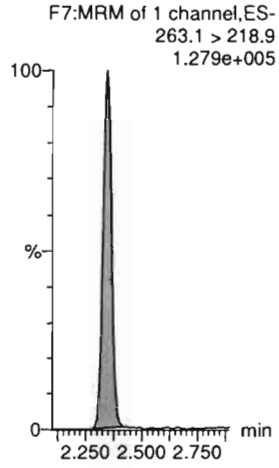
PFPrS



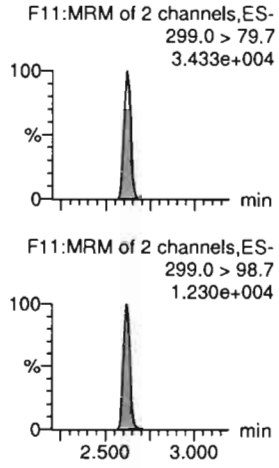
3:3 FTCA



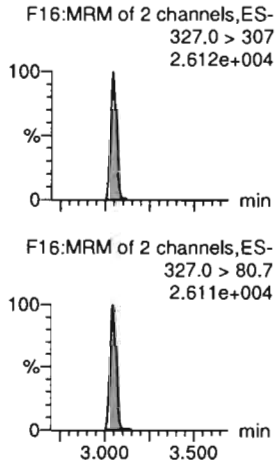
PFPeA



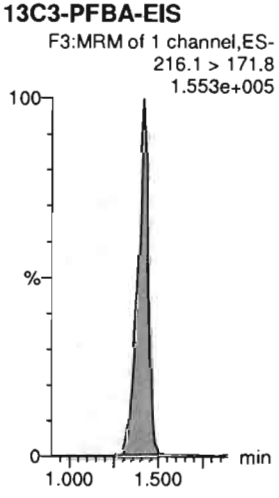
PFBS



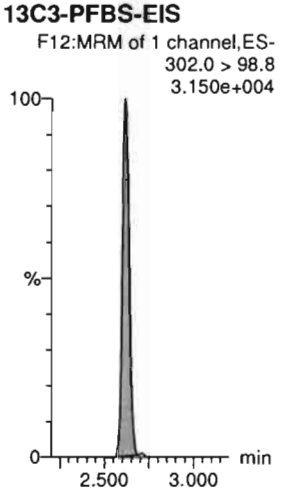
4:2 FTS



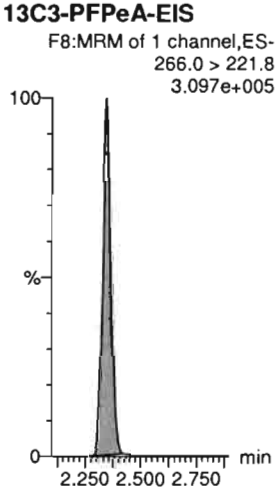
13C3-PFBA-EIS



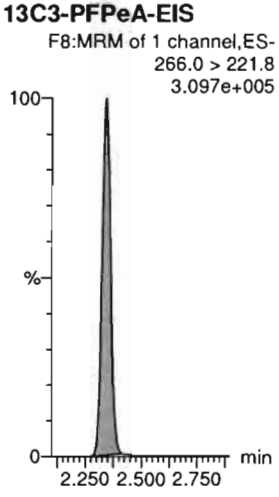
13C3-PFBS-EIS



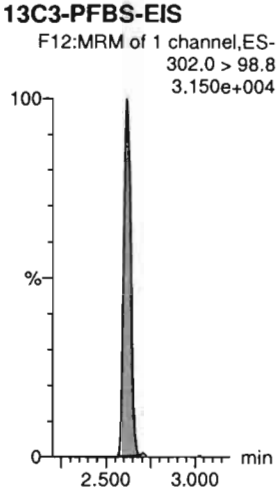
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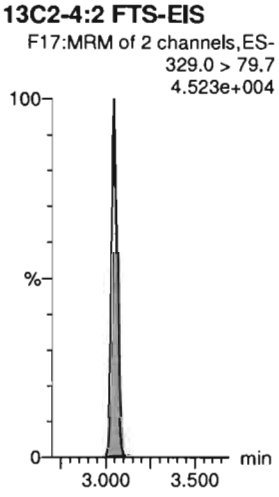
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

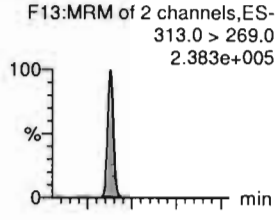


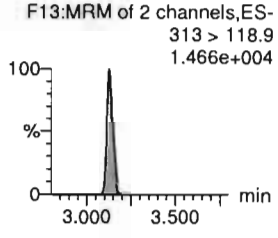
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Printed: Wednesday, February 26, 2020 10:18:42 Pacific Standard Time

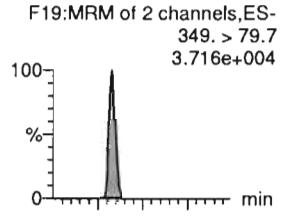
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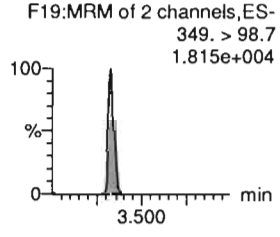
PFHxA



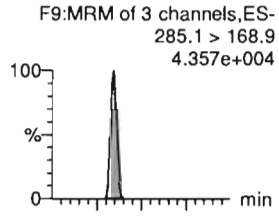


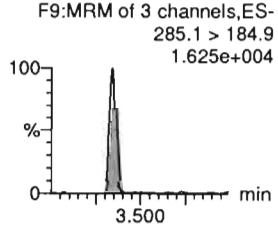
PFPeS



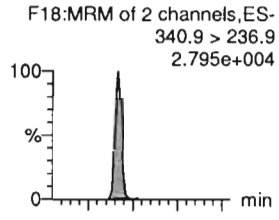


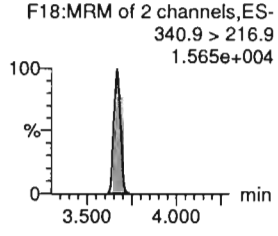
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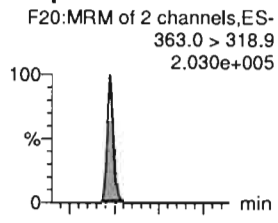


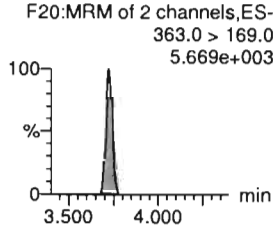
5:3 FTCA



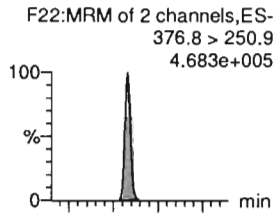


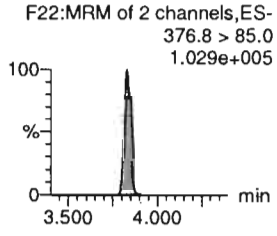
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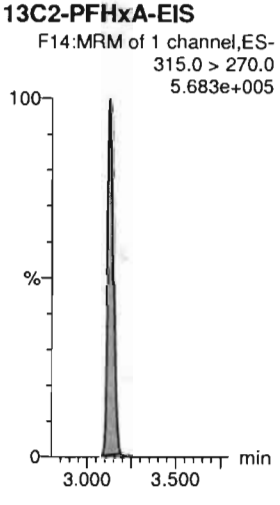


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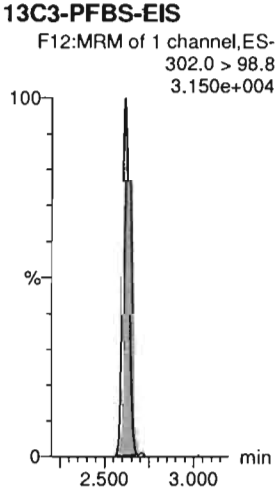




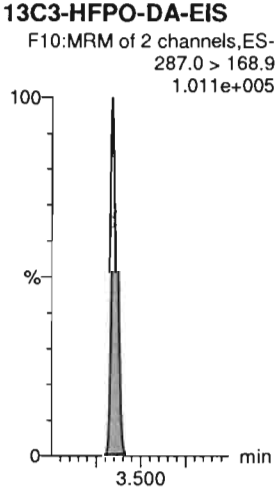
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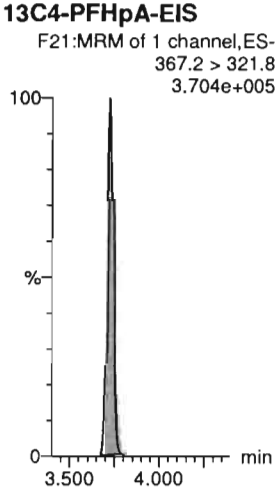
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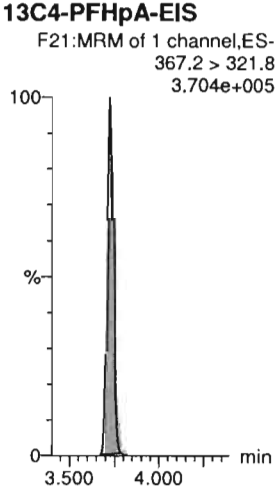
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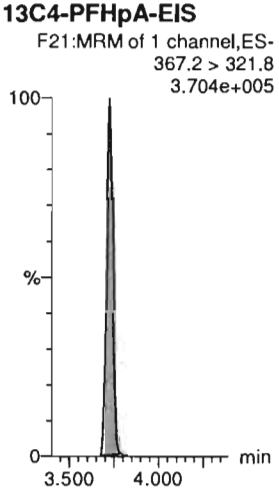
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

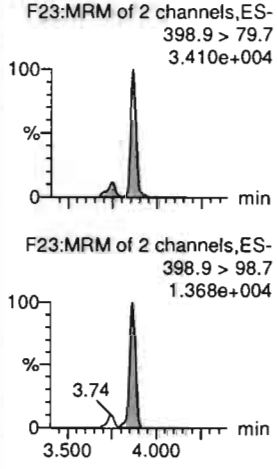


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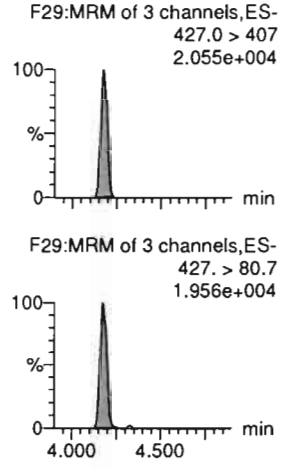
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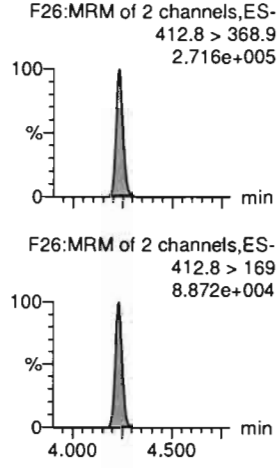
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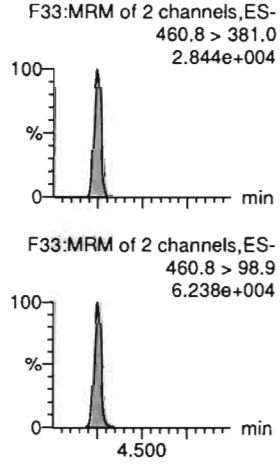
6:2 FTS



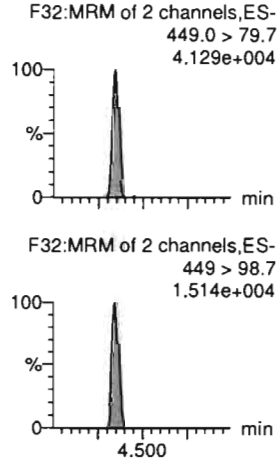
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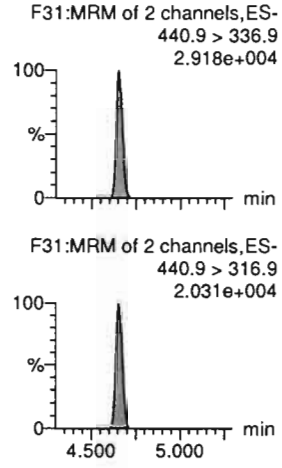
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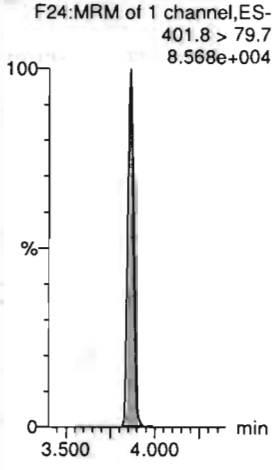
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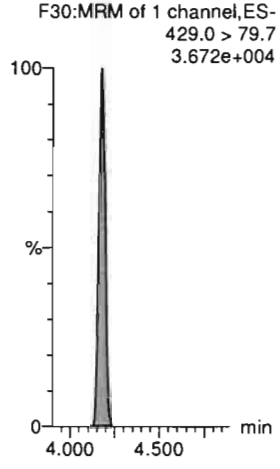
7:3 FTCA



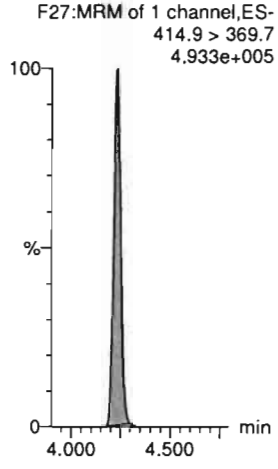
13C3-PFHxS-EIS



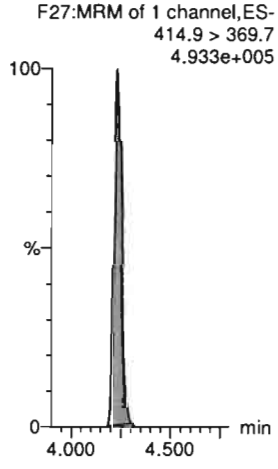
13C2-6:2 FTS-EIS



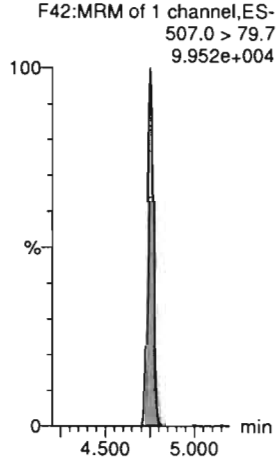
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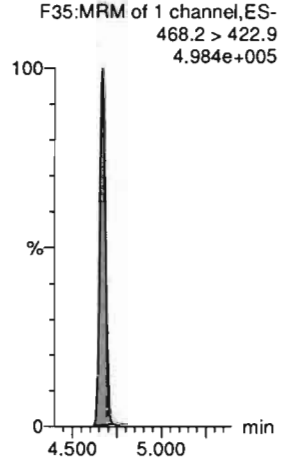
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

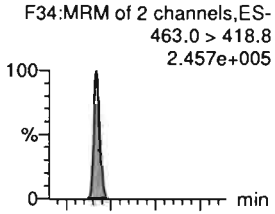


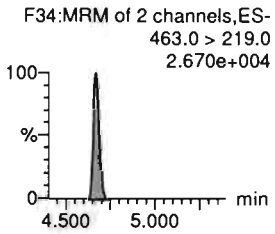
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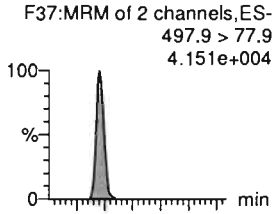
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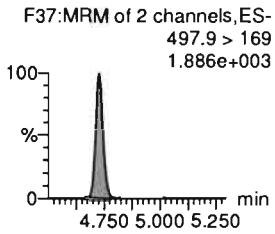
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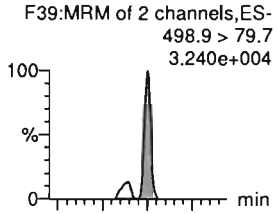


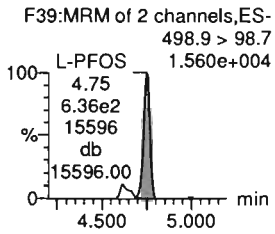
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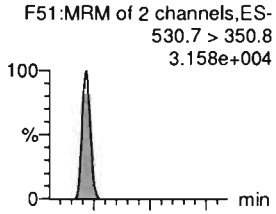


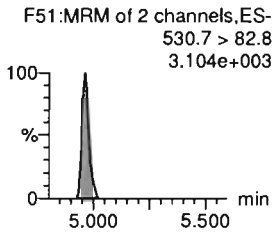
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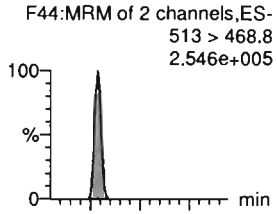


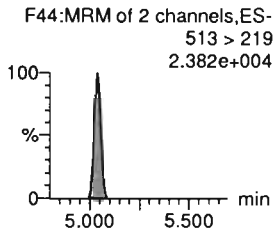
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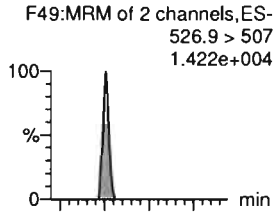


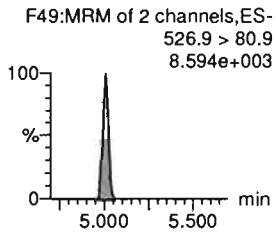
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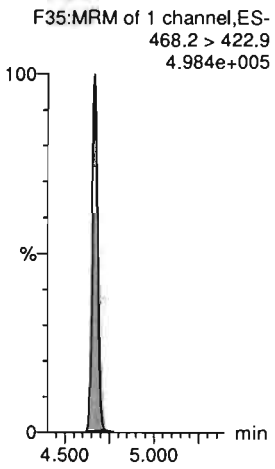


8:2 FTS

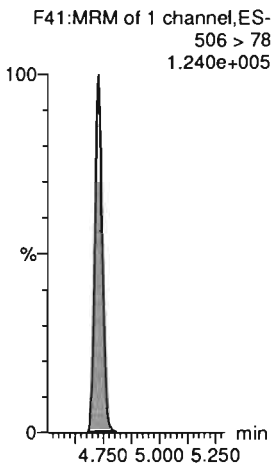




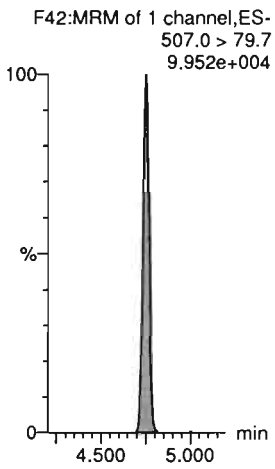
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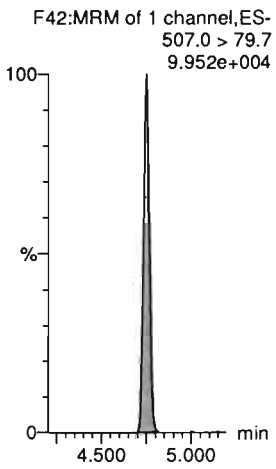
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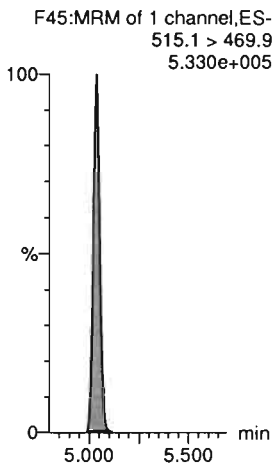
13C8-PFOS-EIS



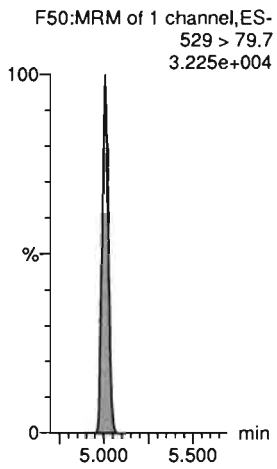
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

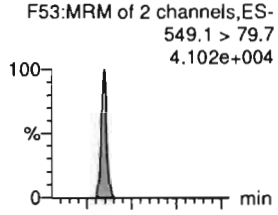


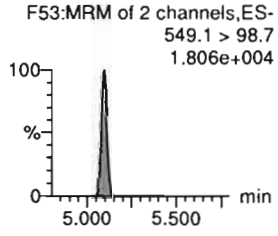
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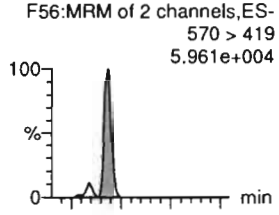
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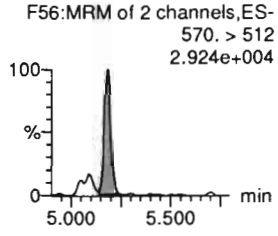
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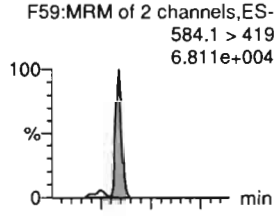


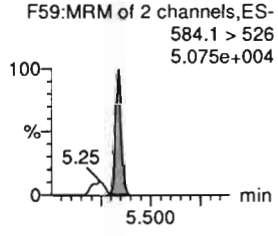
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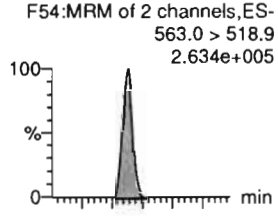


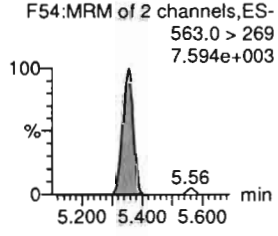
L-EtFOSAA



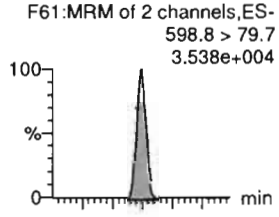


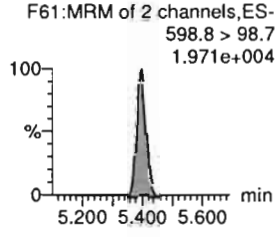
PFUdA



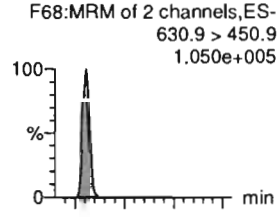


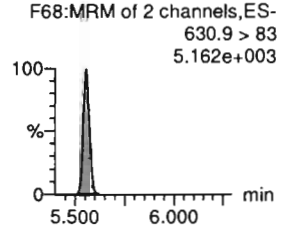
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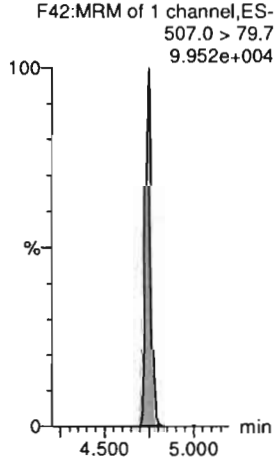


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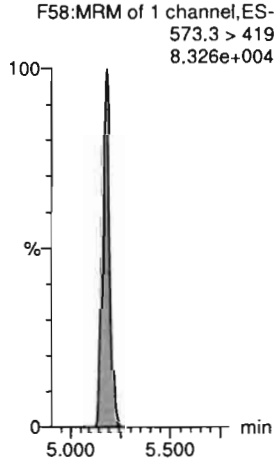




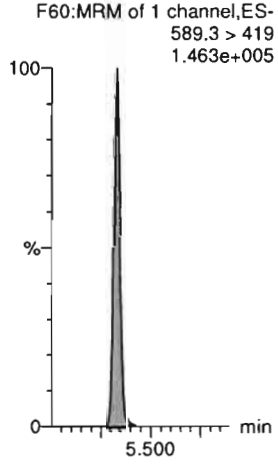
13C8-PFOS-EIS



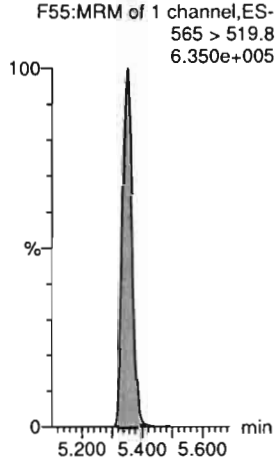
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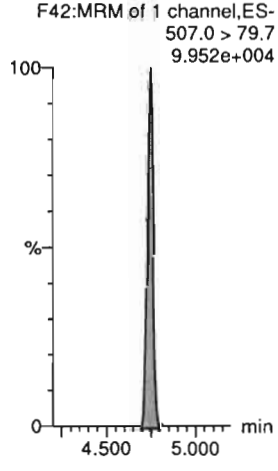
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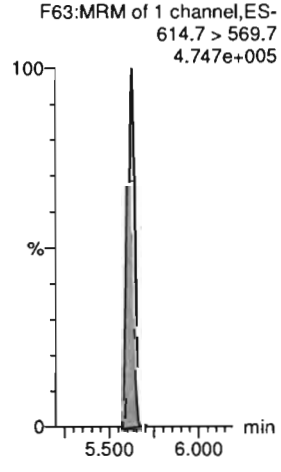
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13C8-PFOS-EIS



13C2-PFDoA-EIS

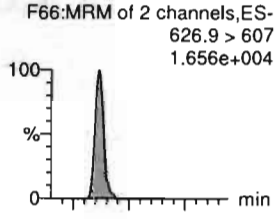


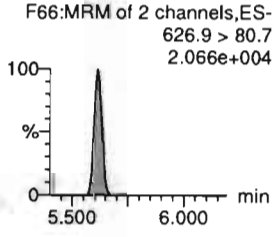
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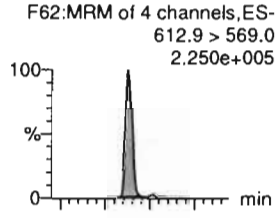
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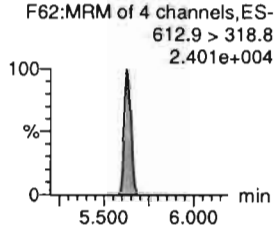
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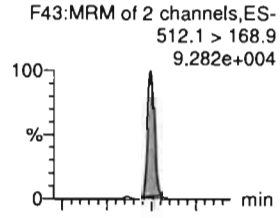


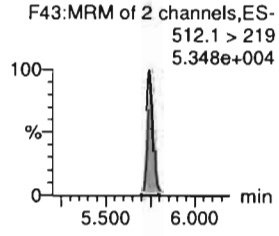
PFDoA



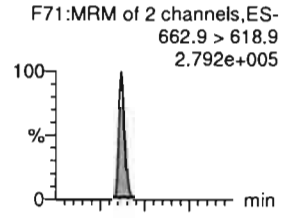


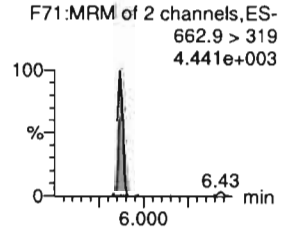
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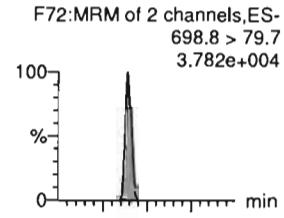


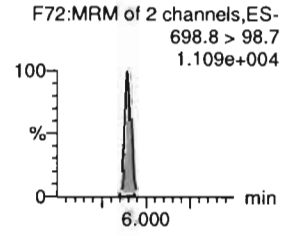
PFTrDA



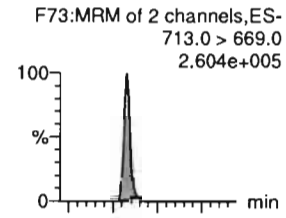


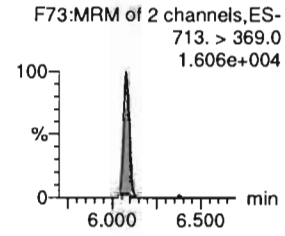
PFDoS



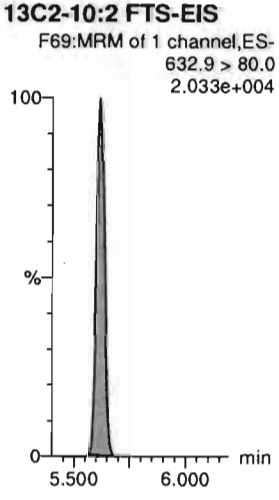


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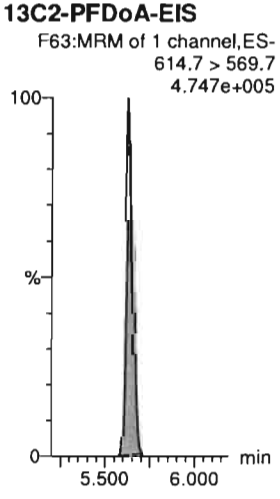




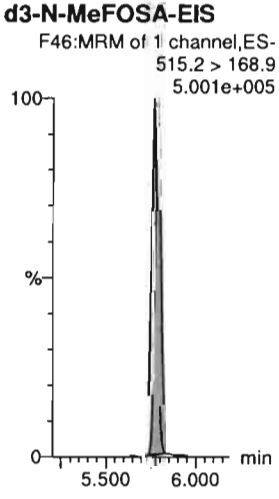
13C2-10:2 FTS-EIS



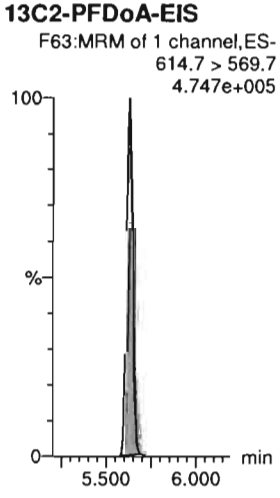
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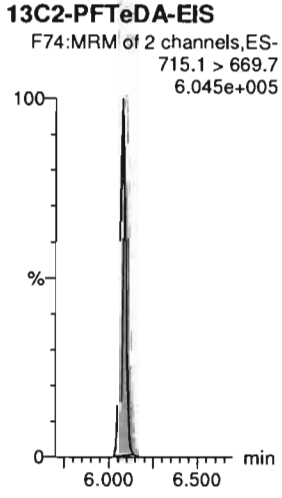
d3-N-MeFOSA-EIS



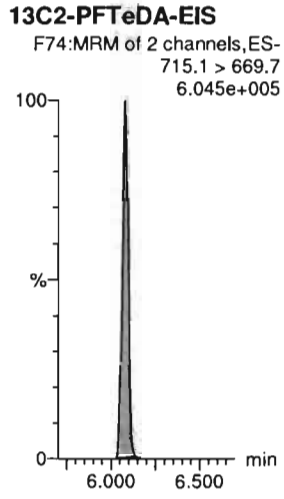
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

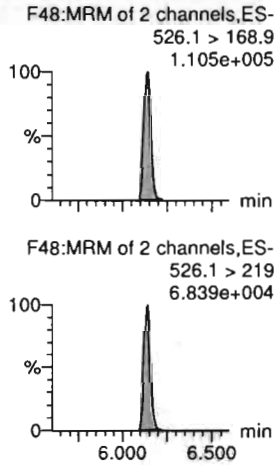


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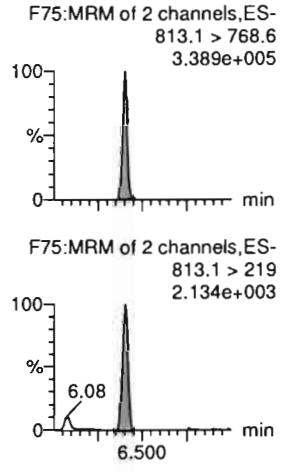
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Name: 200225P1-7, Date: 25-Feb-2020, Time: 19:01:42, ID: ST200225P1-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

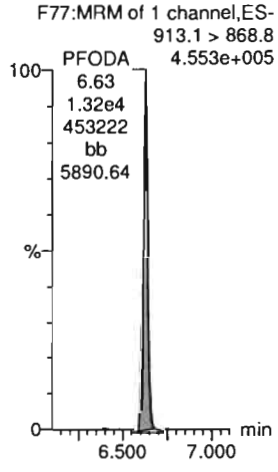
N-EtFOSA



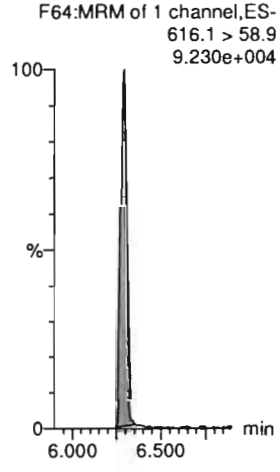
PFHxDA



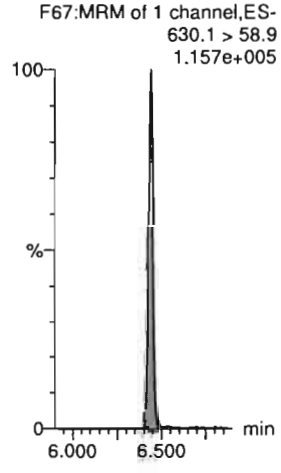
PFODA



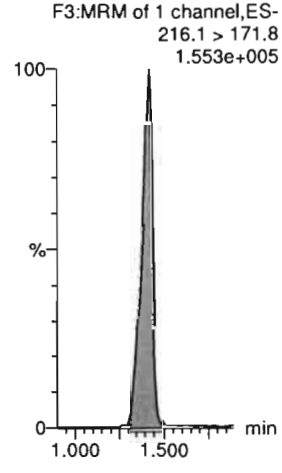
N-MeFOSE



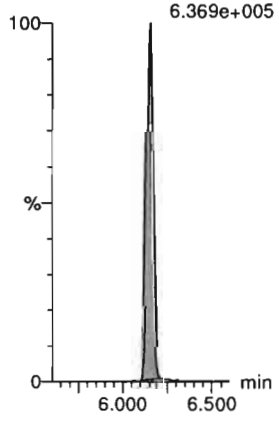
N-EtFOSE



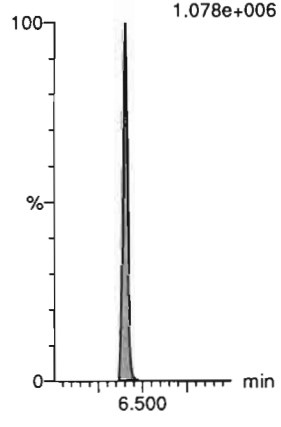
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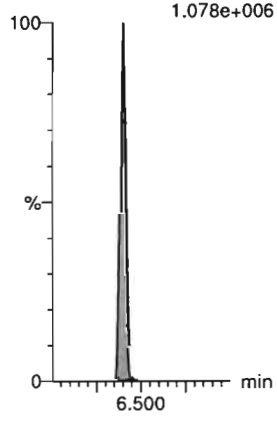
d5-N-ETFOSA-EIS



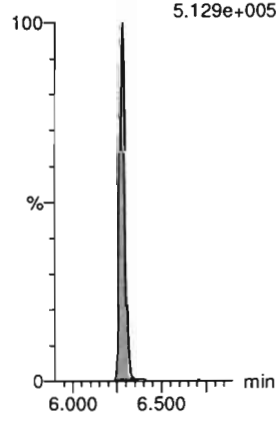
13C2-PFHxDA-EIS



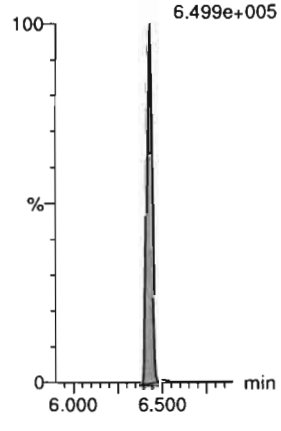
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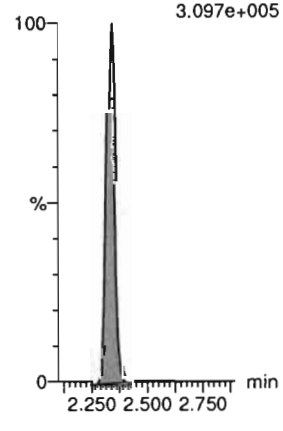
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

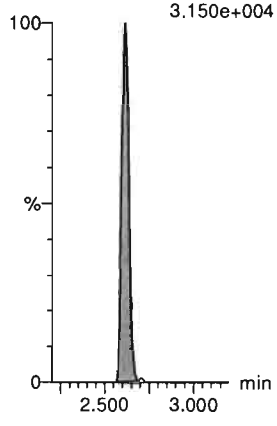


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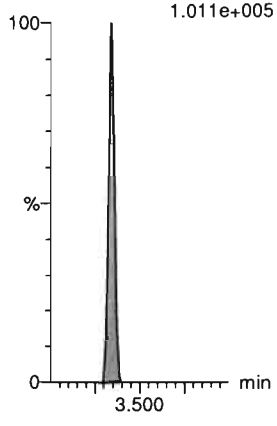
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Name: 200225P1-7, Date: 25-Feb-2020, Time: 19:01:42, ID: ST200225P1-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

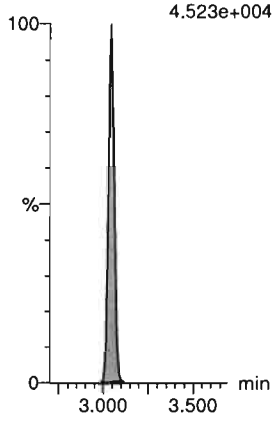
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.150e+004



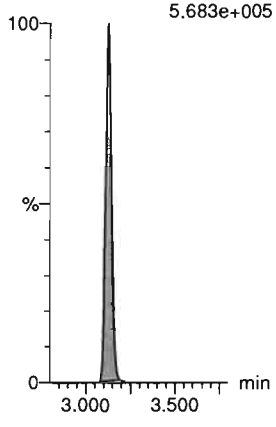
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.011e+005



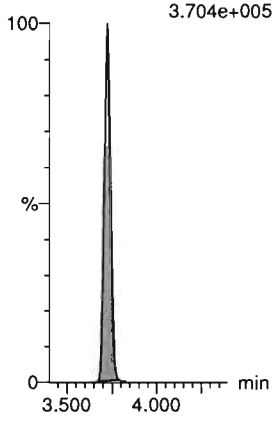
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.523e+004



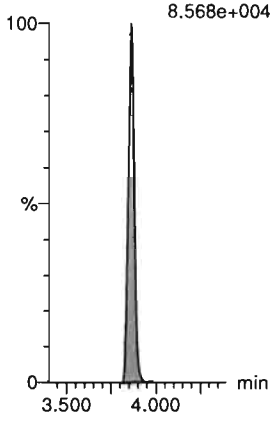
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.683e+005



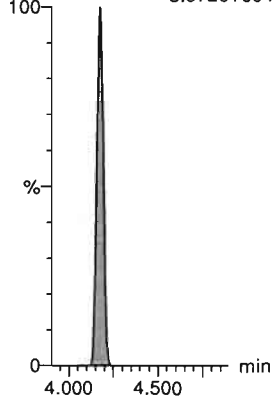
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.704e+005



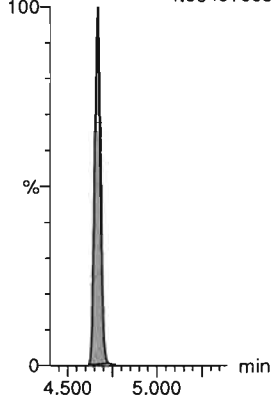
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.568e+004



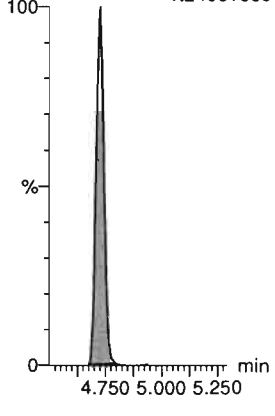
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.672e+004



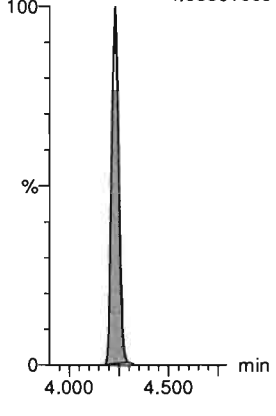
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.984e+005



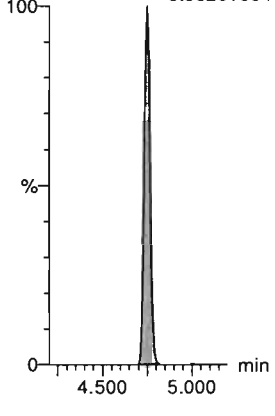
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.240e+005



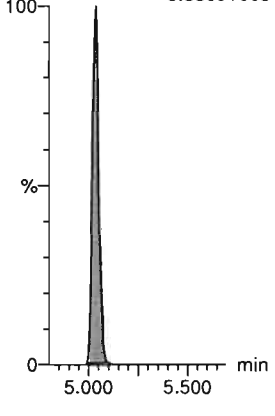
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.933e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.952e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.330e+005

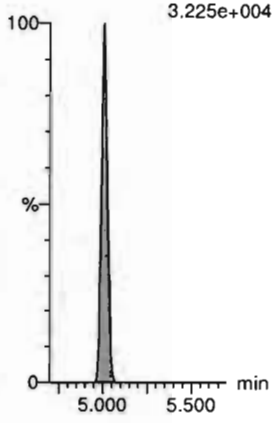


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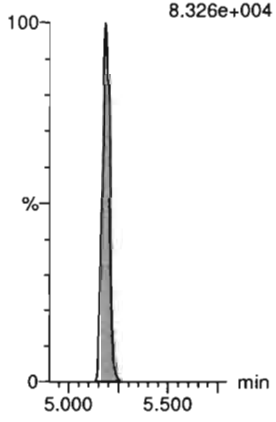
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Name: 200225P1-7, Date: 25-Feb-2020, Time: 19:01:42, ID: ST200225P1-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

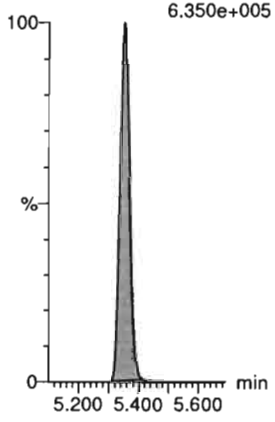
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.225e+004



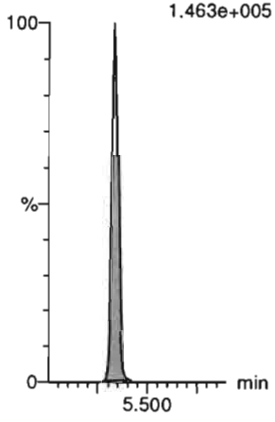
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F58:MRM of 1 channel,ES-
573.3 > 419
8.326e+004



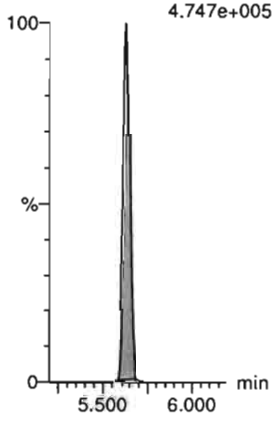
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F55:MRM of 1 channel,ES-
565 > 519.8
6.350e+005



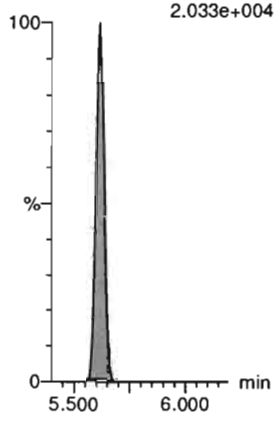
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.463e+005



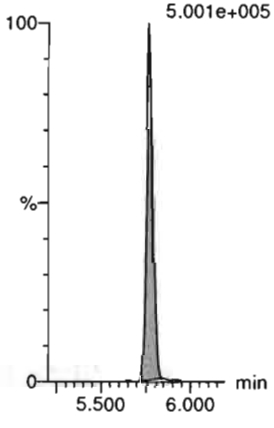
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.747e+005



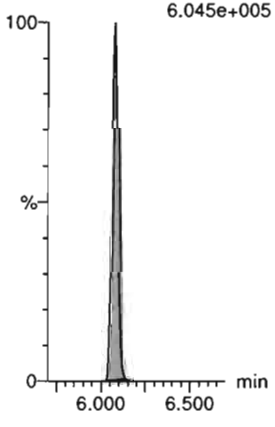
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.033e+004



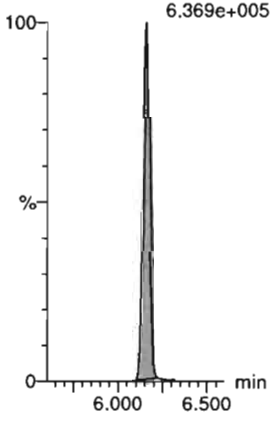
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.001e+005



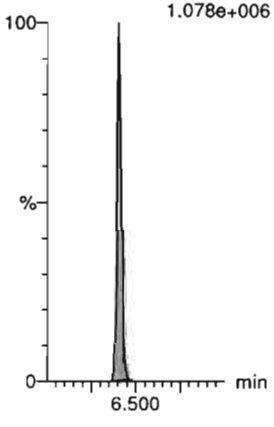
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F74:MRM of 2 channels,ES-
715.1 > 669.7
6.045e+005



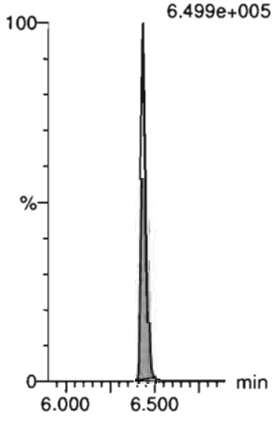
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.369e+005



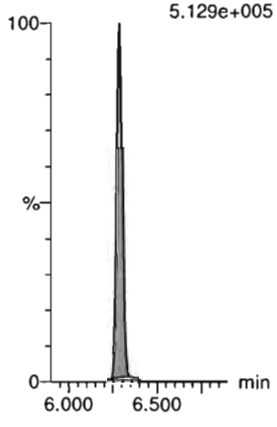
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.078e+006



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.499e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.129e+005

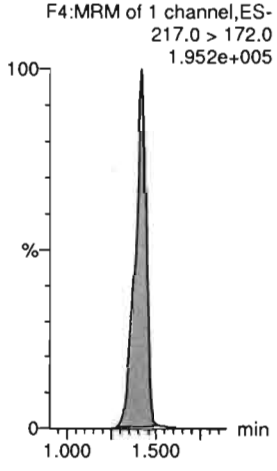


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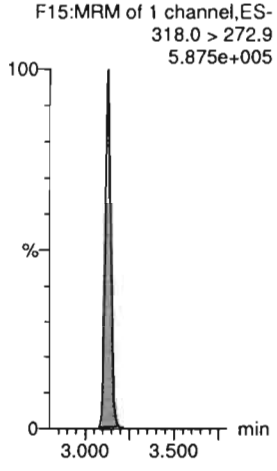
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Printed: Wednesday, February 26, 2020 10:18:42 Pacific Standard Time

Name: 200225P1-7, Date: 25-Feb-2020, Time: 19:01:42, ID: ST200225P1-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

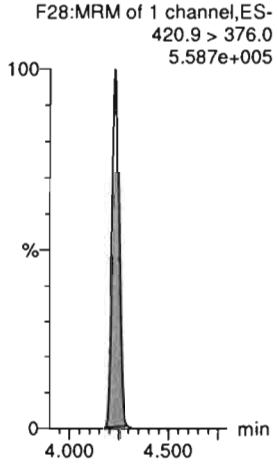
13C4-PFBA



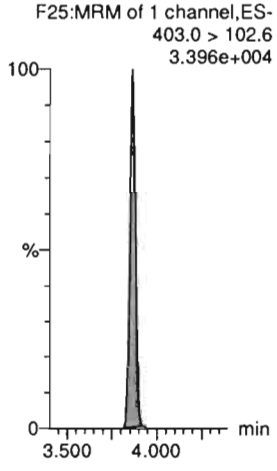
13C5-PFHxA



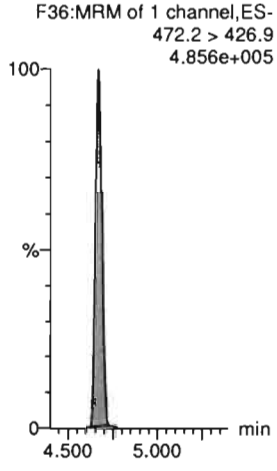
13C8-PFOA



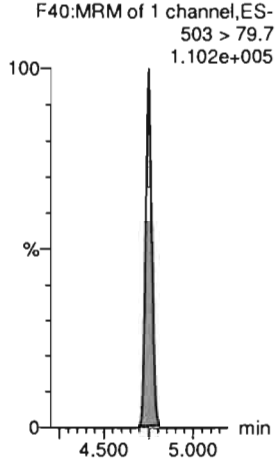
18O2-PFHxS



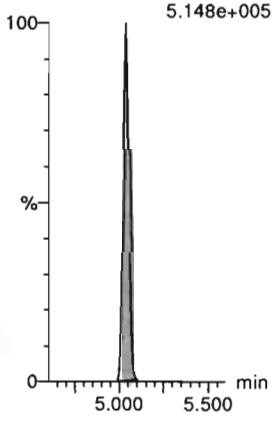
13C9-PFNA



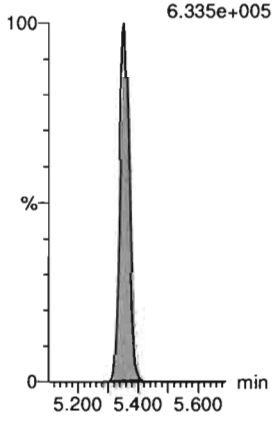
13C4-PFOS



13C6-PFDA



13C7-PFUdA

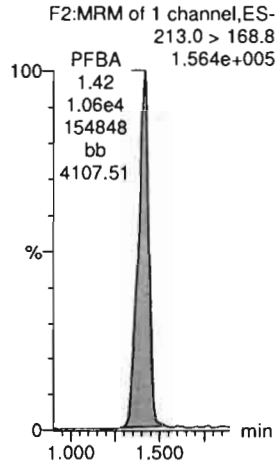


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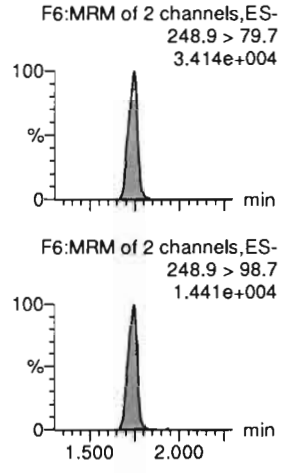
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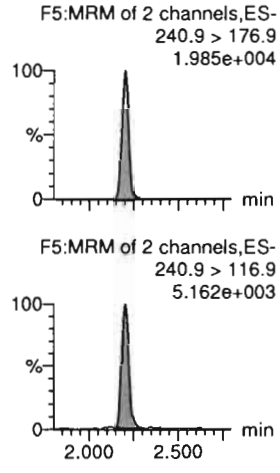
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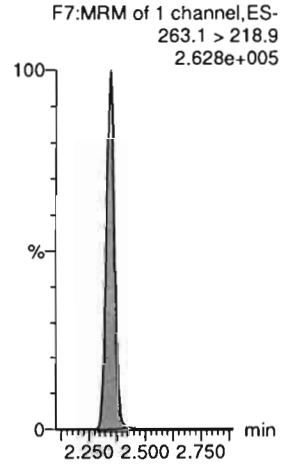
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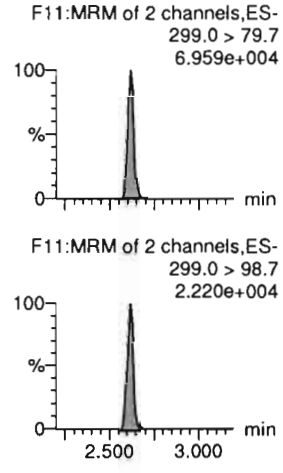
3:3 FTCA



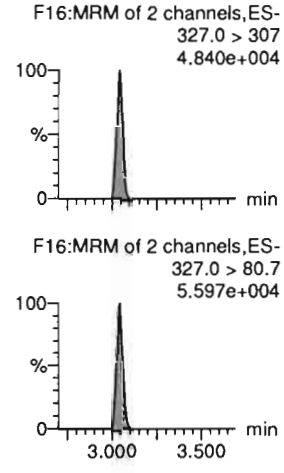
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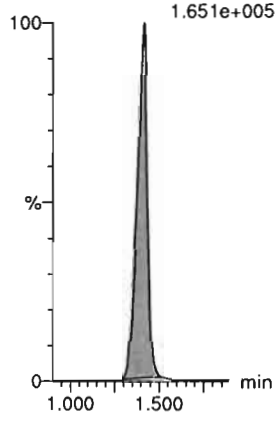
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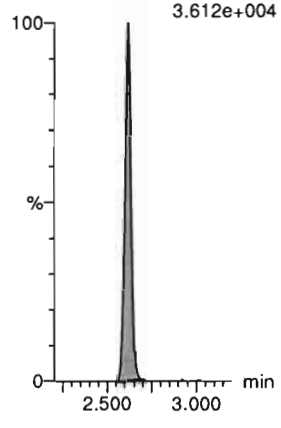
4:2 FTS



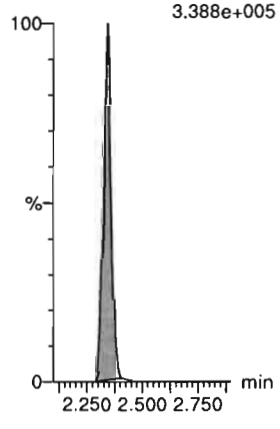
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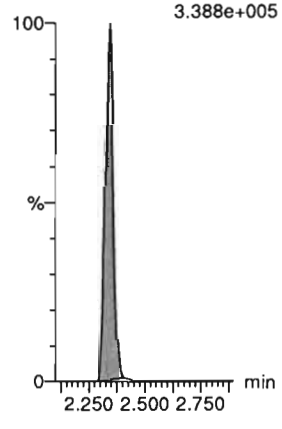
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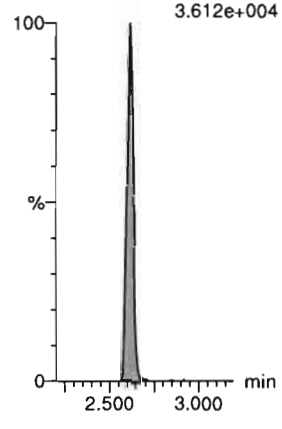
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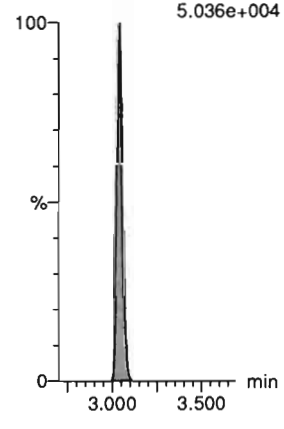
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

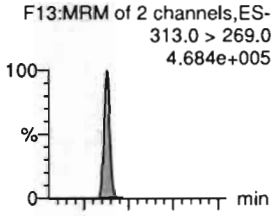


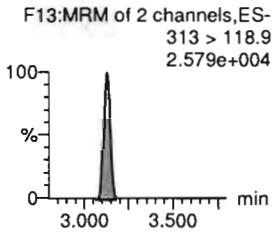
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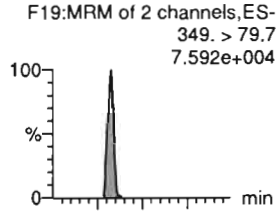
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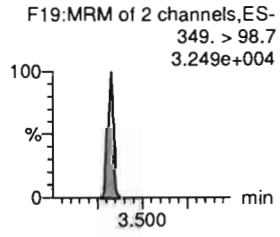
PFHxA



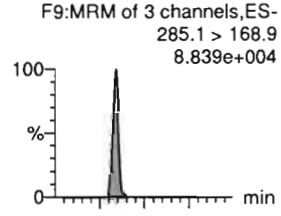


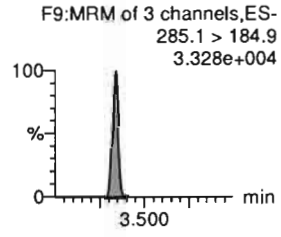
PFPeS



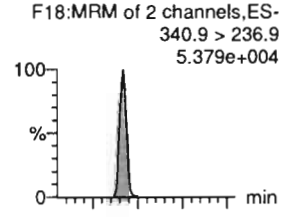


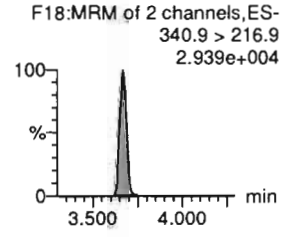
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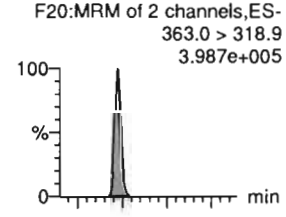


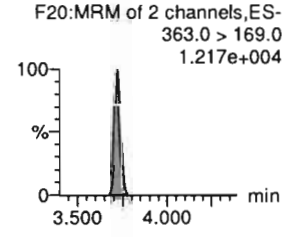
5:3 FTCA



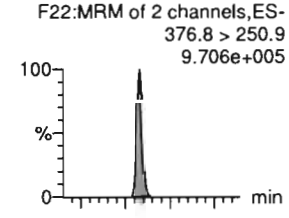


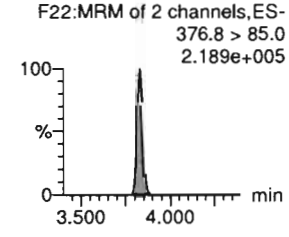
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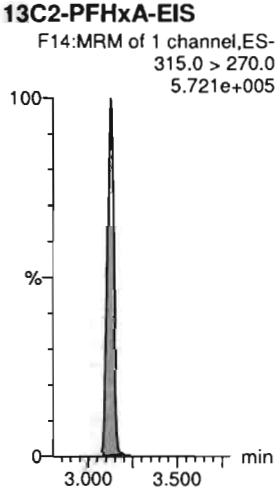


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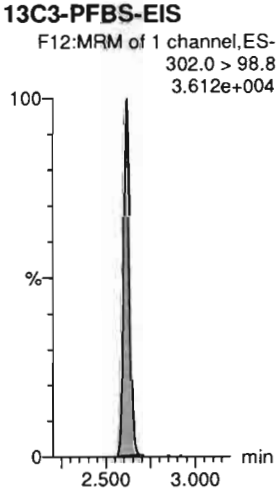




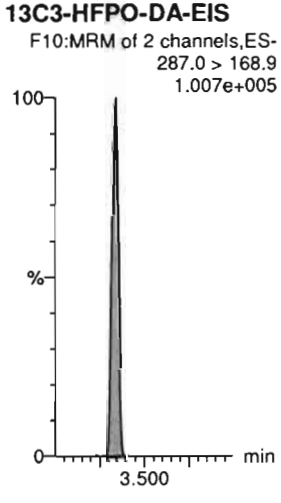
13C2-PFHxA-EIS



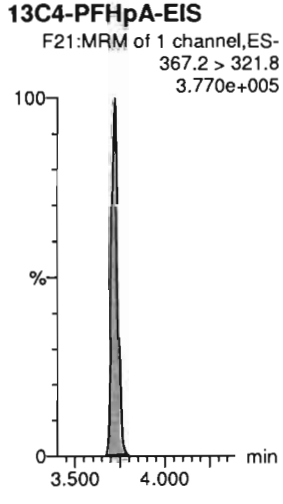
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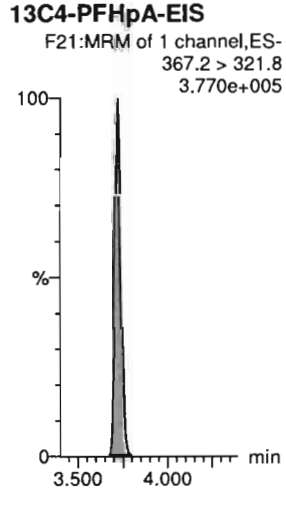
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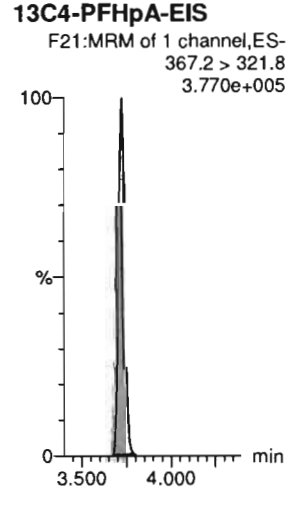
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

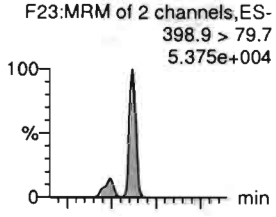


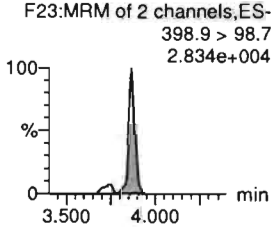
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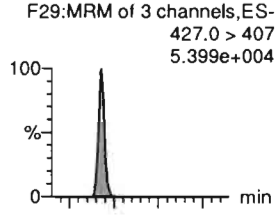
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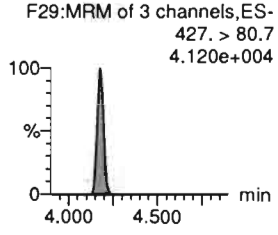
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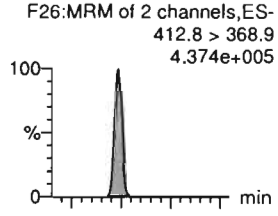


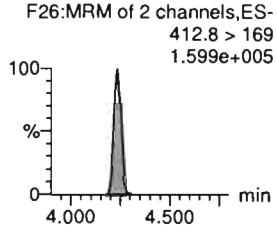
6:2 FTS



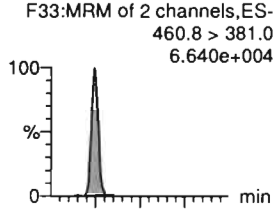


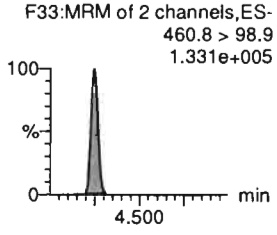
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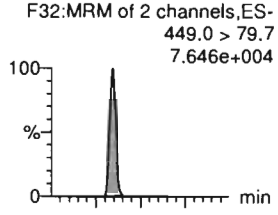


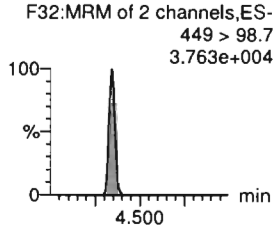
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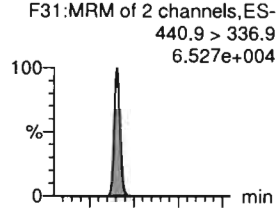


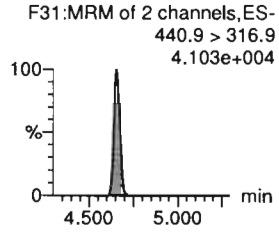
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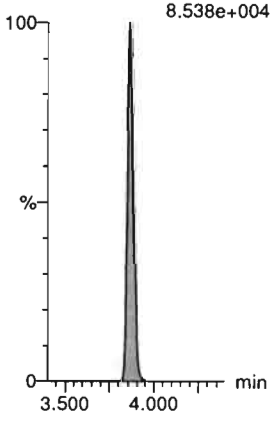


7:3 FTCA

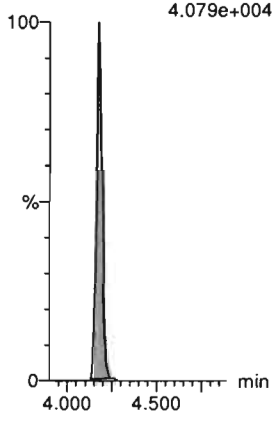




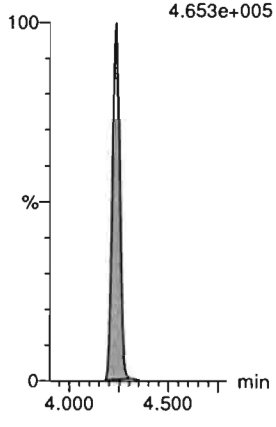
13C3-PFHxS-EIS



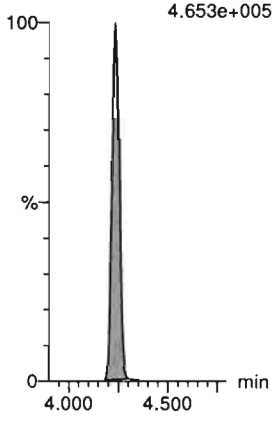
13C2-6:2 FTS-EIS



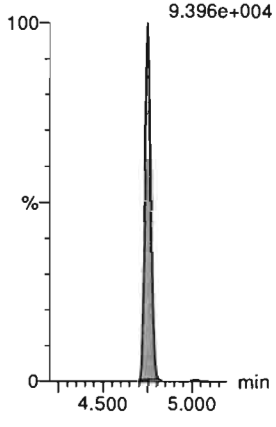
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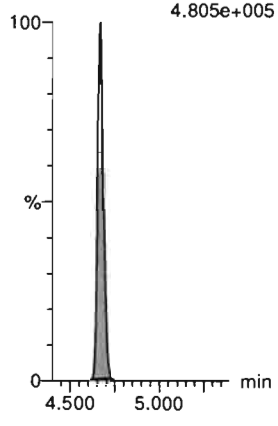
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

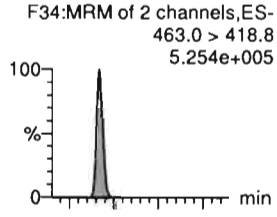


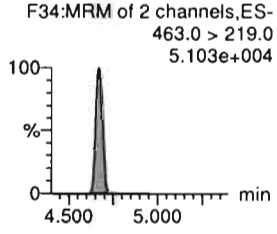
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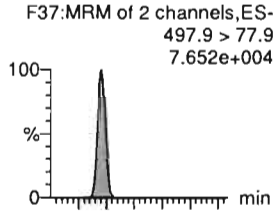
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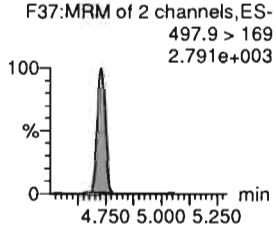
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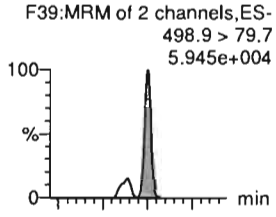


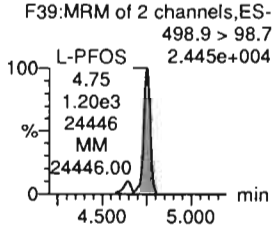
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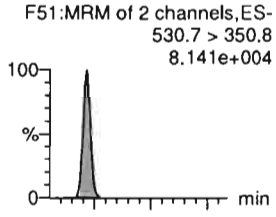


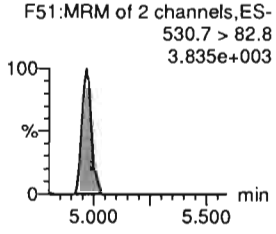
L-PFOS



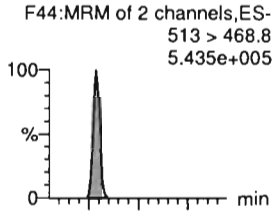


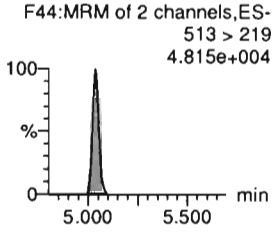
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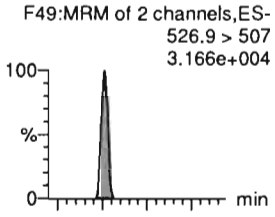


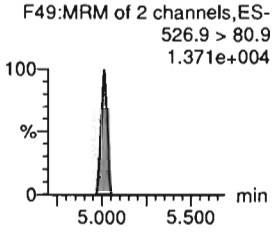
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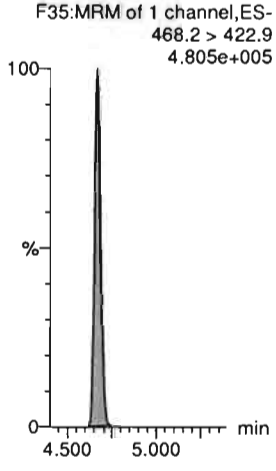


8:2 FTS

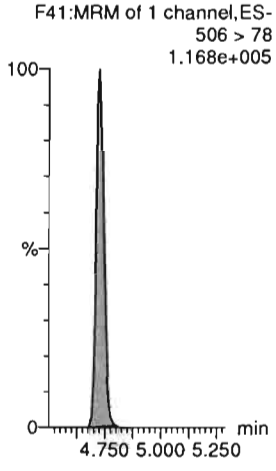




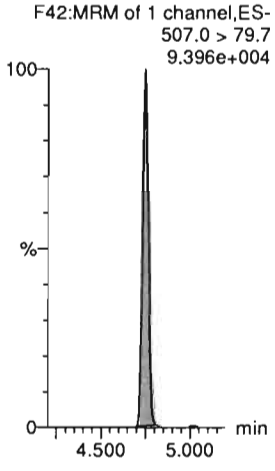
13C5-PFNA-EIS



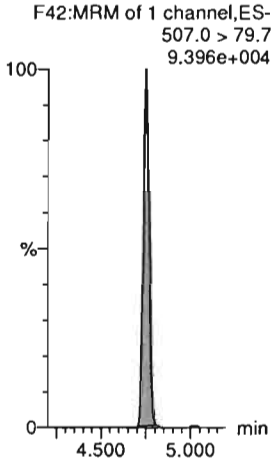
13C8-PFOSA-EIS



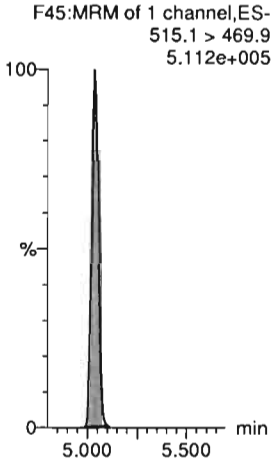
13C8-PFOS-EIS



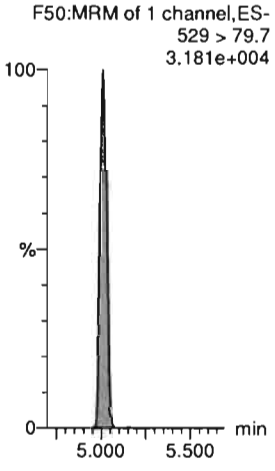
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

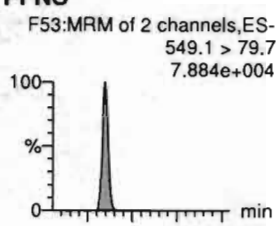


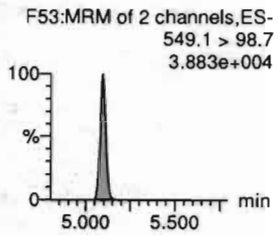
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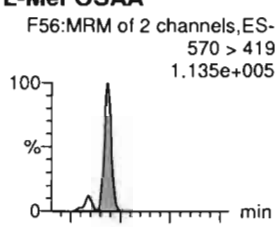
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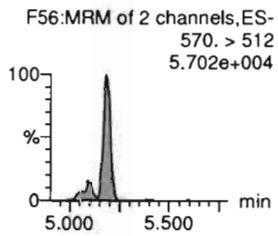
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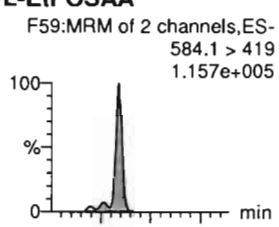


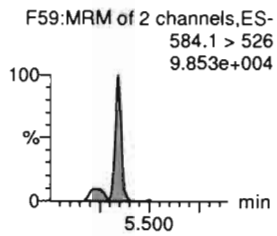
L-MeFOSAA



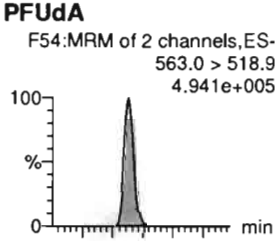


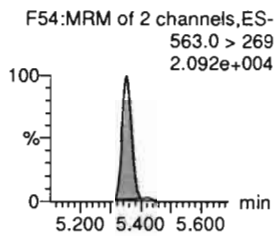
L-EtFOSAA



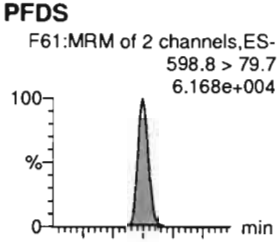


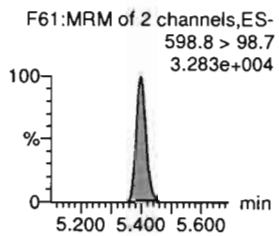
PFUdA



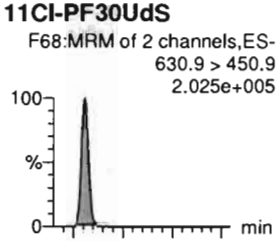


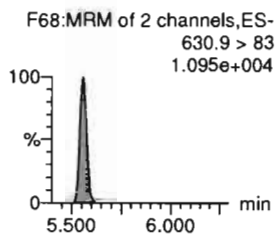
PFDS



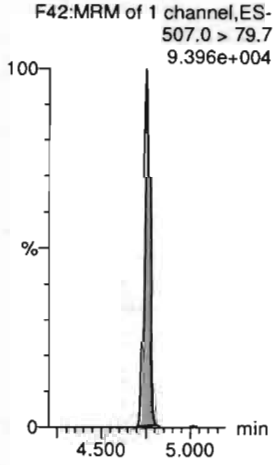


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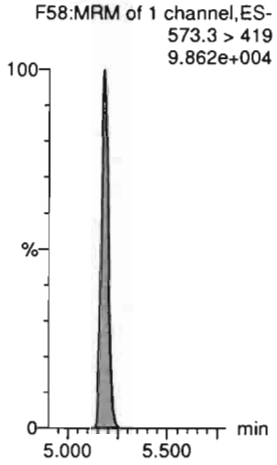




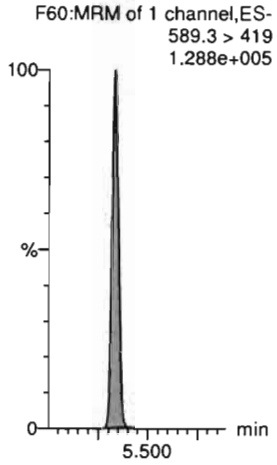
13C8-PFOS-EIS



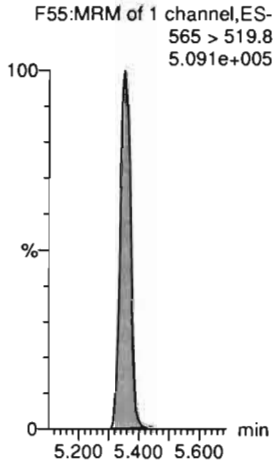
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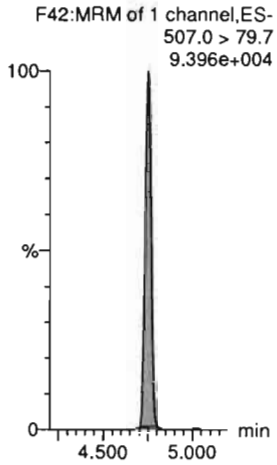
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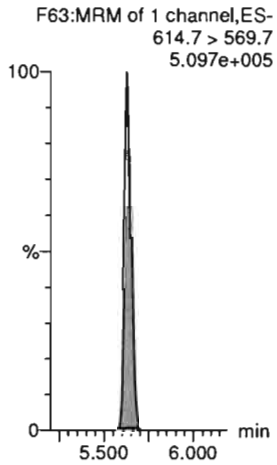
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13C8-PFOS-EIS



13C2-PFDoA-EIS

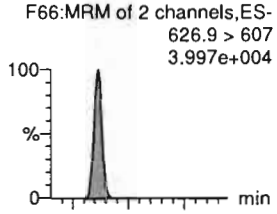


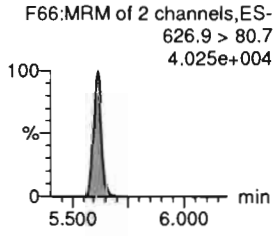
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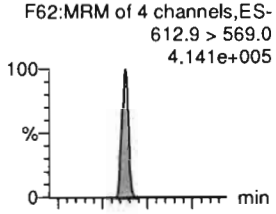
Name: 200225P1-8, Date: 25-Feb-2020, Time: 19:12:14, ID: ST200225P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

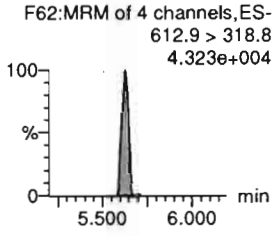
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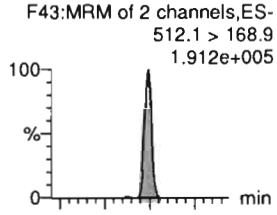


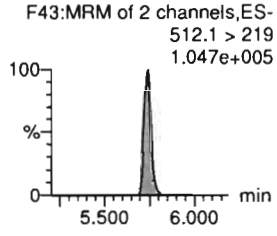
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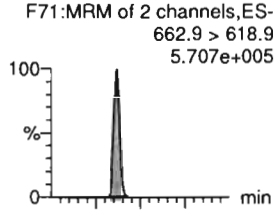


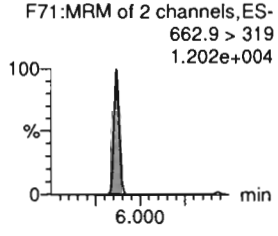
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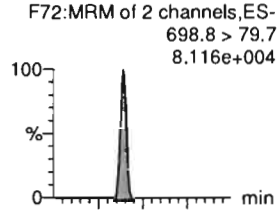


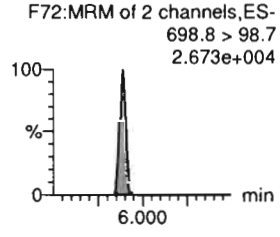
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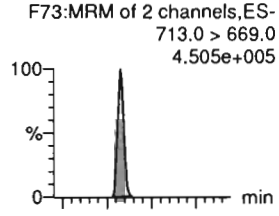


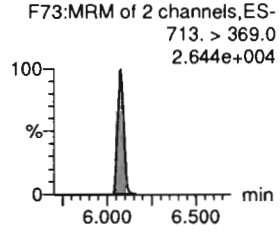
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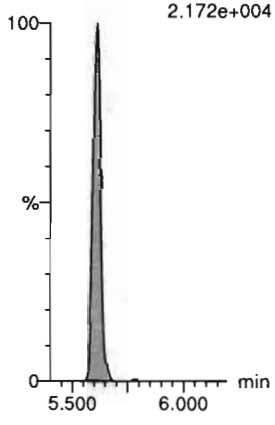


PFTeDA

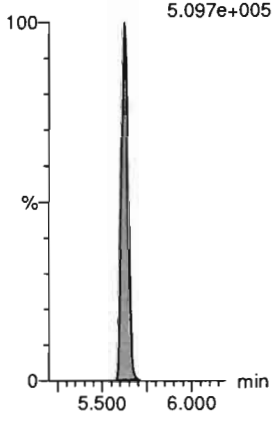




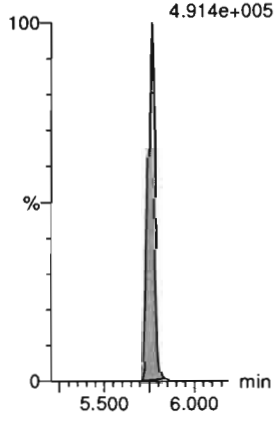
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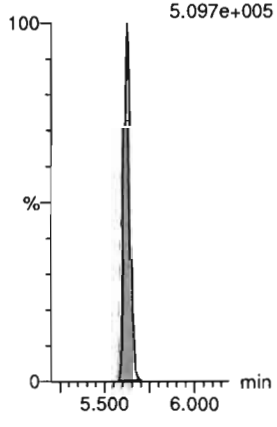
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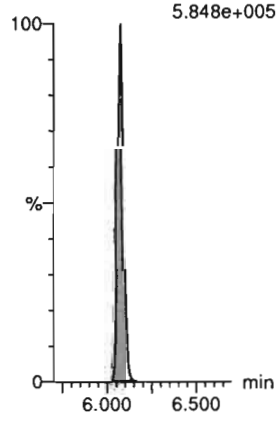
d3-N-MeFOSA-EIS



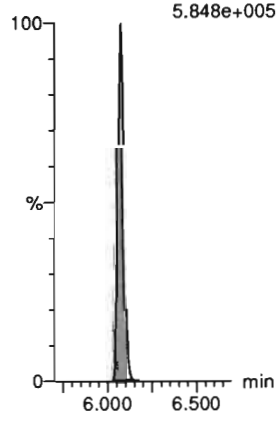
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

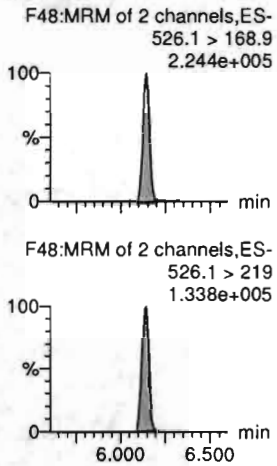


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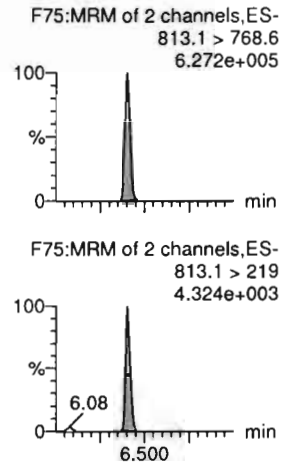
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Name: 200225P1-8, Date: 25-Feb-2020, Time: 19:12:14, ID: ST200225P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

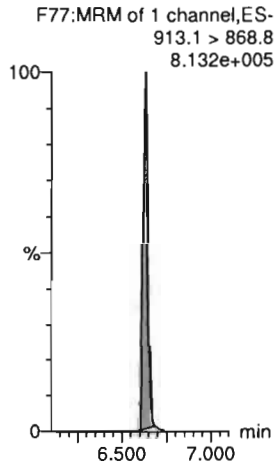
N-EtFOSA



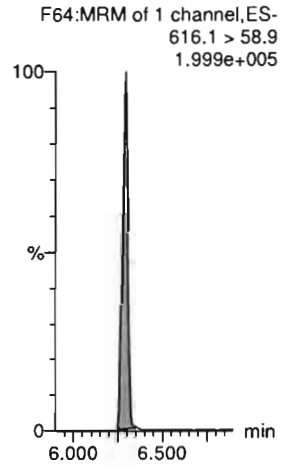
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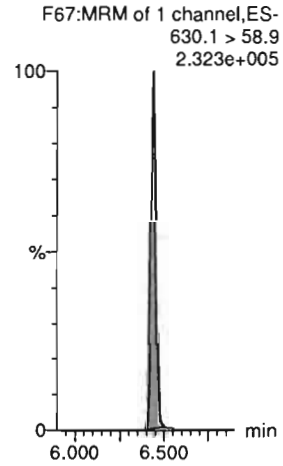
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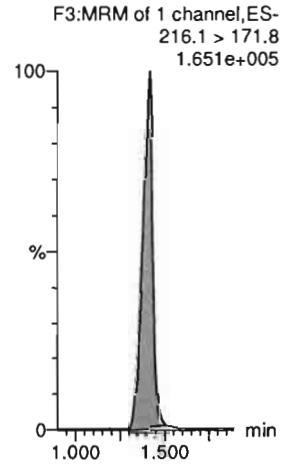
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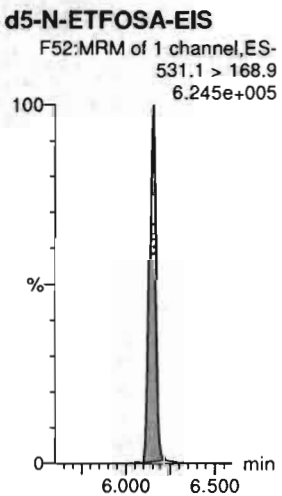
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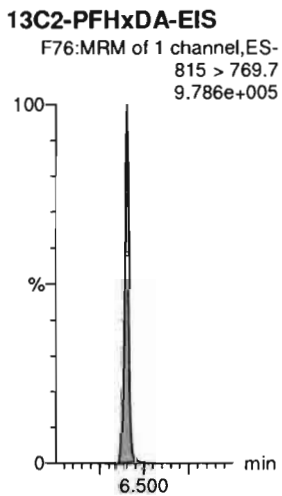
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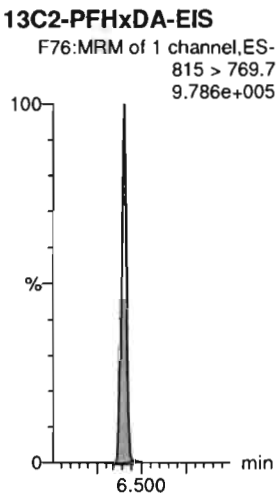
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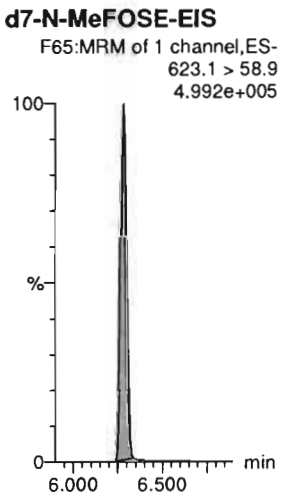
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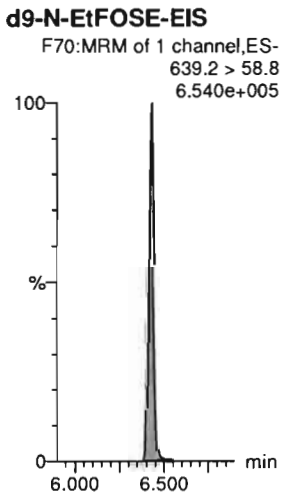
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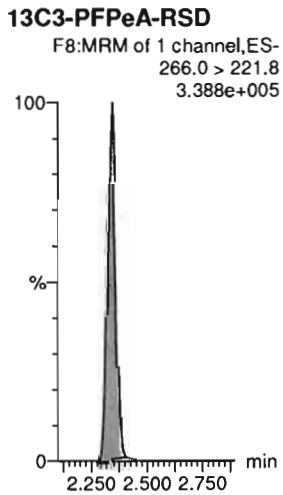
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d9-N-EtFOSE-EIS



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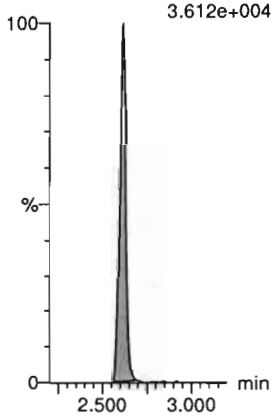


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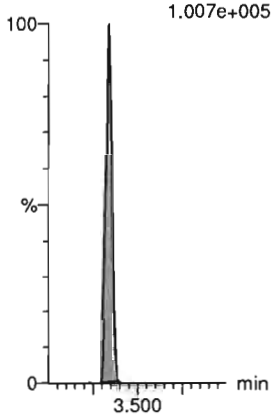
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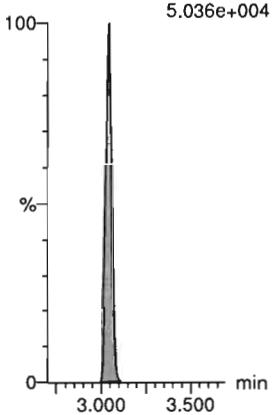
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.612e+004



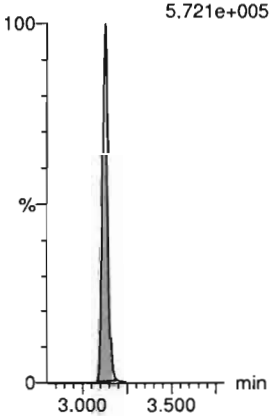
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.007e+005



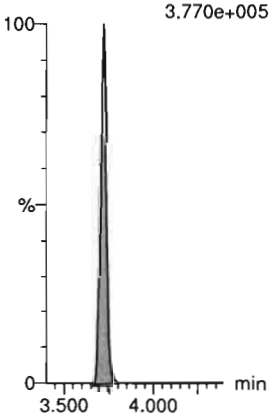
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F17:MRM of 2 channels,ES-
329.0 > 79.7
5.036e+004



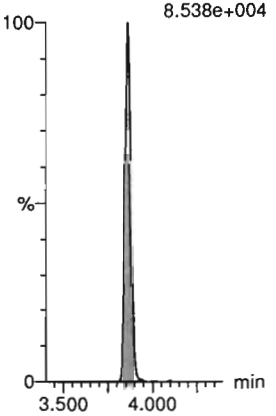
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.721e+005



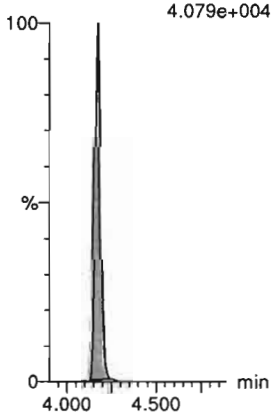
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.770e+005



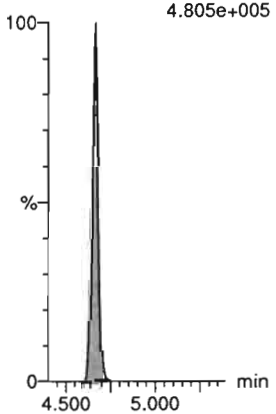
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F24:MRM of 1 channel,ES-
401.8 > 79.7
8.538e+004



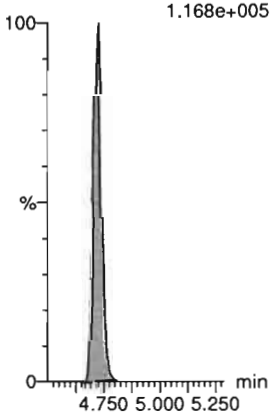
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F30:MRM of 1 channel,ES-
429.0 > 79.7
4.079e+004



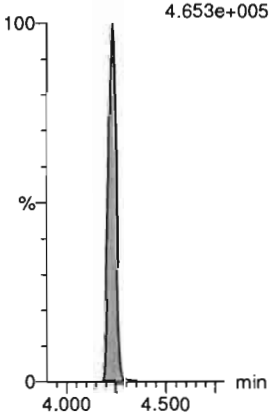
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F35:MRM of 1 channel,ES-
468.2 > 422.9
4.805e+005



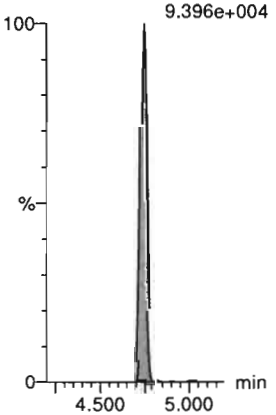
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.168e+005



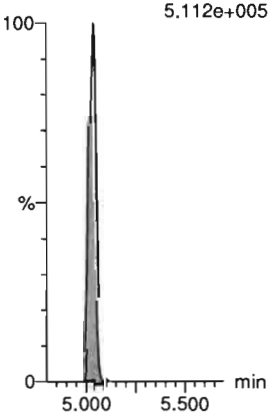
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.653e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.396e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.112e+005

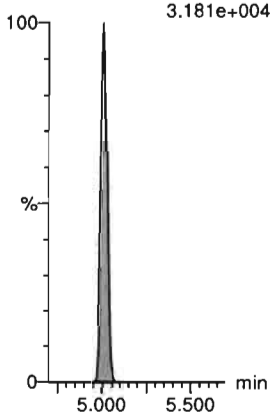


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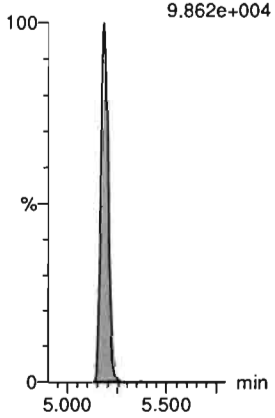
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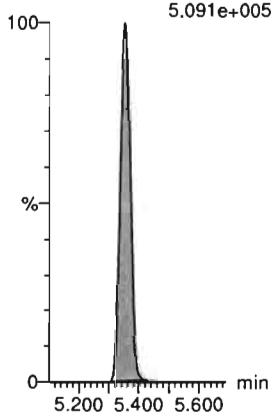
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.181e+004



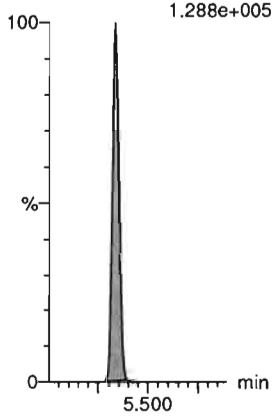
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
9.862e+004



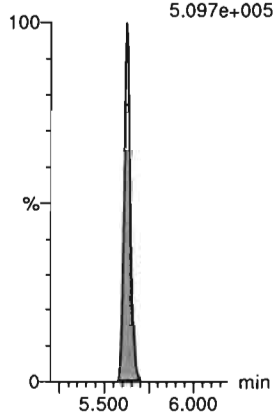
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.091e+005



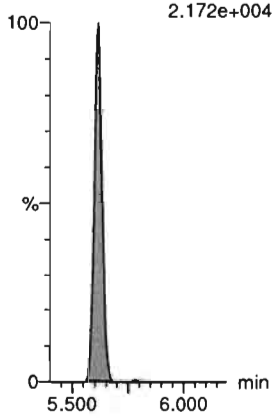
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F60:MRM of 1 channel,ES-
589.3 > 419
1.288e+005



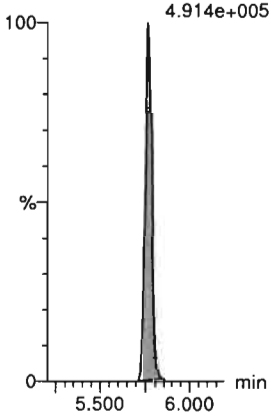
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.097e+005



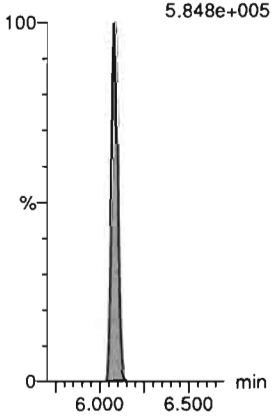
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.172e+004



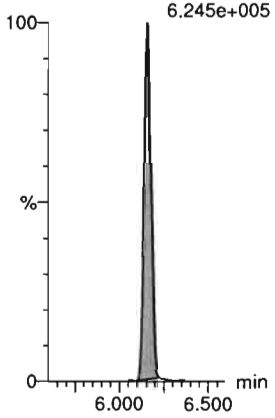
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.914e+005



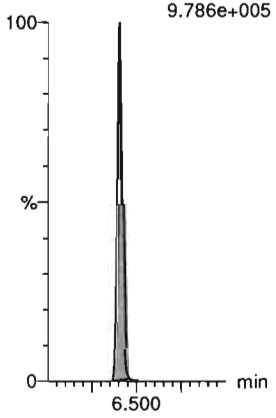
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.848e+005



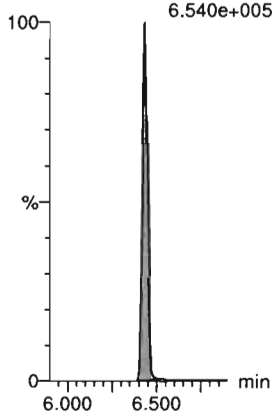
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.245e+005



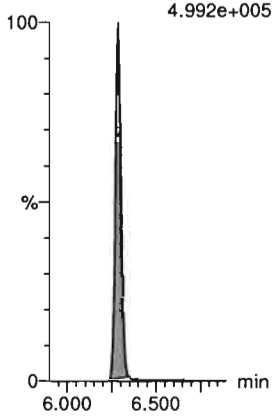
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.786e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.540e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
4.992e+005

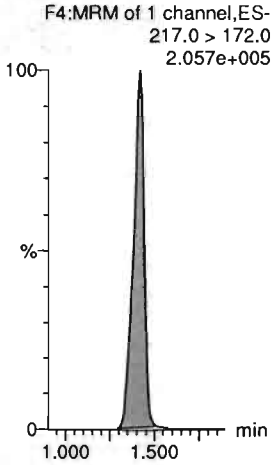


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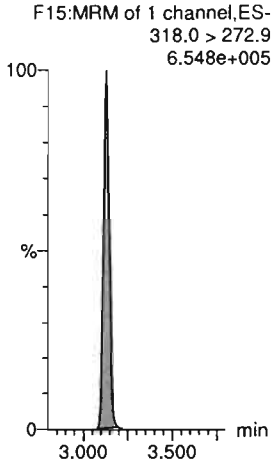
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Name: 200225P1-8, Date: 25-Feb-2020, Time: 19:12:14, ID: ST200225P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

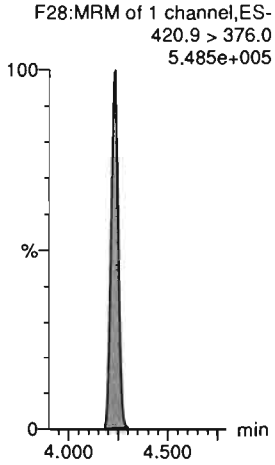
13C4-PFBA



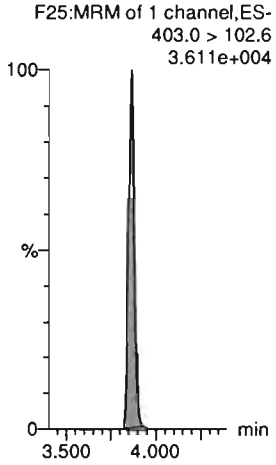
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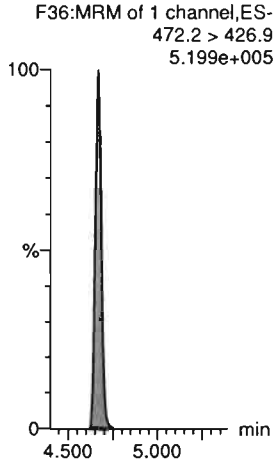
13C8-PFOA



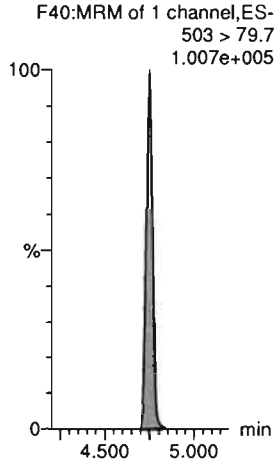
18O2-PFHxS



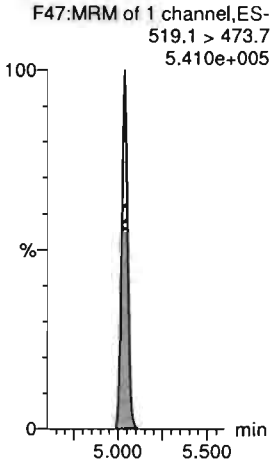
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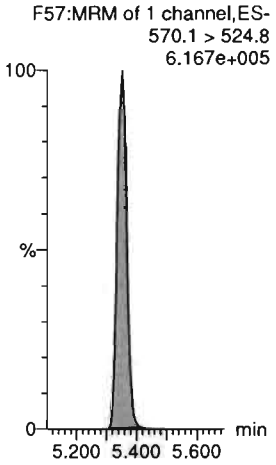
13C4-PFOS



13C6-PFDA



13C7-PFUdA

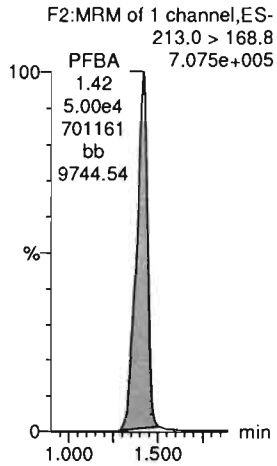


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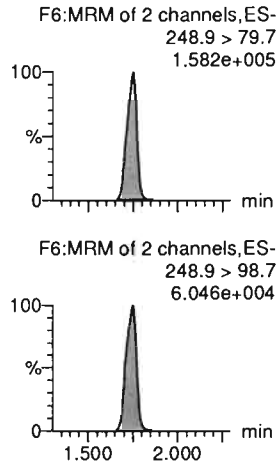
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Name: 200225P1-9, Date: 25-Feb-2020, Time: 19:22:44, ID: ST200225P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

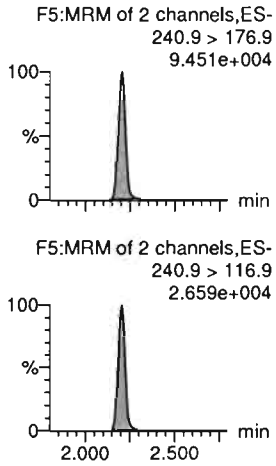
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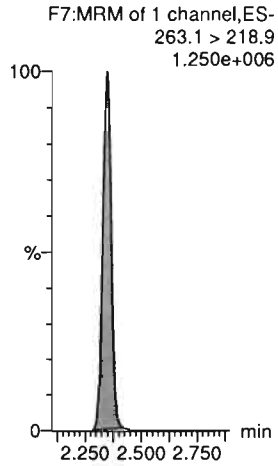
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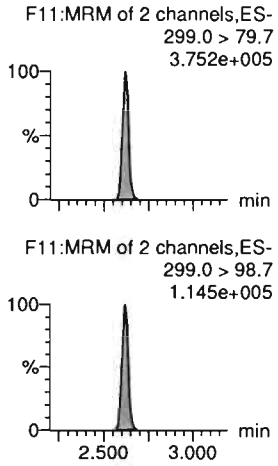
3:3 FTCA



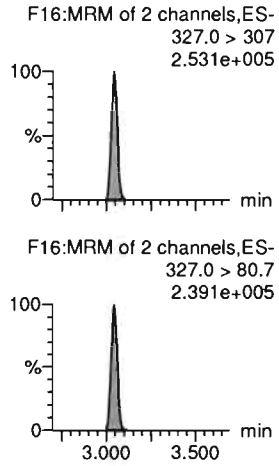
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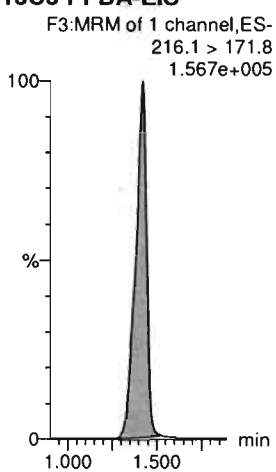
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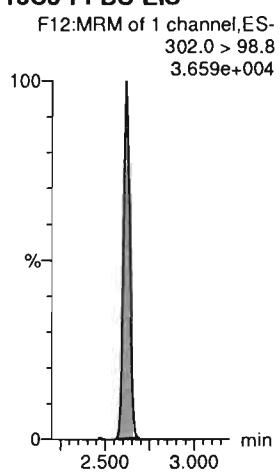
4:2 FTS



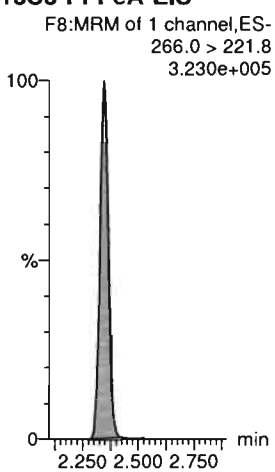
13C3-PFBA-EIS



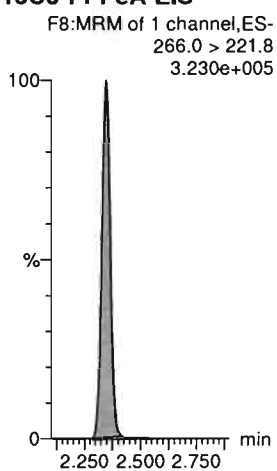
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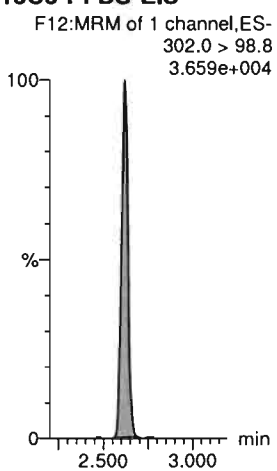
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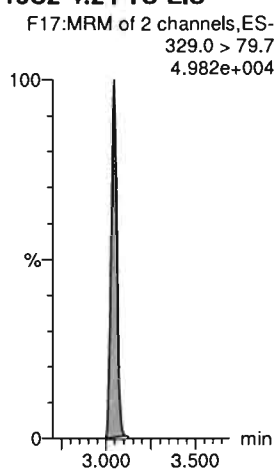
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

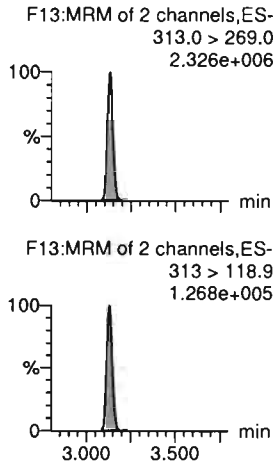


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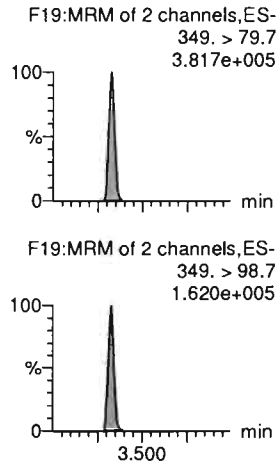
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Name: 200225P1-9, Date: 25-Feb-2020, Time: 19:22:44, ID: ST200225P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

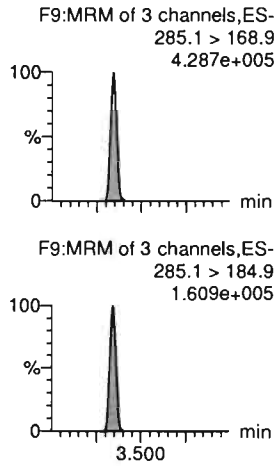
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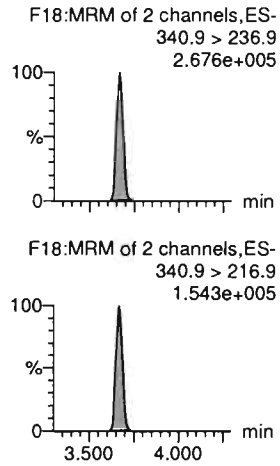
PFPeS



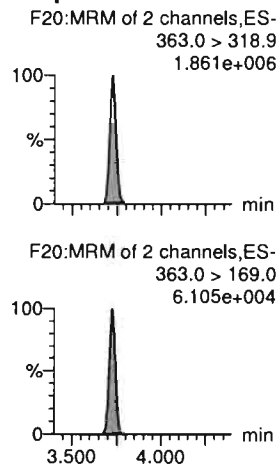
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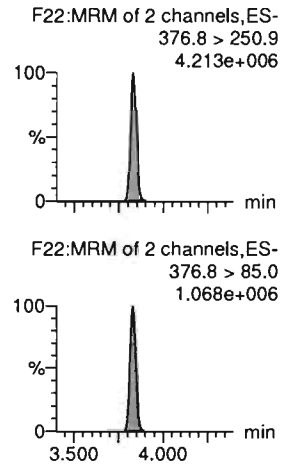
5:3 FTCA



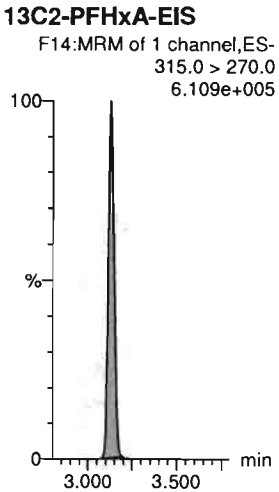
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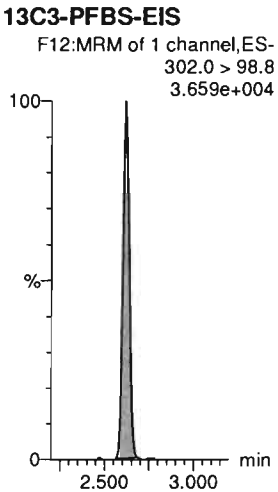
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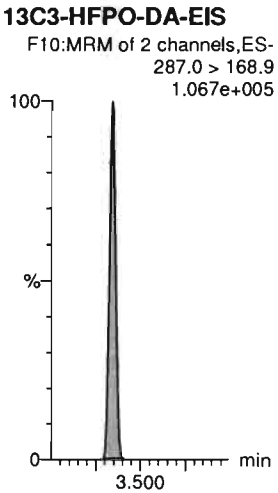
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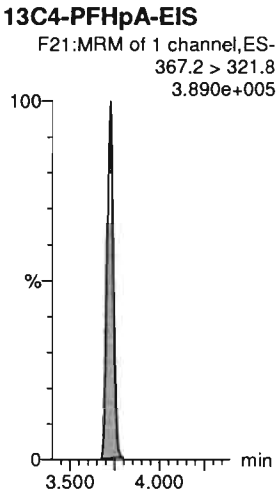
13C3-PFBS-EIS



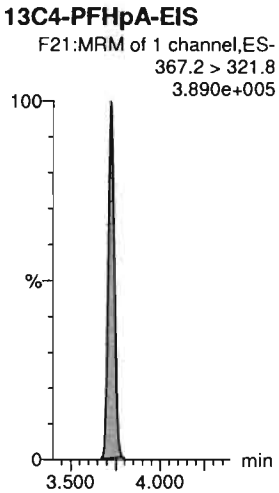
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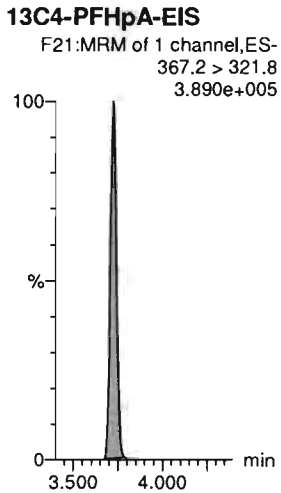
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

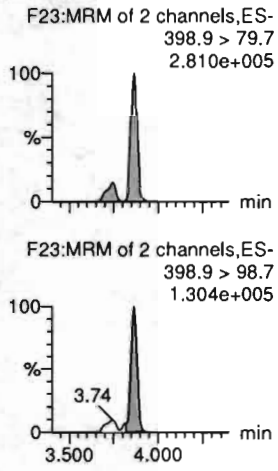


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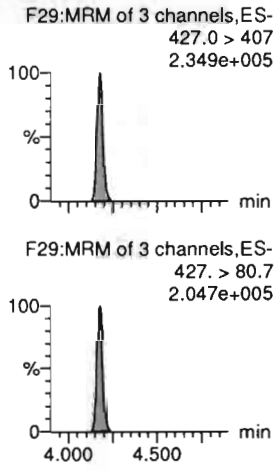
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Name: 200225P1-9, Date: 25-Feb-2020, Time: 19:22:44, ID: ST200225P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

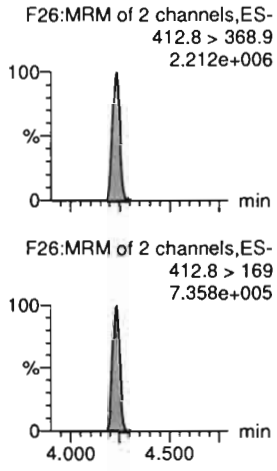
L-PFHxS



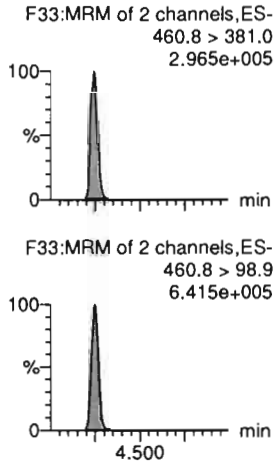
6:2 FTS



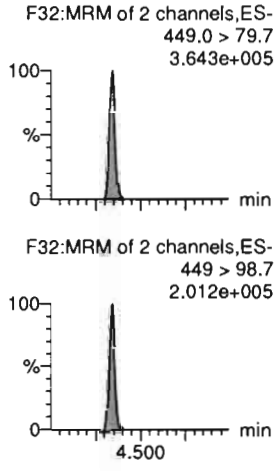
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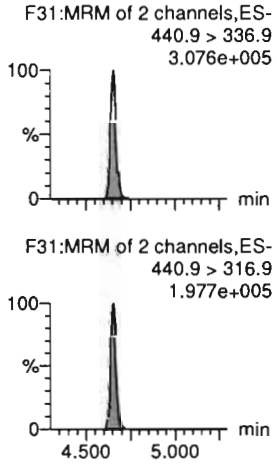
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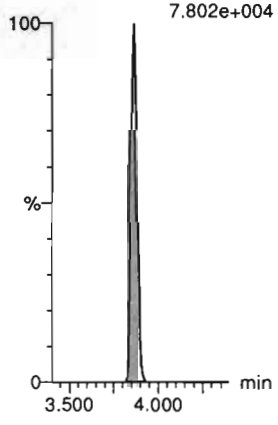
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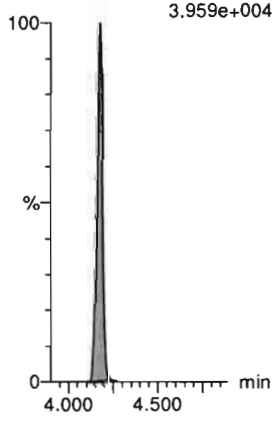
7:3 FTCA



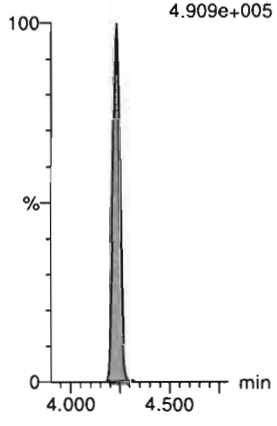
13C3-PFHxS-EIS



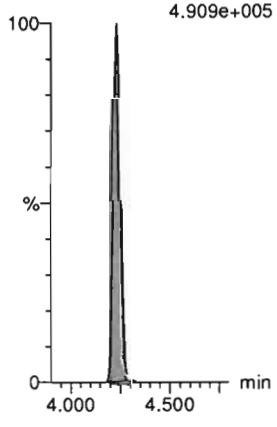
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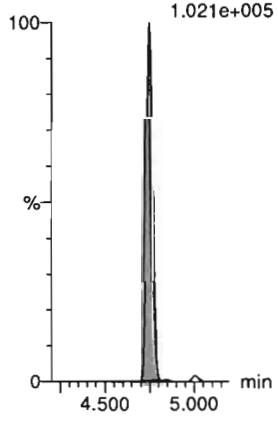
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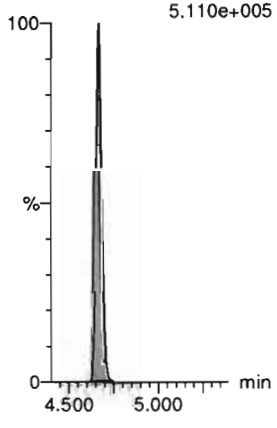
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

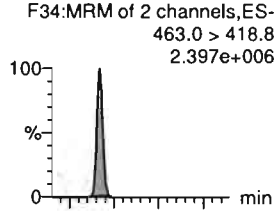


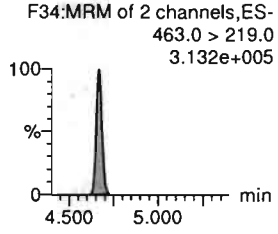
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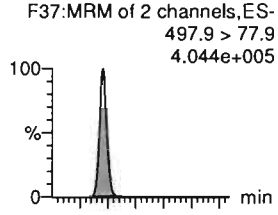
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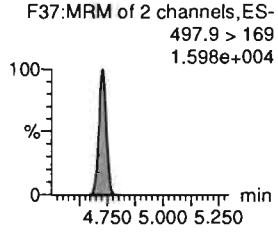
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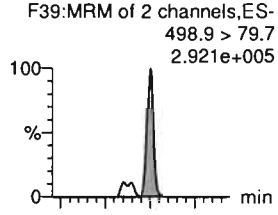


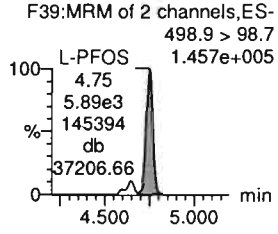
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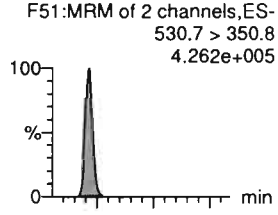


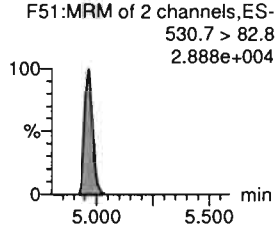
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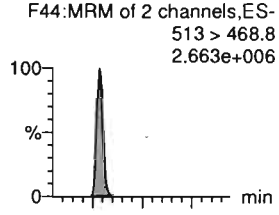


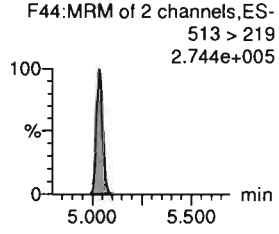
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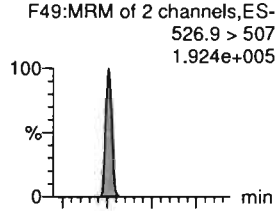


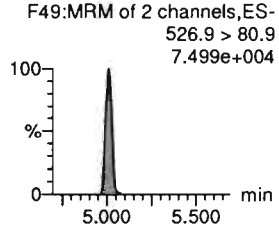
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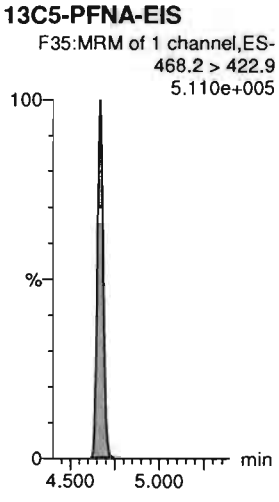


8:2 FTS

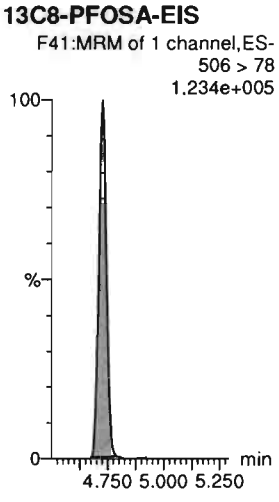




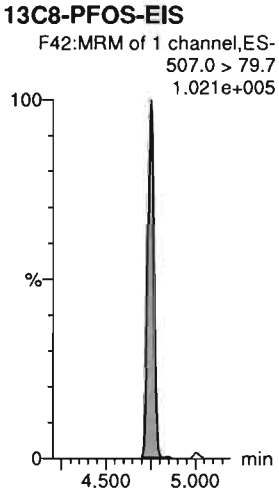
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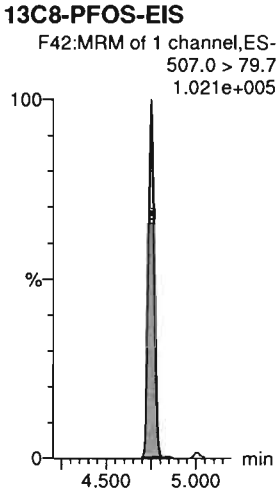
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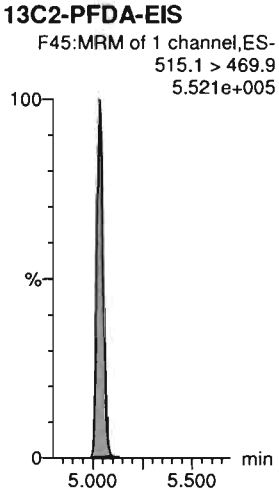
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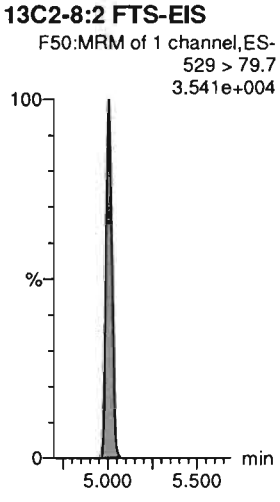
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

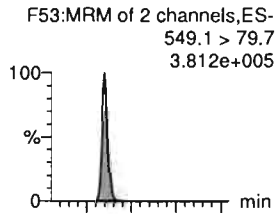


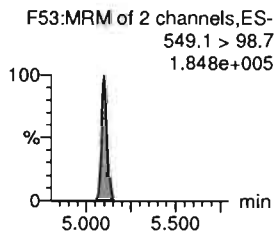
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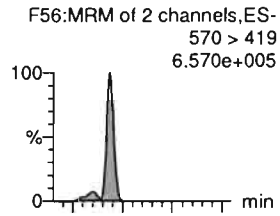
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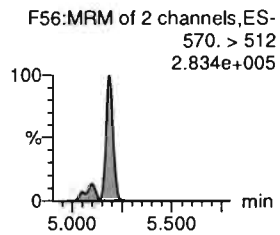
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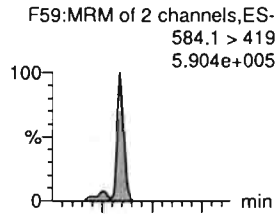


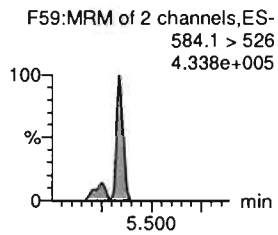
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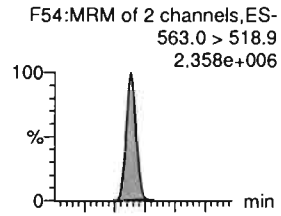


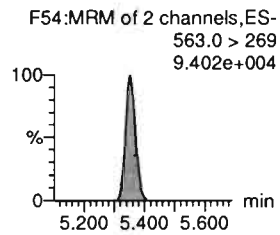
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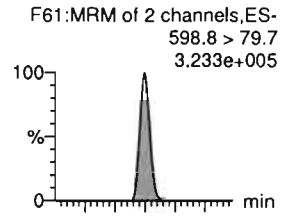


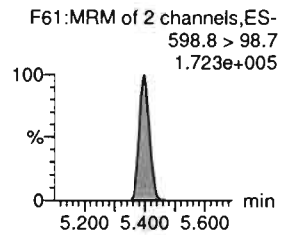
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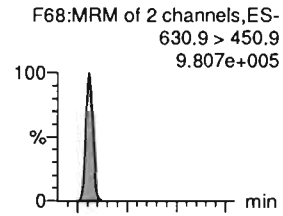


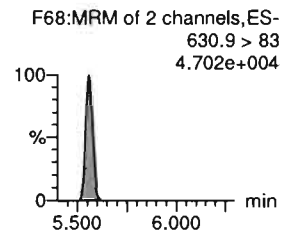
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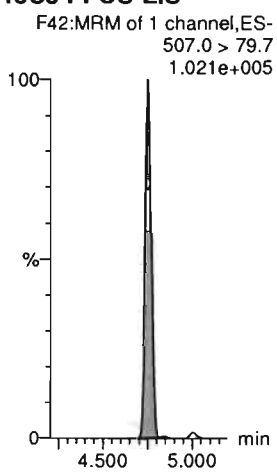


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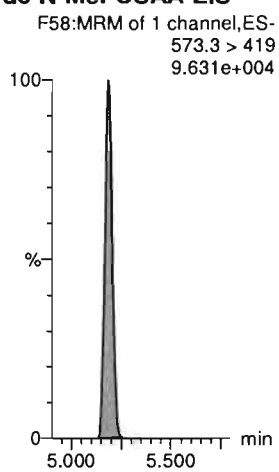




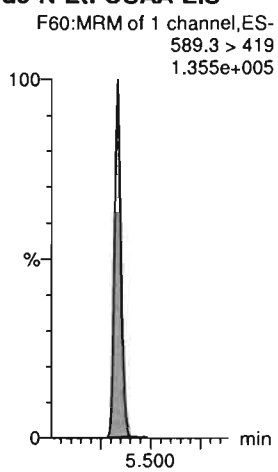
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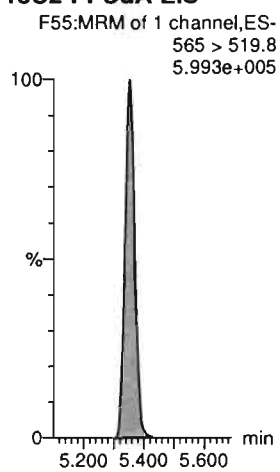
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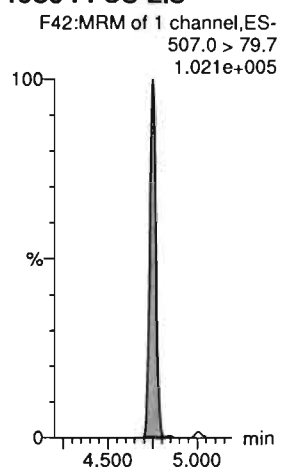
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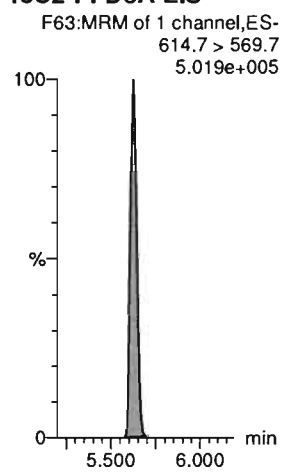
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13C8-PFOS-EIS



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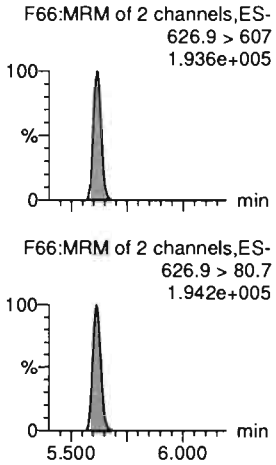


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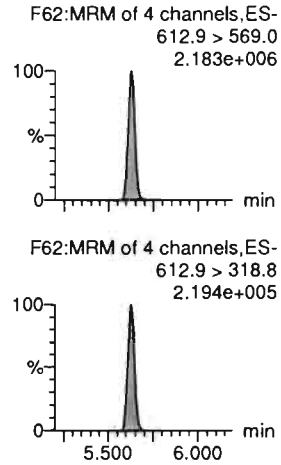
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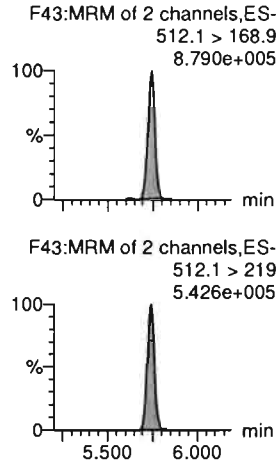
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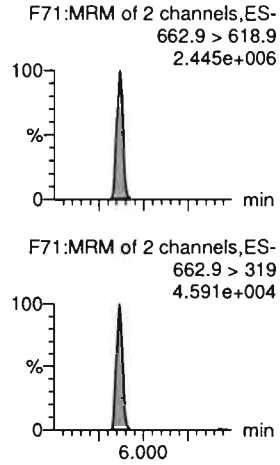
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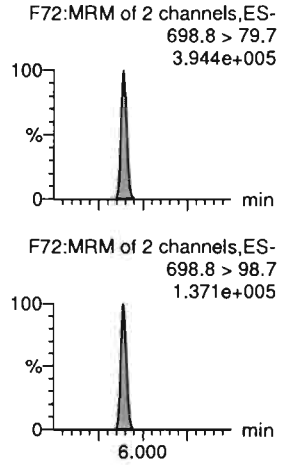
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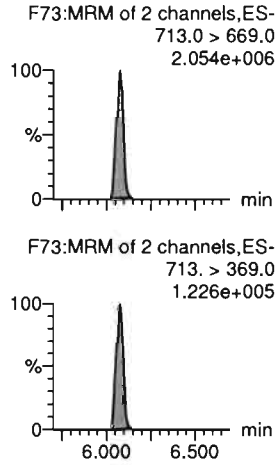
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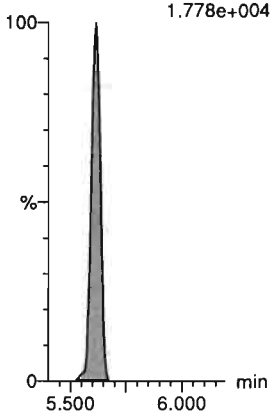
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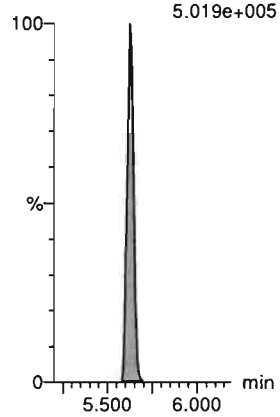
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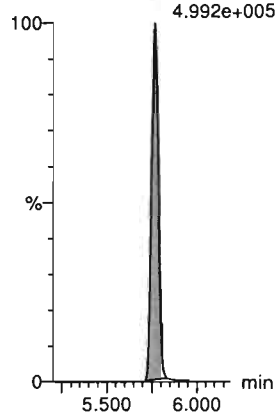
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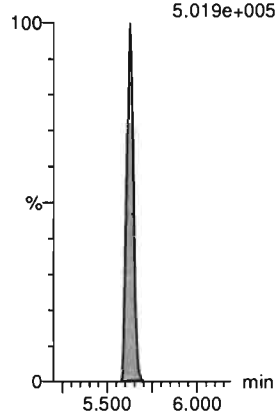
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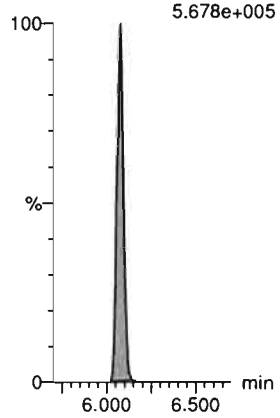
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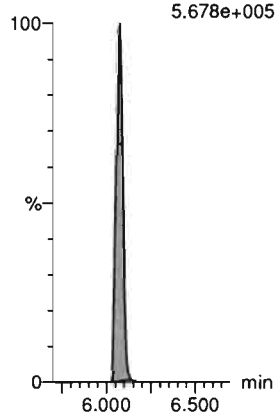
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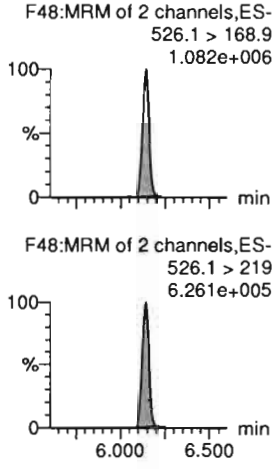


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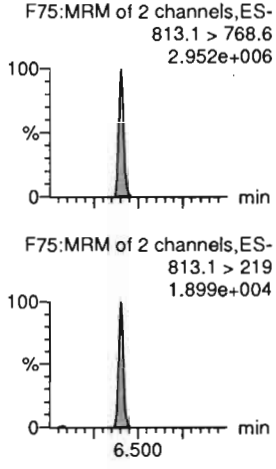
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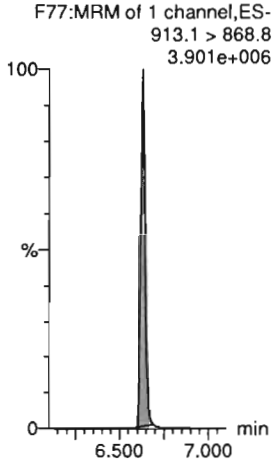
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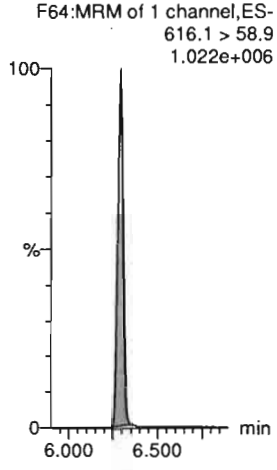
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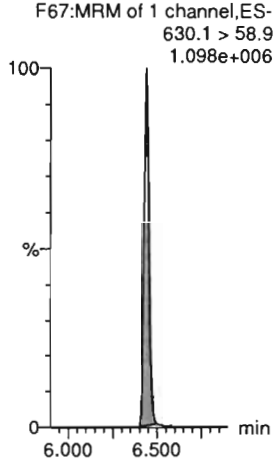
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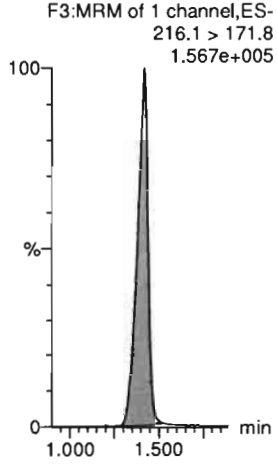
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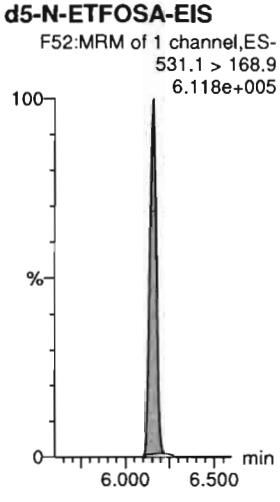
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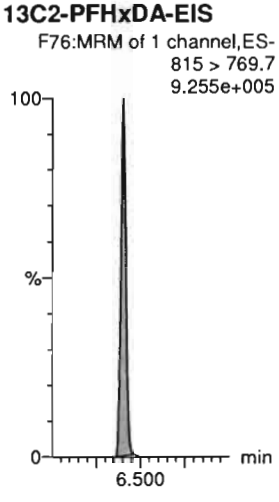
13C3-PFBA-RSD



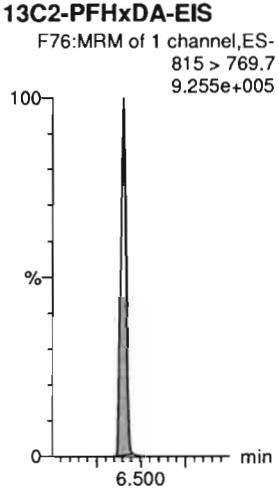
d5-N-ETFOSA-EIS



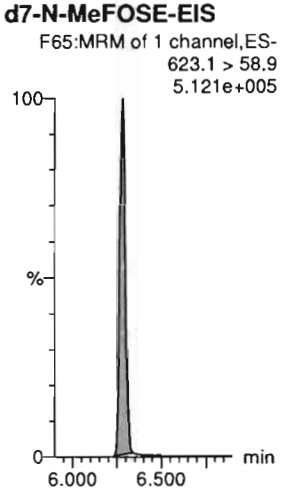
13C2-PFHxDA-EIS



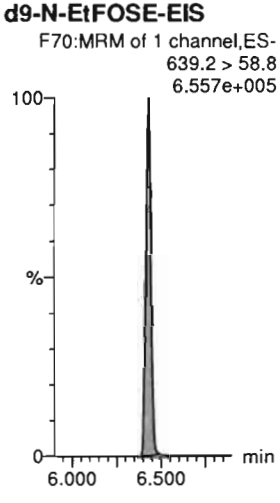
13C2-PFHxDA-EIS



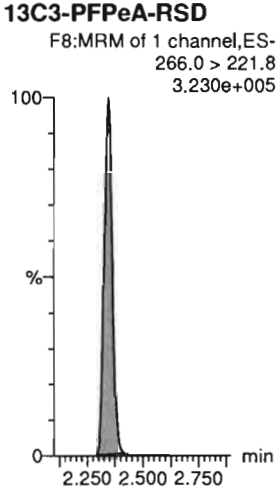
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

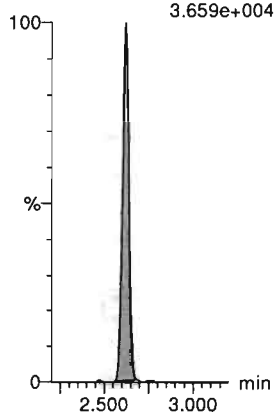


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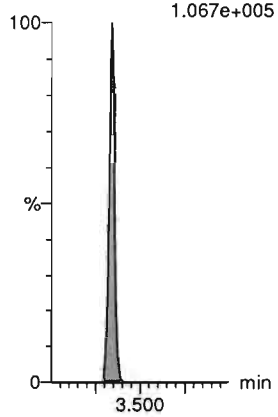
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Printed: Wednesday, February 26, 2020 10:18:42 Pacific Standard Time

Name: 200225P1-9, Date: 25-Feb-2020, Time: 19:22:44, ID: ST200225P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

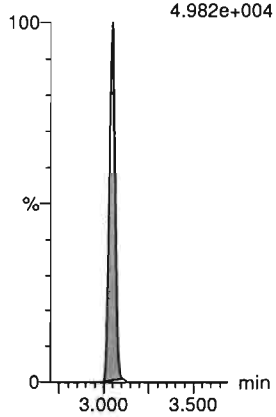
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.659e+004



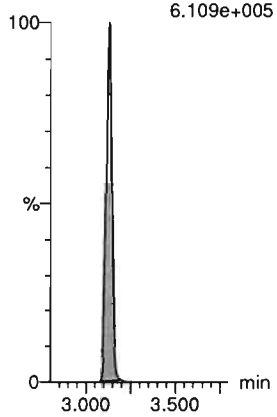
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.067e+005



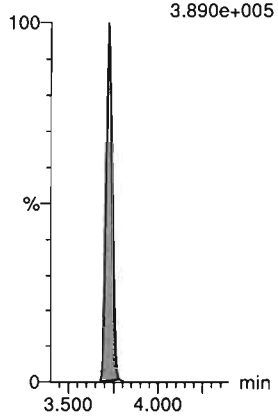
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.982e+004



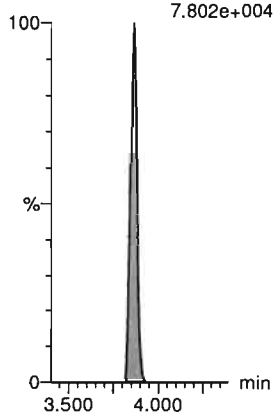
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
6.109e+005



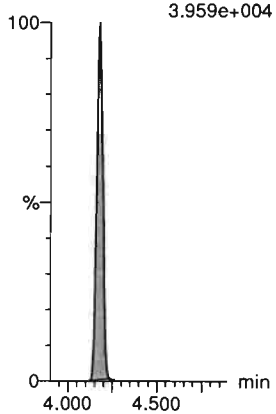
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.890e+005



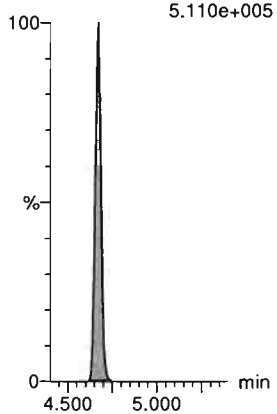
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.802e+004



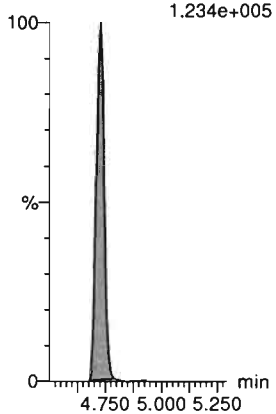
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.959e+004



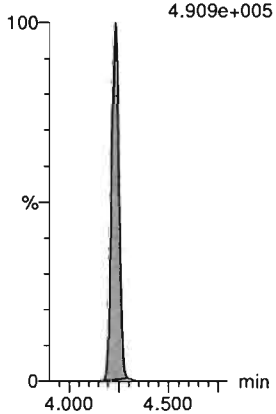
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.110e+005



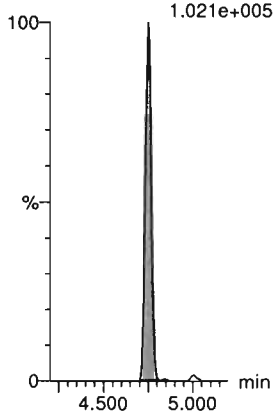
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.234e+005



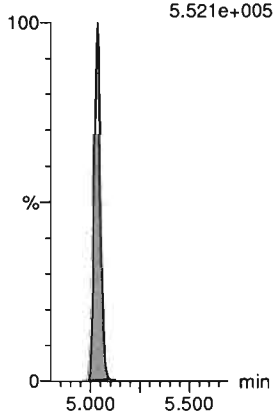
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.909e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
1.021e+005



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.521e+005

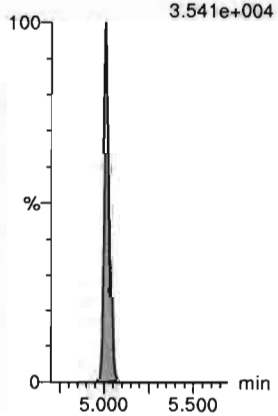


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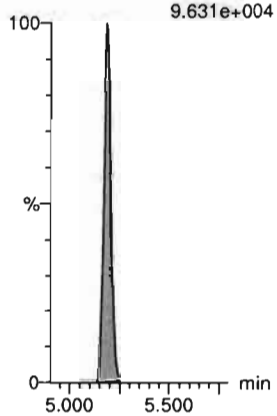
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Printed: Wednesday, February 26, 2020 10:18:42 Pacific Standard Time

Name: 200225P1-9, Date: 25-Feb-2020, Time: 19:22:44, ID: ST200225P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

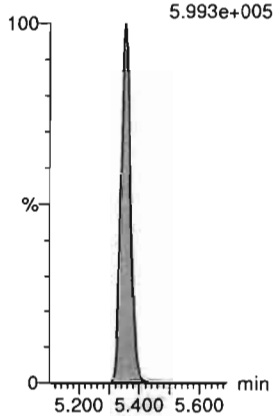
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.541e+004



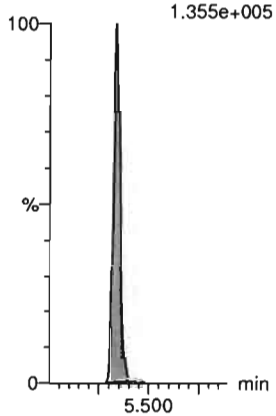
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
9.631e+004



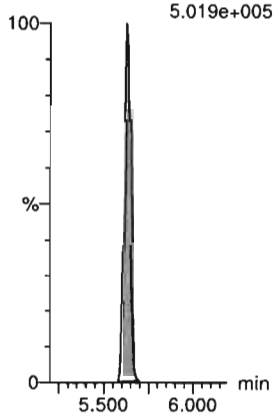
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.993e+005



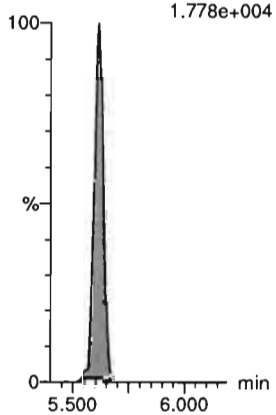
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.355e+005



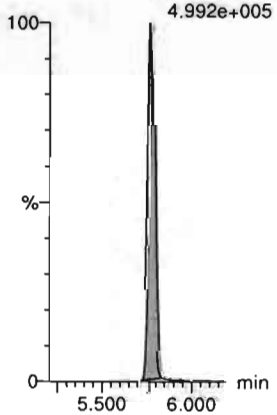
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.019e+005



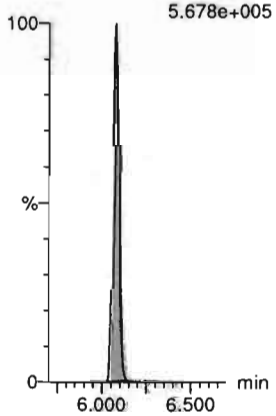
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
1.778e+004



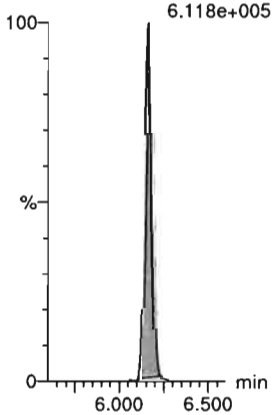
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.992e+005



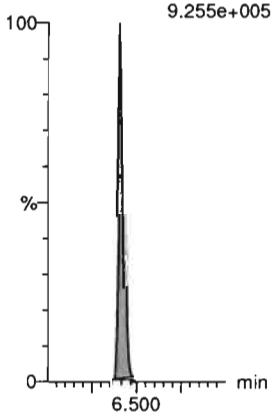
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.678e+005



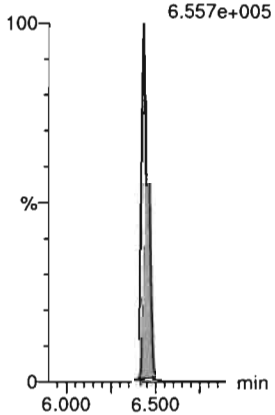
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.118e+005



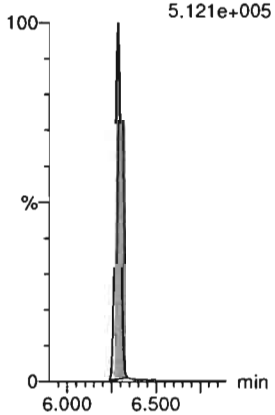
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.255e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.557e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.121e+005

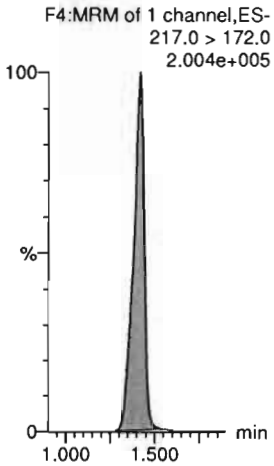


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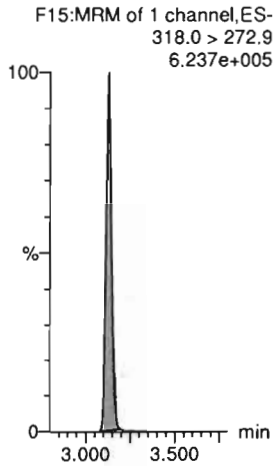
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Name: 200225P1-9, Date: 25-Feb-2020, Time: 19:22:44, ID: ST200225P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

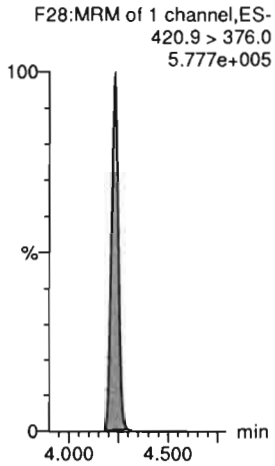
13C4-PFBA



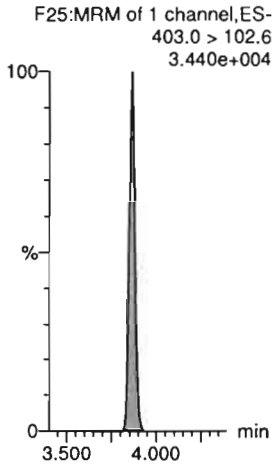
13C5-PFHxA



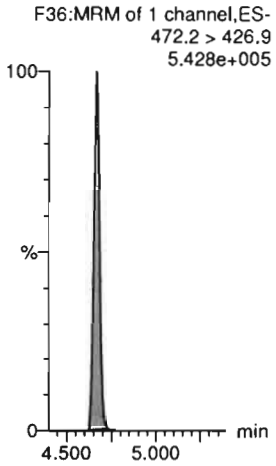
13C8-PFOA



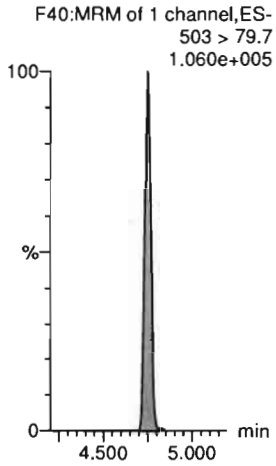
18O2-PFHxS



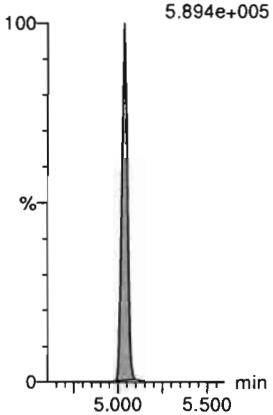
13C9-PFNA



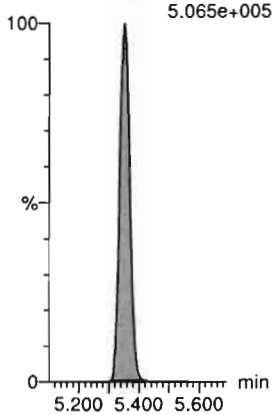
13C4-PFOS



13C6-PFDA



13C7-PFUdA

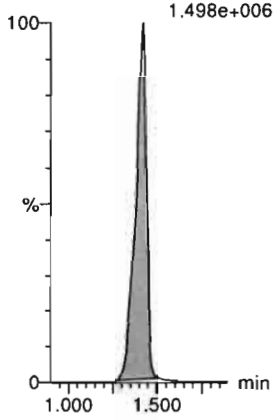


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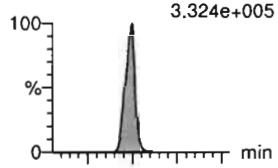
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Name: 200225P1-10, Date: 25-Feb-2020, Time: 19:33:15, ID: ST200225P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

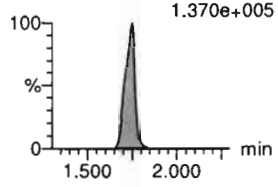
PFBA
F2:MRM of 1 channel,ES-
213.0 > 168.8
1.498e+006



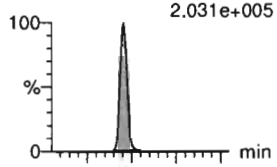
PFPrS
F6:MRM of 2 channels,ES-
248.9 > 79.7
3.324e+005



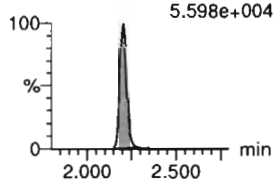
F6:MRM of 2 channels,ES-
248.9 > 98.7
1.370e+005



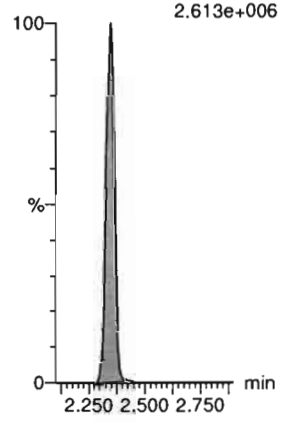
3:3 FTCA
F5:MRM of 2 channels,ES-
240.9 > 176.9
2.031e+005



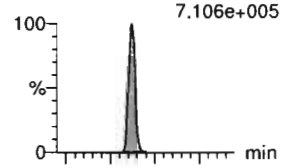
F5:MRM of 2 channels,ES-
240.9 > 116.9
5.598e+004



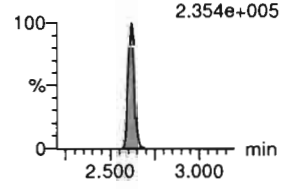
PFPeA
F7:MRM of 1 channel,ES-
263.1 > 218.9
2.613e+006



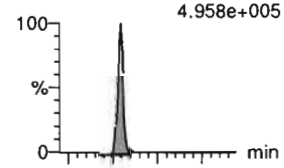
PFBS
F11:MRM of 2 channels,ES-
299.0 > 79.7
7.106e+005



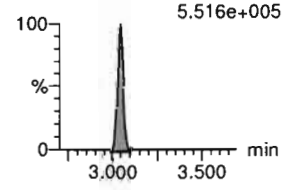
F11:MRM of 2 channels,ES-
299.0 > 98.7
2.354e+005



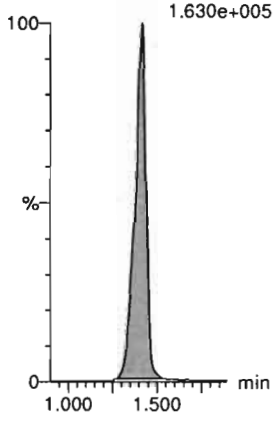
4:2 FTS
F16:MRM of 2 channels,ES-
327.0 > 307
4.958e+005



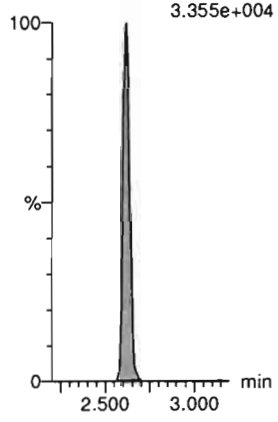
F16:MRM of 2 channels,ES-
327.0 > 80.7
5.516e+005



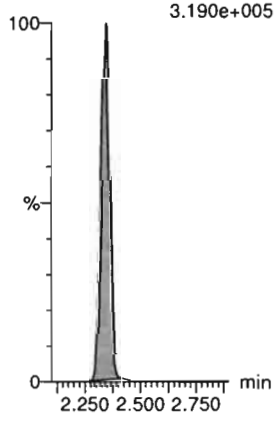
13C3-PFBA-EIS
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.630e+005



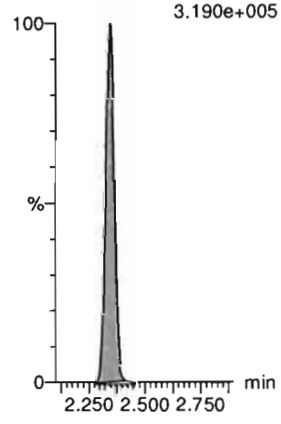
13C3-PFBS-EIS
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.355e+004



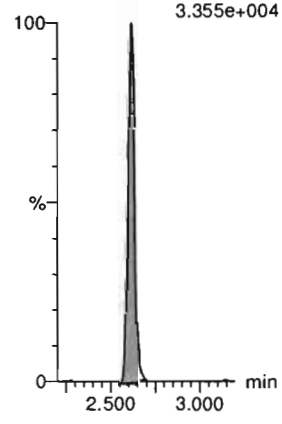
13C3-PFPeA-EIS
F8:MRM of 1 channel,ES-
266.0 > 221.8
3.190e+005



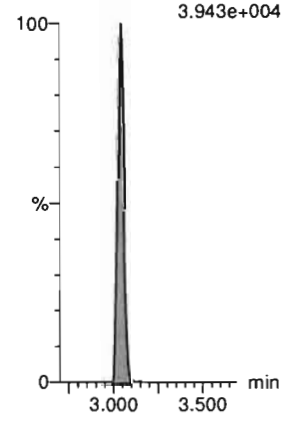
13C3-PFPeA-EIS
F8:MRM of 1 channel,ES-
266.0 > 221.8
3.190e+005



13C3-PFBS-EIS
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.355e+004



13C2-4:2 FTS-EIS
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.943e+004

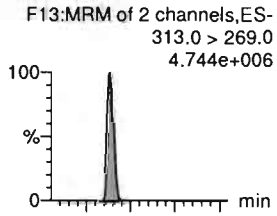


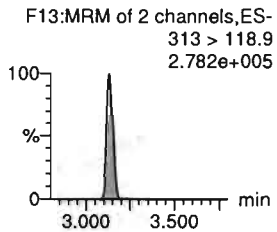
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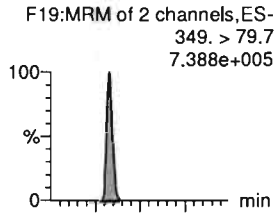
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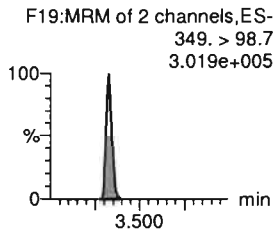
PFHxA



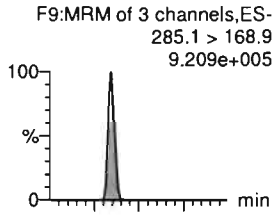


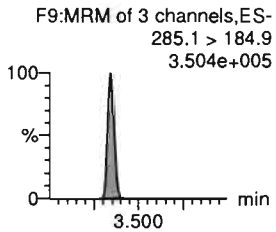
PFPeS



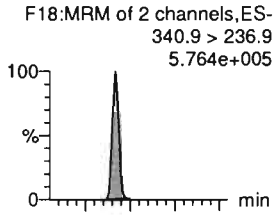


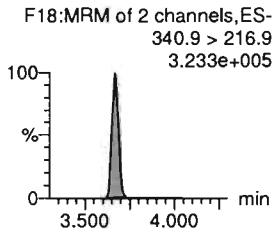
HFPO-DA



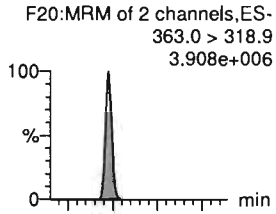


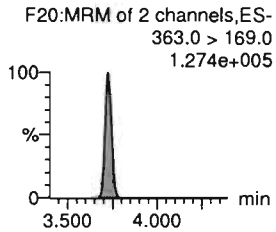
5:3 FTCA



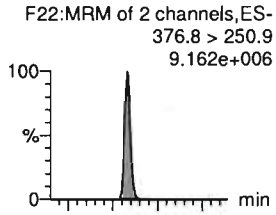


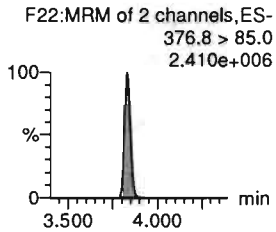
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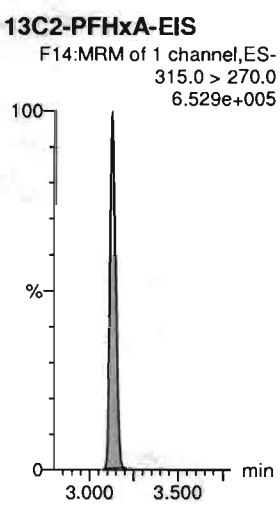


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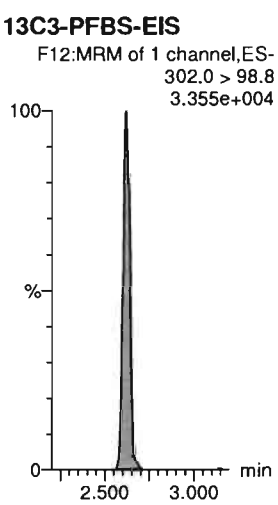




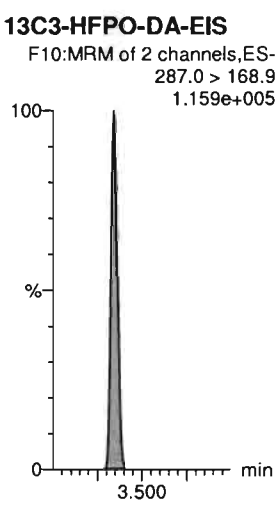
13C2-PFHxA-EIS



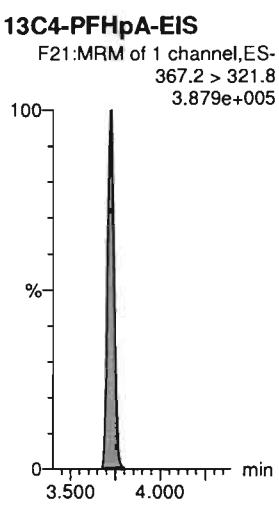
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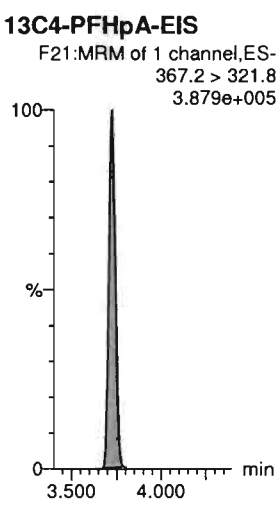
13C3-HFPO-DA-EIS



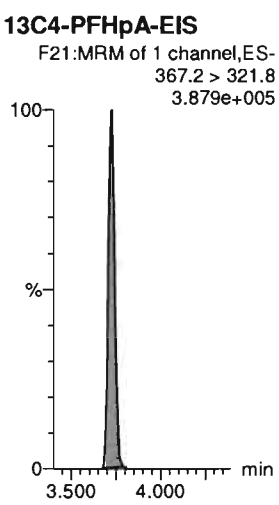
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

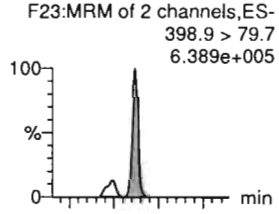


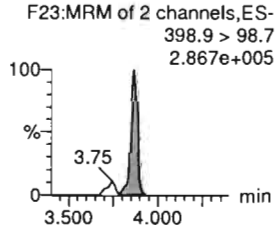
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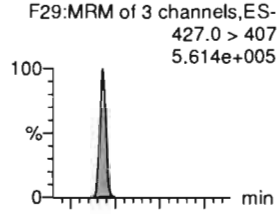
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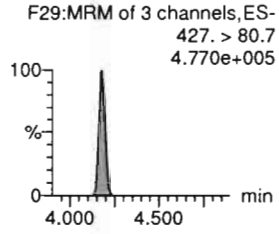
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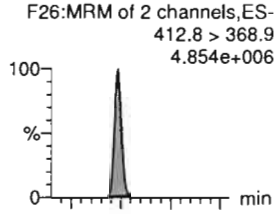


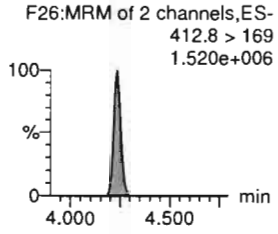
6:2 FTS



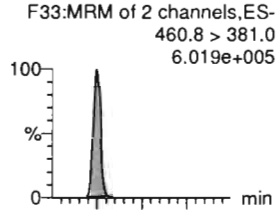


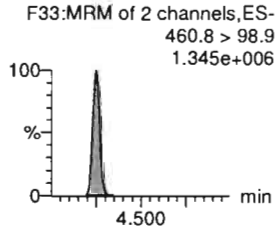
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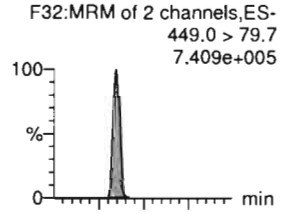


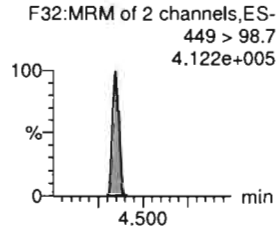
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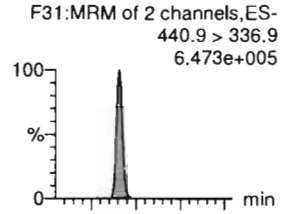


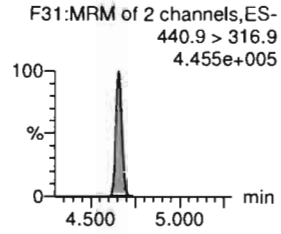
PFHpS



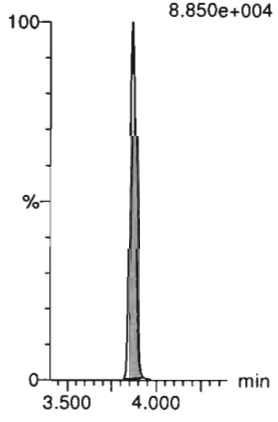


7:3 FTCA

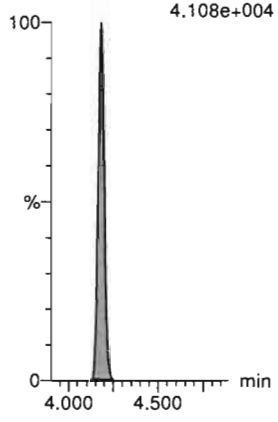




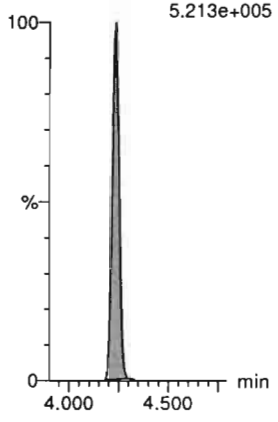
13C3-PFHxS-EIS



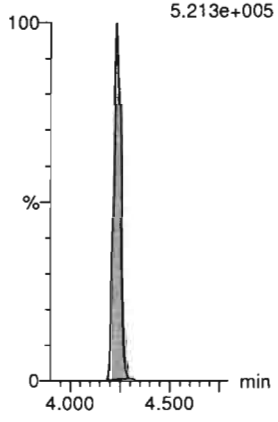
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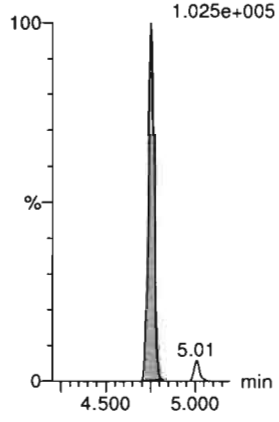
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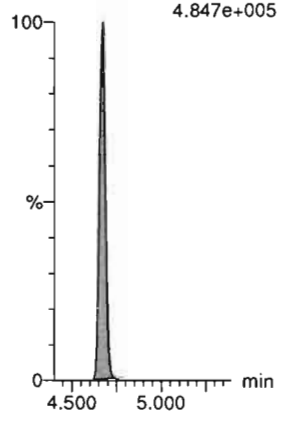
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

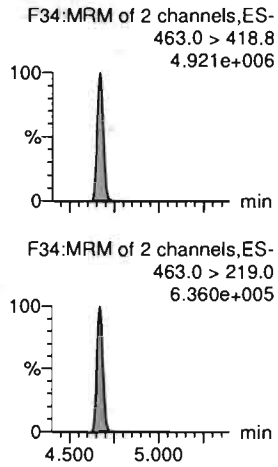


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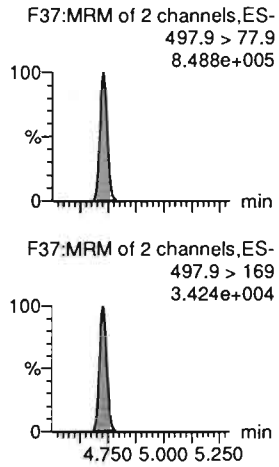
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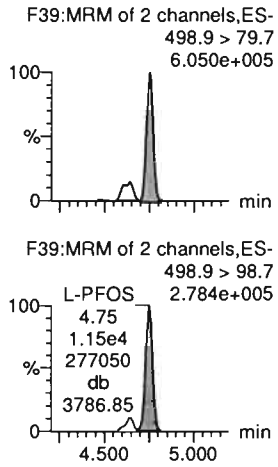
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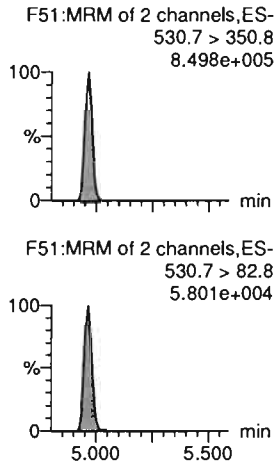
PFOSA



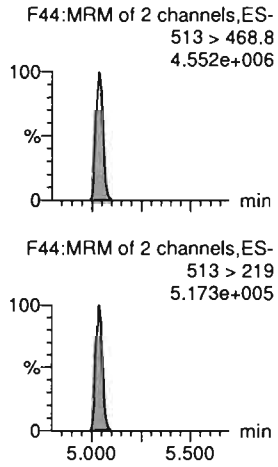
L-PFOS



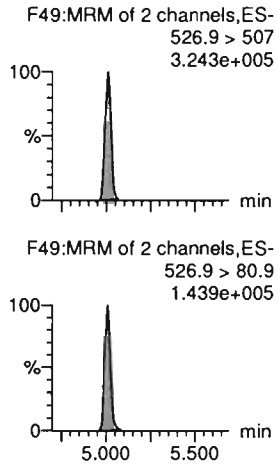
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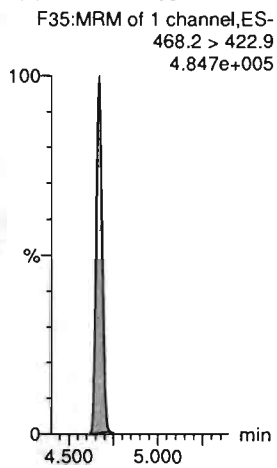
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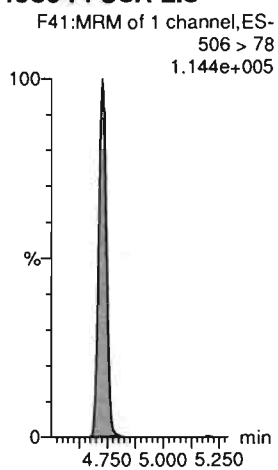
8:2 FTS



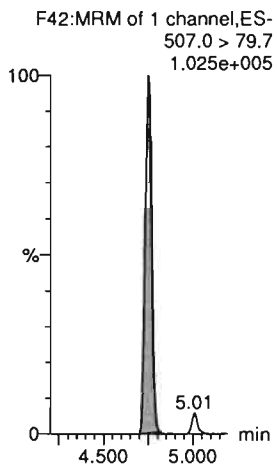
13C5-PFNA-EIS



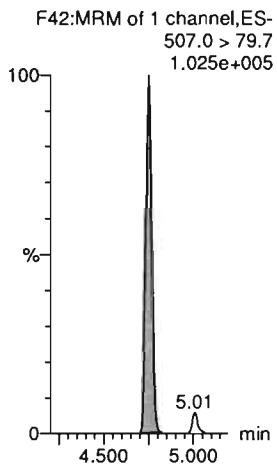
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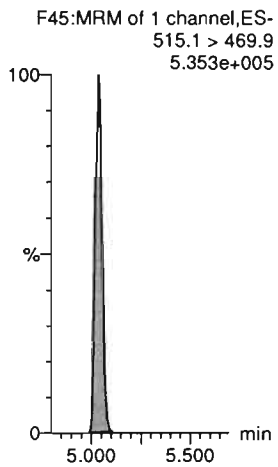
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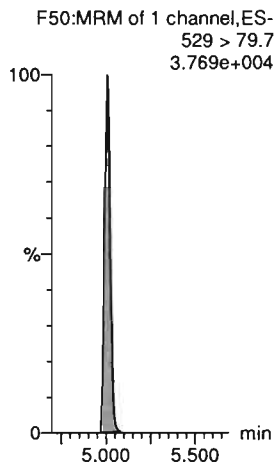
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

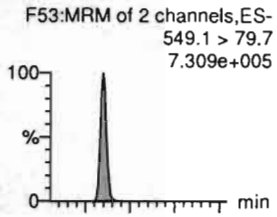


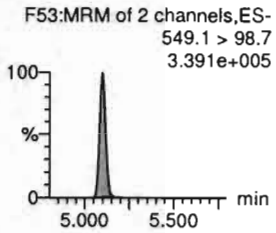
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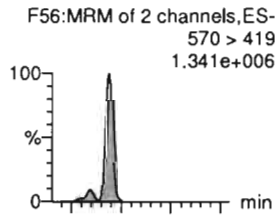
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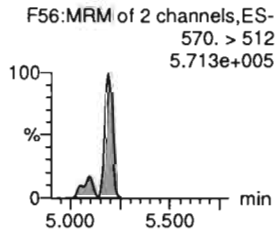
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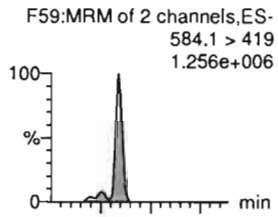


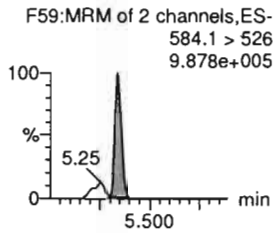
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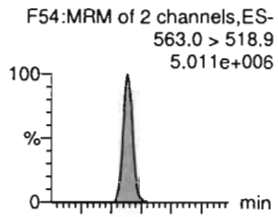


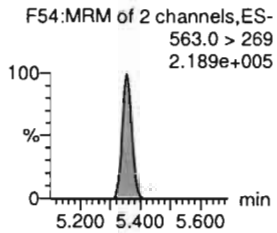
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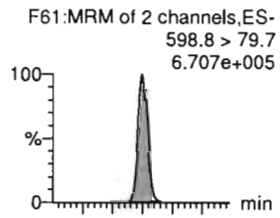


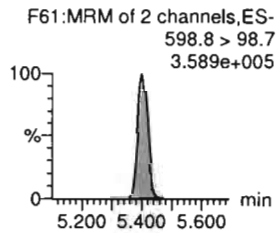
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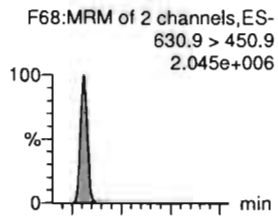


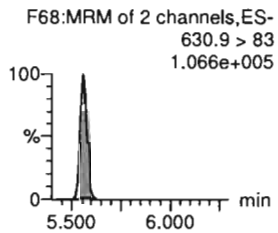
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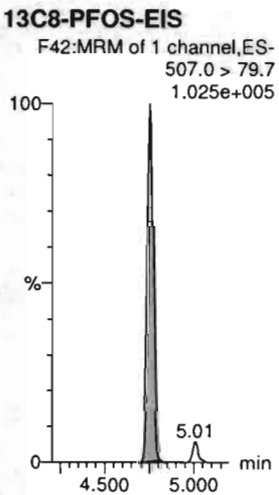


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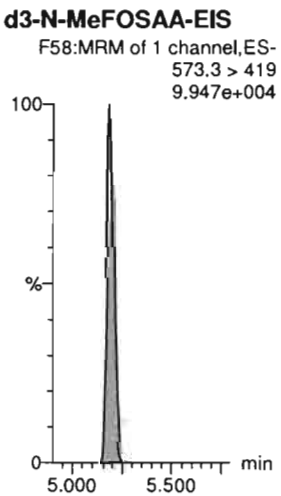




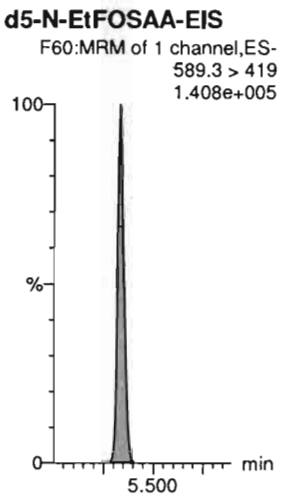
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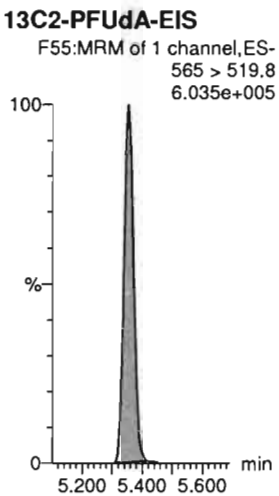
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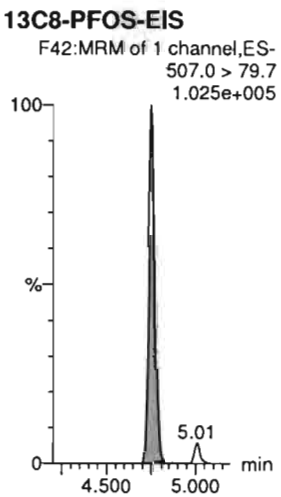
d5-N-EtFOSAA-EIS



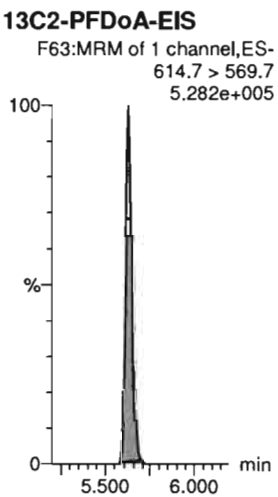
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

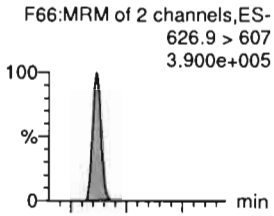


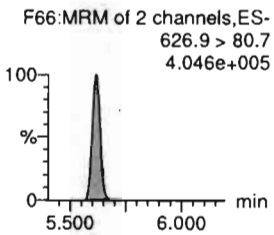
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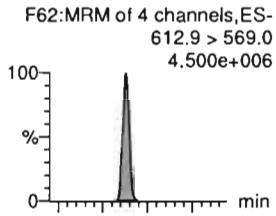
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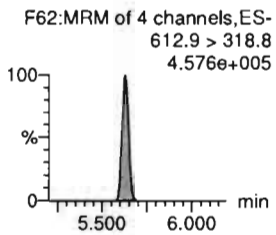
10:2 FTS



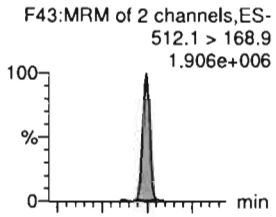


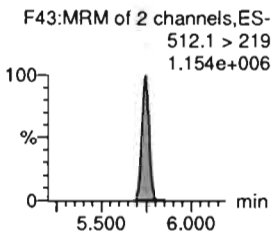
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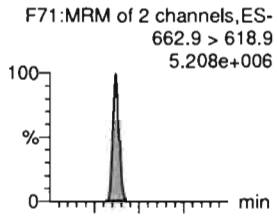


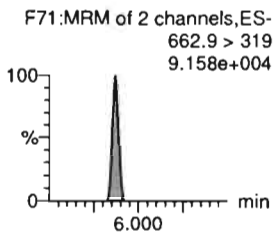
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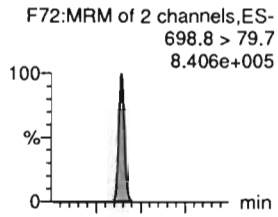


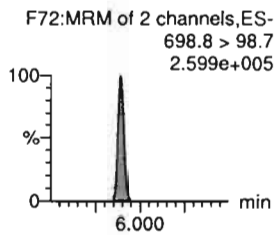
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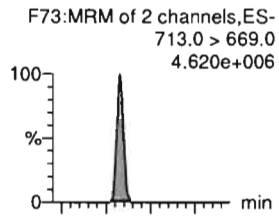


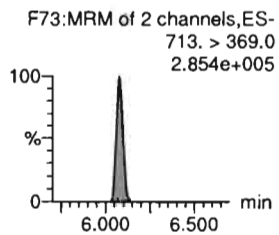
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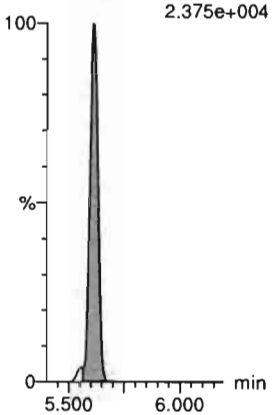


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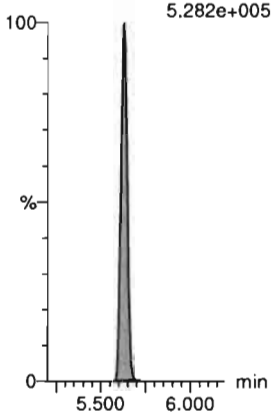




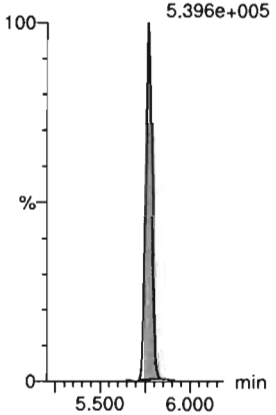
13C2-10:2 FTS-EIS



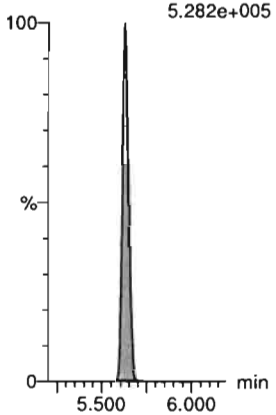
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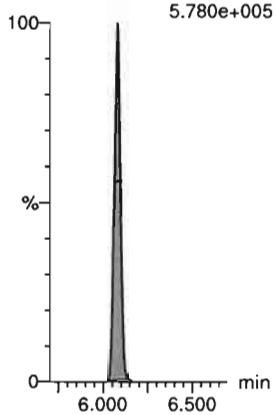
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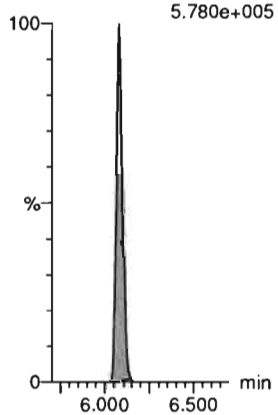
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13C2-PFTeDA-EIS

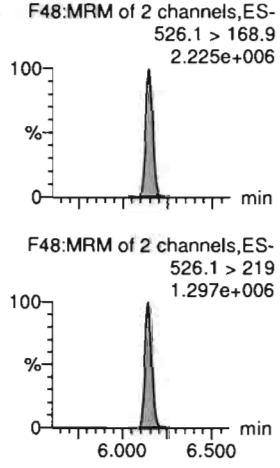


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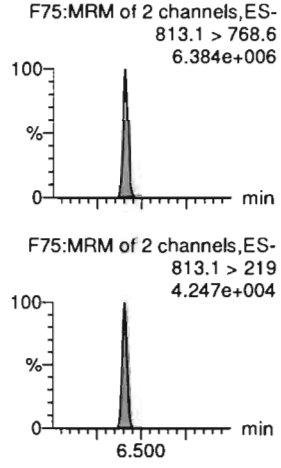
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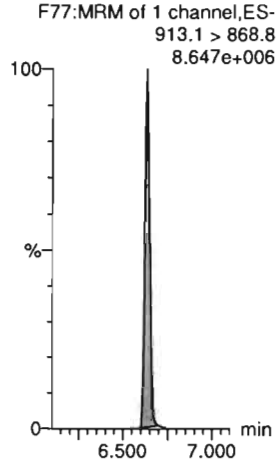
N-EtFOSA



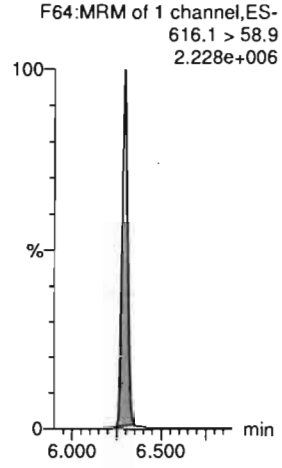
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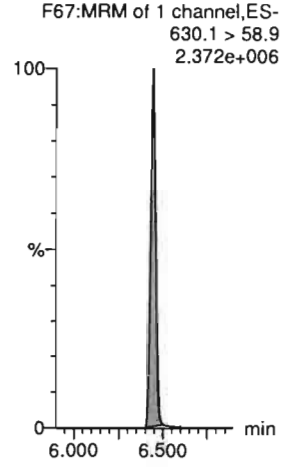
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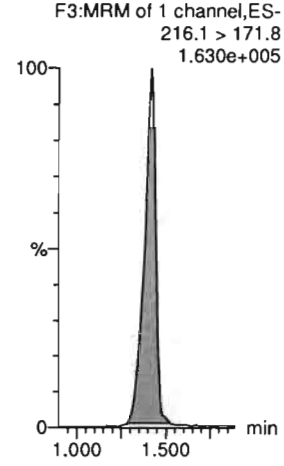
N-MeFOSE



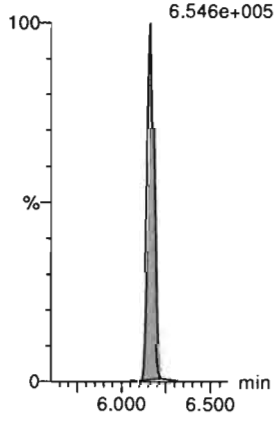
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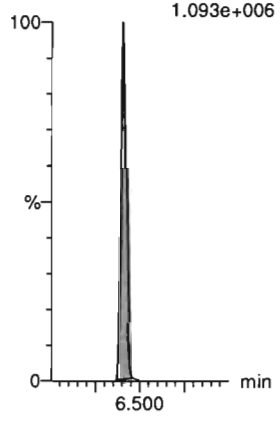
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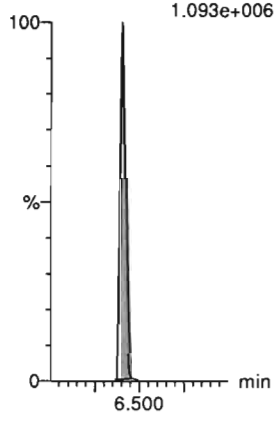
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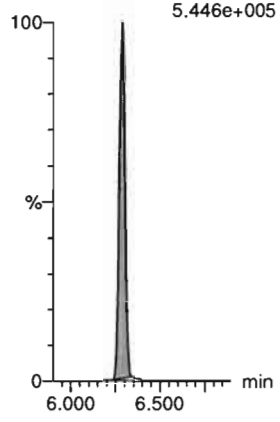
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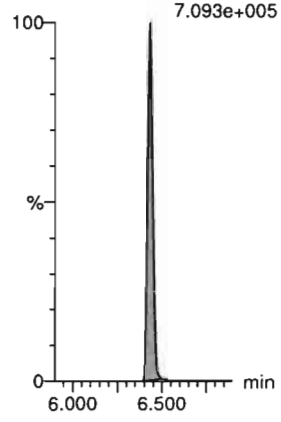
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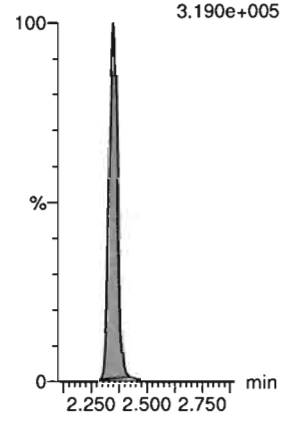
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

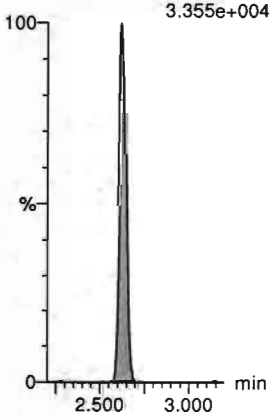


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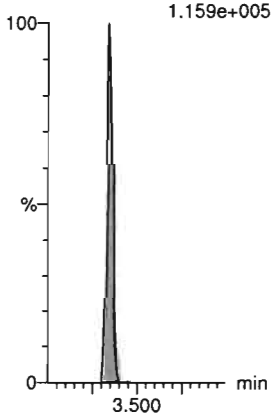
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Name: 200225P1-10, Date: 25-Feb-2020, Time: 19:33:15, ID: ST200225P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

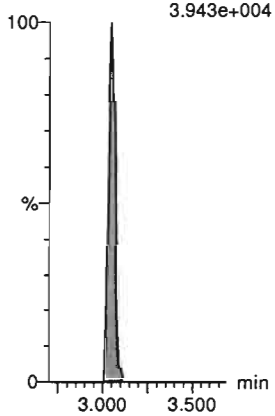
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.355e+004



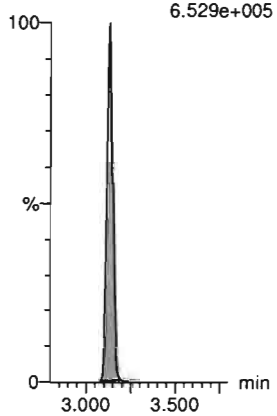
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.159e+005



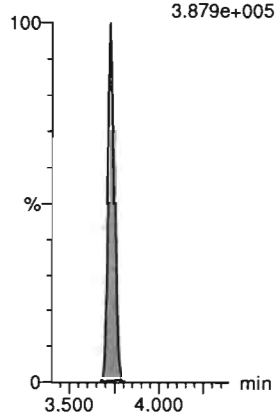
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.943e+004



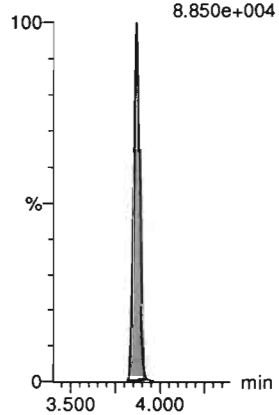
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
6.529e+005



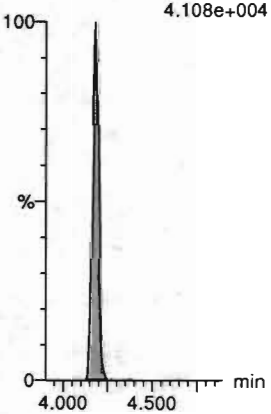
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.879e+005



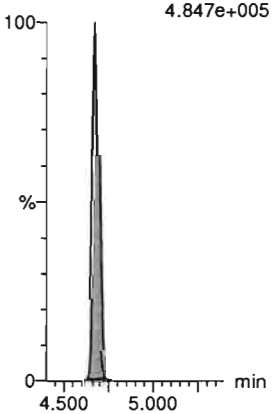
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.850e+004



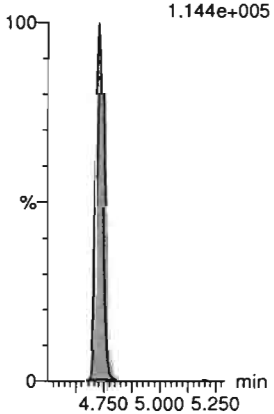
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.108e+004



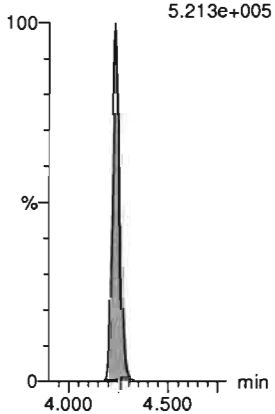
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.847e+005



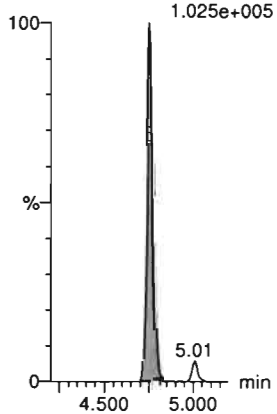
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.144e+005



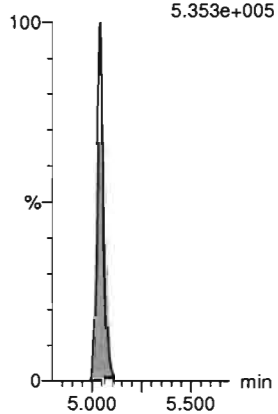
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.213e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
1.025e+005



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.353e+005

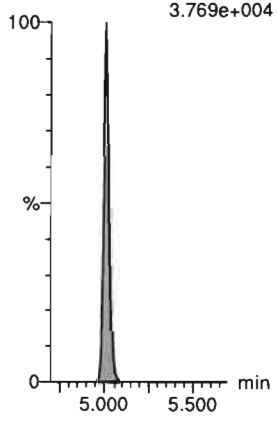


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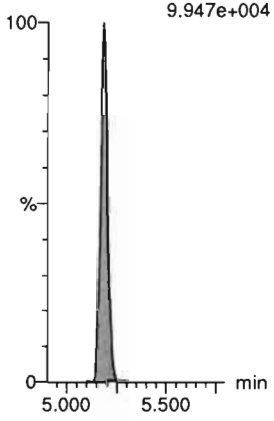
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Name: 200225P1-10, Date: 25-Feb-2020, Time: 19:33:15, ID: ST200225P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

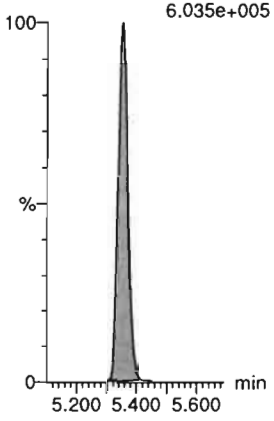
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.769e+004



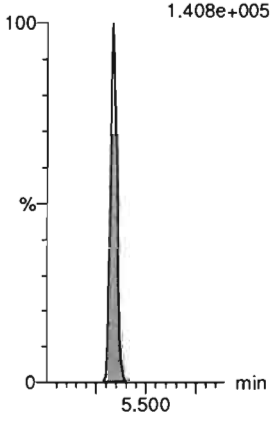
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
9.947e+004



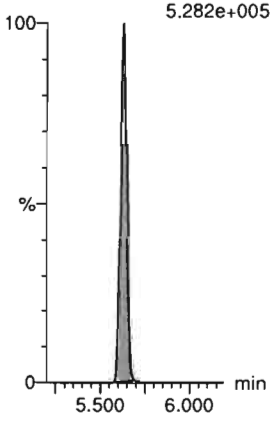
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.035e+005



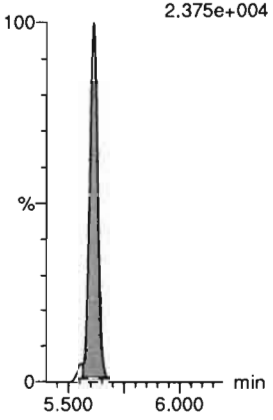
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.408e+005



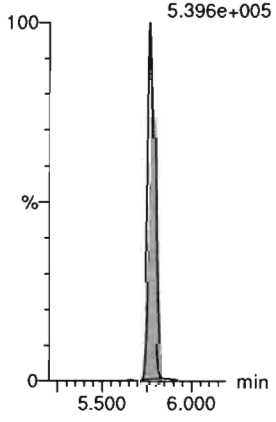
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.282e+005



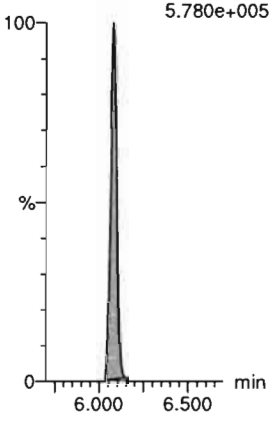
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.375e+004



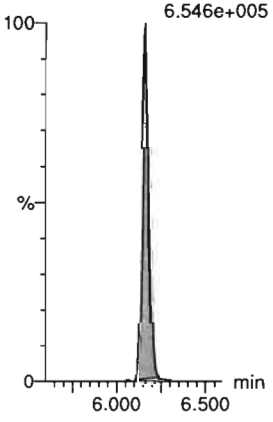
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.396e+005



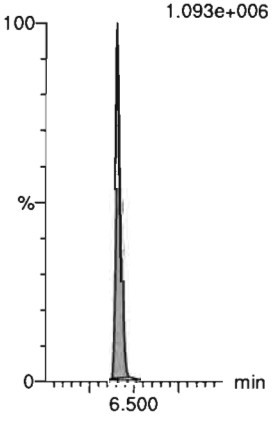
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.780e+005



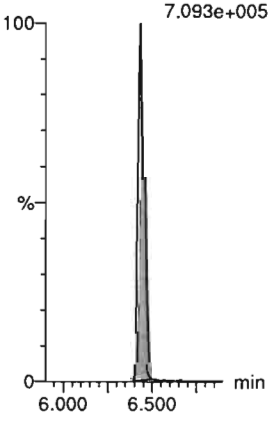
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.546e+005



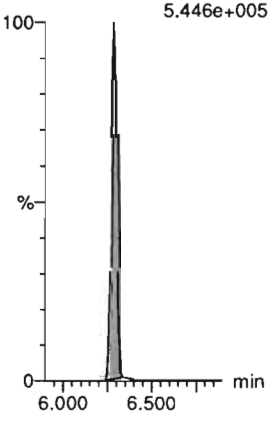
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.093e+006



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.093e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.446e+005

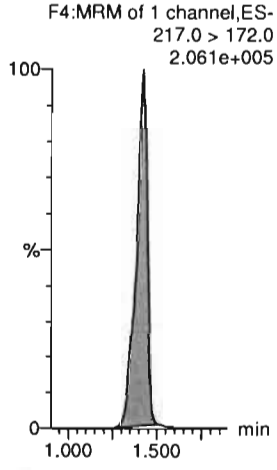


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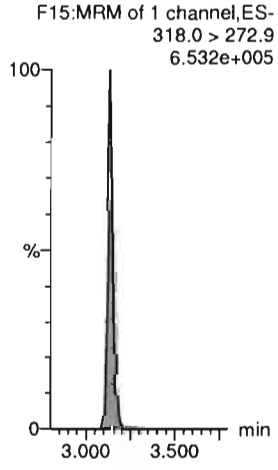
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Name: 200225P1-10, Date: 25-Feb-2020, Time: 19:33:15, ID: ST200225P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

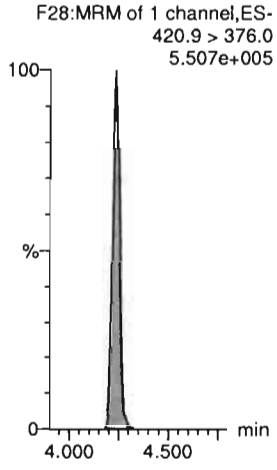
13C4-PFBA



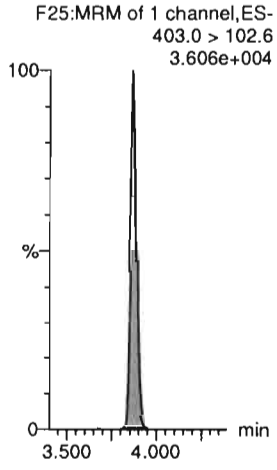
13C5-PFHxA



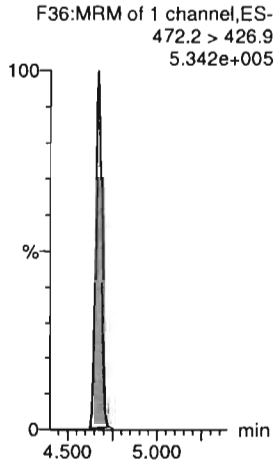
13C8-PFOA



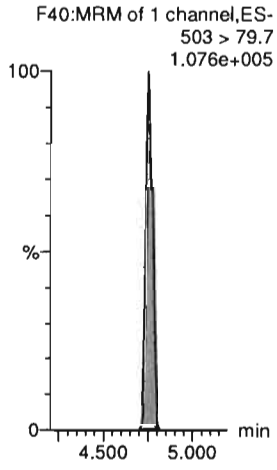
18O2-PFHxS



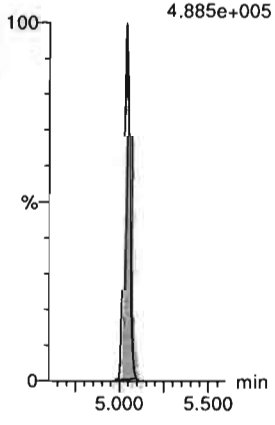
13C9-PFNA



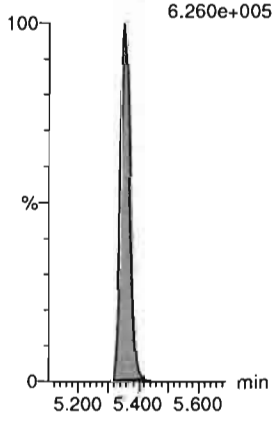
13C4-PFOS



13C6-PFDA



13C7-PFUdA

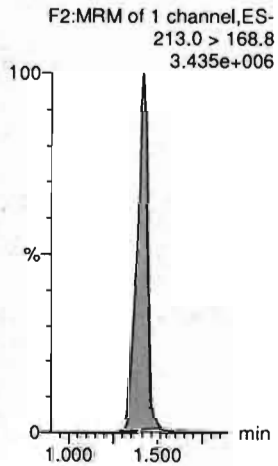


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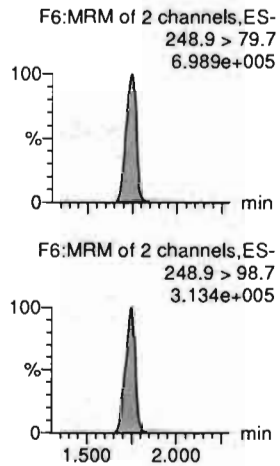
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Name: 200225P1-11, Date: 25-Feb-2020, Time: 19:43:44, ID: ST200225P1-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

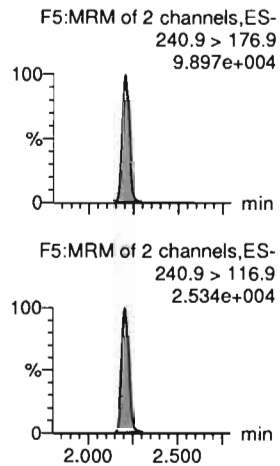
PFBA



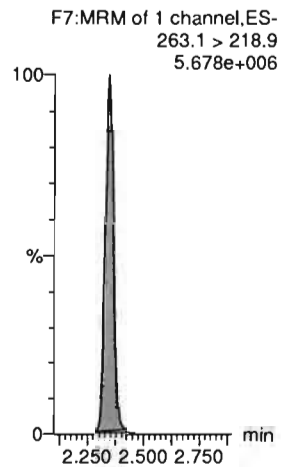
PFPrS



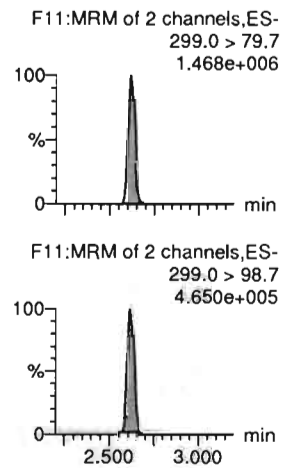
3:3 FTCA



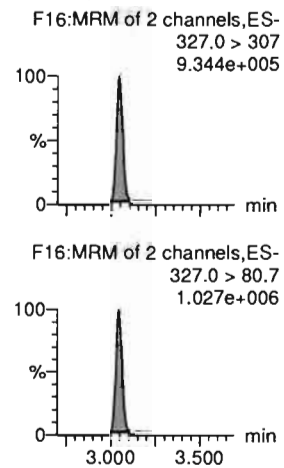
PFPeA



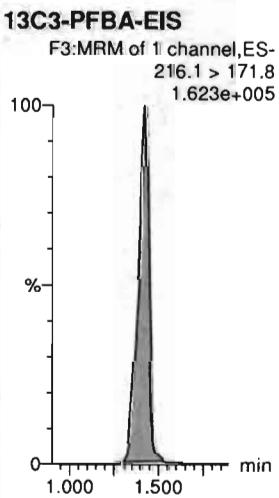
PFBS



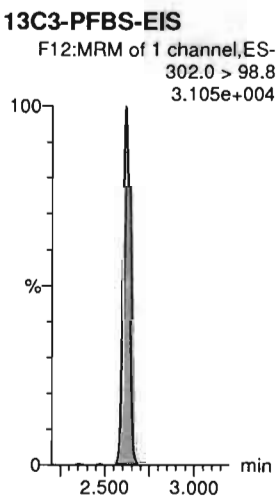
4:2 FTS



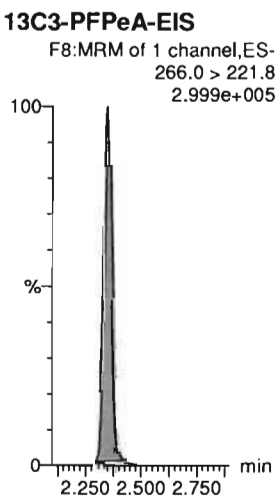
13C3-PFBA-EIS



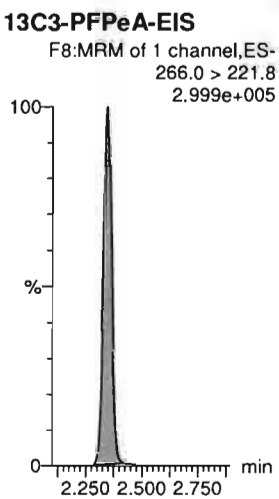
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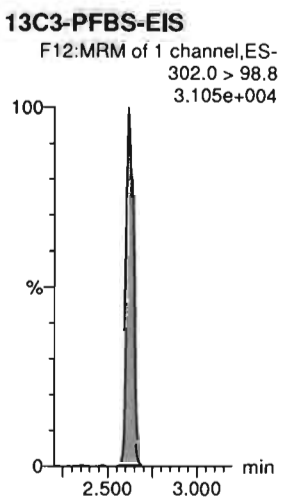
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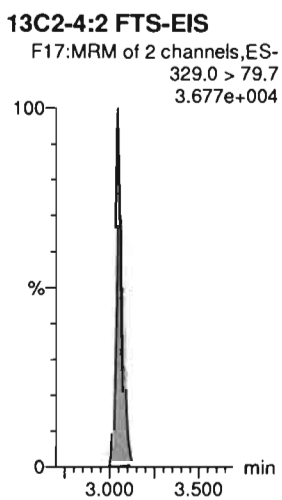
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

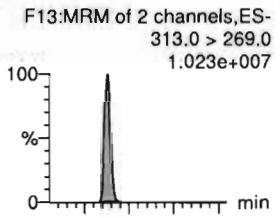


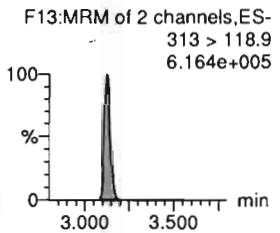
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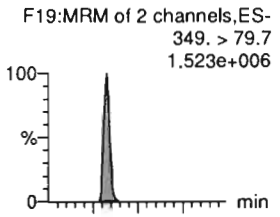
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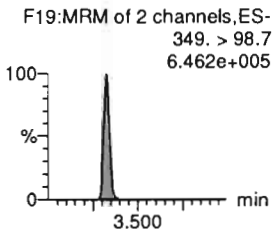
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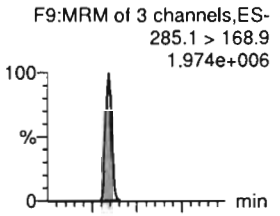


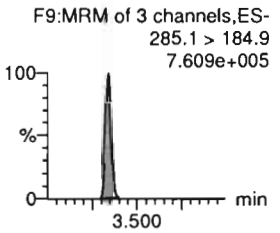
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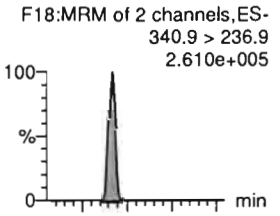


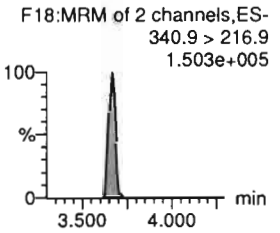
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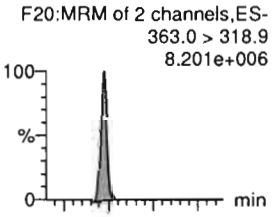


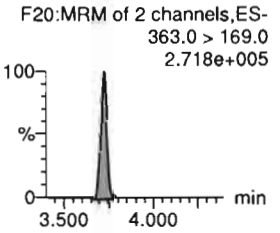
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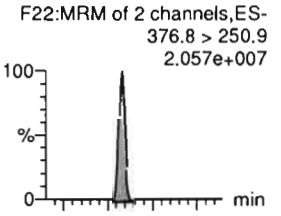


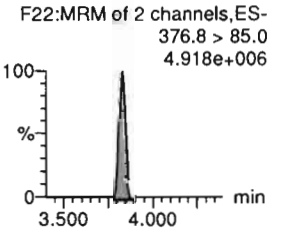
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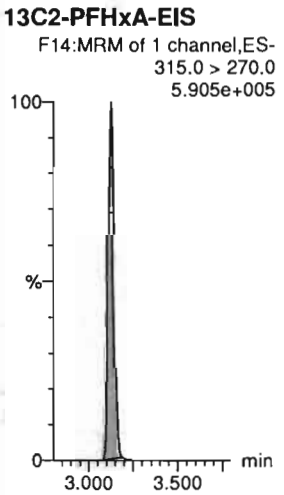


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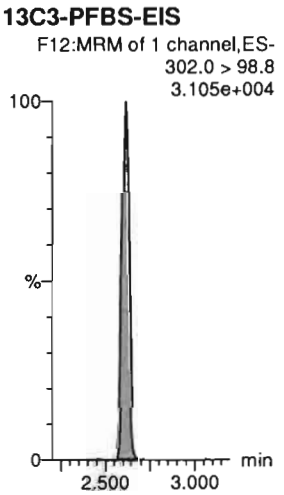




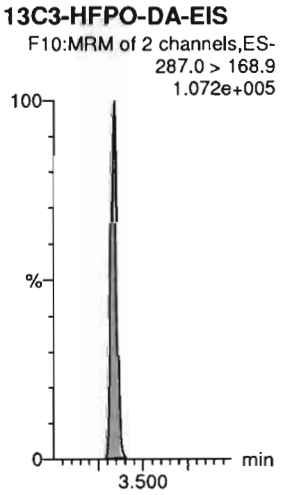
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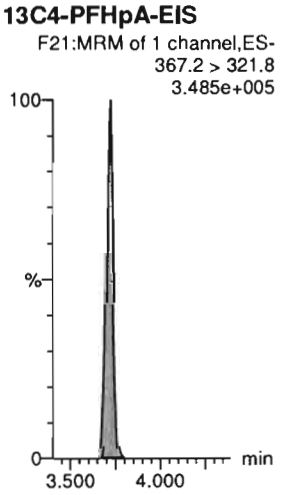
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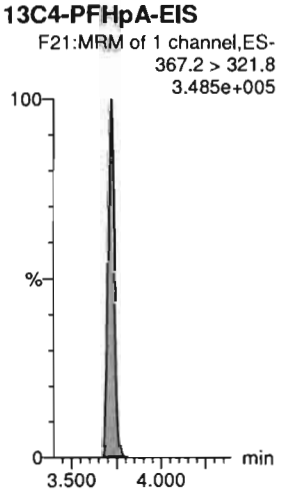
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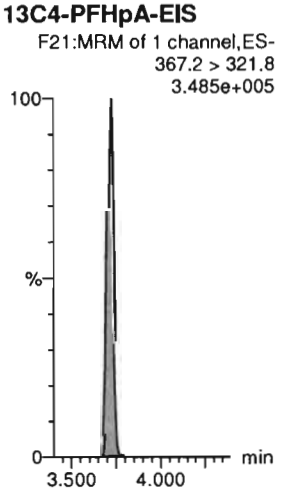
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13C4-PFHpA-EIS



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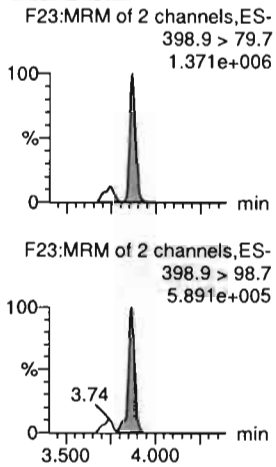


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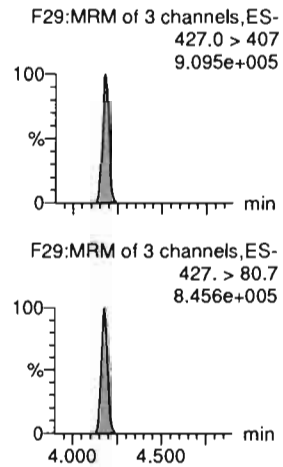
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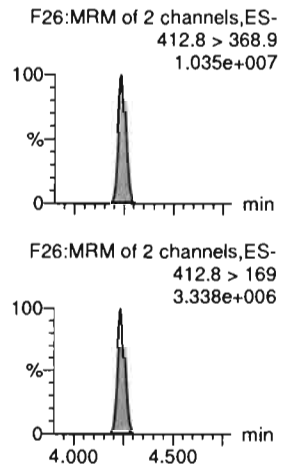
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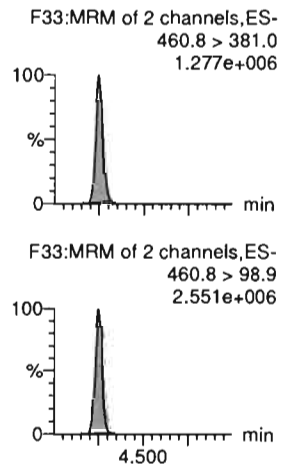
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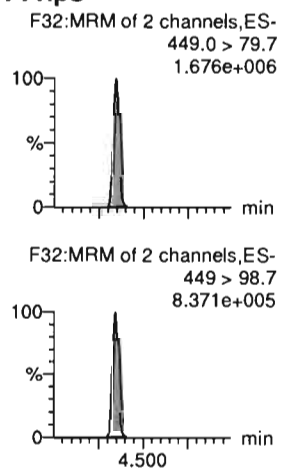
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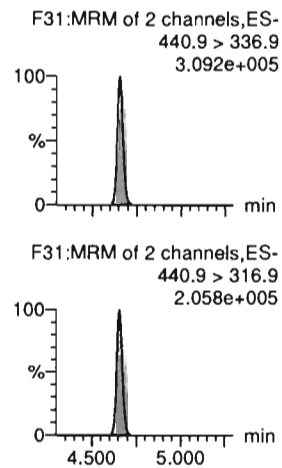
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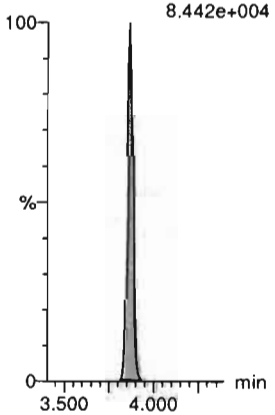
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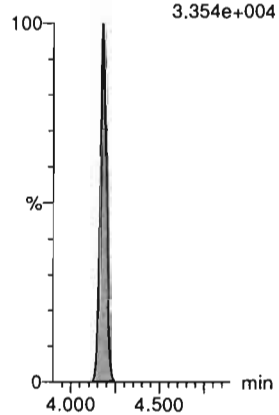
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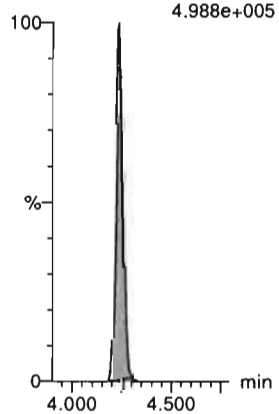
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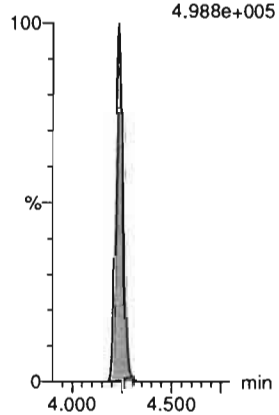
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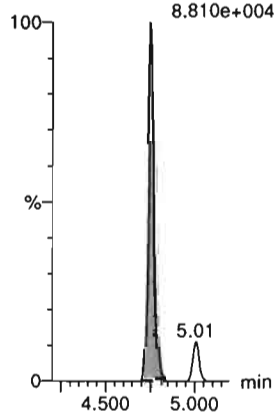
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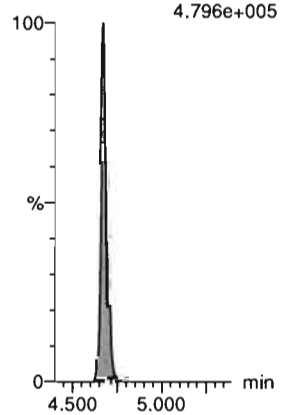
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13C8-PFOS-EIS



13C5-PFNA-EIS

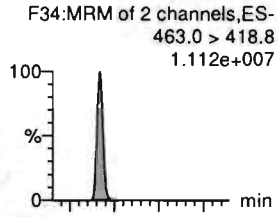


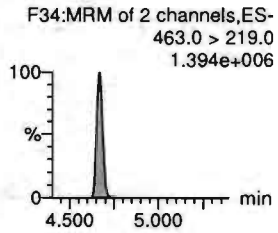
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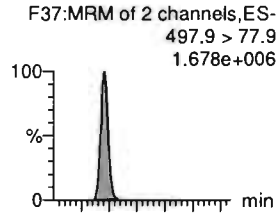
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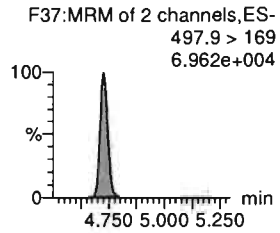
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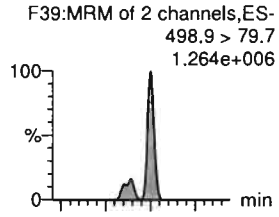


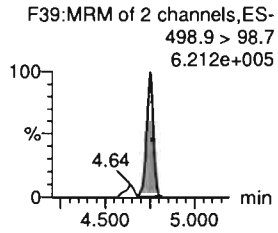
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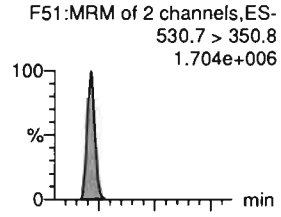


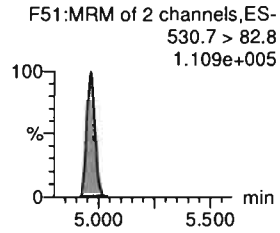
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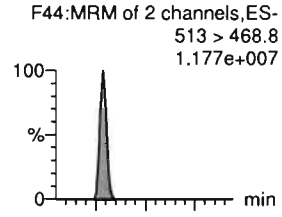


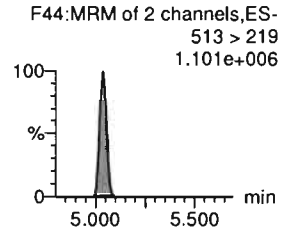
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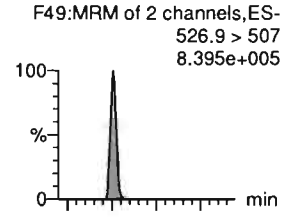


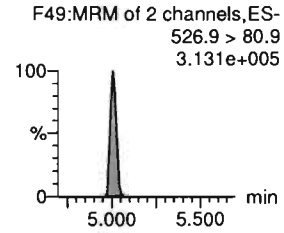
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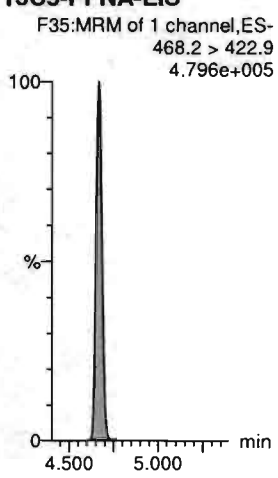


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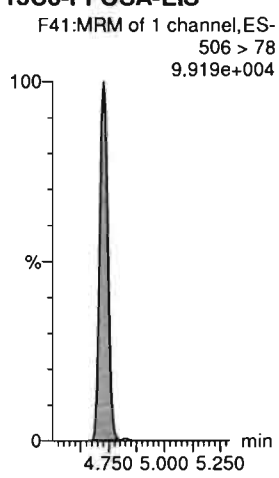




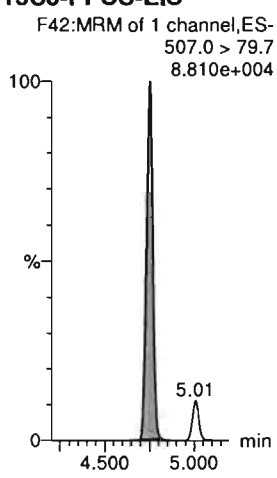
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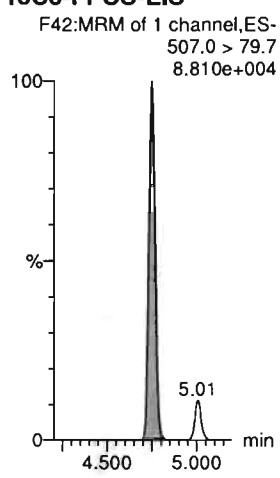
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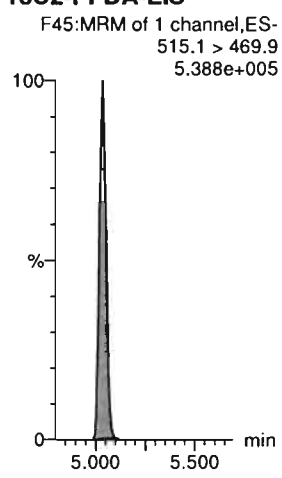
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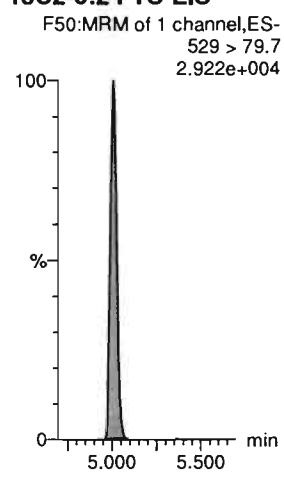
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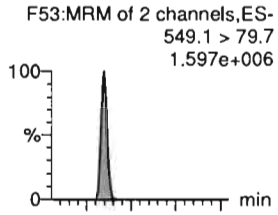


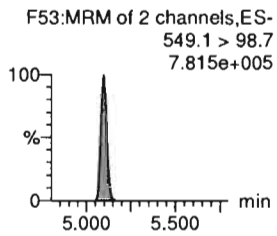
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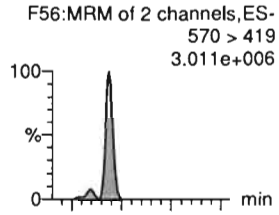
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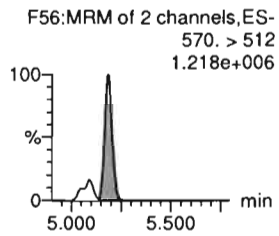
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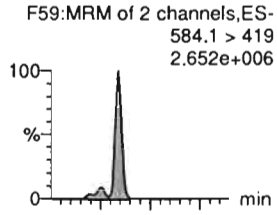


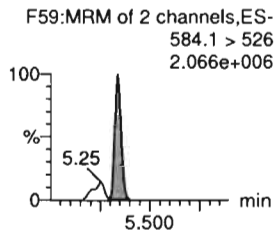
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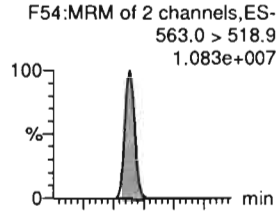


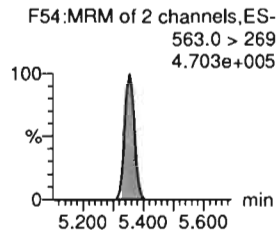
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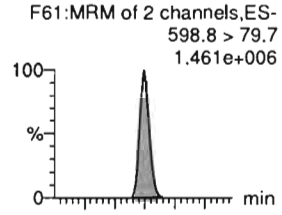


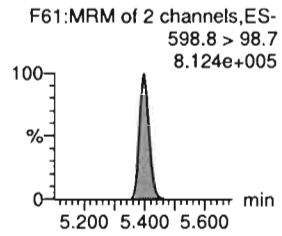
PFUdA



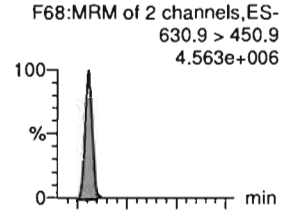


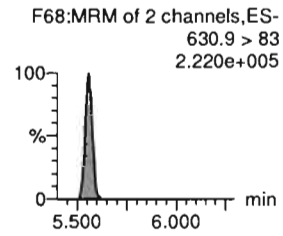
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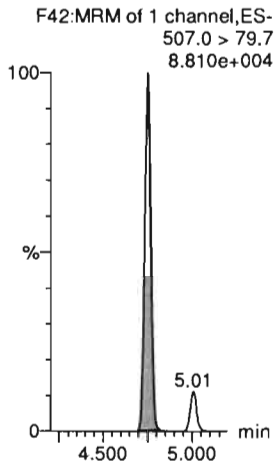


11Cl-PF30UdS

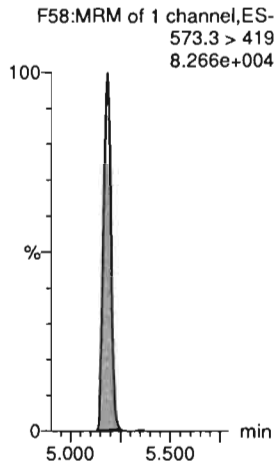




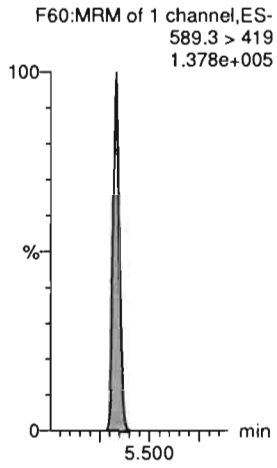
13C8-PFOS-EIS



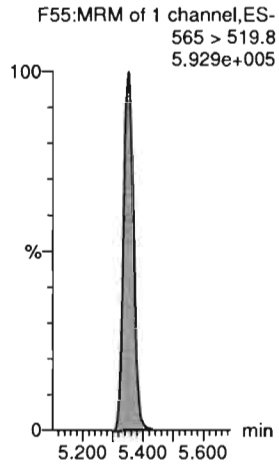
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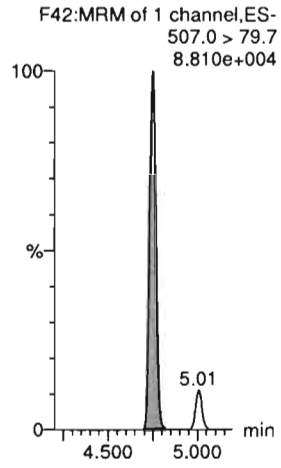
d5-N-EtFOSAA-EIS



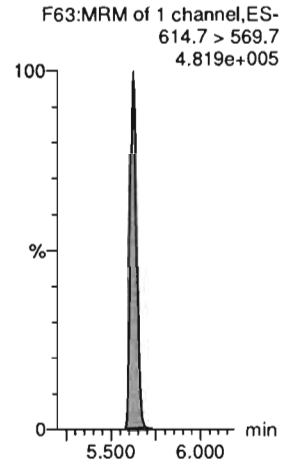
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

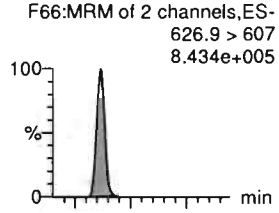


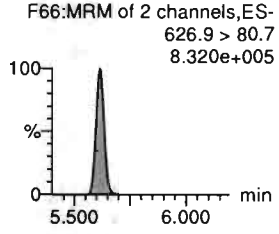
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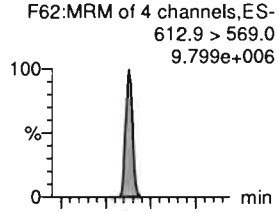
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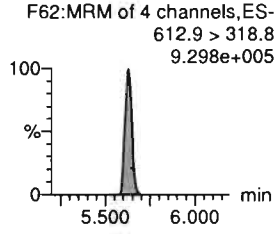
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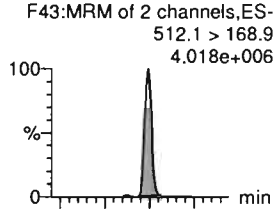


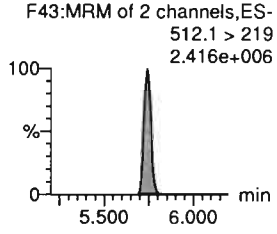
PFDoA



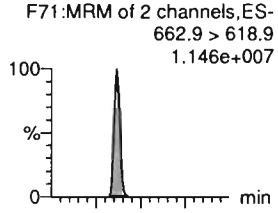


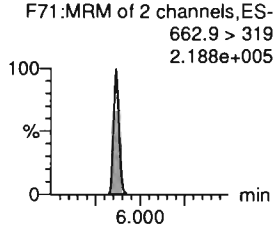
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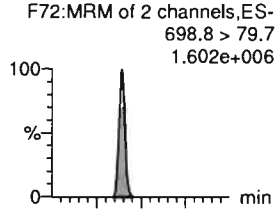


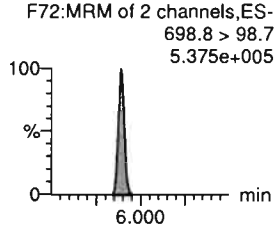
PFTrDA



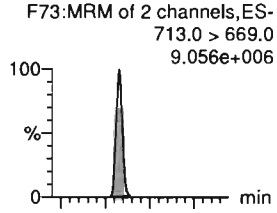


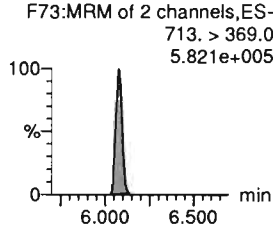
PFDoS



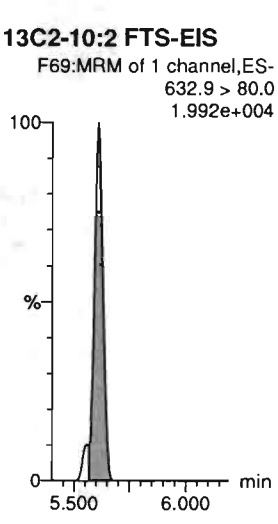


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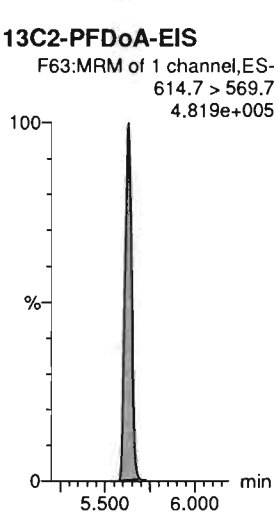




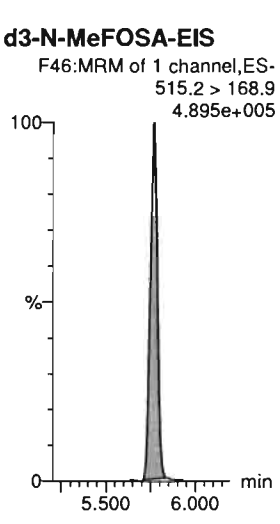
13C2-10:2 FTS-EIS



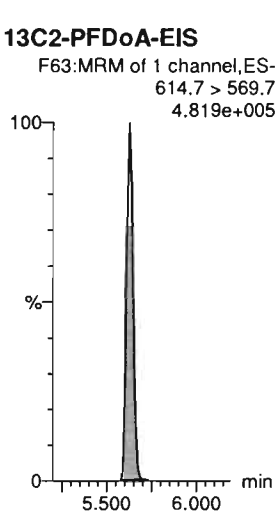
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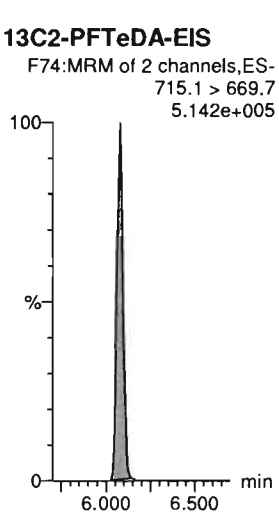
d3-N-MeFOSA-EIS



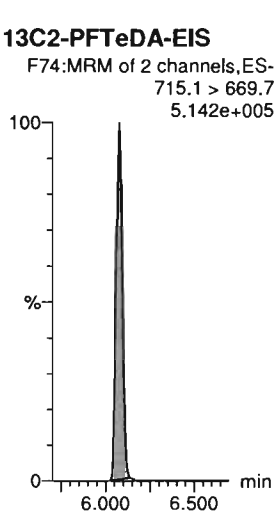
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

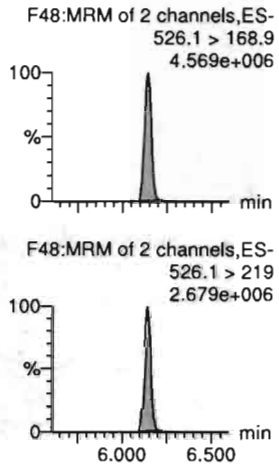


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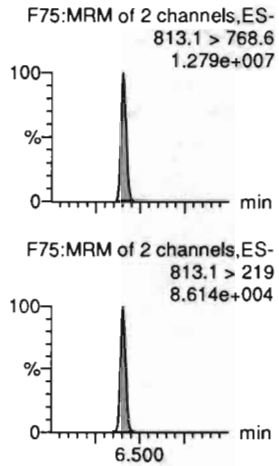
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Name: 200225P1-11, Date: 25-Feb-2020, Time: 19:43:44, ID: ST200225P1-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

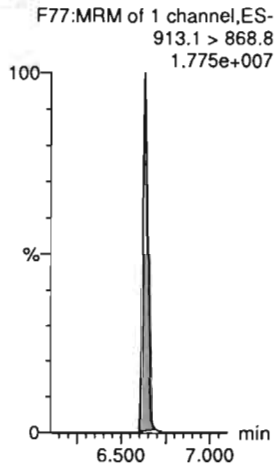
N-EtFOSA



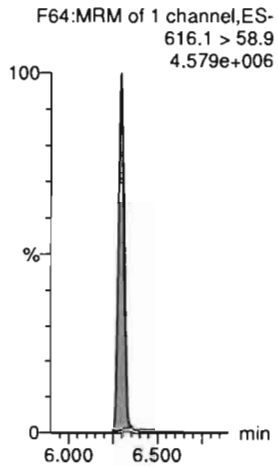
PFHxDA



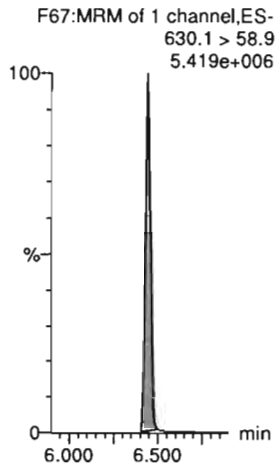
PFODA



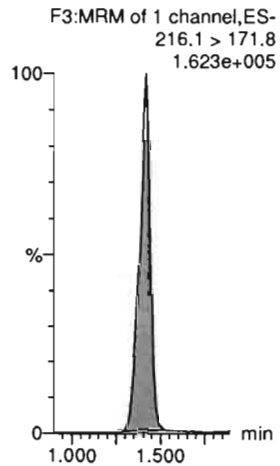
N-MeFOSE



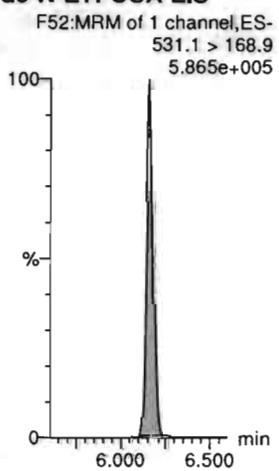
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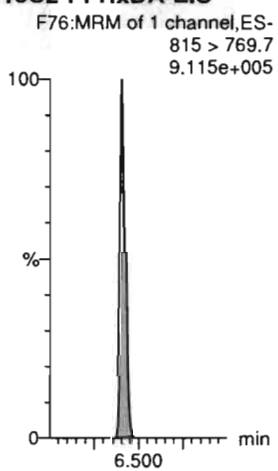
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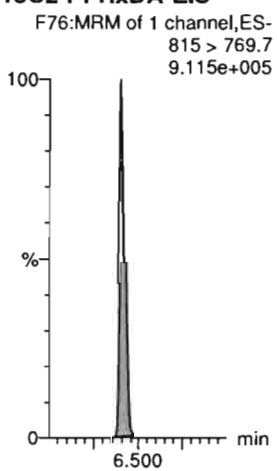
d5-N-ETFOSA-EIS



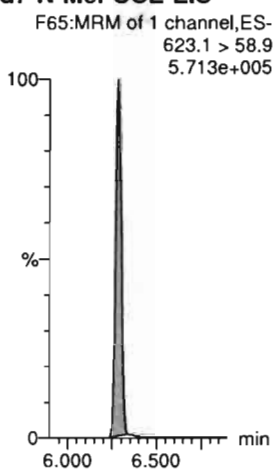
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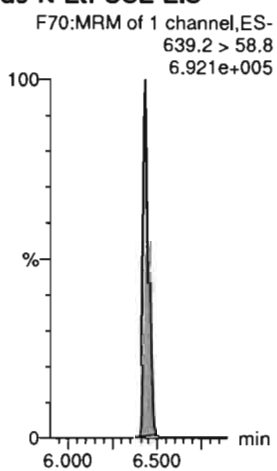
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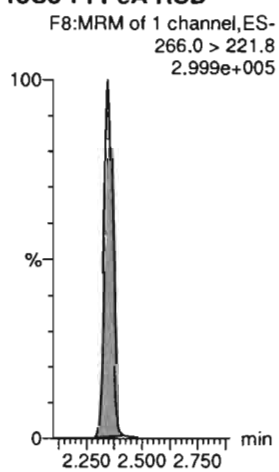
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d9-N-EtFOSE-EIS



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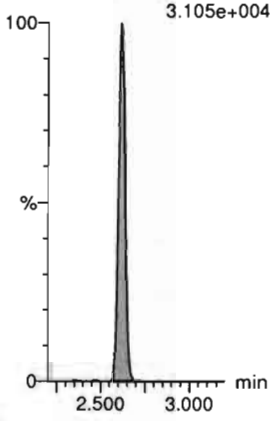


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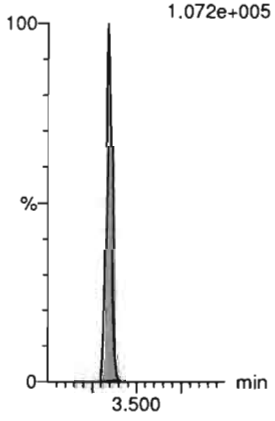
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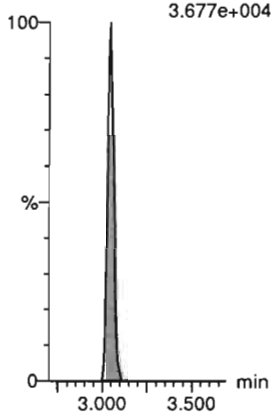
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.105e+004



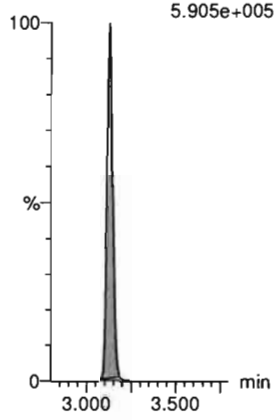
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F10:MRM of 2 channels,ES-
287.0 > 168.9
1.072e+005



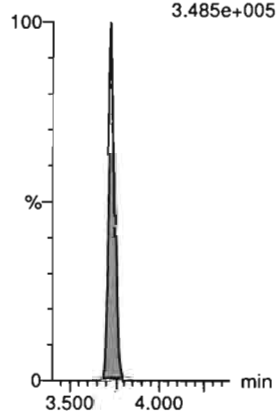
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.677e+004



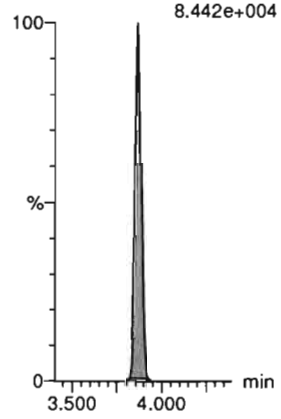
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F14:MRM of 1 channel,ES-
315.0 > 270.0
5.905e+005



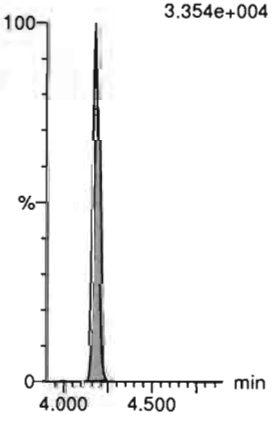
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.485e+005



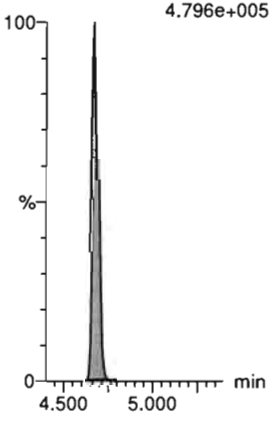
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.442e+004



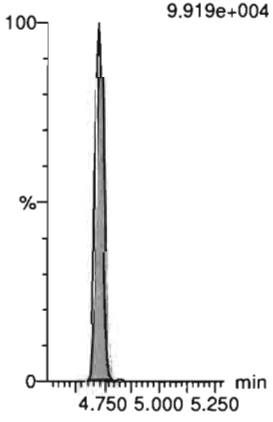
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.354e+004



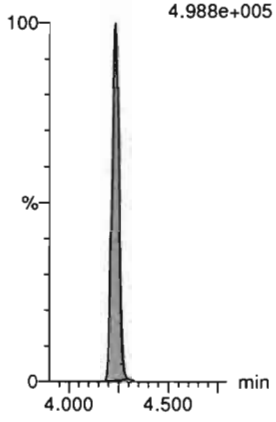
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.796e+005



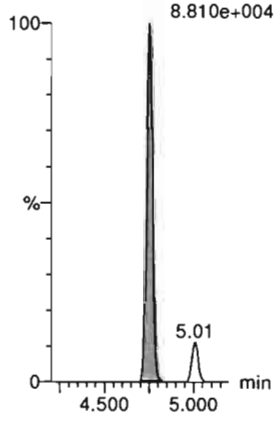
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.919e+004



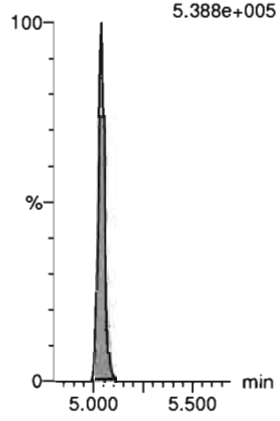
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.988e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.810e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.388e+005

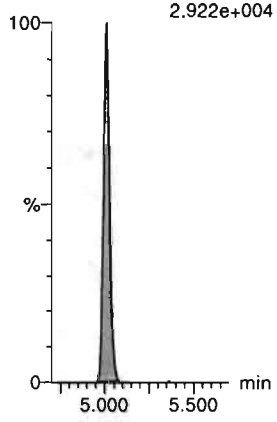


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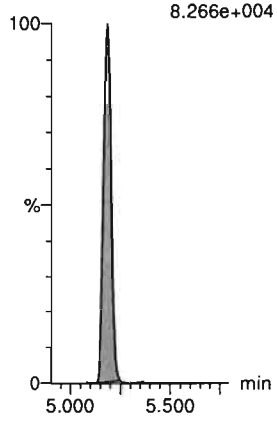
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Name: 200225P1-11, Date: 25-Feb-2020, Time: 19:43:44, ID: ST200225P1-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

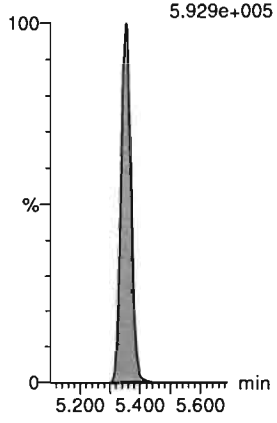
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F50:MRM of 1 channel,ES-
529 > 79.7
2.922e+004



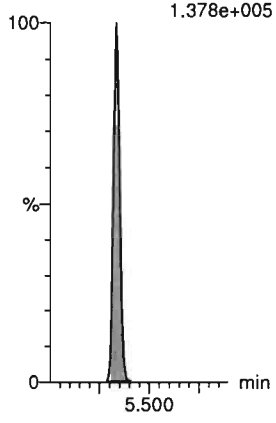
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.266e+004



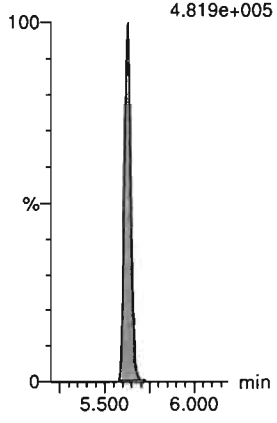
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F55:MRM of 1 channel,ES-
565 > 519.8
5.929e+005



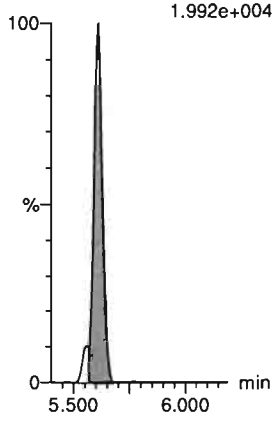
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.378e+005



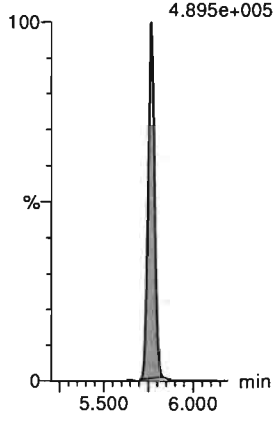
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.819e+005



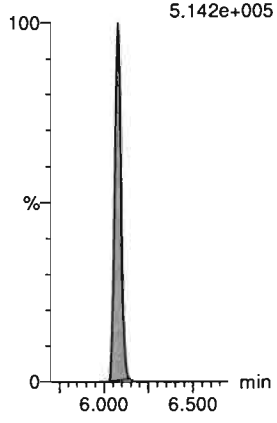
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
1.992e+004



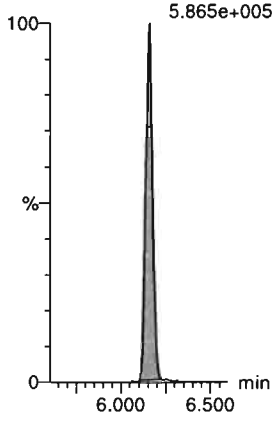
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.895e+005



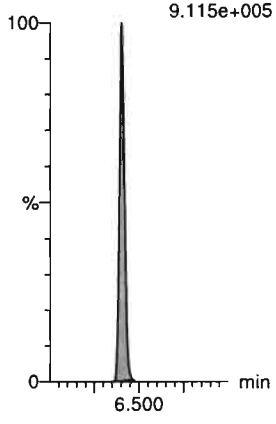
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.142e+005



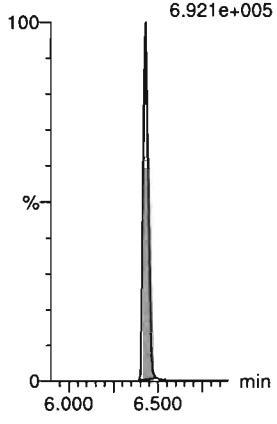
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.865e+005



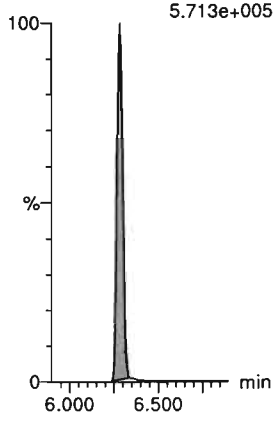
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.115e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.921e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.713e+005

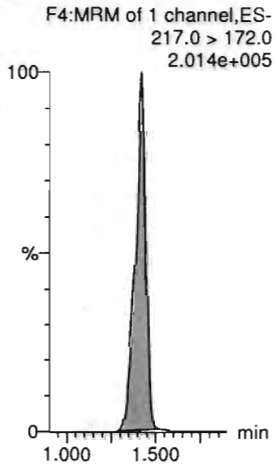


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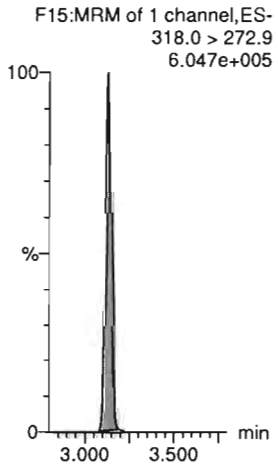
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Name: 200225P1-11, Date: 25-Feb-2020, Time: 19:43:44, ID: ST200225P1-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

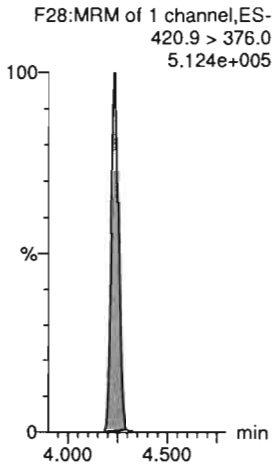
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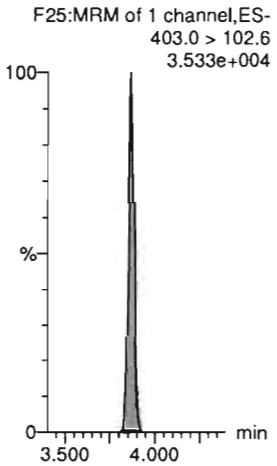
13C5-PFHxA



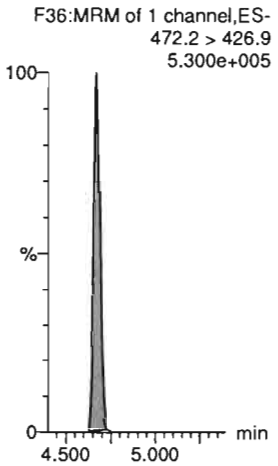
13C8-PFOA



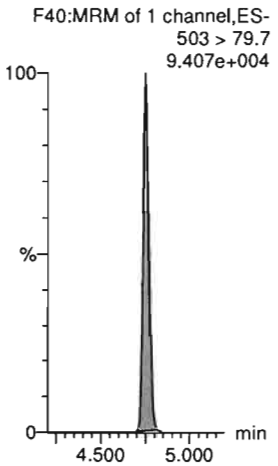
18O2-PFHxS



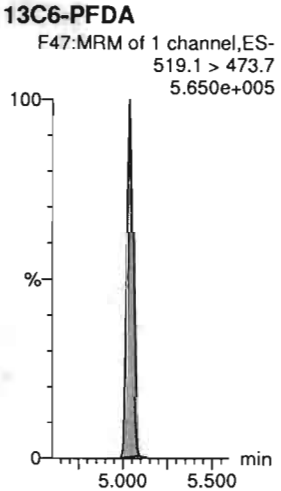
13C9-PFNA



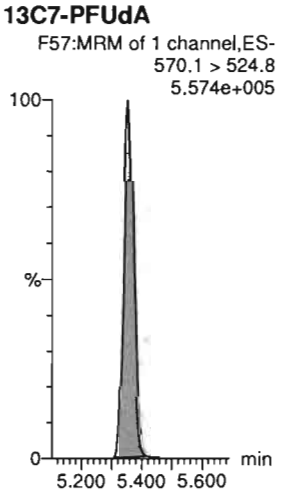
13C4-PFOS



13C6-PFDA



13C7-PFUdA

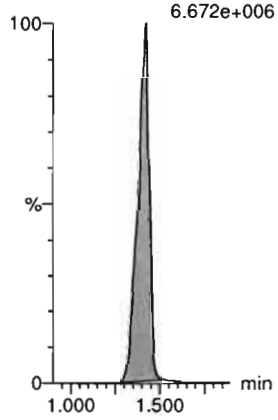


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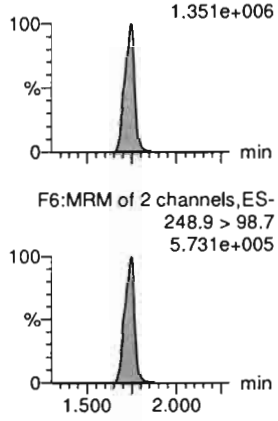
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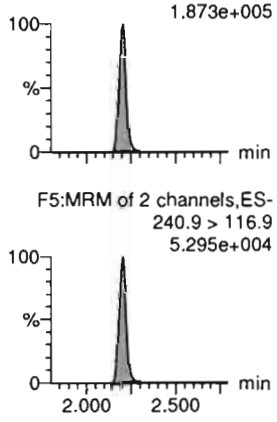
PFBA



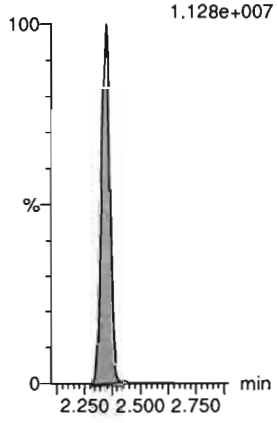
PFPrS



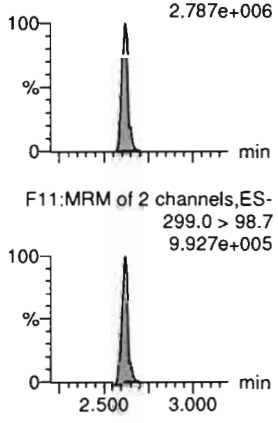
3:3 FTCA



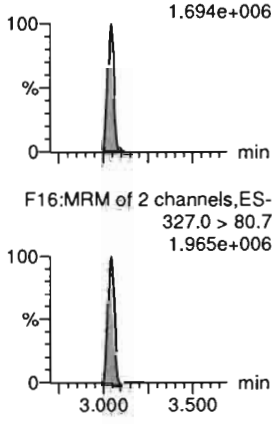
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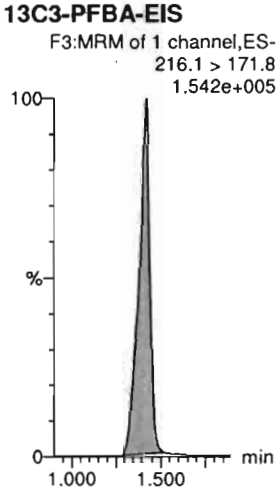
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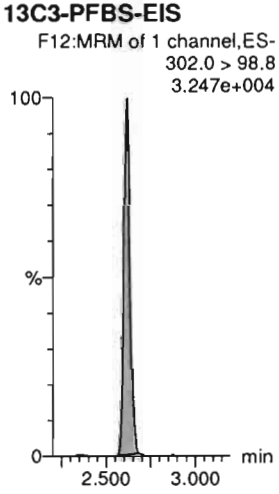
4:2 FTS



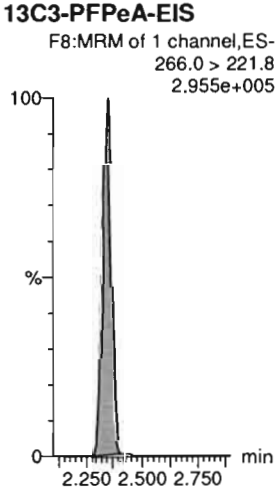
13C3-PFBA-EIS



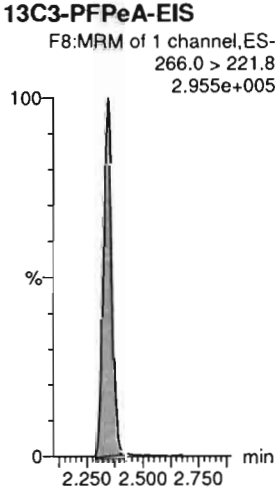
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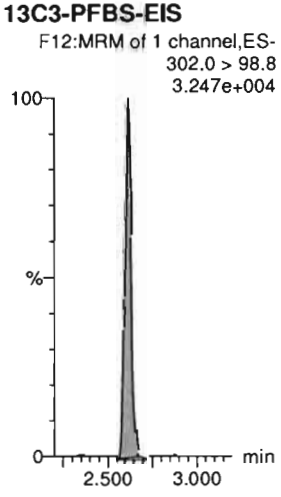
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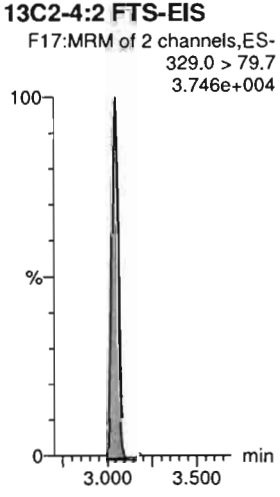
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

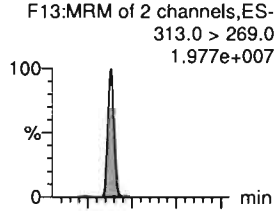


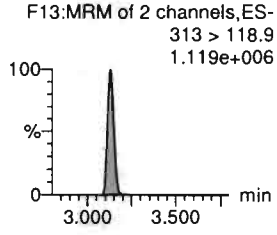
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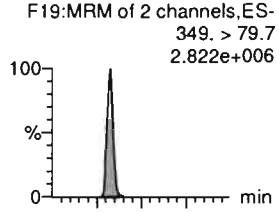
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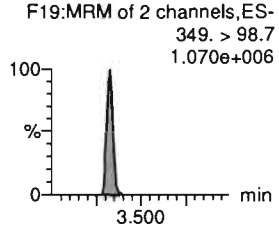
PFHxA



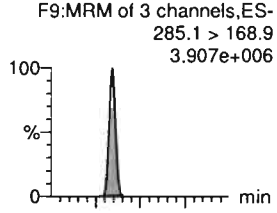


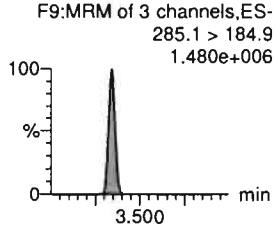
PFPeS



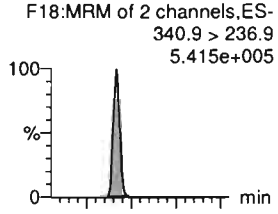


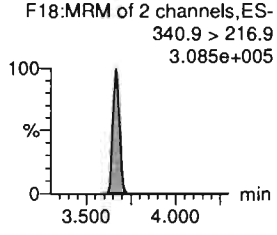
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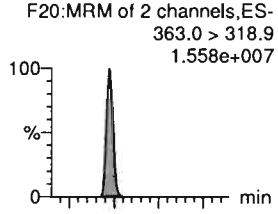


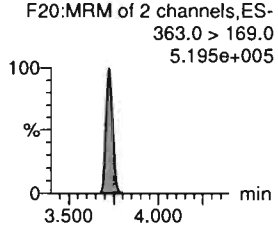
5:3 FTCA



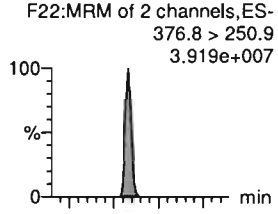


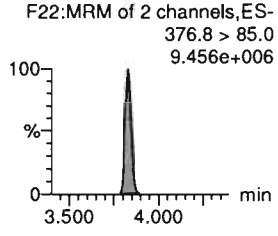
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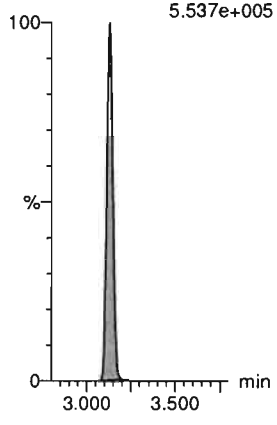


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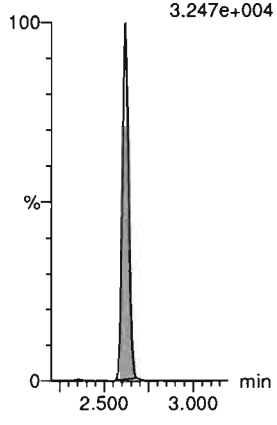




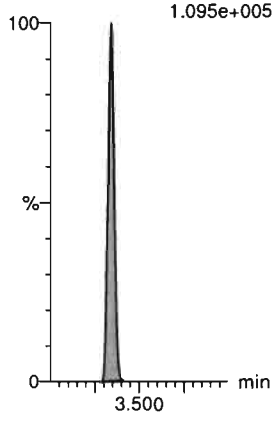
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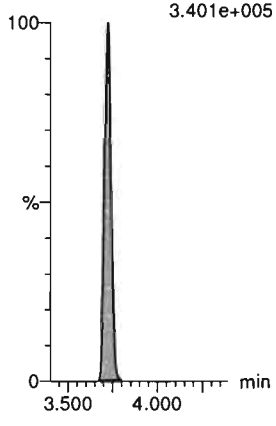
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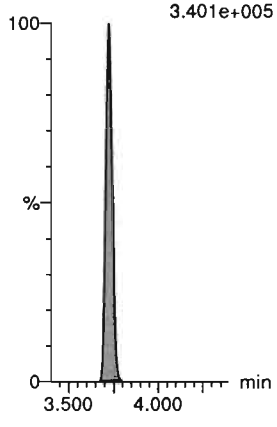
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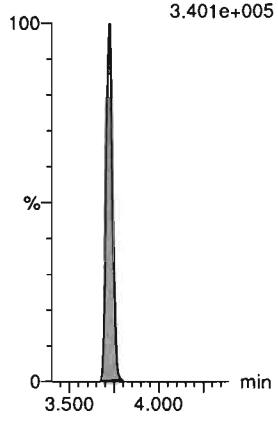
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13C4-PFHpA-EIS



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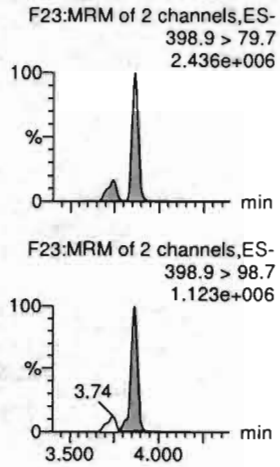


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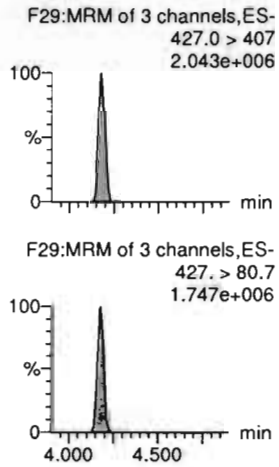
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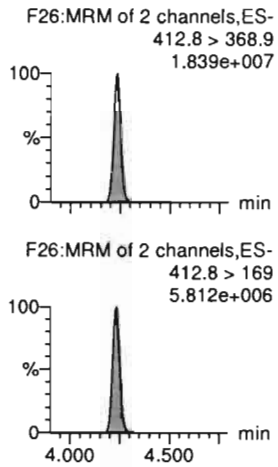
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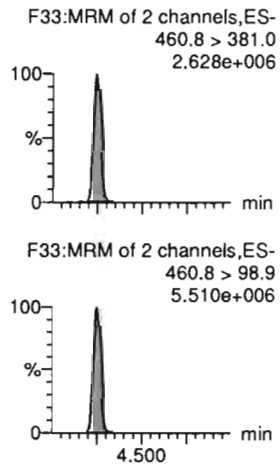
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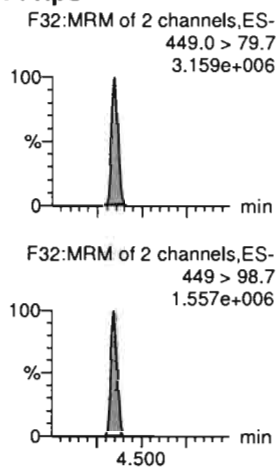
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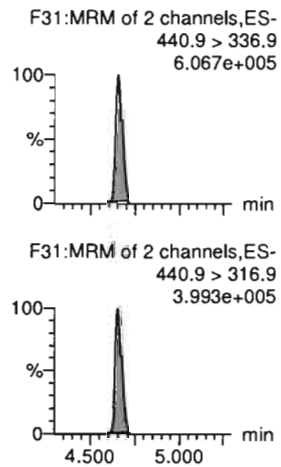
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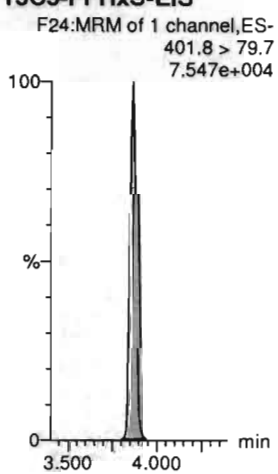
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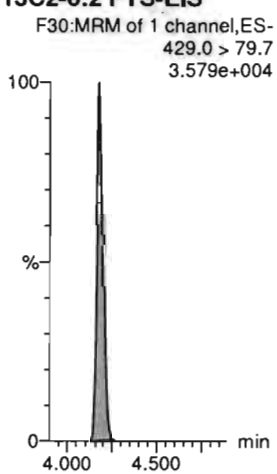
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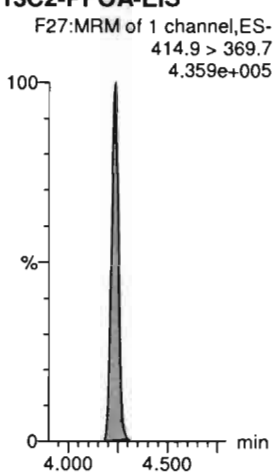
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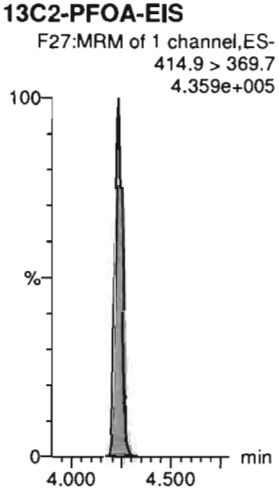
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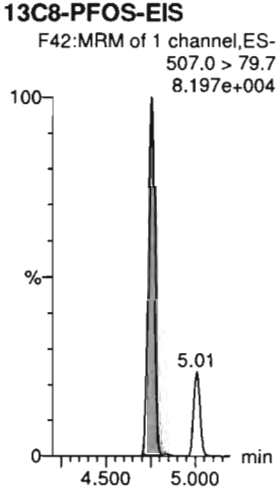
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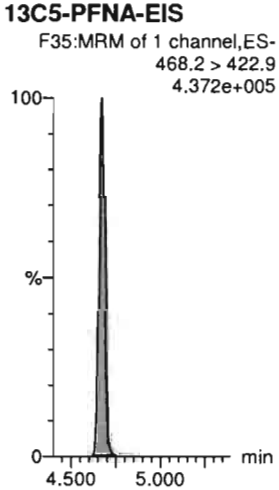
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13C8-PFOS-EIS



13C5-PFNA-EIS

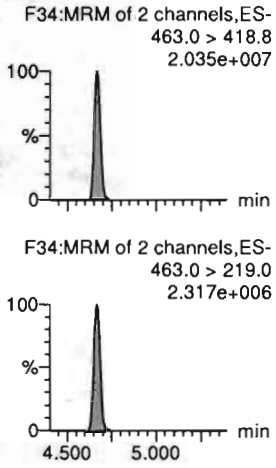


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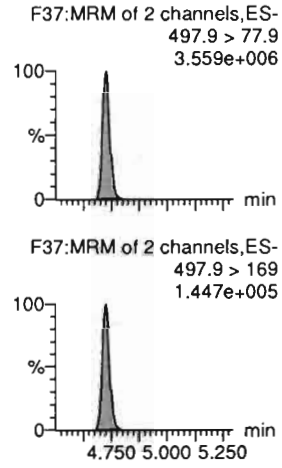
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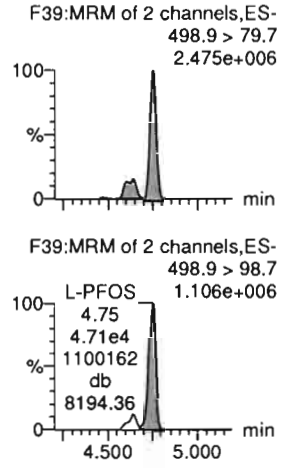
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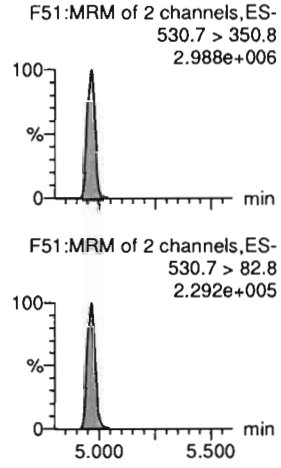
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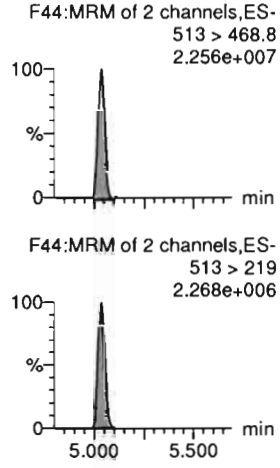
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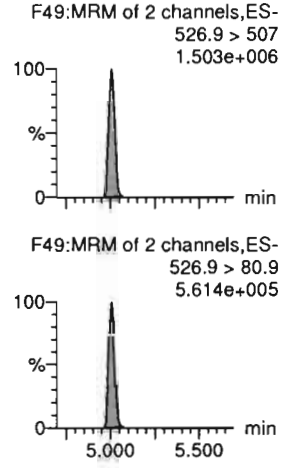
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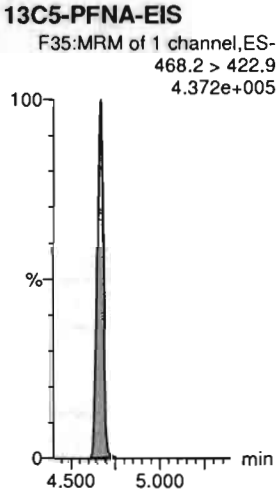
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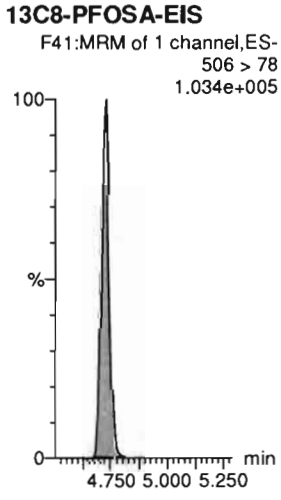
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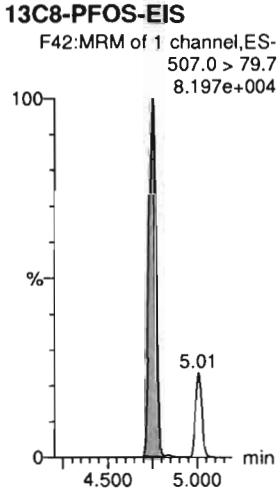
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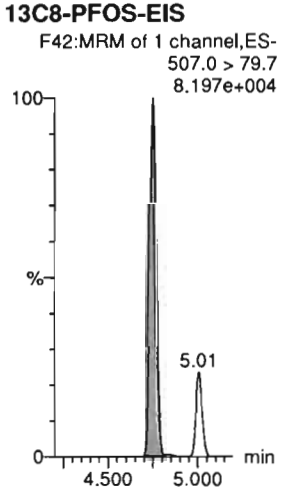
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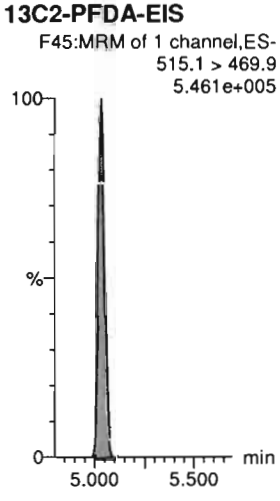
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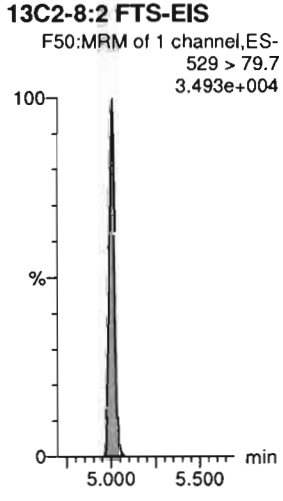
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

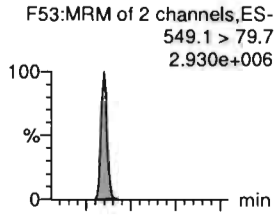


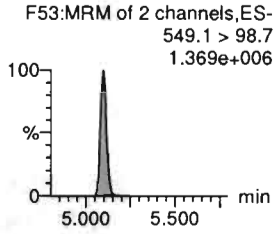
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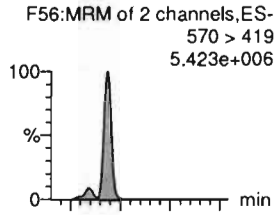
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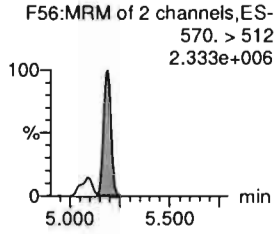
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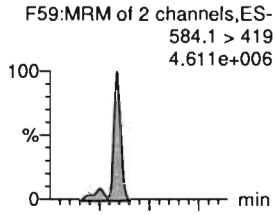


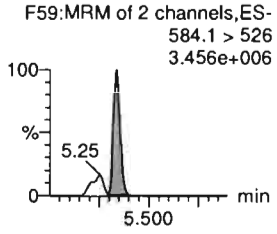
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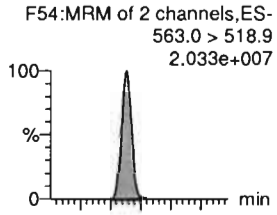


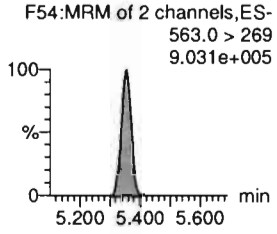
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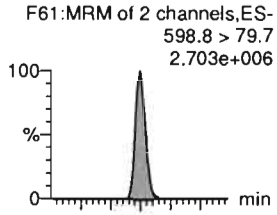


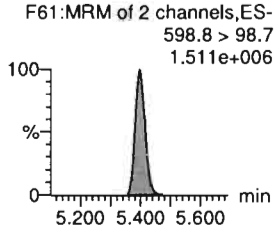
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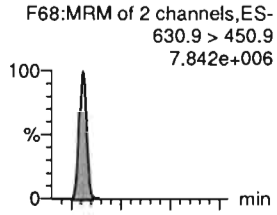


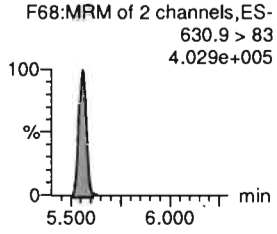
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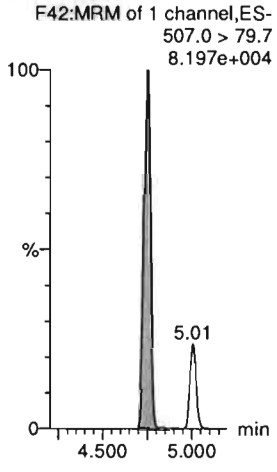


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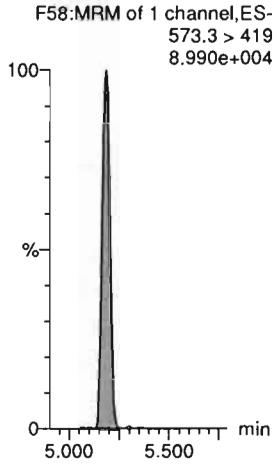




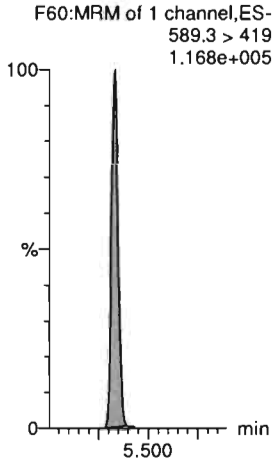
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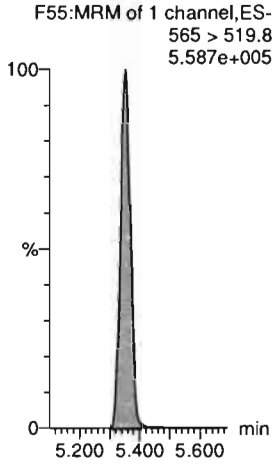
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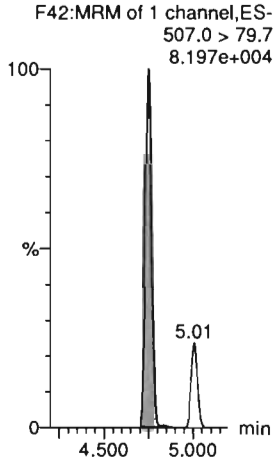
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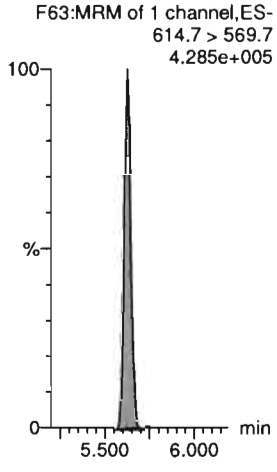
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13C8-PFOS-EIS



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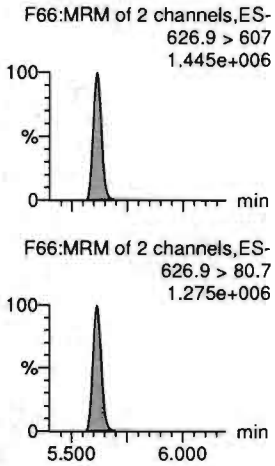


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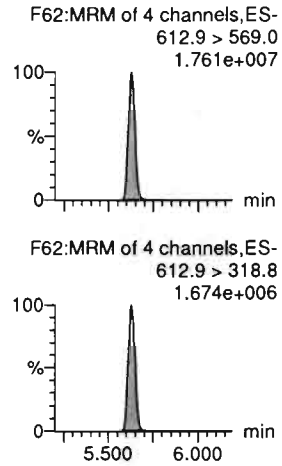
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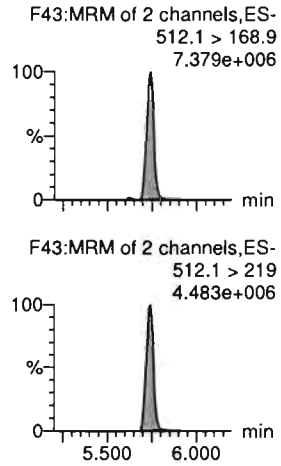
10:2 FTS



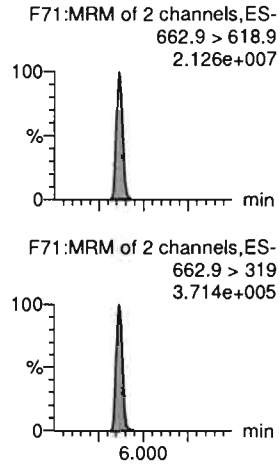
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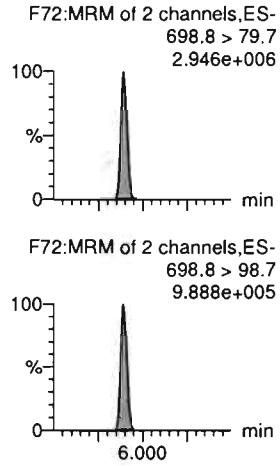
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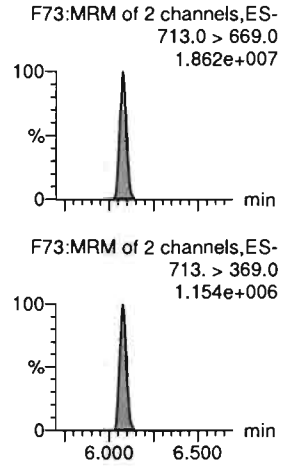
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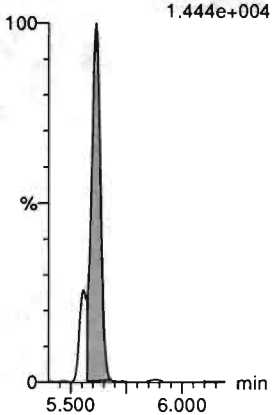
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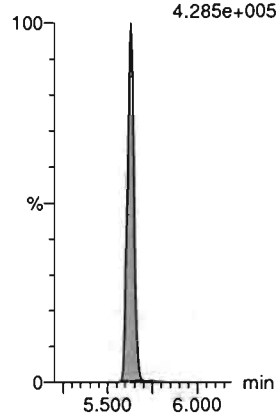
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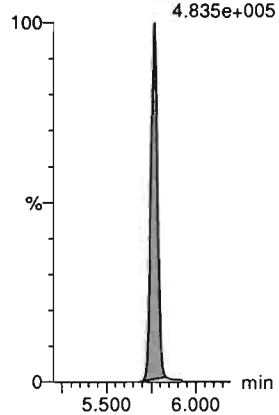
13C2-10:2 FTS-EIS



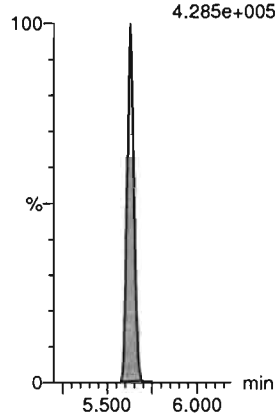
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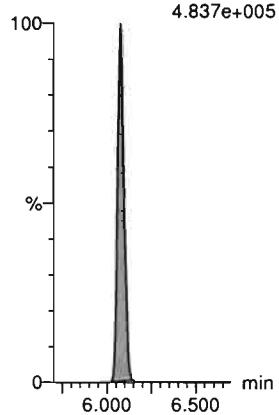
d3-N-MeFOSA-EIS



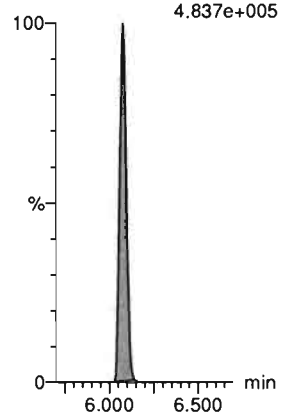
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

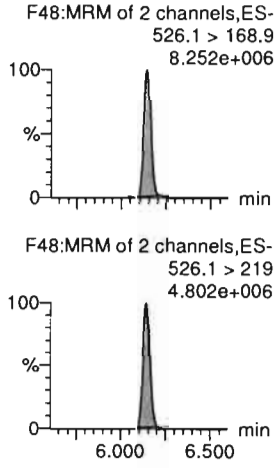


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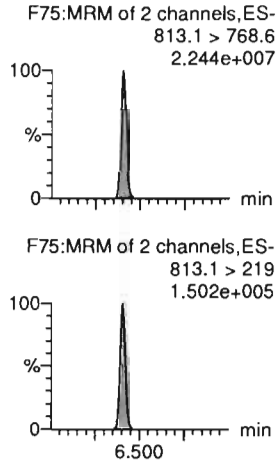
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Name: 200225P1-12, Date: 25-Feb-2020, Time: 19:54:16, ID: ST200225P1-10 PFC CS7 20B1111, Description: PFC CS7 20B1111

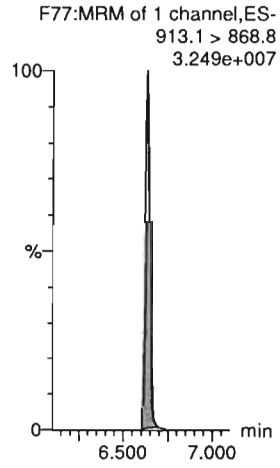
N-EtFOSA



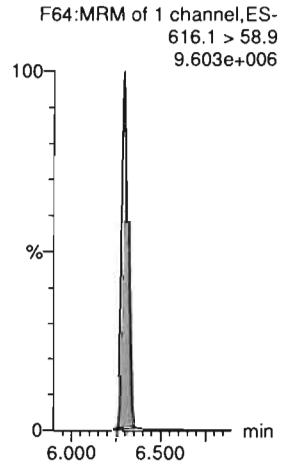
PFHxDA



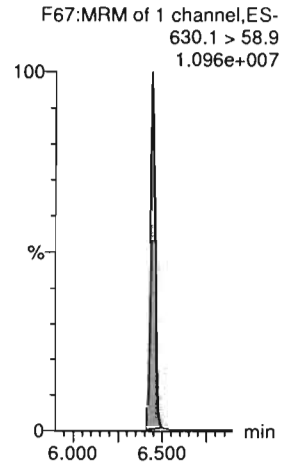
PFODA



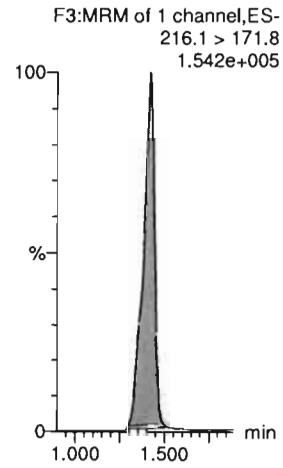
N-MeFOSE



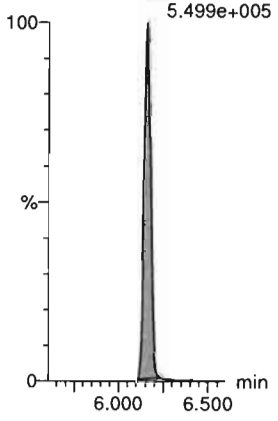
N-EtFOSE



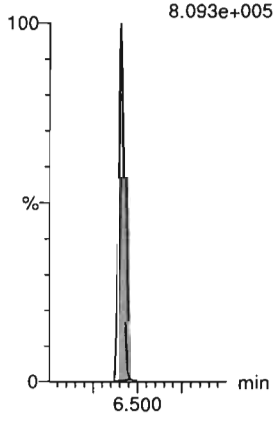
13C3-PFBA-RSD



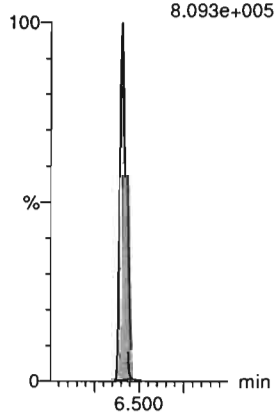
d5-N-ETFOSA-EIS



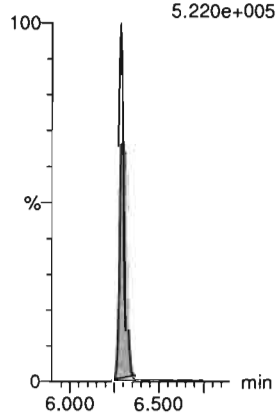
13C2-PFHxDA-EIS



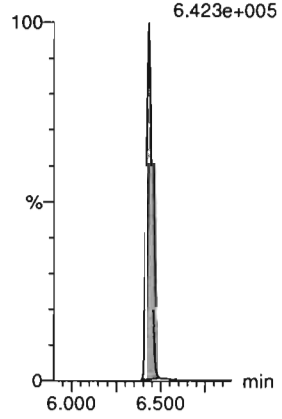
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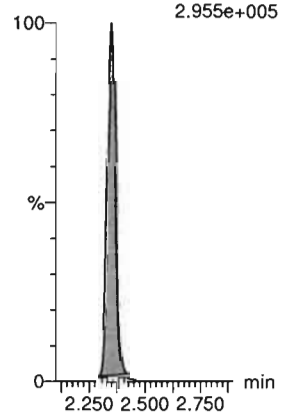
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

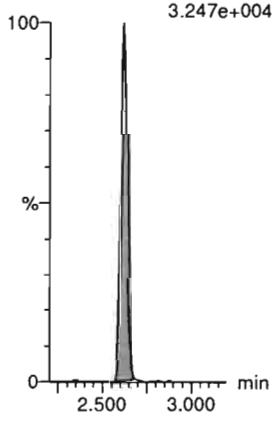


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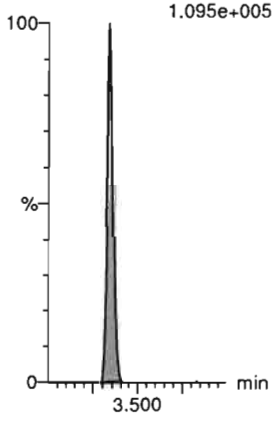
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Name: 200225P1-12, Date: 25-Feb-2020, Time: 19:54:16, ID: ST200225P1-10 PFC CS7 20B1111, Description: PFC CS7 20B1111

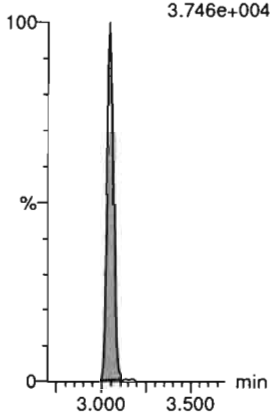
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.247e+004



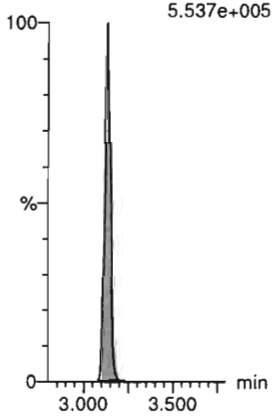
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.095e+005



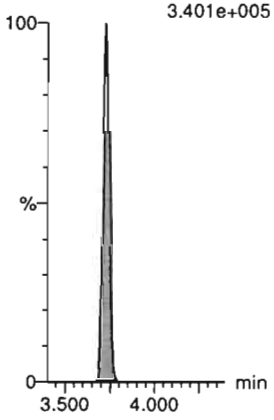
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.746e+004



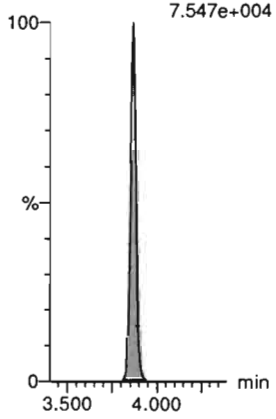
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.537e+005



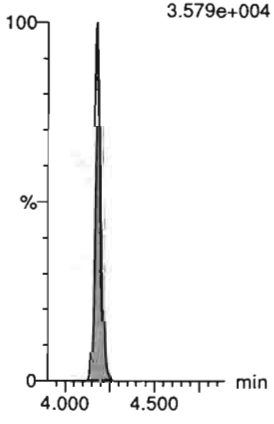
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.401e+005



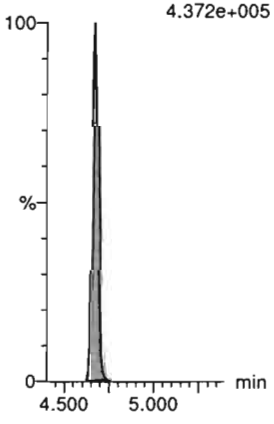
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.547e+004



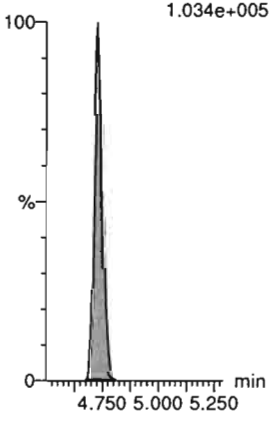
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.579e+004



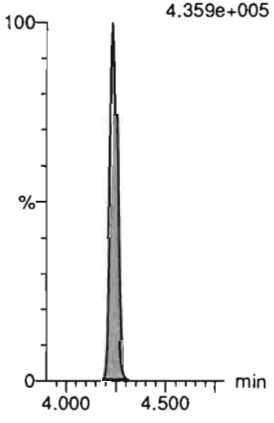
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.372e+005



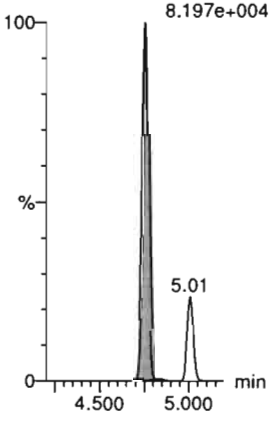
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.034e+005



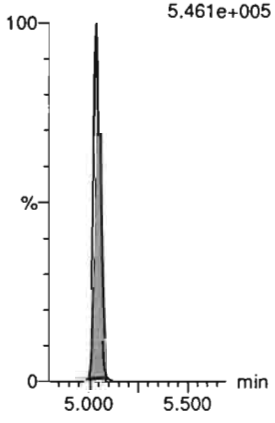
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.359e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.197e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.461e+005

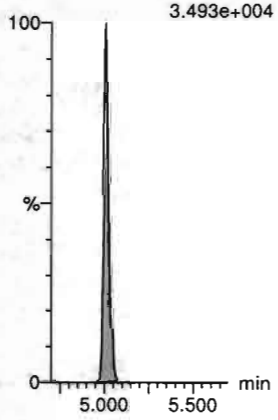


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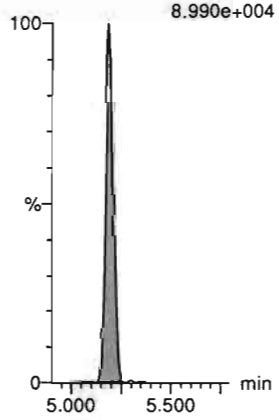
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Name: 200225P1-12, Date: 25-Feb-2020, Time: 19:54:16, ID: ST200225P1-10 PFC CS7 20B1111, Description: PFC CS7 20B1111

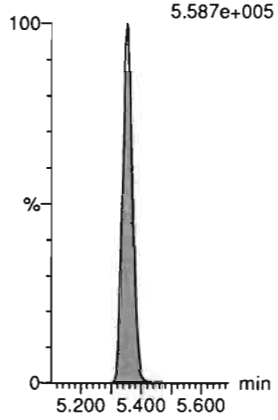
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.493e+004



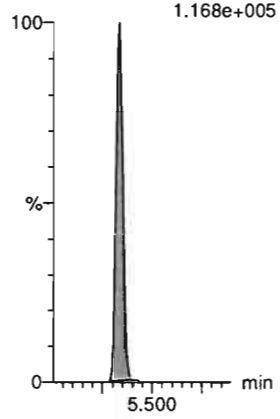
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.990e+004



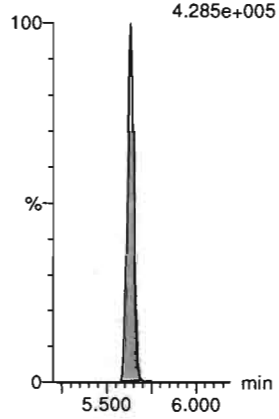
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.587e+005



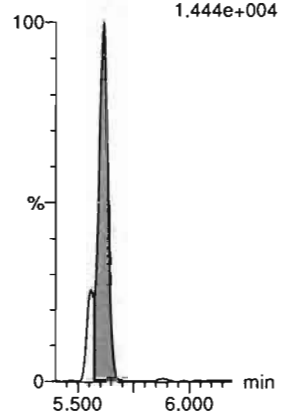
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.168e+005



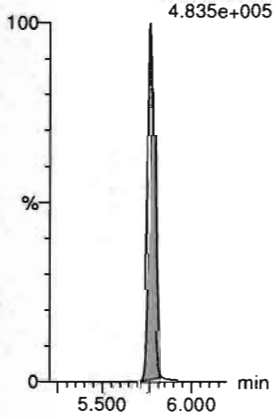
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.285e+005



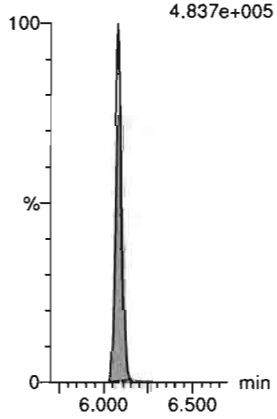
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
1.444e+004



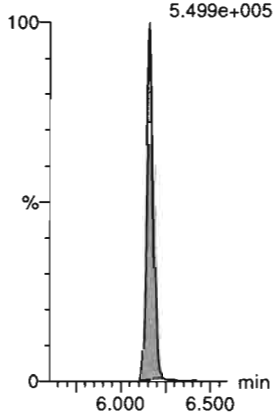
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.835e+005



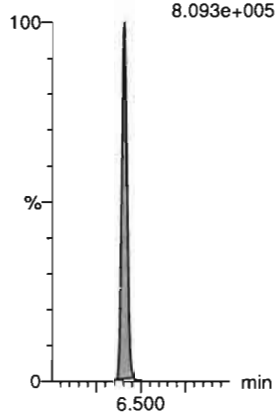
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.837e+005



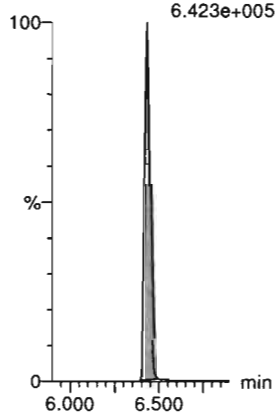
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.499e+005



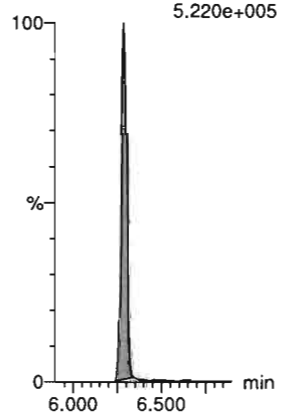
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.093e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.423e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.220e+005

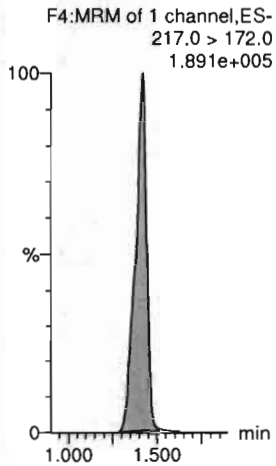


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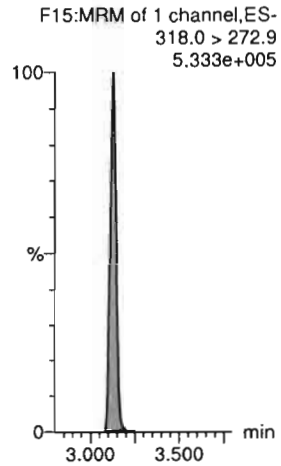
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Name: 200225P1-12, Date: 25-Feb-2020, Time: 19:54:16, ID: ST200225P1-10 PFC CS7 20B1111, Description: PFC CS7 20B1111

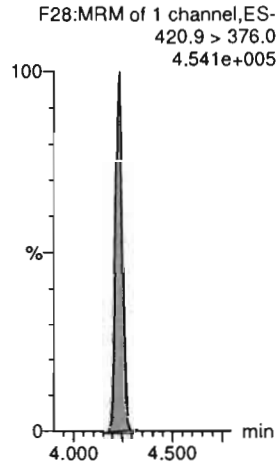
13C4-PFBA



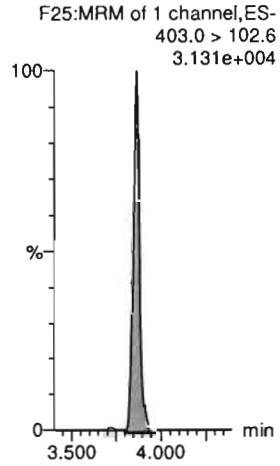
13C5-PFHxA



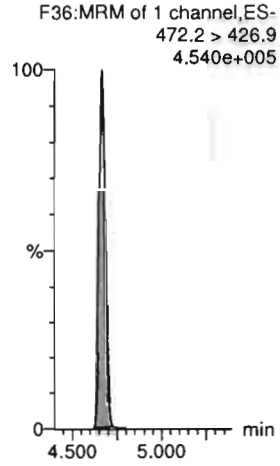
13C8-PFOA



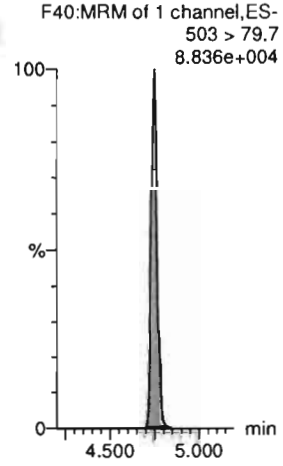
18O2-PFHxS



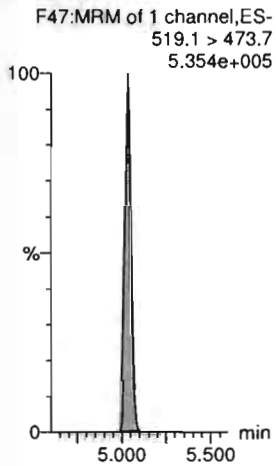
13C9-PFNA



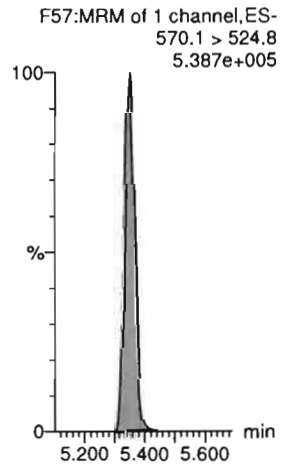
13C4-PFOS



13C6-PFDA



13C7-PFUdA



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(A) Not in ICV RK 2/26/20

Name: 200225P1-14, Date: 25-Feb-2020, Time: 20:15:16, ID: ICV200225P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	10298.746	10920.761	1.00	1.42	11.788	10.000	10.6	105.7	NO		
2	2	PFPrS	248.9 > 79.7		1546.425	1.00			10.000		(A)	NO		
3	3	3:3 FTCA	240.9 > 176.9		13528.744	1.00			10.000		↓	NO		
4	4	PFPeA	263.1 > 218.9	11375.653	13528.744	1.00	2.35	10.511	10.000	10.7	107.4	NO		
5	5	PFBS	299.0 > 79.7	2863.487	1546.425	1.00	2.62	23.146	8.840	9.99	113.0	NO	3.289	NO
6	6	4:2 FTS	327.0 > 307	1939.800	1699.368	1.00	3.04	14.269	9.360	10.4	111.5	NO	0.933	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	10920.761		1.00	1.42	10920.761	12.500	12.2	97.7	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1546.425		1.00	2.62	1546.425	12.500	12.9	103.1	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	13528.744		1.00	2.34	13528.744	12.500	12.0	95.6	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	13528.744		1.00	2.34	13528.744	12.500	12.0	95.6	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1546.425		1.00	2.62	1546.425	12.500	12.9	103.1	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1699.368		1.00	3.04	1699.368	12.500	11.4	91.2	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	19142.988	24208.178	1.00	3.13	9.885	10.000	11.0	109.7	NO	15.041	NO
15	8	PFPeS	349.>79.7	2700.508	1546.425	1.00	3.32	21.829	9.360	9.22	98.5	NO	2.557	NO
16	9	HFPO-DA	285.1 > 168.9	3430.764	4035.316	1.00	3.34	10.627	10.000	10.7	106.8	NO	2.672	NO
17	10	5:3 FTCA	340.9 > 236.9		16385.832	1.00			10.000		(A)	NO		
18	11	PFHpA	363.0 > 318.9	16250.435	16385.832	1.00	3.73	12.397	10.000	9.98	99.8	NO	31.736	NO
19	12	ADONA	376.8 > 250.9	35319.387	16385.832	1.00	3.83	26.944	10.000	9.43	94.3	NO	3.962	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	24208.178		1.00	3.13	24208.178	12.500	13.5	107.9	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1546.425		1.00	2.62	1546.425	12.500	12.9	103.1	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	4035.316		1.00	3.34	4035.316	12.500	12.8	102.7	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	16385.832		1.00	3.72	16385.832	12.500	13.3	106.3	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	16385.832		1.00	3.72	16385.832	12.500	13.3	106.3	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	16385.832		1.00	3.72	16385.832	12.500	13.3	106.3	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2530.766	3487.608	1.00	3.86	9.071	9.120	8.86	97.2	NO	2.023	NO
28	15	6:2 FTS	427.0 > 407	1664.254	1242.526	1.00	4.18	16.743	9.480	10.6	112.0	NO	1.052	NO
29	16	L-PFOA	412.8 > 368.9	21512.307	21463.426	1.00	4.23	12.528	10.000	11.0	109.9	NO	3.289	NO
30	18	PFecHS	460.8 > 381.0		21463.426	1.00			10.000		(A)	NO		
31	19	PFHpS	449.0 > 79.7	3236.478	3720.247	1.00	4.34	10.875	9.480	11.7	123.4	NO	2.010	NO
32	20	7:3 FTCA	440.9 > 336.9		18928.699	1.00			10.000		(A)	NO		
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3487.608		1.00	3.86	3487.608	12.500	12.8	102.1	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1242.526		1.00	4.18	1242.526	12.500	10.1	80.9	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	21463.426		1.00	4.23	21463.426	12.500	13.5	107.8	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	21463.426		1.00	4.23	21463.426	12.500	13.5	107.8	NO		

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Name: 200225P1-14, Date: 25-Feb-2020, Time: 20:15:16, ID: ICV200225P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	71	13C8-PFOS-EIS	507.0 > 79.7	3720.247		1.00	4.75	3720.247	12.500	12.8	102.0	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	18928.699		1.00	4.67	18928.699	12.500	12.7	101.5	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	18616.787	18928.699	1.00	4.67	12.294	10.000	10.3	102.9	NO	8.250	NO
41	22	PFOSA	497.9 > 77.9	3245.099	4987.479	1.00	4.73	8.133	10.000	9.94	99.4	NO	22.910	NO
42	23	L-PFOS	498.9 > 79.7	2950.595	3720.247	1.00	4.75	9.914	9.280	10.6	114.2	NO	2.513	NO
43	25	9Cl-PF30NS	530.7 > 350.8	2930.765	3720.247	1.00	4.96	9.847	9.280	9.77	105.3	NO	15.856	NO
44	26	PFDA	513 > 468.8	18401.865	19611.957	1.00	5.04	11.729	10.000	9.96	99.6	NO	9.449	NO
45	27	8:2 FTS	526.9 > 507	1508.775	1205.674	1.00	5.01	15.642	9.600	12.4	128.9	NO	2.206	YES
46	65	13C5-PFNA-EIS	468.2 > 422.9	18928.699		1.00	4.67	18928.699	12.500	12.7	101.5	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4987.479		1.00	4.73	4987.479	12.500	13.3	106.2	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3720.247		1.00	4.75	3720.247	12.500	12.8	102.0	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3720.247		1.00	4.75	3720.247	12.500	12.8	102.0	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	19611.957		1.00	5.04	19611.957	12.500	12.0	96.0	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1205.674		1.00	5.01	1205.674	12.500	11.8	94.4	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	3022.497	3720.247	1.00	5.10	10.156	9.600	11.4	118.4	NO	2.354	NO
54	29	L-MeFOSAA	570 > 419	6104.077	4390.783	1.00	5.19	17.378	10.000	8.99	89.9	NO	1.878	NO
55	31	L-EtFOSAA	584.1 > 419	5447.836	5635.973	1.00	5.34	12.083	10.000	10.1	101.0	NO	1.164	NO
56	33	PFUdA	563.0 > 518.9	19137.322	22407.240	1.00	5.35	10.676	10.000	11.4	114.3	NO	24.952	NO
57	34	PFDS	598.8 > 79.7	2683.358	3720.247	1.00	5.40	9.016	9.600	11.7	122.3	NO	1.908	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	7882.754	18890.717	1.00	5.56	5.216	9.440	11.4	120.9	NO	19.475	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3720.247		1.00	4.75	3720.247	12.500	12.8	102.0	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	4390.783		1.00	5.18	4390.783	12.500	13.3	106.3	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	5635.973		1.00	5.33	5635.973	12.500	14.3	114.0	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	22407.240		1.00	5.35	22407.240	12.500	13.9	110.9	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3720.247		1.00	4.75	3720.247	12.500	12.8	102.0	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	18890.717		1.00	5.62	18890.717	12.500	11.2	89.6	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	5.285	845.520	1.00	5.63	0.063	10.000		(A)	NO	0.559	NO
67	37	PFDoA	612.9 > 569.0	18885.117	18890.717	1.00	5.62	12.496	10.000	11.5	115.5	NO	11.138	NO
68	38	N-MeFOSA	512.1 > 168.9		21195.408	1.00			9.600		(A)	NO		
69	39	PFTrDA	662.9 > 618.9	19907.018	18890.717	1.00	5.87	13.172	10.000	11.8	117.9	NO	53.731	NO
70	40	PFDoS	698.8 > 79.7	4.986	22225.467	1.00	5.86	0.003	10.000		(A)	NO	1.242	NO
71	41	PFTeDA	713.0 > 669.0	19661.219	22225.467	1.00	6.08	11.058	10.000	11.6	116.2	NO	15.780	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	845.520		1.00	5.61	845.520	10.000	11.7	117.5	NO		

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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83	13C2-PFDoA-EIS	614.7 > 569.7	18890.717		1.00	5.62	18890.717	12.500	11.2	89.6	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	21195.408		1.00	5.76	21195.408	149.200	150	100.4	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	18890.717		1.00	5.62	18890.717	12.500	11.2	89.6	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	22225.467		1.00	6.08	22225.467	12.500	11.7	93.8	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	22225.467		1.00	6.08	22225.467	12.500	11.7	93.8	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9		27160.416	1.00			9.600			NO		
80	43	PFHxDA	813.1 > 768.6		31592.230	1.00			10.000			NO		
81	44	PFODA	913.1 > 868.8	65.524	31592.230	1.00	6.63	0.026	10.000			NO		
82	45	N-MeFOSE	616.1 > 58.9		19540.221	1.00			9.600			NO		
83	46	N-EtFOSE	630.1 > 58.9		22678.684	1.00			9.600			NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	27160.416		1.00	6.15	27160.416	149.200	150	100.7	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	31592.230		1.00	6.40	31592.230	12.500	12.2	97.5	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	31592.230		1.00	6.40	31592.230	12.500	12.2	97.5	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	19540.221		1.00	6.28	19540.221	149.200	162	108.4	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	22678.684		1.00	6.43	22678.684	149.200	152	101.8	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3720.247		1.00	4.75	3720.247	12.500	12.8	102.0	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	10920.761	13872.810	1.00	1.42	9.840	12.500	12.3	98.4	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	13696.423	25504.557	1.00	2.34	6.713	12.500	11.4	91.1	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	1546.675	1428.649	1.00	2.62	13.533	12.500	12.0	96.1	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	4035.316	25504.557	1.00	3.34	1.978	12.500	11.3	90.7	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1699.368	1428.649	1.00	3.04	14.869	12.500	11.3	90.6	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	24208.178	25504.557	1.00	3.13	11.865	12.500	12.2	97.5	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	16385.832	25504.557	1.00	3.72	8.031	12.500	12.2	97.5	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	3487.608	1428.649	1.00	3.86	30.515	12.500	12.1	96.9	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1242.526	4206.357	1.00	4.18	3.692	12.500	9.60	76.8	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	18928.699	20125.334	1.00	4.67	11.757	12.500	12.5	100.3	NO		
101	68	13C8-PFOSA-RSD	506 > 78	4987.479	24458.998	1.00	4.73	2.549	12.500	12.1	97.1	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	21463.426	23181.445	1.00	4.23	11.574	12.500	12.5	100.4	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3753.851	4206.357	1.00	4.75	11.155	12.500	11.7	94.0	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	19611.957	21334.279	1.00	5.04	11.491	12.500	11.9	95.2	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1202.633	4206.357	1.00	5.01	3.574	12.500	10.8	86.7	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	4390.783	24458.998	1.00	5.18	2.244	12.500	12.9	103.1	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	22407.240	24458.998	1.00	5.35	11.451	12.500	11.4	90.9	NO		

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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82	d5-N-EtFOSAA-RSD	589.3 > 419	5635.973	24458.998	1.00	5.33	2.880	12.500	12.4	99.5	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	18890.717	21334.279	1.00	5.62	11.068	12.500	11.4	91.4	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	845.520	4206.357	1.00	5.61	2.513	10.000	10.5	105.4	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	21195.408	24458.998	1.00	5.76	10.832	149.200	135	90.4	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	22225.467	24458.998	1.00	6.08	11.359	12.500	10.8	86.8	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	27160.416	24458.998	1.00	6.15	13.881	149.200	140	93.8	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	31592.230	24458.998	1.00	6.40	16.146	12.500	10.8	86.4	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	19540.221	24458.998	1.00	6.28	9.986	149.200	137	91.9	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	22678.684	24458.998	1.00	6.43	11.590	149.200	135	90.5	NO		
119	99	13C4-PFBA	217.0 > 172.0	13872.810	13872.810	1.00	1.42	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	25504.557	25504.557	1.00	3.13	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	23181.445	23181.445	1.00	4.23	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1428.649	1428.649	1.00	3.86	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	20125.334	20125.334	1.00	4.67	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	4206.357	4206.357	1.00	4.75	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	21334.279	21334.279	1.00	5.04	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	24458.998	24458.998	1.00	5.35	12.500	12.500	12.5	100.0	NO		

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Vista Analytical Laboratory

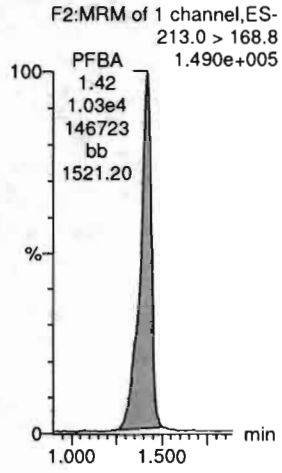
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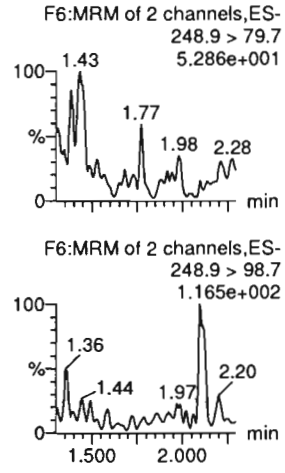
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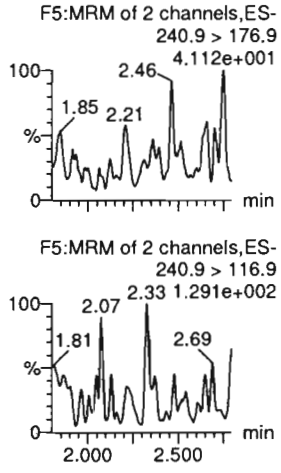
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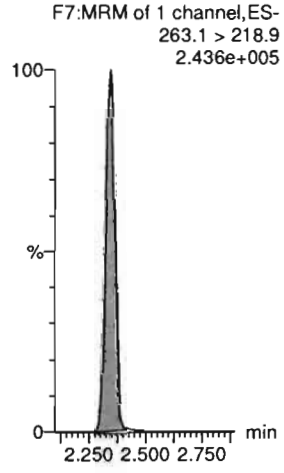
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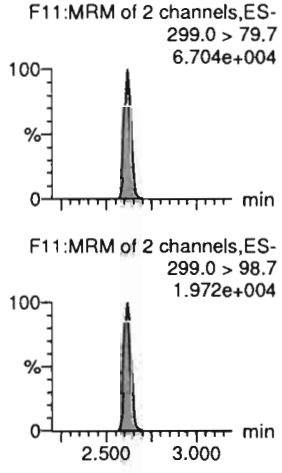
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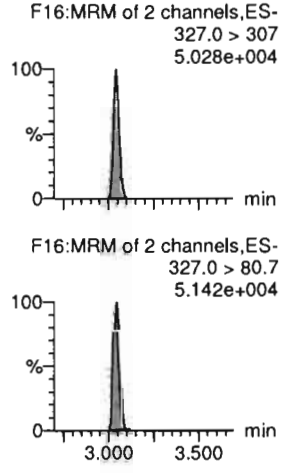
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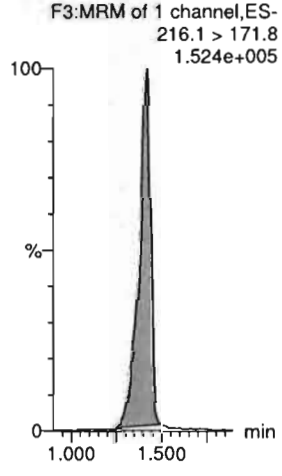
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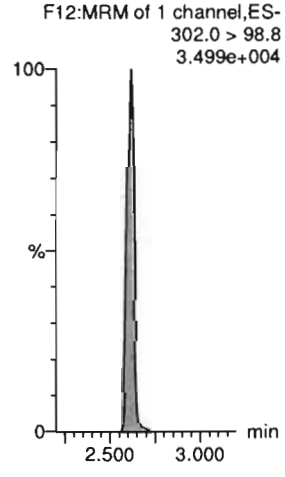
4:2 FTS



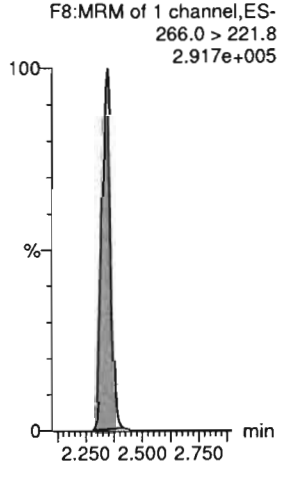
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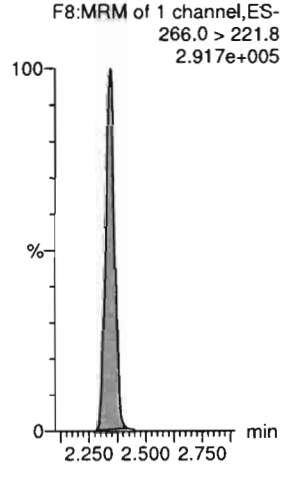
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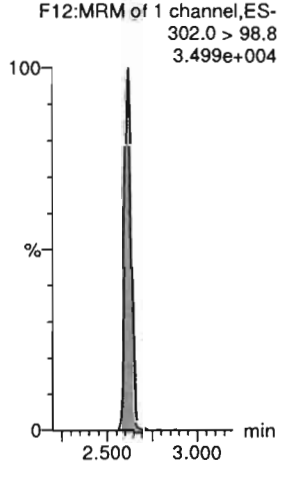
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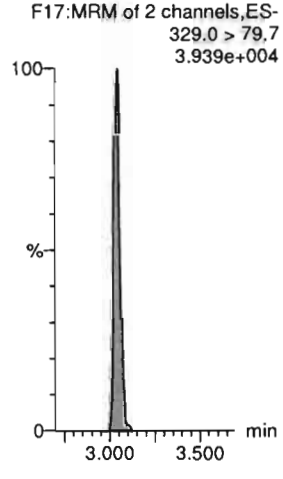
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS



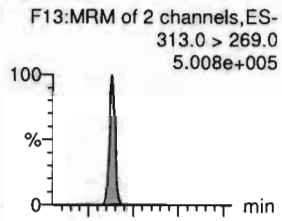
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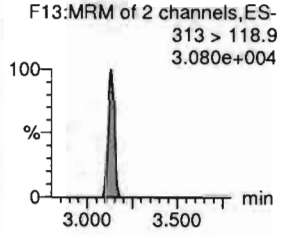
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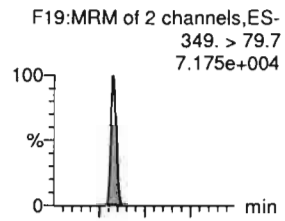
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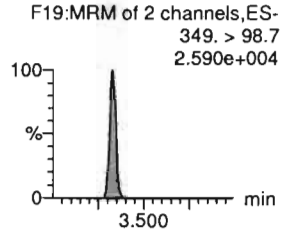
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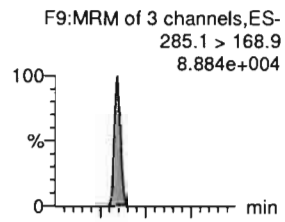


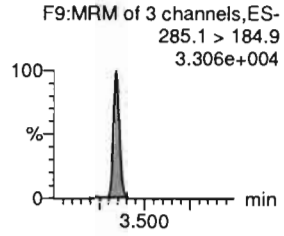
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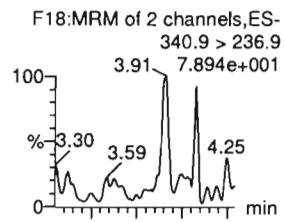


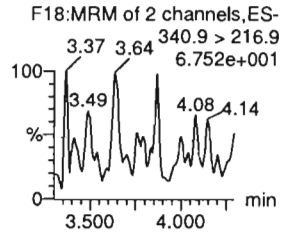
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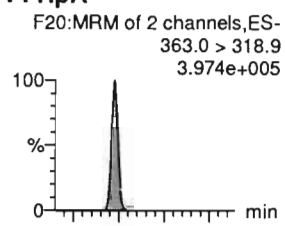


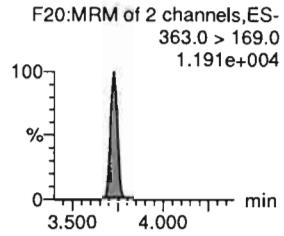
5:3 FTCA



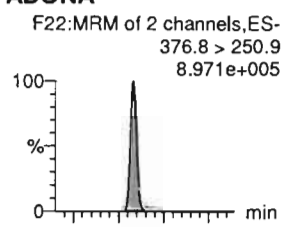


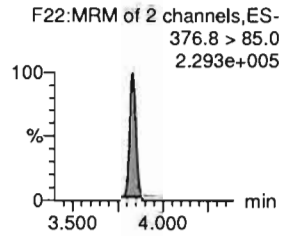
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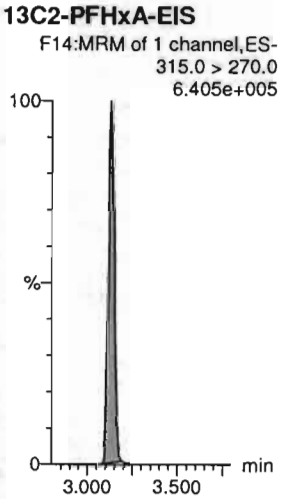


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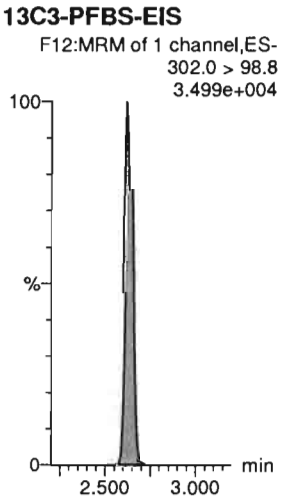




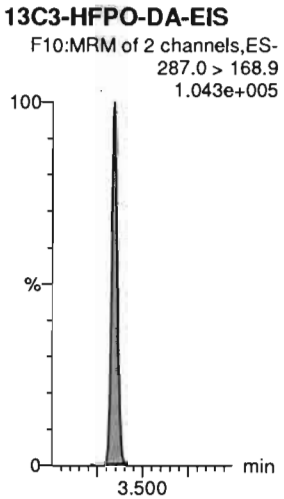
13C2-PFHxA-EIS



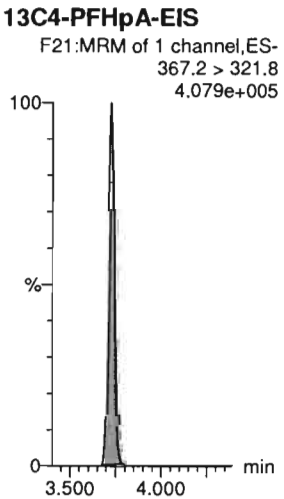
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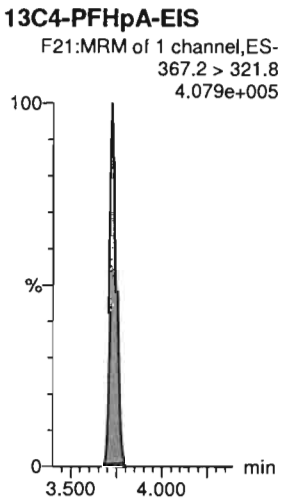
13C3-HFPO-DA-EIS



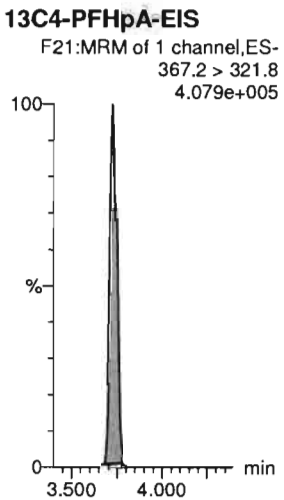
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS



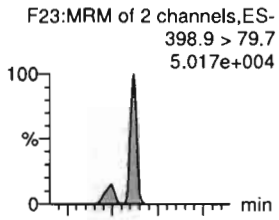
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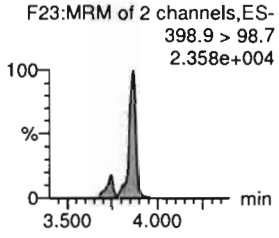
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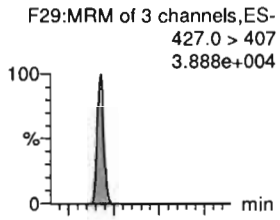
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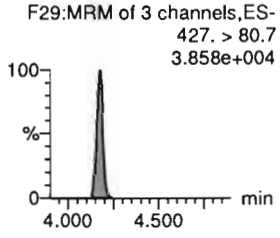
L-PFHxS



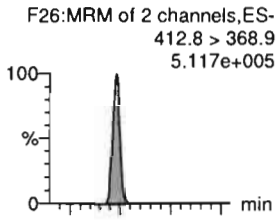


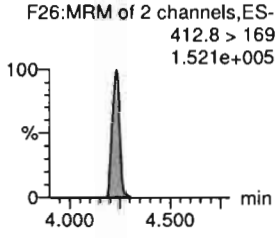
6:2 FTS



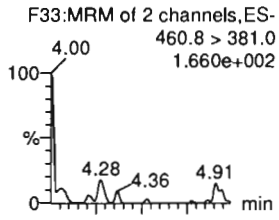


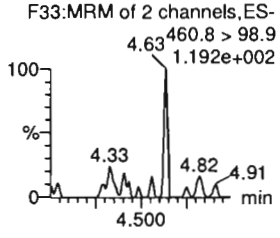
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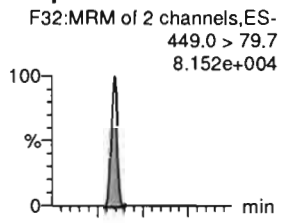


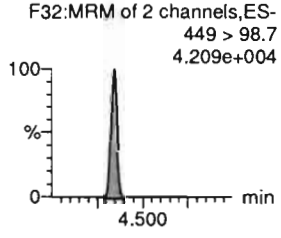
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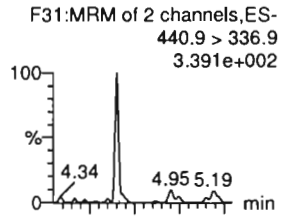


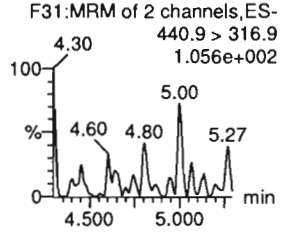
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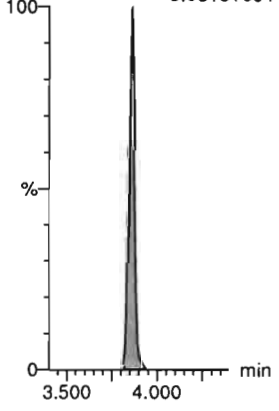


7:3 FTCA

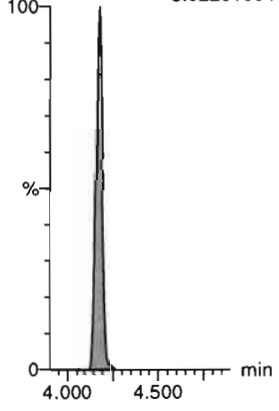




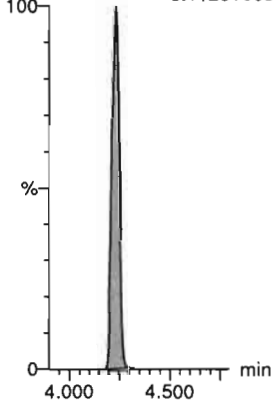
13C3-PFHxS-EIS



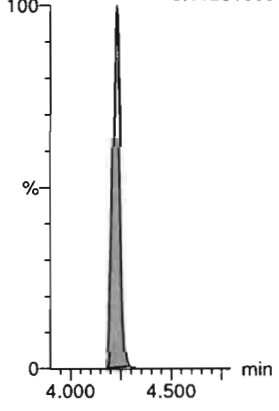
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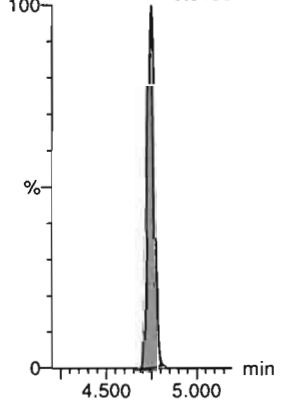
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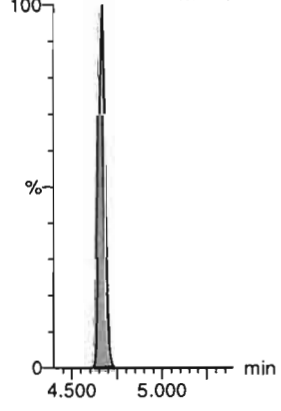
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS



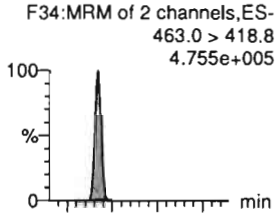
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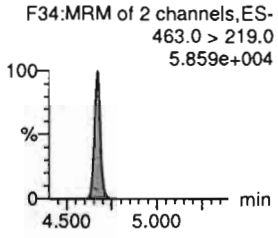
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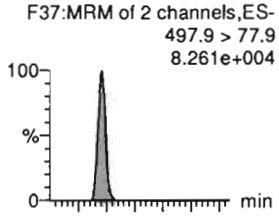
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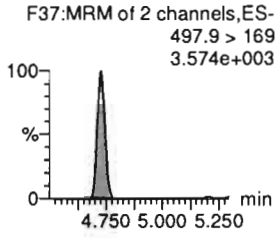
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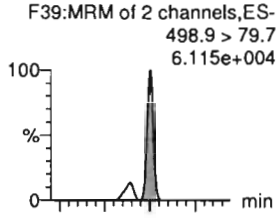


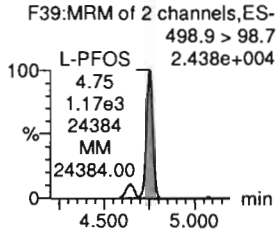
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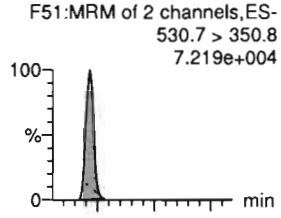


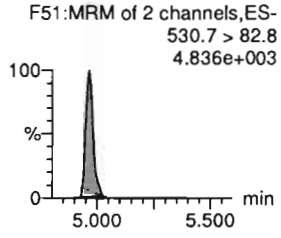
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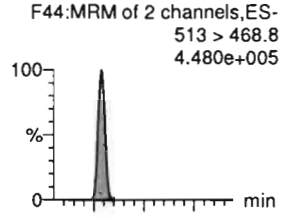


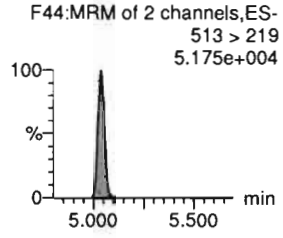
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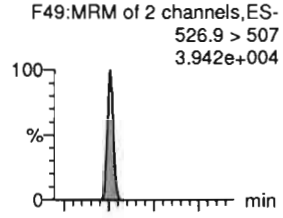


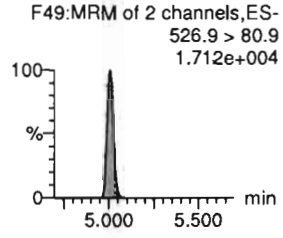
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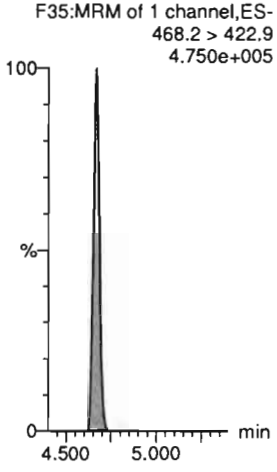


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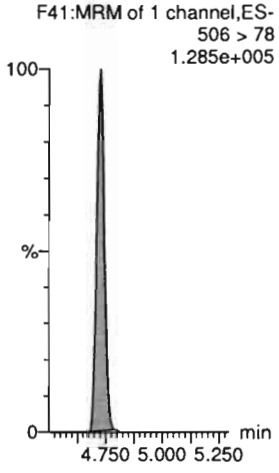




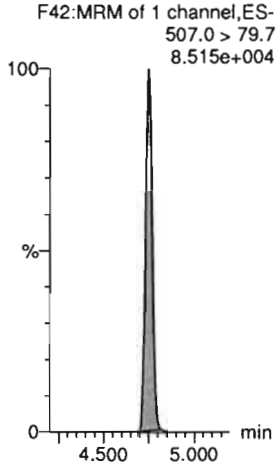
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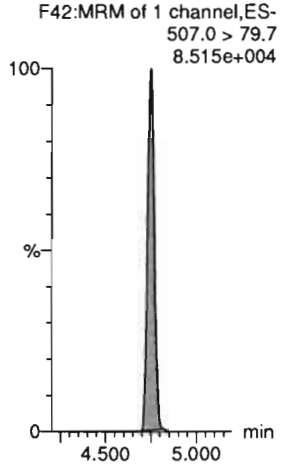
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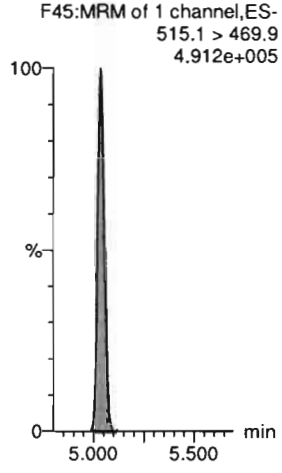
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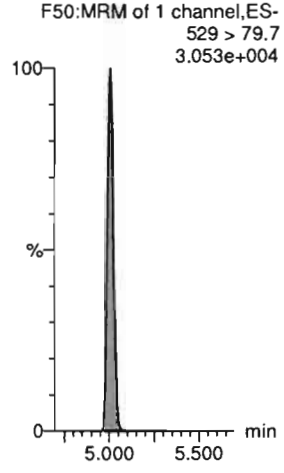
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13C2-PFDA-EIS



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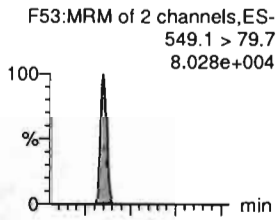
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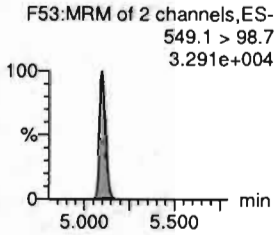
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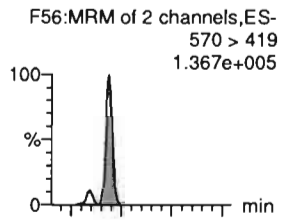
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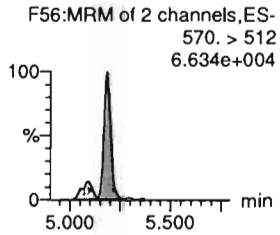
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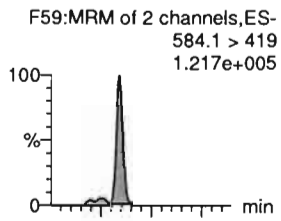


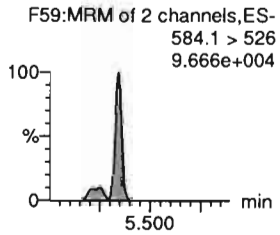
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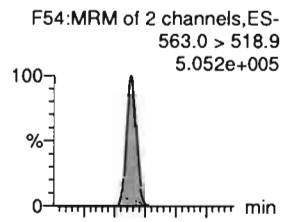


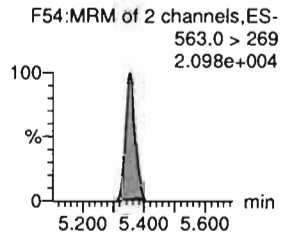
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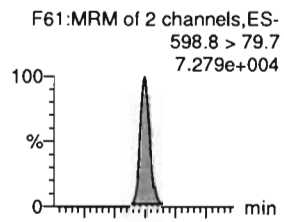


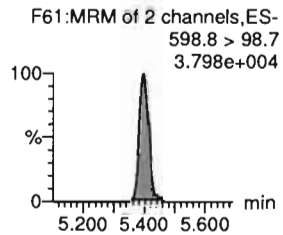
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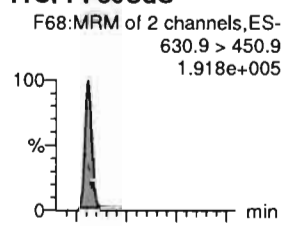


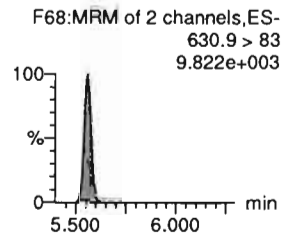
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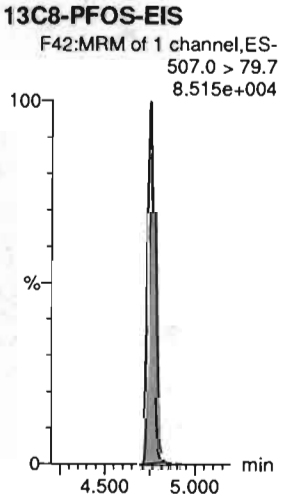


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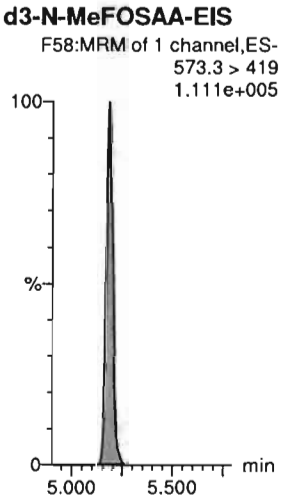




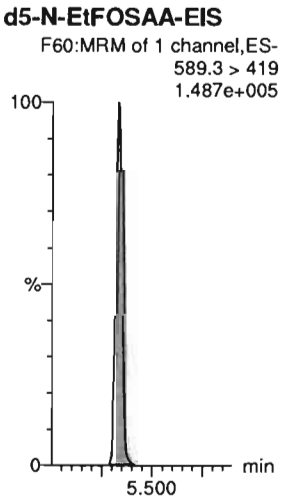
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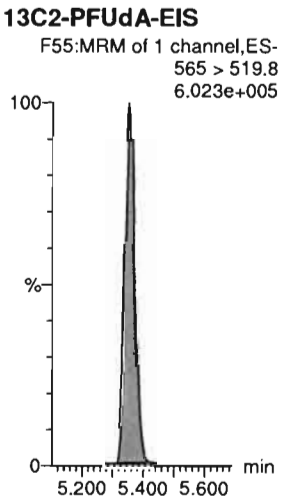
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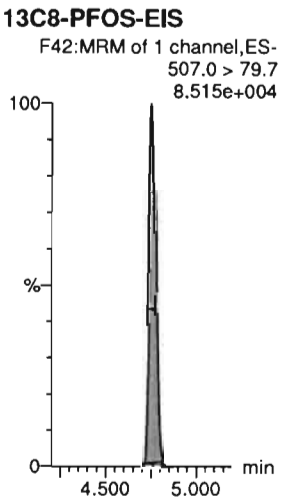
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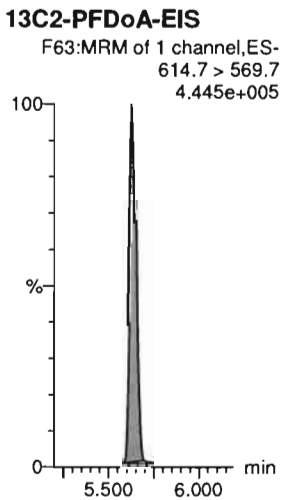
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13C8-PFOS-EIS



13C2-PFDoA-EIS



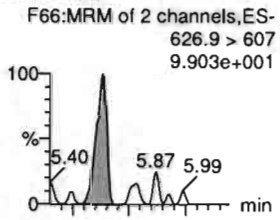
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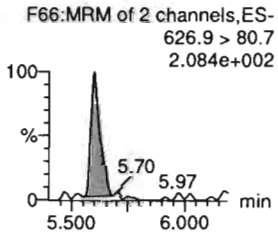
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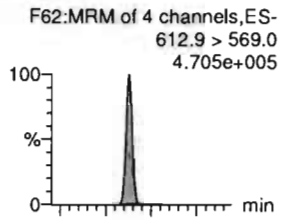
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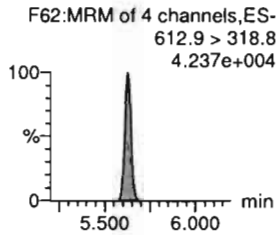
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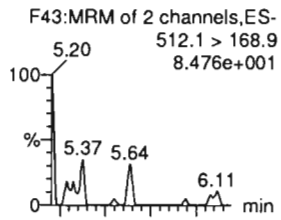


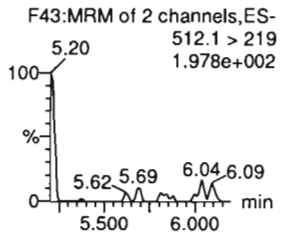
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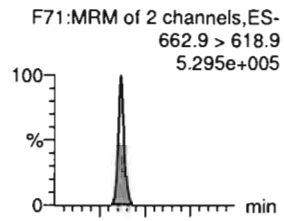


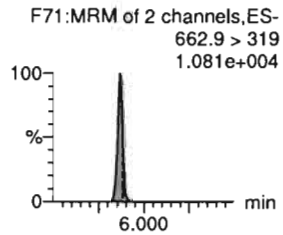
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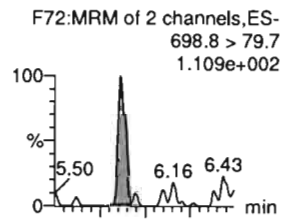


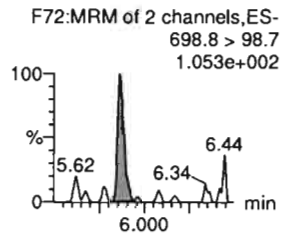
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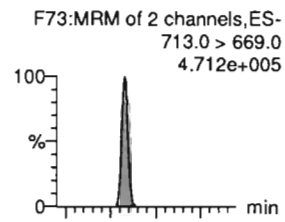


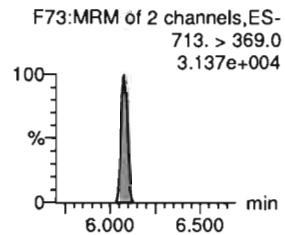
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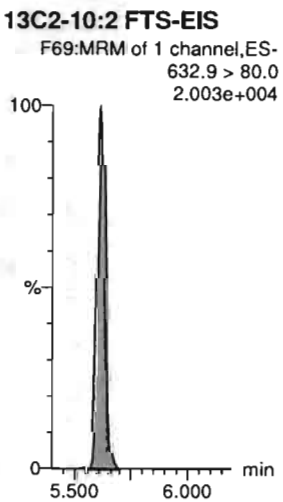


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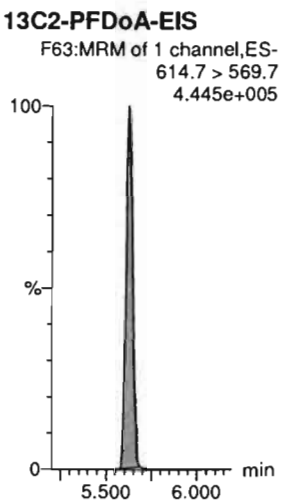




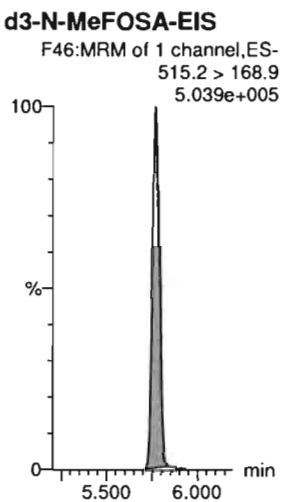
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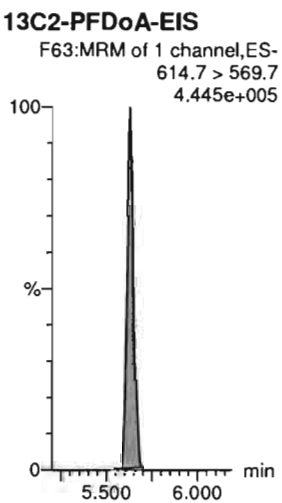
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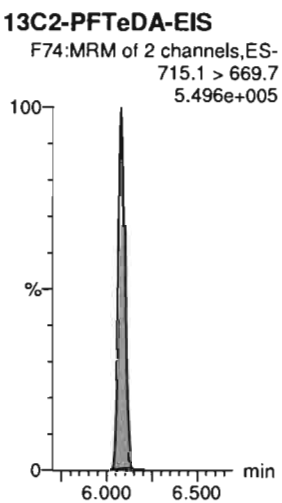
d3-N-MeFOSA-EIS



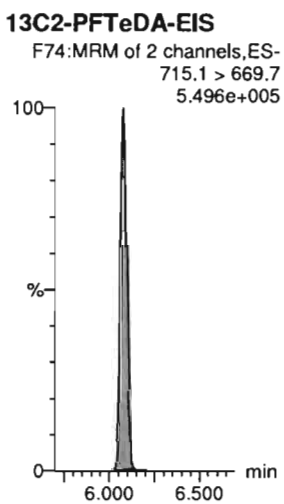
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS



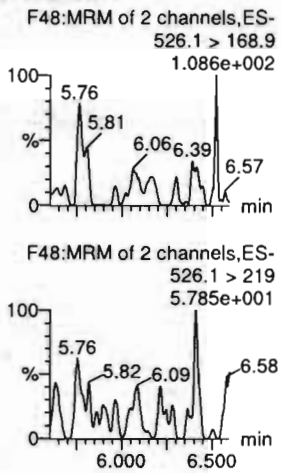
RK 2/26/2020

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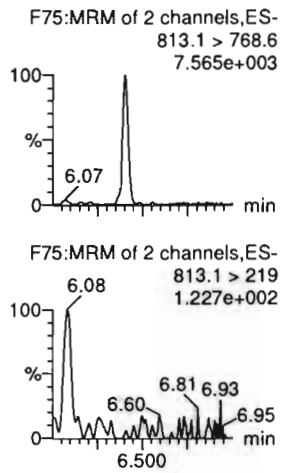
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Printed: Wednesday, February 26, 2020 12:18:14 Pacific Standard Time

Name: 200225P1-14, Date: 25-Feb-2020, Time: 20:15:16, ID: ICV200225P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

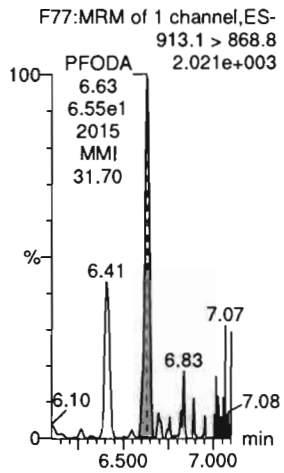
N-EtFOSA



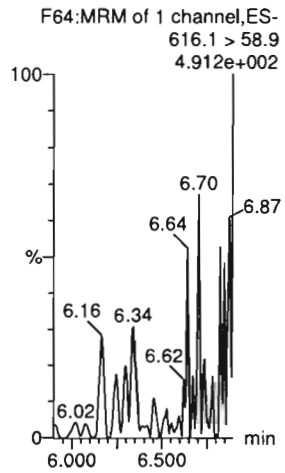
PFHxDA



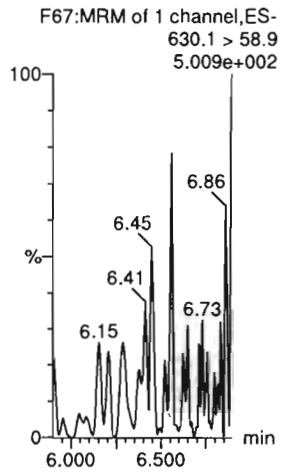
PFODA



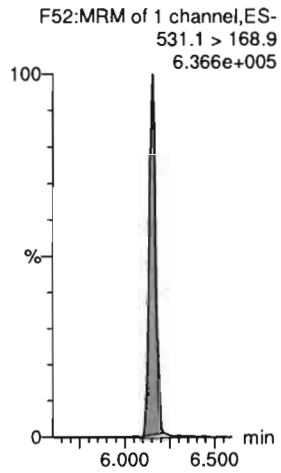
N-MeFOSE



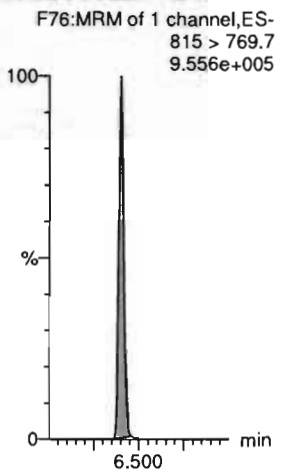
N-EtFOSE



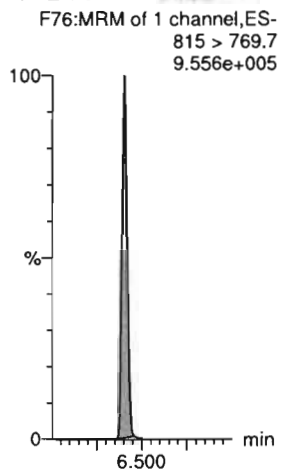
d5-N-ETFOSA-EIS



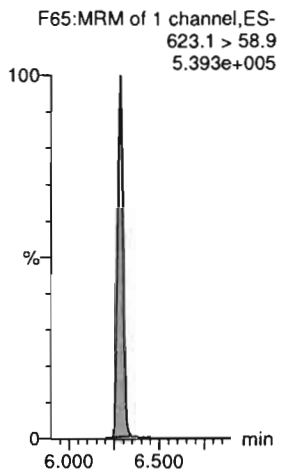
13C2-PFHxDA-EIS



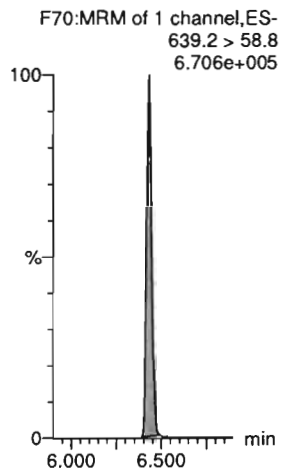
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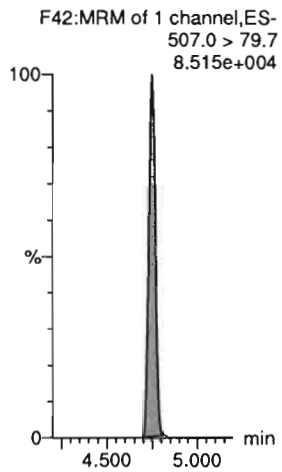
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS



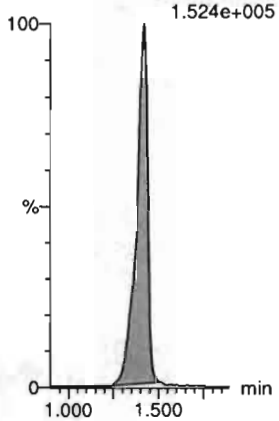
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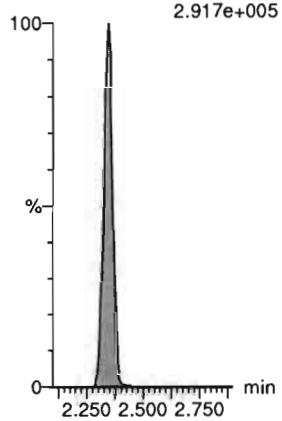
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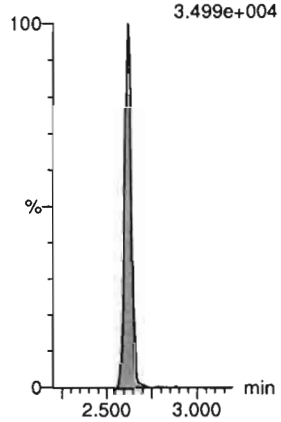
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.524e+005



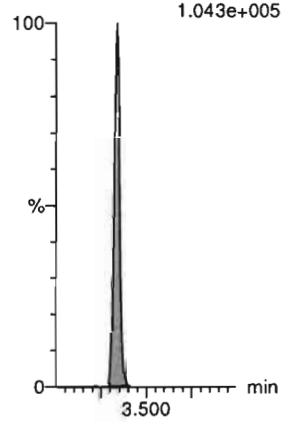
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.917e+005



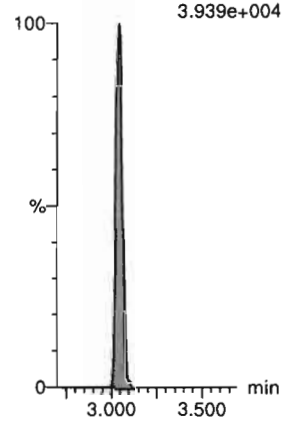
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.499e+004



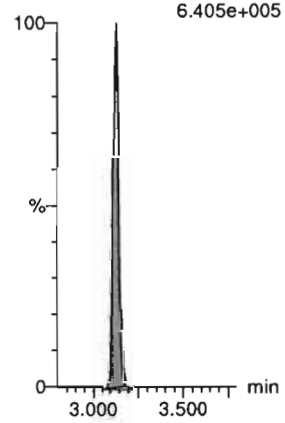
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.043e+005



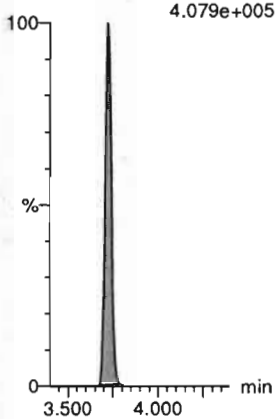
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.939e+004



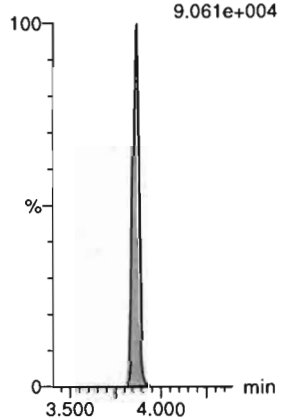
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
6.405e+005



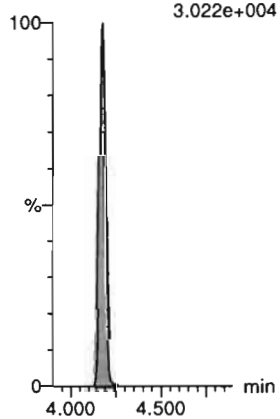
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
4.079e+005



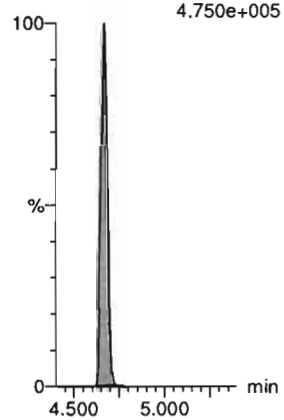
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
9.061e+004



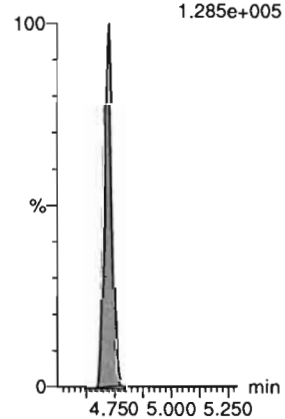
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.022e+004



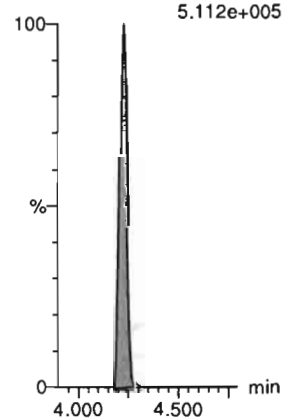
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.750e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.285e+005



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.112e+005



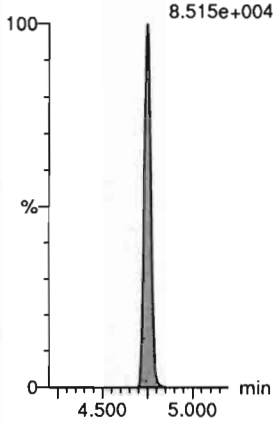
RK 2/26/2020

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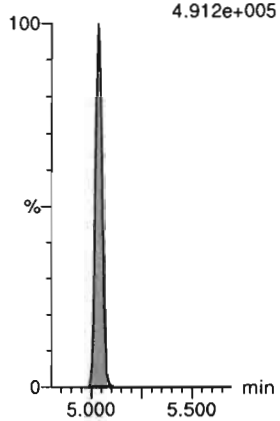
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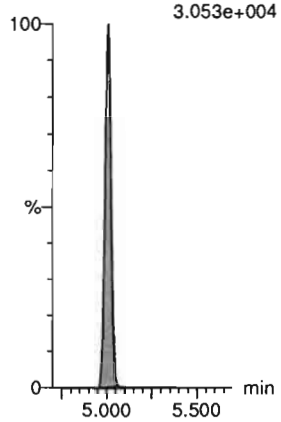
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.515e+004



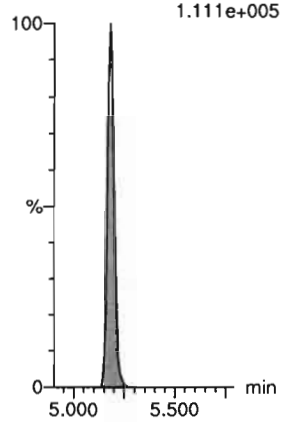
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.912e+005



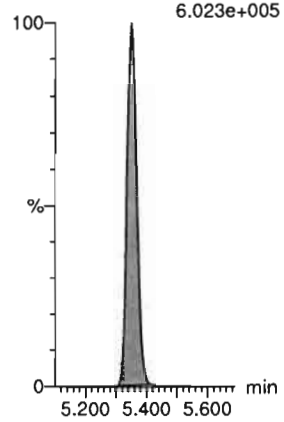
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.053e+004



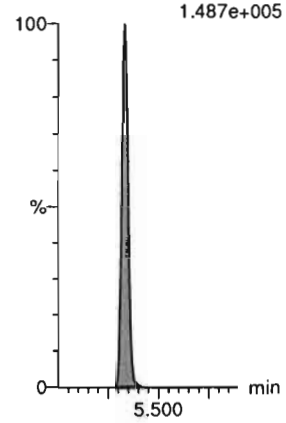
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.111e+005



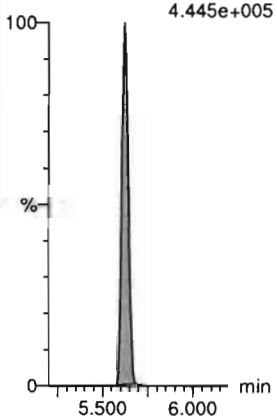
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.023e+005



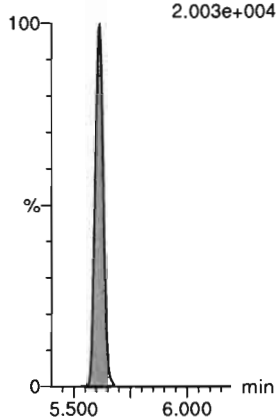
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.487e+005



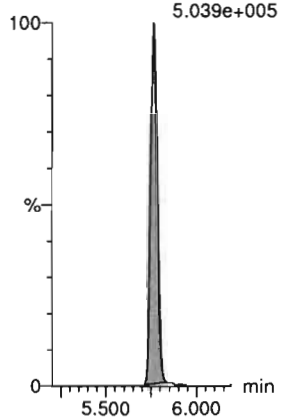
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.445e+005



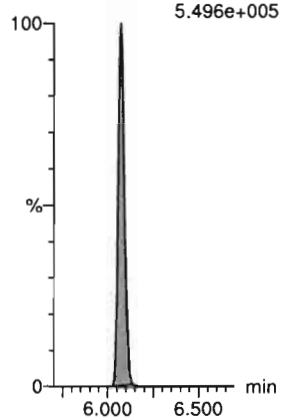
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.003e+004



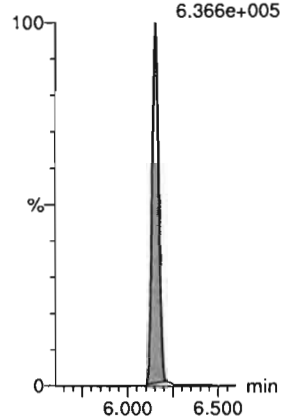
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.039e+005



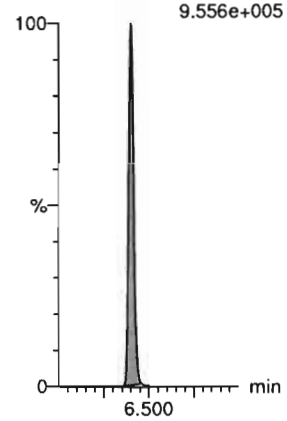
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.496e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.366e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.556e+005



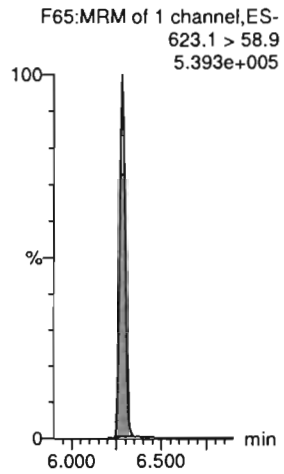
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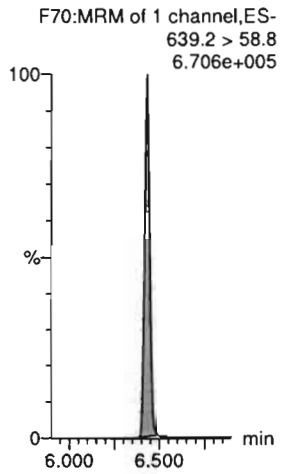
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Name: 200225P1-14, Date: 25-Feb-2020, Time: 20:15:16, ID: ICV200225P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

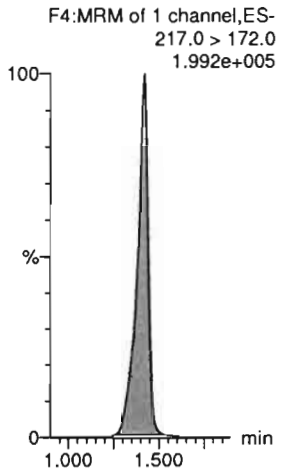
d7-N-MeFOSE-RSD



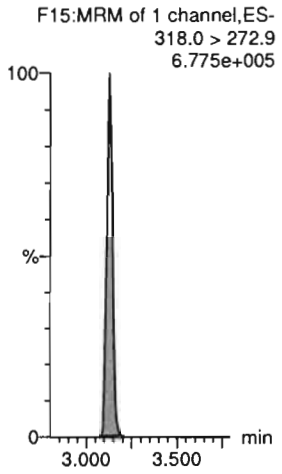
d9-N-EtFOSE-RSD



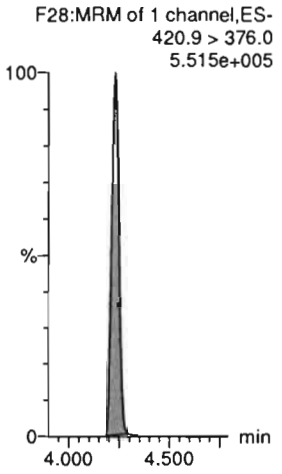
13C4-PFBA



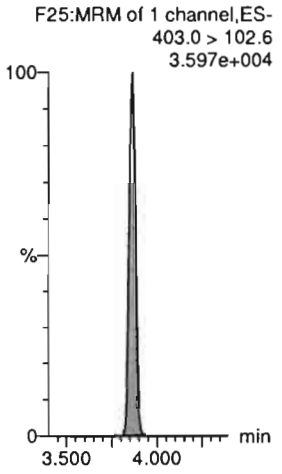
13C5-PFHxA



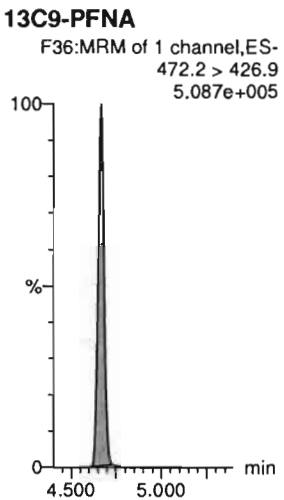
13C8-PFOA



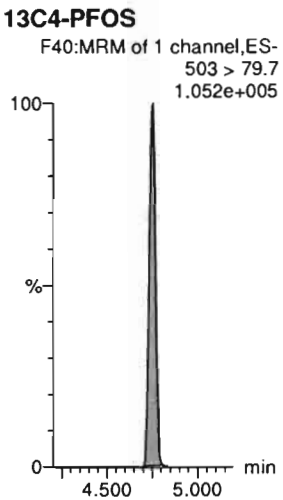
18O2-PFHxS



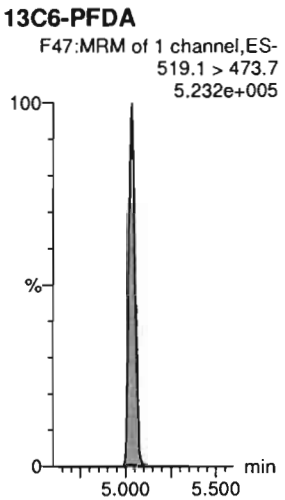
13C9-PFNA



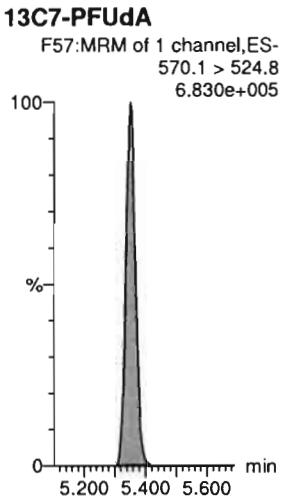
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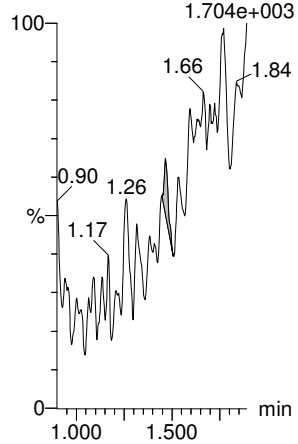
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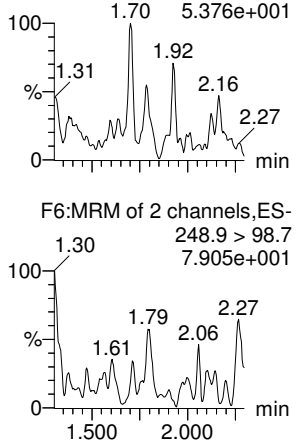
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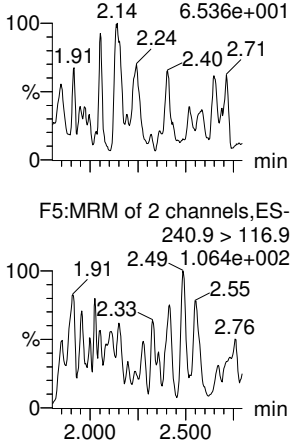
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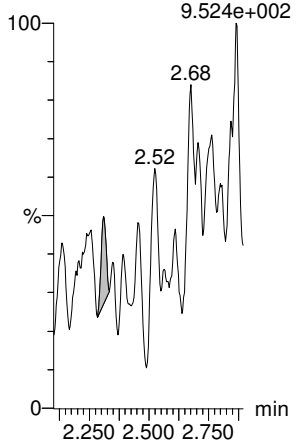
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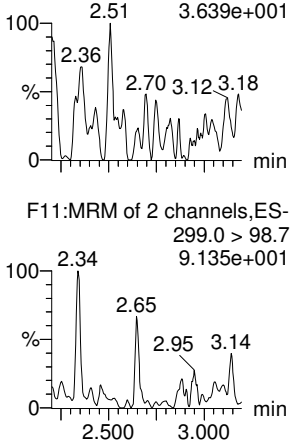
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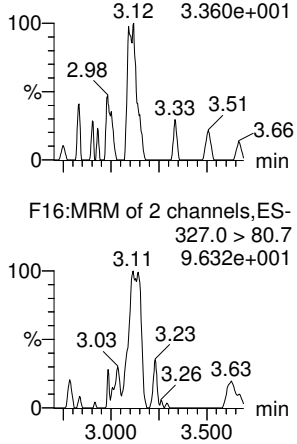
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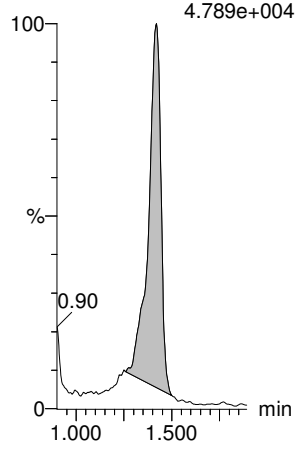
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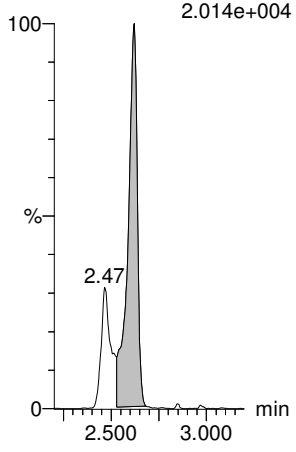
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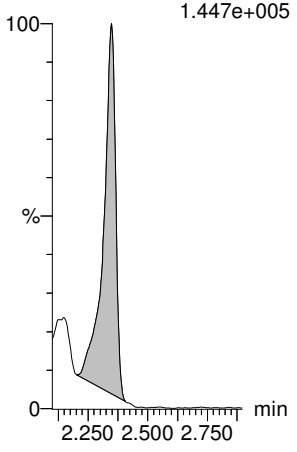
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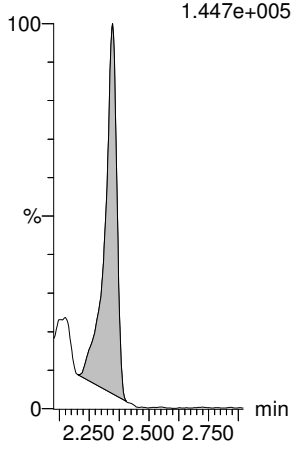
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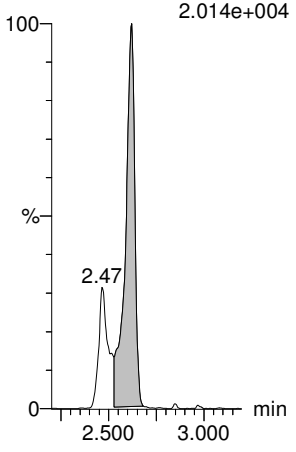
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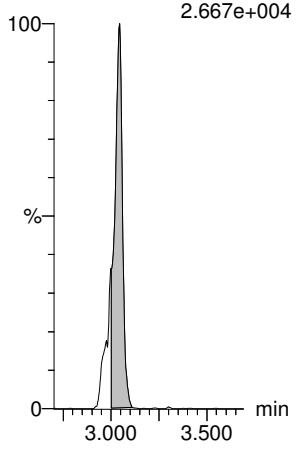
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13C3-PFBS-EIS



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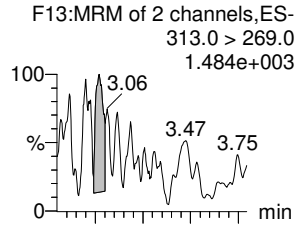


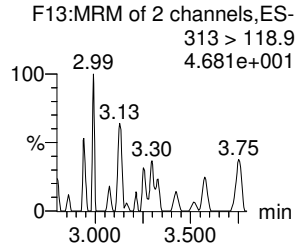
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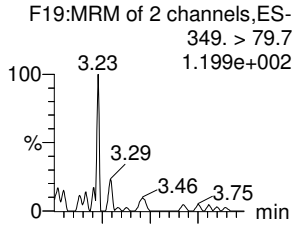
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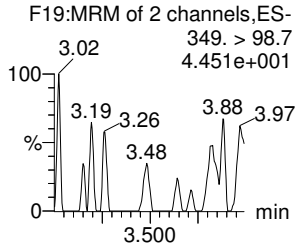
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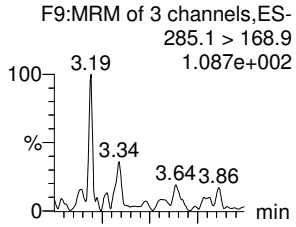


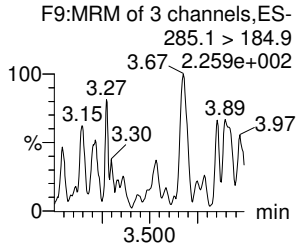
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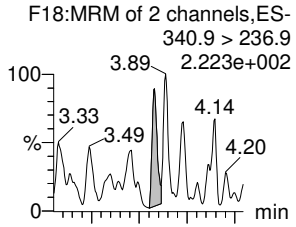


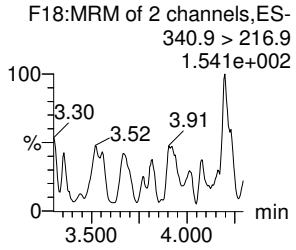
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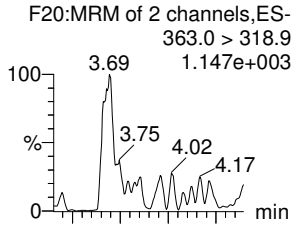


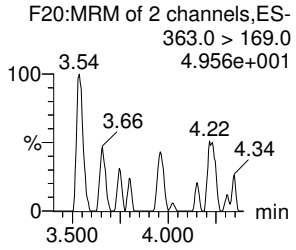
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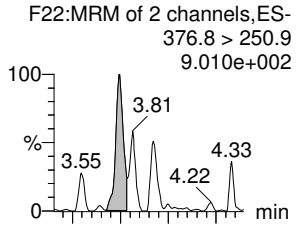


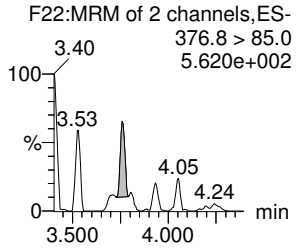
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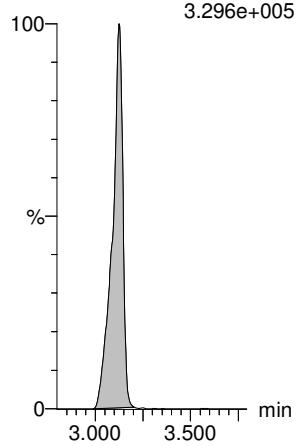


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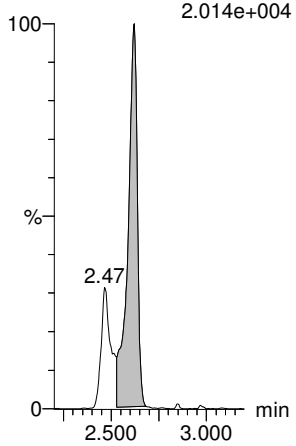




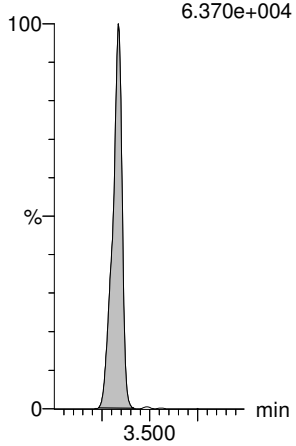
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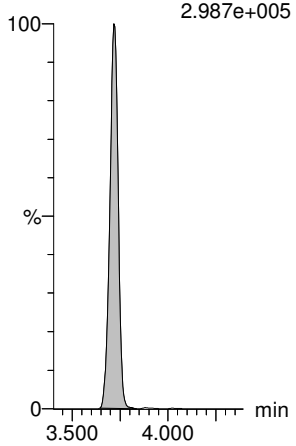
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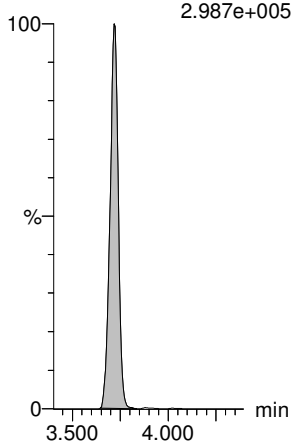
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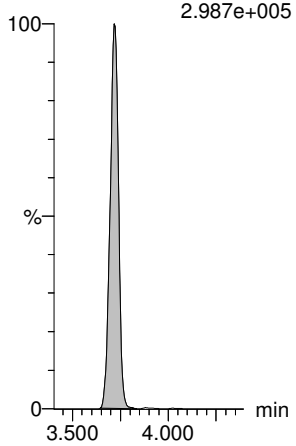
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13C4-PFHpA-EIS



13C4-PFHpA-EIS



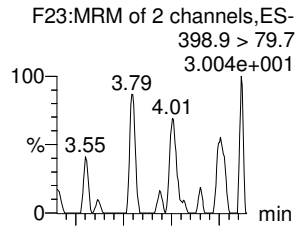
Vista Analytical Laboratory

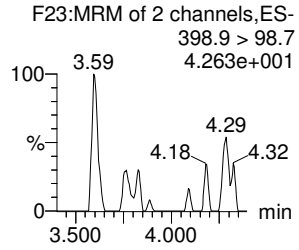
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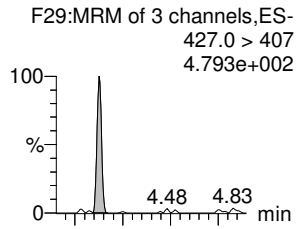
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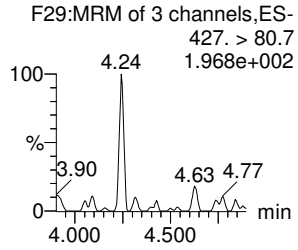
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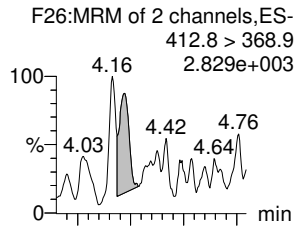


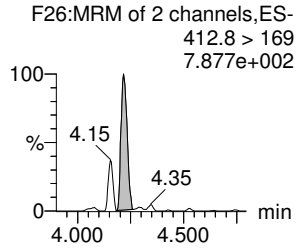
6:2 FTS



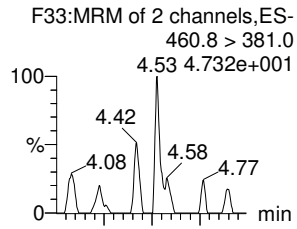


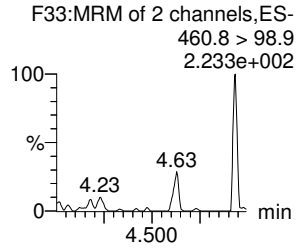
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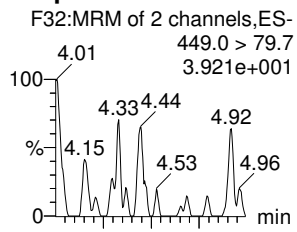


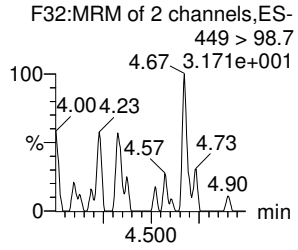
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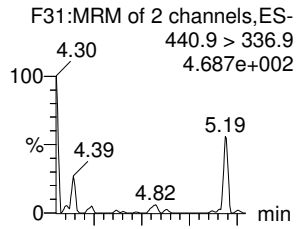


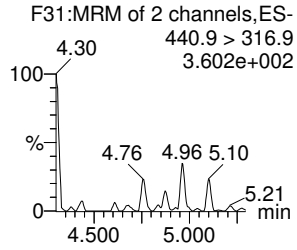
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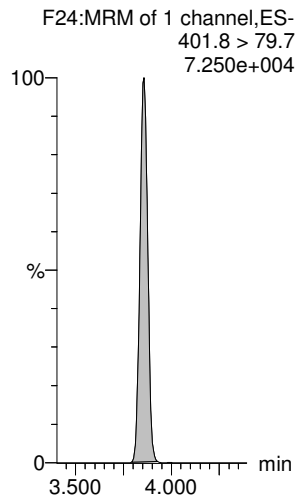


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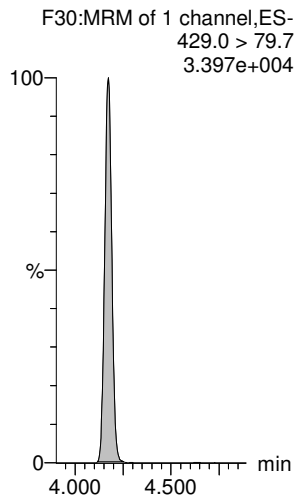




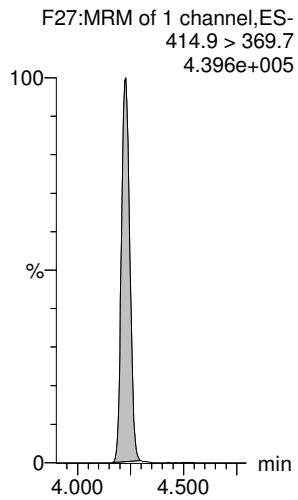
13C3-PFHxS-EIS



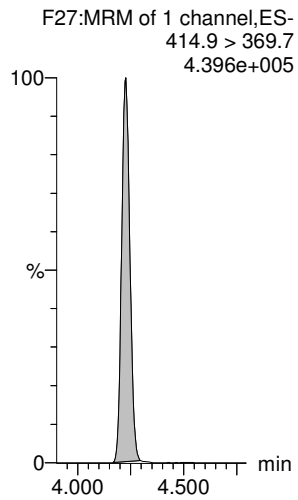
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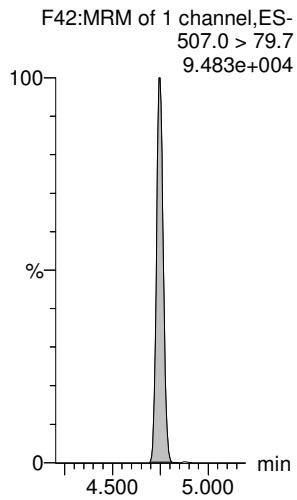
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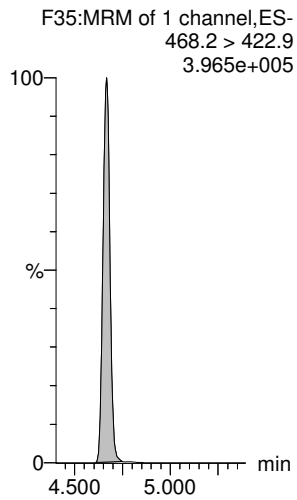
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

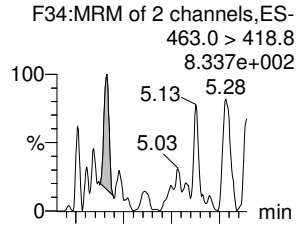


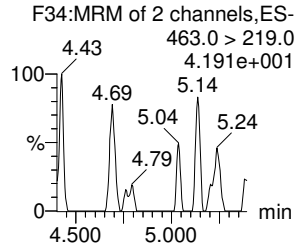
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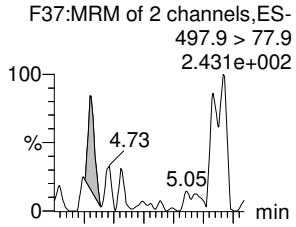
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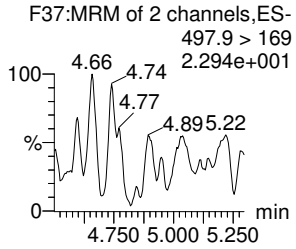
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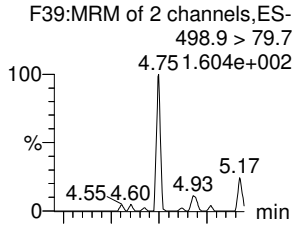


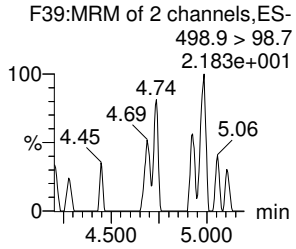
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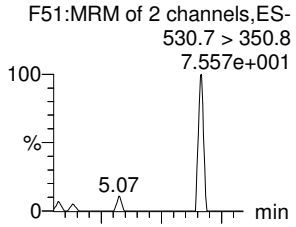


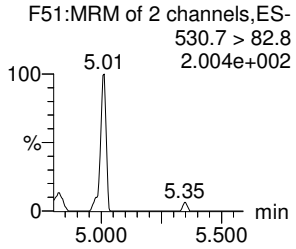
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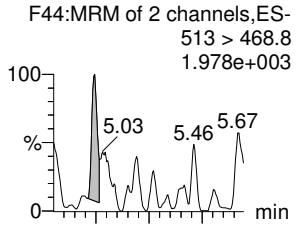


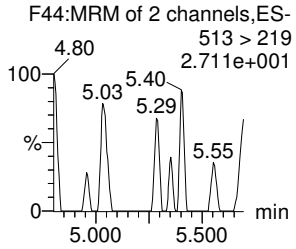
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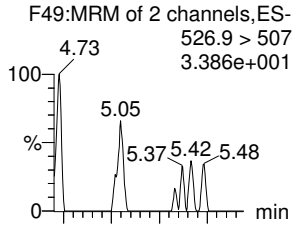


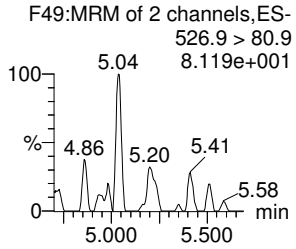
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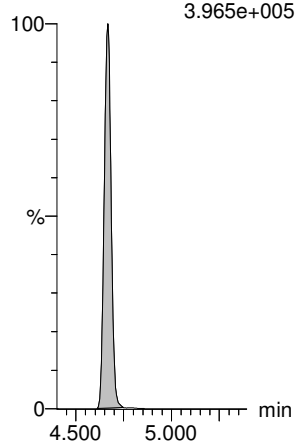


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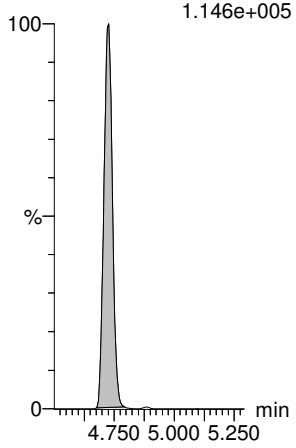




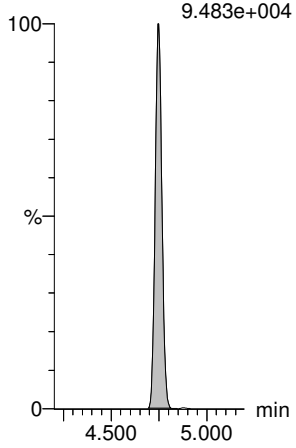
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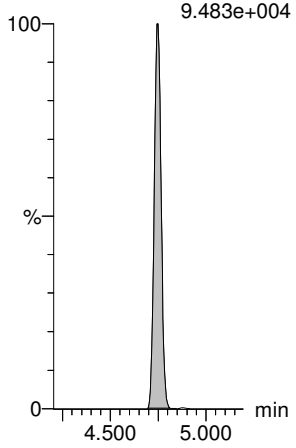
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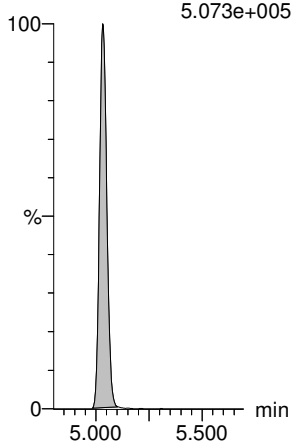
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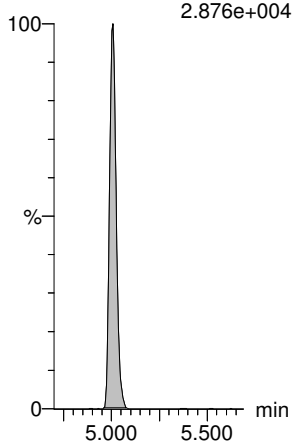
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

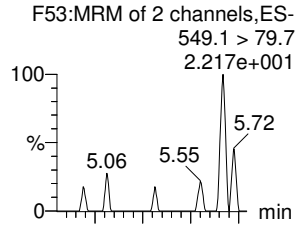


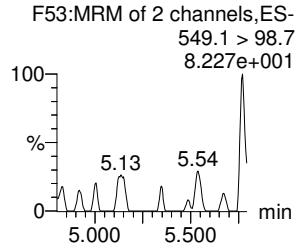
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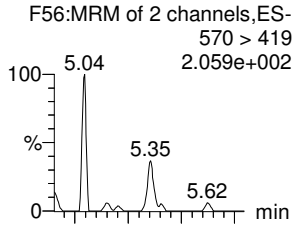
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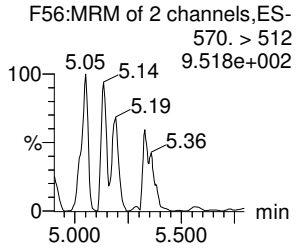
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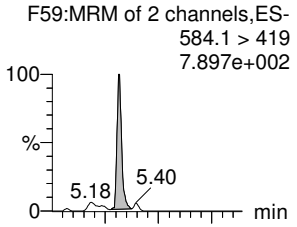


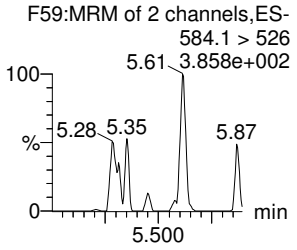
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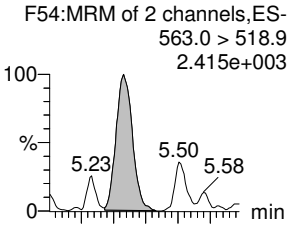


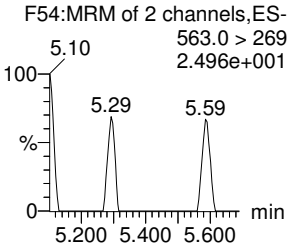
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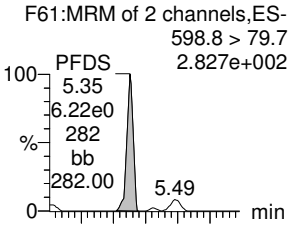


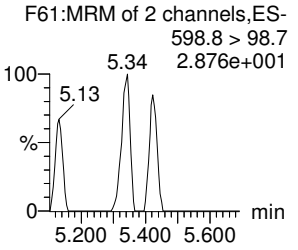
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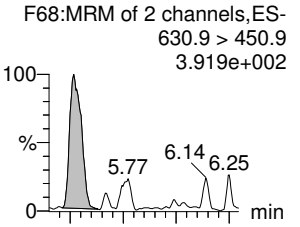


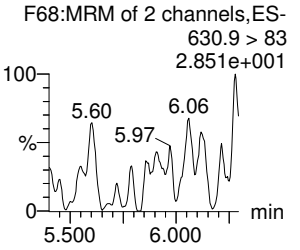
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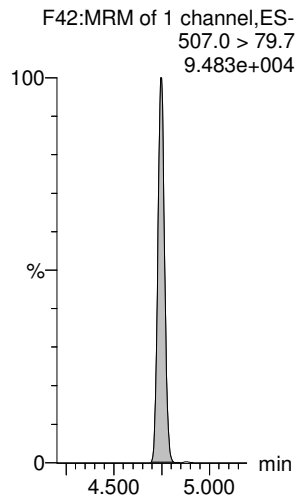


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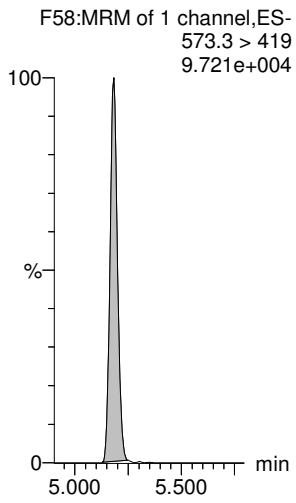




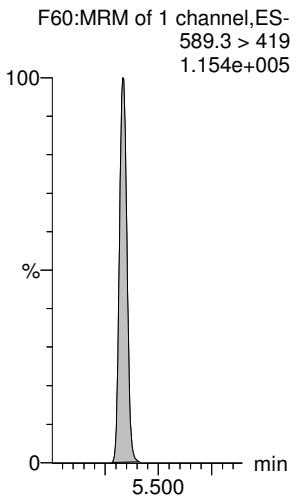
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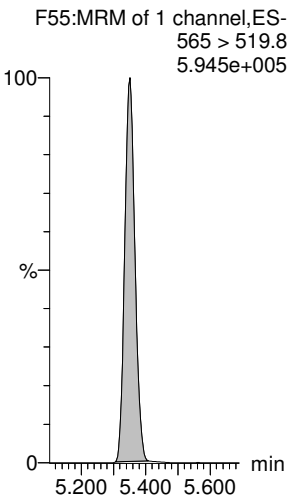
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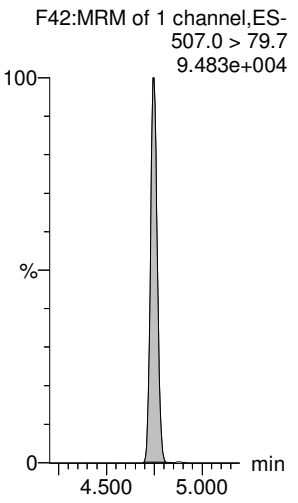
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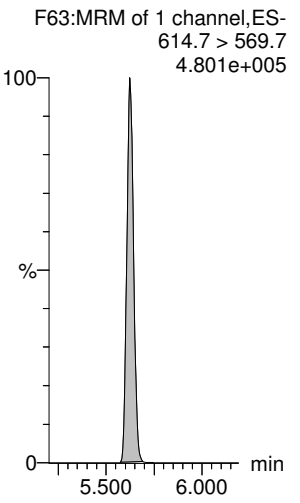
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13C8-PFOS-EIS



13C2-PFDoA-EIS

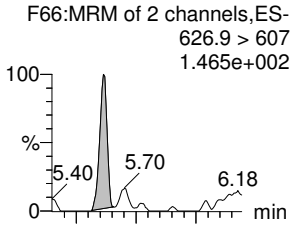


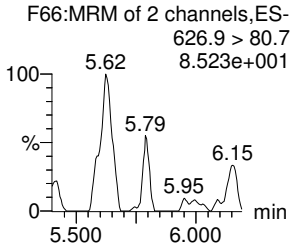
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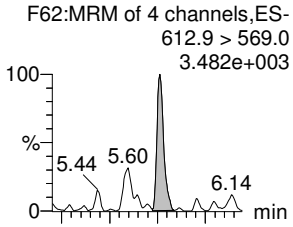
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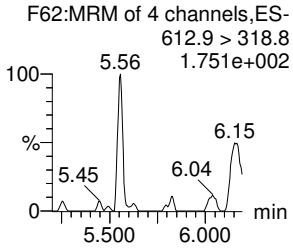
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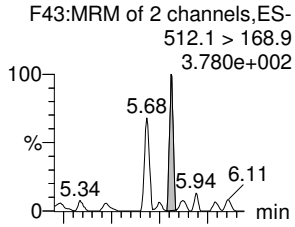


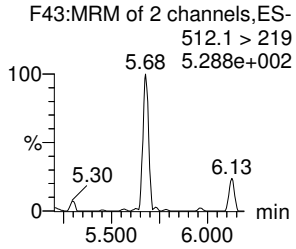
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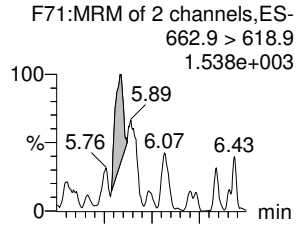


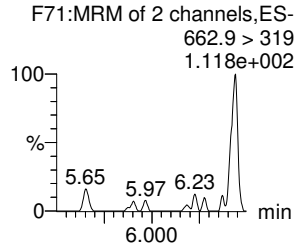
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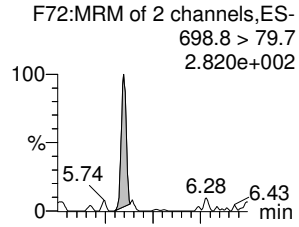


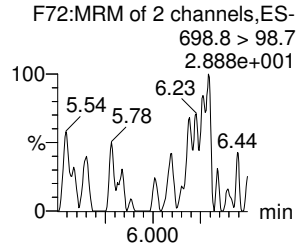
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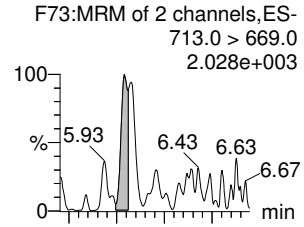


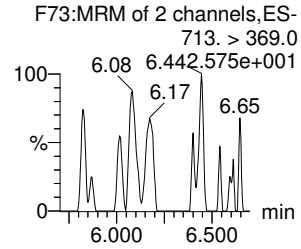
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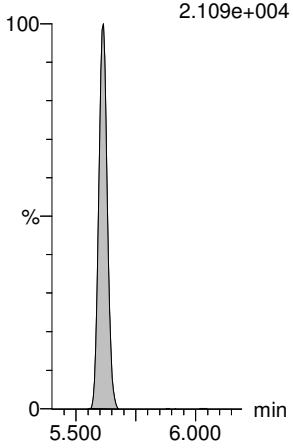


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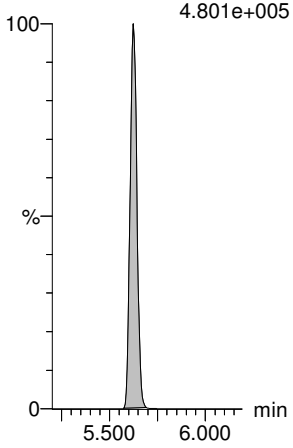




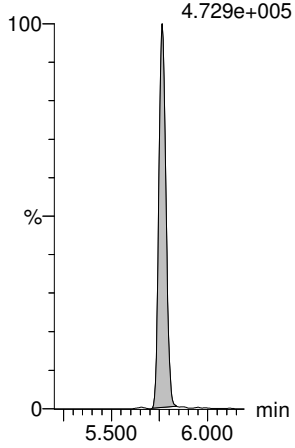
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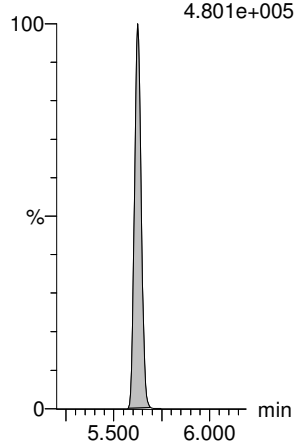
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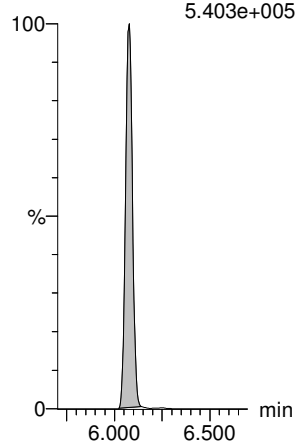
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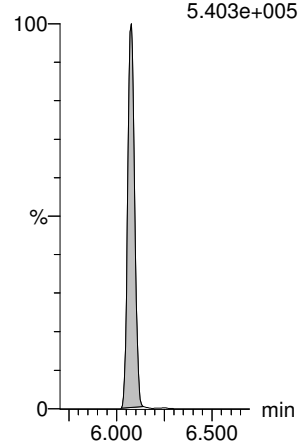
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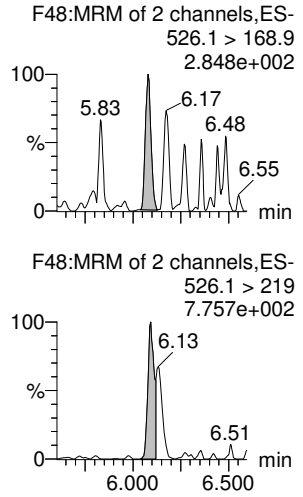


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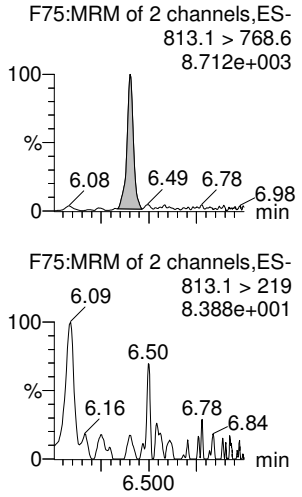
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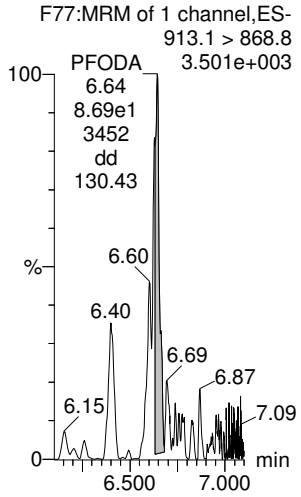
N-EtFOSA



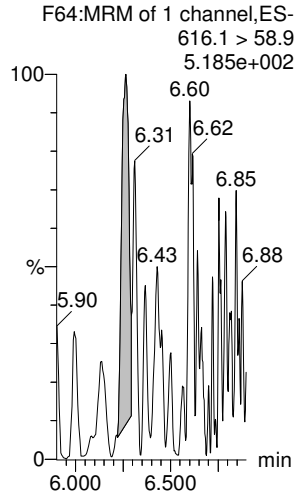
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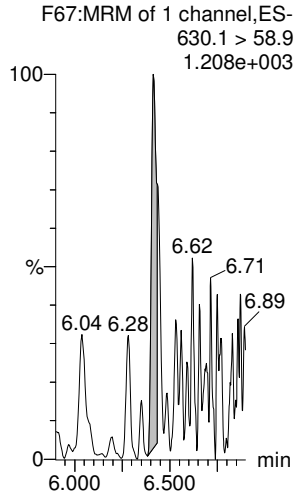
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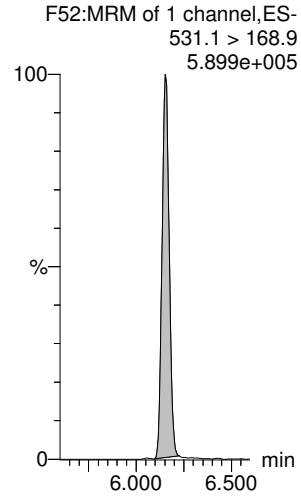
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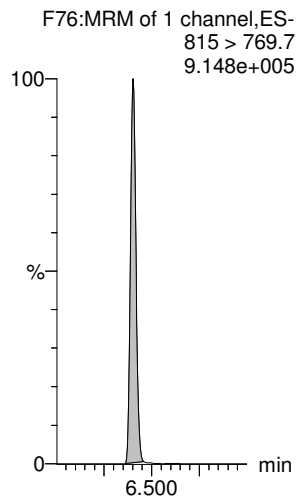
N-EtFOSE



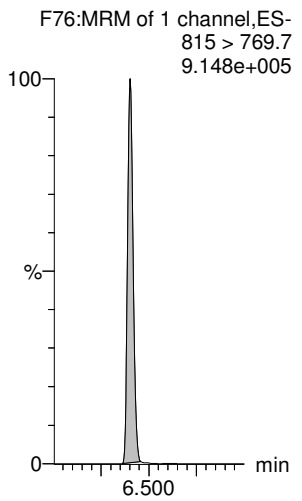
d5-N-ETFOSA-EIS



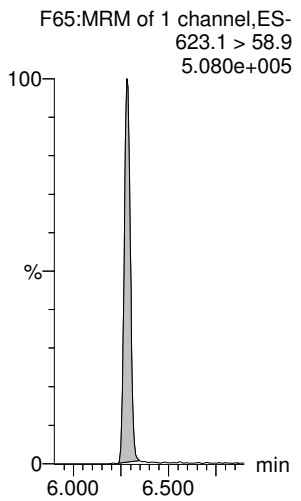
13C2-PFHxDA-EIS



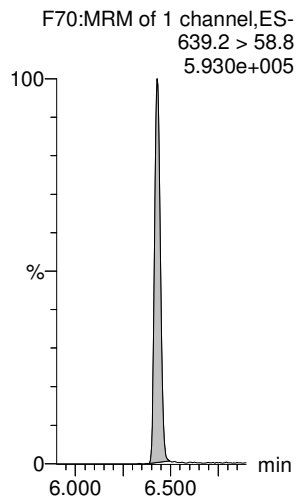
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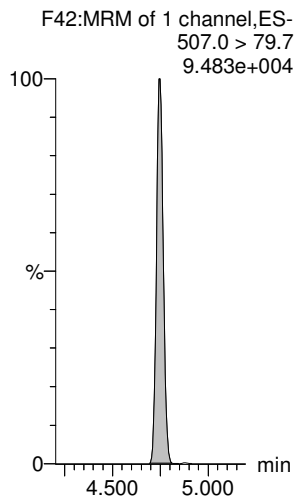
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS

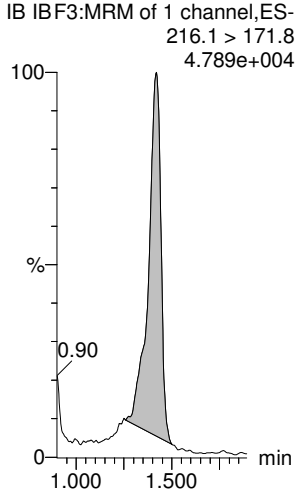


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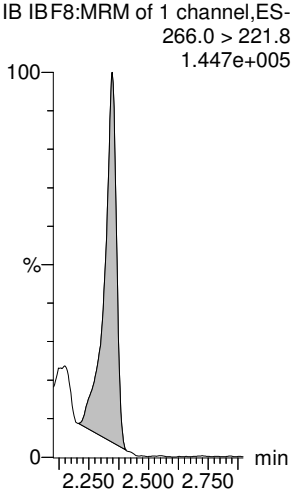
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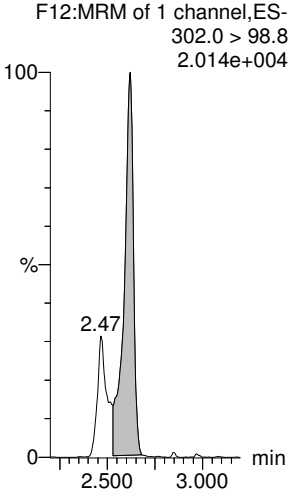
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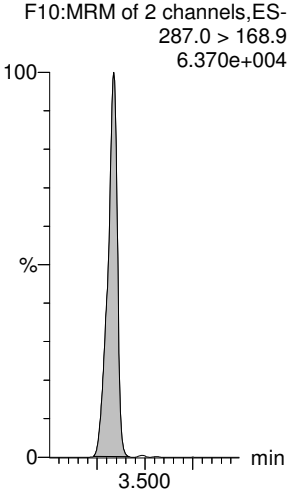
13C3-PFPeA-RSD



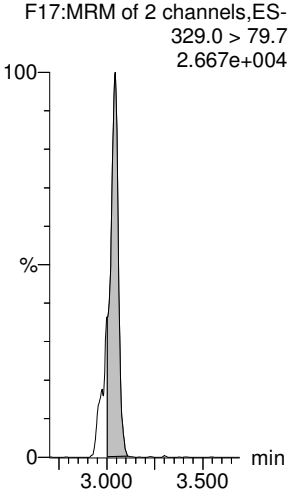
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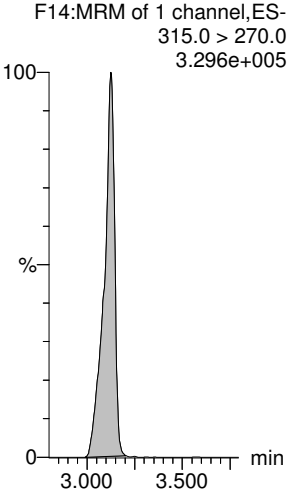
13C3-HFPO-DA-RSD



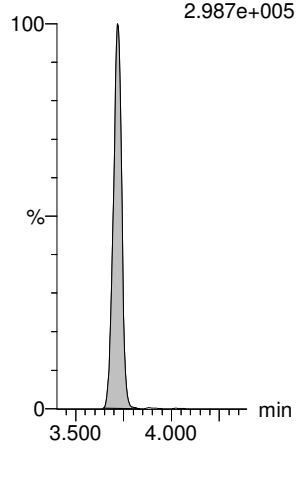
13C2-4:2 FTS-RSD



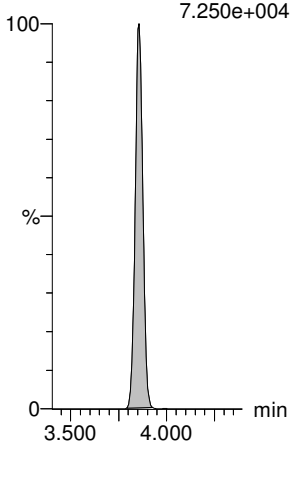
13C2-PFHxA-RSD



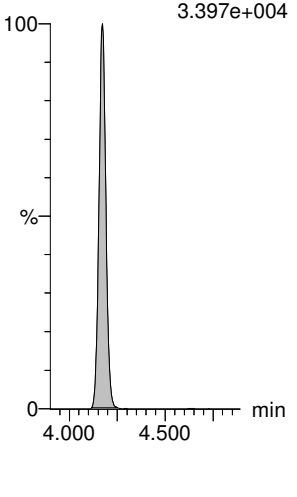
13C4-PFHpA-RSD



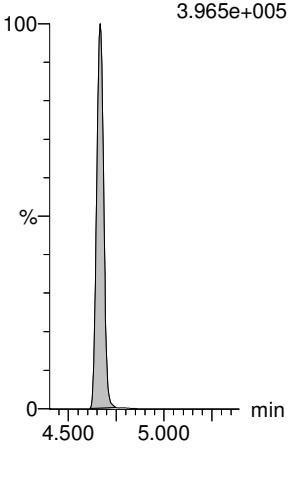
13C3-PFHxS-RSD



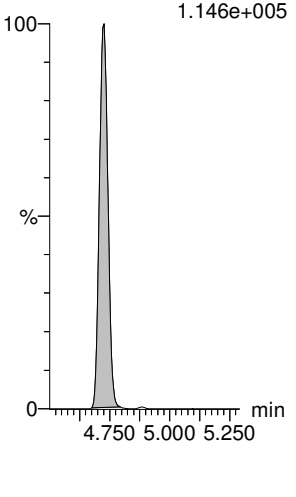
13C2-6:2 FTS-RSD



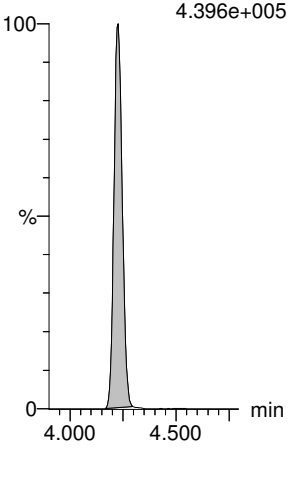
13C5-PFNA-RSD



13C8-PFOSA-RSD



13C2-PFOA-RSD

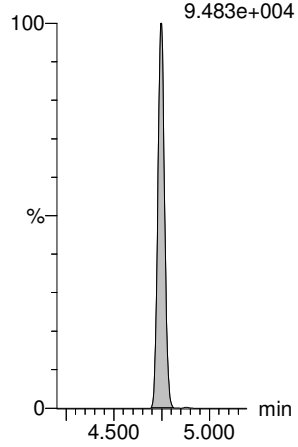


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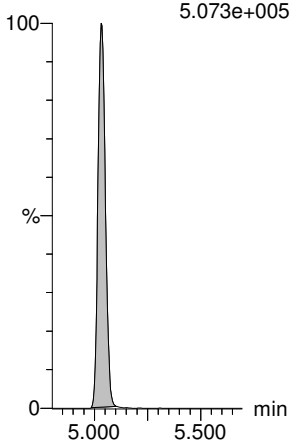
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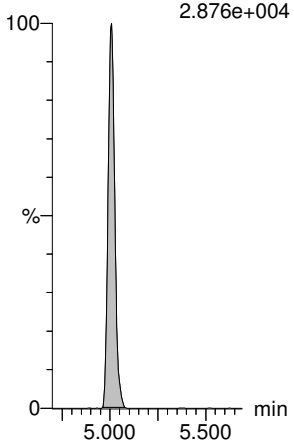
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.483e+004



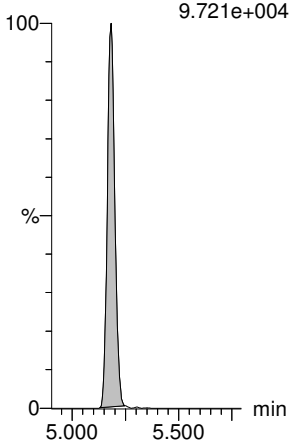
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.073e+005



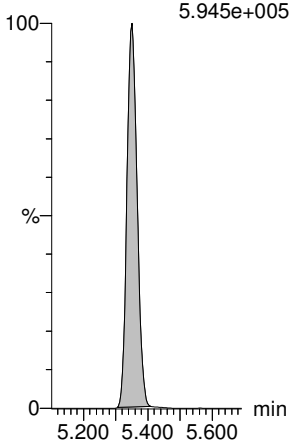
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.876e+004



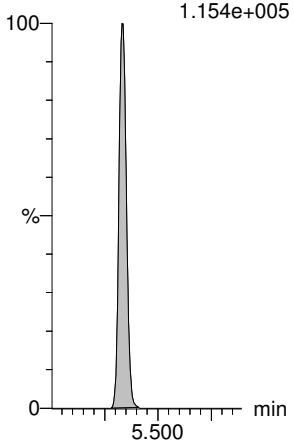
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
9.721e+004



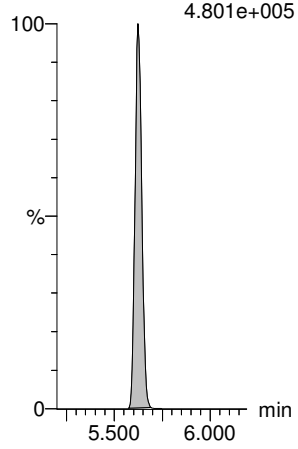
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.945e+005



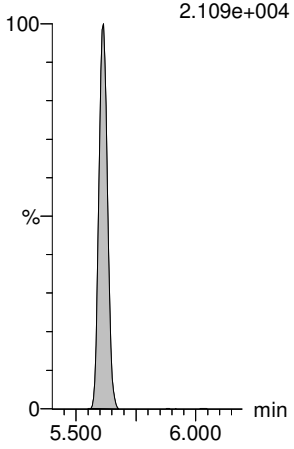
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.154e+005



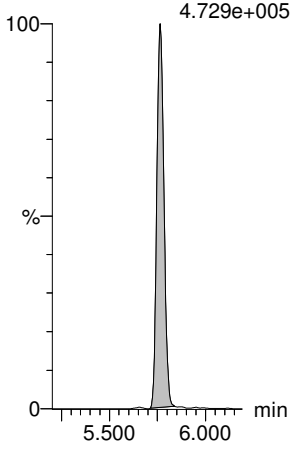
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.801e+005



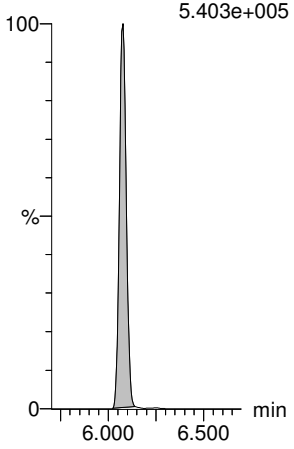
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.109e+004



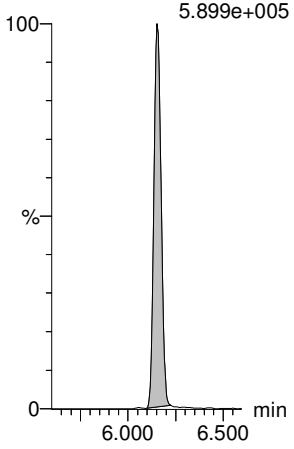
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.729e+005



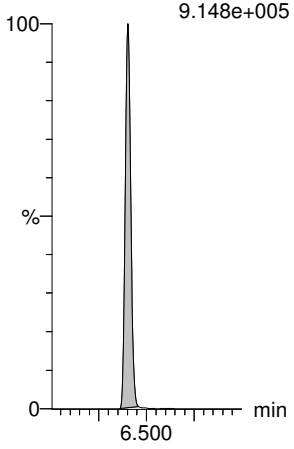
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.403e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.899e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.148e+005

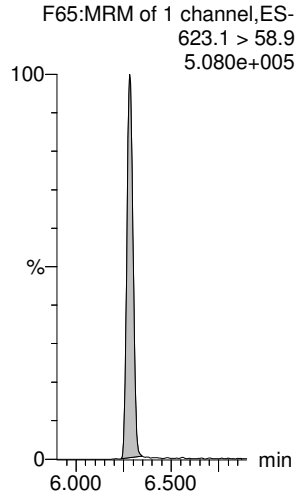


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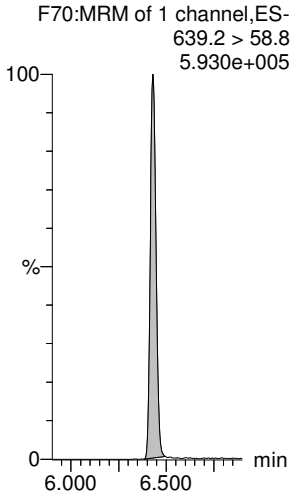
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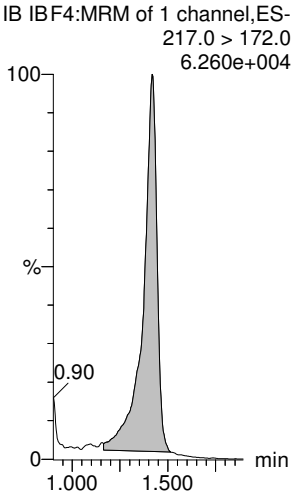
d7-N-MeFOSE-RSD



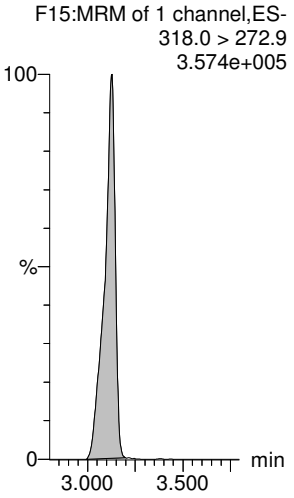
d9-N-EtFOSE-RSD



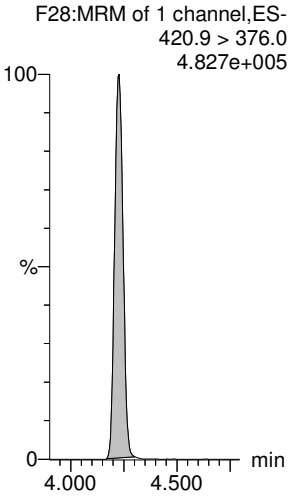
13C4-PFBA



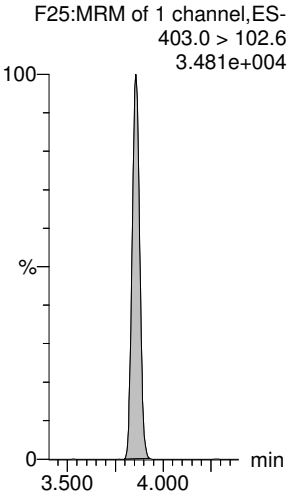
13C5-PFHxA



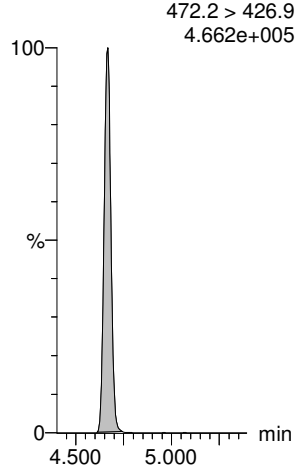
13C8-PFOA



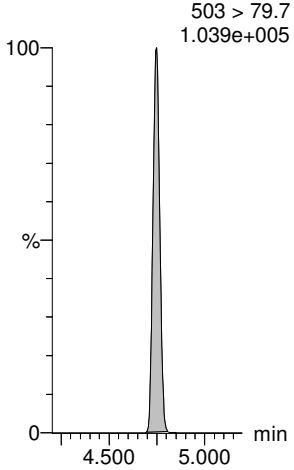
18O2-PFHxS



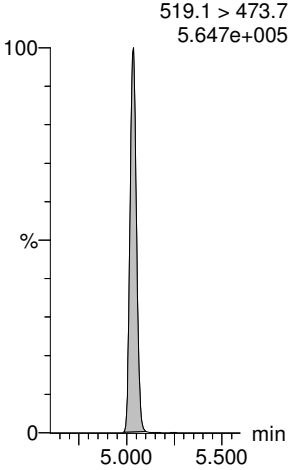
13C9-PFNA



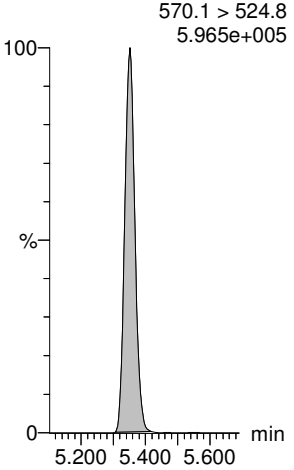
13C4-PFOS



13C6-PFDA



13C7-PFUdA



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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	6.087	3374.603	1.00	1.47	0.023				NO		
2	2	PFPrS	248.9 > 79.7		1117.574	1.00						NO		
3	3	3:3 FTCA	240.9 > 176.9		8162.300	1.00						NO		
4	4	PFPeA	263.1 > 218.9	5.105	8162.300	1.00	2.31	0.008				NO		
5	5	PFBS	299.0 > 79.7		1117.574	1.00						NO		
6	6	4:2 FTS	327.0 > 307		1218.698	1.00						NO		
7	47	13C3-PFBA-EIS	216.1 > 171.8	3374.603		1.00	1.42	3374.603	12.500	3.77	30.2	YES		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1117.574		1.00	2.62	1117.574	12.500	9.31	74.5	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	8162.300		1.00	2.35	8162.300	12.500	7.21	57.7	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	8162.300		1.00	2.35	8162.300	12.500	7.21	57.7	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1117.574		1.00	2.62	1117.574	12.500	9.31	74.5	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1218.698		1.00	3.04	1218.698	12.500	8.18	65.4	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	59.331	20717.152	1.00	3.02	0.036				NO		
15	8	PFPeS	349.>79.7		1117.574	1.00						NO		
16	9	HFPO-DA	285.1 > 168.9		3623.440	1.00						NO		
17	10	5:3 FTCA	340.9 > 236.9	5.697	14782.707	1.00	3.83	0.005		0.0705		NO		
18	11	PFHpA	363.0 > 318.9		14782.707	1.00						NO		
19	12	ADONA	376.8 > 250.9	41.141	14782.707	1.00	3.75	0.035				NO	4.883	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	20717.152		1.00	3.12	20717.152	12.500	11.5	92.3	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1117.574		1.00	2.62	1117.574	12.500	9.31	74.5	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3623.440		1.00	3.34	3623.440	12.500	11.5	92.3	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	14782.707		1.00	3.72	14782.707	12.500	12.0	95.9	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	14782.707		1.00	3.72	14782.707	12.500	12.0	95.9	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	14782.707		1.00	3.72	14782.707	12.500	12.0	95.9	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7		3320.766	1.00						NO		
28	15	6:2 FTS	427.0 > 407	13.202	1390.905	1.00	4.13	0.119				NO		
29	16	L-PFOA	412.8 > 368.9	110.780	19666.736	1.00	4.22	0.070				NO	4.336	YES
30	18	PFecHS	460.8 > 381.0		19666.736	1.00						NO		
31	19	PFHpS	449.0 > 79.7		3852.213	1.00						NO		
32	20	7:3 FTCA	440.9 > 336.9		16544.805	1.00						NO		
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3320.766		1.00	3.86	3320.766	12.500	12.1	97.2	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1390.905		1.00	4.17	1390.905	12.500	11.3	90.6	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	19666.736		1.00	4.23	19666.736	12.500	12.3	98.7	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	19666.736		1.00	4.23	19666.736	12.500	12.3	98.7	NO		

Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 11:58:03 Pacific Standard Time
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Name: 200225P1-13, Date: 25-Feb-2020, Time: 20:04:45, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	71	13C8-PFOS-EIS	507.0 > 79.7	3852.213		1.00	4.75	3852.213	12.500	13.2	105.6	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	16544.805		1.00	4.67	16544.805	12.500	11.1	88.7	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	21.350	16544.805	1.00	4.66	0.016				NO		
41	22	PFOSA	497.9 > 77.9	5.084	4592.565	1.00	4.65	0.014		0.0480		NO		
42	23	L-PFOS	498.9 > 79.7		3852.213	1.00						NO		
43	25	9Cl-PF30NS	530.7 > 350.8		3852.213	1.00						NO		
44	26	PFDA	513 > 468.8	52.535	20059.008	1.00	4.99	0.033				NO		
45	27	8:2 FTS	526.9 > 507		1123.938	1.00						NO		
46	65	13C5-PFNA-EIS	468.2 > 422.9	16544.805		1.00	4.67	16544.805	12.500	11.1	88.7	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4592.565		1.00	4.73	4592.565	12.500	12.2	97.8	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3852.213		1.00	4.75	3852.213	12.500	13.2	105.6	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3852.213		1.00	4.75	3852.213	12.500	13.2	105.6	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	20059.008		1.00	5.03	20059.008	12.500	12.3	98.1	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1123.938		1.00	5.01	1123.938	12.500	11.0	88.0	NO		
52	-1													
53	28	PFNS	549.1 > 79.7		3852.213	1.00						NO		
54	29	L-MeFOSAA	570 > 419		3885.093	1.00						NO		
55	31	L-EtFOSAA	584.1 > 419	19.145	4576.282	1.00	5.32	0.052		0.0133		NO		
56	33	PFUdA	563.0 > 518.9	141.371	21489.662	1.00	5.33	0.082				NO		
57	34	PFDS	598.8 > 79.7	6.220	3852.213	1.00	5.35	0.020		0.0111		NO		
58	35	11Cl-PF30UdS	630.9 > 450.9	24.052	19587.941	1.00	5.52	0.015				NO		
59	71	13C8-PFOS-EIS	507.0 > 79.7	3852.213		1.00	4.75	3852.213	12.500	13.2	105.6	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	3885.093		1.00	5.18	3885.093	12.500	11.8	94.1	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	4576.282		1.00	5.33	4576.282	12.500	11.6	92.6	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	21489.662		1.00	5.35	21489.662	12.500	13.3	106.3	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3852.213		1.00	4.75	3852.213	12.500	13.2	105.6	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	19587.941		1.00	5.62	19587.941	12.500	11.6	92.9	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	5.157	873.436	1.00	5.61	0.074				NO		
67	37	PFDoA	612.9 > 569.0	139.302	19587.941	1.00	5.76	0.089		0.0106		NO		
68	38	N-MeFOSA	512.1 > 168.9	8.689	19895.789	1.00	5.81	0.065		0.0855		NO		
69	39	PFTrDA	662.9 > 618.9	48.682	19587.941	1.00	5.84	0.031				NO		
70	40	PFDoS	698.8 > 79.7	7.948	22213.631	1.00	5.85	0.004				NO		
71	41	PFTeDA	713.0 > 669.0	80.025	22213.631	1.00	6.04	0.045				NO		
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	873.436		1.00	5.61	873.436	12.500	12.1	97.1	NO		

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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83	13C2-PFDoA-EIS	614.7 > 569.7	19587.941		1.00	5.62	19587.941	12.500	11.6	92.9	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	19895.789		1.00	5.76	19895.789	149.200	141	94.2	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	19587.941		1.00	5.62	19587.941	12.500	11.6	92.9	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	22213.631		1.00	6.08	22213.631	12.500	11.7	93.7	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	22213.631		1.00	6.08	22213.631	12.500	11.7	93.7	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	9.688	25288.002	1.00	6.08	0.057				NO	0.330	YES
80	43	PFHxDA	813.1 > 768.6	332.756	29914.744	1.00	6.40	0.139				NO		
81	44	PFODA	913.1 > 868.8	86.946	29914.744	1.00	6.64	0.036		0.00864		NO		
82	45	N-MeFOSE	616.1 > 58.9	21.383	18268.793	1.00	6.27	0.175		0.142		NO		
83	46	N-EtFOSE	630.1 > 58.9	32.575	20460.025	1.00	6.41	0.238				NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	25288.002		1.00	6.15	25288.002	149.200	140	93.8	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	29914.744		1.00	6.40	29914.744	12.500	11.5	92.3	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	29914.744		1.00	6.40	29914.744	12.500	11.5	92.3	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	18268.793		1.00	6.28	18268.793	149.200	151	101.4	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	20460.025		1.00	6.43	20460.025	149.200	137	91.9	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3852.213		1.00	4.75	3852.213	12.500	13.2	105.6	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	3374.603	5063.513	1.00	1.42	8.331	12.500	10.4	83.3	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	8143.700	22758.422	1.00	2.35	4.473	12.500	7.59	60.7	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	1117.574	1564.224	1.00	2.62	8.931	12.500	7.92	63.4	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	3623.440	22758.422	1.00	3.34	1.990	12.500	11.4	91.3	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1218.698	1564.224	1.00	3.04	9.739	12.500	7.41	59.3	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	20717.152	22758.422	1.00	3.12	11.379	12.500	11.7	93.5	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	14782.707	22758.422	1.00	3.72	8.119	12.500	12.3	98.6	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	3320.766	1564.224	1.00	3.86	26.537	12.500	10.5	84.3	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1390.905	4144.186	1.00	4.17	4.195	12.500	10.9	87.3	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	16544.805	19038.262	1.00	4.67	10.863	12.500	11.6	92.6	NO		
101	68	13C8-PFOSA-RSD	506 > 78	4592.565	21475.115	1.00	4.73	2.673	12.500	12.7	101.8	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	19666.736	21630.061	1.00	4.23	11.365	12.500	12.3	98.6	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3852.213	4144.186	1.00	4.75	11.619	12.500	12.2	97.9	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	20059.008	21429.576	1.00	5.03	11.701	12.500	12.1	97.0	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1123.938	4144.186	1.00	5.01	3.390	12.500	10.3	82.2	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	3885.093	21475.115	1.00	5.18	2.261	12.500	13.0	103.9	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	21489.662	21475.115	1.00	5.35	12.508	12.500	12.4	99.2	NO		

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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82	d5-N-EtFOSAA-RSD	589.3 > 419	4576.282	21475.115	1.00	5.33	2.664	12.500	11.5	92.0	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	19587.941	21429.576	1.00	5.62	11.426	12.500	11.8	94.4	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	873.436	4144.186	1.00	5.61	2.635	12.500	11.1	88.4	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	19895.789	21475.115	1.00	5.76	11.581	149.200	144	96.7	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	22213.631	21475.115	1.00	6.08	12.930	12.500	12.3	98.8	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	25288.002	21475.115	1.00	6.15	14.719	149.200	148	99.5	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	29914.744	21475.115	1.00	6.40	17.412	12.500	11.6	93.2	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	18268.793	21475.115	1.00	6.28	10.634	149.200	146	97.8	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	20460.025	21475.115	1.00	6.43	11.909	149.200	139	93.0	NO		
119	99	13C4-PFBA	217.0 > 172.0	5063.513	5063.513	1.00	1.42	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	22758.422	22758.422	1.00	3.13	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	21630.061	21630.061	1.00	4.23	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1564.224	1564.224	1.00	3.86	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	19038.262	19038.262	1.00	4.67	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	4144.186	4144.186	1.00	4.75	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	21429.576	21429.576	1.00	5.04	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	21475.115	21475.115	1.00	5.35	12.500	12.500	12.5	100.0	NO		

Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 08:07:56
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-27-20.cdb 28 Feb 2020 09:57:55

Compound name: PFBA
Correlation coefficient: r = 0.999073, r^2 = 0.998147
Calibration curve: 1.15518 * x + 0.0395457
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

B.P. 2/28/2020

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	1.32	172.203	7590.314	0.284	0.2	-15.5	NO	0.998	NO	MM
2	2	200227P1-4	Standard	0.500	1.32	423.593	7291.915	0.726	0.6	18.9	NO	0.998	NO	MM
3	3	200227P1-5	Standard	1.000	1.33	718.914	7825.403	1.148	1.0	-4.0	NO	0.998	NO	MM
4	4	200227P1-6	Standard	2.000	1.33	1449.523	8329.849	2.175	1.8	-7.6	NO	0.998	NO	bb
5	5	200227P1-7	Standard	5.000	1.35	3758.970	7523.821	6.245	5.4	7.4	NO	0.998	NO	bb
6	6	200227P1-8	Standard	10.000	1.33	7233.840	8026.943	11.265	9.7	-2.8	NO	0.998	NO	MM
7	7	200227P1-9	Standard	50.000	1.33	36676.141	8364.255	54.811	47.4	-5.2	NO	0.998	NO	MM
8	8	200227P1-10	Standard	100.000	1.34	76008.125	7368.939	128.933	111.6	11.6	NO	0.998	NO	MM
9	9	200227P1-11	Standard	250.000	1.37	183943.750	8128.281	282.876	244.8	-2.1	NO	0.998	NO	MM
10	10	200227P1-12	Standard	500.000	1.33	356567.438	7775.098	573.252	496.2	-0.8	NO	0.998	NO	MM

Compound name: PFPrS
Correlation coefficient: r = 0.999450, r^2 = 0.998900
Calibration curve: 1.40081 * x + -0.0217571
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	1.65	32.770	1446.801	0.283	0.2	-12.9	NO	0.999	NO	MM
2	2	200227P1-4	Standard	0.500	1.65	99.394	1548.338	0.802	0.6	17.7	NO	0.999	NO	MM
3	3	200227P1-5	Standard	1.000	1.66	179.394	1573.643	1.425	1.0	3.3	NO	0.999	NO	MM
4	4	200227P1-6	Standard	2.000	1.66	336.502	1536.398	2.738	2.0	-1.5	NO	0.999	NO	MM
5	5	200227P1-7	Standard	5.000	1.68	888.135	1590.780	6.979	5.0	-0.1	NO	0.999	NO	MM
6	6	200227P1-8	Standard	10.000	1.66	1529.127	1534.622	12.455	8.9	-10.9	NO	0.999	NO	MM
7	7	200227P1-9	Standard	50.000	1.66	8334.349	1564.503	66.589	47.6	-4.9	NO	0.999	NO	MM
8	8	200227P1-10	Standard	100.000	1.66	17837.328	1510.565	147.605	105.4	5.4	NO	0.999	NO	db
9	9	200227P1-11	Standard	250.000	1.69	41602.320	1542.143	337.212	240.7	-3.7	NO	0.999	NO	bb
10	10	200227P1-12	Standard	500.000	1.66	79359.211	1395.823	710.685	507.4	1.5	NO	0.999	NO	bb

DPV 02/28/20

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Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.999814
Calibration curve: -2.09842e-005 * x^2 + 0.0932 * x + -0.000508555
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	2.11	22.512	13550.682	0.021	0.2	-8.7	NO	1.000	NO	MM
2	2	200227P1-4	Standard	0.500	2.11	52.928	13046.680	0.051	0.5	9.9	NO	1.000	NO	MM
3	3	200227P1-5	Standard	1.000	2.11	99.850	13354.771	0.093	1.0	0.8	NO	1.000	NO	bb
4	4	200227P1-6	Standard	2.000	2.11	197.386	13773.231	0.179	1.9	-3.6	NO	1.000	NO	bb
5	5	200227P1-7	Standard	5.000	2.13	489.134	13673.156	0.447	4.8	-3.8	NO	1.000	NO	MM
6	6	200227P1-8	Standard	10.000	2.12	1115.216	14499.703	0.961	10.3	3.5	NO	1.000	NO	bb
7	7	200227P1-9	Standard	50.000	2.12	5278.839	14377.306	4.590	49.8	-0.4	NO	1.000	NO	bb
8	8	200227P1-10	Standard	100.000	2.12	10450.448	14329.535	9.116	100.1	0.1	NO	1.000	NO	bb
9	9	200227P1-11	Standard	250.000	2.12	5063.111	14007.765	4.518	49.0	-80.4	YES	1.000	NO	bbX
10	10	200227P1-12	Standard	500.000	2.12	10995.712	13866.714	9.912	109.0	-78.2	YES	1.000	NO	bbX

Compound name: PFPeA
Coefficient of Determination: R^2 = 0.999912
Calibration curve: -0.000127545 * x^2 + 0.952781 * x + 0.0266328
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	2.25	251.001	13550.682	0.232	0.2	-14.0	NO	1.000	NO	bb
2	2	200227P1-4	Standard	0.500	2.25	546.393	13046.680	0.523	0.5	4.3	NO	1.000	NO	bb
3	3	200227P1-5	Standard	1.000	2.26	1131.122	13354.771	1.059	1.1	8.3	NO	1.000	NO	MM
4	4	200227P1-6	Standard	2.000	2.26	2219.540	13773.231	2.014	2.1	4.3	NO	1.000	NO	bb
5	5	200227P1-7	Standard	5.000	2.28	5616.797	13673.156	5.135	5.4	7.3	NO	1.000	NO	bb
6	6	200227P1-8	Standard	10.000	2.26	11149.240	14499.703	9.612	10.1	0.7	NO	1.000	NO	bb
7	7	200227P1-9	Standard	50.000	2.26	54665.059	14377.306	47.527	50.2	0.4	NO	1.000	NO	bb
8	8	200227P1-10	Standard	100.000	2.27	108304.602	14329.535	94.477	100.5	0.5	NO	1.000	NO	bb
9	9	200227P1-11	Standard	250.000	2.27	255598.875	14007.765	228.087	247.6	-1.0	NO	1.000	NO	bb
10	10	200227P1-12	Standard	500.000	2.26	494209.344	13866.714	445.500	501.2	0.2	NO	1.000	NO	bb

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Compound name: PFBS
Correlation coefficient: r = 0.999221, r^2 = 0.998443
Calibration curve: 2.36623 * x + 0.185525
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	2.53	73.164	1446.801	0.632	0.2	-24.5	NO	0.998	NO	bb
2	2	200227P1-4	Standard	0.500	2.53	196.516	1548.338	1.587	0.6	18.4	NO	0.998	NO	bb
3	3	200227P1-5	Standard	1.000	2.53	345.292	1573.643	2.743	1.1	8.1	NO	0.998	NO	bb
4	4	200227P1-6	Standard	2.000	2.54	602.431	1536.398	4.901	2.0	-0.4	NO	0.998	NO	bb
5	5	200227P1-7	Standard	5.000	2.55	1555.357	1590.780	12.222	5.1	1.7	NO	0.998	NO	bb
6	6	200227P1-8	Standard	10.000	2.54	3398.236	1534.622	27.680	11.6	16.2	NO	0.998	NO	bb
7	7	200227P1-9	Standard	50.000	2.54	16107.025	1564.503	128.691	54.3	8.6	NO	0.998	NO	bb
8	8	200227P1-10	Standard	100.000	2.55	30603.424	1510.565	253.245	106.9	6.9	NO	0.998	NO	bb
9	9	200227P1-11	Standard	250.000	2.54	71335.016	1542.143	578.213	244.3	-2.3	NO	0.998	NO	bb
10	10	200227P1-12	Standard	500.000	2.54	130193.148	1395.823	1165.917	492.7	-1.5	NO	0.998	NO	bb

Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.999364
Calibration curve: -0.000477753 * x^2 + 1.31364 * x + -0.105697
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	2.98	20.835	1991.257	0.131	0.2	-28.0	NO	0.999	NO	MM
2	2	200227P1-4	Standard	0.500	2.98	100.425	2008.212	0.625	0.6	11.3	NO	0.999	NO	bb
3	3	200227P1-5	Standard	1.000	2.97	200.741	2062.690	1.217	1.0	0.7	NO	0.999	NO	bb
4	4	200227P1-6	Standard	2.000	2.98	408.592	2103.935	2.428	1.9	-3.5	NO	0.999	NO	bb
5	5	200227P1-7	Standard	5.000	2.95	1184.339	1939.899	7.631	5.9	18.1	NO	0.999	NO	bb
6	6	200227P1-8	Standard	10.000	2.97	2236.844	2072.868	13.489	10.4	3.9	NO	0.999	NO	bb
7	7	200227P1-9	Standard	50.000	2.97	10201.789	2014.307	63.308	49.2	-1.7	NO	0.999	NO	bb
8	8	200227P1-10	Standard	100.000	2.97	20330.830	2027.564	125.340	99.1	-0.9	NO	0.999	NO	bb
9	9	200227P1-11	Standard	250.000	2.95	45818.098	1915.017	299.071	250.6	0.2	NO	0.999	NO	bb
10	10	200227P1-12	Standard	500.000	2.97	74313.914	1626.885	570.983	541.3	8.3	NO	0.999	NO	bbX

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Compound name: PFHxA
Correlation coefficient: r = 0.999013, r^2 = 0.998027
Calibration curve: 0.884049 * x + 0.101067
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	3.05	553.439	22572.449	0.306	0.2	-7.1	NO	0.998	NO	bb
2	2	200227P1-4	Standard	0.500	3.05	971.987	22576.160	0.538	0.5	-1.1	NO	0.998	NO	bb
3	3	200227P1-5	Standard	1.000	3.05	1907.422	23153.461	1.030	1.1	5.1	NO	0.998	NO	bb
4	4	200227P1-6	Standard	2.000	3.05	3888.754	22529.568	2.158	2.3	16.3	NO	0.998	NO	bb
5	5	200227P1-7	Standard	5.000	3.04	9052.423	22330.906	5.067	5.6	12.3	NO	0.998	NO	bb
6	6	200227P1-8	Standard	10.000	3.05	17282.563	22018.398	9.811	11.0	9.8	NO	0.998	NO	bb
7	7	200227P1-9	Standard	50.000	3.05	89320.734	23788.217	46.935	53.0	6.0	NO	0.998	NO	bb
8	8	200227P1-10	Standard	100.000	3.06	176894.984	22851.168	96.765	109.3	9.3	NO	0.998	NO	bb
9	9	200227P1-11	Standard	250.000	3.04	408500.438	24102.154	211.859	239.5	-4.2	NO	0.998	NO	bb
10	10	200227P1-12	Standard	500.000	3.05	807896.875	23016.420	438.761	496.2	-0.8	NO	0.998	NO	bb

Compound name: PFPeS
Coefficient of Determination: R^2 = 0.999066
Calibration curve: -0.00110209 * x^2 + 2.48401 * x + -0.0827776
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	3.25	44.256	1446.801	0.382	0.2	-25.1	NO	0.999	NO	bb
2	2	200227P1-4	Standard	0.500	3.25	131.801	1548.338	1.064	0.5	-7.6	NO	0.999	NO	bb
3	3	200227P1-5	Standard	1.000	3.25	352.904	1573.643	2.803	1.2	16.2	NO	0.999	NO	bb
4	4	200227P1-6	Standard	2.000	3.26	601.921	1536.398	4.897	2.0	0.3	NO	0.999	NO	bb
5	5	200227P1-7	Standard	5.000	3.24	1496.959	1590.780	11.763	4.8	-4.4	NO	0.999	NO	bb
6	6	200227P1-8	Standard	10.000	3.25	3094.012	1534.622	25.202	10.2	2.3	NO	0.999	NO	bb
7	7	200227P1-9	Standard	50.000	3.26	16033.154	1564.503	128.101	52.8	5.7	NO	0.999	NO	bb
8	8	200227P1-10	Standard	100.000	3.25	29393.314	1510.565	243.231	102.6	2.6	NO	0.999	NO	bb
9	9	200227P1-11	Standard	250.000	3.24	65395.855	1542.143	530.073	238.7	-4.5	NO	0.999	NO	bb
10	10	200227P1-12	Standard	500.000	3.26	108931.391	1395.823	975.512	506.6	1.3	NO	0.999	NO	bb

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Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.999113
Calibration curve: -0.000254582 * x^2 + 1.04533 * x + 0.0245354
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	0.250	3.27	74.062	3957.442	0.234	0.2	-19.9	NO	0.999	NO	bb
2	2 200227P1-4	Standard	0.500	3.27	146.480	3862.557	0.474	0.4	-14.0	NO	0.999	NO	bb
3	3 200227P1-5	Standard	1.000	3.27	382.132	3962.263	1.206	1.1	13.0	NO	0.999	NO	bb
4	4 200227P1-6	Standard	2.000	3.27	765.570	4053.925	2.361	2.2	11.8	NO	0.999	NO	bb
5	5 200227P1-7	Standard	5.000	3.25	1783.731	3904.953	5.710	5.4	8.9	NO	0.999	NO	bb
6	6 200227P1-8	Standard	10.000	3.27	3659.696	4102.858	11.150	10.7	6.7	NO	0.999	NO	bb
7	7 200227P1-9	Standard	50.000	3.27	18033.654	4212.337	53.514	51.8	3.6	NO	0.999	NO	bb
8	8 200227P1-10	Standard	100.000	3.26	35209.598	4213.042	104.466	102.5	2.5	NO	0.999	NO	bb
9	9 200227P1-11	Standard	250.000	3.25	81749.586	4341.552	235.370	239.1	-4.4	NO	0.999	NO	bb
10	10 200227P1-12	Standard	500.000	3.27	158178.109	4266.929	463.384	505.5	1.1	NO	0.999	NO	bb

Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.999928
Calibration curve: -9.69019e-005 * x^2 + 0.209862 * x + 0.00231706
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	0.250	3.60	69.885	15511.189	0.056	0.3	2.9	NO	1.000	NO	bb
2	2 200227P1-4	Standard	0.500	3.60	141.050	16026.478	0.110	0.5	2.7	NO	1.000	NO	bb
3	3 200227P1-5	Standard	1.000	3.60	263.185	15767.739	0.209	1.0	-1.6	NO	1.000	NO	bb
4	4 200227P1-6	Standard	2.000	3.60	527.023	16009.256	0.411	2.0	-2.4	NO	1.000	NO	bb
5	5 200227P1-7	Standard	5.000	3.59	1353.053	16679.984	1.014	4.8	-3.4	NO	1.000	NO	bb
6	6 200227P1-8	Standard	10.000	3.60	2744.865	16136.509	2.126	10.2	1.7	NO	1.000	NO	bb
7	7 200227P1-9	Standard	50.000	3.60	13018.456	15837.346	10.275	50.1	0.2	NO	1.000	NO	bb
8	8 200227P1-10	Standard	100.000	3.60	26304.264	16434.400	20.007	99.9	-0.1	NO	1.000	NO	bb
9	9 200227P1-11	Standard	250.000	3.59	14242.786	15712.550	11.331	55.4	-77.8	YES	1.000	NO	bbX
10	10 200227P1-12	Standard	500.000	3.60	27289.102	13849.063	24.631	124.5	-75.1	YES	1.000	NO	bbX

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Compound name: PFHpA
Correlation coefficient: r = 0.999568, r^2 = 0.999137
Calibration curve: 1.15708 * x + 0.0926754
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	3.65	390.272	15511.189	0.315	0.2	-23.3	NO	0.999	NO	bb
2	2	200227P1-4	Standard	0.500	3.66	707.544	16026.478	0.552	0.4	-20.6	NO	0.999	NO	bb
3	3	200227P1-5	Standard	1.000	3.66	1719.006	15767.739	1.363	1.1	9.8	NO	0.999	NO	bb
4	4	200227P1-6	Standard	2.000	3.66	3369.674	16009.256	2.631	2.2	9.7	NO	0.999	NO	bb
5	5	200227P1-7	Standard	5.000	3.66	8779.510	16679.984	6.579	5.6	12.1	NO	0.999	NO	bb
6	6	200227P1-8	Standard	10.000	3.66	15352.724	16136.509	11.893	10.2	2.0	NO	0.999	NO	bb
7	7	200227P1-9	Standard	50.000	3.66	80225.531	15837.346	63.320	54.6	9.3	NO	0.999	NO	bb
8	8	200227P1-10	Standard	100.000	3.66	156891.188	16434.400	119.331	103.1	3.1	NO	0.999	NO	bb
9	9	200227P1-11	Standard	250.000	3.65	362083.250	15712.550	288.053	248.9	-0.5	NO	0.999	NO	bb
10	10	200227P1-12	Standard	500.000	3.66	631471.938	13849.063	569.959	492.5	-1.5	NO	0.999	NO	bb

Compound name: ADONA
Coefficient of Determination: R^2 = 0.998227
Calibration curve: 9.46897e-005 * x^2 + 2.62123 * x + 0.106178
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	3.76	770.048	15511.189	0.621	0.2	-21.5	NO	0.998	NO	bb
2	2	200227P1-4	Standard	0.500	3.76	1687.109	16026.478	1.316	0.5	-7.7	NO	0.998	NO	bb
3	3	200227P1-5	Standard	1.000	3.76	4047.647	15767.739	3.209	1.2	18.4	NO	0.998	NO	bb
4	4	200227P1-6	Standard	2.000	3.76	7055.406	16009.256	5.509	2.1	3.0	NO	0.998	NO	bb
5	5	200227P1-7	Standard	5.000	3.76	18831.324	16679.984	14.112	5.3	6.8	NO	0.998	NO	bb
6	6	200227P1-8	Standard	10.000	3.76	37400.953	16136.509	28.972	11.0	10.1	NO	0.998	NO	bb
7	7	200227P1-9	Standard	50.000	3.76	182724.672	15837.346	144.220	54.9	9.7	NO	0.998	NO	bb
8	8	200227P1-10	Standard	100.000	3.76	352593.719	16434.400	268.183	101.9	1.9	NO	0.998	NO	bb
9	9	200227P1-11	Standard	250.000	3.76	782483.438	15712.550	622.499	235.4	-5.8	NO	0.998	NO	bb
10	10	200227P1-12	Standard	500.000	3.76	1497322.000	13849.063	1351.465	506.3	1.3	NO	0.998	NO	bb

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Compound name: L-PFHxS
Correlation coefficient: r = 0.999244, r^2 = 0.998489
Calibration curve: 1.03912 * x + 0.141351
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	3.81	56.353	3296.816	0.214	0.1	-72.2	YES	0.998	NO	MMX
2	2	200227P1-4	Standard	0.500	3.80	187.947	3053.301	0.769	0.6	20.9	NO	0.998	NO	MM
3	3	200227P1-5	Standard	1.000	3.80	302.801	3456.836	1.095	0.9	-8.2	NO	0.998	NO	MM
4	4	200227P1-6	Standard	2.000	3.80	530.041	3212.421	2.062	1.8	-7.6	NO	0.998	NO	MM
5	5	200227P1-7	Standard	5.000	3.80	1546.440	3419.747	5.653	5.3	6.1	NO	0.998	NO	MM
6	6	200227P1-8	Standard	10.000	3.80	2931.605	3865.850	9.479	9.0	-10.1	NO	0.998	NO	MM
7	7	200227P1-9	Standard	50.000	3.80	14899.126	3884.181	47.948	46.0	-8.0	NO	0.998	NO	MM
8	8	200227P1-10	Standard	100.000	3.80	30797.471	3401.802	113.166	108.8	8.8	NO	0.998	NO	MM
9	9	200227P1-11	Standard	250.000	3.79	67189.703	3299.161	254.571	244.9	-2.1	NO	0.998	NO	MM
10	10	200227P1-12	Standard	500.000	3.80	130227.656	3124.690	520.962	501.2	0.2	NO	0.998	NO	MM

Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.998706
Calibration curve: -0.000387912 * x^2 + 1.57382 * x + 0.14932
Response type: Internal Std (Ref 63), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	4.10	71.333	1870.401	0.477	0.2	-16.8	NO	0.999	NO	bb
2	2	200227P1-4	Standard	0.500	4.11	149.781	1862.926	1.005	0.5	8.8	NO	0.999	NO	bb
3	3	200227P1-5	Standard	1.000	4.11	295.745	1780.441	2.076	1.2	22.5	NO	0.999	NO	bb
4	4	200227P1-6	Standard	2.000	4.12	542.431	1895.539	3.577	2.2	9.0	NO	0.999	NO	bb
5	5	200227P1-7	Standard	5.000	4.11	1271.821	1803.444	8.815	5.5	10.3	NO	0.999	NO	bd
6	6	200227P1-8	Standard	10.000	4.12	2339.683	1861.131	15.714	9.9	-0.9	NO	0.999	NO	bb
7	7	200227P1-9	Standard	50.000	4.11	12356.195	1867.446	82.708	53.2	6.3	NO	0.999	NO	bb
8	8	200227P1-10	Standard	100.000	4.11	24334.445	1928.453	157.733	102.7	2.7	NO	0.999	NO	bb
9	9	200227P1-11	Standard	250.000	4.11	52435.254	1864.594	351.519	237.1	-5.2	NO	0.999	NO	bb
10	10	200227P1-12	Standard	500.000	4.12	94975.445	1701.591	697.696	506.4	1.3	NO	0.999	NO	bb

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Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.999818
Calibration curve: -0.000410213 * x^2 + 1.20955 * x + 0.0799012
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	0.250	4.17	549.100	21251.869	0.323	0.2	-19.6	NO	1.000	NO	bb
2	2 200227P1-4	Standard	0.500	4.17	1160.169	21819.195	0.665	0.5	-3.3	NO	1.000	NO	bb
3	3 200227P1-5	Standard	1.000	4.17	2611.057	23050.652	1.416	1.1	10.5	NO	1.000	NO	bb
4	4 200227P1-6	Standard	2.000	4.17	4710.436	23512.051	2.504	2.0	0.3	NO	1.000	NO	MM
5	5 200227P1-7	Standard	5.000	4.17	11621.629	21981.383	6.609	5.4	8.2	NO	1.000	NO	bb
6	6 200227P1-8	Standard	10.000	4.17	22981.051	22280.803	12.893	10.6	6.3	NO	1.000	NO	bb
7	7 200227P1-9	Standard	50.000	4.17	98821.664	21296.773	58.003	48.7	-2.6	NO	1.000	NO	bb
8	8 200227P1-10	Standard	100.000	4.17	204043.938	21721.619	117.420	100.4	0.4	NO	1.000	NO	bb
9	9 200227P1-11	Standard	250.000	4.16	452102.750	20458.150	276.236	249.4	-0.2	NO	1.000	NO	bb
10	10 200227P1-12	Standard	500.000	4.17	785699.875	19539.482	502.636	500.4	0.1	NO	1.000	NO	bb

Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999853
Calibration curve: -3.94401e-005 * x^2 + 0.172174 * x + -0.0073928
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	0.250	4.18	55.001	21251.869	0.032	0.2	-7.7	NO	1.000	NO	bb
2	2 200227P1-4	Standard	0.500	4.18	101.137	21819.195	0.058	0.4	-24.1	NO	1.000	NO	bb
3	3 200227P1-5	Standard	1.000	4.18	332.754	23050.652	0.180	1.1	9.1	NO	1.000	NO	bb
4	4 200227P1-6	Standard	2.000	4.18	671.391	23512.051	0.357	2.1	5.9	NO	1.000	NO	bb
5	5 200227P1-7	Standard	5.000	4.18	1550.161	21981.383	0.882	5.2	3.4	NO	1.000	NO	bb
6	6 200227P1-8	Standard	10.000	4.18	2940.923	22280.803	1.650	9.6	-3.5	NO	1.000	NO	bb
7	7 200227P1-9	Standard	50.000	4.18	14264.705	21296.773	8.373	49.2	-1.5	NO	1.000	NO	bb
8	8 200227P1-10	Standard	100.000	4.18	29704.205	21721.619	17.094	101.7	1.7	NO	1.000	NO	bb
9	9 200227P1-11	Standard	250.000	4.17	66117.844	20458.150	40.398	248.9	-0.5	NO	1.000	NO	db
10	10 200227P1-12	Standard	500.000	4.18	119213.453	19539.482	76.264	500.3	0.1	NO	1.000	NO	bb

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Compound name: PFHpS
Coefficient of Determination: R^2 = 0.998747
Calibration curve: -9.14847e-005 * x^2 + 0.96802 * x + 0.039181
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	4.28	77.820	3811.884	0.255	0.2	-10.7	NO	0.999	NO	bb
2	2	200227P1-4	Standard	0.500	4.28	173.585	3853.942	0.563	0.5	8.2	NO	0.999	NO	bb
3	3	200227P1-5	Standard	1.000	4.28	323.534	4103.427	0.986	1.0	-2.2	NO	0.999	NO	bd
4	4	200227P1-6	Standard	2.000	4.29	739.107	3785.626	2.441	2.5	24.1	NO	0.999	NO	bb
5	5	200227P1-7	Standard	5.000	4.28	1529.184	4162.623	4.592	4.7	-5.9	NO	0.999	NO	bb
6	6	200227P1-8	Standard	10.000	4.28	3244.303	4330.533	9.365	9.6	-3.6	NO	0.999	NO	bb
7	7	200227P1-9	Standard	50.000	4.29	15380.911	3762.240	51.103	53.0	6.0	NO	0.999	NO	bb
8	8	200227P1-10	Standard	100.000	4.28	31327.684	3923.374	99.811	104.1	4.1	NO	0.999	NO	bb
9	9	200227P1-11	Standard	250.000	4.28	72793.531	4039.851	225.236	238.0	-4.8	NO	0.999	NO	bb
10	10	200227P1-12	Standard	500.000	4.29	130270.031	3496.880	465.665	505.1	1.0	NO	0.999	NO	bb

Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.998364
Calibration curve: 5.76096e-005 * x^2 + 0.154515 * x + 0.00622813
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	4.60	64.402	20147.256	0.040	0.2	-12.7	NO	0.998	NO	bb
2	2	200227P1-4	Standard	0.500	4.60	153.389	22786.998	0.084	0.5	0.8	NO	0.998	NO	bb
3	3	200227P1-5	Standard	1.000	4.60	258.905	23200.951	0.139	0.9	-13.8	NO	0.998	NO	bb
4	4	200227P1-6	Standard	2.000	4.60	629.119	21380.867	0.368	2.3	16.9	NO	0.998	NO	bb
5	5	200227P1-7	Standard	5.000	4.60	1443.954	22412.998	0.805	5.2	3.2	NO	0.998	NO	bb
6	6	200227P1-8	Standard	10.000	4.60	2968.931	21885.287	1.696	10.9	8.9	NO	0.998	NO	bb
7	7	200227P1-9	Standard	50.000	4.60	13166.948	21866.051	7.527	47.8	-4.4	NO	0.998	NO	bb
8	8	200227P1-10	Standard	100.000	4.60	27167.848	20972.752	16.192	101.0	1.0	NO	0.998	NO	bb
9	9	200227P1-11	Standard	250.000	4.60	15064.476	21927.553	8.588	54.4	-78.2	YES	0.998	NO	bbX
10	10	200227P1-12	Standard	500.000	4.60	27796.854	20111.846	17.276	107.5	-78.5	YES	0.998	NO	bbX

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Compound name: PFNA
Correlation coefficient: r = 0.998714, r^2 = 0.997430
Calibration curve: 1.07614 * x + 0.0721371
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	0.250	4.61	451.794	20147.256	0.280	0.2	-22.6	NO	0.997	NO	bb
2	2 200227P1-4	Standard	0.500	4.61	1067.981	22786.998	0.586	0.5	-4.5	NO	0.997	NO	bd
3	3 200227P1-5	Standard	1.000	4.62	2326.105	23200.951	1.253	1.1	9.8	NO	0.997	NO	bb
4	4 200227P1-6	Standard	2.000	4.62	4132.158	21380.867	2.416	2.2	8.9	NO	0.997	NO	bb
5	5 200227P1-7	Standard	5.000	4.61	11149.335	22412.998	6.218	5.7	14.2	NO	0.997	NO	bb
6	6 200227P1-8	Standard	10.000	4.62	20409.455	21885.287	11.657	10.8	7.7	NO	0.997	NO	bb
7	7 200227P1-9	Standard	50.000	4.62	100235.727	21866.051	57.301	53.2	6.4	NO	0.997	NO	bb
8	8 200227P1-10	Standard	100.000	4.62	202717.031	20972.752	120.822	112.2	12.2	NO	0.997	NO	bb
9	9 200227P1-11	Standard	250.000	4.61	455941.969	21927.553	259.914	241.5	-3.4	NO	0.997	NO	bb
10	10 200227P1-12	Standard	500.000	4.62	851104.063	20111.846	528.982	491.5	-1.7	NO	0.997	NO	bb

Compound name: PFOSA
Coefficient of Determination: R^2 = 0.999714
Calibration curve: -4.40009e-005 * x^2 + 0.782908 * x + 0.0473526
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	0.250	4.66	89.406	5099.000	0.219	0.2	-12.2	NO	1.000	NO	bb
2	2 200227P1-4	Standard	0.500	4.66	186.624	5352.596	0.436	0.5	-0.8	NO	1.000	NO	bb
3	3 200227P1-5	Standard	1.000	4.67	387.920	5476.014	0.885	1.1	7.1	NO	1.000	NO	bb
4	4 200227P1-6	Standard	2.000	4.67	644.688	5767.154	1.397	1.7	-13.8	NO	1.000	NO	bb
5	5 200227P1-7	Standard	5.000	4.66	1947.066	5536.480	4.396	5.6	11.1	NO	1.000	NO	bb
6	6 200227P1-8	Standard	10.000	4.67	3853.182	5614.223	8.579	10.9	9.0	NO	1.000	NO	bb
7	7 200227P1-9	Standard	50.000	4.67	17284.828	5434.770	39.755	50.9	1.7	NO	1.000	NO	bb
8	8 200227P1-10	Standard	100.000	4.67	33060.758	5416.187	76.301	97.9	-2.1	NO	1.000	NO	bb
9	9 200227P1-11	Standard	250.000	4.66	86205.398	5597.888	192.495	249.3	-0.3	NO	1.000	NO	bb
10	10 200227P1-12	Standard	500.000	4.67	145662.266	4778.941	381.000	500.7	0.1	NO	1.000	NO	bb

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Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.997544
Calibration curve: -3.34868e-005 * x^2 + 0.937949 * x + -0.0268767
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	0.250	4.70	61.040	3811.884	0.200	0.2	-3.2	NO	0.998	NO	MM
2	2 200227P1-4	Standard	0.500	4.70	98.318	3853.942	0.319	0.4	-26.3	NO	0.998	NO	MM
3	3 200227P1-5	Standard	1.000	4.70	304.830	4103.427	0.929	1.0	1.9	NO	0.998	NO	MM
4	4 200227P1-6	Standard	2.000	4.70	632.509	3785.626	2.089	2.3	12.8	NO	0.998	NO	MM
5	5 200227P1-7	Standard	5.000	4.70	1661.574	4162.623	4.990	5.3	7.0	NO	0.998	NO	MM
6	6 200227P1-8	Standard	10.000	4.70	3168.878	4330.533	9.147	9.8	-2.2	NO	0.998	NO	MM
7	7 200227P1-9	Standard	50.000	4.70	15706.525	3762.240	52.185	55.8	11.6	NO	0.998	NO	MM
8	8 200227P1-10	Standard	100.000	4.70	30459.131	3923.374	97.044	103.9	3.9	NO	0.998	NO	MM
9	9 200227P1-11	Standard	250.000	4.70	69928.531	4039.851	216.371	232.6	-6.9	NO	0.998	NO	MM
10	10 200227P1-12	Standard	500.000	4.70	130730.766	3496.880	467.312	507.4	1.5	NO	0.998	NO	MM

Compound name: 9Cl-PF30NS
Coefficient of Determination: R^2 = 0.998806
Calibration curve: -0.000294917 * x^2 + 1.02474 * x + -0.150151
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	0.250	4.92	30.106	3811.884	0.099	0.2	-2.8	NO	0.999	NO	bb
2	2 200227P1-4	Standard	0.500	4.92	79.363	3853.942	0.257	0.4	-20.4	NO	0.999	NO	bb
3	3 200227P1-5	Standard	1.000	4.92	360.942	4103.427	1.100	1.2	22.0	NO	0.999	NO	bb
4	4 200227P1-6	Standard	2.000	4.92	633.181	3785.626	2.091	2.2	9.4	NO	0.999	NO	bb
5	5 200227P1-7	Standard	5.000	4.92	1628.069	4162.623	4.889	4.9	-1.5	NO	0.999	NO	bb
6	6 200227P1-8	Standard	10.000	4.92	3091.613	4330.533	8.924	8.9	-11.2	NO	0.999	NO	bb
7	7 200227P1-9	Standard	50.000	4.92	16535.404	3762.240	54.939	54.6	9.2	NO	0.999	NO	bb
8	8 200227P1-10	Standard	100.000	4.92	29584.863	3923.374	94.258	94.7	-5.3	NO	0.999	NO	bb
9	9 200227P1-11	Standard	250.000	4.91	77342.711	4039.851	239.312	252.0	0.8	NO	0.999	NO	bb
10	10 200227P1-12	Standard	500.000	4.92	122592.352	3496.880	438.220	499.6	-0.1	NO	0.999	NO	bb

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Compound name: PFDA
Coefficient of Determination: R^2 = 0.999532
Calibration curve: -0.000220705 * x^2 + 1.15294 * x + 0.0597003
Response type: Internal Std (Ref 73), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	4.99	562.787	21043.768	0.334	0.2	-4.7	NO	1.000	NO	bb
2	2	200227P1-4	Standard	0.500	4.99	1178.214	22836.324	0.645	0.5	1.5	NO	1.000	NO	bb
3	3	200227P1-5	Standard	1.000	4.99	2590.703	22427.988	1.444	1.2	20.1	NO	1.000	NO	bb
4	4	200227P1-6	Standard	2.000	4.99	4443.523	24894.533	2.231	1.9	-5.8	NO	1.000	NO	bb
5	5	200227P1-7	Standard	5.000	4.99	11175.819	22933.172	6.092	5.2	4.7	NO	1.000	NO	bb
6	6	200227P1-8	Standard	10.000	4.99	22548.996	23944.254	11.772	10.2	1.8	NO	1.000	NO	bb
7	7	200227P1-9	Standard	50.000	4.99	116806.344	24006.590	60.820	53.2	6.5	NO	1.000	NO	bb
8	8	200227P1-10	Standard	100.000	4.99	219822.031	24897.689	110.363	97.5	-2.5	NO	1.000	NO	bb
9	9	200227P1-11	Standard	250.000	4.99	534721.375	24643.057	271.233	246.9	-1.3	NO	1.000	NO	bb
10	10	200227P1-12	Standard	500.000	4.99	914682.688	21854.182	523.174	502.0	0.4	NO	1.000	NO	bb

Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.999278
Calibration curve: -0.000560644 * x^2 + 1.41716 * x + -0.136378
Response type: Internal Std (Ref 75), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	4.95	29.837	1486.300	0.251	0.3	9.3	NO	0.999	NO	bb
2	2	200227P1-4	Standard	0.500	4.96	98.125	1656.781	0.740	0.6	23.8	NO	0.999	NO	bb
3	3	200227P1-5	Standard	1.000	4.96	153.657	1570.424	1.223	1.0	-4.0	NO	0.999	NO	bb
4	4	200227P1-6	Standard	2.000	4.97	293.142	1578.509	2.321	1.7	-13.2	NO	0.999	NO	bb
5	5	200227P1-7	Standard	5.000	4.96	840.852	1725.461	6.092	4.4	-12.0	NO	0.999	NO	bd
6	6	200227P1-8	Standard	10.000	4.96	1802.264	1659.765	13.573	9.7	-2.9	NO	0.999	NO	bb
7	7	200227P1-9	Standard	50.000	4.96	8007.568	1446.929	69.177	49.9	-0.2	NO	0.999	NO	bd
8	8	200227P1-10	Standard	100.000	4.96	16484.561	1567.856	131.426	96.5	-3.5	NO	0.999	NO	bb
9	9	200227P1-11	Standard	250.000	4.96	39315.816	1491.189	329.568	259.2	3.7	NO	0.999	NO	bb
10	10	200227P1-12	Standard	500.000	4.96	62052.113	1375.282	563.994	495.0	-1.0	NO	0.999	NO	bb

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Compound name: PFNS
Coefficient of Determination: R^2 = 0.999756
Calibration curve: -0.000187635 * x^2 + 0.973141 * x + -0.026475
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	5.04	53.137	3811.884	0.174	0.2	-17.5	NO	1.000	NO	bb
2	2	200227P1-4	Standard	0.500	5.06	142.734	3853.942	0.463	0.5	0.6	NO	1.000	NO	bb
3	3	200227P1-5	Standard	1.000	5.06	352.647	4103.427	1.074	1.1	13.1	NO	1.000	NO	bb
4	4	200227P1-6	Standard	2.000	5.06	573.585	3785.626	1.894	2.0	-1.3	NO	1.000	NO	bb
5	5	200227P1-7	Standard	5.000	5.05	1707.260	4162.623	5.127	5.3	6.0	NO	1.000	NO	bb
6	6	200227P1-8	Standard	10.000	5.06	3230.814	4330.533	9.326	9.6	-3.7	NO	1.000	NO	bb
7	7	200227P1-9	Standard	50.000	5.05	14991.118	3762.240	49.808	51.7	3.5	NO	1.000	NO	bb
8	8	200227P1-10	Standard	100.000	5.06	30147.430	3923.374	96.051	100.7	0.7	NO	1.000	NO	bb
9	9	200227P1-11	Standard	250.000	5.05	73540.555	4039.851	227.547	245.5	-1.8	NO	1.000	NO	bb
10	10	200227P1-12	Standard	500.000	5.06	123464.773	3496.880	441.339	502.2	0.4	NO	1.000	NO	bb

Compound name: L-MeFOSAA
Coefficient of Determination: R^2 = 0.999179
Calibration curve: -0.000374142 * x^2 + 1.3115 * x + -0.0249981
Response type: Internal Std (Ref 77), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	5.14	95.507	5263.099	0.227	0.2	-23.2	NO	0.999	NO	bb
2	2	200227P1-4	Standard	0.500	5.14	320.729	5443.758	0.736	0.6	16.1	NO	0.999	NO	MM
3	3	200227P1-5	Standard	1.000	5.15	380.018	5290.940	0.898	0.7	-29.6	NO	0.999	NO	MM
4	4	200227P1-6	Standard	2.000	5.14	1347.425	5347.418	3.150	2.4	21.1	NO	0.999	NO	MM
5	5	200227P1-7	Standard	5.000	5.14	3104.947	5811.585	6.678	5.1	2.4	NO	0.999	NO	MM
6	6	200227P1-8	Standard	10.000	5.14	6496.339	6032.000	13.462	10.3	3.1	NO	0.999	NO	MM
7	7	200227P1-9	Standard	50.000	5.14	30979.932	5616.224	68.952	53.4	6.8	NO	0.999	NO	MM
8	8	200227P1-10	Standard	100.000	5.14	58177.809	5959.918	122.019	95.7	-4.3	NO	0.999	NO	MM
9	9	200227P1-11	Standard	250.000	5.14	143666.250	5912.287	303.745	249.4	-0.3	NO	0.999	NO	MM
10	10	200227P1-12	Standard	500.000	5.14	265260.625	5887.597	563.177	501.1	0.2	NO	0.999	NO	MM

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 08:07:56
Calibration: 28 Feb 2020 09:57:55

Compound name: L-EtFOSAA
Correlation coefficient: r = 0.999538, r^2 = 0.999077
Calibration curve: 1.04314 * x + 0.0808309
Response type: Internal Std (Ref 81), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	5.30	140.051	5304.309	0.330	0.2	-4.4	NO	0.999	NO	MM
2	2	200227P1-4	Standard	0.500	5.30	276.238	5987.810	0.577	0.5	-4.9	NO	0.999	NO	MM
3	3	200227P1-5	Standard	1.000	5.30	577.176	5982.130	1.206	1.1	7.9	NO	0.999	NO	MM
4	4	200227P1-6	Standard	2.000	5.30	1255.850	6729.643	2.333	2.2	7.9	NO	0.999	NO	MM
5	5	200227P1-7	Standard	5.000	5.30	2913.767	5798.325	6.281	5.9	18.9	NO	0.999	NO	MM
6	6	200227P1-8	Standard	10.000	5.31	5591.754	6916.312	10.106	9.6	-3.9	NO	0.999	NO	MM
7	7	200227P1-9	Standard	50.000	5.30	29351.309	6574.667	55.804	53.4	6.8	NO	0.999	NO	MM
8	8	200227P1-10	Standard	100.000	5.30	55420.844	6377.508	108.626	104.1	4.1	NO	0.999	NO	MM
9	9	200227P1-11	Standard	250.000	5.30	126621.344	6028.284	262.557	251.6	0.6	NO	0.999	NO	MM
10	10	200227P1-12	Standard	500.000	5.30	203220.906	4967.543	511.372	490.1	-2.0	NO	0.999	NO	MM

Compound name: PFUdA
Correlation coefficient: r = 0.999079, r^2 = 0.998158
Calibration curve: 0.924289 * x + 0.177335
Response type: Internal Std (Ref 79), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	5.31	718.342	25200.305	0.356	0.2	-22.5	NO	0.998	NO	bb
2	2	200227P1-4	Standard	0.500	5.31	1103.934	25355.393	0.544	0.4	-20.6	NO	0.998	NO	bb
3	3	200227P1-5	Standard	1.000	5.32	2195.318	25529.578	1.075	1.0	-2.9	NO	0.998	NO	bb
4	4	200227P1-6	Standard	2.000	5.31	4452.869	27138.848	2.051	2.0	1.4	NO	0.998	NO	bb
5	5	200227P1-7	Standard	5.000	5.31	11694.880	26397.266	5.538	5.8	16.0	NO	0.998	NO	bb
6	6	200227P1-8	Standard	10.000	5.32	23747.057	27430.928	10.821	11.5	15.2	NO	0.998	NO	bb
7	7	200227P1-9	Standard	50.000	5.32	107787.398	26523.031	50.799	54.8	9.5	NO	0.998	NO	bb
8	8	200227P1-10	Standard	100.000	5.32	213897.281	27009.330	98.992	106.9	6.9	NO	0.998	NO	bb
9	9	200227P1-11	Standard	250.000	5.31	537969.000	29161.537	230.599	249.3	-0.3	NO	0.998	NO	bb
10	10	200227P1-12	Standard	500.000	5.32	850345.250	23610.824	450.188	486.9	-2.6	NO	0.998	NO	bb

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Compound name: PFDS
Coefficient of Determination: R^2 = 0.998198
Calibration curve: -0.00017666 * x^2 + 0.840876 * x + -0.0241212
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	5.37	72.274	3811.884	0.237	0.3	24.2	NO	0.998	NO	bb
2	2	200227P1-4	Standard	0.500	5.36	96.508	3853.942	0.313	0.4	-19.8	NO	0.998	NO	bb
3	3	200227P1-5	Standard	1.000	5.36	208.531	4103.427	0.635	0.8	-21.6	NO	0.998	NO	bb
4	4	200227P1-6	Standard	2.000	5.36	552.030	3785.626	1.823	2.2	9.9	NO	0.998	NO	bb
5	5	200227P1-7	Standard	5.000	5.36	1412.660	4162.623	4.242	5.1	1.6	NO	0.998	NO	bb
6	6	200227P1-8	Standard	10.000	5.36	2797.913	4330.533	8.076	9.7	-3.5	NO	0.998	NO	bb
7	7	200227P1-9	Standard	50.000	5.36	11339.687	3762.240	37.676	45.3	-9.5	NO	0.998	NO	bb
8	8	200227P1-10	Standard	100.000	5.36	28131.508	3923.374	89.628	109.1	9.1	NO	0.998	NO	bb
9	9	200227P1-11	Standard	250.000	5.36	63016.098	4039.851	194.983	244.5	-2.2	NO	0.998	NO	bb
10	10	200227P1-12	Standard	500.000	5.36	105539.547	3496.880	377.263	501.5	0.3	NO	0.998	NO	bb

Compound name: 11Cl-PF30UdS
Coefficient of Determination: R^2 = 0.990533
Calibration curve: -0.000128075 * x^2 + 0.447138 * x + 0.0250385
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	5.52	220.459	22903.898	0.120	0.2	-14.8	NO	0.991	NO	bb
2	2	200227P1-4	Standard	0.500	5.53	436.133	23804.039	0.229	0.5	-8.7	NO	0.991	NO	bb
3	3	200227P1-5	Standard	1.000	5.53	907.703	22481.869	0.505	1.1	7.3	NO	0.991	NO	bb
4	4	200227P1-6	Standard	2.000	5.53	1642.167	22749.807	0.902	2.0	-1.8	NO	0.991	NO	bb
5	5	200227P1-7	Standard	5.000	5.52	4042.833	22389.895	2.257	5.0	-0.0	NO	0.991	NO	bb
6	6	200227P1-8	Standard	10.000	5.53	8974.947	24332.355	4.611	10.3	2.9	NO	0.991	NO	bb
7	7	200227P1-9	Standard	50.000	5.53	42767.328	21432.641	24.943	56.6	13.3	NO	0.991	NO	bb
8	8	200227P1-10	Standard	100.000	5.53	84686.328	21544.352	49.135	113.5	13.5	NO	0.991	NO	bb
9	9	200227P1-11	Standard	250.000	5.52	197818.250	27681.455	89.328	212.7	-14.9	NO	0.991	NO	bb
10	10	200227P1-12	Standard	500.000	5.53	337641.156	21381.818	197.388	518.4	3.7	NO	0.991	NO	bb

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Compound name: 10:2 FTS
Coefficient of Determination: R^2 = 0.999815
Calibration curve: -7.14305e-005 * x^2 + 2.18549 * x + -0.0614199
Response type: Internal Std (Ref 85), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	0.250	5.58	44.180	1520.083	0.363	0.2	-22.3	NO	1.000	NO	bbX
2	2 200227P1-4	Standard	0.500	5.58	179.058	1161.896	1.926	0.9	81.9	YES	1.000	NO	bbX
3	3 200227P1-5	Standard	1.000	5.58	195.866	1141.970	2.144	1.0	0.9	NO	1.000	NO	bb
4	4 200227P1-6	Standard	2.000	5.59	436.162	1168.401	4.666	2.2	8.2	NO	1.000	NO	bb
5	5 200227P1-7	Standard	5.000	5.58	1271.776	1483.068	10.719	4.9	-1.3	NO	1.000	NO	bb
6	6 200227P1-8	Standard	10.000	5.58	2040.166	1301.703	19.591	9.0	-10.0	NO	1.000	NO	bb
7	7 200227P1-9	Standard	50.000	5.59	9972.799	1111.605	112.144	51.4	2.9	NO	1.000	NO	bb
8	8 200227P1-10	Standard	100.000	5.58	19854.289	1146.510	216.464	99.4	-0.6	NO	1.000	NO	bb
9	9 200227P1-11	Standard	250.000	5.58	53560.637	1234.839	542.182	250.2	0.1	NO	1.000	NO	bb
10	10 200227P1-12	Standard	500.000	5.58	70507.898	820.124	1074.653	499.9	-0.0	NO	1.000	NO	bb

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.993601
Calibration curve: -0.000395328 * x^2 + 1.16883 * x + 0.0381445
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	0.250	5.59	528.333	22903.898	0.288	0.2	-14.4	NO	0.994	NO	MM
2	2 200227P1-4	Standard	0.500	5.60	1145.323	23804.039	0.601	0.5	-3.6	NO	0.994	NO	MM
3	3 200227P1-5	Standard	1.000	5.60	2342.781	22481.869	1.303	1.1	8.2	NO	0.994	NO	MM
4	4 200227P1-6	Standard	2.000	5.60	4493.118	22749.807	2.469	2.1	4.0	NO	0.994	NO	bb
5	5 200227P1-7	Standard	5.000	5.59	11157.124	22389.895	6.229	5.3	6.1	NO	0.994	NO	bd
6	6 200227P1-8	Standard	10.000	5.60	23386.689	24332.355	12.014	10.3	2.8	NO	0.994	NO	bb
7	7 200227P1-9	Standard	50.000	5.60	105011.555	21432.641	61.245	53.3	6.7	NO	0.994	NO	bb
8	8 200227P1-10	Standard	100.000	5.60	218427.109	21544.352	126.731	112.7	12.7	NO	0.994	NO	bb
9	9 200227P1-11	Standard	250.000	5.59	525196.250	27681.455	237.161	219.1	-12.4	NO	0.994	NO	bb
10	10 200227P1-12	Standard	500.000	5.60	851293.750	21381.818	497.674	515.7	3.1	NO	0.994	NO	bb

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Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.999467
Calibration curve: -9.45291e-005 * x^2 + 1.09751 * x + 0.280033
Response type: Internal Std (Ref 87), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	1.250	5.67	241.377	21808.662	1.651	1.2	-0.0	NO	0.999	NO	bb
2	2 200227P1-4	Standard	2.500	5.67	458.006	21244.533	3.217	2.7	7.0	NO	0.999	NO	bb
3	3 200227P1-5	Standard	5.000	5.67	836.361	21879.736	5.703	4.9	-1.1	NO	0.999	NO	bb
4	4 200227P1-6	Standard	10.000	5.67	1584.051	22544.168	10.483	9.3	-7.0	NO	0.999	NO	bb
5	5 200227P1-7	Standard	25.000	5.66	4389.076	20572.188	31.832	28.8	15.3	NO	0.999	NO	MM
6	6 200227P1-8	Standard	50.000	5.67	8431.912	21968.227	57.266	52.2	4.3	NO	0.999	NO	bb
7	7 200227P1-9	Standard	250.000	5.67	42011.238	22298.123	281.103	261.8	4.7	NO	0.999	NO	bb
8	8 200227P1-10	Standard	500.000	5.67	81257.023	23388.596	518.353	493.0	-1.4	NO	0.999	NO	bb
9	9 200227P1-11	Standard	1250.000	5.66	192931.094	23949.617	1201.911	1223.9	-2.1	NO	0.999	NO	bb
10	10 200227P1-12	Standard	2500.000	5.67	332373.625	22909.338	2164.626	2518.2	0.7	NO	0.999	NO	bb

Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.991155
Calibration curve: -0.000578829 * x^2 + 1.22195 * x + 0.123282
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	0.250	5.84	675.427	22903.898	0.369	0.2	-19.7	NO	0.991	NO	bb
2	2 200227P1-4	Standard	0.500	5.84	1177.034	23804.039	0.618	0.4	-19.0	NO	0.991	NO	MM
3	3 200227P1-5	Standard	1.000	5.84	2493.019	22481.869	1.386	1.0	3.4	NO	0.991	NO	bb
4	4 200227P1-6	Standard	2.000	5.84	5068.672	22749.807	2.785	2.2	9.0	NO	0.991	NO	MM
5	5 200227P1-7	Standard	5.000	5.84	12054.166	22389.895	6.730	5.4	8.4	NO	0.991	NO	bb
6	6 200227P1-8	Standard	10.000	5.84	24320.143	24332.355	12.494	10.2	1.7	NO	0.991	NO	bb
7	7 200227P1-9	Standard	50.000	5.84	122573.430	21432.641	71.488	60.1	20.2	NO	0.991	NO	bb
8	8 200227P1-10	Standard	100.000	5.84	213038.047	21544.352	123.604	106.4	6.4	NO	0.991	NO	bb
9	9 200227P1-11	Standard	250.000	5.84	521382.250	27681.455	235.438	214.3	-14.3	NO	0.991	NO	bb
10	10 200227P1-12	Standard	500.000	5.84	822415.313	21381.818	480.791	522.9	4.6	NO	0.991	NO	bb

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Compound name: PFDoS
Coefficient of Determination: R^2 = 0.992926
Calibration curve: -5.89691e-005 * x^2 + 0.144524 * x + 0.0159102
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	5.86	107.555	27977.867	0.048	0.2	-11.0	NO	0.993	NO	bb
2	2	200227P1-4	Standard	0.500	5.87	156.125	25789.664	0.076	0.4	-17.3	NO	0.993	NO	bb
3	3	200227P1-5	Standard	1.000	5.86	387.930	27034.334	0.179	1.1	13.2	NO	0.993	NO	bb
4	4	200227P1-6	Standard	2.000	5.86	688.820	23436.889	0.367	2.4	21.7	NO	0.993	NO	bb
5	5	200227P1-7	Standard	5.000	5.86	1725.084	25405.254	0.849	5.8	15.5	NO	0.993	NO	bb
6	6	200227P1-8	Standard	10.000	5.87	3434.973	26069.697	1.647	11.3	13.4	NO	0.993	NO	bb
7	7	200227P1-9	Standard	50.000	5.87	16199.978	26311.123	7.696	54.3	8.7	NO	0.993	NO	bb
8	8	200227P1-10	Standard	100.000	5.87	31715.859	26123.756	15.176	109.8	9.8	NO	0.993	NO	bb
9	9	200227P1-11	Standard	250.000	5.86	66830.766	29233.990	28.576	216.8	-13.3	NO	0.993	NO	bb
10	10	200227P1-12	Standard	500.000	5.87	116321.063	24580.410	59.153	519.2	3.8	NO	0.993	NO	bb

Compound name: PFTeDA
Correlation coefficient: r = 0.999133, r^2 = 0.998266
Calibration curve: 0.896808 * x + 0.108589
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	6.05	672.317	27977.867	0.300	0.2	-14.5	NO	0.998	NO	bb
2	2	200227P1-4	Standard	0.500	6.06	966.845	25789.664	0.469	0.4	-19.7	NO	0.998	NO	MM
3	3	200227P1-5	Standard	1.000	6.05	2365.808	27034.334	1.094	1.1	9.9	NO	0.998	NO	bb
4	4	200227P1-6	Standard	2.000	6.06	4438.468	23436.889	2.367	2.5	25.9	NO	0.998	NO	bb
5	5	200227P1-7	Standard	5.000	6.06	11471.837	25405.254	5.644	6.2	23.5	NO	0.998	NO	bb
6	6	200227P1-8	Standard	10.000	6.06	21485.725	26069.697	10.302	11.4	13.7	NO	0.998	NO	bb
7	7	200227P1-9	Standard	50.000	6.06	99924.094	26311.123	47.472	52.8	5.6	NO	0.998	NO	bb
8	8	200227P1-10	Standard	100.000	6.05	199762.391	26123.756	95.585	106.5	6.5	NO	0.998	NO	MM
9	9	200227P1-11	Standard	250.000	6.05	525153.375	29233.990	224.547	250.3	0.1	NO	0.998	NO	bb
10	10	200227P1-12	Standard	500.000	6.06	859816.438	24580.410	437.247	487.4	-2.5	NO	0.998	NO	MM

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Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999010
Calibration curve: -5.6471e-005 * x^2 + 1.02308 * x + 0.202857
Response type: Internal Std (Ref 91), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	1.250	6.10	264.214	30400.055	1.297	1.1	-14.5	NO	0.999	NO	bb
2	2	200227P1-4	Standard	2.500	6.10	602.409	31743.156	2.831	2.6	2.8	NO	0.999	NO	bb
3	3	200227P1-5	Standard	5.000	6.10	1148.992	31157.057	5.502	5.2	3.6	NO	0.999	NO	bb
4	4	200227P1-6	Standard	10.000	6.10	2355.245	32484.291	10.818	10.4	3.8	NO	0.999	NO	bb
5	5	200227P1-7	Standard	25.000	6.10	6041.348	31780.652	28.362	27.6	10.3	NO	0.999	NO	bb
6	6	200227P1-8	Standard	50.000	6.10	11964.191	32218.385	55.405	54.1	8.2	NO	0.999	NO	bb
7	7	200227P1-9	Standard	250.000	6.10	55012.195	32249.908	254.507	252.1	0.8	NO	0.999	NO	bb
8	8	200227P1-10	Standard	500.000	6.10	105722.258	30433.887	518.296	521.4	4.3	NO	0.999	NO	bb
9	9	200227P1-11	Standard	1250.000	6.09	232404.344	30424.328	1139.704	1192.3	-4.6	NO	0.999	NO	bb
10	10	200227P1-12	Standard	2500.000	6.10	411836.438	27603.184	2226.047	2528.5	1.1	NO	0.999	NO	bb

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999762
Calibration curve: -0.00014335 * x^2 + 0.706539 * x + 0.115848
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	0.250	6.39	796.464	36901.500	0.270	0.2	-12.8	NO	1.000	NO	bb
2	2	200227P1-4	Standard	0.500	6.39	1333.842	36042.426	0.463	0.5	-1.8	NO	1.000	NO	bb
3	3	200227P1-5	Standard	1.000	6.39	2529.417	36864.965	0.858	1.1	5.0	NO	1.000	NO	bb
4	4	200227P1-6	Standard	2.000	6.39	4701.463	36720.137	1.600	2.1	5.1	NO	1.000	NO	bb
5	5	200227P1-7	Standard	5.000	6.39	11477.290	37080.008	3.869	5.3	6.4	NO	1.000	NO	bb
6	6	200227P1-8	Standard	10.000	6.39	21739.498	38435.602	7.070	9.9	-1.4	NO	1.000	NO	bb
7	7	200227P1-9	Standard	50.000	6.39	104269.117	38014.348	34.286	48.8	-2.3	NO	1.000	NO	bb
8	8	200227P1-10	Standard	100.000	6.39	205399.297	35969.020	71.381	103.0	3.0	NO	1.000	NO	bb
9	9	200227P1-11	Standard	250.000	6.39	486242.250	36714.754	165.547	246.5	-1.4	NO	1.000	NO	bb
10	10	200227P1-12	Standard	500.000	6.39	854989.125	33572.141	318.340	501.4	0.3	NO	1.000	NO	bb

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Compound name: PFODA
Coefficient of Determination: R^2 = 0.999135
Calibration curve: -0.000123507 * x^2 + 0.908012 * x + 0.0218764
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	0.250	6.62	567.597	36901.500	0.192	0.2	-24.9	NO	0.999	NO	bb
2	2 200227P1-4	Standard	0.500	6.62	1418.529	36042.426	0.492	0.5	3.5	NO	0.999	NO	MM
3	3 200227P1-5	Standard	1.000	6.62	2945.373	36864.965	0.999	1.1	7.6	NO	0.999	NO	bb
4	4 200227P1-6	Standard	2.000	6.62	5906.873	36720.137	2.011	2.2	9.6	NO	0.999	NO	bb
5	5 200227P1-7	Standard	5.000	6.62	14604.384	37080.008	4.923	5.4	8.0	NO	0.999	NO	bb
6	6 200227P1-8	Standard	10.000	6.62	29027.596	38435.602	9.440	10.4	3.9	NO	0.999	NO	bb
7	7 200227P1-9	Standard	50.000	6.62	137982.156	38014.348	45.372	50.3	0.6	NO	0.999	NO	bb
8	8 200227P1-10	Standard	100.000	6.62	269698.438	35969.020	93.726	104.7	4.7	NO	0.999	NO	bb
9	9 200227P1-11	Standard	250.000	6.62	618011.500	36714.754	210.410	239.5	-4.2	NO	0.999	NO	bb
10	10 200227P1-12	Standard	500.000	6.62	1146111.000	33572.141	426.734	504.6	0.9	NO	0.999	NO	bb

Compound name: N-MeFOSE
Coefficient of Determination: R^2 = 0.999771
Calibration curve: -1.98902e-005 * x^2 + 1.05441 * x + 0.358784
Response type: Internal Std (Ref 95), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	1.250	6.29	248.133	22784.545	1.625	1.2	-3.9	NO	1.000	NO	bb
2	2 200227P1-4	Standard	2.500	6.30	460.103	23573.861	2.912	2.4	-3.1	NO	1.000	NO	bb
3	3 200227P1-5	Standard	5.000	6.30	1055.613	24814.814	6.347	5.7	13.6	NO	1.000	NO	bb
4	4 200227P1-6	Standard	10.000	6.30	1930.767	25282.391	11.394	10.5	4.7	NO	1.000	NO	bb
5	5 200227P1-7	Standard	25.000	6.30	4474.207	22479.533	29.696	27.8	11.4	NO	1.000	NO	MM
6	6 200227P1-8	Standard	50.000	6.30	9216.988	24859.201	55.319	52.2	4.4	NO	1.000	NO	bb
7	7 200227P1-9	Standard	250.000	6.30	44736.992	25015.324	266.827	253.9	1.6	NO	1.000	NO	bb
8	8 200227P1-10	Standard	500.000	6.30	91666.367	26204.295	521.923	499.4	-0.1	NO	1.000	NO	bb
9	9 200227P1-11	Standard	1250.000	6.30	204416.422	24044.918	1268.415	1231.2	-1.5	NO	1.000	NO	bb
10	10 200227P1-12	Standard	2500.000	6.30	410290.219	24280.707	2521.150	2509.5	0.4	NO	1.000	NO	bb

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Compound name: N-EtFOSE
Correlation coefficient: r = 0.998864, r^2 = 0.997730
Calibration curve: 0.970285 * x + 0.35217
Response type: Internal Std (Ref 97), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	1.250	6.45	242.281	27819.070	1.299	1.0	-21.9	NO	0.998	NO	bd
2	2	200227P1-4	Standard	2.500	6.44	516.016	27953.850	2.754	2.5	-1.0	NO	0.998	NO	bb
3	3	200227P1-5	Standard	5.000	6.44	1098.357	27550.979	5.948	5.8	15.3	NO	0.998	NO	bb
4	4	200227P1-6	Standard	10.000	6.44	1998.672	27343.031	10.906	10.9	8.8	NO	0.998	NO	bb
5	5	200227P1-7	Standard	25.000	6.44	4580.513	26338.322	25.947	26.4	5.5	NO	0.998	NO	bb
6	6	200227P1-8	Standard	50.000	6.44	10086.944	28838.369	52.186	53.4	6.8	NO	0.998	NO	bb
7	7	200227P1-9	Standard	250.000	6.45	51224.137	28820.082	265.185	272.9	9.2	NO	0.998	NO	bb
8	8	200227P1-10	Standard	500.000	6.45	99465.289	27607.914	537.535	553.6	10.7	NO	0.998	NO	bb
9	9	200227P1-11	Standard	1250.000	6.44	229413.922	28880.707	1185.170	1221.1	-2.3	NO	0.998	NO	bb
10	10	200227P1-12	Standard	2500.000	6.45	448534.188	28191.189	2373.837	2446.2	-2.2	NO	0.998	NO	bb

Compound name: 13C3-PFBA-EIS
Response Factor: 642.155
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	1.32	7590.314		7590.314	11.8	-5.4	NO		NO	MMX
2	2	200227P1-4	Standard	12.500	1.32	7291.915		7291.915	11.4	-9.2	NO		NO	MMX
3	3	200227P1-5	Standard	12.500	1.32	7825.403		7825.403	12.2	-2.5	NO		NO	MMX
4	4	200227P1-6	Standard	12.500	1.33	8329.849		8329.849	13.0	3.8	NO		NO	MMX
5	5	200227P1-7	Standard	12.500	1.35	7523.821		7523.821	11.7	-6.3	NO		NO	MMX
6	6	200227P1-8	Standard	12.500	1.33	8026.943		8026.943	12.5	0.0	NO		NO	MM
7	7	200227P1-9	Standard	12.500	1.33	8364.255		8364.255	13.0	4.2	NO		NO	bbX
8	8	200227P1-10	Standard	12.500	1.34	7368.939		7368.939	11.5	-8.2	NO		NO	MMX
9	9	200227P1-11	Standard	12.500	1.37	8128.281		8128.281	12.7	1.3	NO		NO	MMX
10	10	200227P1-12	Standard	12.500	1.33	7775.098		7775.098	12.1	-3.1	NO		NO	MMX

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Compound name: 13C3-PFBA-RSD
Response Factor: 0.812583
RRF SD: 0.0230694, Relative SD: 2.83902
Response type: Internal Std (Ref 99), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	1.32	7591.001	9207.453	10.306	12.7	1.5	NO		NO	MM
2	2	200227P1-4	Standard	12.500	1.32	7308.312	9543.297	9.573	11.8	-5.8	NO		NO	MM
3	3	200227P1-5	Standard	12.500	1.32	7840.852	9432.535	10.391	12.8	2.3	NO		NO	MM
4	4	200227P1-6	Standard	12.500	1.33	8328.985	10042.703	10.367	12.8	2.1	NO		NO	MM
5	5	200227P1-7	Standard	12.500	1.35	7529.580	9248.677	10.177	12.5	0.2	NO		NO	MM
6	6	200227P1-8	Standard	12.500	1.33	8021.751	9750.017	10.284	12.7	1.3	NO		NO	MM
7	7	200227P1-9	Standard	12.500	1.33	8364.255	9928.814	10.530	13.0	3.7	NO		NO	bb
8	8	200227P1-10	Standard	12.500	1.34	8174.892	10378.795	9.846	12.1	-3.1	NO		NO	MM
9	9	200227P1-11	Standard	12.500	1.37	8476.718	10619.274	9.978	12.3	-1.8	NO		NO	MM
10	10	200227P1-12	Standard	12.500	1.33	8150.312	10064.693	10.122	12.5	-0.3	NO		NO	MM

Compound name: 13C3-PFPeA-EIS
Response Factor: 1159.98
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	2.25	13550.682		13550.682	11.7	-6.5	NO		NO	bbX
2	2	200227P1-4	Standard	12.500	2.25	13046.680		13046.680	11.2	-10.0	NO		NO	bbX
3	3	200227P1-5	Standard	12.500	2.25	13354.771		13354.771	11.5	-7.9	NO		NO	bbX
4	4	200227P1-6	Standard	12.500	2.26	13773.231		13773.231	11.9	-5.0	NO		NO	bbX
5	5	200227P1-7	Standard	12.500	2.28	13673.156		13673.156	11.8	-5.7	NO		NO	bbX
6	6	200227P1-8	Standard	12.500	2.26	14499.703		14499.703	12.5	0.0	NO		NO	bb
7	7	200227P1-9	Standard	12.500	2.26	14377.306		14377.306	12.4	-0.8	NO		NO	bbX
8	8	200227P1-10	Standard	12.500	2.26	14329.535		14329.535	12.4	-1.2	NO		NO	MMX
9	9	200227P1-11	Standard	12.500	2.27	14007.765		14007.765	12.1	-3.4	NO		NO	bbX
10	10	200227P1-12	Standard	12.500	2.26	13866.714		13866.714	12.0	-4.4	NO		NO	bbX

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Compound name: 13C3-PFPeA-RSD
Response Factor: 0.590662
RRF SD: 0.0207352, Relative SD: 3.5105
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	2.25	13550.682	23322.006	7.263	12.3	-1.6	NO		NO	bb
2	2	200227P1-4	Standard	12.500	2.25	13046.680	23173.131	7.038	11.9	-4.7	NO		NO	bb
3	3	200227P1-5	Standard	12.500	2.25	13354.771	21964.490	7.600	12.9	2.9	NO		NO	bb
4	4	200227P1-6	Standard	12.500	2.26	13773.231	24595.543	7.000	11.9	-5.2	NO		NO	bb
5	5	200227P1-7	Standard	12.500	2.28	13673.156	22249.055	7.682	13.0	4.0	NO		NO	bb
6	6	200227P1-8	Standard	12.500	2.26	14499.703	24781.201	7.314	12.4	-0.9	NO		NO	bb
7	7	200227P1-9	Standard	12.500	2.26	14377.306	23138.252	7.767	13.1	5.2	NO		NO	bb
8	8	200227P1-10	Standard	12.500	2.26	14073.620	23437.229	7.506	12.7	1.7	NO		NO	bb
9	9	200227P1-11	Standard	12.500	2.27	14007.765	24166.633	7.245	12.3	-1.9	NO		NO	bb
10	10	200227P1-12	Standard	12.500	2.26	13866.714	23366.463	7.418	12.6	0.5	NO		NO	bb

Compound name: 13C3-PFBS-EIS
Response Factor: 122.77
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	2.53	1446.801		1446.801	11.8	-5.7	NO		NO	bbX
2	2	200227P1-4	Standard	12.500	2.53	1548.338		1548.338	12.6	0.9	NO		NO	bbX
3	3	200227P1-5	Standard	12.500	2.53	1573.643		1573.643	12.8	2.5	NO		NO	bbX
4	4	200227P1-6	Standard	12.500	2.53	1536.398		1536.398	12.5	0.1	NO		NO	bbX
5	5	200227P1-7	Standard	12.500	2.55	1590.780		1590.780	13.0	3.7	NO		NO	bbX
6	6	200227P1-8	Standard	12.500	2.53	1534.622		1534.622	12.5	0.0	NO		NO	bb
7	7	200227P1-9	Standard	12.500	2.53	1564.503		1564.503	12.7	1.9	NO		NO	bbX
8	8	200227P1-10	Standard	12.500	2.55	1510.565		1510.565	12.3	-1.6	NO		NO	bbX
9	9	200227P1-11	Standard	12.500	2.54	1542.143		1542.143	12.6	0.5	NO		NO	bbX
10	10	200227P1-12	Standard	12.500	2.53	1395.823		1395.823	11.4	-9.0	NO		NO	bdX

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Compound name: 13C3-PFBS-RSD
Response Factor: 1.09013
RRF SD: 0.0812028, Relative SD: 7.44895
Response type: Internal Std (Ref 101), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	2.53	1446.801	1416.009	12.772	11.7	-6.3	NO		NO	bb
2	2 200227P1-4	Standard	12.500	2.53	1548.338	1339.785	14.446	13.3	6.0	NO		NO	bb
3	3 200227P1-5	Standard	12.500	2.53	1573.643	1572.158	12.512	11.5	-8.2	NO		NO	bb
4	4 200227P1-6	Standard	12.500	2.53	1536.398	1464.692	13.112	12.0	-3.8	NO		NO	bb
5	5 200227P1-7	Standard	12.500	2.55	1590.780	1329.265	14.959	13.7	9.8	NO		NO	bb
6	6 200227P1-8	Standard	12.500	2.53	1534.622	1549.201	12.382	11.4	-9.1	NO		NO	bb
7	7 200227P1-9	Standard	12.500	2.53	1564.503	1511.461	12.939	11.9	-5.0	NO		NO	bb
8	8 200227P1-10	Standard	12.500	2.55	1510.565	1248.387	15.125	13.9	11.0	NO		NO	bb
9	9 200227P1-11	Standard	12.500	2.54	1542.143	1364.603	14.126	13.0	3.7	NO		NO	bb
10	10 200227P1-12	Standard	12.500	2.53	1395.823	1255.906	13.893	12.7	2.0	NO		NO	bd

Compound name: 13C3-HFPO-DA-EIS
Response Factor: 328.229
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	3.27	3957.442		3957.442	12.1	-3.5	NO		NO	MMX
2	2 200227P1-4	Standard	12.500	3.27	3862.557		3862.557	11.8	-5.9	NO		NO	bbX
3	3 200227P1-5	Standard	12.500	3.27	3962.263		3962.263	12.1	-3.4	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	3.27	4053.925		4053.925	12.4	-1.2	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	3.25	3904.953		3904.953	11.9	-4.8	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	3.27	4102.858		4102.858	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	3.27	4212.337		4212.337	12.8	2.7	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	3.26	4213.042		4213.042	12.8	2.7	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	3.24	4341.552		4341.552	13.2	5.8	NO		NO	bbX
10	10 200227P1-12	Standard	12.500	3.27	4266.929		4266.929	13.0	4.0	NO		NO	bbX

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Compound name: 13C3-HFPO-DA-RSD
Response Factor: 0.174668
RRF SD: 0.00723163, Relative SD: 4.14021
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	3.27	3956.328	23322.006	2.120	12.1	-2.9	NO		NO	MM
2	2 200227P1-4	Standard	12.500	3.27	3862.557	23173.131	2.084	11.9	-4.6	NO		NO	bb
3	3 200227P1-5	Standard	12.500	3.27	3962.263	21964.490	2.255	12.9	3.3	NO		NO	bb
4	4 200227P1-6	Standard	12.500	3.27	4053.925	24595.543	2.060	11.8	-5.6	NO		NO	bb
5	5 200227P1-7	Standard	12.500	3.25	3904.953	22249.055	2.194	12.6	0.5	NO		NO	bb
6	6 200227P1-8	Standard	12.500	3.27	4102.858	24781.201	2.070	11.8	-5.2	NO		NO	bb
7	7 200227P1-9	Standard	12.500	3.27	4212.337	23138.252	2.276	13.0	4.2	NO		NO	bb
8	8 200227P1-10	Standard	12.500	3.26	4213.042	23437.229	2.247	12.9	2.9	NO		NO	bb
9	9 200227P1-11	Standard	12.500	3.24	4341.552	24166.633	2.246	12.9	2.9	NO		NO	bb
10	10 200227P1-12	Standard	12.500	3.27	4266.929	23366.463	2.283	13.1	4.5	NO		NO	bb

Compound name: 13C2-4:2 FTS-EIS
Response Factor: 165.829
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	2.96	1991.287		1991.287	12.0	-3.9	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	2.97	2008.212		2008.212	12.1	-3.1	NO		NO	bbX
3	3 200227P1-5	Standard	12.500	2.97	2062.690		2062.690	12.4	-0.5	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	2.97	2103.935		2103.935	12.7	1.5	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	2.95	1939.899		1939.899	11.7	-6.4	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	2.97	2072.868		2072.868	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	2.97	2014.307		2014.307	12.1	-2.8	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	2.97	2027.564		2027.564	12.2	-2.2	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	2.95	1915.017		1915.017	11.5	-7.6	NO		NO	bbX
10	10 200227P1-12	Standard	12.500	2.97	1626.885		1626.885	9.8	-21.5	NO		NO	bbX

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Compound name: 13C2-4:2 FTS-RSD
Response Factor: 1.41066
RRF SD: 0.100471, Relative SD: 7.12225
Response type: Internal Std (Ref 101), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	2.96	1991.287	1416.009	17.578	12.5	-0.3	NO		NO	bb
2	2 200227P1-4	Standard	12.500	2.97	2008.212	1339.785	18.736	13.3	6.3	NO		NO	bb
3	3 200227P1-5	Standard	12.500	2.97	2062.690	1572.158	16.400	11.6	-7.0	NO		NO	bb
4	4 200227P1-6	Standard	12.500	2.97	2103.935	1464.692	17.955	12.7	1.8	NO		NO	bb
5	5 200227P1-7	Standard	12.500	2.95	1939.899	1329.265	18.242	12.9	3.5	NO		NO	bb
6	6 200227P1-8	Standard	12.500	2.97	2072.868	1549.201	16.725	11.9	-5.1	NO		NO	bb
7	7 200227P1-9	Standard	12.500	2.97	2014.307	1511.461	16.659	11.8	-5.5	NO		NO	bb
8	8 200227P1-10	Standard	12.500	2.97	2027.564	1248.387	20.302	14.4	15.1	NO		NO	bb
9	9 200227P1-11	Standard	12.500	2.95	1915.017	1364.603	17.542	12.4	-0.5	NO		NO	bb
10	10 200227P1-12	Standard	12.500	2.97	1626.885	1255.906	16.192	11.5	-8.2	NO		NO	bb

Compound name: 13C2-PFHxA-EIS
Response Factor: 1761.47
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	3.05	22572.449		22572.449	12.8	2.5	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	3.05	22576.160		22576.160	12.8	2.5	NO		NO	bbX
3	3 200227P1-5	Standard	12.500	3.05	23153.461		23153.461	13.1	5.2	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	3.05	22529.568		22529.568	12.8	2.3	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	3.04	22330.906		22330.906	12.7	1.4	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	3.05	22018.398		22018.398	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	3.05	23788.217		23788.217	13.5	8.0	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	3.06	22851.168		22851.168	13.0	3.8	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	3.04	24102.154		24102.154	13.7	9.5	NO		NO	bbX
10	10 200227P1-12	Standard	12.500	3.05	23016.420		23016.420	13.1	4.5	NO		NO	bbX

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Compound name: 13C2-PFHxA-RSD
Response Factor: 0.978986
RRF SD: 0.0487118, Relative SD: 4.97574
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	3.05	22572.449	23322.006	12.098	12.4	-1.1	NO		NO	bb
2	2	200227P1-4	Standard	12.500	3.05	22576.160	23173.131	12.178	12.4	-0.5	NO		NO	bb
3	3	200227P1-5	Standard	12.500	3.05	23153.461	21964.490	13.177	13.5	7.7	NO		NO	bb
4	4	200227P1-6	Standard	12.500	3.05	22529.568	24595.543	11.450	11.7	-6.4	NO		NO	bb
5	5	200227P1-7	Standard	12.500	3.04	22330.906	22249.055	12.546	12.8	2.5	NO		NO	bb
6	6	200227P1-8	Standard	12.500	3.05	22018.398	24781.201	11.106	11.3	-9.2	NO		NO	bb
7	7	200227P1-9	Standard	12.500	3.05	23788.217	23138.252	12.851	13.1	5.0	NO		NO	bb
8	8	200227P1-10	Standard	12.500	3.06	22851.168	23437.229	12.187	12.4	-0.4	NO		NO	bb
9	9	200227P1-11	Standard	12.500	3.04	24102.154	24166.633	12.467	12.7	1.9	NO		NO	bb
10	10	200227P1-12	Standard	12.500	3.05	23016.420	23366.463	12.313	12.6	0.6	NO		NO	bb

Compound name: 13C4-PFHpA-EIS
Response Factor: 1290.92
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=exciuded
1	1	200227P1-3	Standard	12.500	3.65	15511.189		15511.189	12.0	-3.9	NO		NO	bbX
2	2	200227P1-4	Standard	12.500	3.66	16026.478		16026.478	12.4	-0.7	NO		NO	bbX
3	3	200227P1-5	Standard	12.500	3.66	15767.739		15767.739	12.2	-2.3	NO		NO	bbX
4	4	200227P1-6	Standard	12.500	3.66	16009.256		16009.256	12.4	-0.8	NO		NO	bbX
5	5	200227P1-7	Standard	12.500	3.65	16679.984		16679.984	12.9	3.4	NO		NO	bbX
6	6	200227P1-8	Standard	12.500	3.66	16136.509		16136.509	12.5	0.0	NO		NO	bb
7	7	200227P1-9	Standard	12.500	3.66	15837.346		15837.346	12.3	-1.9	NO		NO	bbX
8	8	200227P1-10	Standard	12.500	3.66	16434.400		16434.400	12.7	1.8	NO		NO	bbX
9	9	200227P1-11	Standard	12.500	3.65	15712.550		15712.550	12.2	-2.6	NO		NO	bbX
10	10	200227P1-12	Standard	12.500	3.66	13849.063		13849.063	10.7	-14.2	NO		NO	bbX

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Compound name: 13C4-PFHpA-RSD
Response Factor: 0.675485
RRF SD: 0.0435962, Relative SD: 6.45406
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	3.65	15511.189	23322.006	8.314	12.3	-1.5	NO		NO	bb
2	2 200227P1-4	Standard	12.500	3.66	16026.478	23173.131	8.645	12.8	2.4	NO		NO	bb
3	3 200227P1-5	Standard	12.500	3.66	15767.739	21964.490	8.973	13.3	6.3	NO		NO	bb
4	4 200227P1-6	Standard	12.500	3.66	16009.256	24595.543	8.136	12.0	-3.6	NO		NO	bb
5	5 200227P1-7	Standard	12.500	3.65	16679.984	22249.055	9.371	13.9	11.0	NO		NO	bb
6	6 200227P1-8	Standard	12.500	3.66	16136.509	24781.201	8.139	12.0	-3.6	NO		NO	bb
7	7 200227P1-9	Standard	12.500	3.66	15837.346	23138.252	8.556	12.7	1.3	NO		NO	bb
8	8 200227P1-10	Standard	12.500	3.66	16434.400	23437.229	8.765	13.0	3.8	NO		NO	bb
9	9 200227P1-11	Standard	12.500	3.65	15712.550	24166.633	8.127	12.0	-3.7	NO		NO	bb
10	10 200227P1-12	Standard	12.500	3.66	13849.063	23366.463	7.409	11.0	-12.3	NO		NO	bb

Compound name: 13C3-PFHxS-EIS
Response Factor: 309.268
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	3.80	3296.816		3296.816	10.7	-14.7	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	3.80	3053.301		3053.301	9.9	-21.0	NO		NO	bbX
3	3 200227P1-5	Standard	12.500	3.80	3456.836		3456.836	11.2	-10.6	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	3.80	3212.421		3212.421	10.4	-16.9	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	3.80	3419.747		3419.747	11.1	-11.5	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	3.80	3865.850		3865.850	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	3.80	3884.181		3884.181	12.6	0.5	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	3.80	3401.802		3401.802	11.0	-12.0	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	3.79	3299.161		3299.161	10.7	-14.7	NO		NO	bbX
10	10 200227P1-12	Standard	12.500	3.80	3124.690		3124.690	10.1	-19.2	NO		NO	bbX

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Compound name: 13C3-PFHxS-RSD
Response Factor: 2.42677
RRF SD: 0.175523, Relative SD: 7.23277
Response type: Internal Std (Ref 101), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	3.80	3296.816	1416.009	29.103	12.0	-4.1	NO		NO	bb
2	2 200227P1-4	Standard	12.500	3.80	3053.301	1339.785	28.487	11.7	-6.1	NO		NO	bb
3	3 200227P1-5	Standard	12.500	3.80	3456.836	1572.158	27.485	11.3	-9.4	NO		NO	bb
4	4 200227P1-6	Standard	12.500	3.80	3212.421	1464.692	27.415	11.3	-9.6	NO		NO	bb
5	5 200227P1-7	Standard	12.500	3.80	3419.747	1329.265	32.158	13.3	6.0	NO		NO	bb
6	6 200227P1-8	Standard	12.500	3.80	3865.850	1549.201	31.192	12.9	2.8	NO		NO	bb
7	7 200227P1-9	Standard	12.500	3.80	3884.181	1511.461	32.123	13.2	5.9	NO		NO	bb
8	8 200227P1-10	Standard	12.500	3.80	3401.802	1248.387	34.062	14.0	12.3	NO		NO	bb
9	9 200227P1-11	Standard	12.500	3.79	3299.161	1364.603	30.221	12.5	-0.4	NO		NO	bb
10	10 200227P1-12	Standard	12.500	3.80	3124.690	1255.906	31.100	12.8	2.5	NO		NO	bb

Compound name: 13C2-6:2 FTS-EIS
Response Factor: 148.89
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	4.11	1870.401		1870.401	12.6	0.5	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	4.11	1862.926		1862.926	12.5	0.1	NO		NO	bbX
3	3 200227P1-5	Standard	12.500	4.11	1780.441		1780.441	12.0	-4.3	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	4.11	1895.539		1895.539	12.7	1.8	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	4.11	1803.444		1803.444	12.1	-3.1	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	4.12	1861.131		1861.131	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	4.11	1867.446		1867.446	12.5	0.3	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	4.11	1928.453		1928.453	13.0	3.6	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	4.11	1864.594		1864.594	12.5	0.2	NO		NO	bbX
10	10 200227P1-12	Standard	12.500	4.12	1701.591		1701.591	11.4	-8.6	NO		NO	bbX

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Compound name: 13C2-6:2 FTS-RSD
Response Factor: 0.436051
RRF SD: 0.0253184, Relative SD: 5.80629
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	4.11	1870.401	4211.613	5.551	12.7	1.8	NO		NO	bb
2	2 200227P1-4	Standard	12.500	4.11	1862.926	4384.649	5.311	12.2	-2.6	NO		NO	bb
3	3 200227P1-5	Standard	12.500	4.11	1780.441	4334.910	5.134	11.8	-5.8	NO		NO	bb
4	4 200227P1-6	Standard	12.500	4.11	1895.539	3849.120	6.156	14.1	12.9	NO		NO	bb
5	5 200227P1-7	Standard	12.500	4.11	1803.444	4489.755	5.021	11.5	-7.9	NO		NO	bb
6	6 200227P1-8	Standard	12.500	4.12	1861.131	4439.965	5.240	12.0	-3.9	NO		NO	bb
7	7 200227P1-9	Standard	12.500	4.11	1867.446	4329.113	5.392	12.4	-1.1	NO		NO	bb
8	8 200227P1-10	Standard	12.500	4.11	1928.453	4349.698	5.542	12.7	1.7	NO		NO	bb
9	9 200227P1-11	Standard	12.500	4.11	1864.594	4183.187	5.572	12.8	2.2	NO		NO	bb
10	10 200227P1-12	Standard	12.500	4.12	1701.591	3806.387	5.588	12.8	2.5	NO		NO	bb

Compound name: 13C5-PFNA-EIS
Response Factor: 1750.82
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	4.61	20147.256		20147.256	11.5	-7.9	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	4.61	22786.998		22786.998	13.0	4.1	NO		NO	bbX
3	3 200227P1-5	Standard	12.500	4.62	23200.951		23200.951	13.3	6.0	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	4.62	21380.867		21380.867	12.2	-2.3	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	4.61	22412.998		22412.998	12.8	2.4	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	4.62	21885.287		21885.287	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	4.62	21866.051		21866.051	12.5	-0.1	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	4.62	20972.752		20972.752	12.0	-4.2	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	4.61	21927.553		21927.553	12.5	0.2	NO		NO	bbX
10	10 200227P1-12	Standard	12.500	4.62	20111.846		20111.846	11.5	-8.1	NO		NO	bbX

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Compound name: 13C5-PFNA-RSD
Response Factor: 0.950126
RRF SD: 0.0275816, Relative SD: 2.90294
Response type: Internal Std (Ref 103), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	4.61	20147.256	21849.729	11.526	12.1	-3.0	NO		NO	bb
2	2 200227P1-4	Standard	12.500	4.61	22786.998	23852.248	11.942	12.6	0.5	NO		NO	bb
3	3 200227P1-5	Standard	12.500	4.62	23200.951	24464.400	11.854	12.5	-0.2	NO		NO	bb
4	4 200227P1-6	Standard	12.500	4.62	21380.867	22735.102	11.755	12.4	-1.0	NO		NO	bb
5	5 200227P1-7	Standard	12.500	4.61	22412.998	23278.066	12.035	12.7	1.3	NO		NO	bb
6	6 200227P1-8	Standard	12.500	4.62	21885.287	21606.609	12.661	13.3	6.6	NO		NO	bb
7	7 200227P1-9	Standard	12.500	4.62	21866.051	23057.561	11.854	12.5	-0.2	NO		NO	bb
8	8 200227P1-10	Standard	12.500	4.62	20972.752	22040.479	11.894	12.5	0.2	NO		NO	bb
9	9 200227P1-11	Standard	12.500	4.61	21927.553	24165.168	11.343	11.9	-4.5	NO		NO	bb
10	10 200227P1-12	Standard	12.500	4.62	20111.846	21125.219	11.900	12.5	0.2	NO		NO	bb

Compound name: 13C8-PFOSA-EIS
Response Factor: 449.138
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	4.67	5099.000		5099.000	11.4	-9.2	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	4.67	5352.596		5352.596	11.9	-4.7	NO		NO	bbX
3	3 200227P1-5	Standard	12.500	4.67	5476.014		5476.014	12.2	-2.5	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	4.67	5767.154		5767.154	12.8	2.7	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	4.66	5536.480		5536.480	12.3	-1.4	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	4.67	5614.223		5614.223	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	4.67	5434.770		5434.770	12.1	-3.2	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	4.67	5416.187		5416.187	12.1	-3.5	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	4.66	5597.888		5597.888	12.5	-0.3	NO		NO	bbX
10	10 200227P1-12	Standard	12.500	4.67	4778.941		4778.941	10.6	-14.9	NO		NO	bbX

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Compound name: 13C8-PFOSA-RSD
Response Factor: 0.216075
RRF SD: 0.00932684, Relative SD: 4.31649
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	4.67	5099.000	24404.371	2.612	12.1	-3.3	NO		NO	bb
2	2 200227P1-4	Standard	12.500	4.67	5352.596	25318.955	2.643	12.2	-2.2	NO		NO	bb
3	3 200227P1-5	Standard	12.500	4.67	5476.014	25984.789	2.634	12.2	-2.5	NO		NO	bb
4	4 200227P1-6	Standard	12.500	4.67	5767.154	26183.898	2.753	12.7	1.9	NO		NO	bb
5	5 200227P1-7	Standard	12.500	4.66	5536.480	23987.494	2.885	13.4	6.8	NO		NO	bb
6	6 200227P1-8	Standard	12.500	4.67	5614.223	26085.492	2.690	12.5	-0.4	NO		NO	bb
7	7 200227P1-9	Standard	12.500	4.67	5434.770	26144.961	2.598	12.0	-3.8	NO		NO	bb
8	8 200227P1-10	Standard	12.500	4.67	5416.187	25819.922	2.622	12.1	-2.9	NO		NO	bb
9	9 200227P1-11	Standard	12.500	4.66	5597.888	26435.783	2.647	12.3	-2.0	NO		NO	bb
10	10 200227P1-12	Standard	12.500	4.67	4778.941	20424.268	2.925	13.5	8.3	NO		NO	bb

Compound name: 13C2-PFOA-EIS
Response Factor: 1782.46
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	4.17	21251.869		21251.869	11.9	-4.6	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	4.17	21819.195		21819.195	12.2	-2.1	NO		NO	bbX
3	3 200227P1-5	Standard	12.500	4.17	23050.652		23050.652	12.9	3.5	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	4.17	23512.051		23512.051	13.2	5.5	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	4.17	21981.383		21981.383	12.3	-1.3	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	4.17	22280.803		22280.803	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	4.17	21296.773		21296.773	11.9	-4.4	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	4.17	21721.619		21721.619	12.2	-2.5	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	4.16	20458.150		20458.150	11.5	-8.2	NO		NO	bbX
10	10 200227P1-12	Standard	12.500	4.17	19539.482		19539.482	11.0	-12.3	NO		NO	bbX

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Compound name: 13C2-PFOA-RSD
Response Factor: 0.917041
RRF SD: 0.0287046, Relative SD: 3.13013
Response type: Internal Std (Ref 102), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	4.17	21251.869	23255.871	11.423	12.5	-0.4	NO		NO	bb
2	2 200227P1-4	Standard	12.500	4.17	21819.195	22781.117	11.972	13.1	4.4	NO		NO	bb
3	3 200227P1-5	Standard	12.500	4.17	23050.652	25051.422	11.502	12.5	0.3	NO		NO	bb
4	4 200227P1-6	Standard	12.500	4.17	23512.051	24702.975	11.897	13.0	3.8	NO		NO	bb
5	5 200227P1-7	Standard	12.500	4.17	21981.383	23600.613	11.642	12.7	1.6	NO		NO	bb
6	6 200227P1-8	Standard	12.500	4.17	22280.803	25495.762	10.924	11.9	-4.7	NO		NO	bb
7	7 200227P1-9	Standard	12.500	4.17	21296.773	24286.318	10.961	12.0	-4.4	NO		NO	bb
8	8 200227P1-10	Standard	12.500	4.17	21721.619	24081.479	11.275	12.3	-1.6	NO		NO	bb
9	9 200227P1-11	Standard	12.500	4.16	20458.150	22625.801	11.302	12.3	-1.4	NO		NO	bb
10	10 200227P1-12	Standard	12.500	4.17	19539.482	20820.176	11.731	12.8	2.3	NO		NO	bb

Compound name: 13C8-PFOS-EIS
Response Factor: 346.443
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	4.70	3811.884		3811.884	11.0	-12.0	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	4.70	3853.942		3853.942	11.1	-11.0	NO		NO	bbX
3	3 200227P1-5	Standard	12.500	4.70	4103.427		4103.427	11.8	-5.2	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	4.70	3785.626		3785.626	10.9	-12.6	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	4.70	4162.623		4162.623	12.0	-3.9	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	4.70	4330.533		4330.533	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	4.70	3762.240		3762.240	10.9	-13.1	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	4.70	3923.374		3923.374	11.3	-9.4	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	4.69	4039.851		4039.851	11.7	-6.7	NO		NO	MMX
10	10 200227P1-12	Standard	12.500	4.70	3496.880		3496.880	10.1	-19.3	NO		NO	bbX

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Compound name: 13C8-PFOS-RSD
Response Factor: 0.927198
RRF SD: 0.0397834, Relative SD: 4.29072
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	4.70	3811.884	4211.613	11.314	12.2	-2.4	NO		NO	bb
2	2	200227P1-4	Standard	12.500	4.70	3853.942	4384.649	10.987	11.8	-5.2	NO		NO	bb
3	3	200227P1-5	Standard	12.500	4.70	4103.427	4334.910	11.833	12.8	2.1	NO		NO	bb
4	4	200227P1-6	Standard	12.500	4.70	3785.626	3849.120	12.294	13.3	6.1	NO		NO	bb
5	5	200227P1-7	Standard	12.500	4.70	4162.623	4489.755	11.589	12.5	-0.0	NO		NO	bb
6	6	200227P1-8	Standard	12.500	4.70	4330.533	4439.965	12.192	13.1	5.2	NO		NO	bb
7	7	200227P1-9	Standard	12.500	4.70	3762.240	4329.113	10.863	11.7	-6.3	NO		NO	bb
8	8	200227P1-10	Standard	12.500	4.70	3923.374	4349.698	11.275	12.2	-2.7	NO		NO	bb
9	9	200227P1-11	Standard	12.500	4.69	4039.287	4183.187	12.070	13.0	4.1	NO		NO	MM
10	10	200227P1-12	Standard	12.500	4.70	3496.880	3806.387	11.484	12.4	-0.9	NO		NO	bb

Compound name: 13C2-PFDA-EIS
Response Factor: 1915.54
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	4.99	21043.768		21043.768	11.0	-12.1	NO		NO	bbX
2	2	200227P1-4	Standard	12.500	4.99	22836.324		22836.324	11.9	-4.6	NO		NO	bbX
3	3	200227P1-5	Standard	12.500	4.99	22427.988		22427.988	11.7	-6.3	NO		NO	bbX
4	4	200227P1-6	Standard	12.500	4.99	24894.533		24894.533	13.0	4.0	NO		NO	bbX
5	5	200227P1-7	Standard	12.500	4.99	22933.172		22933.172	12.0	-4.2	NO		NO	bbX
6	6	200227P1-8	Standard	12.500	4.99	23944.254		23944.254	12.5	0.0	NO		NO	bb
7	7	200227P1-9	Standard	12.500	4.99	24006.590		24006.590	12.5	0.3	NO		NO	bbX
8	8	200227P1-10	Standard	12.500	4.99	24897.689		24897.689	13.0	4.0	NO		NO	bbX
9	9	200227P1-11	Standard	12.500	4.99	24643.057		24643.057	12.9	2.9	NO		NO	bbX
10	10	200227P1-12	Standard	12.500	4.99	21854.182		21854.182	11.4	-8.7	NO		NO	bbX

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Compound name: 13C2-PFDA-RSD
Response Factor: 0.983002
RRF SD: 0.0553709, Relative SD: 5.63284
Response type: Internal Std (Ref 105), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	4.99	21043.768	23647.152	11.124	11.3	-9.5	NO		NO	bb
2	2 200227P1-4	Standard	12.500	4.99	22836.324	25046.877	11.397	11.6	-7.2	NO		NO	bb
3	3 200227P1-5	Standard	12.500	4.99	22427.988	23820.924	11.769	12.0	-4.2	NO		NO	bb
4	4 200227P1-6	Standard	12.500	4.99	24894.533	24192.422	12.863	13.1	4.7	NO		NO	bb
5	5 200227P1-7	Standard	12.500	4.99	22933.172	24235.971	11.828	12.0	-3.7	NO		NO	bb
6	6 200227P1-8	Standard	12.500	4.99	23944.254	23466.820	12.754	13.0	3.8	NO		NO	bb
7	7 200227P1-9	Standard	12.500	4.99	24006.590	23827.920	12.594	12.8	2.5	NO		NO	bb
8	8 200227P1-10	Standard	12.500	4.99	24897.689	23996.334	12.970	13.2	5.6	NO		NO	bb
9	9 200227P1-11	Standard	12.500	4.99	24643.057	23729.617	12.981	13.2	5.6	NO		NO	bb
10	10 200227P1-12	Standard	12.500	4.99	21854.182	21687.629	12.596	12.8	2.5	NO		NO	bb

Compound name: 13C2-8:2 FTS-EIS
Response Factor: 132.781
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	4.96	1486.300		1486.300	11.2	-10.5	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	4.96	1656.781		1656.781	12.5	-0.2	NO		NO	bdX
3	3 200227P1-5	Standard	12.500	4.96	1570.424		1570.424	11.8	-5.4	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	4.96	1578.509		1578.509	11.9	-4.9	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	4.96	1725.461		1725.461	13.0	4.0	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	4.96	1659.765		1659.765	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	4.96	1446.929		1446.929	10.9	-12.8	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	4.96	1567.856		1567.856	11.8	-5.5	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	4.96	1491.189		1491.189	11.2	-10.2	NO		NO	bbX
10	10 200227P1-12	Standard	12.500	4.96	1375.282		1375.282	10.4	-17.1	NO		NO	bbX

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Compound name: 13C2-8:2 FTS-RSD
Response Factor: 0.367373
RRF SD: 0.0205504, Relative SD: 5.59387
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	4.96	1486.300	4211.613	4.411	12.0	-3.9	NO		NO	bb
2	2 200227P1-4	Standard	12.500	4.96	1656.781	4384.649	4.723	12.9	2.9	NO		NO	bd
3	3 200227P1-5	Standard	12.500	4.96	1570.424	4334.910	4.528	12.3	-1.4	NO		NO	bb
4	4 200227P1-6	Standard	12.500	4.96	1578.509	3849.120	5.126	14.0	11.6	NO		NO	bb
5	5 200227P1-7	Standard	12.500	4.96	1725.461	4489.755	4.804	13.1	4.6	NO		NO	bb
6	6 200227P1-8	Standard	12.500	4.96	1659.765	4439.965	4.673	12.7	1.8	NO		NO	bb
7	7 200227P1-9	Standard	12.500	4.96	1446.929	4329.113	4.178	11.4	-9.0	NO		NO	bb
8	8 200227P1-10	Standard	12.500	4.96	1567.856	4349.698	4.506	12.3	-1.9	NO		NO	bb
9	9 200227P1-11	Standard	12.500	4.96	1491.189	4183.187	4.456	12.1	-3.0	NO		NO	bb
10	10 200227P1-12	Standard	12.500	4.96	1375.282	3806.387	4.516	12.3	-1.7	NO		NO	bb

Compound name: d3-N-MeFOSAA-EIS
Response Factor: 482.56
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	5.14	5263.099		5263.099	10.9	-12.7	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	5.14	5443.758		5443.758	11.3	-9.8	NO		NO	bbX
3	3 200227P1-5	Standard	12.500	5.14	5290.940		5290.940	11.0	-12.3	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	5.14	5347.418		5347.418	11.1	-11.3	NO		NO	MMX
5	5 200227P1-7	Standard	12.500	5.14	5811.585		5811.585	12.0	-3.7	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	5.14	6032.000		6032.000	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	5.14	5616.224		5616.224	11.6	-6.9	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	5.14	5959.918		5959.918	12.4	-1.2	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	5.14	5912.287		5912.287	12.3	-2.0	NO		NO	bbX
10	10 200227P1-12	Standard	12.500	5.14	5887.597		5887.597	12.2	-2.4	NO		NO	MMX

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Compound name: d3-N-MeFOSAA-RSD
Response Factor: 0.226962
RRF SD: 0.0247697, Relative SD: 10.9136
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	5.14	5263.099	24404.371	2.696	11.9	-5.0	NO		NO	bb
2	2 200227P1-4	Standard	12.500	5.14	5443.758	25318.955	2.688	11.8	-5.3	NO		NO	bb
3	3 200227P1-5	Standard	12.500	5.14	5290.940	25984.789	2.545	11.2	-10.3	NO		NO	bb
4	4 200227P1-6	Standard	12.500	5.14	5347.418	26183.898	2.553	11.2	-10.0	NO		NO	MM
5	5 200227P1-7	Standard	12.500	5.14	5811.585	23987.494	3.028	13.3	6.7	NO		NO	bb
6	6 200227P1-8	Standard	12.500	5.14	6032.000	26085.492	2.890	12.7	1.9	NO		NO	bb
7	7 200227P1-9	Standard	12.500	5.14	5616.224	26144.961	2.685	11.8	-5.4	NO		NO	bb
8	8 200227P1-10	Standard	12.500	5.14	5959.918	25819.922	2.885	12.7	1.7	NO		NO	bb
9	9 200227P1-11	Standard	12.500	5.14	5912.287	26435.783	2.796	12.3	-1.5	NO		NO	bb
10	10 200227P1-12	Standard	12.500	5.14	5888.414	20424.268	3.604	15.9	27.0	NO		NO	MM

Compound name: 13C2-PFUdA-EIS
Response Factor: 2194.47
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	5.31	25200.305		25200.305	11.5	-8.1	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	5.31	25355.393		25355.393	11.6	-7.6	NO		NO	bbX
3	3 200227P1-5	Standard	12.500	5.32	25529.578		25529.578	11.6	-6.9	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	5.32	27138.848		27138.848	12.4	-1.1	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	5.31	26397.266		26397.266	12.0	-3.8	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	5.32	27430.928		27430.928	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	5.32	26523.031		26523.031	12.1	-3.3	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	5.32	27009.330		27009.330	12.3	-1.5	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	5.31	29161.537		29161.537	13.3	6.3	NO		NO	bbX
10	10 200227P1-12	Standard	12.500	5.32	23610.824		23610.824	10.8	-13.9	NO		NO	bbX

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Compound name: 13C2-PFUdA-RSD
Response Factor: 1.05247
RRF SD: 0.0529452, Relative SD: 5.03057
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	5.31	25200.305	24404.371	12.908	12.3	-1.9	NO		NO	bb
2	2 200227P1-4	Standard	12.500	5.31	25355.393	25318.955	12.518	11.9	-4.8	NO		NO	bb
3	3 200227P1-5	Standard	12.500	5.32	25529.578	25984.789	12.281	11.7	-6.6	NO		NO	bb
4	4 200227P1-6	Standard	12.500	5.32	27138.848	26183.898	12.956	12.3	-1.5	NO		NO	bb
5	5 200227P1-7	Standard	12.500	5.31	26397.266	23987.494	13.756	13.1	4.6	NO		NO	bb
6	6 200227P1-8	Standard	12.500	5.32	27430.928	26085.492	13.145	12.5	-0.1	NO		NO	bb
7	7 200227P1-9	Standard	12.500	5.32	26523.031	26144.961	12.681	12.0	-3.6	NO		NO	bb
8	8 200227P1-10	Standard	12.500	5.32	27009.330	25819.922	13.076	12.4	-0.6	NO		NO	bb
9	9 200227P1-11	Standard	12.500	5.31	29161.537	26435.783	13.789	13.1	4.8	NO		NO	bb
10	10 200227P1-12	Standard	12.500	5.32	23610.824	20424.268	14.450	13.7	9.8	NO		NO	bb

Compound name: d5-N-EtFOSAA-EIS
Response Factor: 553.305
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	5.30	5304.309		5304.309	9.6	-23.3	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	5.29	5987.810		5987.810	10.8	-13.4	NO		NO	bbX
3	3 200227P1-5	Standard	12.500	5.30	5982.130		5982.130	10.8	-13.5	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	5.30	6729.643		6729.643	12.2	-2.7	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	5.29	5798.325		5798.325	10.5	-16.2	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	5.30	6916.312		6916.312	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	5.30	6574.667		6574.667	11.9	-4.9	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	5.30	6377.508		6377.508	11.5	-7.8	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	5.29	6028.284		6028.284	10.9	-12.8	NO		NO	bbX
10	10 200227P1-12	Standard	12.500	5.29	4967.543		4967.543	9.0	-28.2	NO		NO	MMX

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Compound name: d5-N-EtFOSAA-RSD
Response Factor: 0.241773
RRF SD: 0.0143316, Relative SD: 5.92771
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	5.30	5304.309	24404.371	2.717	11.2	-10.1	NO		NO	bb
2	2 200227P1-4	Standard	12.500	5.29	5987.810	25318.955	2.956	12.2	-2.2	NO		NO	bb
3	3 200227P1-5	Standard	12.500	5.30	5982.130	25984.789	2.878	11.9	-4.8	NO		NO	bb
4	4 200227P1-6	Standard	12.500	5.30	6729.643	26183.898	3.213	13.3	6.3	NO		NO	bb
5	5 200227P1-7	Standard	12.500	5.29	5798.325	23987.494	3.022	12.5	-0.0	NO		NO	bb
6	6 200227P1-8	Standard	12.500	5.30	6916.312	26085.492	3.314	13.7	9.7	NO		NO	bb
7	7 200227P1-9	Standard	12.500	5.30	6574.667	26144.961	3.143	13.0	4.0	NO		NO	bb
8	8 200227P1-10	Standard	12.500	5.30	6377.508	25819.922	3.087	12.8	2.2	NO		NO	bb
9	9 200227P1-11	Standard	12.500	5.29	6028.284	26435.783	2.850	11.8	-5.7	NO		NO	bb
10	10 200227P1-12	Standard	12.500	5.29	4968.983	20424.268	3.041	12.6	0.6	NO		NO	MM

Compound name: 13C2-PFDoA-EIS
Response Factor: 1946.59
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	5.59	22903.898		22903.898	11.8	-5.9	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	5.59	23804.039		23804.039	12.2	-2.2	NO		NO	bbX
3	3 200227P1-5	Standard	12.500	5.60	22481.869		22481.869	11.5	-7.6	NO		NO	MMX
4	4 200227P1-6	Standard	12.500	5.60	22749.807		22749.807	11.7	-6.5	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	5.59	22389.895		22389.895	11.5	-8.0	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	5.60	24332.355		24332.355	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	5.60	21432.641		21432.641	11.0	-11.9	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	5.60	21544.352		21544.352	11.1	-11.5	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	5.59	27681.455		27681.455	14.2	13.8	NO		NO	bbX
10	10 200227P1-12	Standard	12.500	5.60	21381.818		21381.818	11.0	-12.1	NO		NO	bbX

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Compound name: 13C2-PFDoA-RSD
Response Factor: 0.97108
RRF SD: 0.0801113, Relative SD: 8.24971
Response type: Internal Std (Ref 105), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	5.59	22903.898	23647.152	12.107	12.5	-0.3	NO		NO	bb
2	2 200227P1-4	Standard	12.500	5.59	23804.039	25046.877	11.880	12.2	-2.1	NO		NO	bb
3	3 200227P1-5	Standard	12.500	5.60	22416.367	23820.924	11.763	12.1	-3.1	NO		NO	bd
4	4 200227P1-6	Standard	12.500	5.60	22749.807	24192.422	11.755	12.1	-3.2	NO		NO	bb
5	5 200227P1-7	Standard	12.500	5.59	22389.895	24235.971	11.548	11.9	-4.9	NO		NO	bb
6	6 200227P1-8	Standard	12.500	5.60	24332.355	23466.820	12.961	13.3	6.8	NO		NO	bb
7	7 200227P1-9	Standard	12.500	5.60	21432.641	23827.920	11.243	11.6	-7.4	NO		NO	bb
8	8 200227P1-10	Standard	12.500	5.60	21544.352	23996.334	11.223	11.6	-7.5	NO		NO	bb
9	9 200227P1-11	Standard	12.500	5.59	27681.455	23729.617	14.582	15.0	20.1	NO		NO	bb
10	10 200227P1-12	Standard	12.500	5.60	21381.818	21687.629	12.324	12.7	1.5	NO		NO	bb

Compound name: 13C2-10:2 FTS-EIS
Response Factor: 104.136
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	5.58	1520.083		1520.083	14.6	16.8	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	5.58	1161.896		1161.896	11.2	-10.7	NO		NO	MMX
3	3 200227P1-5	Standard	12.500	5.58	1141.970		1141.970	11.0	-12.3	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	5.58	1168.401		1168.401	11.2	-10.2	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	5.58	1483.068		1483.068	14.2	13.9	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	5.58	1301.703		1301.703	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	5.58	1111.605		1111.605	10.7	-14.6	NO		NO	MMX
8	8 200227P1-10	Standard	12.500	5.58	1146.510		1146.510	11.0	-11.9	NO		NO	MMX
9	9 200227P1-11	Standard	12.500	5.58	1234.839		1234.839	11.9	-5.1	NO		NO	MMX
10	10 200227P1-12	Standard	12.500	5.58	820.124		820.124	7.9	-37.0	YES		NO	MMX

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Compound name: 13C2-10:2 FTS-RSD
Response Factor: 0.285833
RRF SD: 0.0404726, Relative SD: 14.1596
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	5.58	1520.083	4211.613	4.512	15.8	26.3	NO		NO	bb
2	2 200227P1-4	Standard	12.500	5.58	1158.542	4384.649	3.303	11.6	-7.6	NO		NO	bb
3	3 200227P1-5	Standard	12.500	5.58	1141.970	4334.910	3.293	11.5	-7.8	NO		NO	bb
4	4 200227P1-6	Standard	12.500	5.58	1168.401	3849.120	3.794	13.3	6.2	NO		NO	bb
5	5 200227P1-7	Standard	12.500	5.58	1483.068	4489.755	4.129	14.4	15.6	NO		NO	bb
6	6 200227P1-8	Standard	12.500	5.58	1301.703	4439.965	3.665	12.8	2.6	NO		NO	bb
7	7 200227P1-9	Standard	12.500	5.58	1128.992	4329.113	3.260	11.4	-8.8	NO		NO	bb
8	8 200227P1-10	Standard	12.500	5.58	1171.373	4349.698	3.366	11.8	-5.8	NO		NO	bb
9	9 200227P1-11	Standard	12.500	5.58	1237.953	4183.187	3.699	12.9	3.5	NO		NO	MM
10	10 200227P1-12	Standard	12.500	5.58	824.687	3806.387	2.708	9.5	-24.2	NO		NO	MM

Compound name: d3-N-MeFOSA-EIS
Response Factor: 147.24
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	149.200	5.69	21808.662		21808.662	148.1	-0.7	NO		NO	bbX
2	2 200227P1-4	Standard	149.200	5.69	21244.533		21244.533	144.3	-3.3	NO		NO	bbX
3	3 200227P1-5	Standard	149.200	5.70	21879.736		21879.736	148.6	-0.4	NO		NO	bbX
4	4 200227P1-6	Standard	149.200	5.70	22544.168		22544.168	153.1	2.6	NO		NO	bbX
5	5 200227P1-7	Standard	149.200	5.69	20572.188		20572.188	139.7	-6.4	NO		NO	bbX
6	6 200227P1-8	Standard	149.200	5.70	21968.227		21968.227	149.2	0.0	NO		NO	bb
7	7 200227P1-9	Standard	149.200	5.70	22298.123		22298.123	151.4	1.5	NO		NO	bbX
8	8 200227P1-10	Standard	149.200	5.69	23388.596		23388.596	158.8	6.5	NO		NO	bbX
9	9 200227P1-11	Standard	149.200	5.68	23949.617		23949.617	162.7	9.0	NO		NO	bbX
10	10 200227P1-12	Standard	149.200	5.70	22909.338		22909.338	155.6	4.3	NO		NO	bbX

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Compound name: d3-N-MeFOSA-RSD
Response Factor: 0.0747473
RRF SD: 0.00709775, Relative SD: 9.49565
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	149.200	5.69	21808.662	24404.371	11.170	149.4	0.2	NO		NO	bb
2	2	200227P1-4	Standard	149.200	5.69	21244.533	25318.955	10.488	140.3	-6.0	NO		NO	bb
3	3	200227P1-5	Standard	149.200	5.70	21879.736	25984.789	10.525	140.8	-5.6	NO		NO	bb
4	4	200227P1-6	Standard	149.200	5.70	22544.168	26183.898	10.762	144.0	-3.5	NO		NO	bb
5	5	200227P1-7	Standard	149.200	5.69	20572.188	23987.494	10.720	143.4	-3.9	NO		NO	bb
6	6	200227P1-8	Standard	149.200	5.70	21968.227	26085.492	10.527	140.8	-5.6	NO		NO	bb
7	7	200227P1-9	Standard	149.200	5.70	22298.123	26144.961	10.661	142.6	-4.4	NO		NO	bb
8	8	200227P1-10	Standard	149.200	5.69	23388.596	25819.922	11.323	151.5	1.5	NO		NO	bb
9	9	200227P1-11	Standard	149.200	5.68	23949.617	26435.783	11.324	151.5	1.5	NO		NO	bb
10	10	200227P1-12	Standard	149.200	5.70	22909.338	20424.268	14.021	187.6	25.7	NO		NO	bb

Compound name: 13C2-PFTeDA-EIS
Response Factor: 2085.58
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	6.05	27977.867		27977.867	13.4	7.3	NO		NO	bbX
2	2	200227P1-4	Standard	12.500	6.05	25789.664		25789.664	12.4	-1.1	NO		NO	bbX
3	3	200227P1-5	Standard	12.500	6.05	27034.334		27034.334	13.0	3.7	NO		NO	bbX
4	4	200227P1-6	Standard	12.500	6.05	23436.889		23436.889	11.2	-10.1	NO		NO	bbX
5	5	200227P1-7	Standard	12.500	6.05	25405.254		25405.254	12.2	-2.5	NO		NO	bbX
6	6	200227P1-8	Standard	12.500	6.06	26069.697		26069.697	12.5	0.0	NO		NO	bb
7	7	200227P1-9	Standard	12.500	6.06	26311.123		26311.123	12.6	0.9	NO		NO	bbX
8	8	200227P1-10	Standard	12.500	6.06	26123.756		26123.756	12.5	0.2	NO		NO	bbX
9	9	200227P1-11	Standard	12.500	6.05	29233.990		29233.990	14.0	12.1	NO		NO	bbX
10	10	200227P1-12	Standard	12.500	6.06	24580.410		24580.410	11.8	-5.7	NO		NO	bbX

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Compound name: 13C2-PFTeDA-RSD
Response Factor: 1.04865
RRF SD: 0.0863105, Relative SD: 8.23066
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	6.05	27977.867	24404.371	14.330	13.7	9.3	NO		NO	bb
2	2 200227P1-4	Standard	12.500	6.05	25789.664	25318.955	12.732	12.1	-2.9	NO		NO	bb
3	3 200227P1-5	Standard	12.500	6.05	27034.334	25984.789	13.005	12.4	-0.8	NO		NO	bb
4	4 200227P1-6	Standard	12.500	6.05	23436.889	26183.898	11.189	10.7	-14.6	NO		NO	bb
5	5 200227P1-7	Standard	12.500	6.05	25405.254	23987.494	13.239	12.6	1.0	NO		NO	bb
6	6 200227P1-8	Standard	12.500	6.06	26069.697	26085.492	12.492	11.9	-4.7	NO		NO	bb
7	7 200227P1-9	Standard	12.500	6.06	26311.123	26144.961	12.579	12.0	-4.0	NO		NO	bb
8	8 200227P1-10	Standard	12.500	6.06	26123.756	25819.922	12.647	12.1	-3.5	NO		NO	bb
9	9 200227P1-11	Standard	12.500	6.05	29233.990	26435.783	13.823	13.2	5.5	NO		NO	bb
10	10 200227P1-12	Standard	12.500	6.06	24580.410	20424.268	15.044	14.3	14.8	NO		NO	bb

Compound name: d5-N-ETFOSA-EIS
Response Factor: 215.941
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	149.200	6.11	30400.055		30400.055	140.8	-5.6	NO		NO	bbX
2	2 200227P1-4	Standard	149.200	6.11	31743.156		31743.156	147.0	-1.5	NO		NO	bbX
3	3 200227P1-5	Standard	149.200	6.12	31157.057		31157.057	144.3	-3.3	NO		NO	bbX
4	4 200227P1-6	Standard	149.200	6.12	32484.291		32484.291	150.4	0.8	NO		NO	bbX
5	5 200227P1-7	Standard	149.200	6.11	31780.652		31780.652	147.2	-1.4	NO		NO	bbX
6	6 200227P1-8	Standard	149.200	6.12	32218.385		32218.385	149.2	0.0	NO		NO	bb
7	7 200227P1-9	Standard	149.200	6.12	32249.908		32249.908	149.3	0.1	NO		NO	bbX
8	8 200227P1-10	Standard	149.200	6.11	30433.887		30433.887	140.9	-5.5	NO		NO	bbX
9	9 200227P1-11	Standard	149.200	6.11	30424.328		30424.328	140.9	-5.6	NO		NO	bbX
10	10 200227P1-12	Standard	149.200	6.12	27603.184		27603.184	127.8	-14.3	NO		NO	bbX

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Compound name: d5-N-ETFOSA-RSD
Response Factor: 0.104002
RRF SD: 0.00509475, Relative SD: 4.89872
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	149.200	6.11	30400.055	24404.371	15.571	149.7	0.3	NO		NO	bb
2	2 200227P1-4	Standard	149.200	6.11	31743.156	25318.955	15.672	150.7	1.0	NO		NO	bb
3	3 200227P1-5	Standard	149.200	6.12	31157.057	25984.789	14.988	144.1	-3.4	NO		NO	bb
4	4 200227P1-6	Standard	149.200	6.12	32484.291	26183.898	15.508	149.1	-0.1	NO		NO	bb
5	5 200227P1-7	Standard	149.200	6.11	31780.652	23987.494	16.561	159.2	6.7	NO		NO	bb
6	6 200227P1-8	Standard	149.200	6.12	32218.385	26085.492	15.439	148.4	-0.5	NO		NO	bb
7	7 200227P1-9	Standard	149.200	6.12	32249.908	26144.961	15.419	148.3	-0.6	NO		NO	bb
8	8 200227P1-10	Standard	149.200	6.11	30433.887	25819.922	14.734	141.7	-5.0	NO		NO	bb
9	9 200227P1-11	Standard	149.200	6.11	30424.328	26435.783	14.386	138.3	-7.3	NO		NO	bb
10	10 200227P1-12	Standard	149.200	6.12	27603.184	20424.268	16.894	162.4	8.9	NO		NO	bb

Compound name: 13C2-PFHxDA-EIS
Response Factor: 3074.85
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	6.39	36901.500		36901.500	12.0	-4.0	NO		NO	bbX
2	2 200227P1-4	Standard	12.500	6.39	36042.426		36042.426	11.7	-6.2	NO		NO	bbX
3	3 200227P1-5	Standard	12.500	6.39	36864.965		36864.965	12.0	-4.1	NO		NO	bbX
4	4 200227P1-6	Standard	12.500	6.39	36720.137		36720.137	11.9	-4.5	NO		NO	bbX
5	5 200227P1-7	Standard	12.500	6.39	37080.008		37080.008	12.1	-3.5	NO		NO	bbX
6	6 200227P1-8	Standard	12.500	6.39	38435.602		38435.602	12.5	0.0	NO		NO	bb
7	7 200227P1-9	Standard	12.500	6.39	38014.348		38014.348	12.4	-1.1	NO		NO	bbX
8	8 200227P1-10	Standard	12.500	6.39	35969.020		35969.020	11.7	-6.4	NO		NO	bbX
9	9 200227P1-11	Standard	12.500	6.39	36714.754		36714.754	11.9	-4.5	NO		NO	bbX
10	10 200227P1-12	Standard	12.500	6.39	33572.141		33572.141	10.9	-12.7	NO		NO	bbX

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Compound name: 13C2-PFHxDA-RSD
Response Factor: 1.46556
RRF SD: 0.0814047, Relative SD: 5.55451
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	6.39	36901.500	24404.371	18.901	12.9	3.2	NO		NO	bb
2	2	200227P1-4	Standard	12.500	6.39	36042.426	25318.955	17.794	12.1	-2.9	NO		NO	bb
3	3	200227P1-5	Standard	12.500	6.39	36864.965	25984.789	17.734	12.1	-3.2	NO		NO	bb
4	4	200227P1-6	Standard	12.500	6.39	36720.137	26183.898	17.530	12.0	-4.3	NO		NO	bb
5	5	200227P1-7	Standard	12.500	6.39	37080.008	23987.494	19.323	13.2	5.5	NO		NO	bb
6	6	200227P1-8	Standard	12.500	6.39	38435.602	26085.492	18.418	12.6	0.5	NO		NO	bb
7	7	200227P1-9	Standard	12.500	6.39	38014.348	26144.961	18.175	12.4	-0.8	NO		NO	bb
8	8	200227P1-10	Standard	12.500	6.39	35969.020	25819.922	17.413	11.9	-4.9	NO		NO	bb
9	9	200227P1-11	Standard	12.500	6.39	36714.754	26435.783	17.360	11.8	-5.2	NO		NO	bb
10	10	200227P1-12	Standard	12.500	6.39	33572.141	20424.268	20.547	14.0	12.2	NO		NO	bb

Compound name: d7-N-MeFOSE-EIS
Response Factor: 166.617
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	149.200	6.29	22784.545		22784.545	136.7	-8.3	NO		NO	bbX
2	2	200227P1-4	Standard	149.200	6.29	23573.861		23573.861	141.5	-5.2	NO		NO	bbX
3	3	200227P1-5	Standard	149.200	6.29	24814.814		24814.814	148.9	-0.2	NO		NO	bbX
4	4	200227P1-6	Standard	149.200	6.29	25282.391		25282.391	151.7	1.7	NO		NO	bbX
5	5	200227P1-7	Standard	149.200	6.28	22479.533		22479.533	134.9	-9.6	NO		NO	bbX
6	6	200227P1-8	Standard	149.200	6.29	24859.201		24859.201	149.2	0.0	NO		NO	bb
7	7	200227P1-9	Standard	149.200	6.29	25015.324		25015.324	150.1	0.6	NO		NO	bbX
8	8	200227P1-10	Standard	149.200	6.28	26204.295		26204.295	157.3	5.4	NO		NO	bbX
9	9	200227P1-11	Standard	149.200	6.29	24044.918		24044.918	144.3	-3.3	NO		NO	bbX
10	10	200227P1-12	Standard	149.200	6.29	24280.707		24280.707	145.7	-2.3	NO		NO	bbX

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Compound name: d7-N-MeFOSE-RSD
Response Factor: 0.0816473
RRF SD: 0.00672388, Relative SD: 8.23527
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	149.200	6.29	22784.545	24404.371	11.670	142.9	-4.2	NO		NO	bb
2	2	200227P1-4	Standard	149.200	6.29	23573.861	25318.955	11.638	142.5	-4.5	NO		NO	bb
3	3	200227P1-5	Standard	149.200	6.29	24814.814	25984.789	11.937	146.2	-2.0	NO		NO	bb
4	4	200227P1-6	Standard	149.200	6.29	25282.391	26183.898	12.070	147.8	-0.9	NO		NO	bb
5	5	200227P1-7	Standard	149.200	6.28	22479.533	23987.494	11.714	143.5	-3.8	NO		NO	bb
6	6	200227P1-8	Standard	149.200	6.29	24859.201	26085.492	11.912	145.9	-2.2	NO		NO	bb
7	7	200227P1-9	Standard	149.200	6.29	25015.324	26144.961	11.960	146.5	-1.8	NO		NO	bb
8	8	200227P1-10	Standard	149.200	6.28	26204.295	25819.922	12.686	155.4	4.1	NO		NO	bb
9	9	200227P1-11	Standard	149.200	6.29	24044.918	26435.783	11.369	139.3	-6.7	NO		NO	bb
10	10	200227P1-12	Standard	149.200	6.29	24280.707	20424.268	14.860	182.0	22.0	NO		NO	bb

Compound name: d9-N-EtFOSE-EIS
Response Factor: 193.287
RRF SD: 0, Relative SD: 0
Response type: External Std, Area
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	149.200	6.43	27819.070		27819.070	143.9	-3.5	NO		NO	bbX
2	2	200227P1-4	Standard	149.200	6.44	27953.850		27953.850	144.6	-3.1	NO		NO	bbX
3	3	200227P1-5	Standard	149.200	6.44	27550.979		27550.979	142.5	-4.5	NO		NO	bbX
4	4	200227P1-6	Standard	149.200	6.44	27343.031		27343.031	141.5	-5.2	NO		NO	bbX
5	5	200227P1-7	Standard	149.200	6.43	26338.322		26338.322	136.3	-8.7	NO		NO	bbX
6	6	200227P1-8	Standard	149.200	6.44	28838.369		28838.369	149.2	0.0	NO		NO	bb
7	7	200227P1-9	Standard	149.200	6.44	28820.082		28820.082	149.1	-0.1	NO		NO	bbX
8	8	200227P1-10	Standard	149.200	6.43	27607.914		27607.914	142.8	-4.3	NO		NO	bbX
9	9	200227P1-11	Standard	149.200	6.43	28880.707		28880.707	149.4	0.1	NO		NO	bbX
10	10	200227P1-12	Standard	149.200	6.43	28191.189		28191.189	145.9	-2.2	NO		NO	bbX

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Compound name: d9-N-EtFOSE-RSD
Response Factor: 0.0938036
RRF SD: 0.00799873, Relative SD: 8.52711
Response type: Internal Std (Ref 106), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	149.200	6.43	27819.070	24404.371	14.249	151.9	1.8	NO		NO	bb
2	2 200227P1-4	Standard	149.200	6.44	27953.850	25318.955	13.801	147.1	-1.4	NO		NO	bb
3	3 200227P1-5	Standard	149.200	6.44	27550.979	25984.789	13.253	141.3	-5.3	NO		NO	bb
4	4 200227P1-6	Standard	149.200	6.44	27343.031	26183.898	13.053	139.2	-6.7	NO		NO	bb
5	5 200227P1-7	Standard	149.200	6.43	26338.322	23987.494	13.725	146.3	-1.9	NO		NO	bb
6	6 200227P1-8	Standard	149.200	6.44	28838.369	26085.492	13.819	147.3	-1.3	NO		NO	bb
7	7 200227P1-9	Standard	149.200	6.44	28820.082	26144.961	13.779	146.9	-1.5	NO		NO	bb
8	8 200227P1-10	Standard	149.200	6.43	27607.914	25819.922	13.366	142.5	-4.5	NO		NO	bb
9	9 200227P1-11	Standard	149.200	6.43	28880.707	26435.783	13.656	145.6	-2.4	NO		NO	bb
10	10 200227P1-12	Standard	149.200	6.43	28191.189	20424.268	17.253	183.9	23.3	NO		NO	bb

Compound name: 13C4-PFBA
Response Factor: 1
RRF SD: 3.70074e-017, Relative SD: 3.70074e-015
Response type: Internal Std (Ref 99), Area * (IS Conc. / IS Area)
Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 200227P1-3	Standard	12.500	1.32	9207.453	9207.453	12.500	12.5	0.0	NO		NO	bb
2	2 200227P1-4	Standard	12.500	1.32	9543.297	9543.297	12.500	12.5	0.0	NO		NO	MM
3	3 200227P1-5	Standard	12.500	1.33	9432.535	9432.535	12.500	12.5	0.0	NO		NO	MM
4	4 200227P1-6	Standard	12.500	1.33	10042.703	10042.703	12.500	12.5	0.0	NO		NO	MM
5	5 200227P1-7	Standard	12.500	1.35	9248.677	9248.677	12.500	12.5	0.0	NO		NO	MM
6	6 200227P1-8	Standard	12.500	1.33	9750.017	9750.017	12.500	12.5	0.0	NO		NO	MM
7	7 200227P1-9	Standard	12.500	1.33	9928.814	9928.814	12.500	12.5	0.0	NO		NO	bb
8	8 200227P1-10	Standard	12.500	1.34	10378.795	10378.795	12.500	12.5	0.0	NO		NO	MM
9	9 200227P1-11	Standard	12.500	1.37	10619.274	10619.274	12.500	12.5	0.0	NO		NO	MM
10	10 200227P1-12	Standard	12.500	1.33	10064.693	10064.693	12.500	12.5	0.0	NO		NO	MM

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Compound name: 13C5-PFHxA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 100), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	3.05	23322.006	23322.006	12.500	12.5	0.0	NO		NO	bb
2	2	200227P1-4	Standard	12.500	3.05	23173.131	23173.131	12.500	12.5	0.0	NO		NO	bb
3	3	200227P1-5	Standard	12.500	3.05	21964.490	21964.490	12.500	12.5	0.0	NO		NO	bb
4	4	200227P1-6	Standard	12.500	3.05	24595.543	24595.543	12.500	12.5	0.0	NO		NO	bb
5	5	200227P1-7	Standard	12.500	3.04	22249.055	22249.055	12.500	12.5	0.0	NO		NO	bb
6	6	200227P1-8	Standard	12.500	3.05	24781.201	24781.201	12.500	12.5	0.0	NO		NO	bb
7	7	200227P1-9	Standard	12.500	3.05	23138.252	23138.252	12.500	12.5	0.0	NO		NO	bb
8	8	200227P1-10	Standard	12.500	3.06	23437.229	23437.229	12.500	12.5	0.0	NO		NO	bb
9	9	200227P1-11	Standard	12.500	3.04	24166.633	24166.633	12.500	12.5	0.0	NO		NO	bb
10	10	200227P1-12	Standard	12.500	3.05	23366.463	23366.463	12.500	12.5	0.0	NO		NO	bb

Compound name: 18O2-PFHxS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 101), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	3.80	1416.009	1416.009	12.500	12.5	0.0	NO		NO	bb
2	2	200227P1-4	Standard	12.500	3.79	1339.785	1339.785	12.500	12.5	0.0	NO		NO	bb
3	3	200227P1-5	Standard	12.500	3.80	1572.158	1572.158	12.500	12.5	0.0	NO		NO	bb
4	4	200227P1-6	Standard	12.500	3.80	1464.692	1464.692	12.500	12.5	0.0	NO		NO	bb
5	5	200227P1-7	Standard	12.500	3.80	1329.265	1329.265	12.500	12.5	0.0	NO		NO	bb
6	6	200227P1-8	Standard	12.500	3.80	1549.201	1549.201	12.500	12.5	0.0	NO		NO	bb
7	7	200227P1-9	Standard	12.500	3.80	1511.461	1511.461	12.500	12.5	0.0	NO		NO	bb
8	8	200227P1-10	Standard	12.500	3.80	1248.387	1248.387	12.500	12.5	0.0	NO		NO	bb
9	9	200227P1-11	Standard	12.500	3.79	1364.603	1364.603	12.500	12.5	0.0	NO		NO	bb
10	10	200227P1-12	Standard	12.500	3.80	1255.906	1255.906	12.500	12.5	0.0	NO		NO	bb

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Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 102), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	4.16	23255.871	23255.871	12.500	12.5	0.0	NO		NO	bb
2	2	200227P1-4	Standard	12.500	4.17	22781.117	22781.117	12.500	12.5	0.0	NO		NO	bb
3	3	200227P1-5	Standard	12.500	4.17	25051.422	25051.422	12.500	12.5	0.0	NO		NO	bb
4	4	200227P1-6	Standard	12.500	4.17	24702.975	24702.975	12.500	12.5	0.0	NO		NO	bb
5	5	200227P1-7	Standard	12.500	4.16	23600.613	23600.613	12.500	12.5	0.0	NO		NO	bb
6	6	200227P1-8	Standard	12.500	4.17	25495.762	25495.762	12.500	12.5	0.0	NO		NO	bb
7	7	200227P1-9	Standard	12.500	4.17	24286.318	24286.318	12.500	12.5	0.0	NO		NO	bb
8	8	200227P1-10	Standard	12.500	4.17	24081.479	24081.479	12.500	12.5	0.0	NO		NO	bb
9	9	200227P1-11	Standard	12.500	4.16	22625.801	22625.801	12.500	12.5	0.0	NO		NO	bb
10	10	200227P1-12	Standard	12.500	4.17	20820.176	20820.176	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 103), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	4.61	21849.729	21849.729	12.500	12.5	0.0	NO		NO	bb
2	2	200227P1-4	Standard	12.500	4.61	23852.248	23852.248	12.500	12.5	0.0	NO		NO	bb
3	3	200227P1-5	Standard	12.500	4.62	24464.400	24464.400	12.500	12.5	0.0	NO		NO	bb
4	4	200227P1-6	Standard	12.500	4.61	22735.102	22735.102	12.500	12.5	0.0	NO		NO	bb
5	5	200227P1-7	Standard	12.500	4.61	23278.066	23278.066	12.500	12.5	0.0	NO		NO	bb
6	6	200227P1-8	Standard	12.500	4.62	21606.609	21606.609	12.500	12.5	0.0	NO		NO	bb
7	7	200227P1-9	Standard	12.500	4.62	23057.561	23057.561	12.500	12.5	0.0	NO		NO	bb
8	8	200227P1-10	Standard	12.500	4.62	22040.479	22040.479	12.500	12.5	0.0	NO		NO	bb
9	9	200227P1-11	Standard	12.500	4.61	24165.168	24165.168	12.500	12.5	0.0	NO		NO	bb
10	10	200227P1-12	Standard	12.500	4.62	21125.219	21125.219	12.500	12.5	0.0	NO		NO	bb

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Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 3.70074e-017, Relative SD: 3.70074e-015
Response type: Internal Std (Ref 104), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200227P1-3	Standard	12.500	4.70	4211.613	4211.613	12.500	12.5	0.0	NO		NO	bb
2	2	200227P1-4	Standard	12.500	4.70	4384.649	4384.649	12.500	12.5	0.0	NO		NO	bd
3	3	200227P1-5	Standard	12.500	4.70	4334.910	4334.910	12.500	12.5	0.0	NO		NO	bb
4	4	200227P1-6	Standard	12.500	4.70	3849.120	3849.120	12.500	12.5	0.0	NO		NO	bb
5	5	200227P1-7	Standard	12.500	4.70	4489.755	4489.755	12.500	12.5	0.0	NO		NO	bb
6	6	200227P1-8	Standard	12.500	4.70	4439.965	4439.965	12.500	12.5	0.0	NO		NO	bb
7	7	200227P1-9	Standard	12.500	4.70	4329.113	4329.113	12.500	12.5	0.0	NO		NO	bb
8	8	200227P1-10	Standard	12.500	4.70	4349.698	4349.698	12.500	12.5	0.0	NO		NO	bb
9	9	200227P1-11	Standard	12.500	4.70	4183.187	4183.187	12.500	12.5	0.0	NO		NO	bb
10	10	200227P1-12	Standard	12.500	4.70	3806.387	3806.387	12.500	12.5	0.0	NO		NO	bb

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Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

Last Altered: Friday, February 28, 2020 09:57:55 Pacific Standard Time
Printed: Friday, February 28, 2020 10:05:41 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 08:07:56
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-27-20.cdb 28 Feb 2020 09:57:55

Name: 200227P1-3, Date: 27-Feb-2020, Time: 15:42:07, ID: ST200227P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

	#	Name	IS#	CoD	CoD Flag	%RSD
1	1	PFBA	47	0.9981	NO	
2	2	PFPrS	51	0.9989	NO	
3	3	3:3 FTCA	49	0.9998	NO	
4	4	PFPeA	49	0.9999	NO	
5	5	PFBS	51	0.9984	NO	
6	6	4:2 FTS	55	0.9994	NO	
7	7	PFHxA	57	0.9980	NO	
8	8	PFPeS	51	0.9991	NO	
9	9	HFPO-DA	53	0.9991	NO	
10	10	5:3 FTCA	59	0.9999	NO	
11	11	PFHpA	59	0.9991	NO	
12	12	ADONA	59	0.9982	NO	
13	13	L-PFHxS	61	0.9985	NO	
14	15	6:2 FTS	63	0.9987	NO	
15	16	L-PFOA	69	0.9998	NO	
16	18	PFecHS	69	0.9999	NO	
17	19	PFHpS	71	0.9987	NO	
18	20	7:3 FTCA	65	0.9984	NO	
19	21	PFNA	65	0.9974	NO	
20	22	PFOSA	67	0.9997	NO	
21	23	L-PFOS	71	0.9975	NO	
22	25	9Cl-PF30NS	71	0.9988	NO	
23	26	PFDA	73	0.9995	NO	
24	27	8:2 FTS	75	0.9993	NO	
25	28	PFNS	71	0.9998	NO	
26	29	L-MeFOSAA	77	0.9992	NO	

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Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

Last Altered: Friday, February 28, 2020 09:57:55 Pacific Standard Time
Printed: Friday, February 28, 2020 09:59:49 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 08:07:56
Calibration: 28 Feb 2020 09:57:55

Name: 200227P1-3, Date: 27-Feb-2020, Time: 15:42:07, ID: ST200227P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

	#	Name	IS#	CoD	CoD Flag	%RSD
1	31	L-EtFOSAA	81	0.9991	NO	
2	33	PFUdA	79	0.9982	NO	
3	34	PFDS	71	0.9982	NO	
4	35	11Cl-PF30UdS	83	0.9905	NO	
5	36	10:2 FTS	85	0.9998	NO	
6	37	PFDoA	83	0.9936	NO	
7	38	N-MeFOSA	87	0.9995	NO	
8	39	PFTrDA	83	0.9912	NO	
9	40	PFDoS	89	0.9929	NO	
10	41	PFTeDA	89	0.9983	NO	
11	42	N-EtFOSA	91	0.9990	NO	
12	43	PFHxDA	93	0.9998	NO	
13	44	PFODA	93	0.9991	NO	
14	45	N-MeFOSE	95	0.9998	NO	
15	46	N-EtFOSE	97	0.9977	NO	
16	47	13C3-PFBA-EIS			NO	0.000
17	48	13C3-PFBA-RSD	99		NO	2.839
18	49	13C3-PFPeA-EIS			NO	0.000
19	50	13C3-PFPeA-RSD	100		NO	3.511
20	51	13C3-PFBS-EIS			NO	0.000
21	52	13C3-PFBS-RSD	101		NO	7.449
22	53	13C3-HFPO-DA-EIS			NO	0.000
23	54	13C3-HFPO-DA-RSD	100		NO	4.140
24	55	13C2-4:2 FTS-EIS			NO	0.000
25	56	13C2-4:2 FTS-RSD	101		NO	7.122
26	57	13C2-PFHxA-EIS			NO	0.000
27	58	13C2-PFHxA-RSD	100		NO	4.976
28	59	13C4-PFHpA-EIS			NO	0.000
29	60	13C4-PFHpA-RSD	100		NO	6.454
30	61	13C3-PFHxS-EIS			NO	0.000
31	62	13C3-PFHxS-RSD	101		NO	7.233
32	63	13C2-6:2 FTS-EIS			NO	0.000

Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

Last Altered: Friday, February 28, 2020 09:57:55 Pacific Standard Time
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Name: 200227P1-3, Date: 27-Feb-2020, Time: 15:42:07, ID: ST200227P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

	#	Name	IS#	CoD	CoD Flag	%RSD
33	64	13C2-6:2 FTS-RSD	104		NO	5.806
34	65	13C5-PFNA-EIS			NO	0.000
35	66	13C5-PFNA-RSD	103		NO	2.903
36	67	13C8-PFOSA-EIS			NO	0.000
37	68	13C8-PFOSA-RSD	106		NO	4.316
38	69	13C2-PFOA-EIS			NO	0.000
39	70	13C2-PFOA-RSD	102		NO	3.130
40	71	13C8-PFOS-EIS			NO	0.000
41	72	13C8-PFOS-RSD	104		NO	4.291
42	73	13C2-PFDA-EIS			NO	0.000
43	74	13C2-PFDA-RSD	105		NO	5.633
44	75	13C2-8:2 FTS-EIS			NO	0.000
45	76	13C2-8:2 FTS-RSD	104		NO	5.594
46	77	d3-N-MeFOSAA-EIS			NO	0.000
47	78	d3-N-MeFOSAA-RSD	106		NO	10.914
48	79	13C2-PFUdA-EIS			NO	0.000
49	80	13C2-PFUdA-RSD	106		NO	5.031
50	81	d5-N-EtFOSAA-EIS			NO	0.000
51	82	d5-N-EtFOSAA-RSD	106		NO	5.928
52	83	13C2-PFDoA-EIS			NO	0.000
53	84	13C2-PFDoA-RSD	105		NO	8.250
54	85	13C2-10:2 FTS-EIS			NO	0.000
55	86	13C2-10:2 FTS-RSD	104		NO	14.160
56	87	d3-N-MeFOSA-EIS			NO	0.000
57	88	d3-N-MeFOSA-RSD	106		NO	9.496
58	89	13C2-PFTeDA-EIS			NO	0.000
59	90	13C2-PFTeDA-RSD	106		NO	8.231
60	91	d5-N-ETFOSA-EIS			NO	0.000
61	92	d5-N-ETFOSA-RSD	106		NO	4.899
62	93	13C2-PFHxDA-EIS			NO	0.000
63	94	13C2-PFHxDA-RSD	106		NO	5.555
64	95	d7-N-MeFOSE-EIS			NO	0.000
65	96	d7-N-MeFOSE-RSD	106		NO	8.235
66	97	d9-N-EtFOSE-EIS			NO	0.000
67	98	d9-N-EtFOSE-RSD	106		NO	8.527
68	99	13C4-PFBA	99		NO	0.000

Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

Last Altered: Friday, February 28, 2020 09:57:55 Pacific Standard Time
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Name: 200227P1-3, Date: 27-Feb-2020, Time: 15:42:07, ID: ST200227P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

	#	Name	IS#	CoD	CoD Flag	%RSD
69	1...	13C5-PFHxA	100		NO	0.000
70	1...	18O2-PFHxS	101		NO	0.000
71	1...	13C8-PFOA	102		NO	0.000
72	1...	13C9-PFNA	103		NO	0.000
73	1...	13C4-PFOS	104		NO	0.000

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Dataset: Untitled

Last Altered: Friday, February 28, 2020 10:15:28 Pacific Standard Time
Printed: Friday, February 28, 2020 10:15:37 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 10:15:26
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-27-20.cdb 28 Feb 2020 09:57:55

Name: 200227P1-8, Date: 27-Feb-2020, Time: 16:36:51, ID: ST200227P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	PFBA	1.33	1.33			
2	PFPrS	1.70	1.66	2.511	2.511	NO
3	3:3 FTCA	2.12	2.12	4.030	4.030	NO
4	PFPeA	2.26	2.26			
5	PFBS	2.53	2.54	3.177	3.177	NO
6	4:2 FTS	2.97	2.97	0.836	0.836	NO
7	PFHxA	3.05	3.05	16.907	16.907	NO
8	PFPeS	3.20	3.25	2.445	2.445	NO
9	HFPO-DA	3.27	3.27	2.631	2.631	NO
10	5:3 FTCA	3.60	3.60	1.824	1.824	NO
11	PFHpA	3.66	3.66	29.702	29.702	NO
12	ADONA	3.75	3.76	4.039	4.039	NO
13	L-PFHxS	3.80	3.80	2.010	2.010	NO
14	6:2 FTS	4.12	4.12	1.055	1.055	NO
15	L-PFOA	4.17	4.17	3.150	3.150	NO
16	PFecHS	4.18	4.18	0.488	0.488	NO
17	PFHpS	4.31	4.28	2.098	2.098	NO
18	7:3 FTCA	4.61	4.60	1.486	1.486	NO
19	PFNA	4.62	4.62	9.553	9.553	NO
20	PFOSA	4.67	4.67	24.113	24.113	NO
21	L-PFOS	4.70	4.70	2.210	2.210	NO
22	9Cl-PF30NS	4.91	4.92	15.070	15.070	NO
23	PFDA	4.99	4.99	11.728	11.728	NO
24	8:2 FTS	4.96	4.96	2.632	2.632	NO
25	PFNS	5.04	5.06	2.147	2.147	NO
26	L-MeFOSAA	5.14	5.14	2.173	2.173	NO

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Dataset: Untitled

Last Altered: Friday, February 28, 2020 10:15:28 Pacific Standard Time
Printed: Friday, February 28, 2020 10:16:06 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 10:15:26
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-27-20.cdb 28 Feb 2020 09:57:55

Name: 200227P1-8, Date: 27-Feb-2020, Time: 16:36:51, ID: ST200227P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	L-EtFOSAA	5.30	5.31	1.264	1.264	NO
2	PFUdA	5.32	5.32	25.550	25.550	NO
3	PFDS	5.33	5.36	1.839	1.839	NO
4	11Cl-PF30UdS	5.53	5.53	20.446	20.446	NO
5	10:2 FTS	5.58	5.58	0.920	0.920	NO
6	PFDoA	5.60	5.60	11.920	11.920	NO
7	N-MeFOSA	5.69	5.67	1.622	1.622	NO
8	PFTrDA	5.85	5.84	56.460	56.460	NO
9	PFDoS	5.86	5.87	3.391	3.391	NO
10	PFTeDA	6.06	6.06	14.817	14.817	NO
11	N-EtFOSA	6.10	6.10	1.809	1.809	NO
12	PFHxDA	6.39	6.39	157.504	157.504	NO
13	PFODA	6.60	6.62			
14	N-MeFOSE	6.29	6.30			
15	N-EtFOSE	6.44	6.44			

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Dataset: Untitled

Last Altered: Friday, February 28, 2020 10:17:12 Pacific Standard Time
Printed: Friday, February 28, 2020 10:17:41 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 08:07:56
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-27-20.cdb 28 Feb 2020 09:57:55

Compound name: PFBA

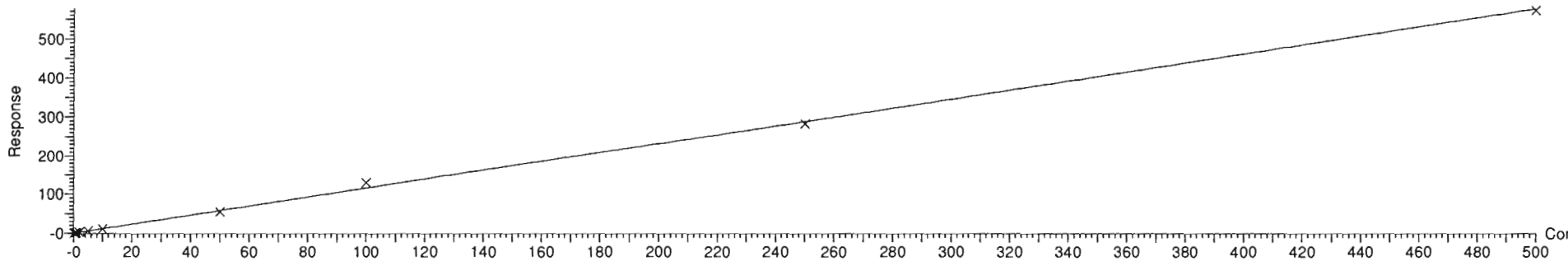
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1	1	200227P1-1	IPA	27-Feb-20	15:20:53
2	2	200227P1-2	IPA	27-Feb-20	15:31:38
3	3	200227P1-3	ST200227P1-1 PFC CS-2 20B1102	27-Feb-20	15:42:07
4	4	200227P1-4	ST200227P1-2 PFC CS-1 20B1103	27-Feb-20	15:52:39
5	5	200227P1-5	ST200227P1-3 PFC CS0 20B1104	27-Feb-20	16:03:08
6	6	200227P1-6	ST200227P1-4 PFC CS1 20B1105	27-Feb-20	16:13:39
7	7	200227P1-7	ST200227P1-5 PFC CS2 20B1106	27-Feb-20	16:26:17
8	8	200227P1-8	ST200227P1-6 PFC CS3 20B1107	27-Feb-20	16:36:51
9	9	200227P1-9	ST200227P1-7 PFC CS4 20B1108	27-Feb-20	16:47:20
10	10	200227P1-10	ST200227P1-8 PFC CS5 20B1109	27-Feb-20	16:58:53
11	11	200227P1-11	ST200227P1-9 PFC CS6 20B1110	27-Feb-20	17:16:12
12	12	200227P1-12	ST200227P1-10 PFC CS7 20B1111	27-Feb-20	17:26:40
13	13	200227P1-13	IB	27-Feb-20	17:37:10
14	14	200227P1-14	ICV200227P1-1 PFC ICV 20B1112	27-Feb-20	17:47:42
15	15	200227P1-15	IB	27-Feb-20	17:58:10

Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

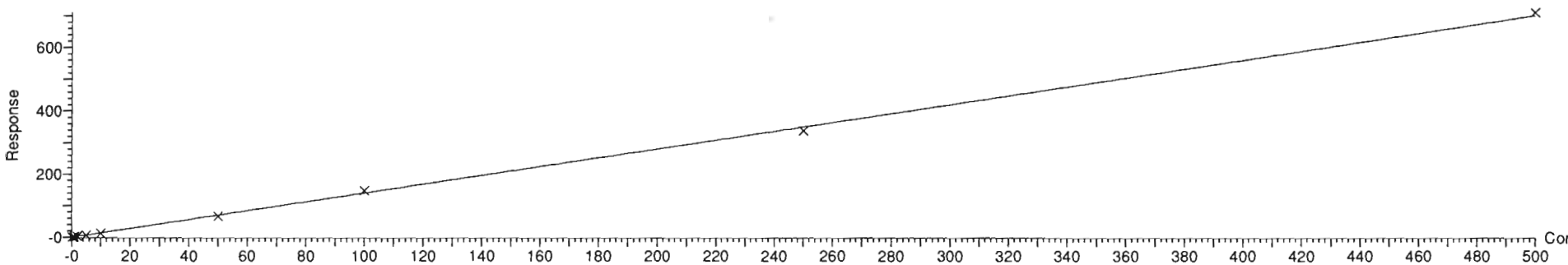
Last Altered: Friday, February 28, 2020 09:57:55 Pacific Standard Time
Printed: Friday, February 28, 2020 10:13:21 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 08:07:56
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-27-20.cdb 28 Feb 2020 09:57:55

Compound name: PFBA
Correlation coefficient: r = 0.999073, r^2 = 0.998147
Calibration curve: 1.15518 * x + 0.0395457
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



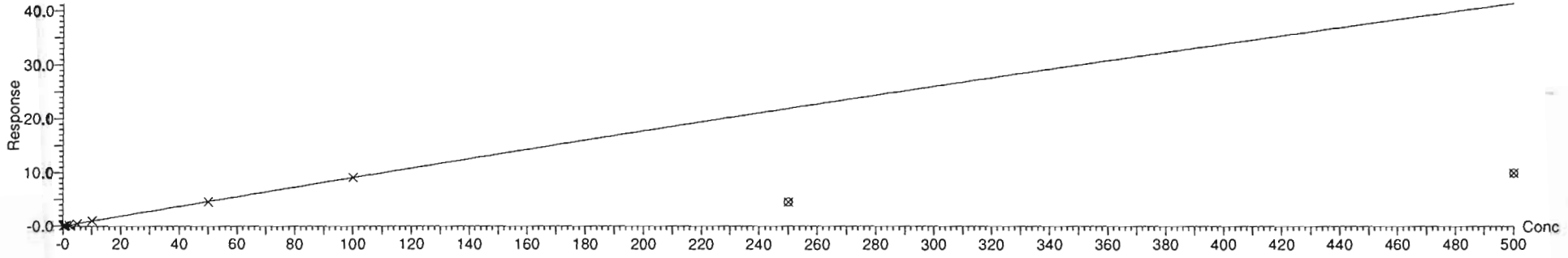
Compound name: PFPrS
Correlation coefficient: r = 0.999450, r^2 = 0.998900
Calibration curve: 1.40081 * x + -0.0217571
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



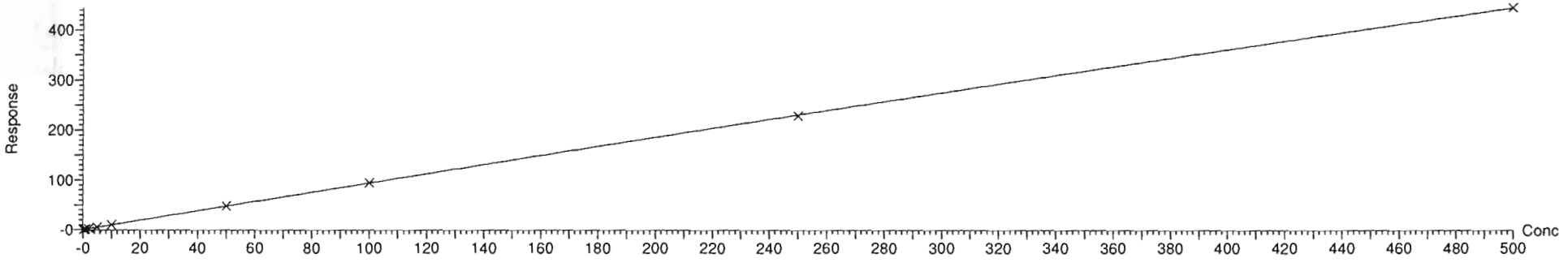
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Last Altered: Friday, February 28, 2020 09:57:55 Pacific Standard Time
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Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.999814
Calibration curve: -2.09842e-005 * x^2 + 0.0932 * x + -0.000508555
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



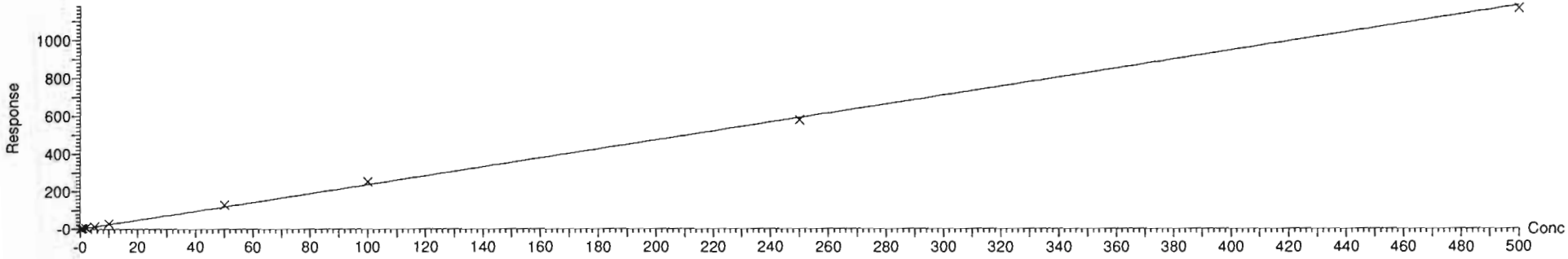
Compound name: PFPeA
Coefficient of Determination: R^2 = 0.999912
Calibration curve: -0.000127545 * x^2 + 0.952781 * x + 0.0266328
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



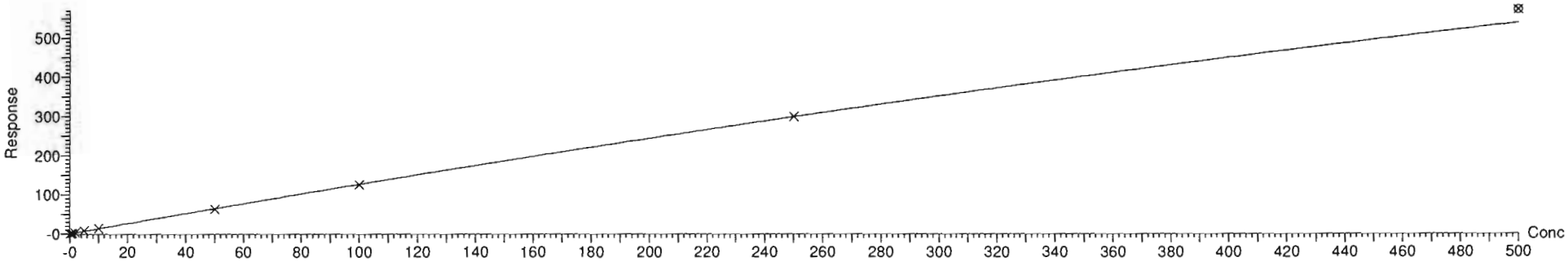
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Last Altered: Friday, February 28, 2020 09:57:55 Pacific Standard Time
Printed: Friday, February 28, 2020 10:13:21 Pacific Standard Time

Compound name: PFBS
Correlation coefficient: r = 0.999221, r^2 = 0.998443
Calibration curve: 2.36623 * x + 0.185525
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



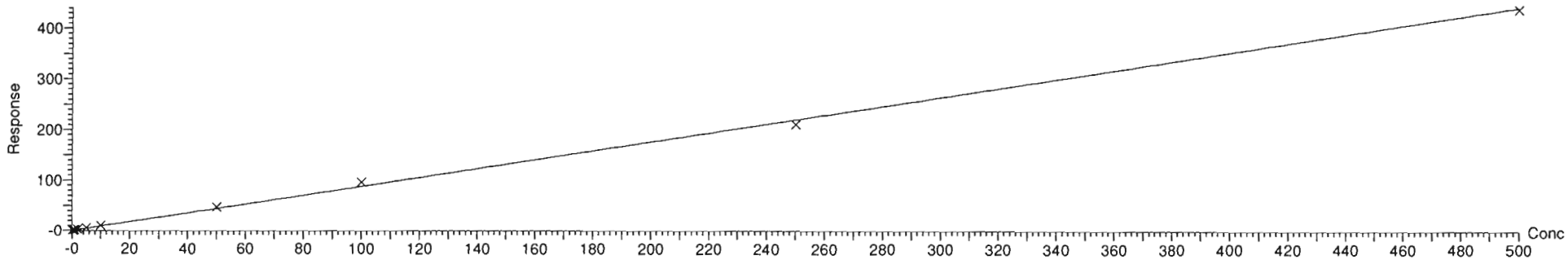
Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.999364
Calibration curve: -0.000477753 * x^2 + 1.31364 * x + -0.105697
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



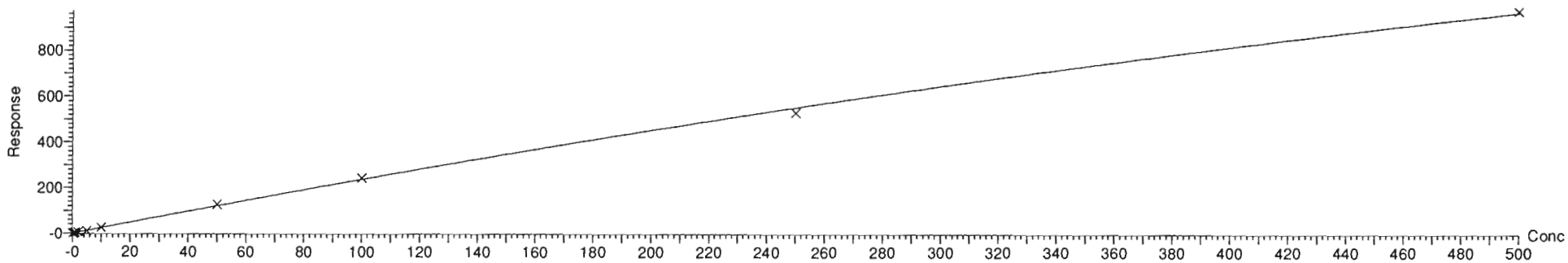
Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

Last Altered: Friday, February 28, 2020 09:57:55 Pacific Standard Time
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Compound name: PFHxA
Correlation coefficient: r = 0.999013, r^2 = 0.998027
Calibration curve: 0.884049 * x + 0.101067
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



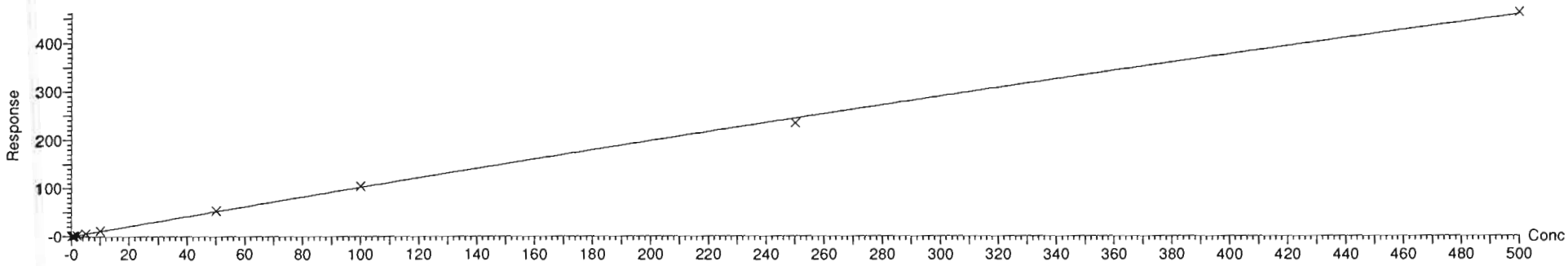
Compound name: PFPeS
Coefficient of Determination: R^2 = 0.999066
Calibration curve: -0.00110209 * x^2 + 2.48401 * x + -0.0827776
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



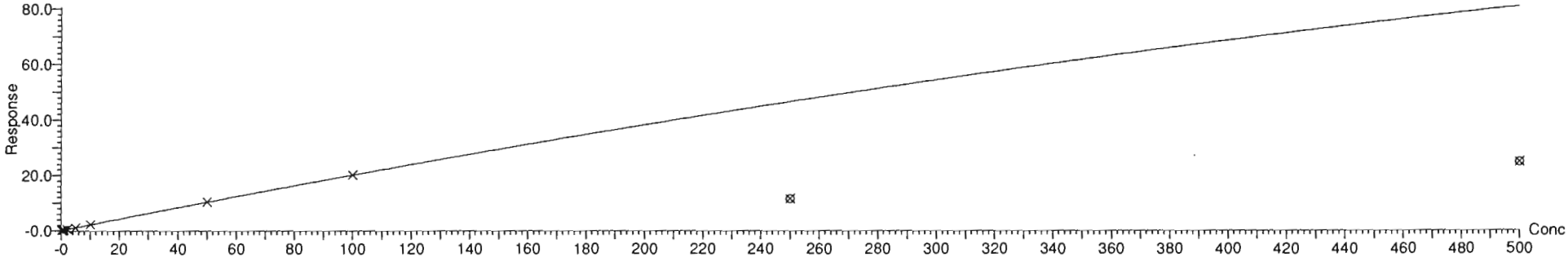
Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.999113
Calibration curve: -0.000254582 * x^2 + 1.04533 * x + 0.0245354
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



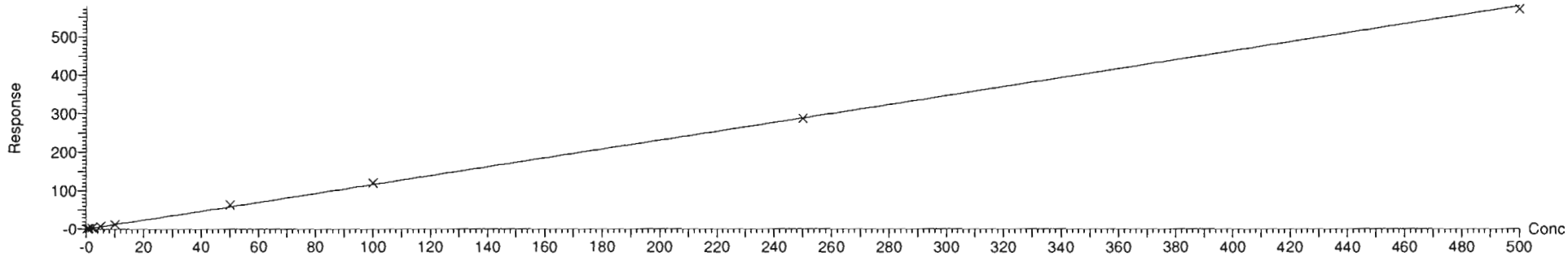
Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.999928
Calibration curve: -9.69019e-005 * x^2 + 0.209862 * x + 0.00231706
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



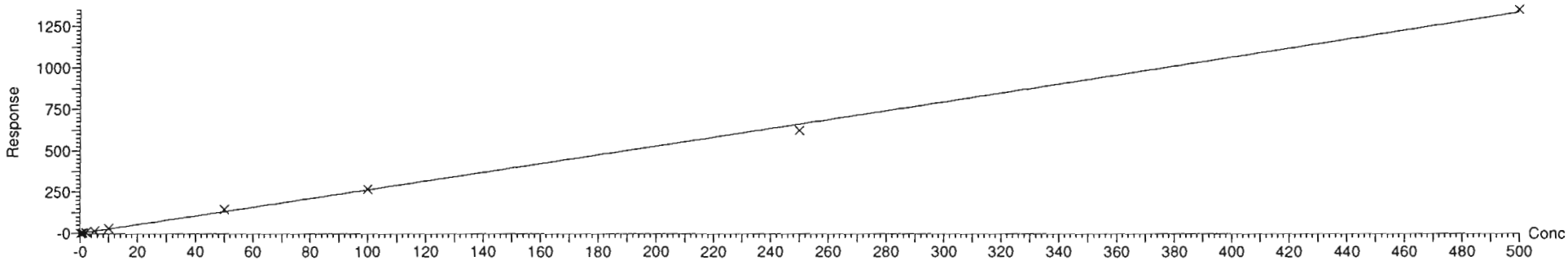
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Compound name: PFHpA
Correlation coefficient: r = 0.999568, r^2 = 0.999137
Calibration curve: 1.15708 * x + 0.0926754
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



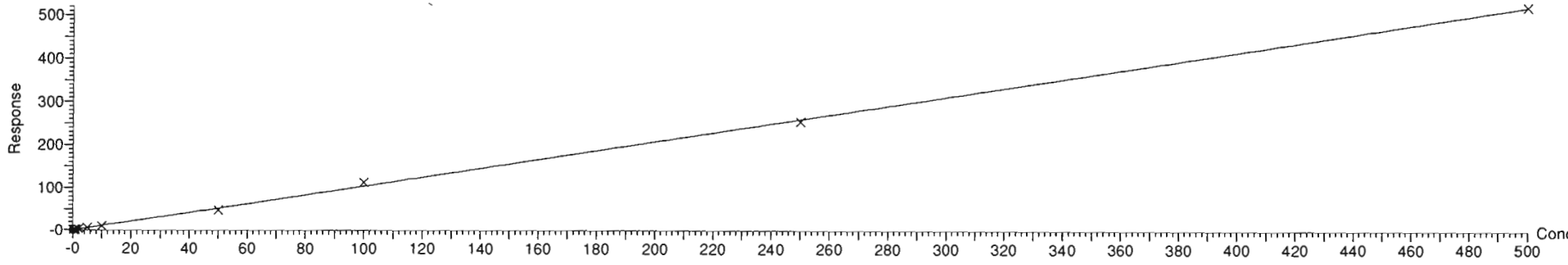
Compound name: ADONA
Coefficient of Determination: R^2 = 0.998227
Calibration curve: 9.46897e-005 * x^2 + 2.62123 * x + 0.106178
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



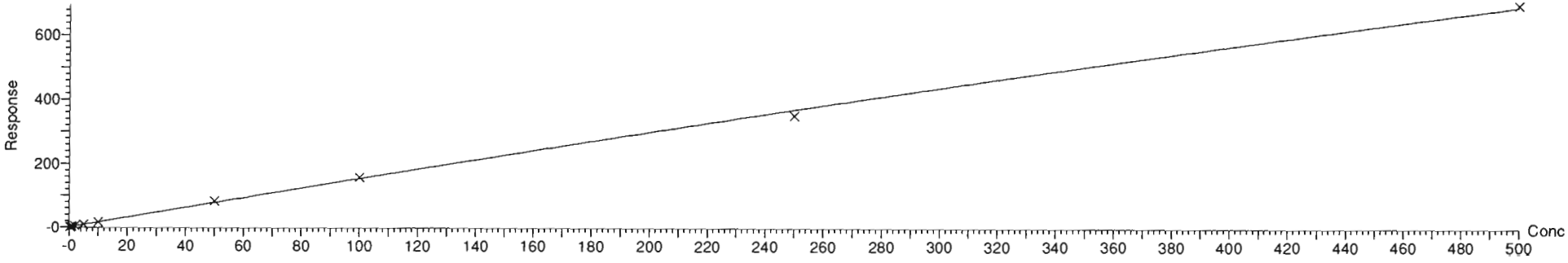
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Compound name: L-PFHxS
Correlation coefficient: r = 0.999244, r^2 = 0.998489
Calibration curve: 1.03912 * x + 0.141351
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



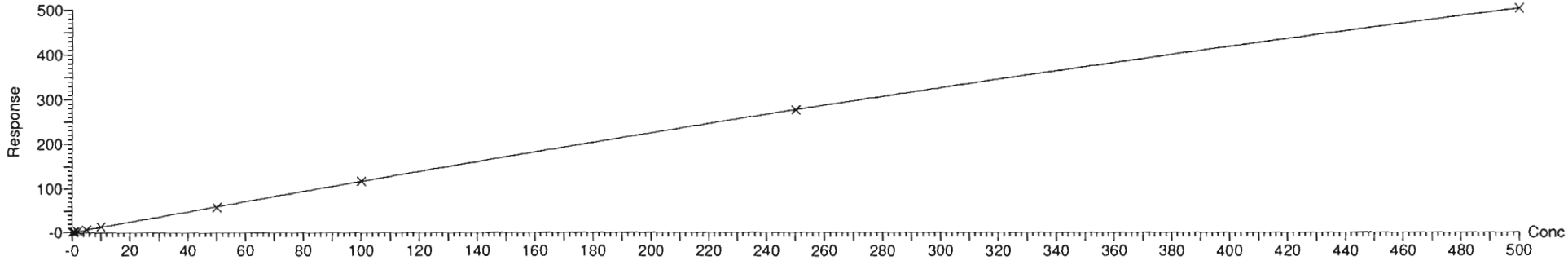
Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.998706
Calibration curve: -0.000387912 * x^2 + 1.57382 * x + 0.14932
Response type: Internal Std (Ref 63), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



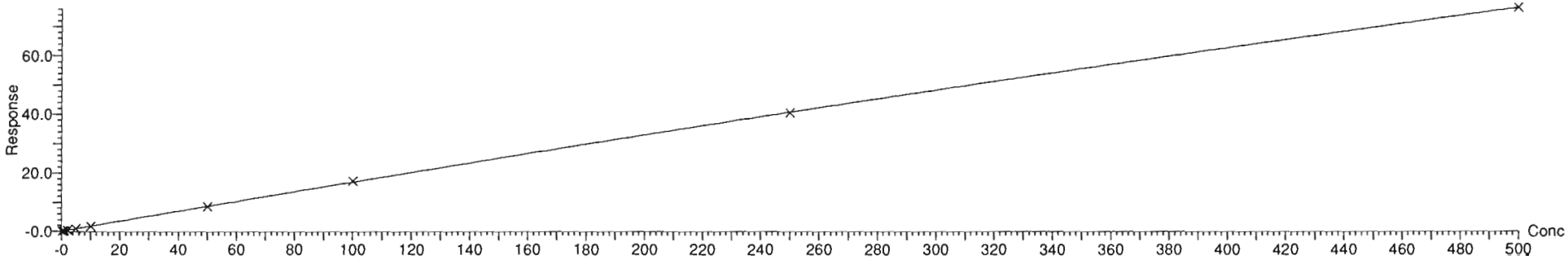
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Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.999818
Calibration curve: -0.000410213 * x^2 + 1.20955 * x + 0.0799012
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



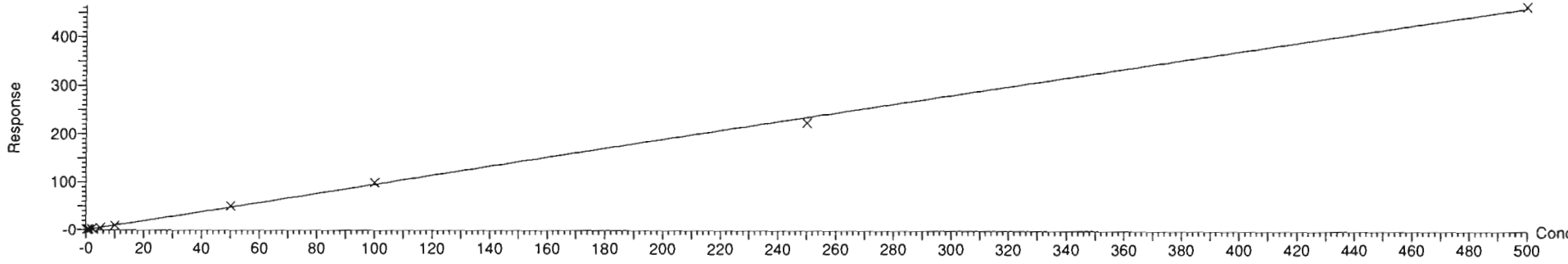
Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999853
Calibration curve: -3.94401e-005 * x^2 + 0.172174 * x + -0.0073928
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



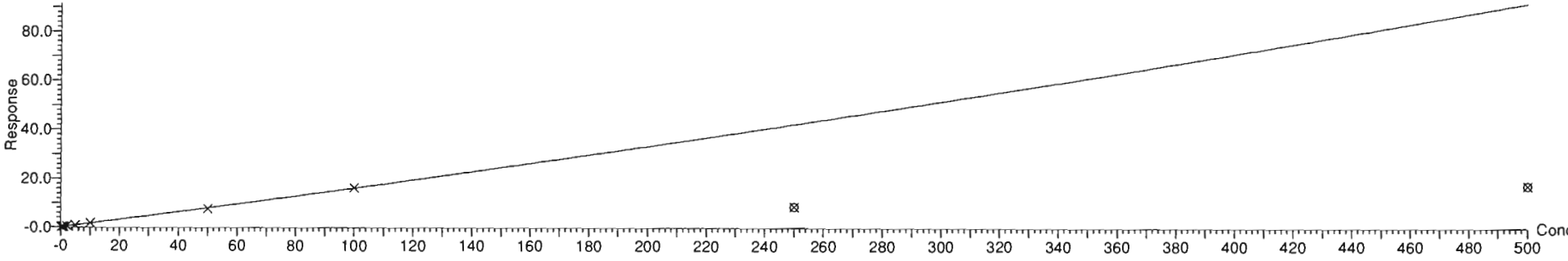
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Compound name: PFHpS
Coefficient of Determination: R^2 = 0.998747
Calibration curve: -9.14847e-005 * x^2 + 0.96802 * x + 0.039181
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



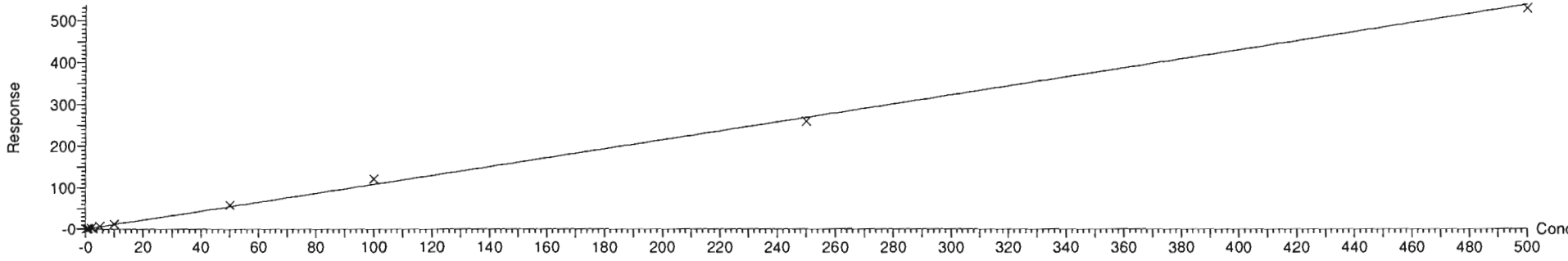
Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.998364
Calibration curve: 5.76096e-005 * x^2 + 0.154515 * x + 0.00622813
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



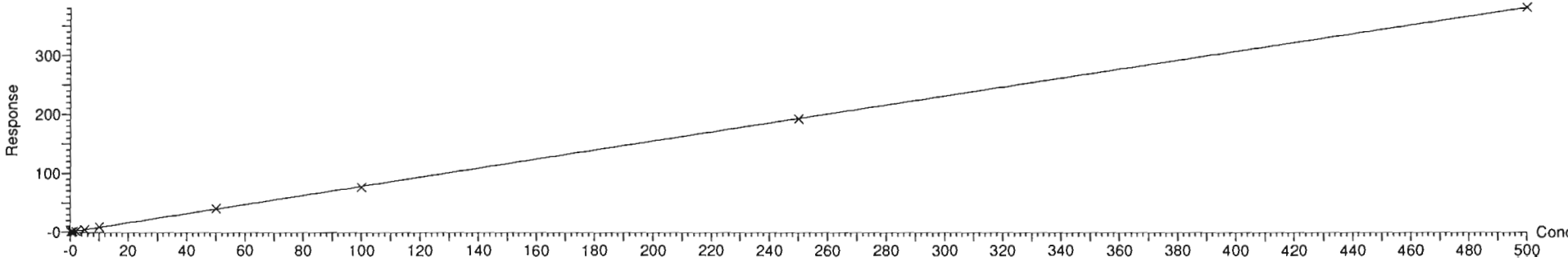
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Compound name: PFNA
Correlation coefficient: r = 0.998714, r^2 = 0.997430
Calibration curve: 1.07614 * x + 0.0721371
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



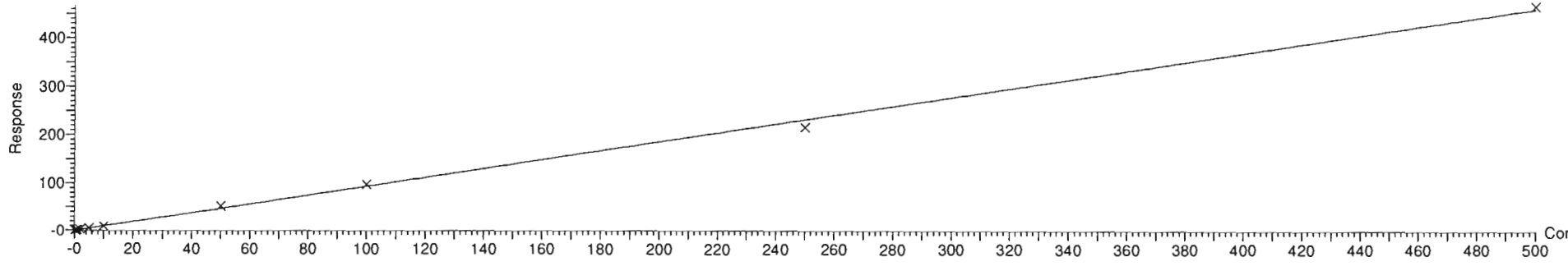
Compound name: PFOSA
Coefficient of Determination: R^2 = 0.999714
Calibration curve: -4.40009e-005 * x^2 + 0.782908 * x + 0.0473526
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



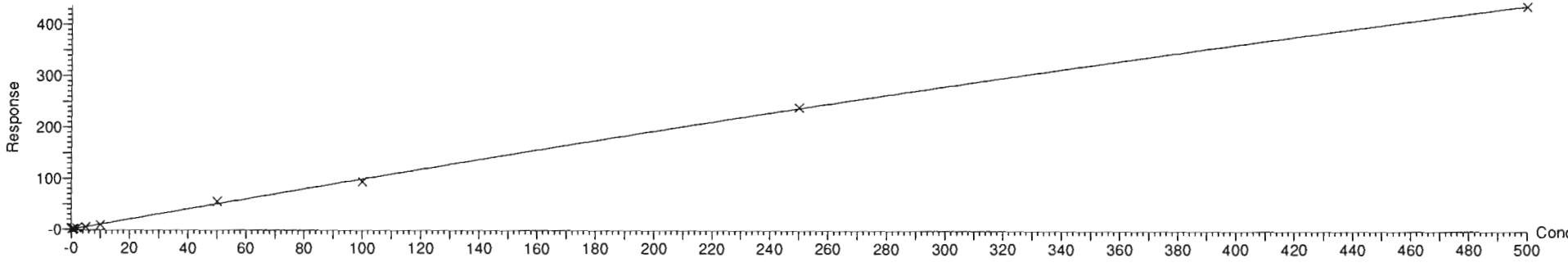
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Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.997544
Calibration curve: -3.34868e-005 * x^2 + 0.937949 * x + -0.0268767
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



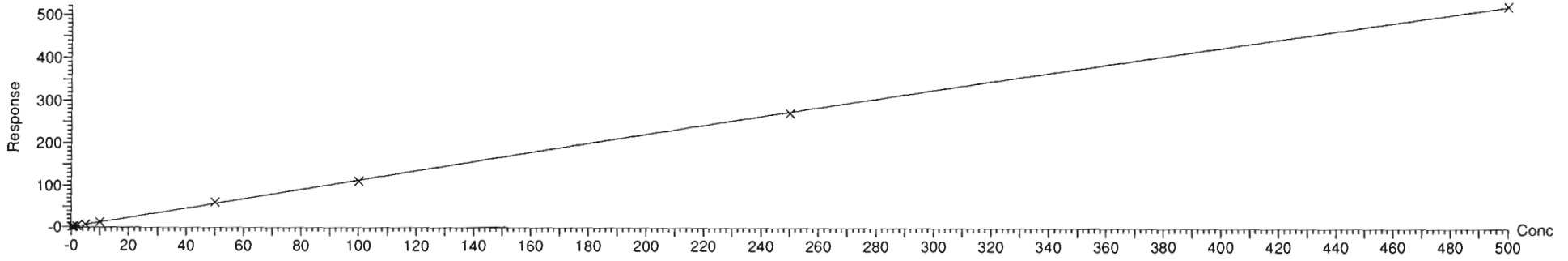
Compound name: 9Cl-PF30NS
Coefficient of Determination: R^2 = 0.998806
Calibration curve: -0.000294917 * x^2 + 1.02474 * x + -0.150151
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



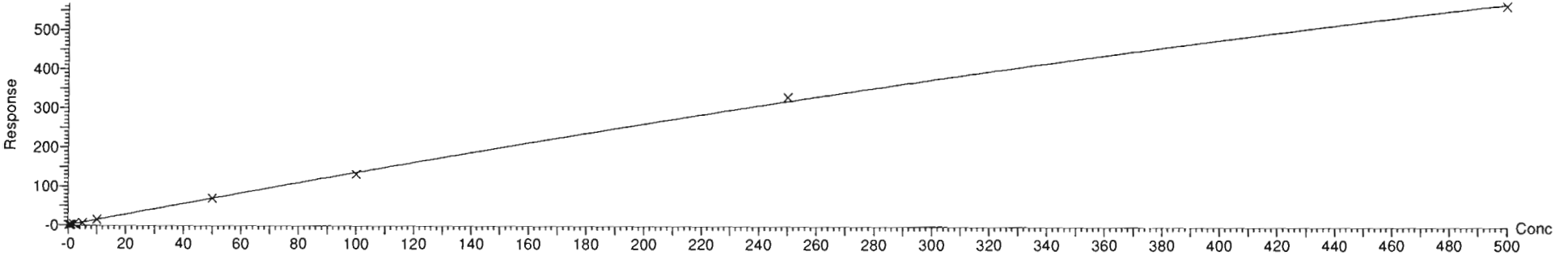
Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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Compound name: PFDA
Coefficient of Determination: R^2 = 0.999532
Calibration curve: -0.000220705 * x^2 + 1.15294 * x + 0.0597003
Response type: Internal Std (Ref 73), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.999278
Calibration curve: -0.000560644 * x^2 + 1.41716 * x + -0.136378
Response type: Internal Std (Ref 75), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

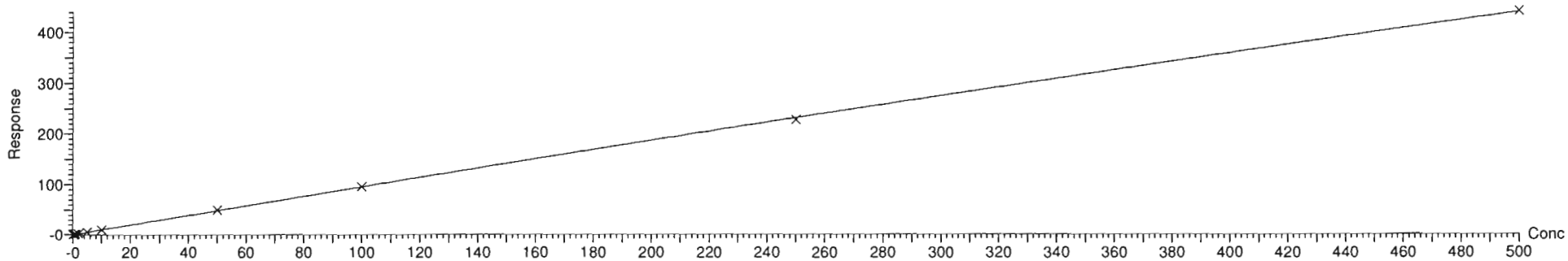


Vista Analytical Laboratory Q1

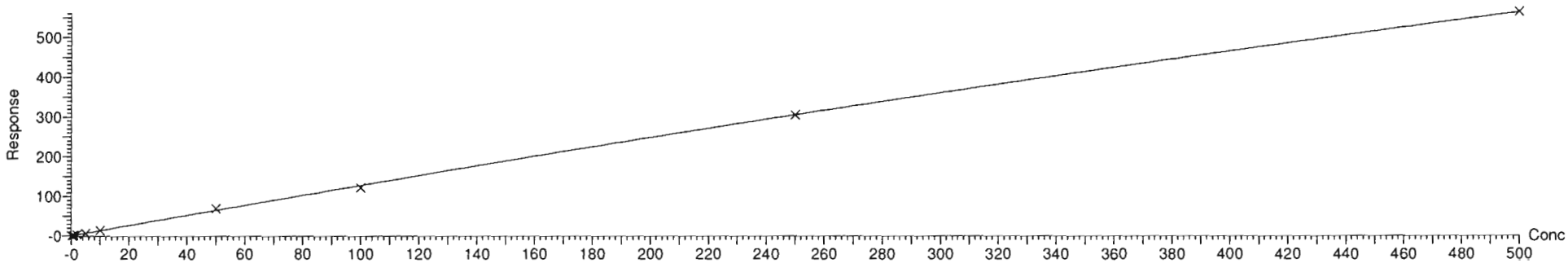
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Compound name: PFNS
Coefficient of Determination: R^2 = 0.999756
Calibration curve: -0.000187635 * x^2 + 0.973141 * x + -0.026475
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Compound name: L-MeFOSAA
Coefficient of Determination: R^2 = 0.999179
Calibration curve: -0.000374142 * x^2 + 1.3115 * x + -0.0249981
Response type: Internal Std (Ref 77), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



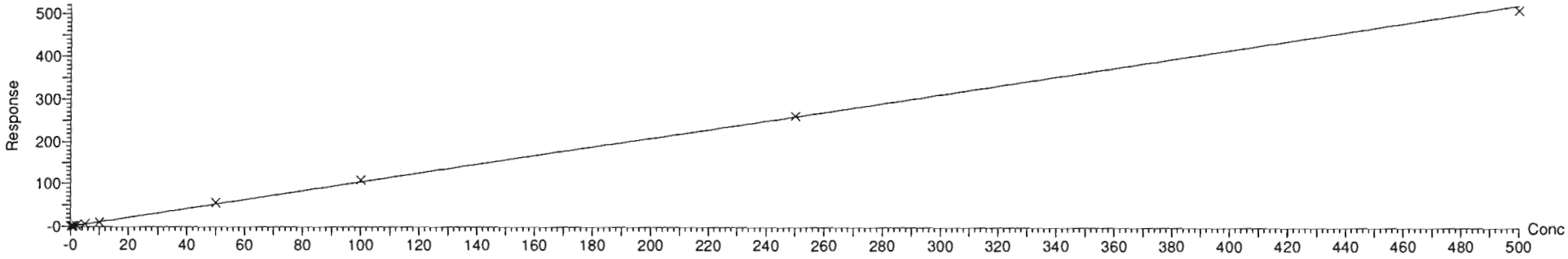
Vista Analytical Laboratory Q1

Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

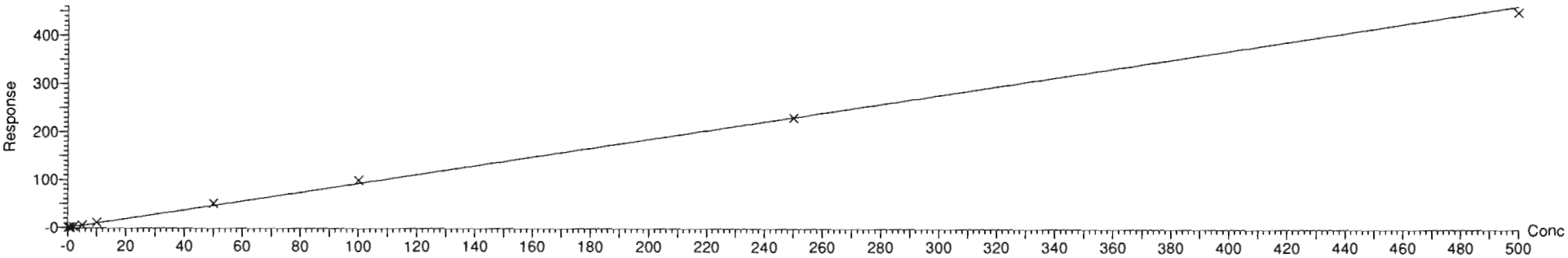
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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 08:07:56
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-27-20.cdb 28 Feb 2020 09:57:55

Compound name: L-EtFOSAA
Correlation coefficient: r = 0.999538, r^2 = 0.999077
Calibration curve: 1.04314 * x + 0.0808309
Response type: Internal Std (Ref 81), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



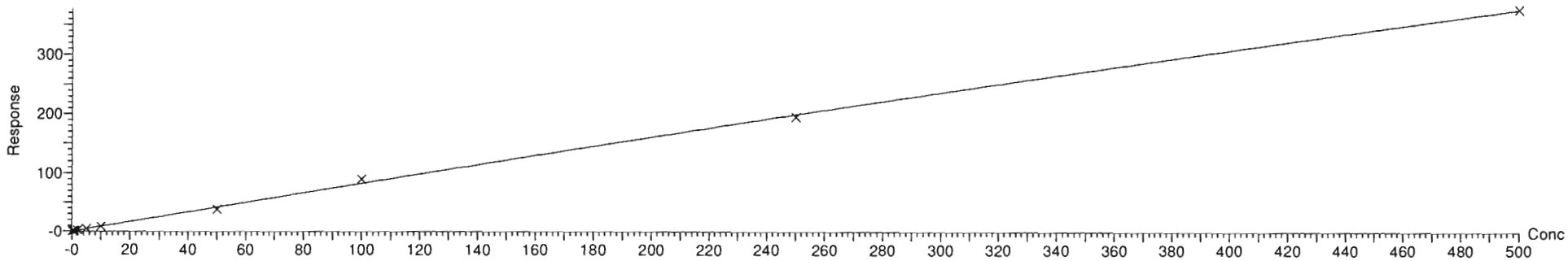
Compound name: PFUdA
Correlation coefficient: r = 0.999079, r^2 = 0.998158
Calibration curve: 0.924289 * x + 0.177335
Response type: Internal Std (Ref 79), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



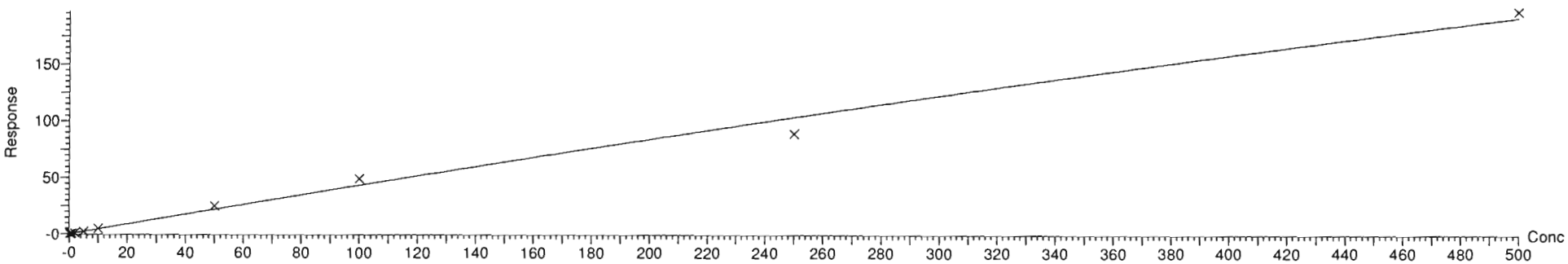
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Compound name: PFDS
Coefficient of Determination: R^2 = 0.998198
Calibration curve: -0.00017666 * x^2 + 0.840876 * x + -0.0241212
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
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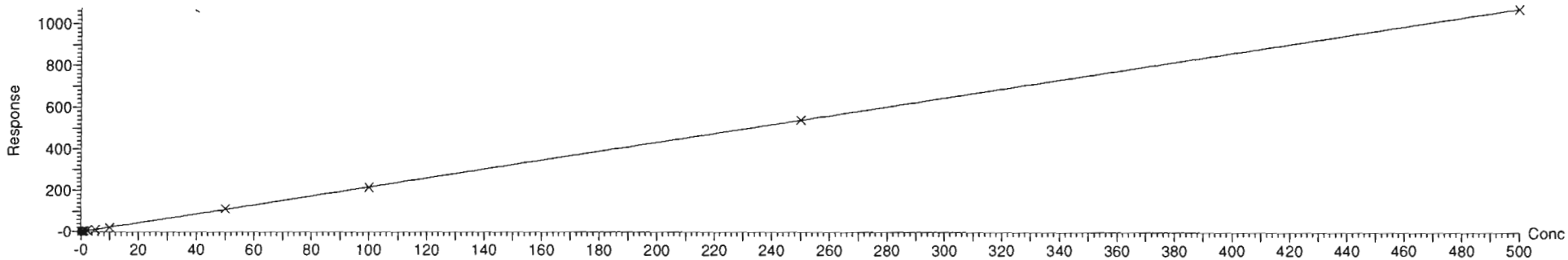
Compound name: 11Cl-PF30UdS
Coefficient of Determination: R^2 = 0.990533
Calibration curve: -0.000128075 * x^2 + 0.447138 * x + 0.0250385
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



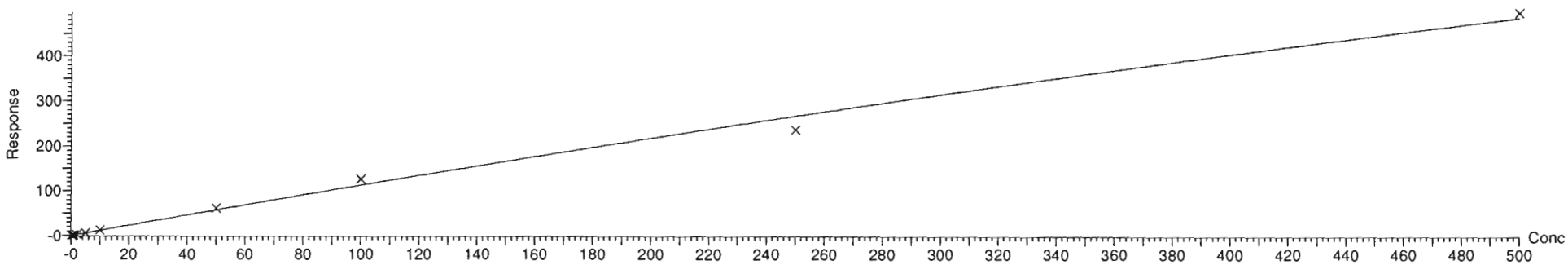
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Compound name: 10:2 FTS
Coefficient of Determination: R^2 = 0.999815
Calibration curve: -7.14305e-005 * x^2 + 2.18549 * x + -0.0614199
Response type: Internal Std (Ref 85), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



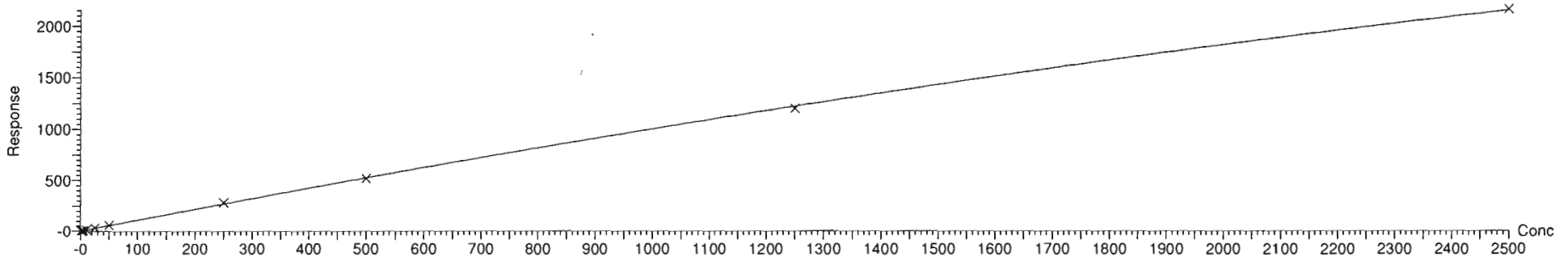
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.993601
Calibration curve: -0.000395328 * x^2 + 1.16883 * x + 0.0381445
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



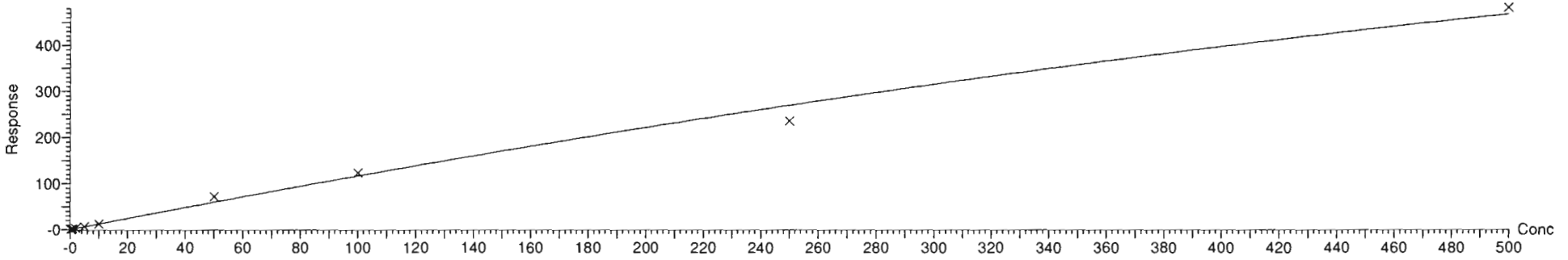
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Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.999467
Calibration curve: -9.45291e-005 * x^2 + 1.09751 * x + 0.280033
Response type: Internal Std (Ref 87), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



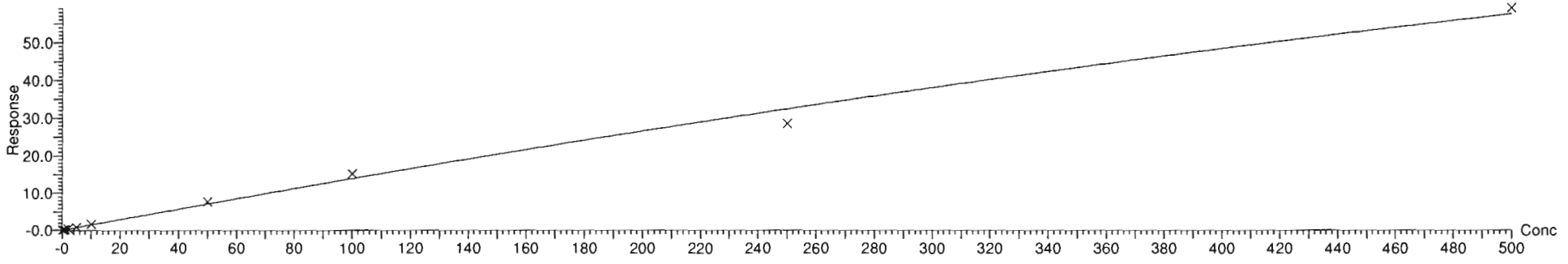
Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.991155
Calibration curve: -0.000578829 * x^2 + 1.22195 * x + 0.123282
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



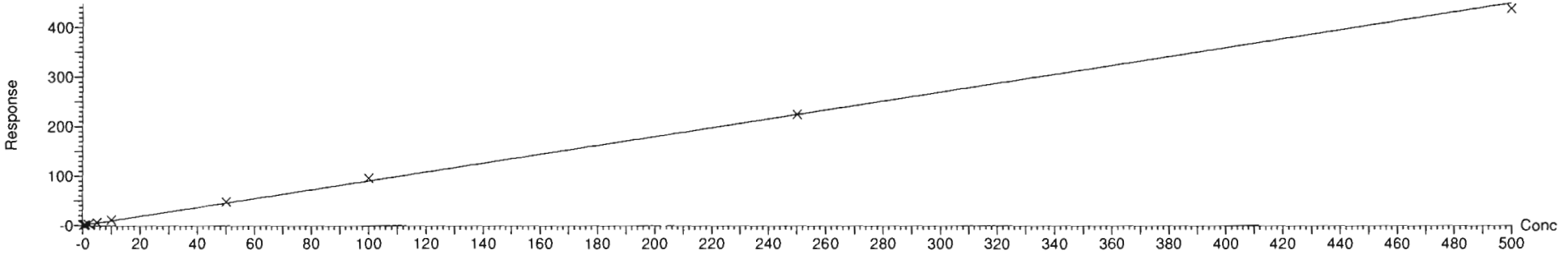
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Compound name: PFDoS
Coefficient of Determination: R^2 = 0.992926
Calibration curve: -5.89691e-005 * x^2 + 0.144524 * x + 0.0159102
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



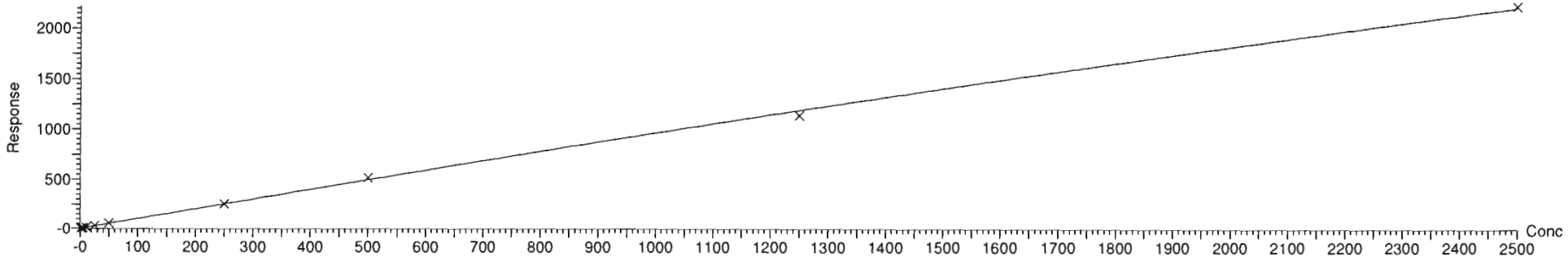
Compound name: PFTeDA
Correlation coefficient: r = 0.999133, r^2 = 0.998266
Calibration curve: 0.896808 * x + 0.108589
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



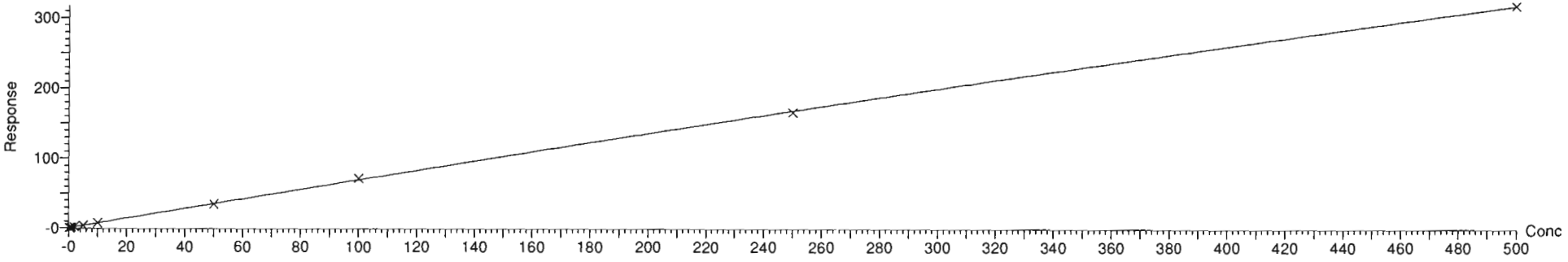
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Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999010
Calibration curve: -5.6471e-005 * x^2 + 1.02308 * x + 0.202857
Response type: Internal Std (Ref 91), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



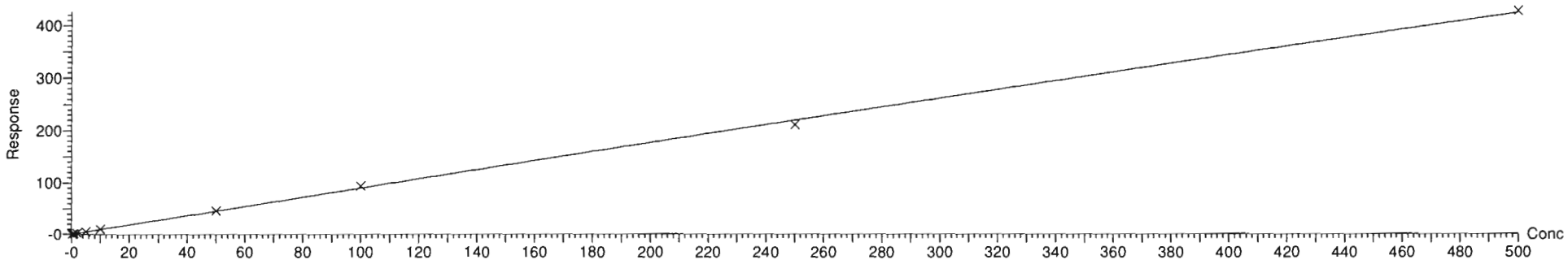
Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999762
Calibration curve: -0.00014335 * x^2 + 0.706539 * x + 0.115848
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



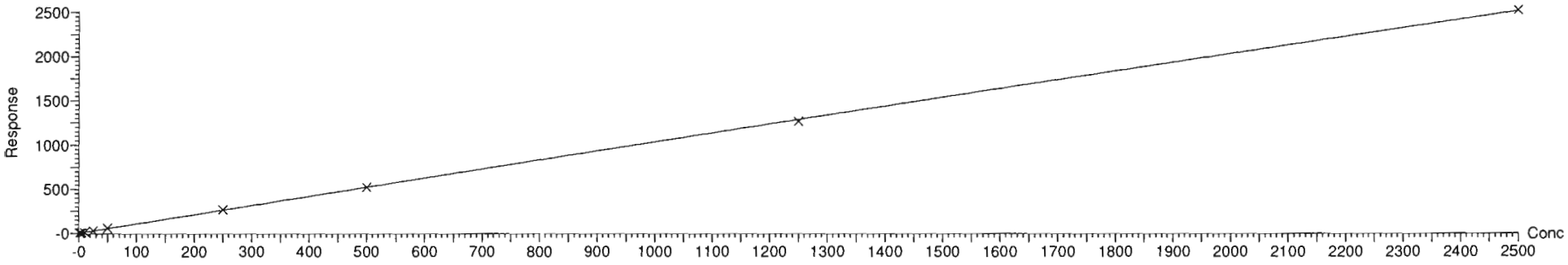
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Last Altered: Friday, February 28, 2020 09:57:55 Pacific Standard Time
Printed: Friday, February 28, 2020 10:13:53 Pacific Standard Time

Compound name: PFODA
Coefficient of Determination: R^2 = 0.999135
Calibration curve: -0.000123507 * x^2 + 0.908012 * x + 0.0218764
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



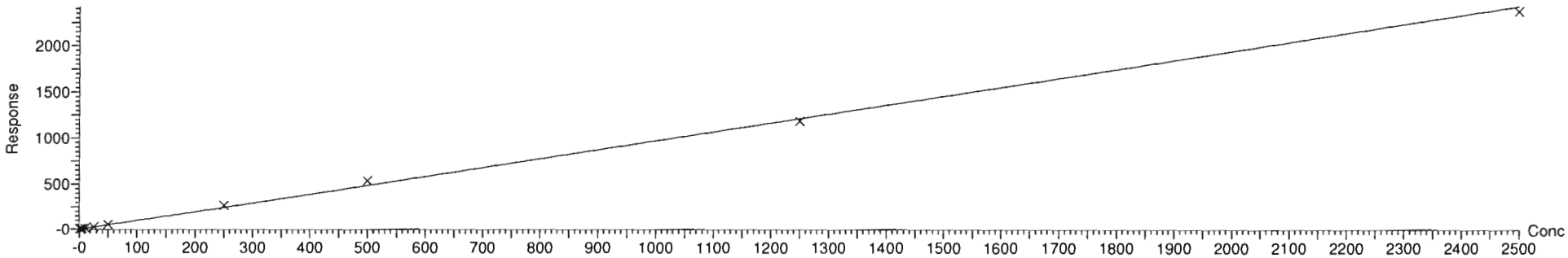
Compound name: N-MeFOSE
Coefficient of Determination: R^2 = 0.999771
Calibration curve: -1.98902e-005 * x^2 + 1.05441 * x + 0.358784
Response type: Internal Std (Ref 95), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

Last Altered: Friday, February 28, 2020 09:57:55 Pacific Standard Time
Printed: Friday, February 28, 2020 10:13:53 Pacific Standard Time

Compound name: N-EtFOSE
Correlation coefficient: r = 0.998864, r^2 = 0.997730
Calibration curve: 0.970285 * x + 0.35217
Response type: Internal Std (Ref 97), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



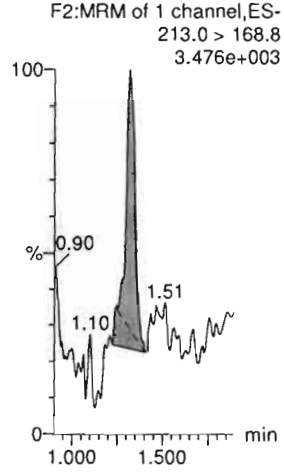
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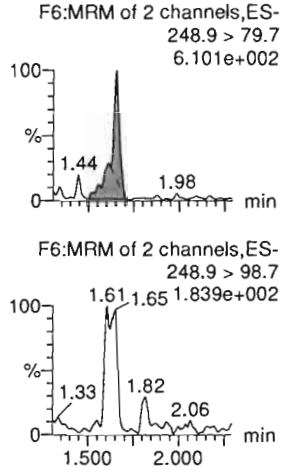
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Name: 200227P1-3, Date: 27-Feb-2020, Time: 15:42:07, ID: ST200227P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

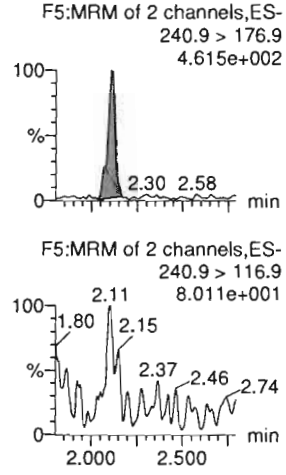
PFBA



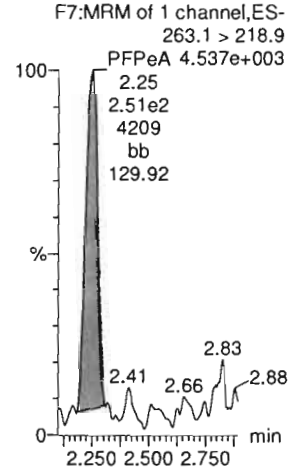
PFPrS



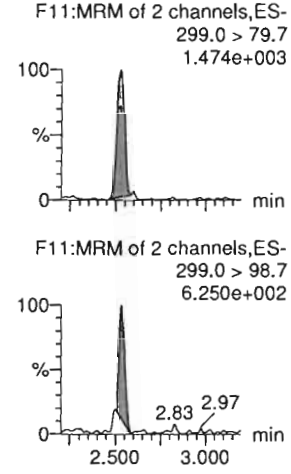
3:3 FTCA



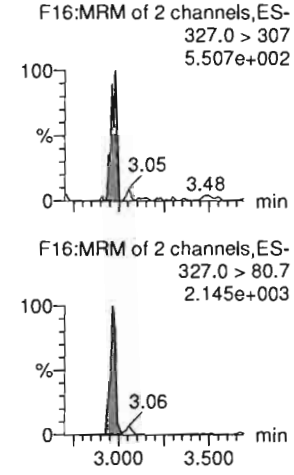
PFPeA



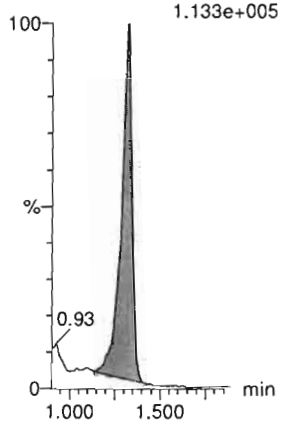
PFBS



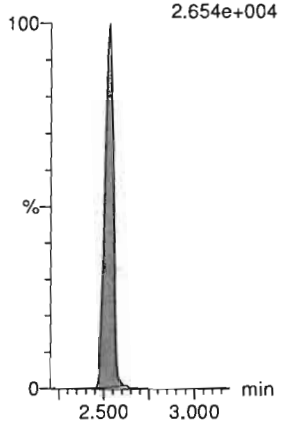
4:2 FTS



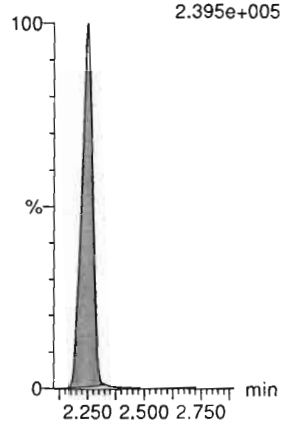
13C3-PFBA-EIS



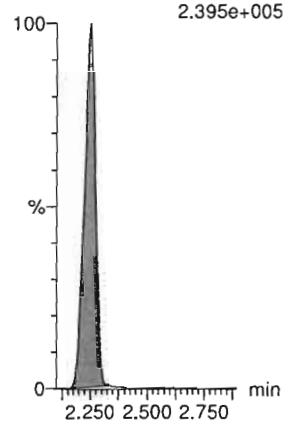
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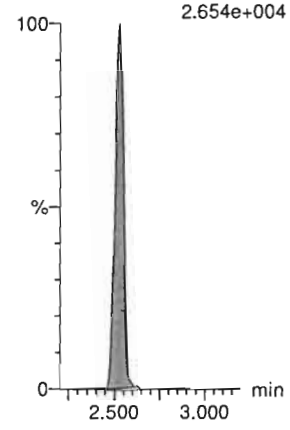
13C3-PFPeA-EIS



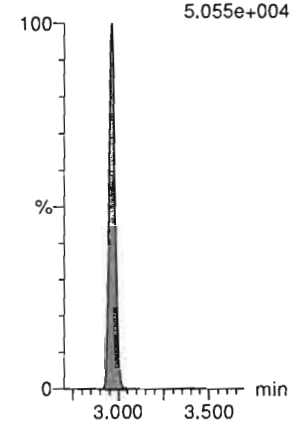
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

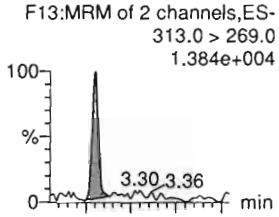


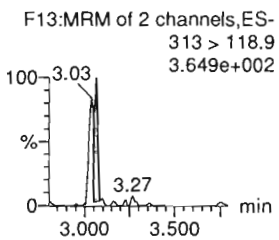
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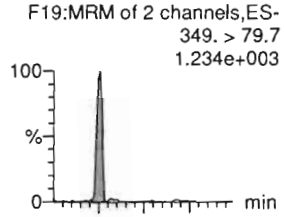
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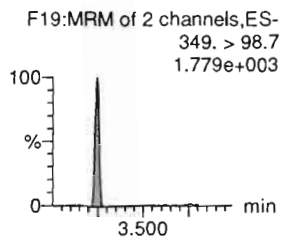
PFHxA



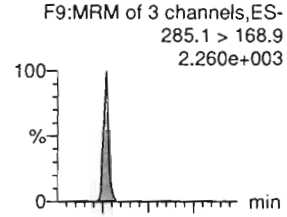


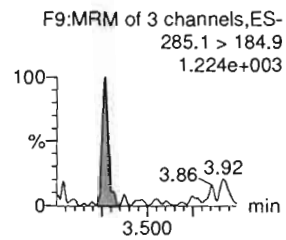
PFPeS



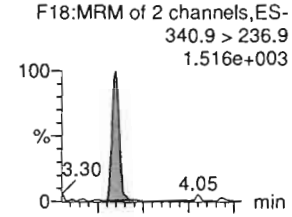


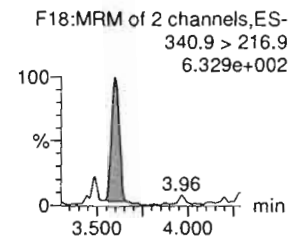
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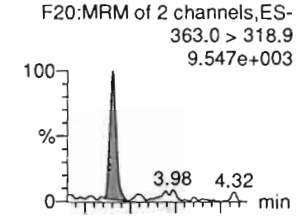


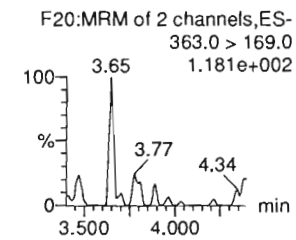
5:3 FTCA



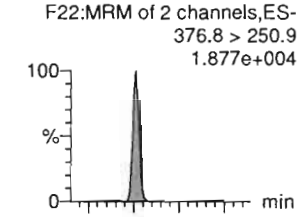


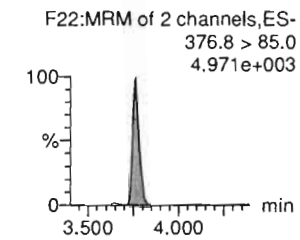
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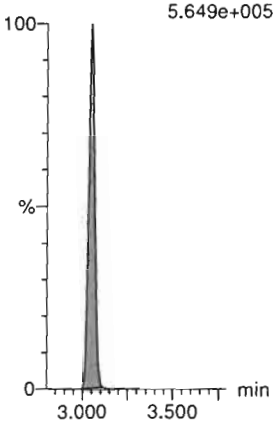


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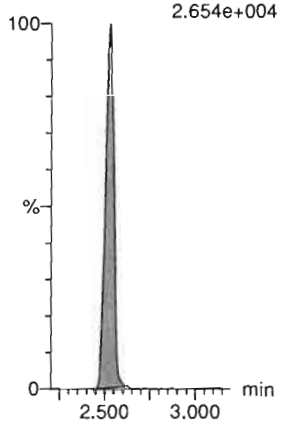




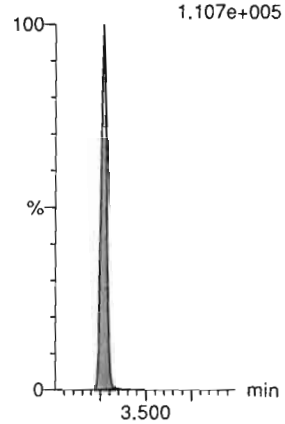
13C2-PFHxA-EIS



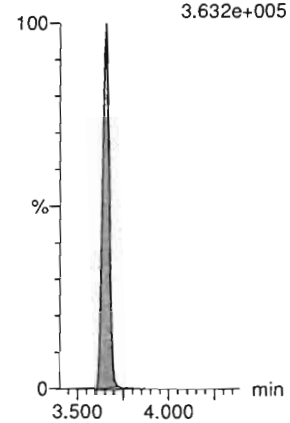
13C3-PFBS-EIS



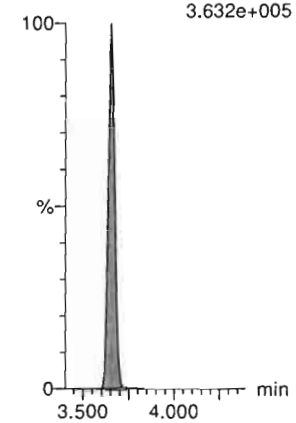
13C3-HFPO-DA-EIS



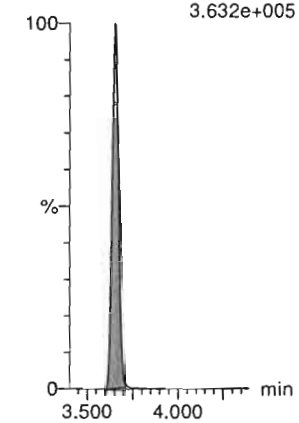
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

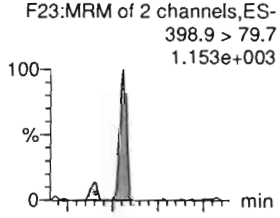


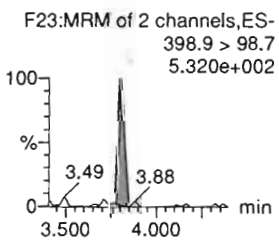
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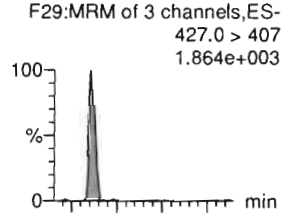
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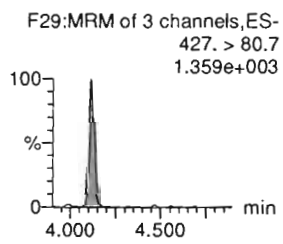
L-PFHxS



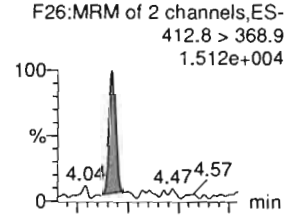


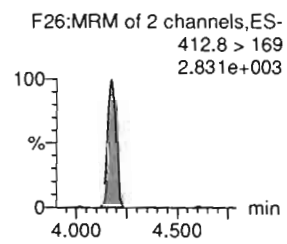
6:2 FTS



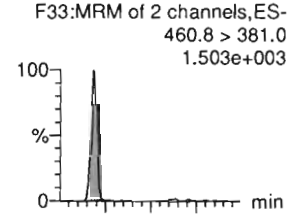


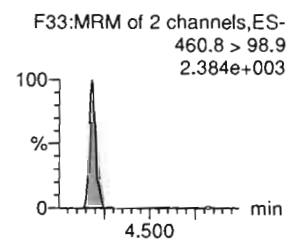
L-PFOA



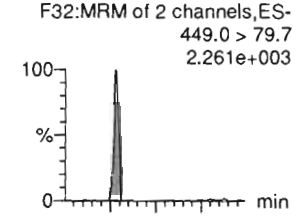


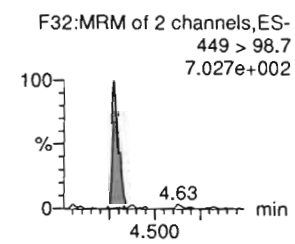
PFEChS



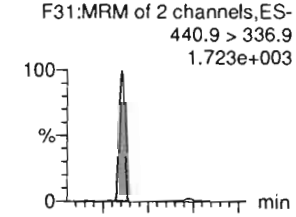


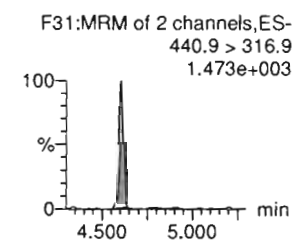
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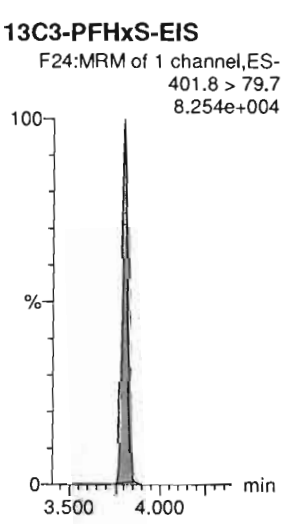


7:3 FTCA

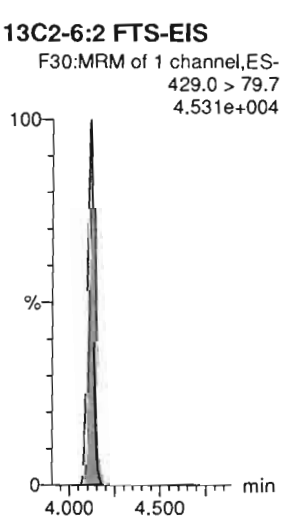




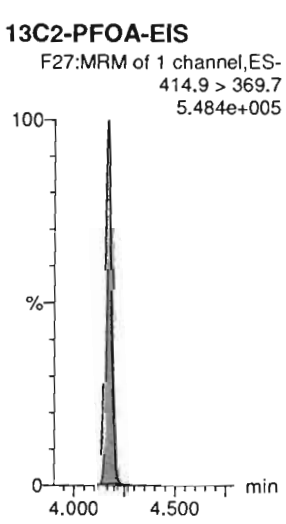
13C3-PFHxS-EIS



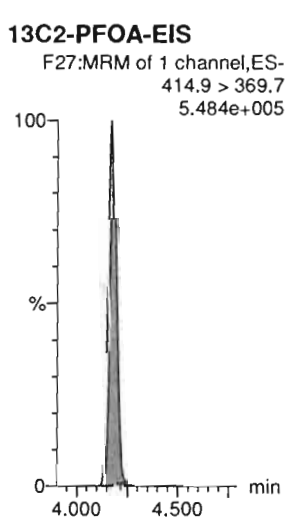
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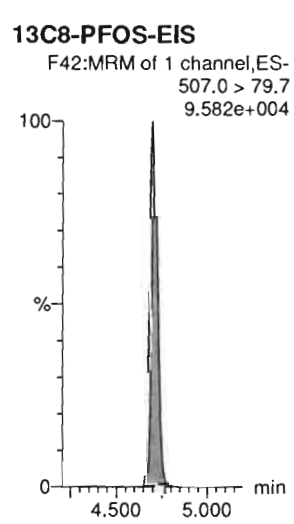
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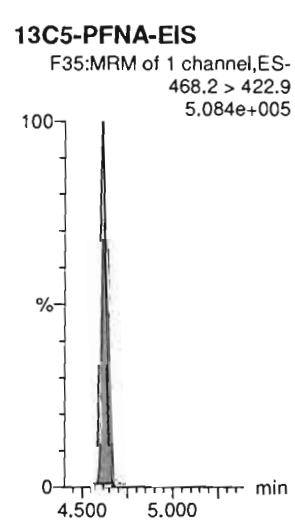
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13C8-PFOS-EIS



13C5-PFNA-EIS

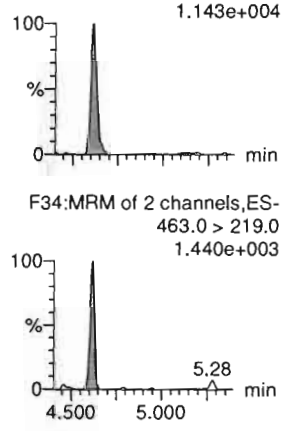


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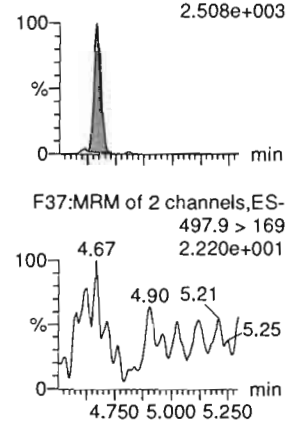
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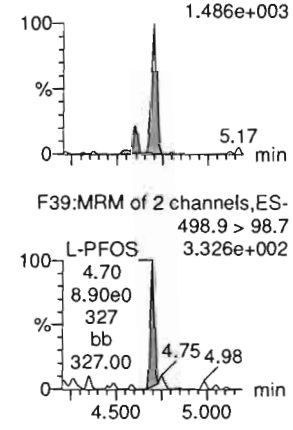
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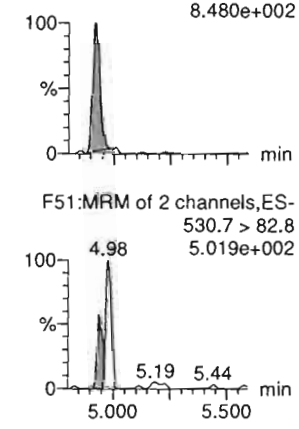
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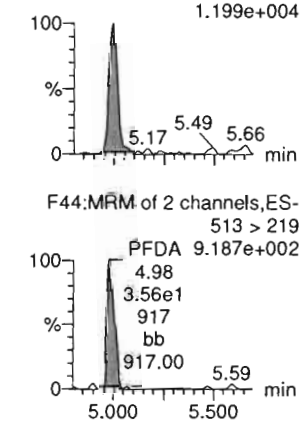
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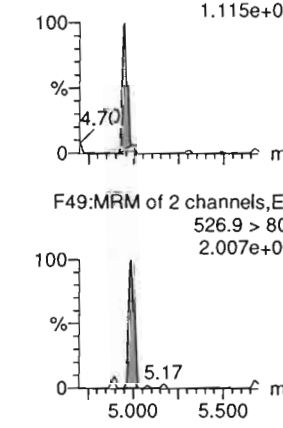
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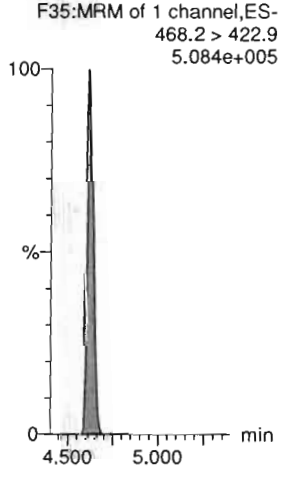
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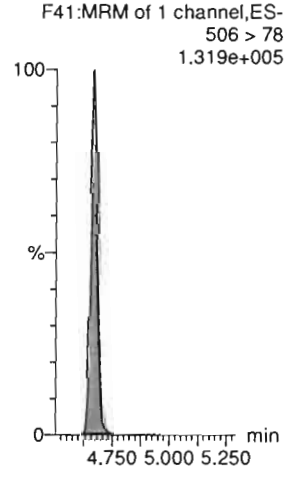
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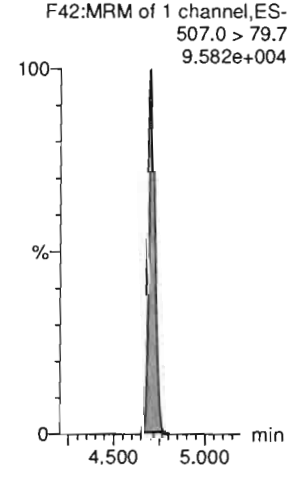
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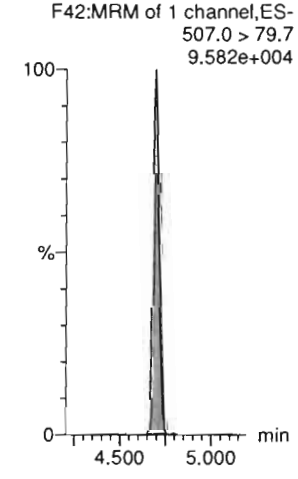
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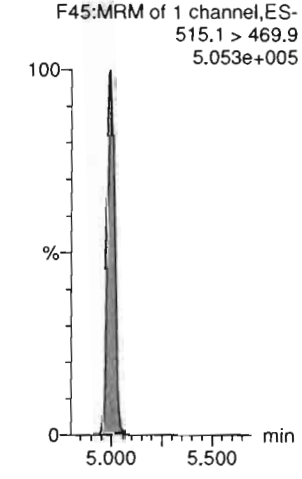
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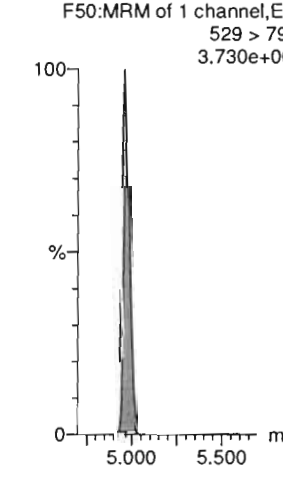
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13C2-PFDA-EIS



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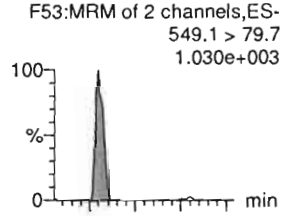


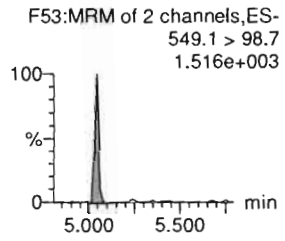
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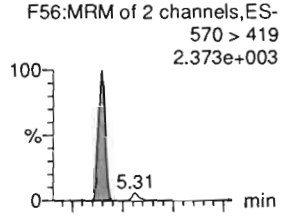
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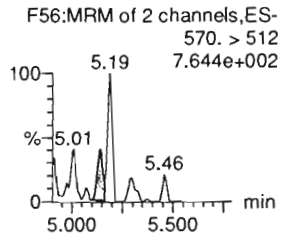
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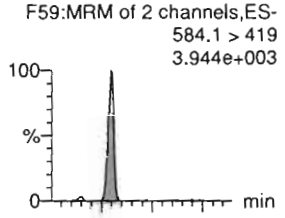


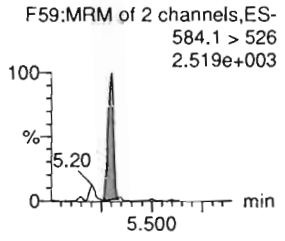
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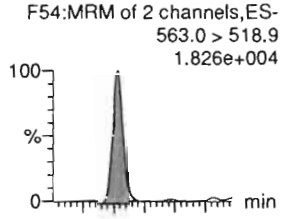


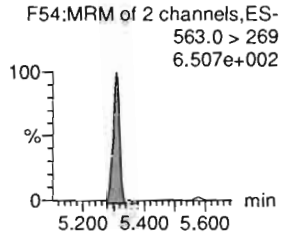
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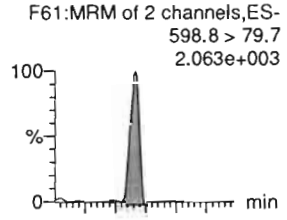


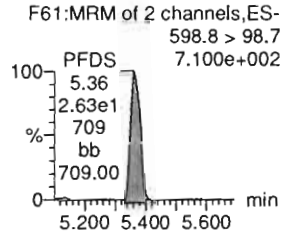
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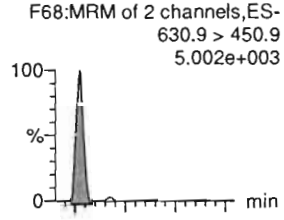


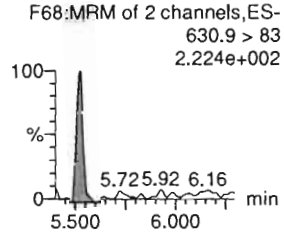
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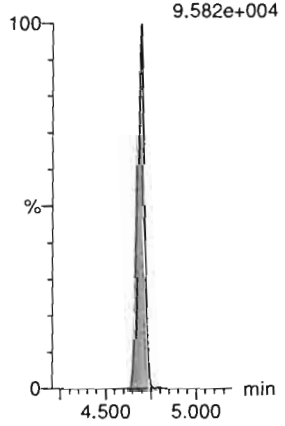


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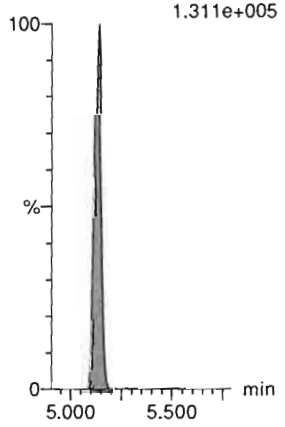




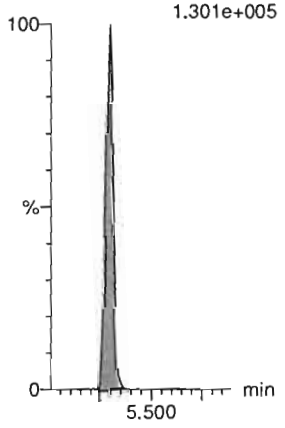
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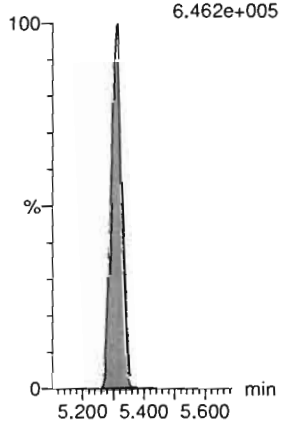
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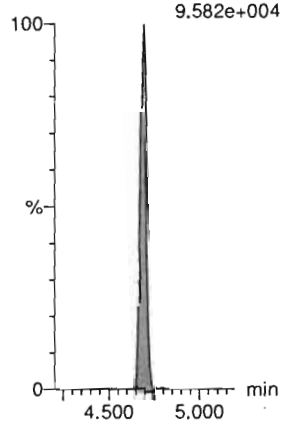
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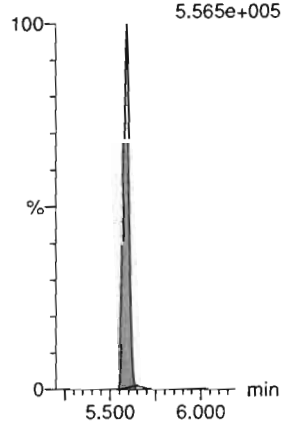
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13C8-PFOS-EIS



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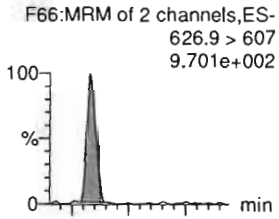


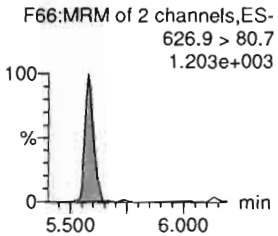
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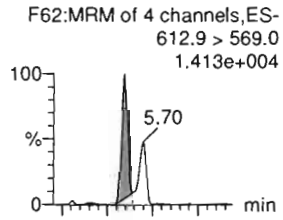
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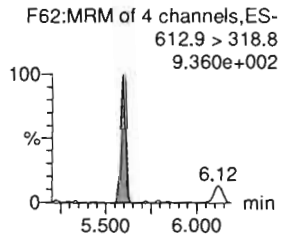
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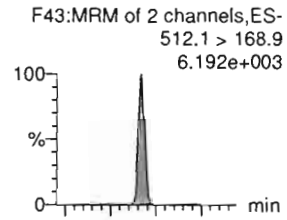


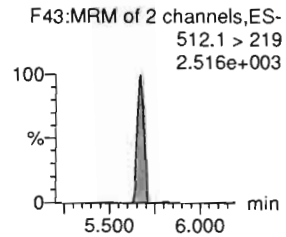
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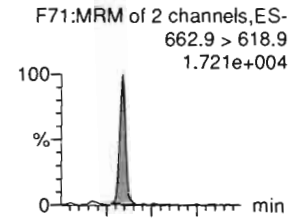


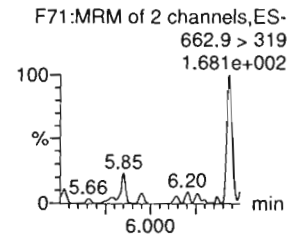
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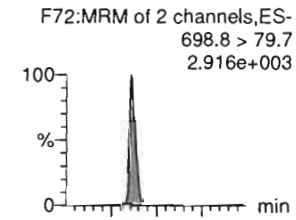


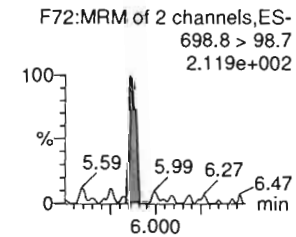
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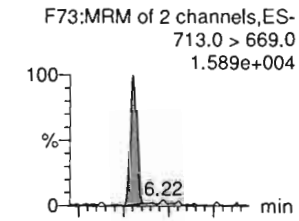


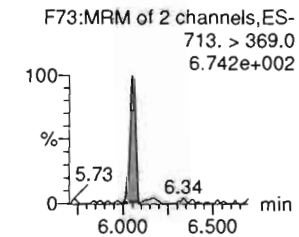
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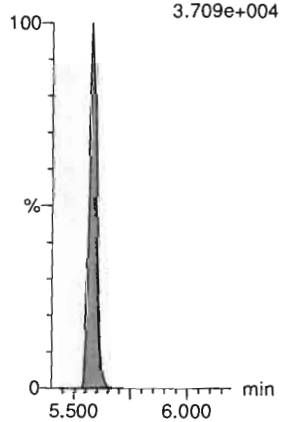


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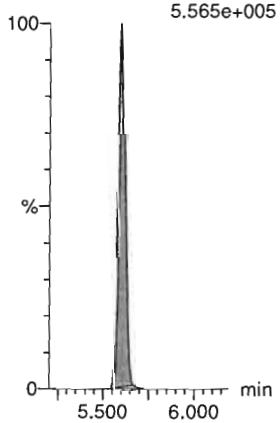




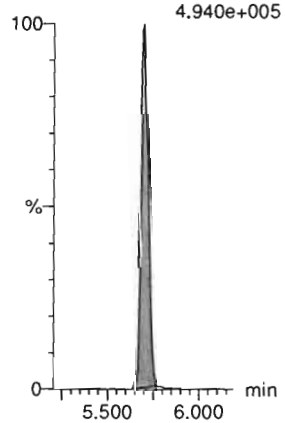
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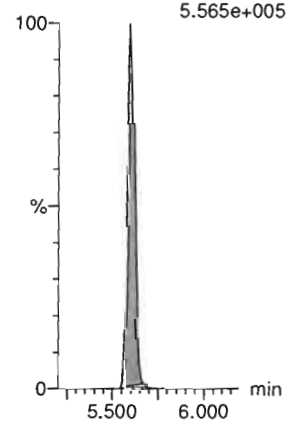
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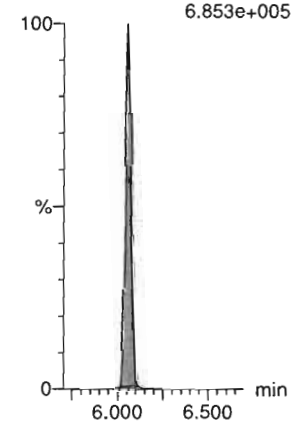
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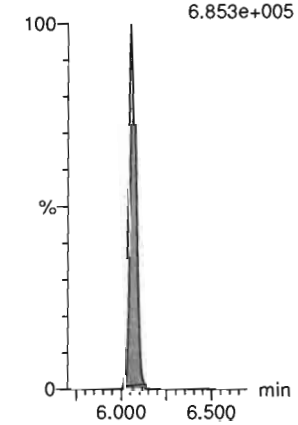
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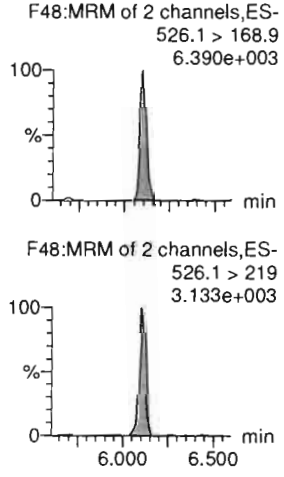


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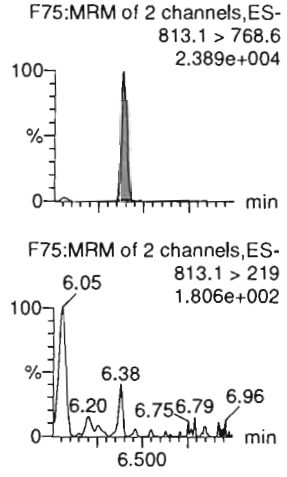
Last Altered: Friday, February 28, 2020 09:05:18 Pacific Standard Time
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Name: 200227P1-3, Date: 27-Feb-2020, Time: 15:42:07, ID: ST200227P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

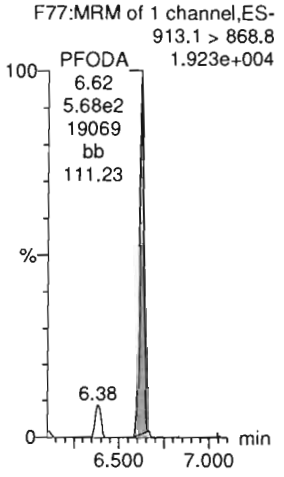
N-EtFOSA



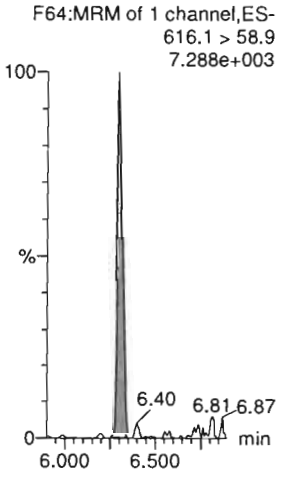
PFHxDA



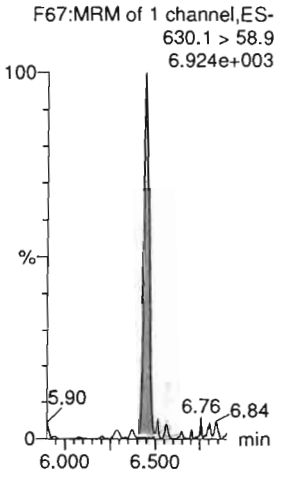
PFODA



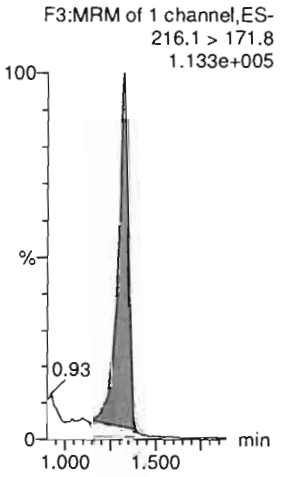
N-MeFOSE



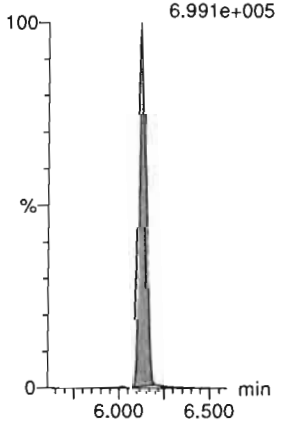
N-EtFOSE



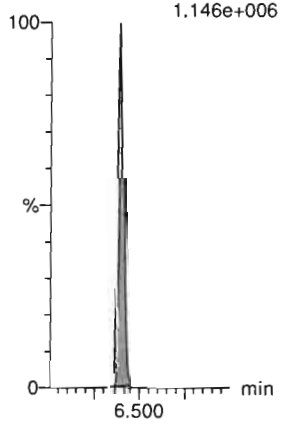
13C3-PFBA-RSD



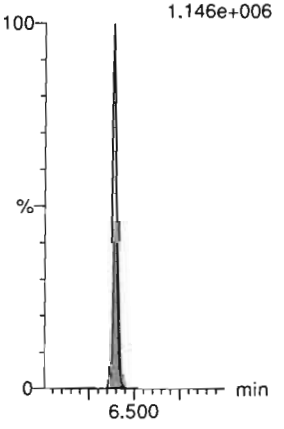
d5-N-ETFOSA-EIS



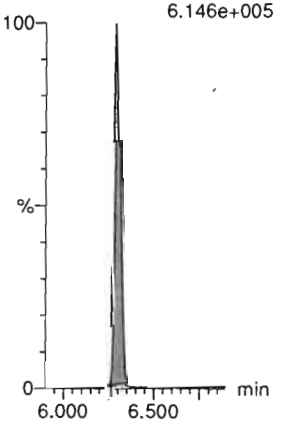
13C2-PFHxDA-EIS



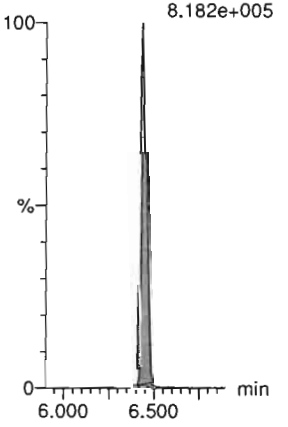
13C2-PFHxDA-EIS



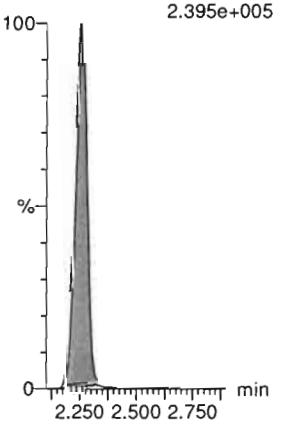
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

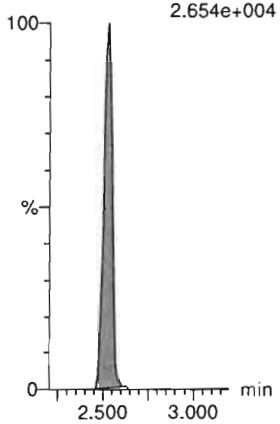


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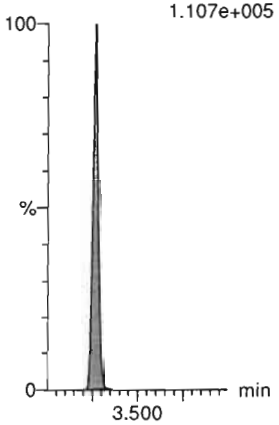
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Printed: Friday, February 28, 2020 09:08:38 Pacific Standard Time

Name: 200227P1-3, Date: 27-Feb-2020, Time: 15:42:07, ID: ST200227P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

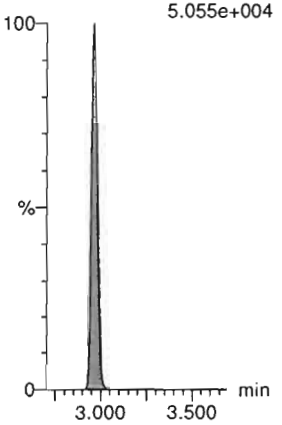
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.654e+004



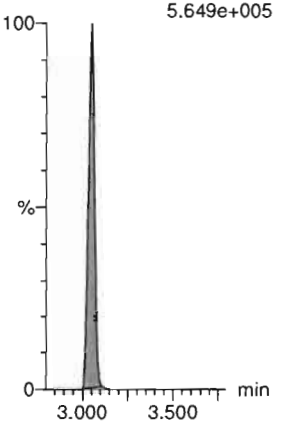
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.107e+005



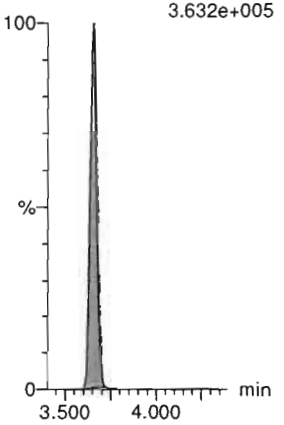
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
5.055e+004



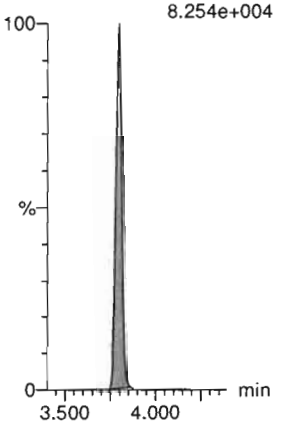
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.649e+005



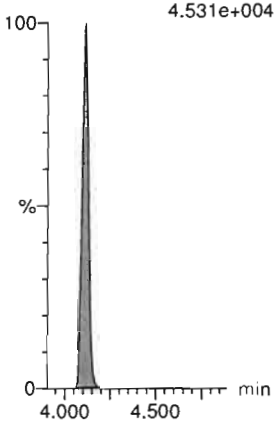
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.632e+005



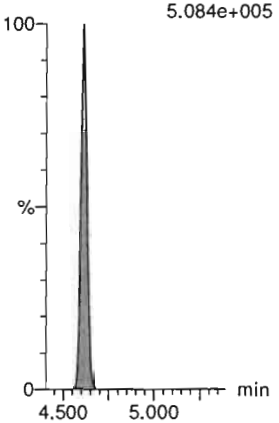
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.254e+004



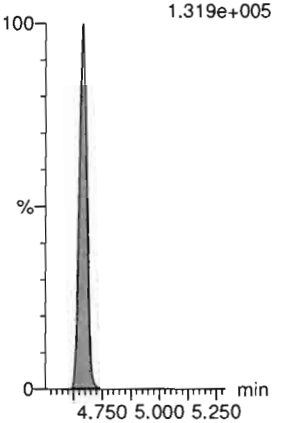
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.531e+004



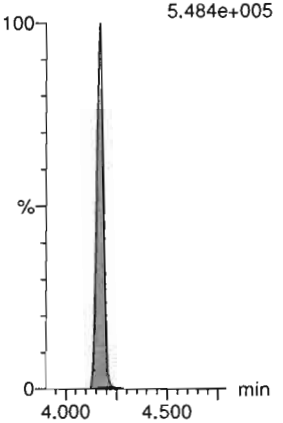
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.084e+005



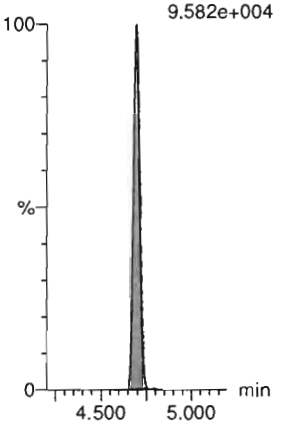
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.319e+005



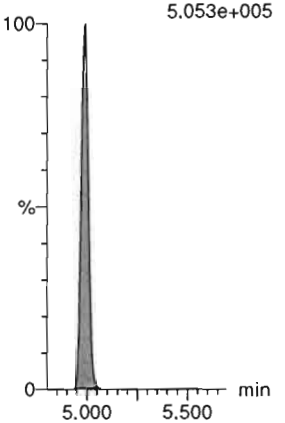
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.484e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.582e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.053e+005

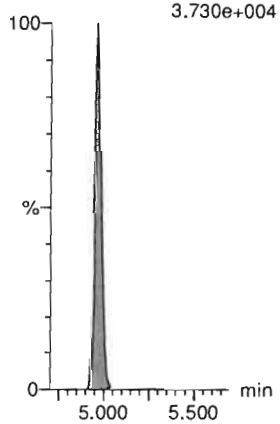


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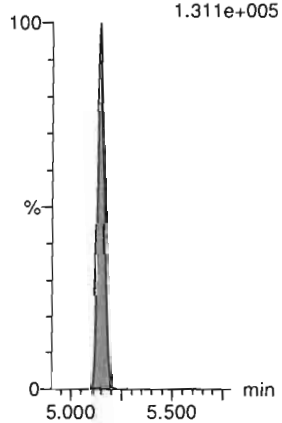
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Name: 200227P1-3, Date: 27-Feb-2020, Time: 15:42:07, ID: ST200227P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

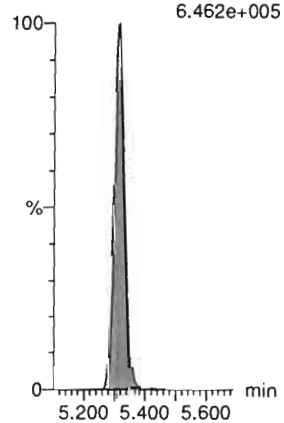
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.730e+004



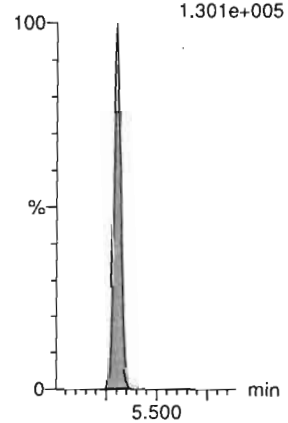
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.311e+005



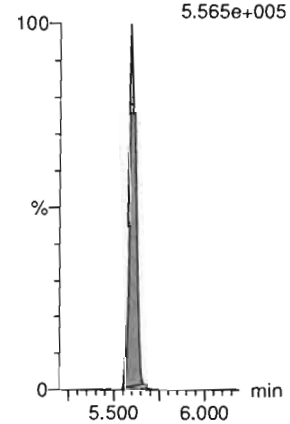
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.462e+005



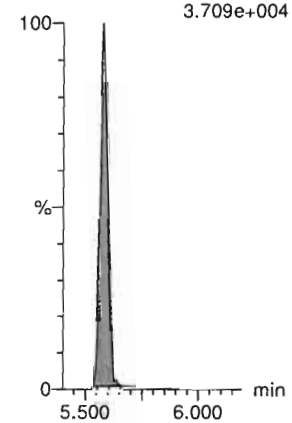
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F60:MRM of 1 channel,ES-
589.3 > 419
1.301e+005



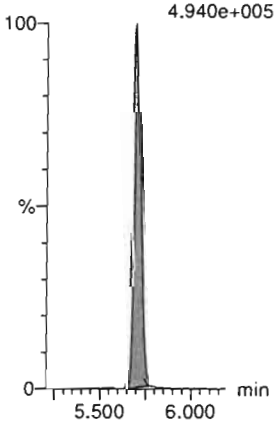
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.565e+005



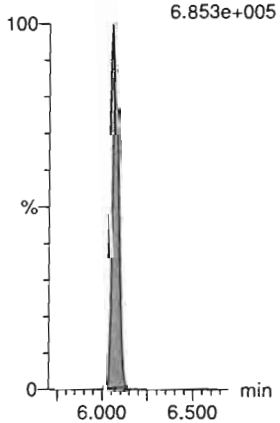
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
3.709e+004



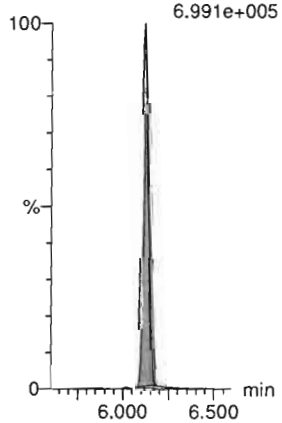
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.940e+005



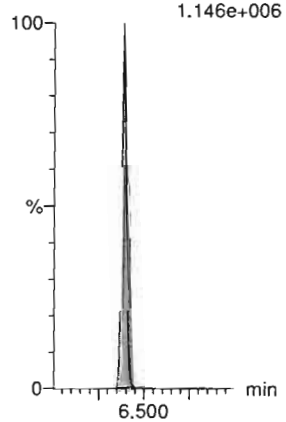
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
6.853e+005



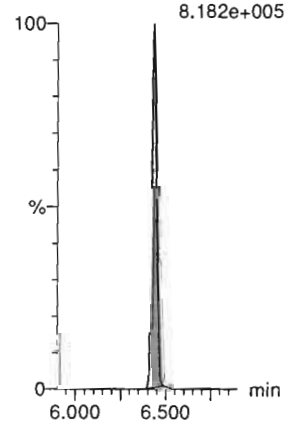
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.991e+005



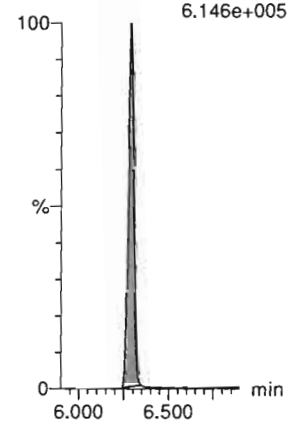
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.146e+006



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
8.182e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
6.146e+005

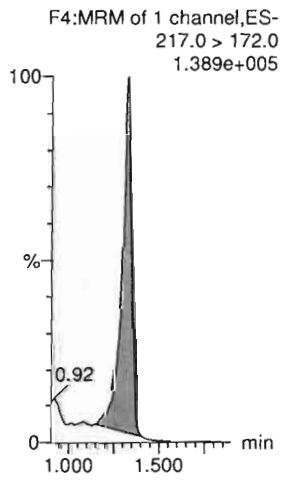


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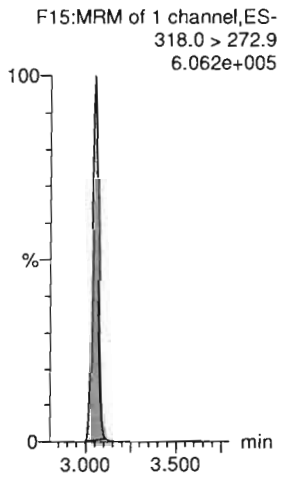
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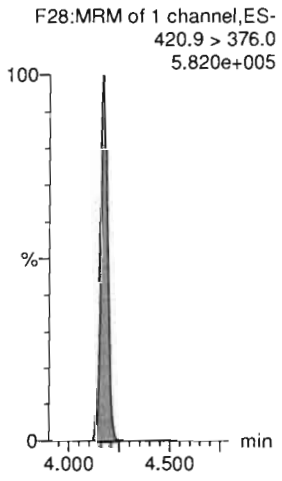
13C4-PFBA



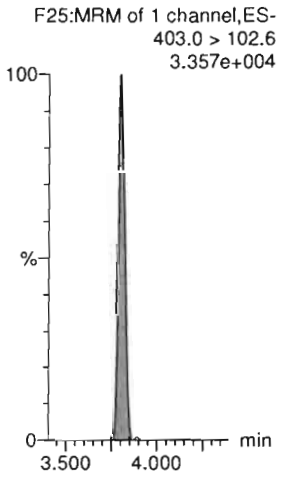
13C5-PFHxA



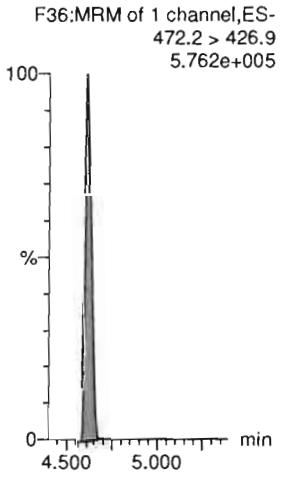
13C8-PFOA



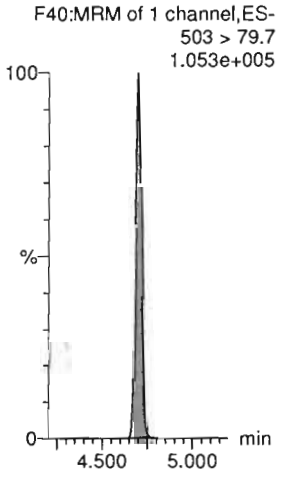
18O2-PFHxS



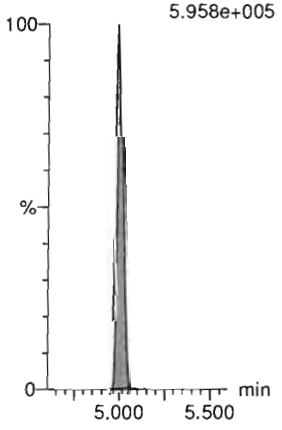
13C9-PFNA



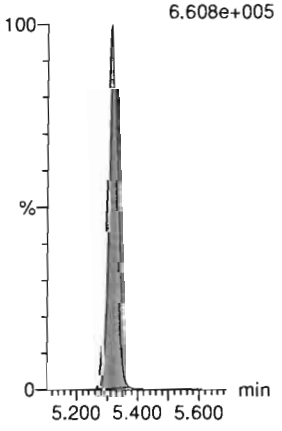
13C4-PFOS



13C6-PFDA



13C7-PFUdA

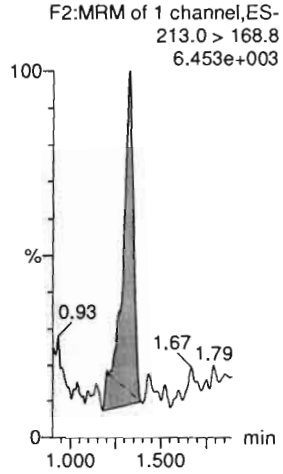


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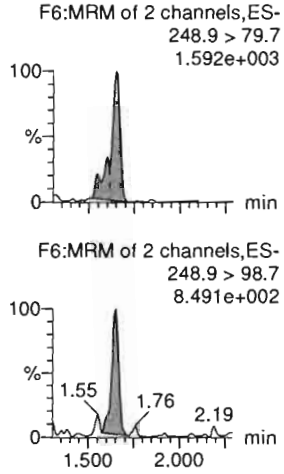
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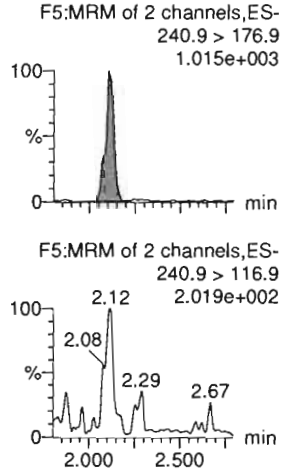
PFBA



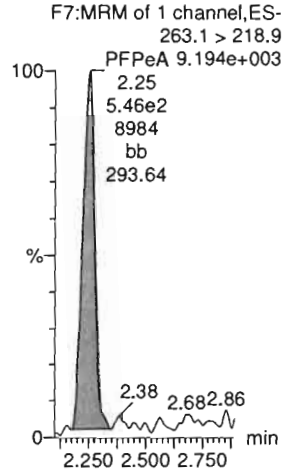
PFPrS



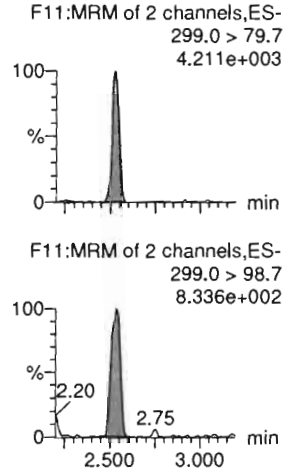
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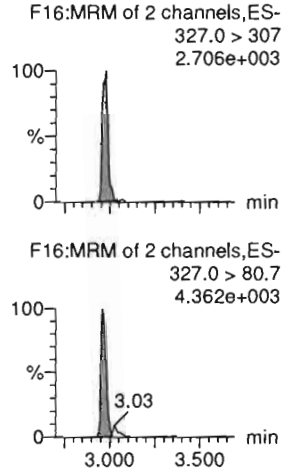
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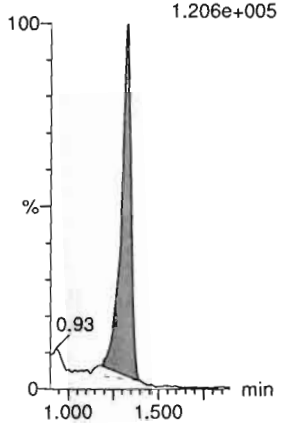
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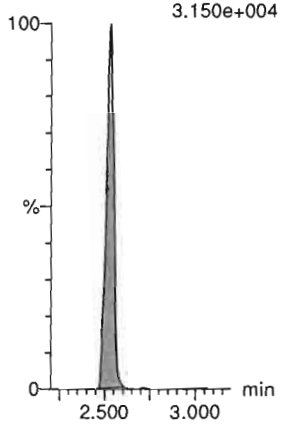
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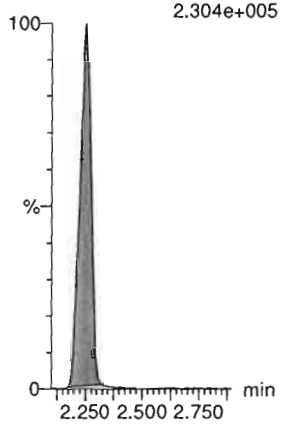
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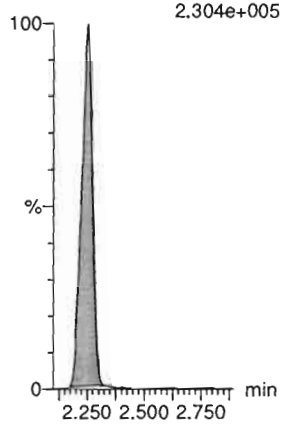
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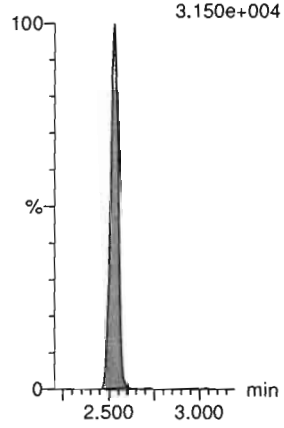
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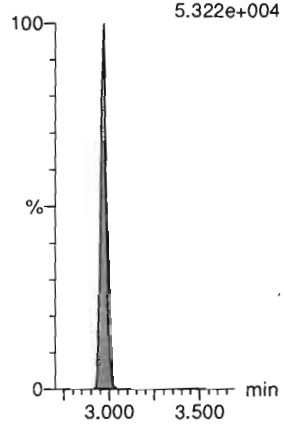
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13C3-PFBS-EIS



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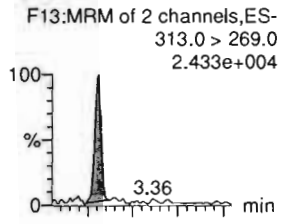


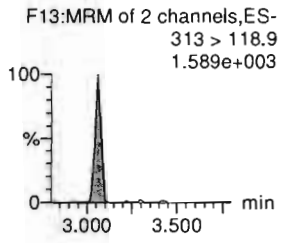
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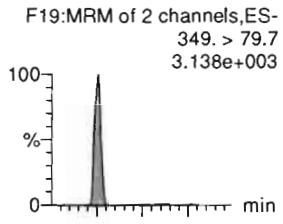
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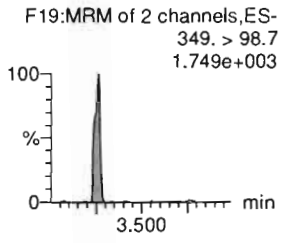
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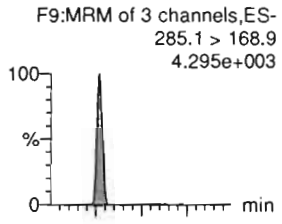


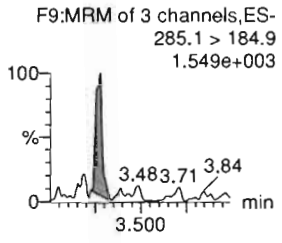
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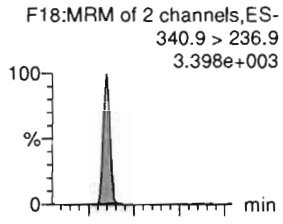


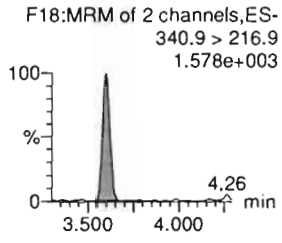
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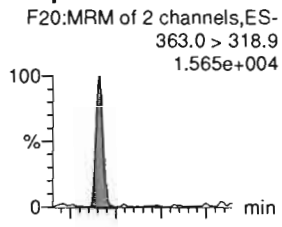


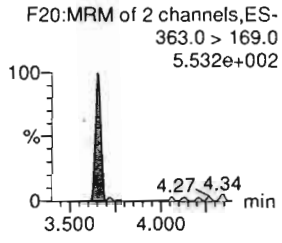
5:3 FTCA



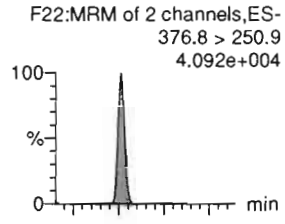


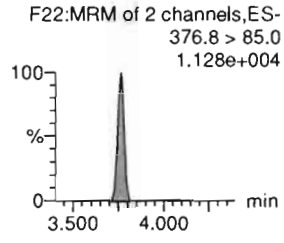
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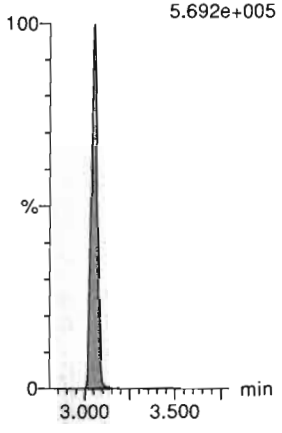


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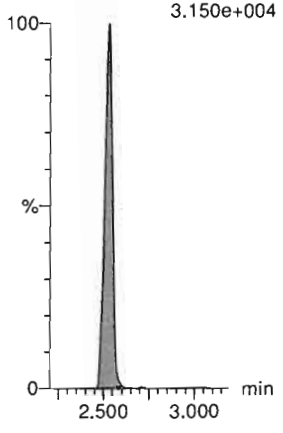




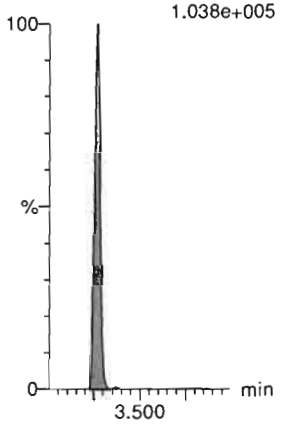
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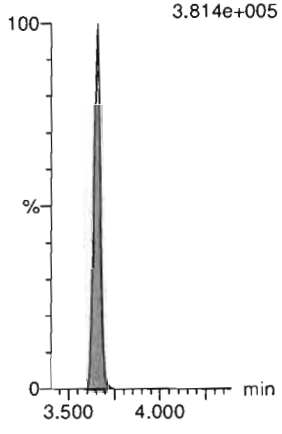
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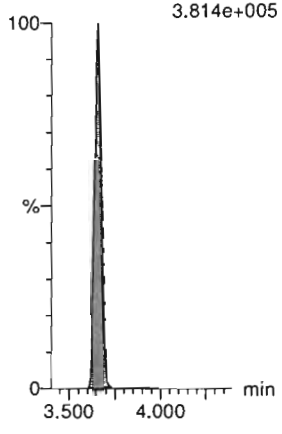
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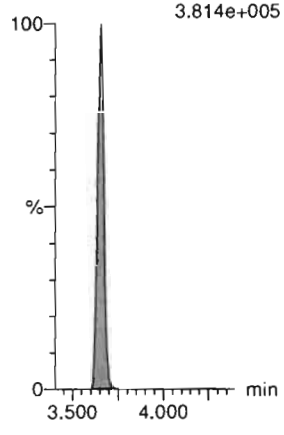
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13C4-PFHpA-EIS



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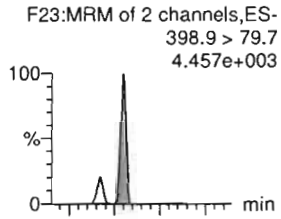


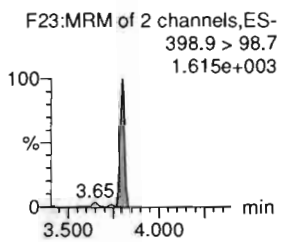
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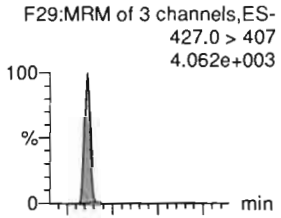
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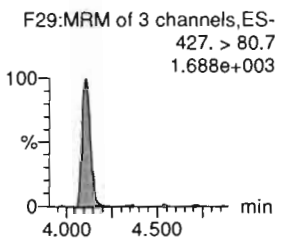
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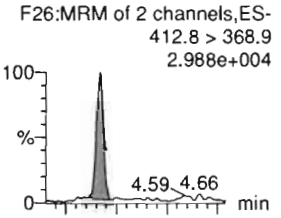


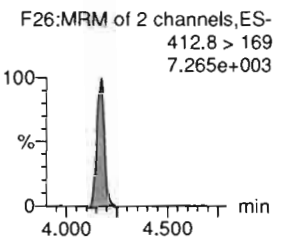
6:2 FTS



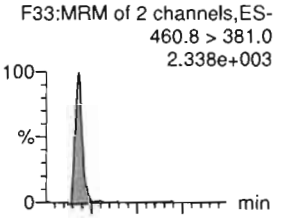


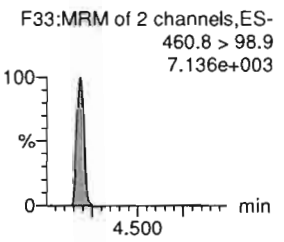
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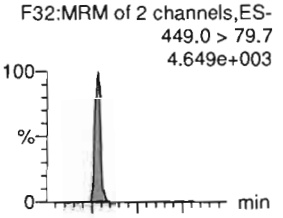


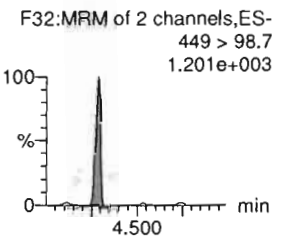
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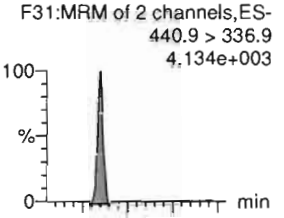


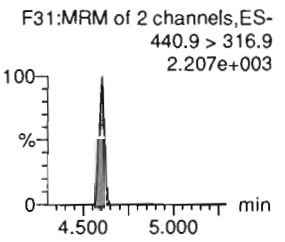
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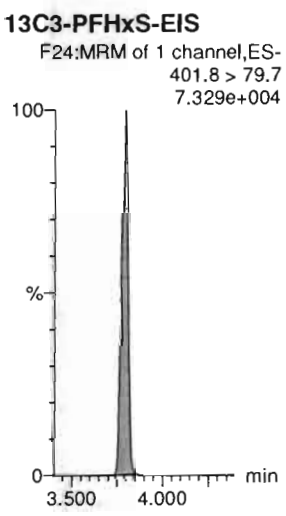


7:3 FTCA

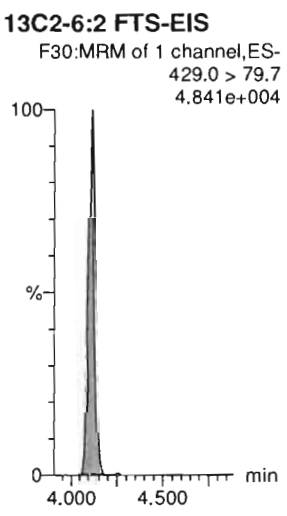




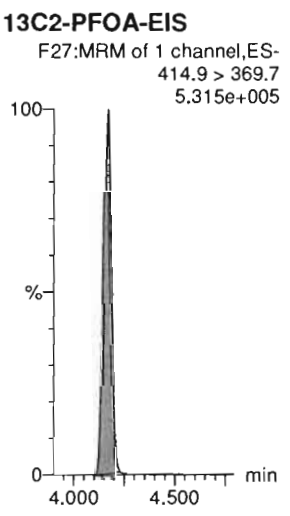
13C3-PFHxS-EIS



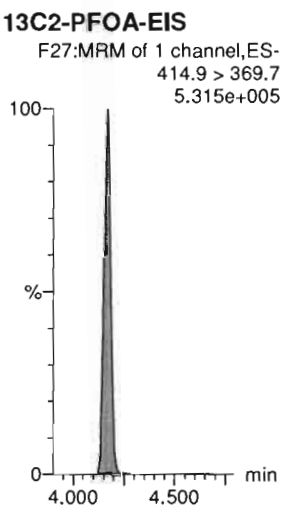
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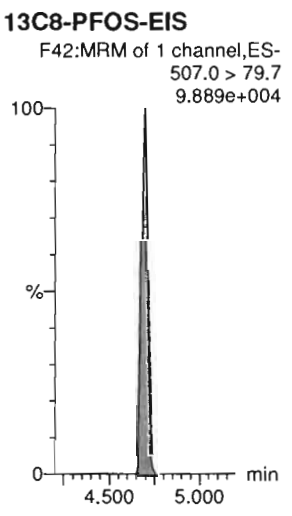
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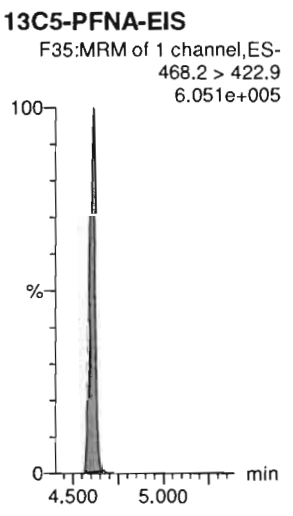
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13C8-PFOS-EIS



13C5-PFNA-EIS

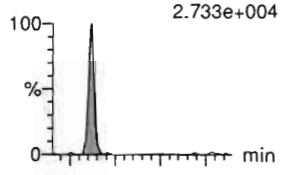


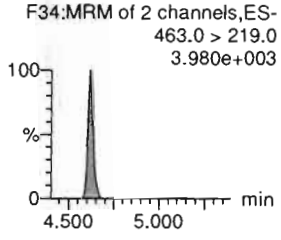
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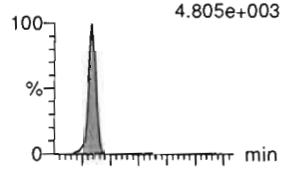
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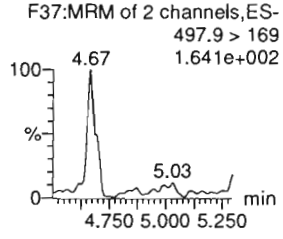
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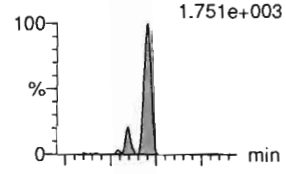


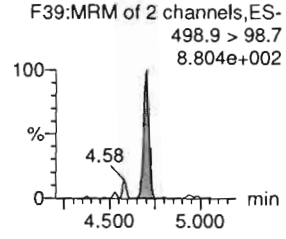
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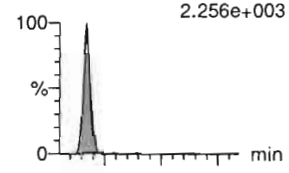


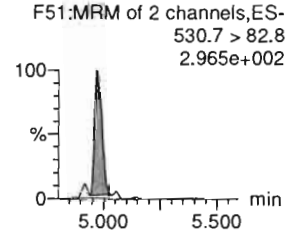
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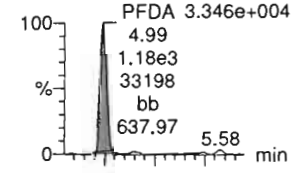


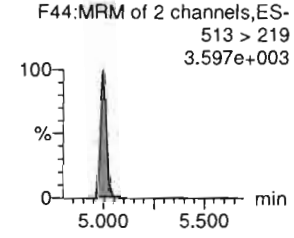
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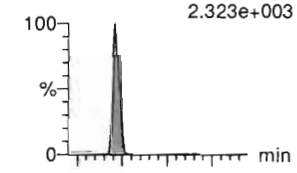


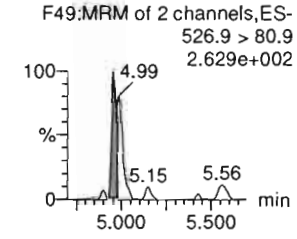
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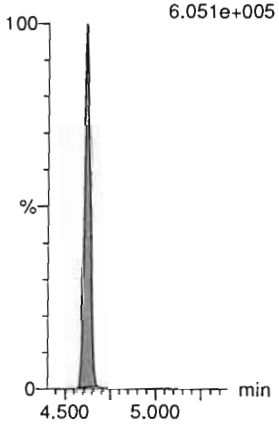


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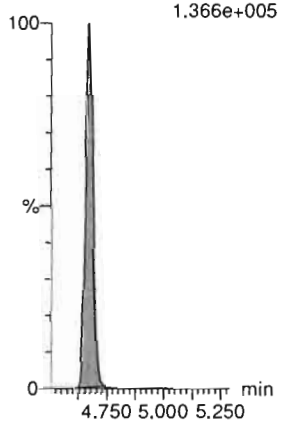




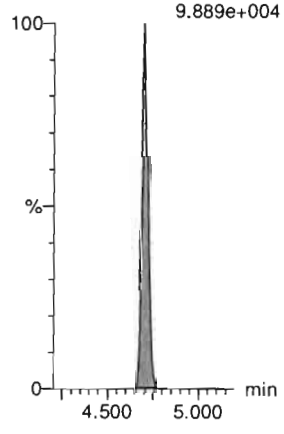
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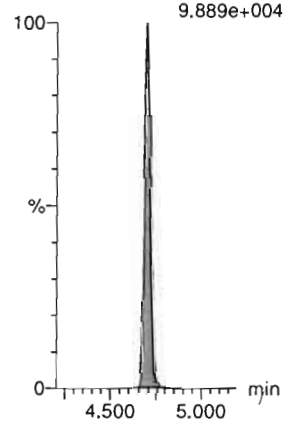
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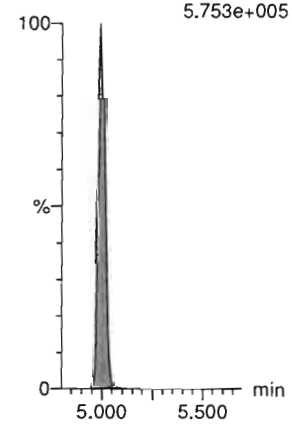
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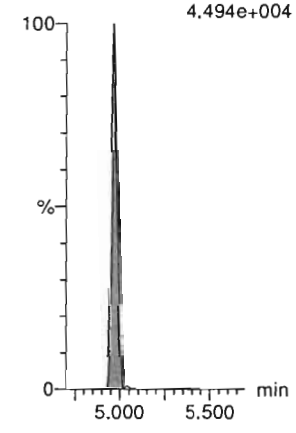
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

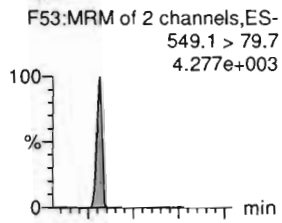


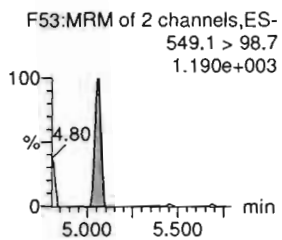
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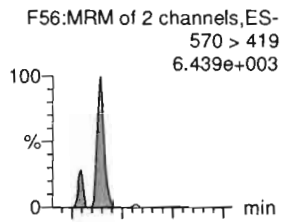
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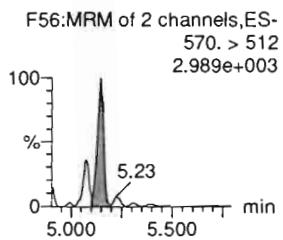
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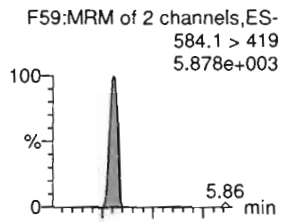


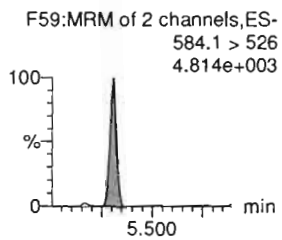
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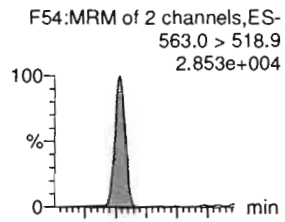


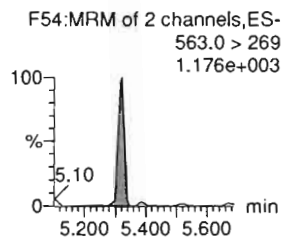
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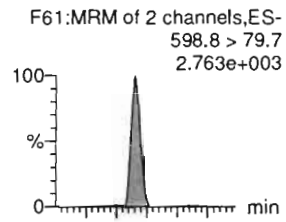


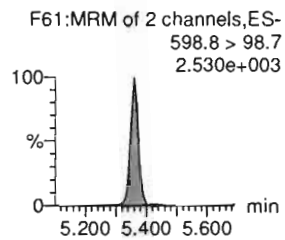
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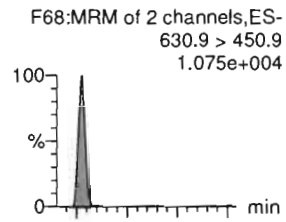


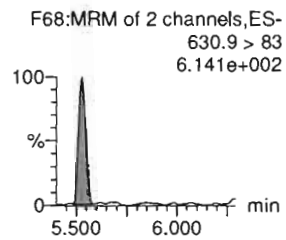
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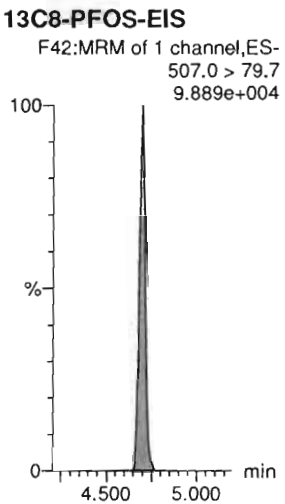


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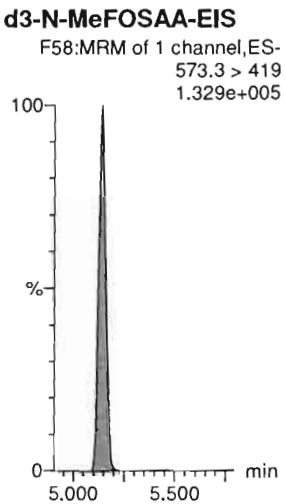




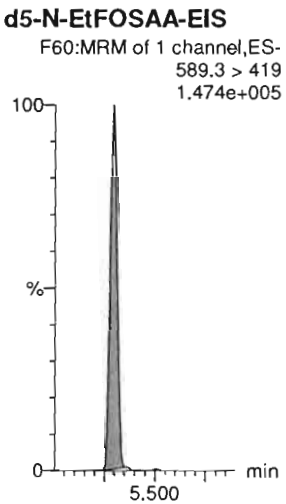
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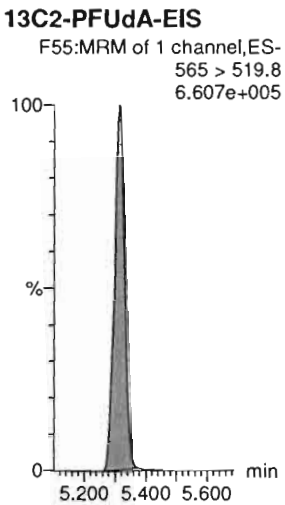
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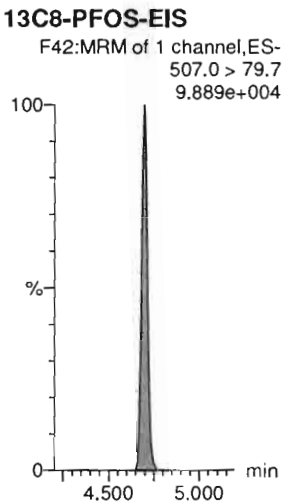
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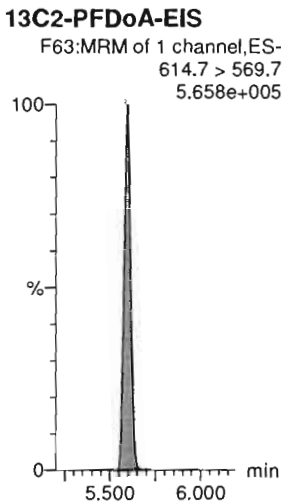
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13C8-PFOS-EIS



13C2-PFDoA-EIS

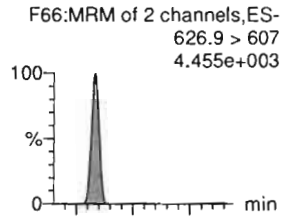


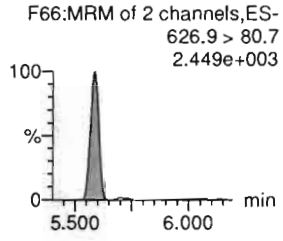
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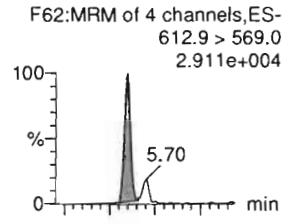
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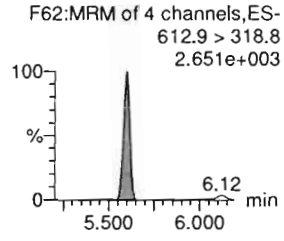
10:2 FTS



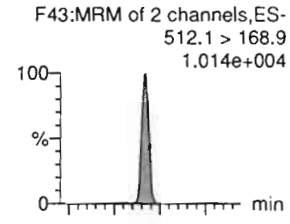


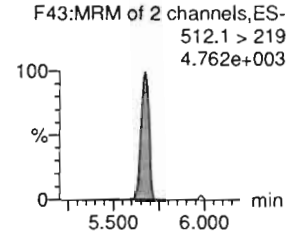
PFDoA



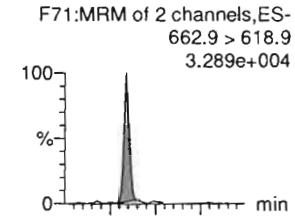


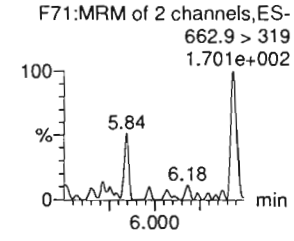
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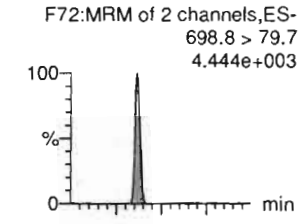


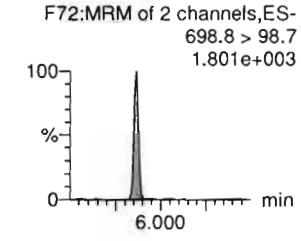
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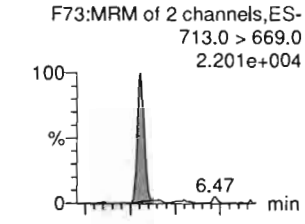


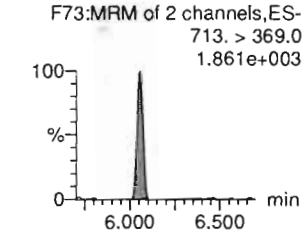
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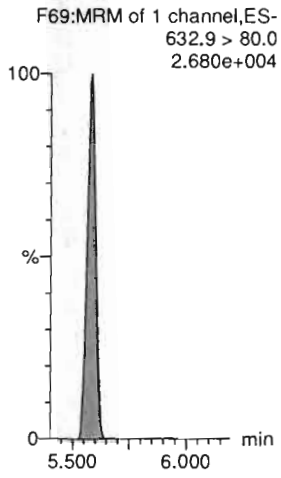


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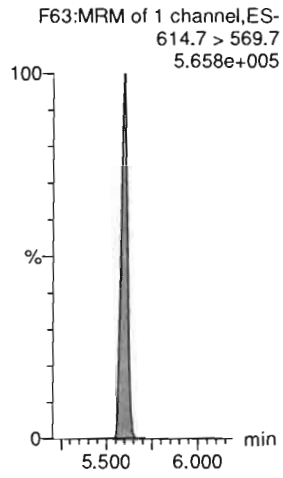




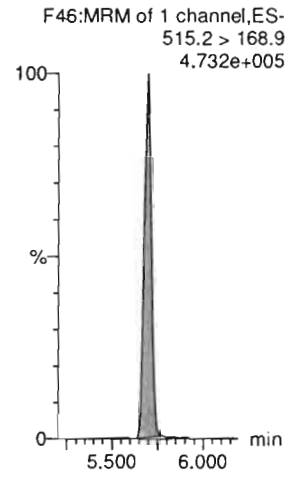
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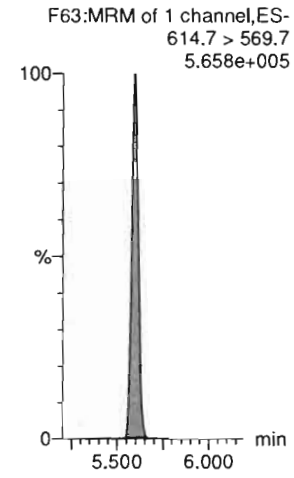
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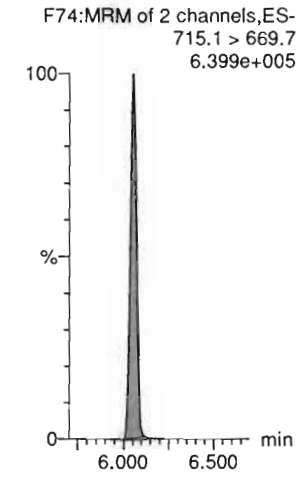
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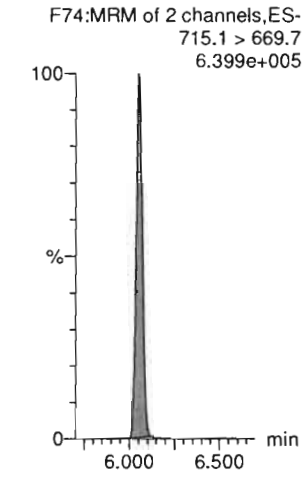
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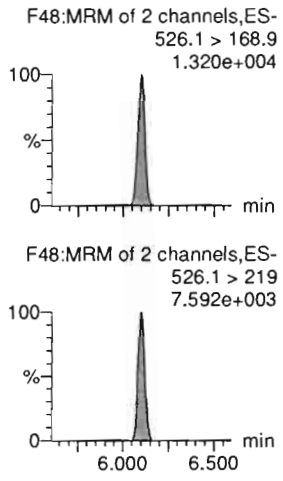


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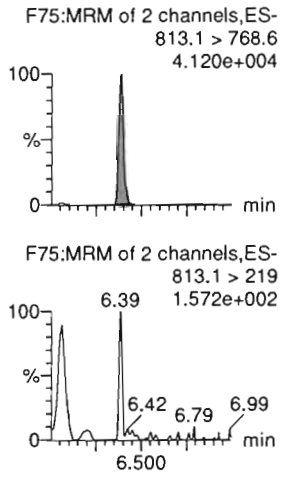
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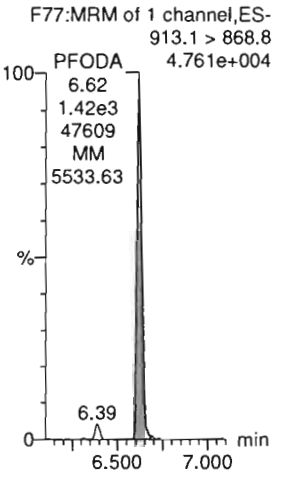
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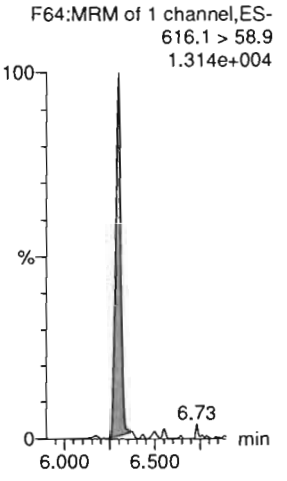
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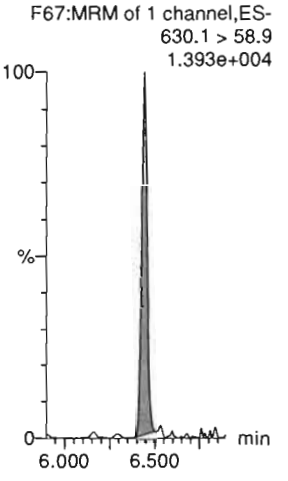
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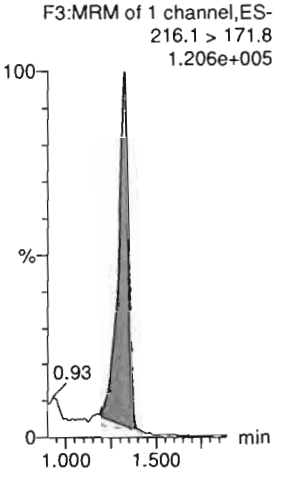
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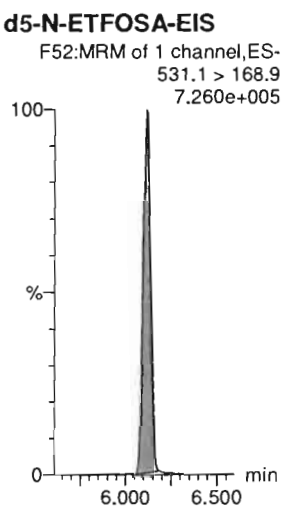
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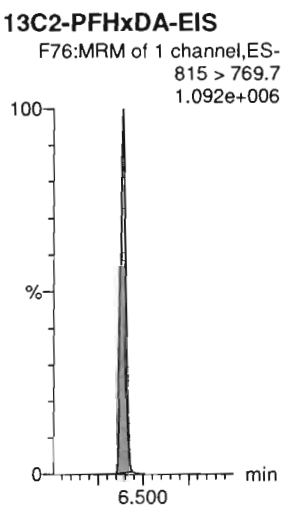
13C3-PFBA-RSD



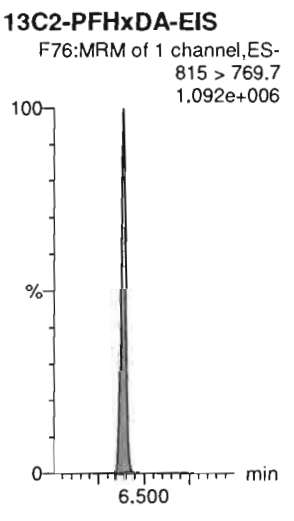
d5-N-ETFOSA-EIS



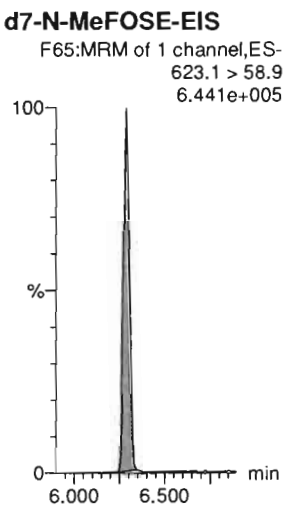
13C2-PFHxDA-EIS



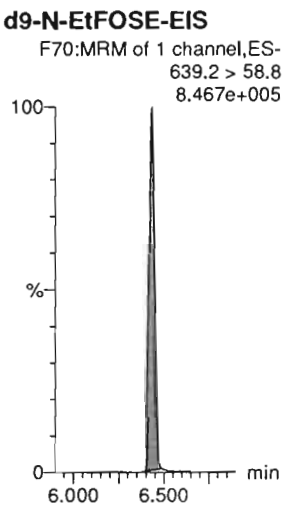
13C2-PFHxDA-EIS



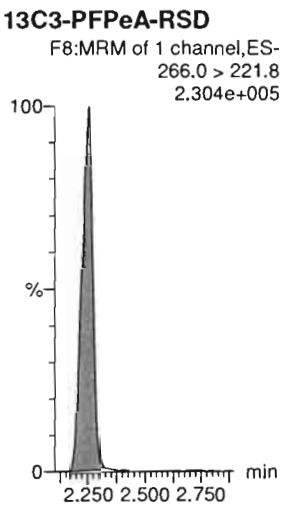
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

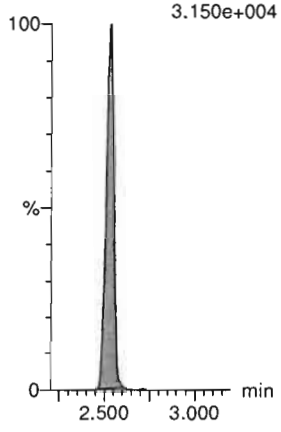


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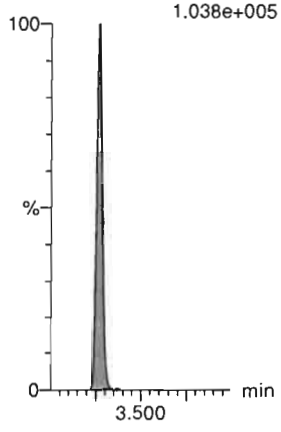
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Name: 200227P1-4, Date: 27-Feb-2020, Time: 15:52:39, ID: ST200227P1-2 PFC CS-1 20B1103, Description: PFC CS-1 20B1103

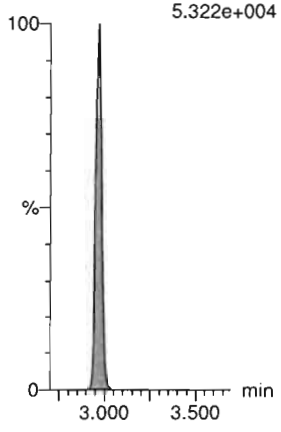
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.150e+004



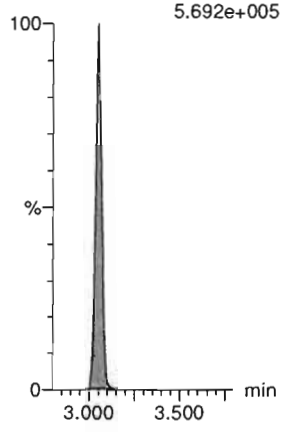
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.038e+005



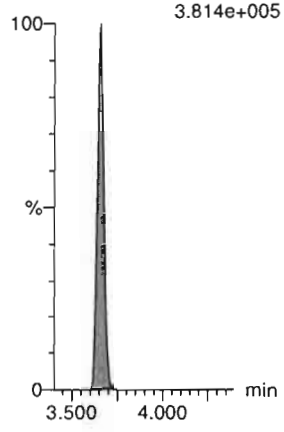
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
5.322e+004



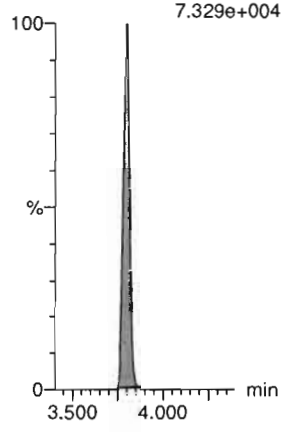
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.692e+005



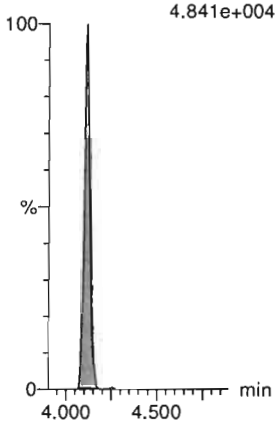
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.814e+005



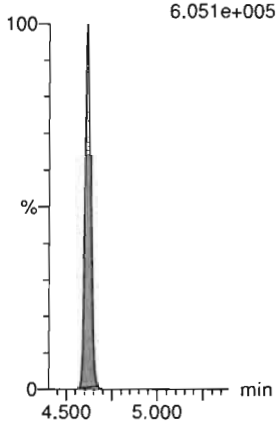
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.329e+004



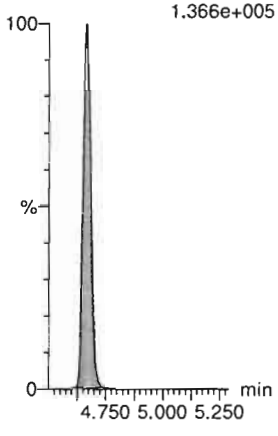
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.841e+004



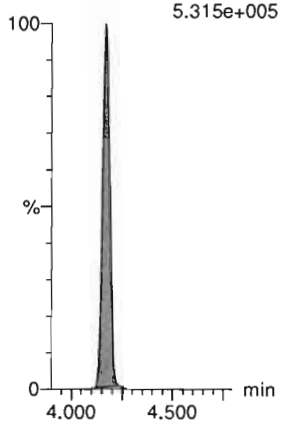
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
6.051e+005



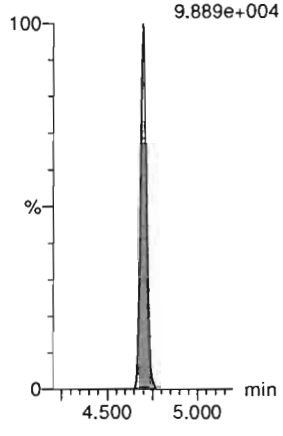
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.366e+005



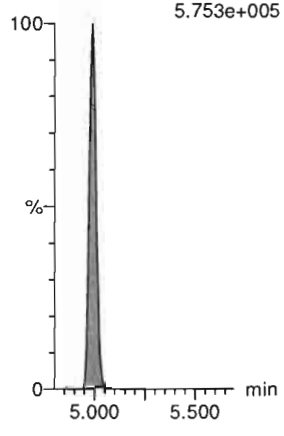
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.315e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.889e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.753e+005

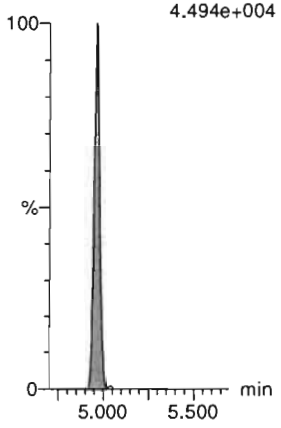


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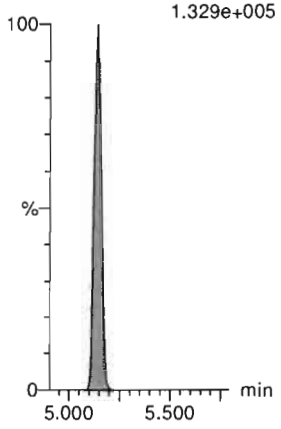
Last Altered: Friday, February 28, 2020 09:05:18 Pacific Standard Time
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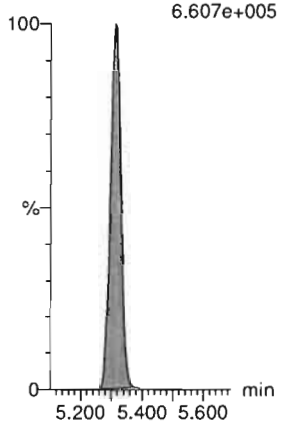
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
4.494e+004



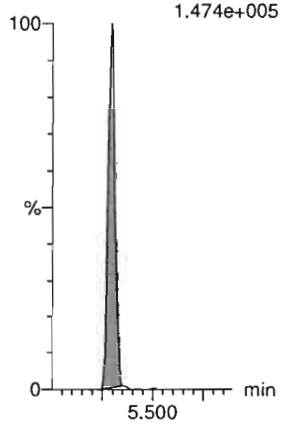
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.329e+005



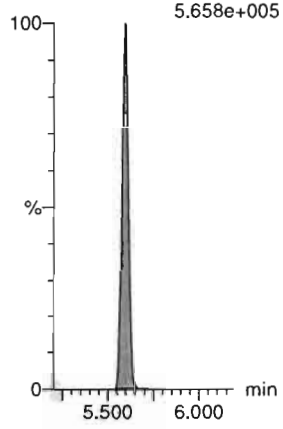
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.607e+005



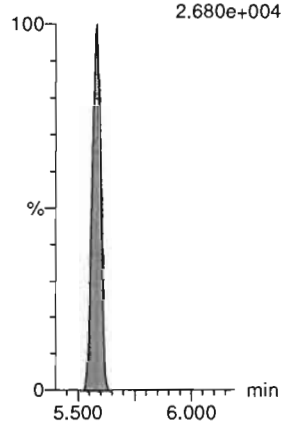
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.474e+005



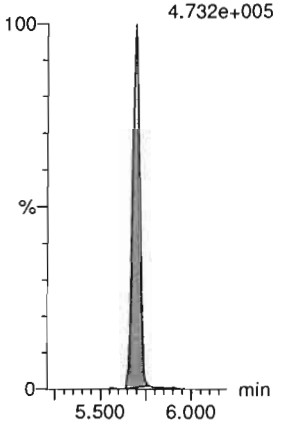
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.658e+005



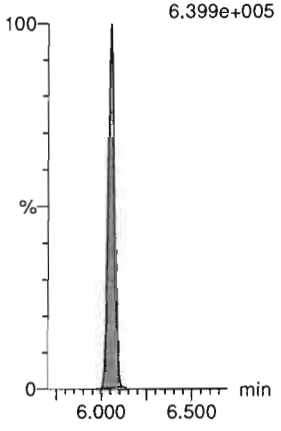
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.680e+004



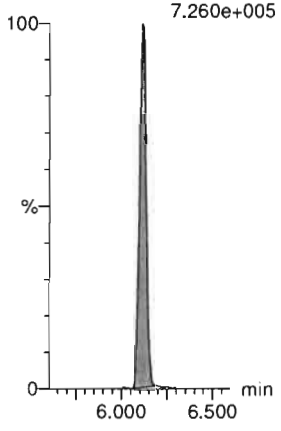
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.732e+005



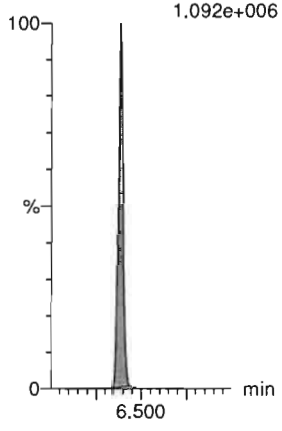
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F74:MRM of 2 channels,ES-
715.1 > 669.7
6.399e+005



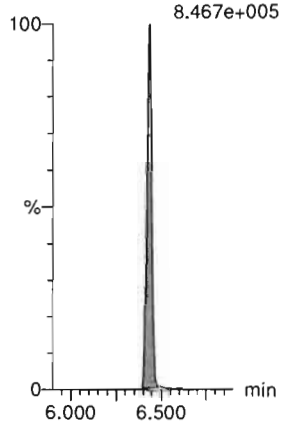
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.260e+005



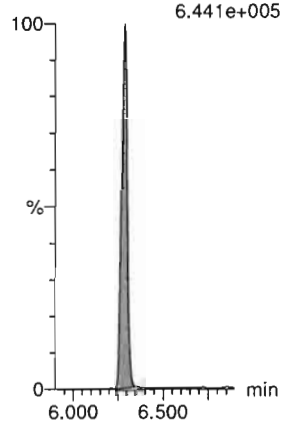
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.092e+006



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
8.467e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
6.441e+005

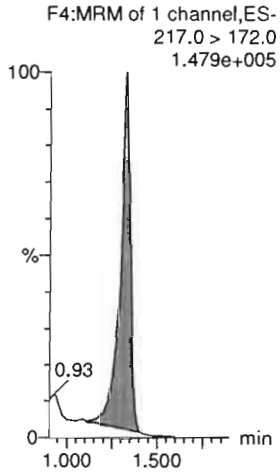


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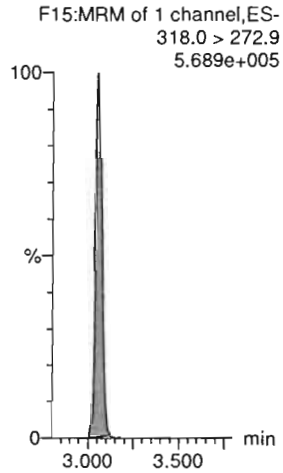
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Name: 200227P1-4, Date: 27-Feb-2020, Time: 15:52:39, ID: ST200227P1-2 PFC CS-1 20B1103, Description: PFC CS-1 20B1103

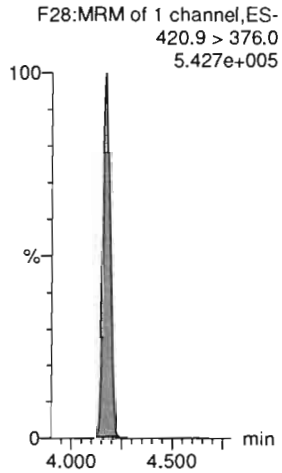
13C4-PFBA



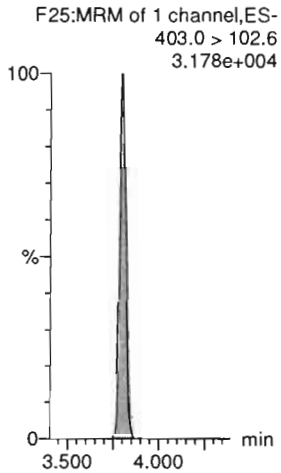
13C5-PFHxA



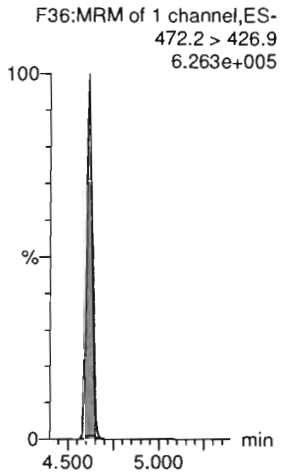
13C8-PFOA



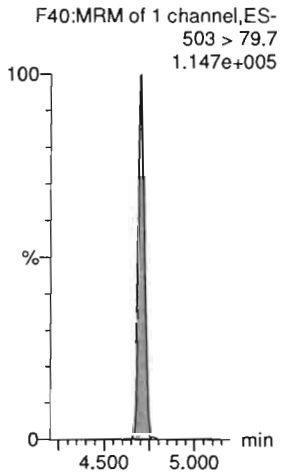
18O2-PFHxS



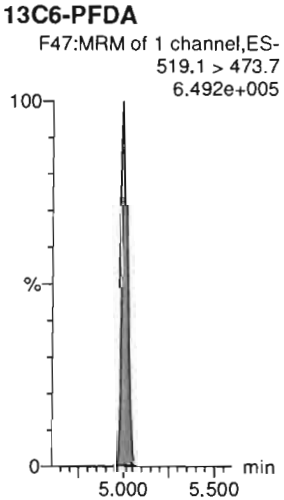
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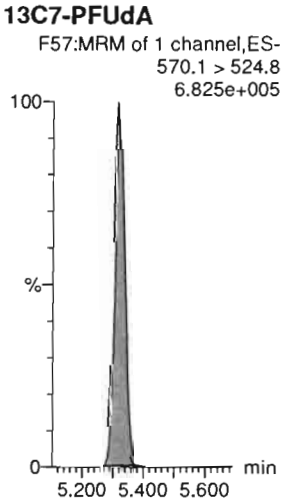
13C4-PFOS



13C6-PFDA



13C7-PFUdA

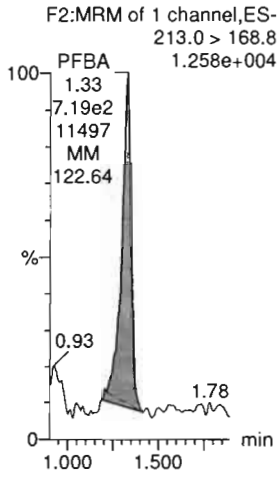


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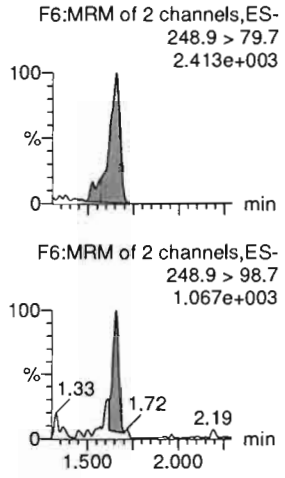
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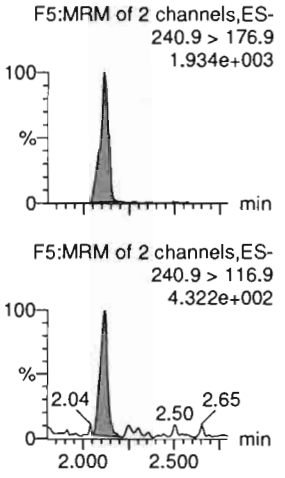
PFBA



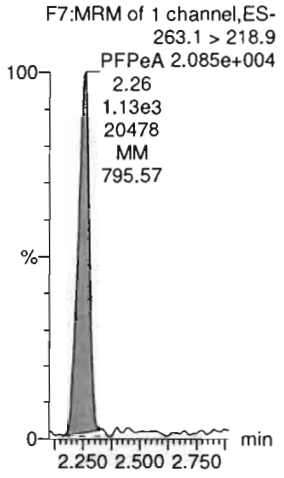
PFPrS



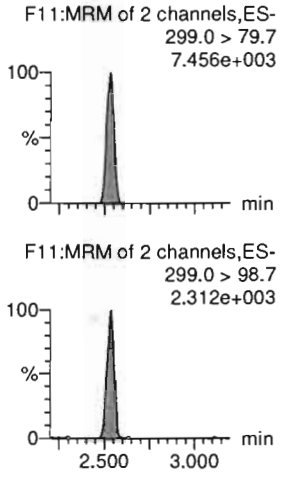
3:3 FTCA



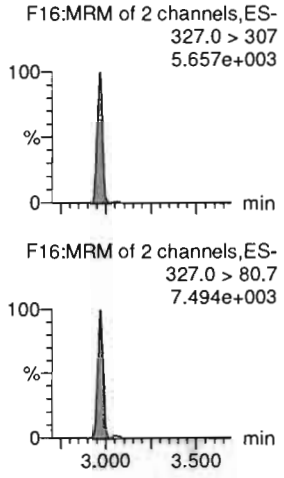
PFPeA



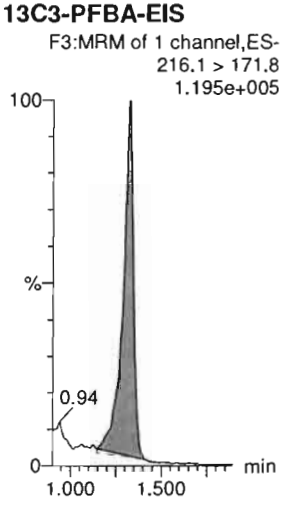
PFBS



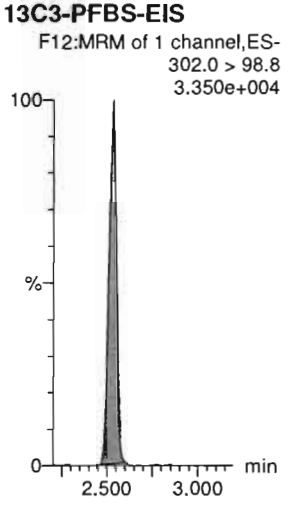
4:2 FTS



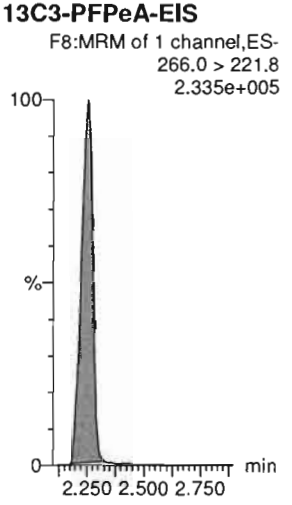
13C3-PFBA-EIS



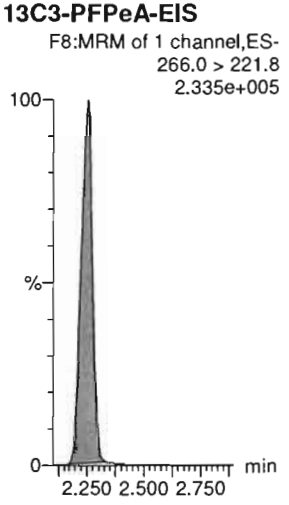
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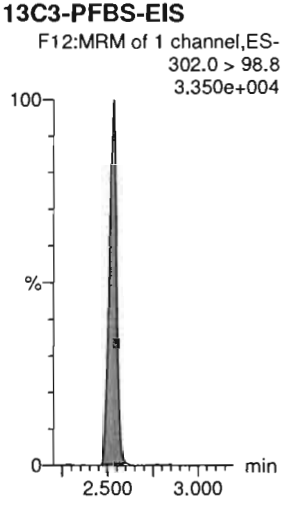
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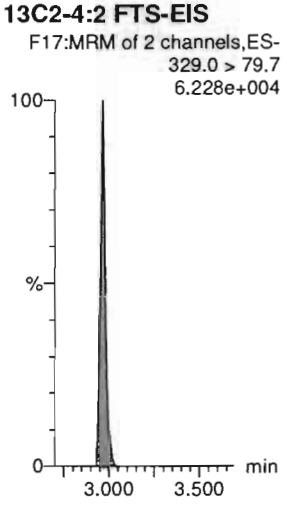
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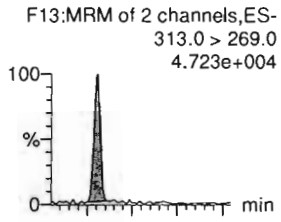


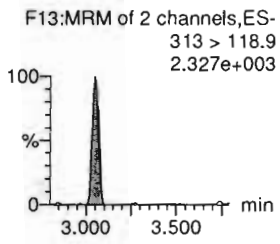
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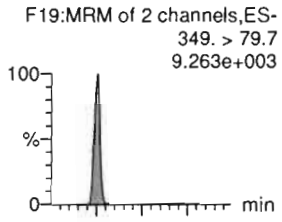
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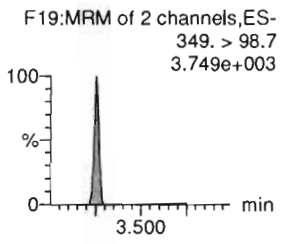
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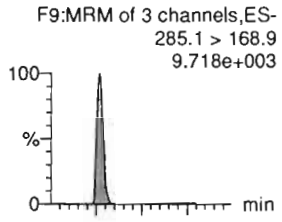


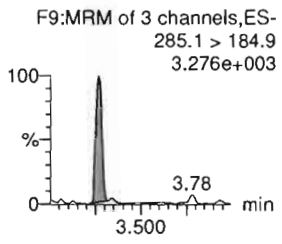
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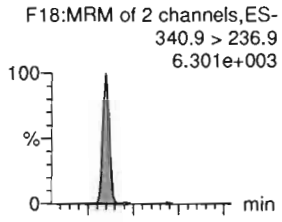


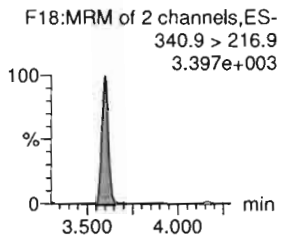
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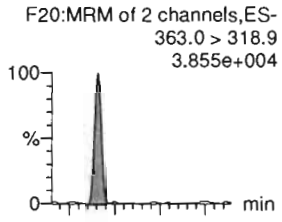


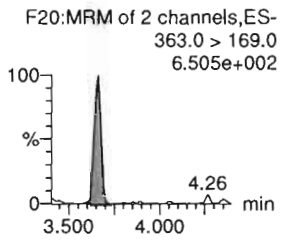
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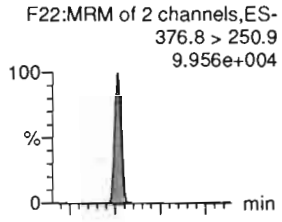


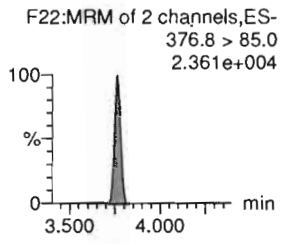
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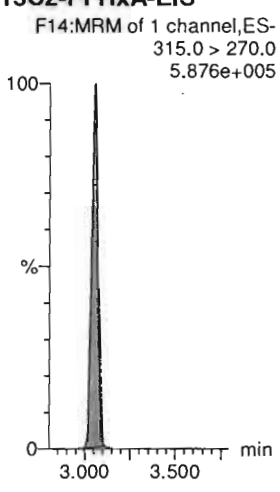


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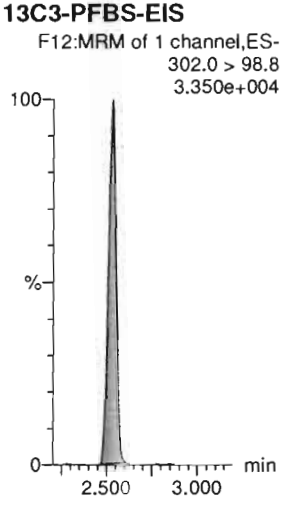




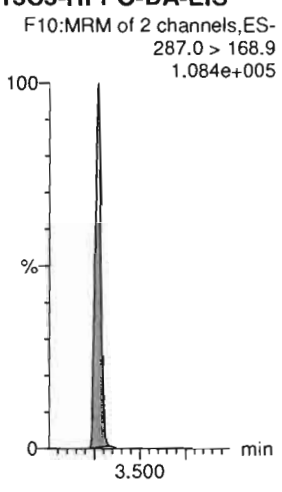
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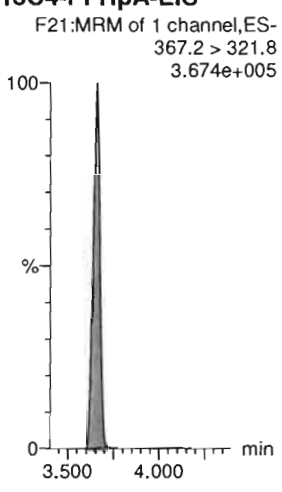
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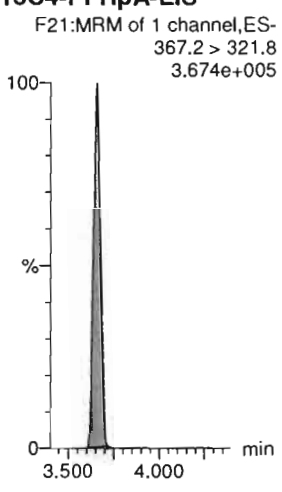
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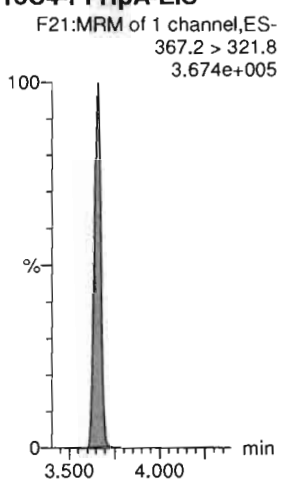
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13C4-PFHpA-EIS



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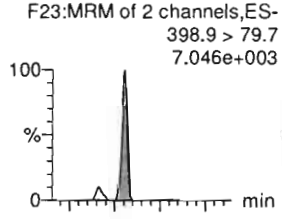


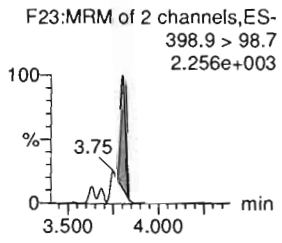
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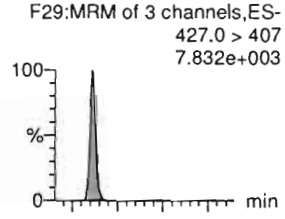
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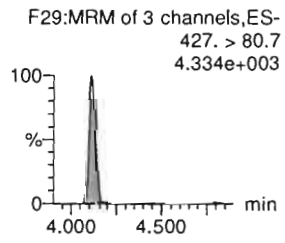
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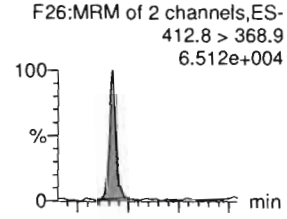


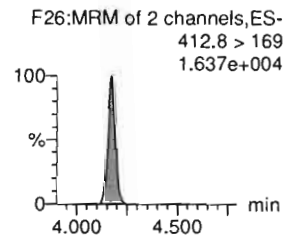
6:2 FTS



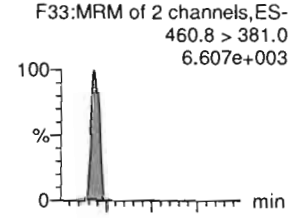


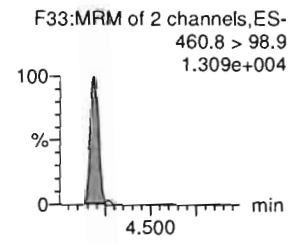
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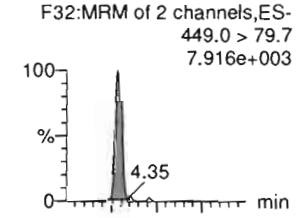


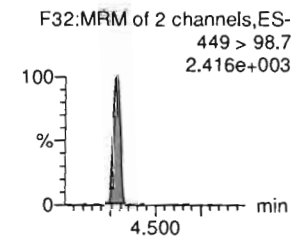
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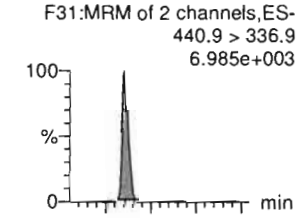


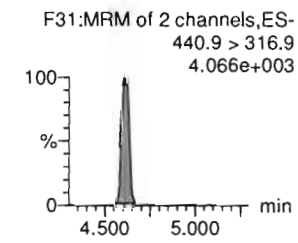
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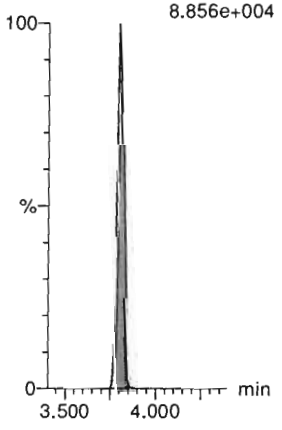


7:3 FTCA

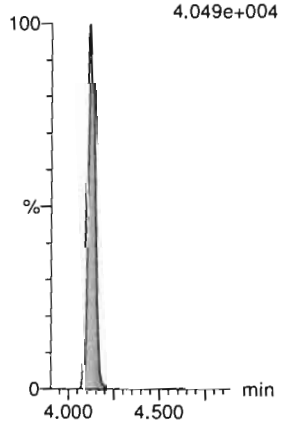




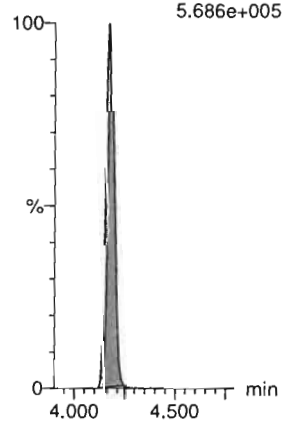
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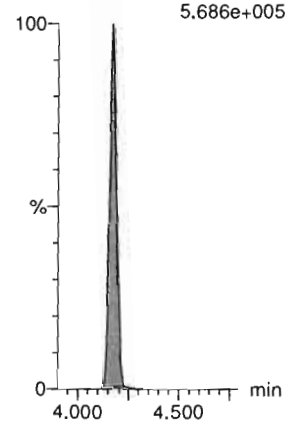
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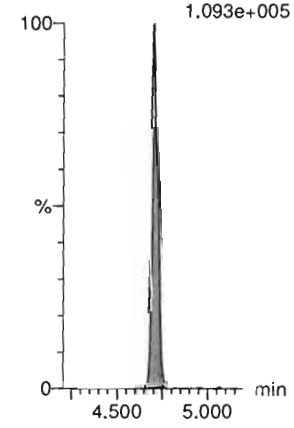
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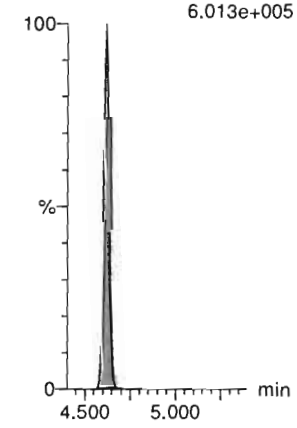
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13C8-PFOS-EIS



13C5-PFNA-EIS

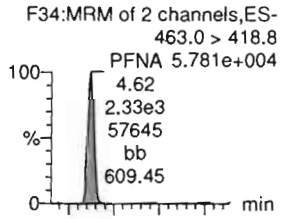


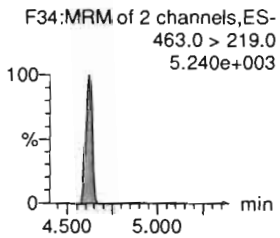
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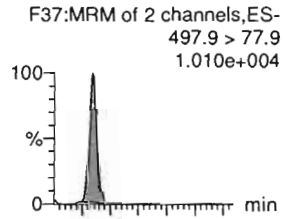
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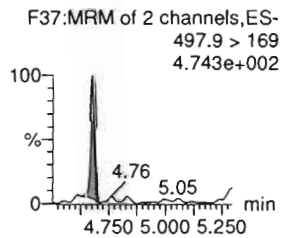
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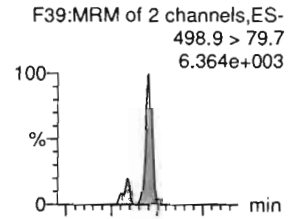


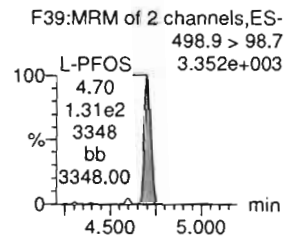
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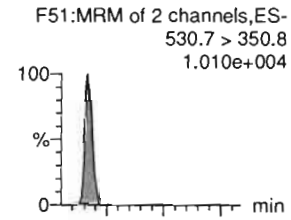


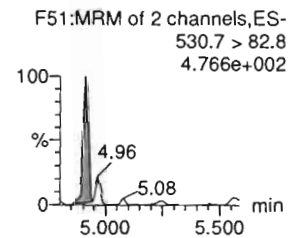
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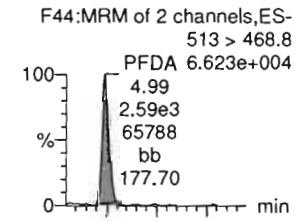


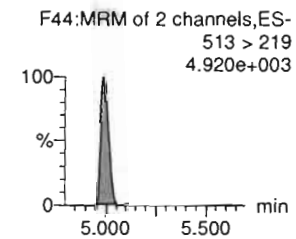
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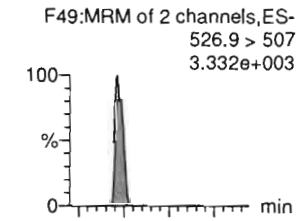


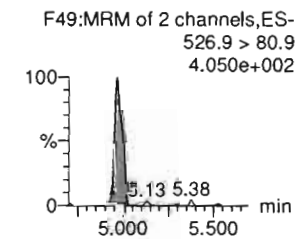
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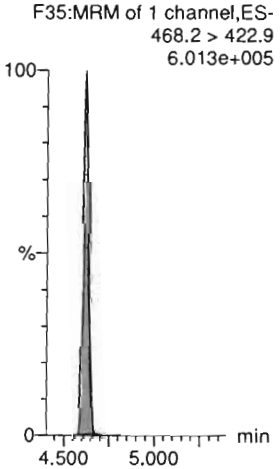


8:2 FTS

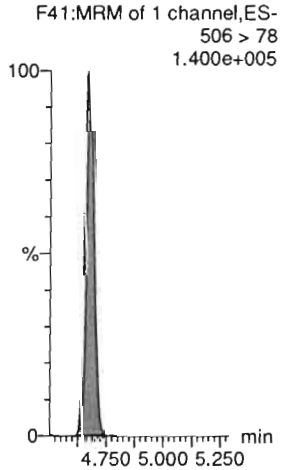




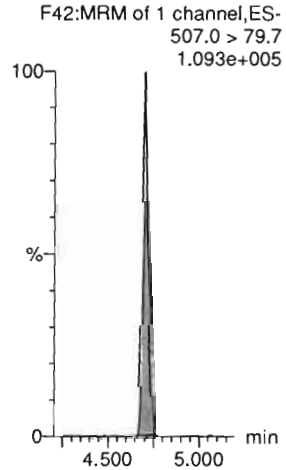
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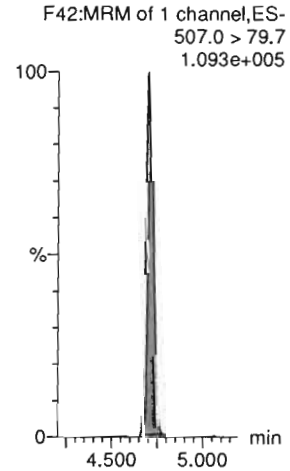
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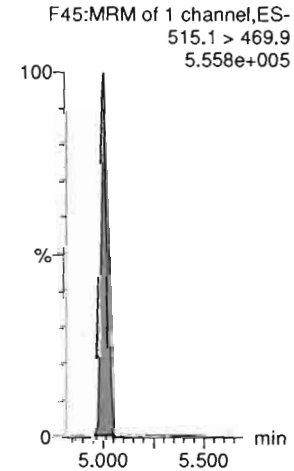
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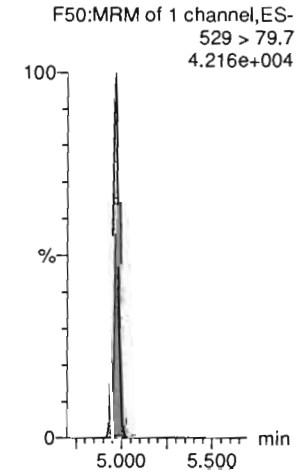
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

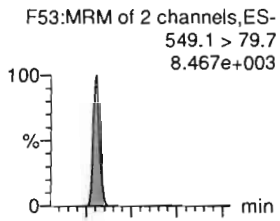


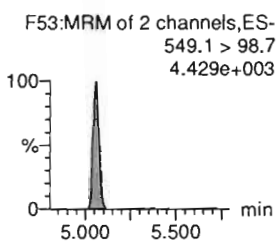
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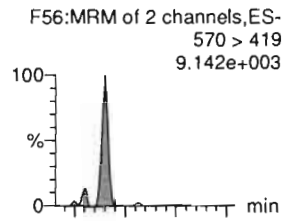
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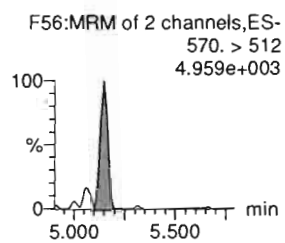
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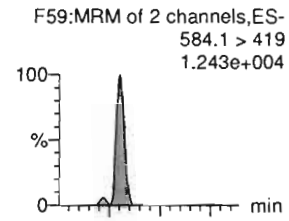


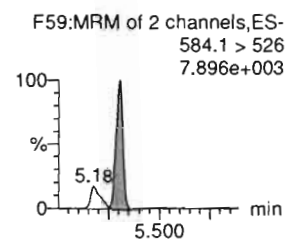
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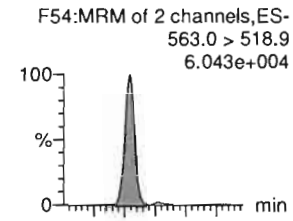


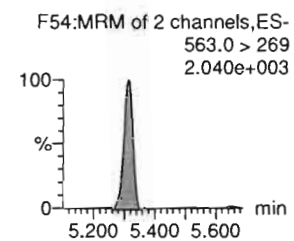
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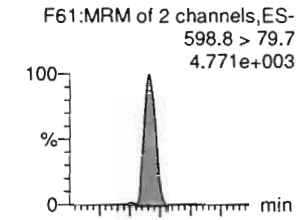


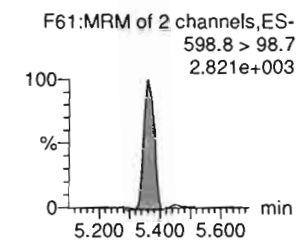
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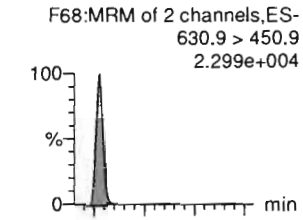


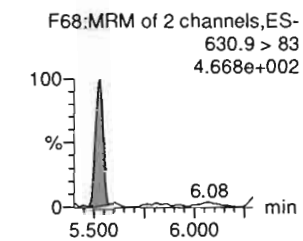
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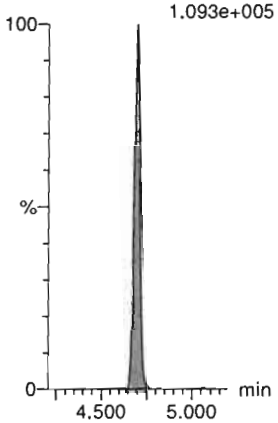


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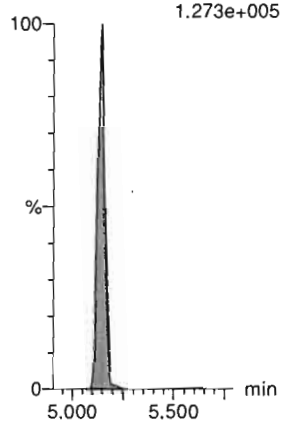




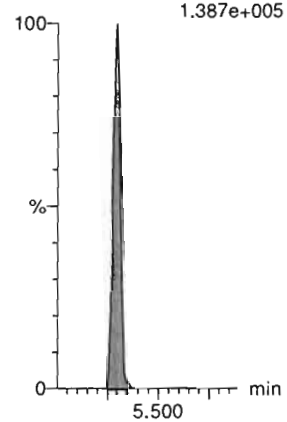
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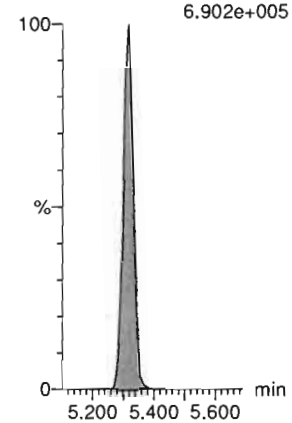
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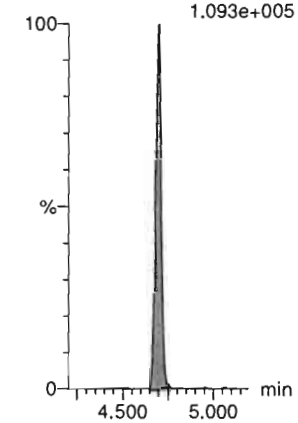
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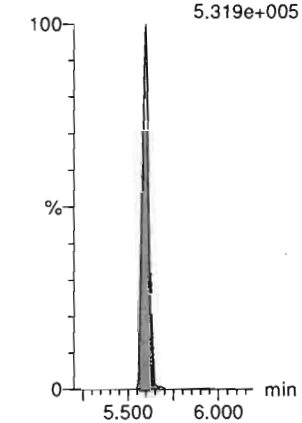
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13C8-PFOS-EIS



13C2-PFDoA-EIS

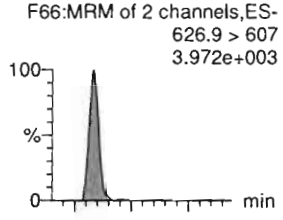


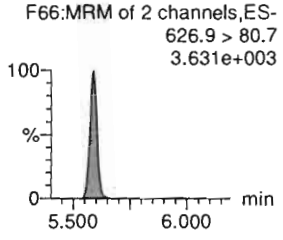
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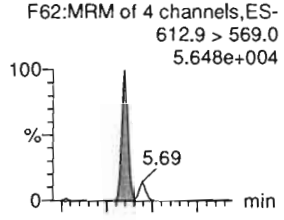
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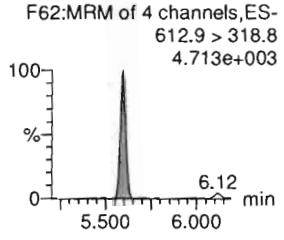
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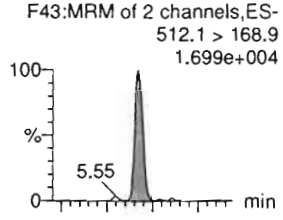


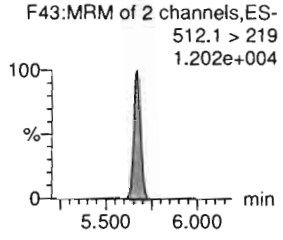
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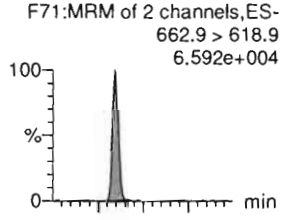


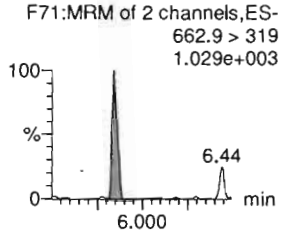
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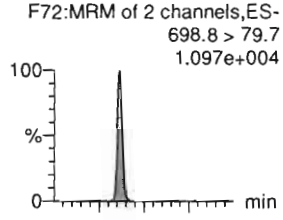


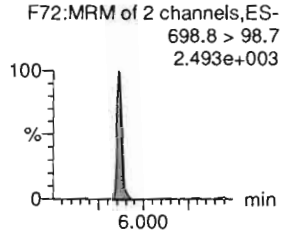
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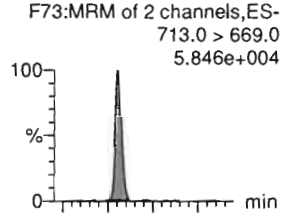


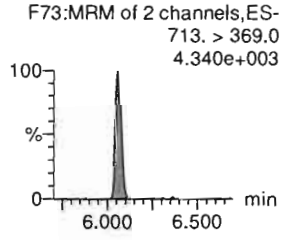
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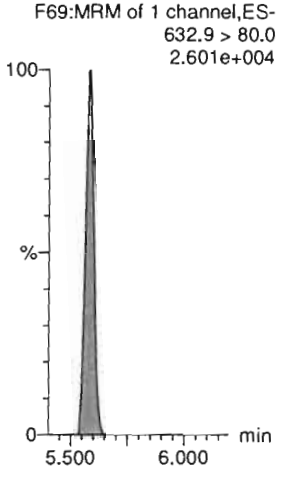


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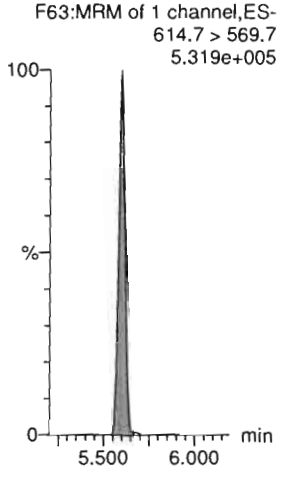




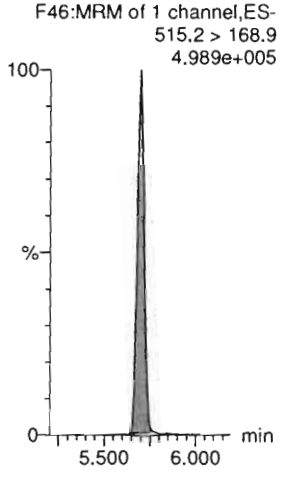
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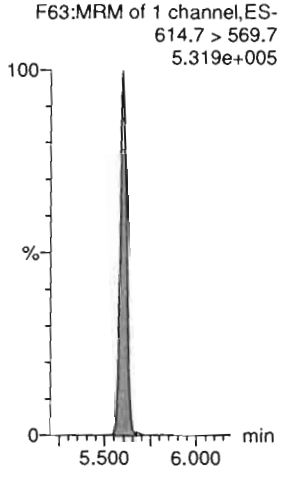
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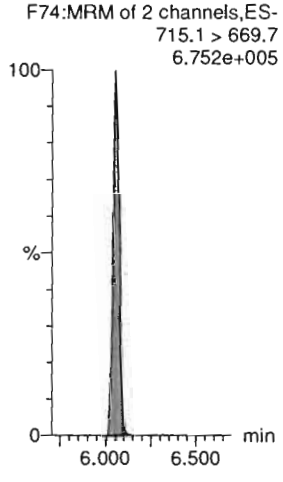
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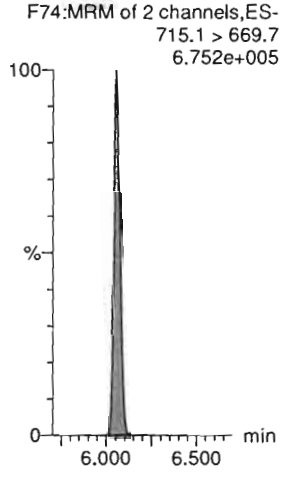
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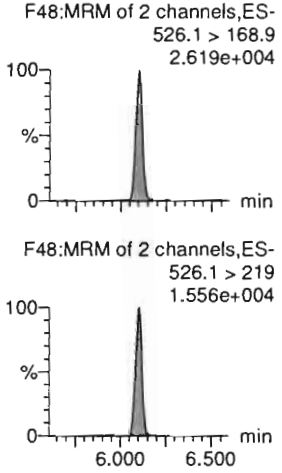


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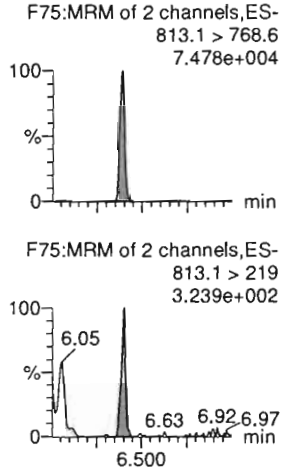
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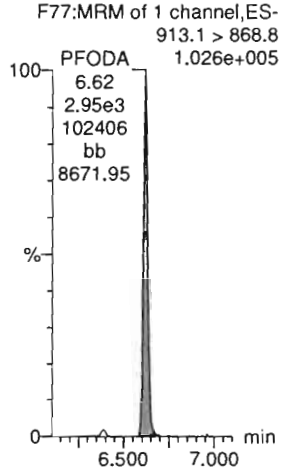
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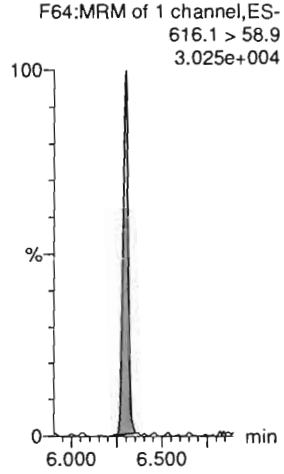
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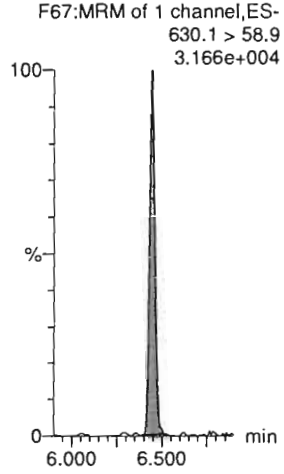
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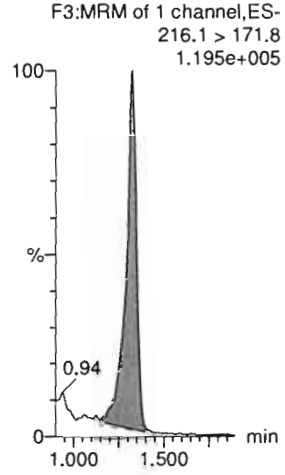
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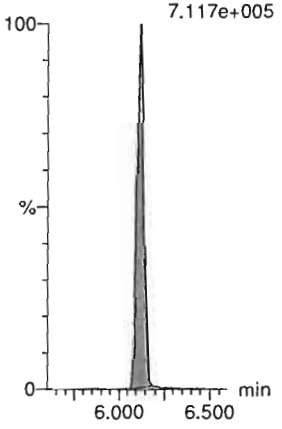
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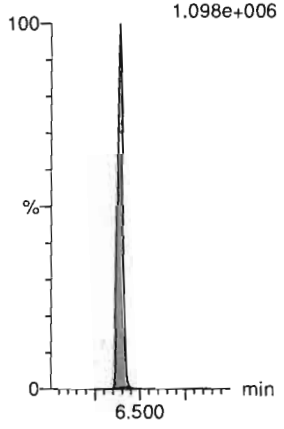
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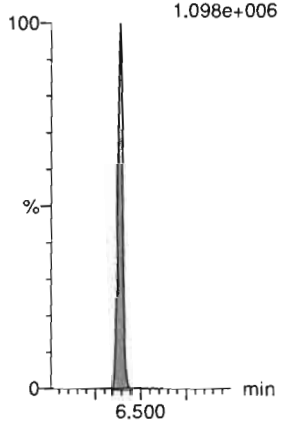
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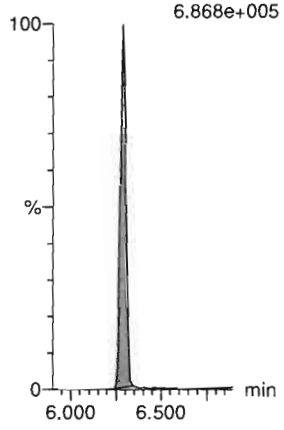
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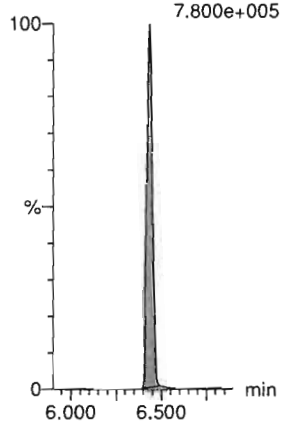
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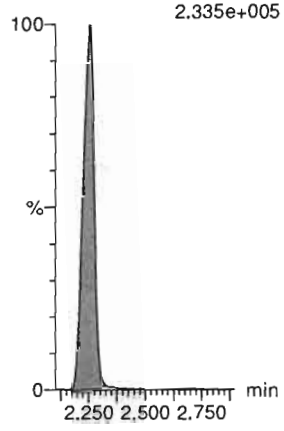
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d9-N-EtFOSE-EIS



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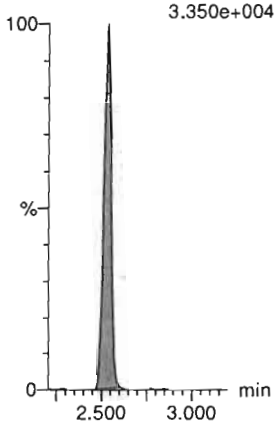


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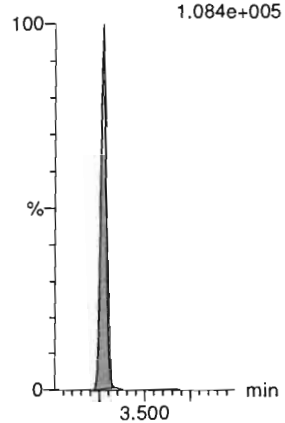
Last Altered: Friday, February 28, 2020 09:05:18 Pacific Standard Time
Printed: Friday, February 28, 2020 09:08:38 Pacific Standard Time

Name: 200227P1-5, Date: 27-Feb-2020, Time: 16:03:08, ID: ST200227P1-3 PFC CS0 20B1104, Description: PFC CS0 20B1104

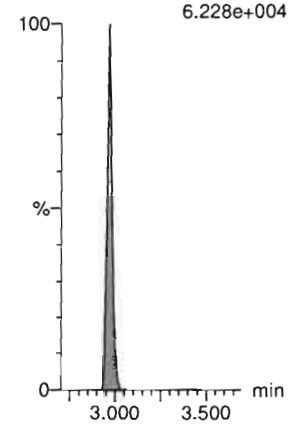
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.350e+004



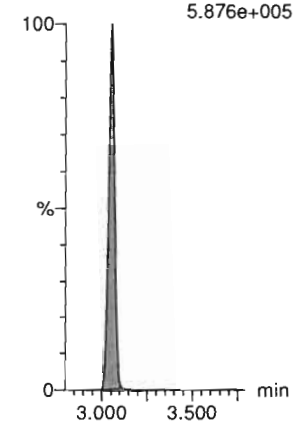
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.084e+005



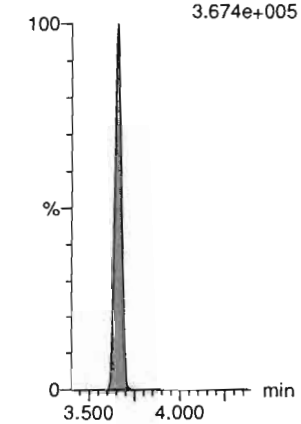
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
6.228e+004



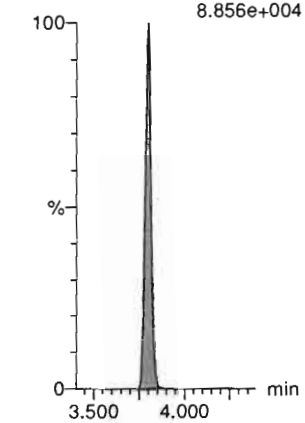
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.876e+005



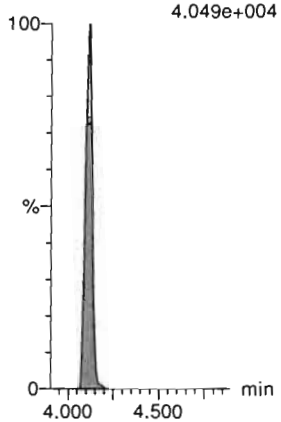
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.674e+005



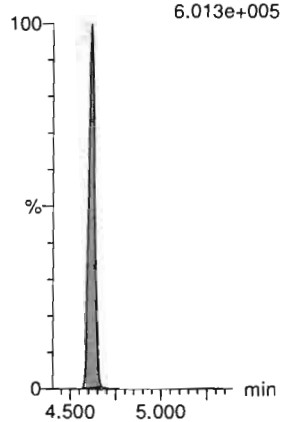
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.856e+004



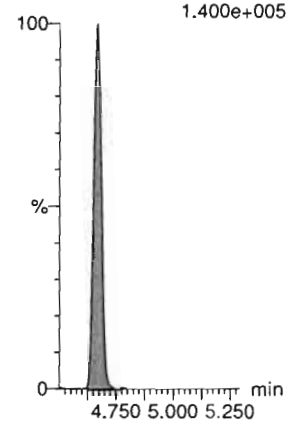
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.049e+004



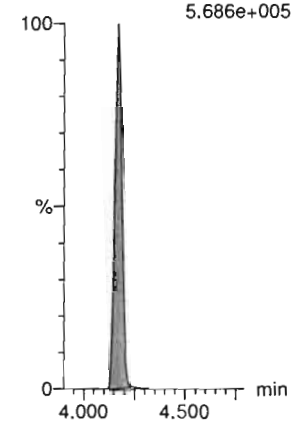
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
6.013e+005



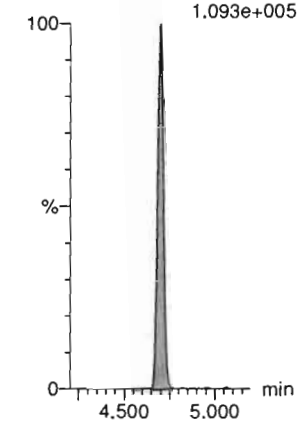
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.400e+005



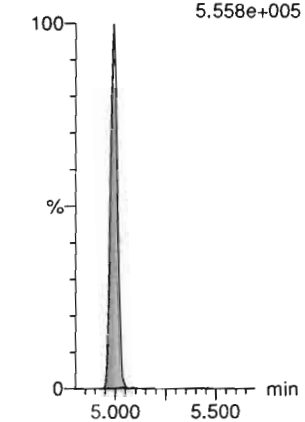
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.686e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
1.093e+005



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.558e+005

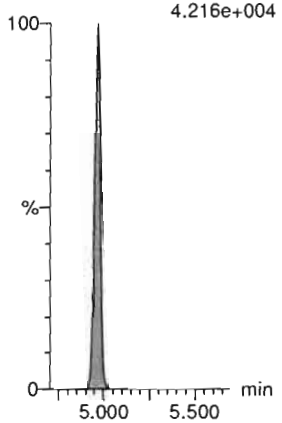


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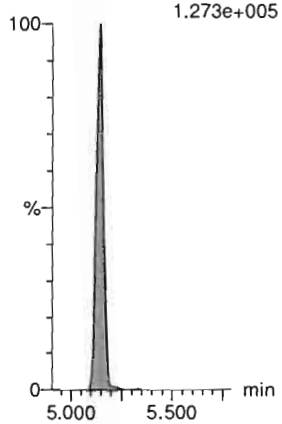
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Name: 200227P1-5, Date: 27-Feb-2020, Time: 16:03:08, ID: ST200227P1-3 PFC CS0 20B1104, Description: PFC CS0 20B1104

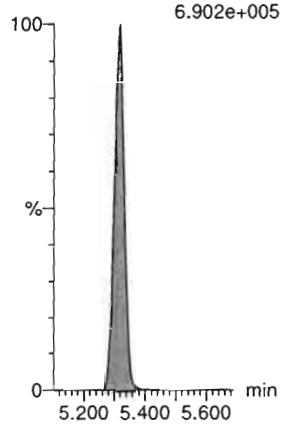
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
4.216e+004



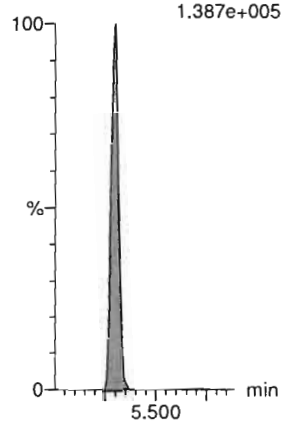
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.273e+005



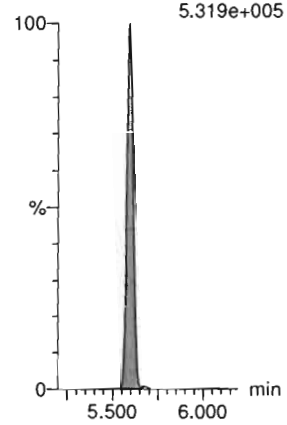
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.902e+005



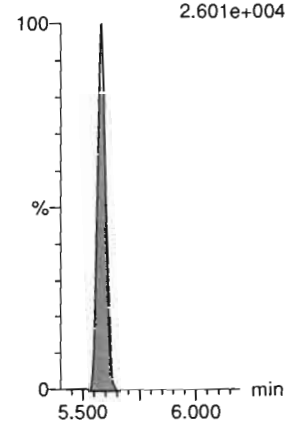
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.387e+005



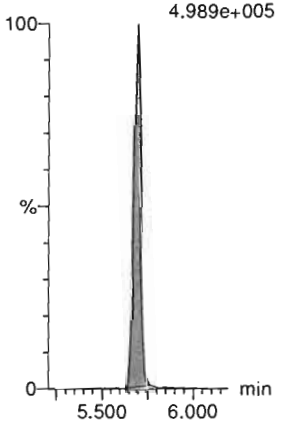
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.319e+005



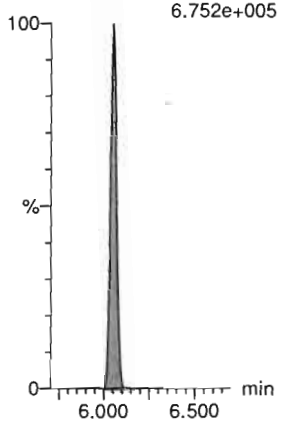
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.601e+004



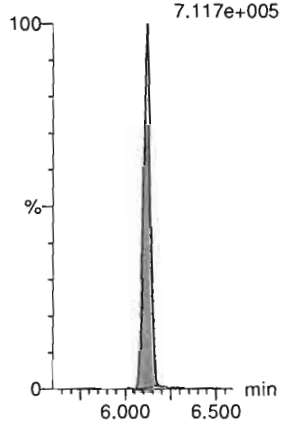
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.989e+005



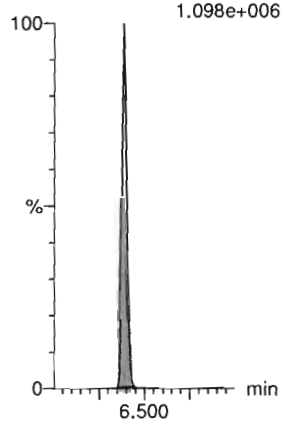
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
6.752e+005



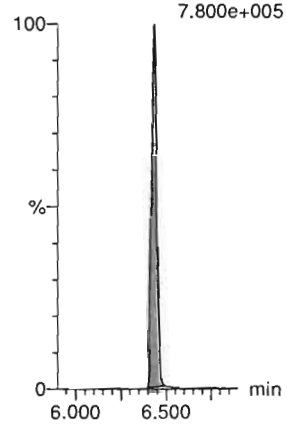
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.117e+005



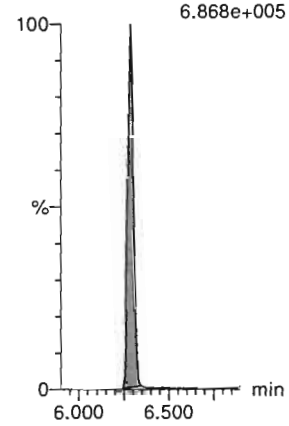
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.098e+006



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.800e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
6.868e+005

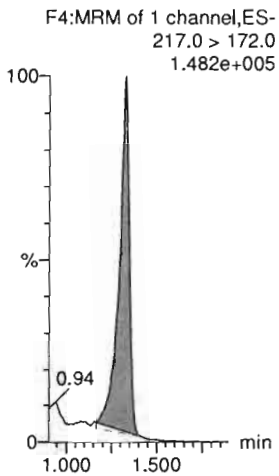


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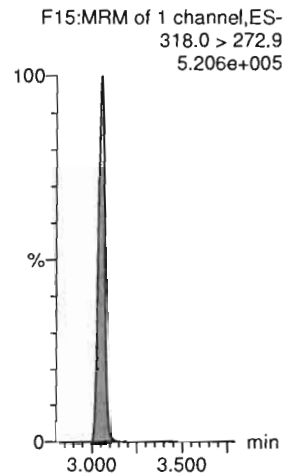
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Name: 200227P1-5, Date: 27-Feb-2020, Time: 16:03:08, ID: ST200227P1-3 PFC CS0 20B1104, Description: PFC CS0 20B1104

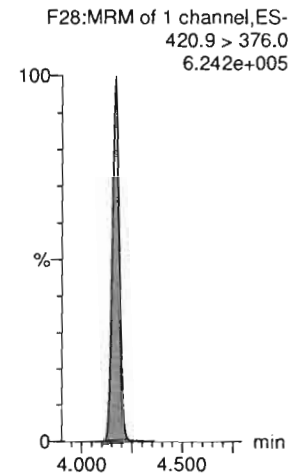
13C4-PFBA



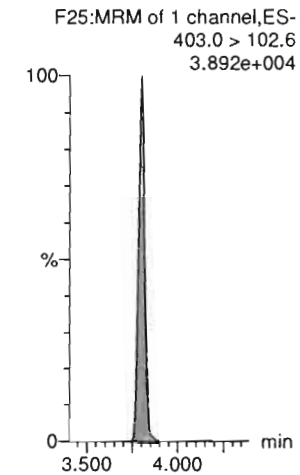
13C5-PFHxA



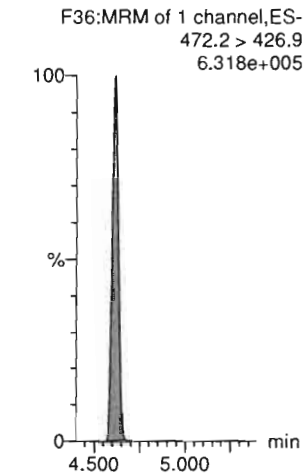
13C8-PFOA



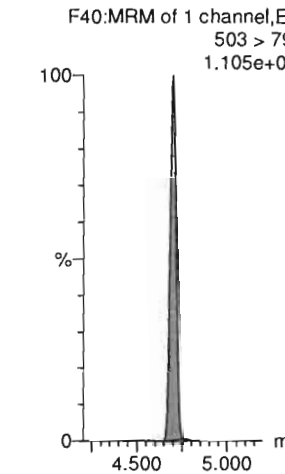
18O2-PFHxS



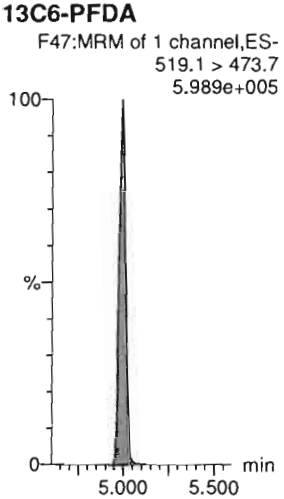
13C9-PFNA



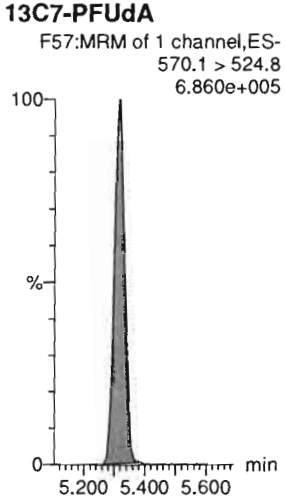
13C4-PFOS



13C6-PFDA



13C7-PFUdA

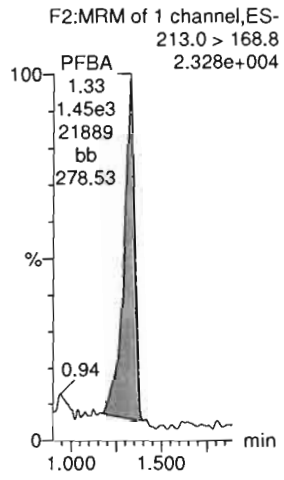


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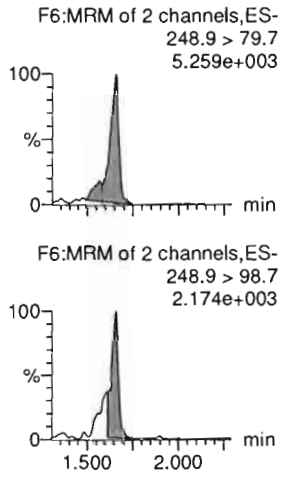
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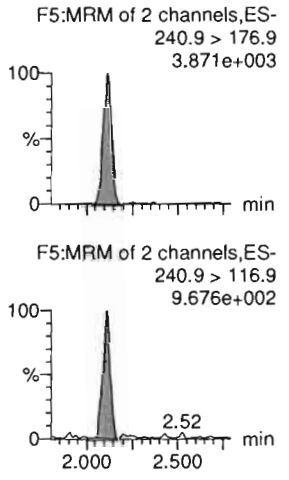
PFBA



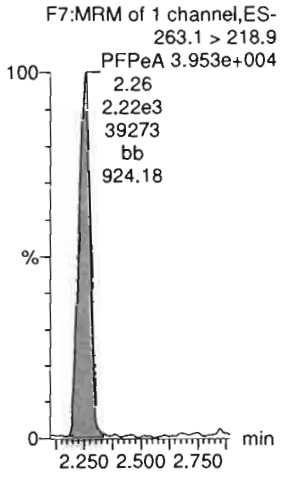
PFPrS



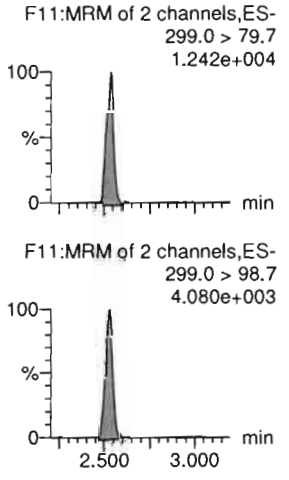
3:3 FTCA



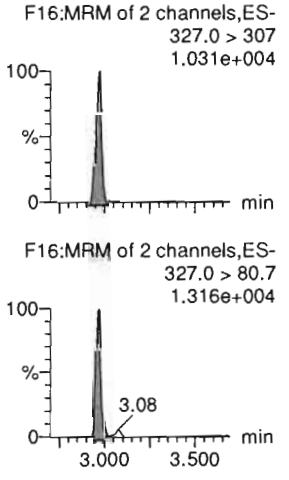
PFPeA



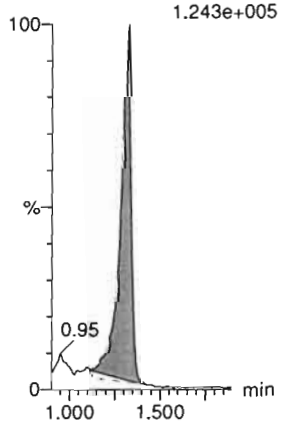
PFBS



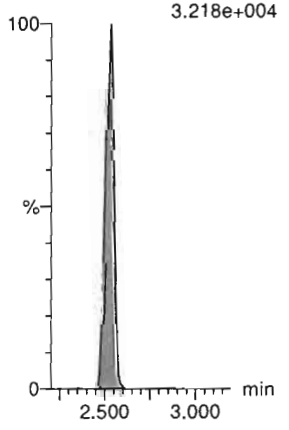
4:2 FTS



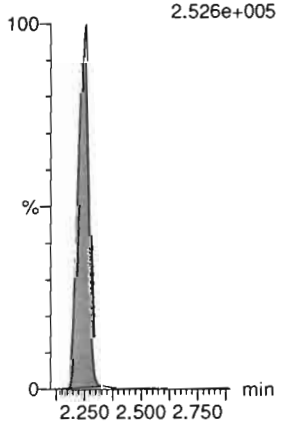
13C3-PFBA-EIS



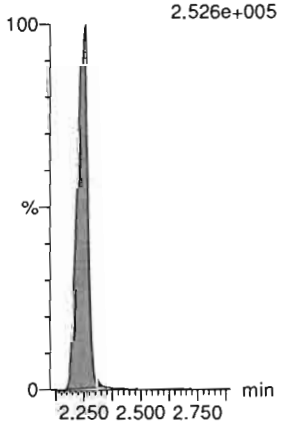
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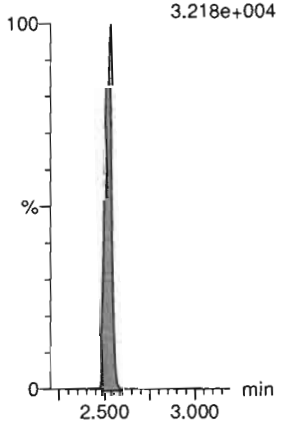
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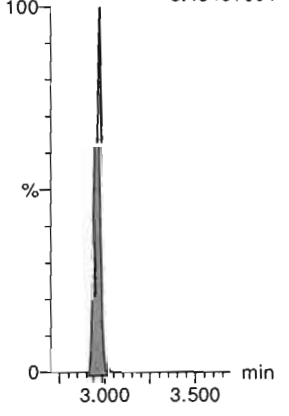
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

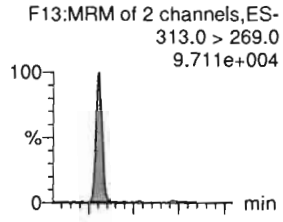


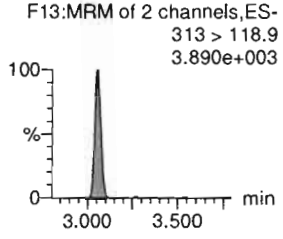
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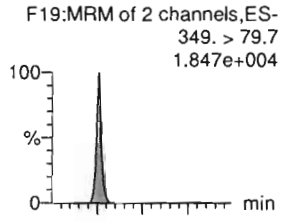
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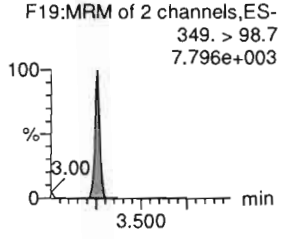
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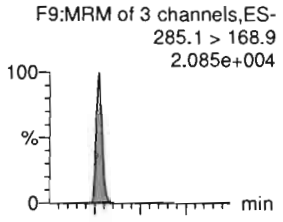


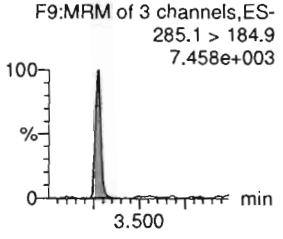
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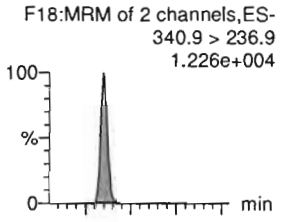


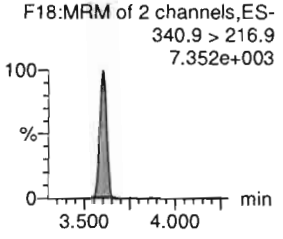
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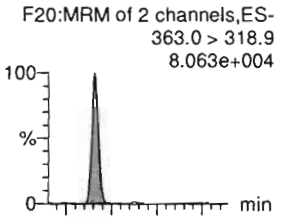


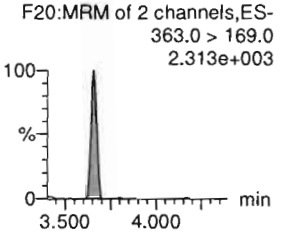
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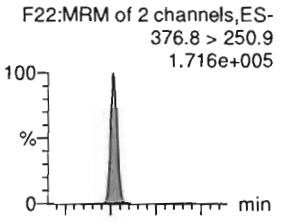


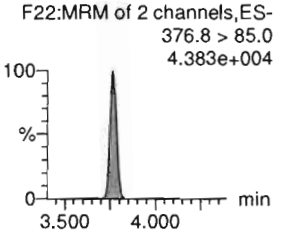
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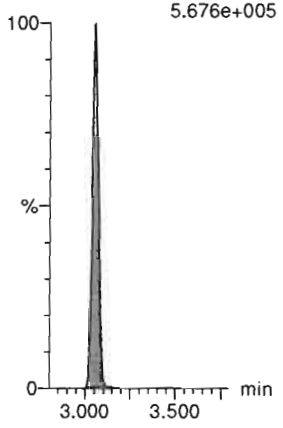


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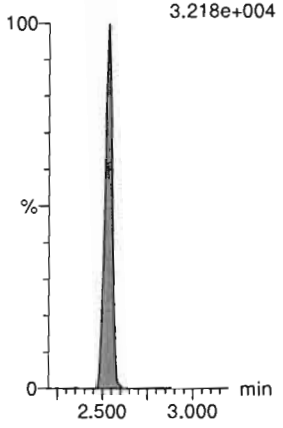




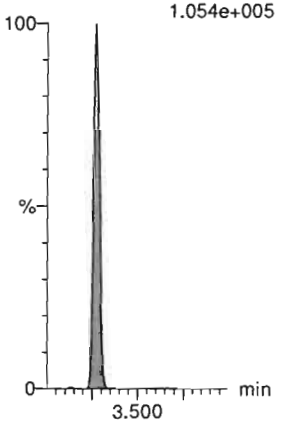
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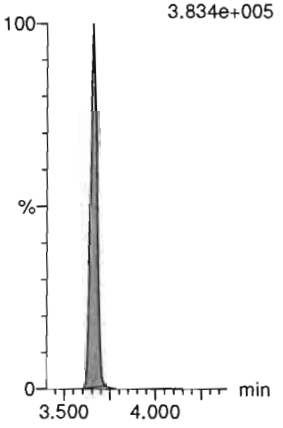
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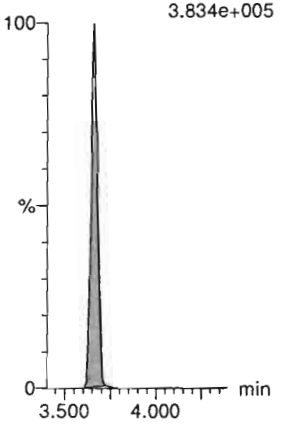
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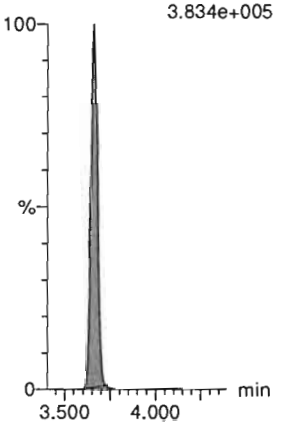
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13C4-PFHpA-EIS



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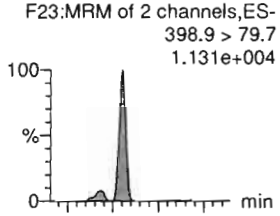


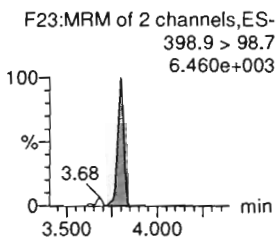
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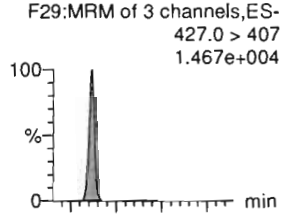
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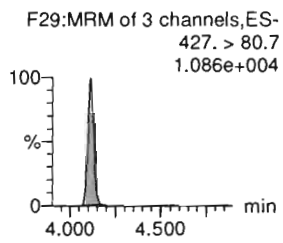
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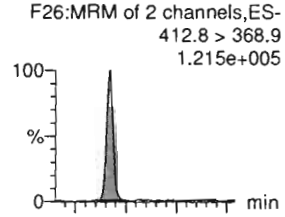


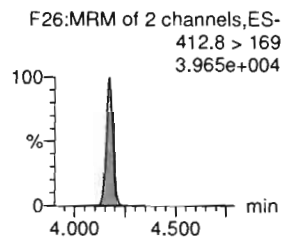
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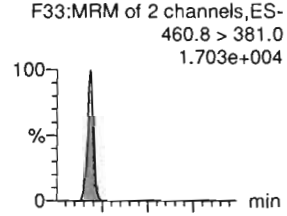


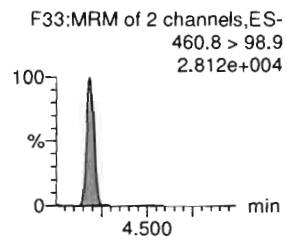
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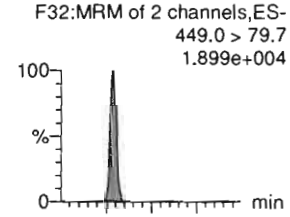


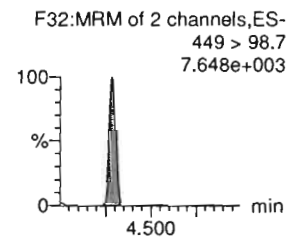
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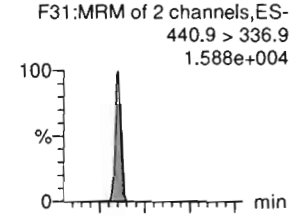


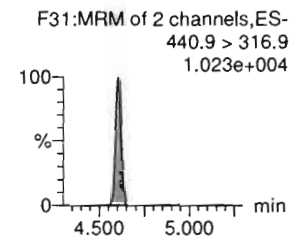
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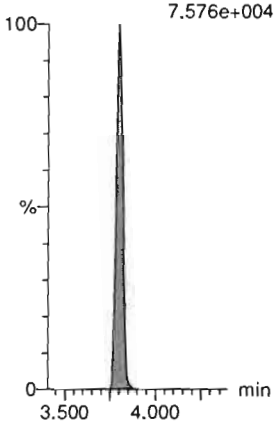


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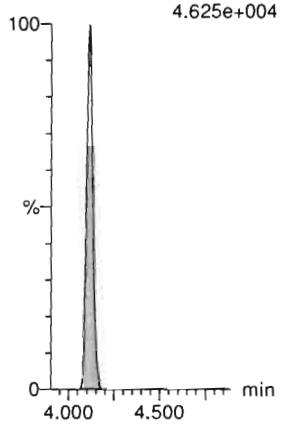




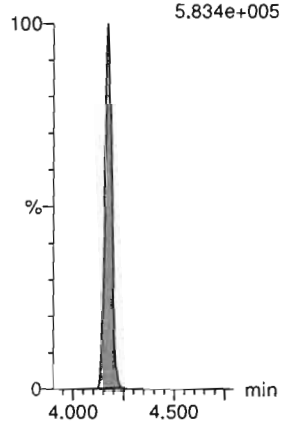
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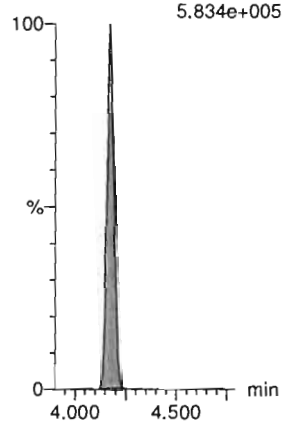
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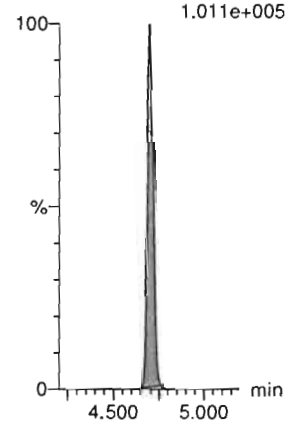
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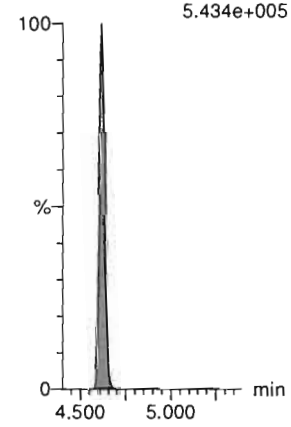
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

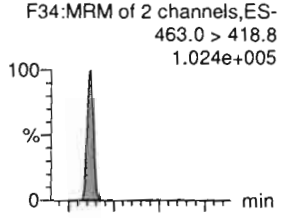


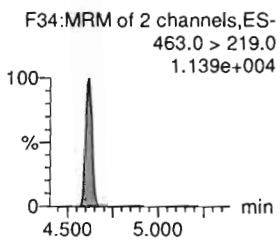
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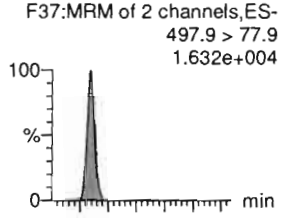
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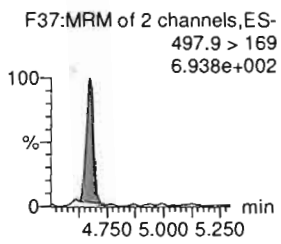
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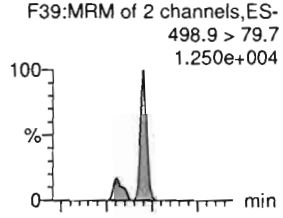


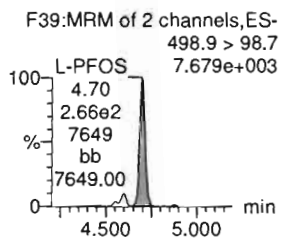
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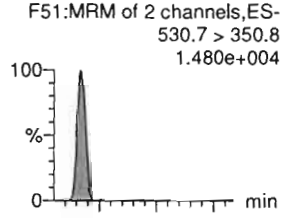


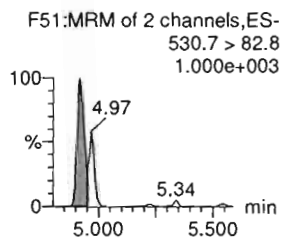
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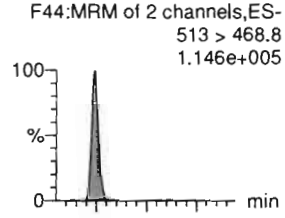


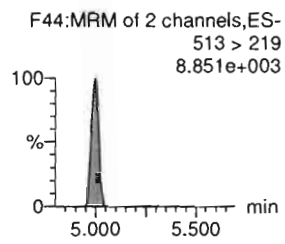
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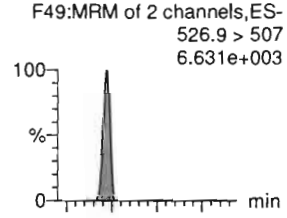


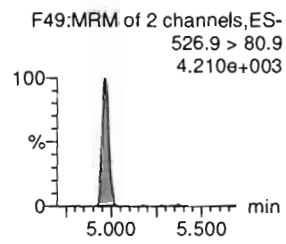
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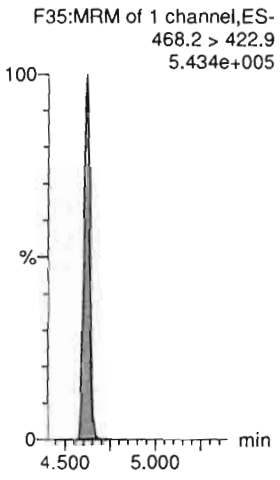


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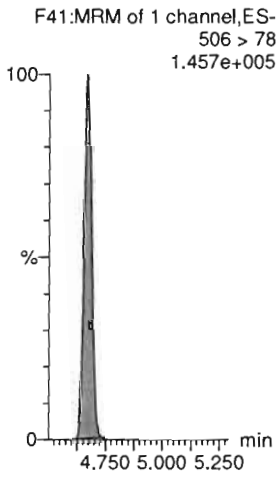




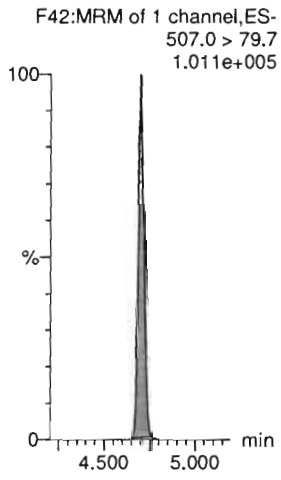
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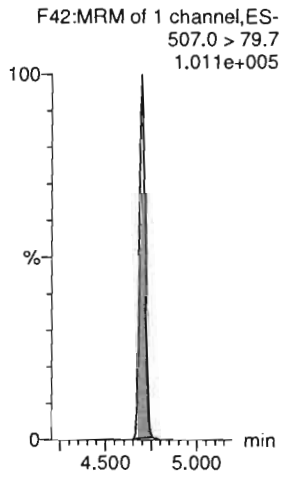
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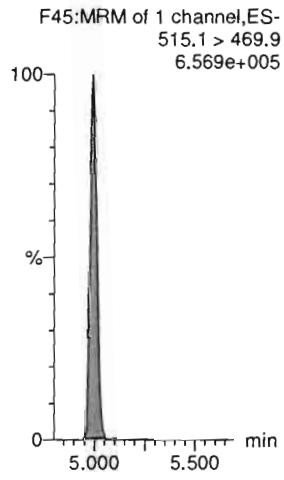
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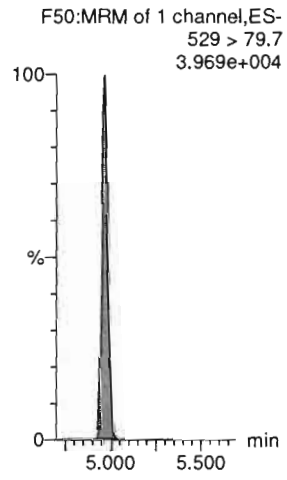
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

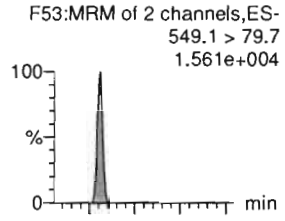


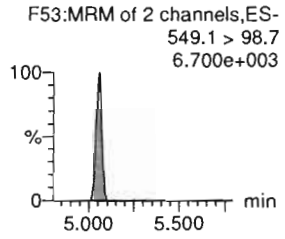
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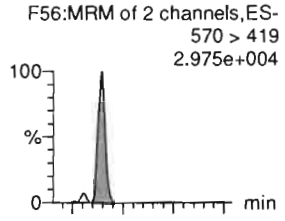
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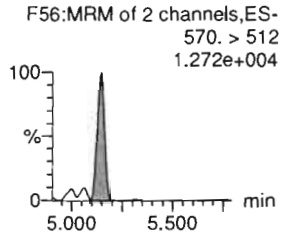
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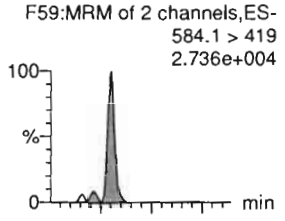


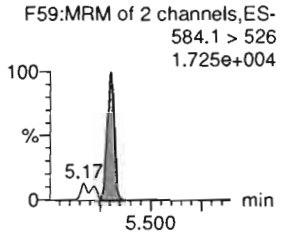
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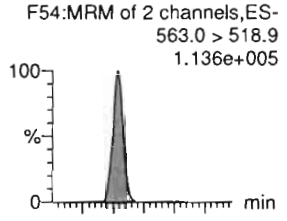


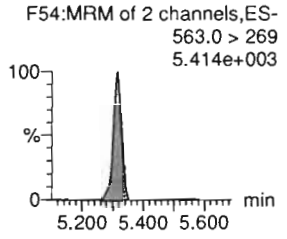
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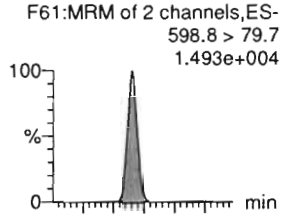


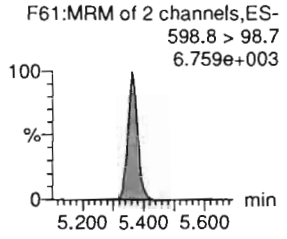
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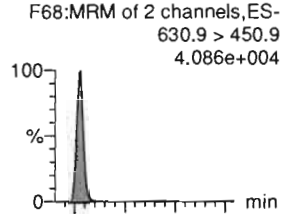


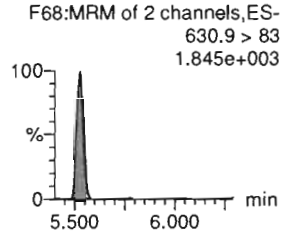
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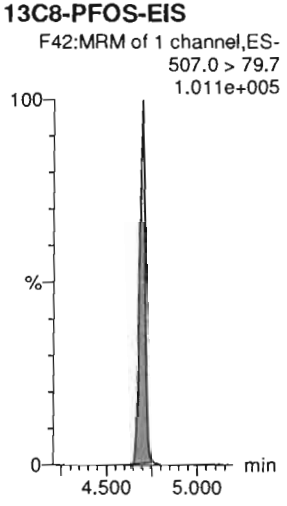


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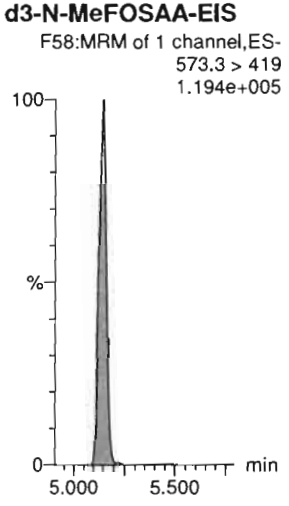




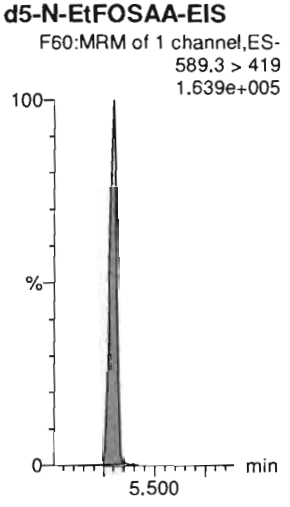
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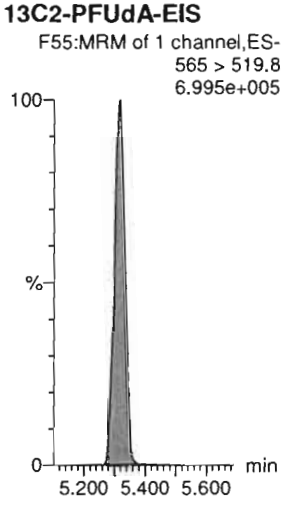
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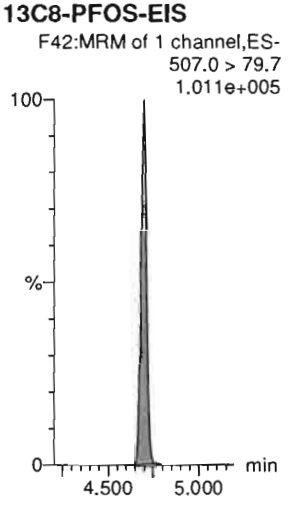
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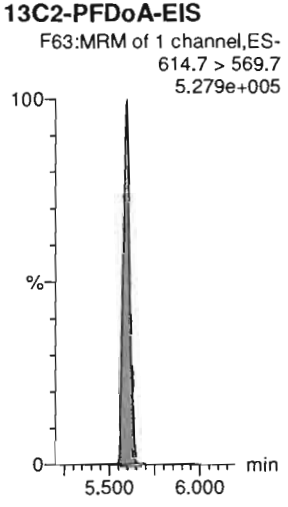
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13C8-PFOS-EIS



13C2-PFDoA-EIS

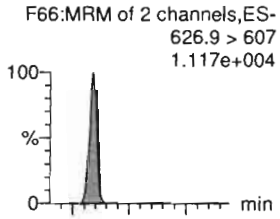


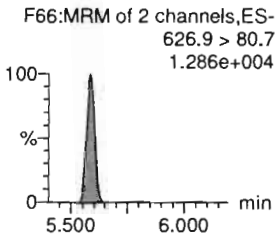
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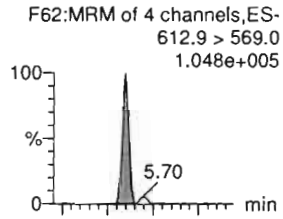
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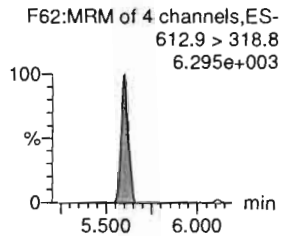
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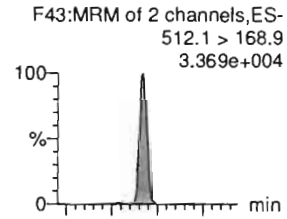


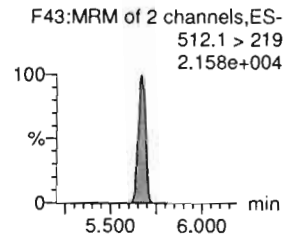
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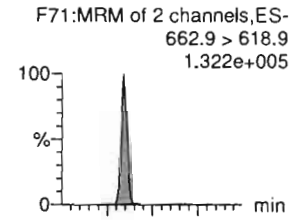


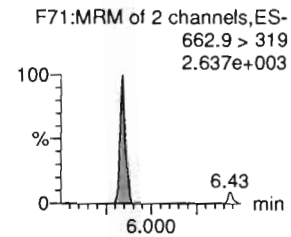
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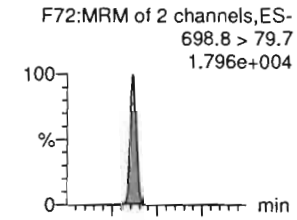


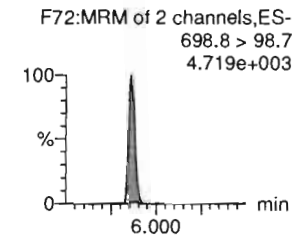
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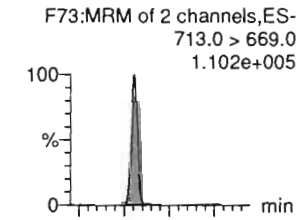


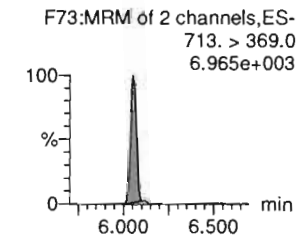
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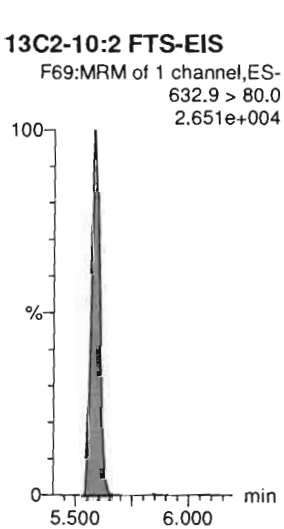


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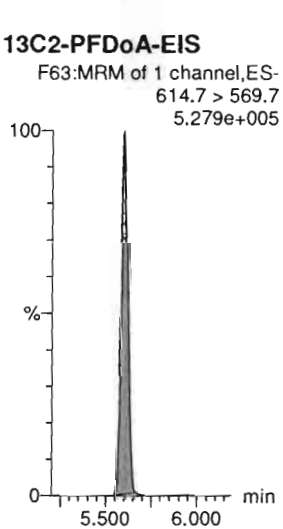




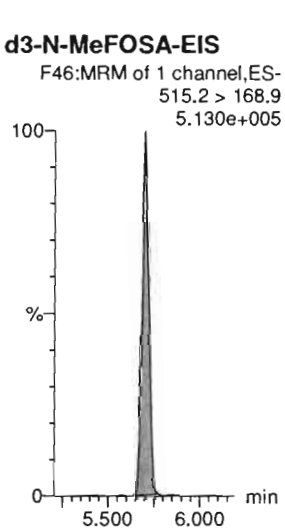
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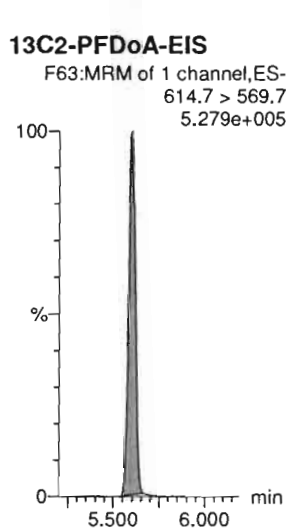
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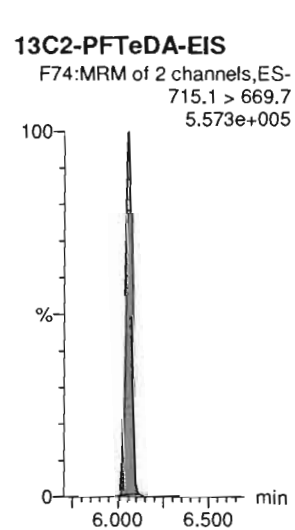
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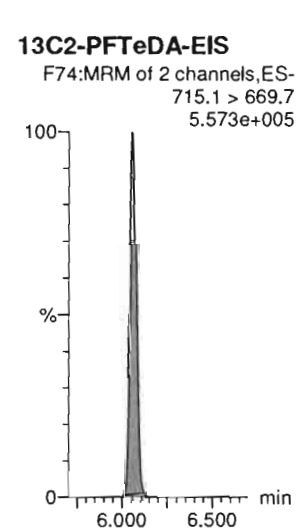
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13C2-PFTeDA-EIS



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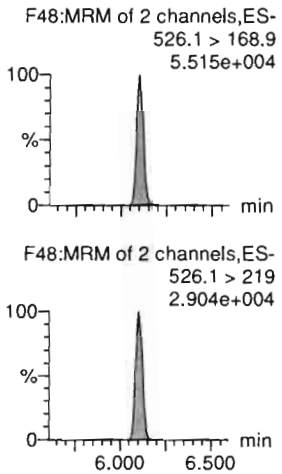


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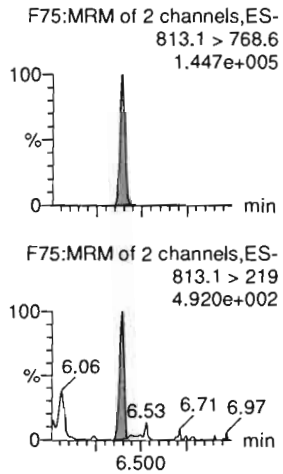
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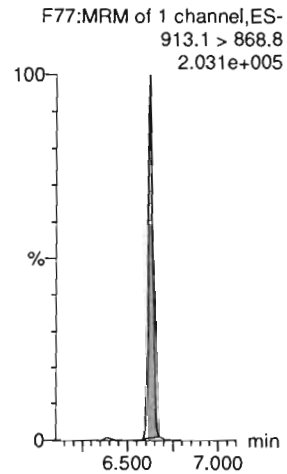
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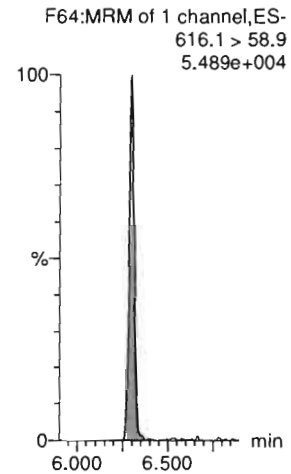
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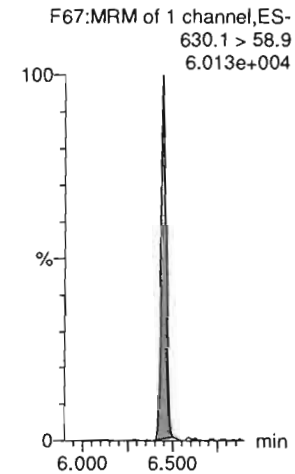
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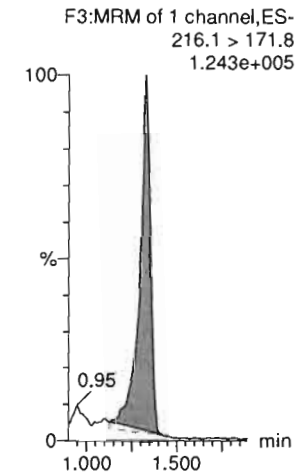
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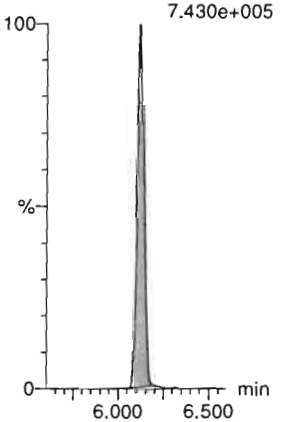
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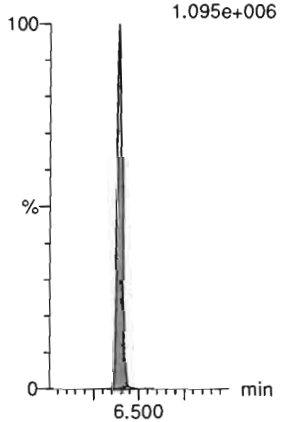
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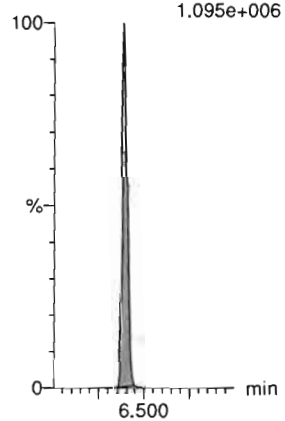
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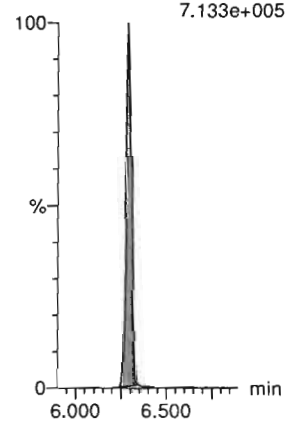
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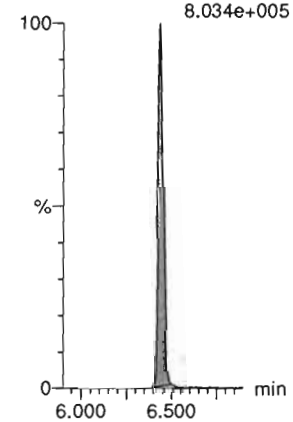
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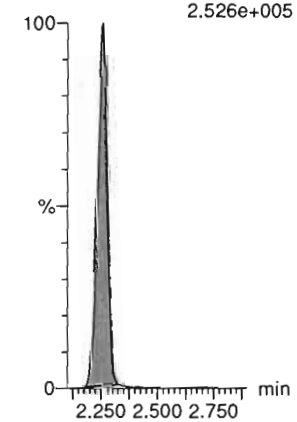
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d9-N-EtFOSE-EIS



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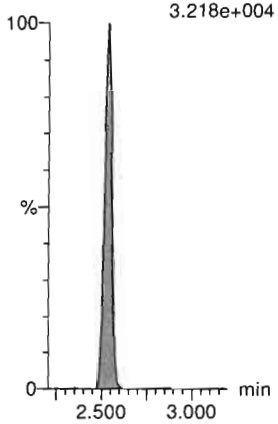


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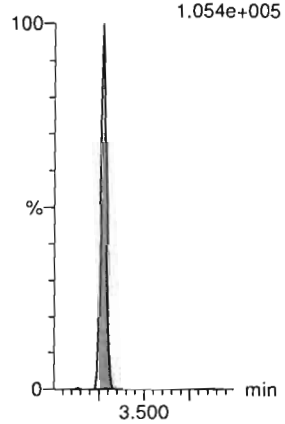
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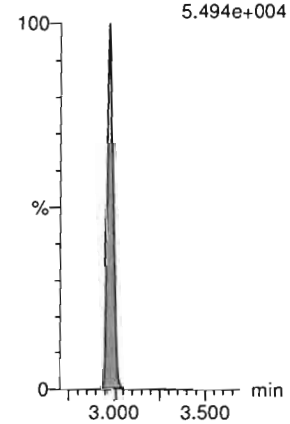
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
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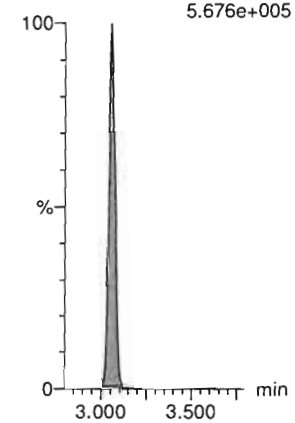
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F10:MRM of 2 channels,ES-
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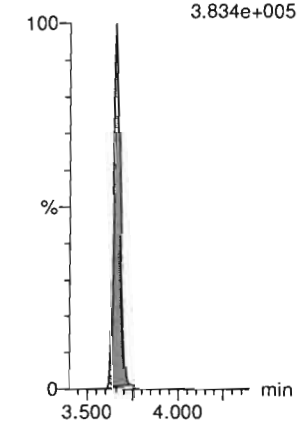
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
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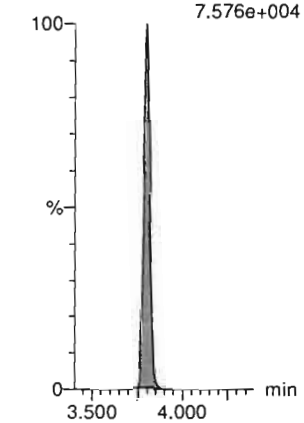
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F14:MRM of 1 channel,ES-
315.0 > 270.0
5.676e+005



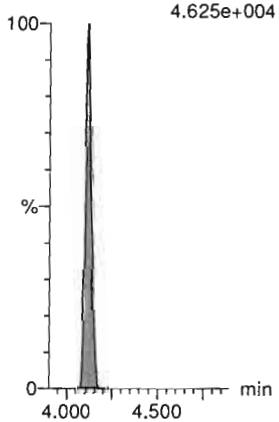
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.834e+005



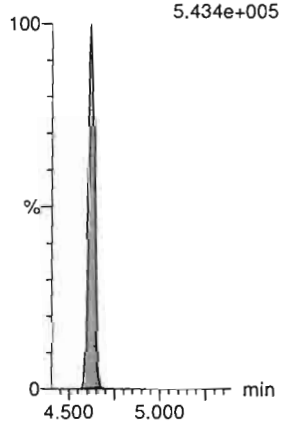
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.576e+004



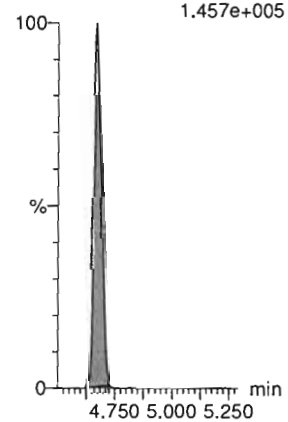
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.625e+004



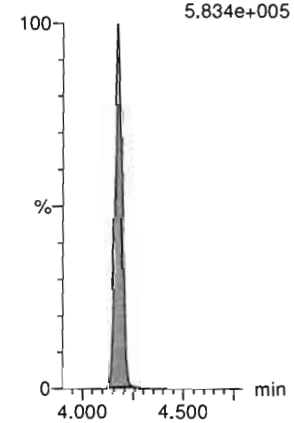
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.434e+005



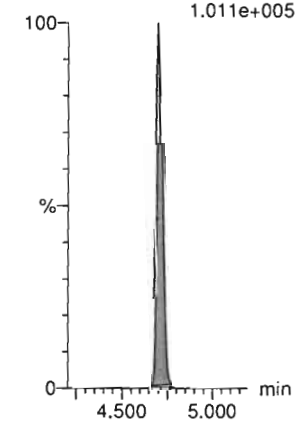
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.457e+005



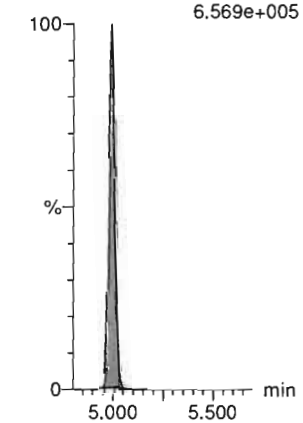
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.834e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
1.011e+005



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
6.569e+005

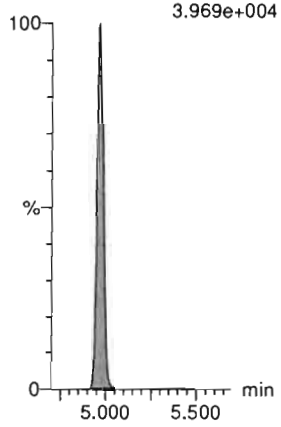


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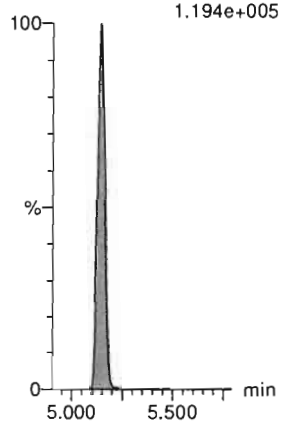
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Printed: Friday, February 28, 2020 09:08:38 Pacific Standard Time

Name: 200227P1-6, Date: 27-Feb-2020, Time: 16:13:39, ID: ST200227P1-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

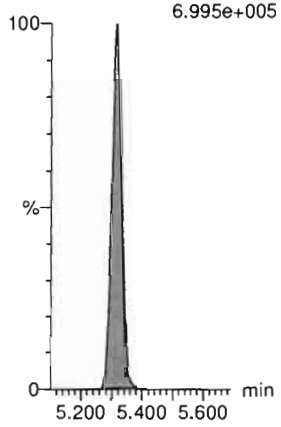
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.969e+004



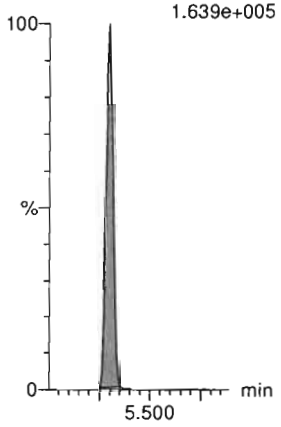
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.194e+005



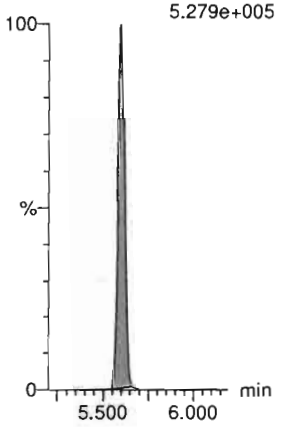
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.995e+005



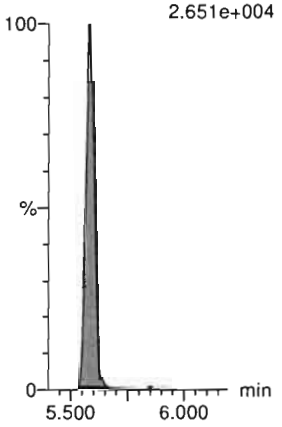
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.639e+005



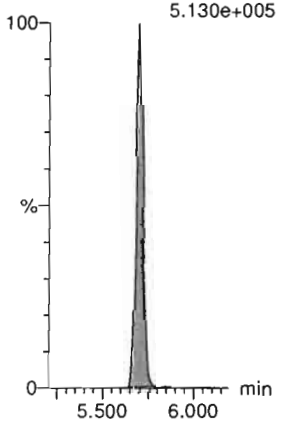
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.279e+005



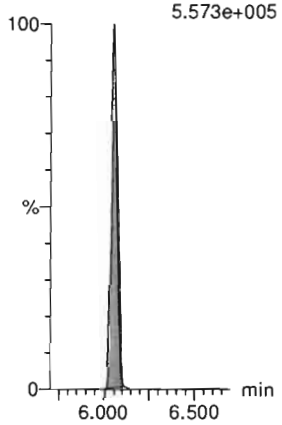
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.651e+004



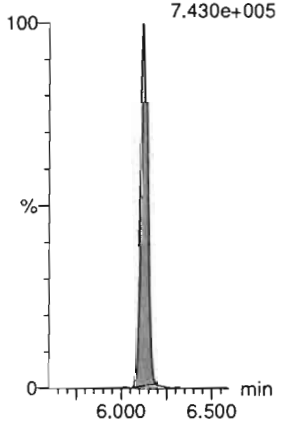
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.130e+005



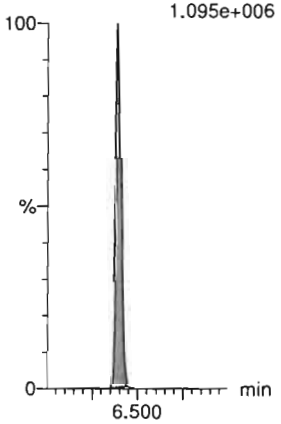
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.573e+005



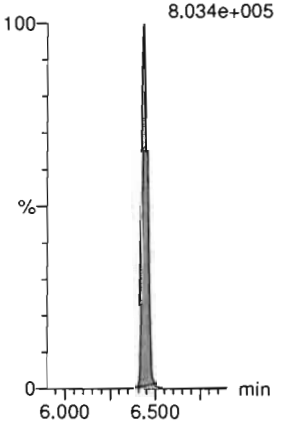
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.430e+005



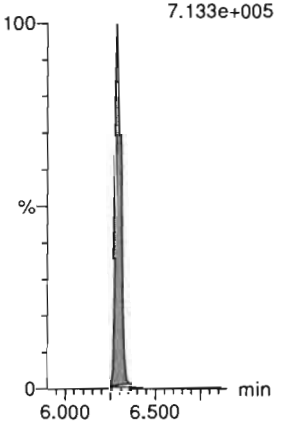
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.095e+006



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
8.034e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
7.133e+005

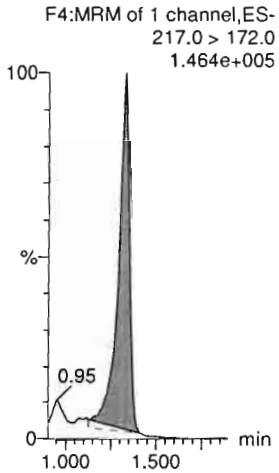


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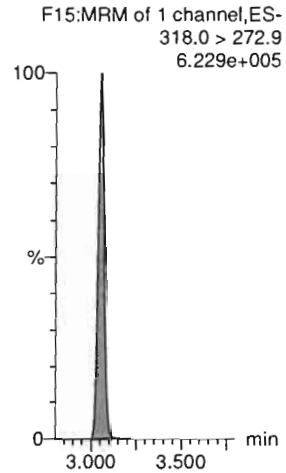
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Name: 200227P1-6, Date: 27-Feb-2020, Time: 16:13:39, ID: ST200227P1-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

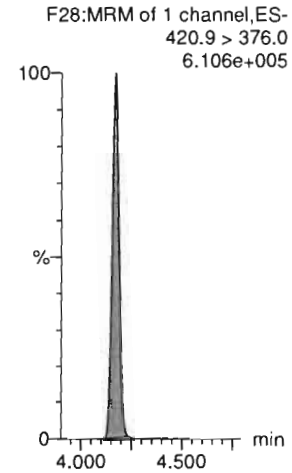
13C4-PFBA



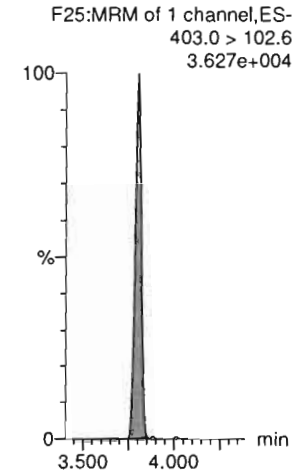
13C5-PFHxA



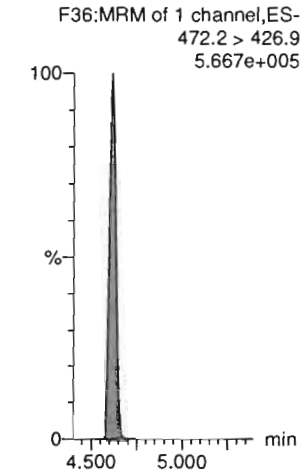
13C8-PFOA



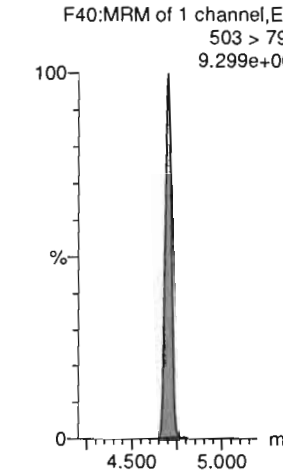
18O2-PFHxS



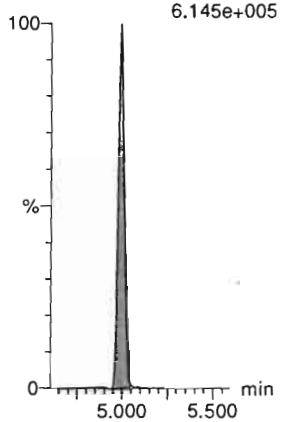
13C9-PFNA



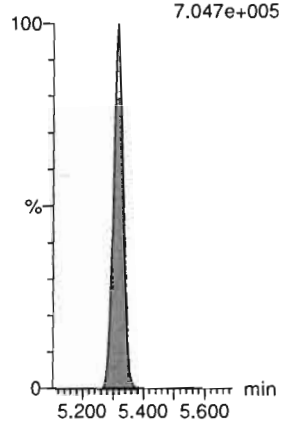
13C4-PFOS



13C6-PFDA



13C7-PFUdA

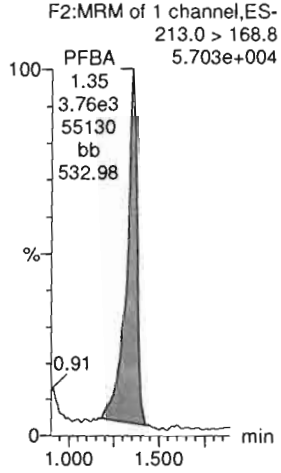


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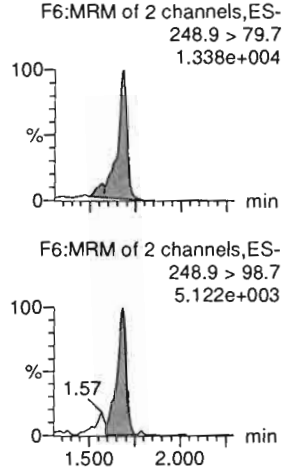
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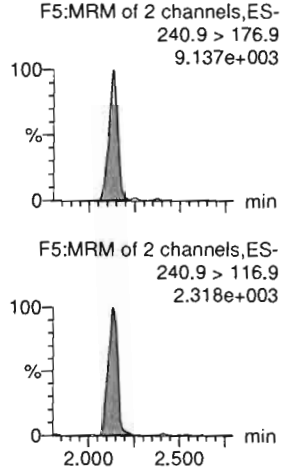
PFBA



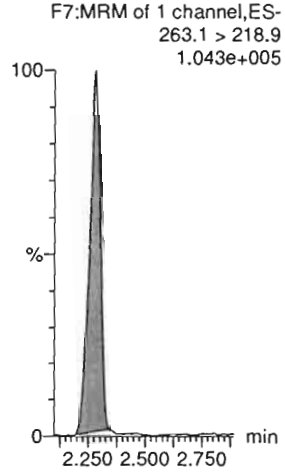
PFPrS



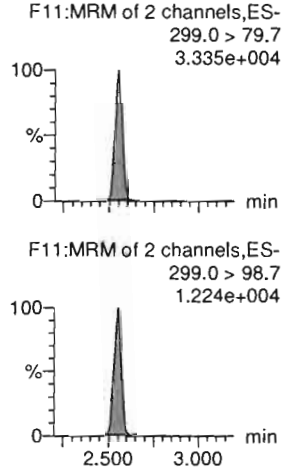
3:3 FTCA



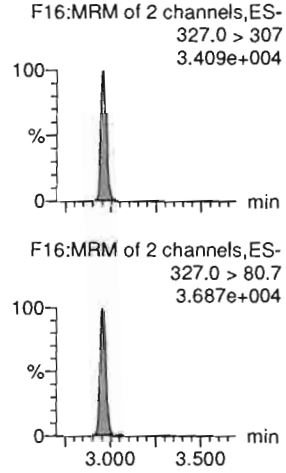
PFPeA



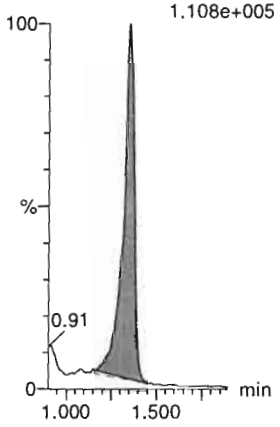
PFBS



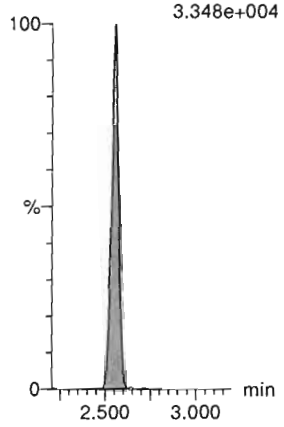
4:2 FTS



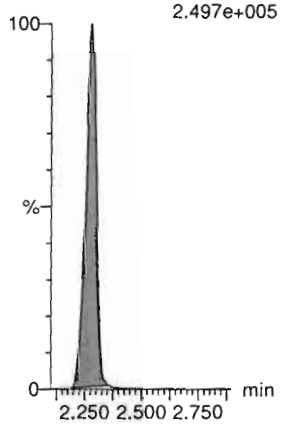
13C3-PFBA-EIS



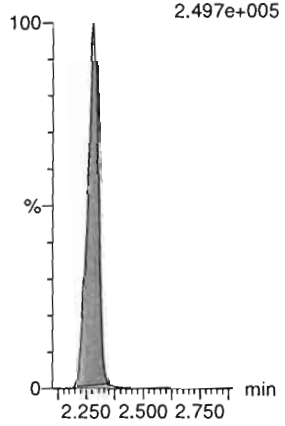
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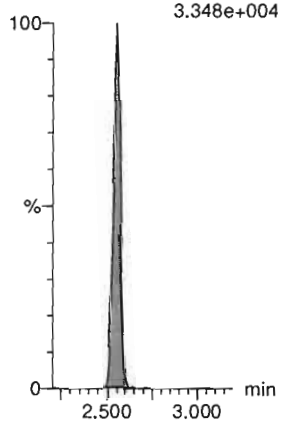
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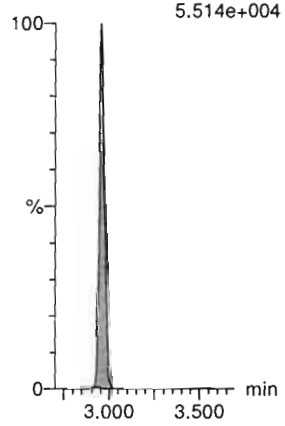
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

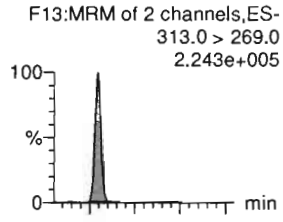


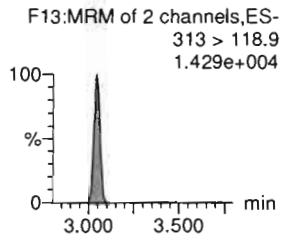
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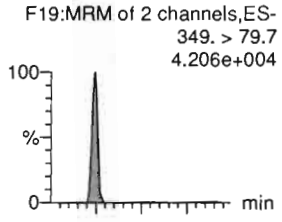
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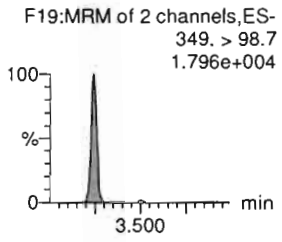
PFHxA



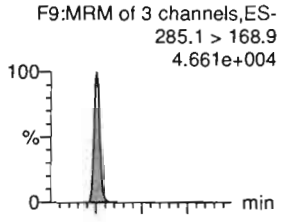


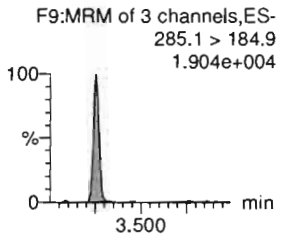
PFPeS



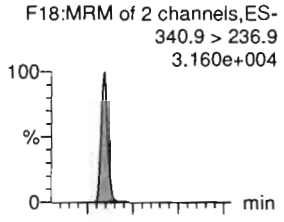


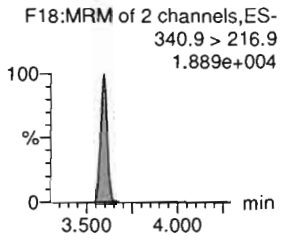
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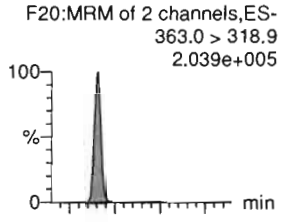


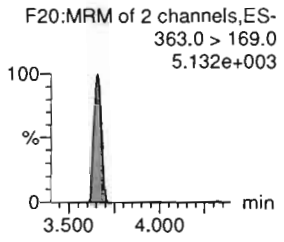
5:3 FTCA



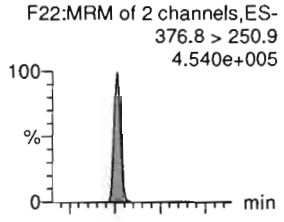


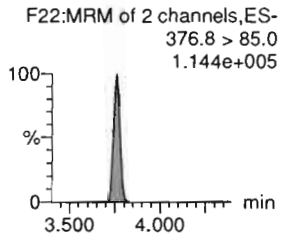
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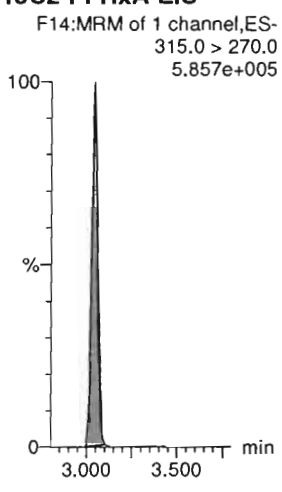


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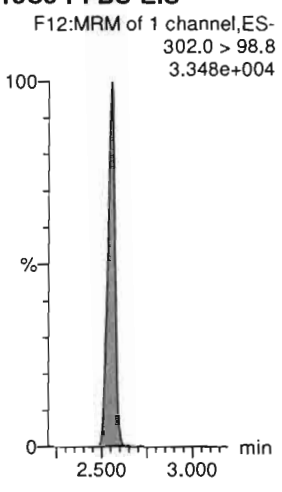




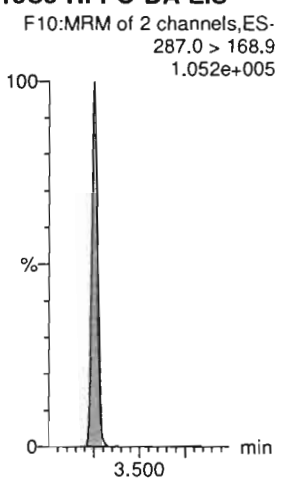
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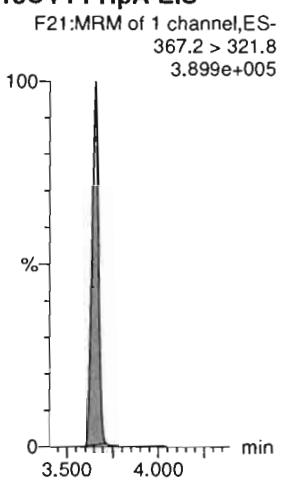
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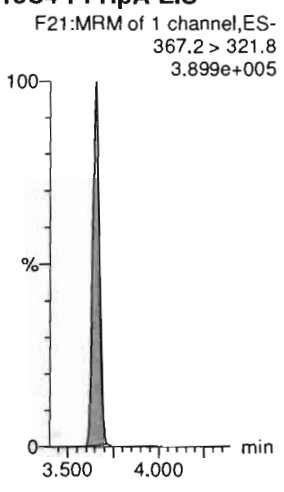
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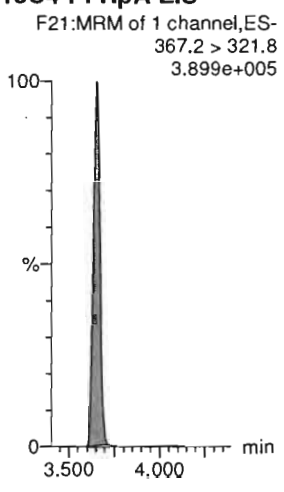
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

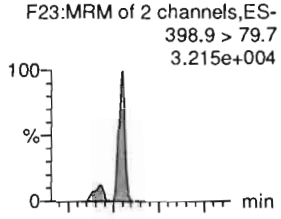


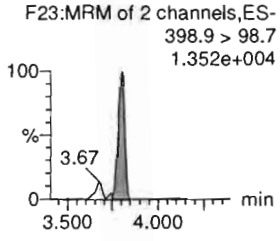
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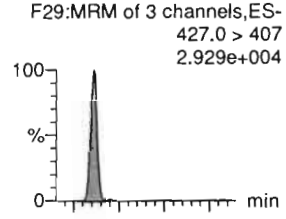
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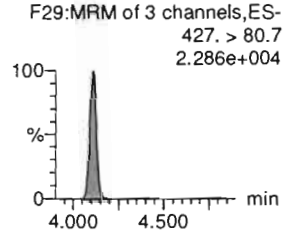
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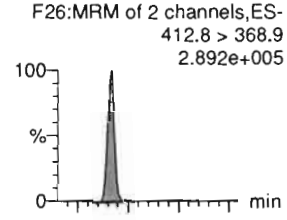


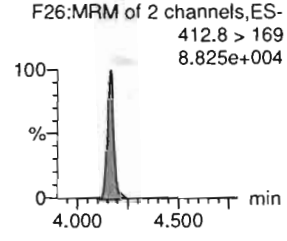
6:2 FTS



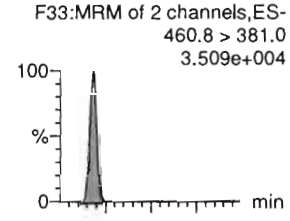


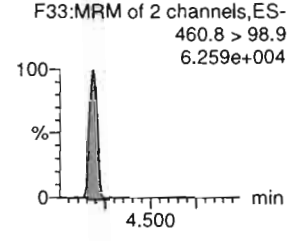
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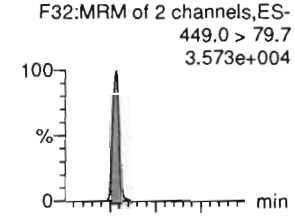


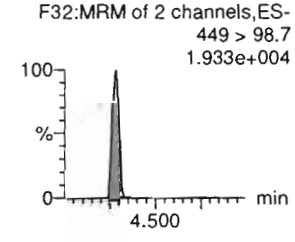
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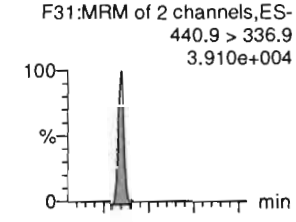


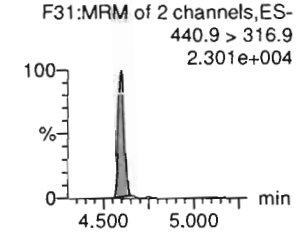
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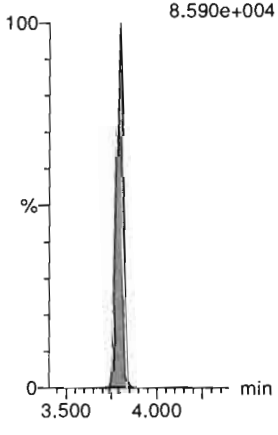


7:3 FTCA

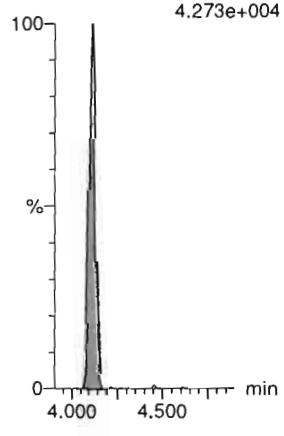




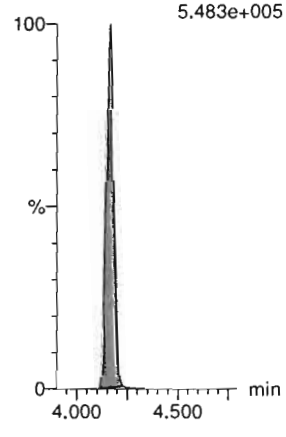
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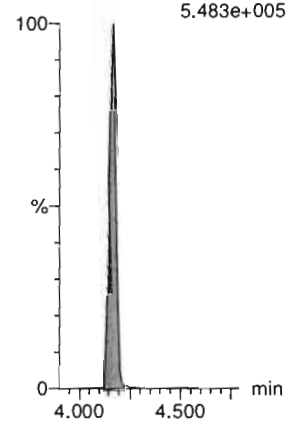
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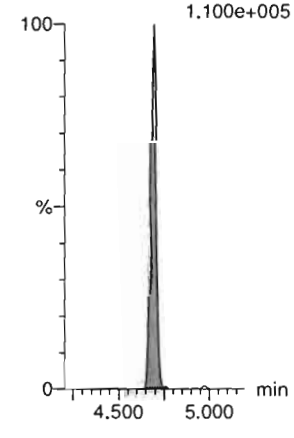
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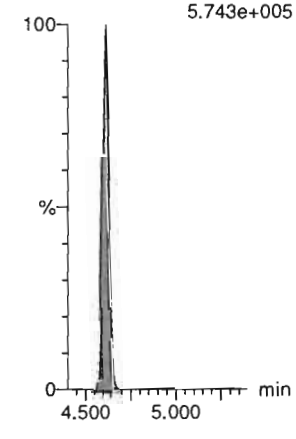
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13C8-PFOS-EIS



13C5-PFNA-EIS

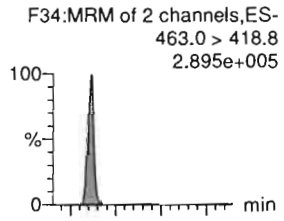


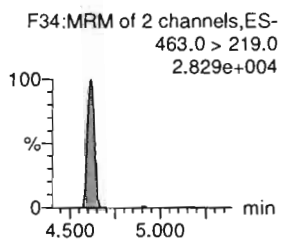
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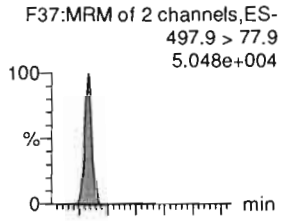
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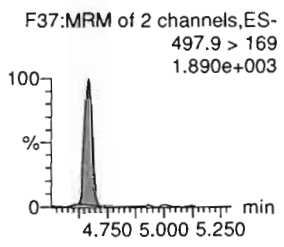
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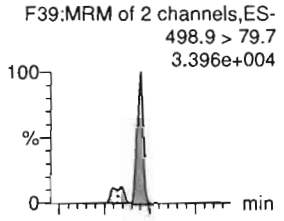


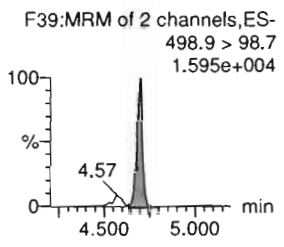
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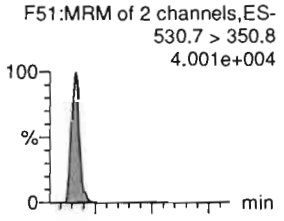


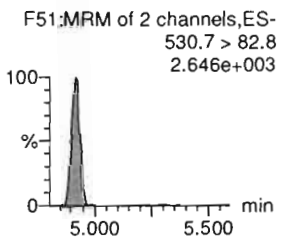
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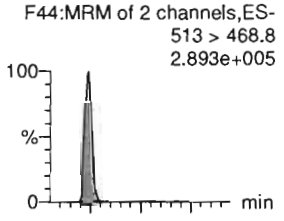


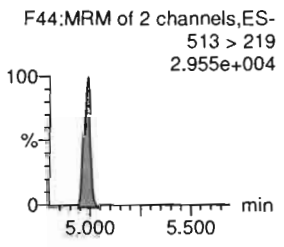
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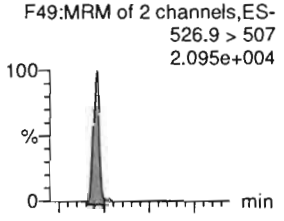


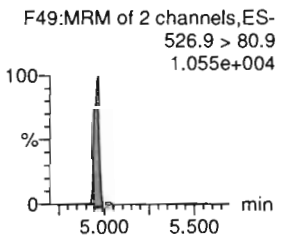
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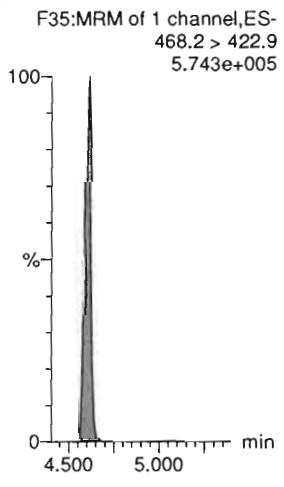


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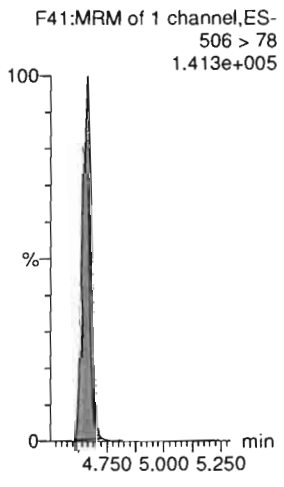




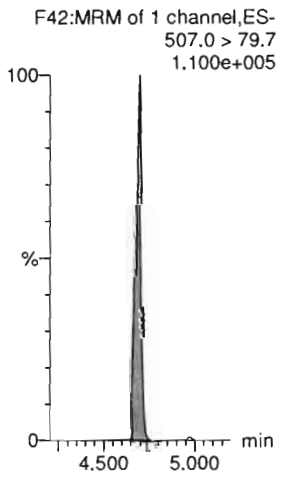
13C5-PFNA-EIS



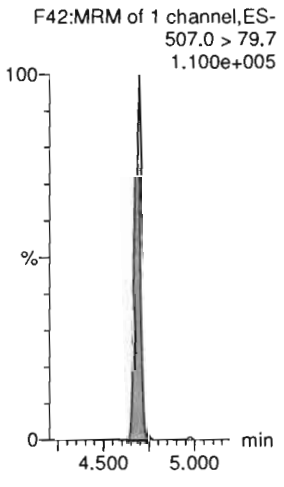
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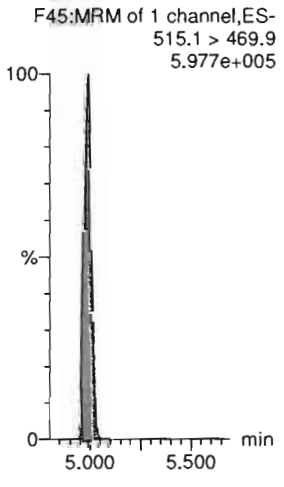
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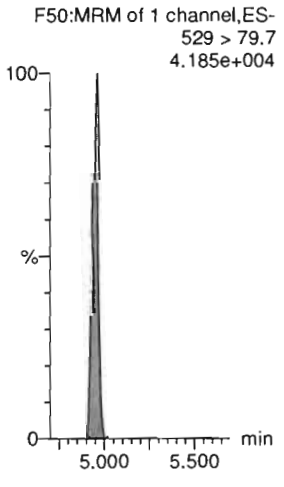
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

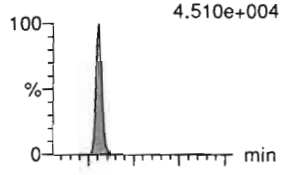


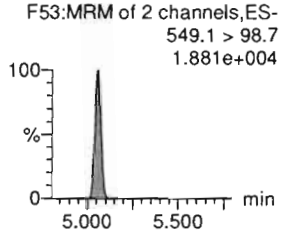
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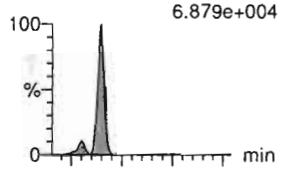
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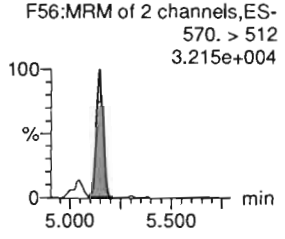
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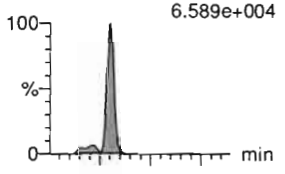


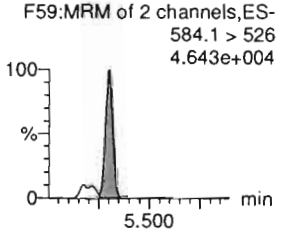
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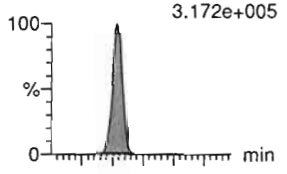


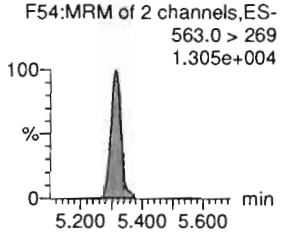
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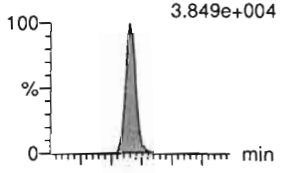


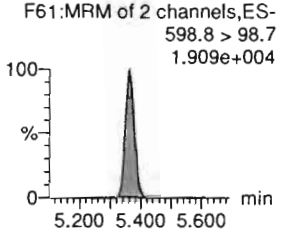
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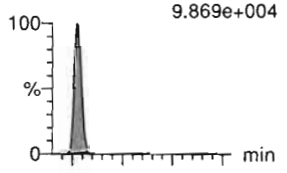


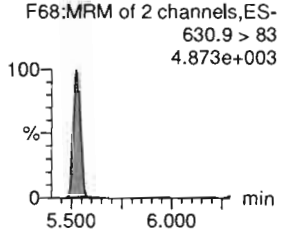
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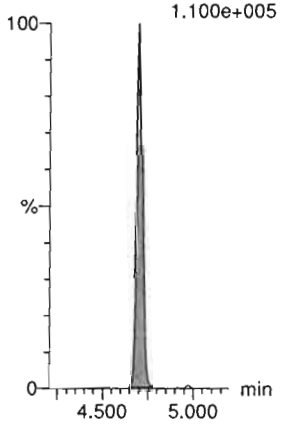


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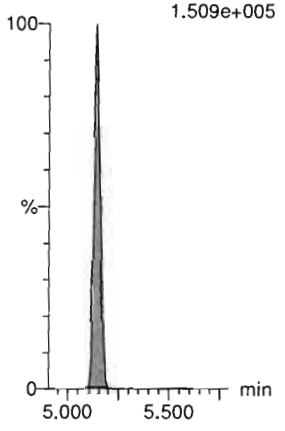




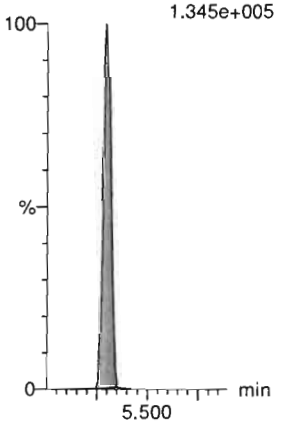
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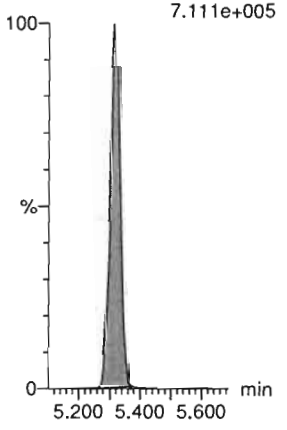
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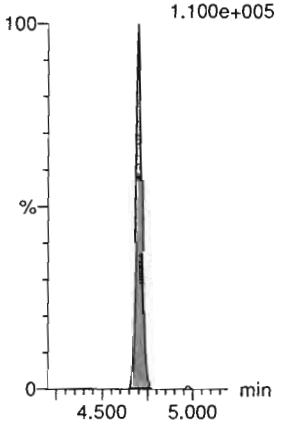
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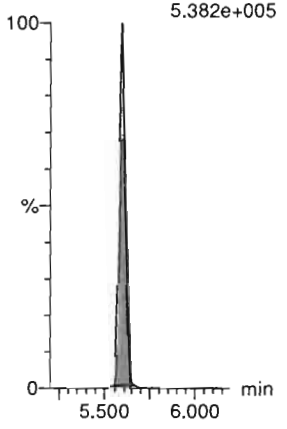
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13C8-PFOS-EIS



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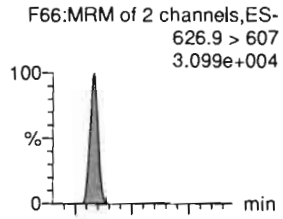


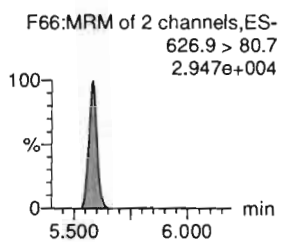
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Printed: Friday, February 28, 2020 09:08:38 Pacific Standard Time

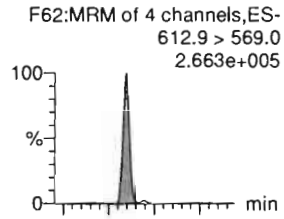
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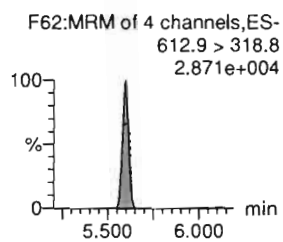
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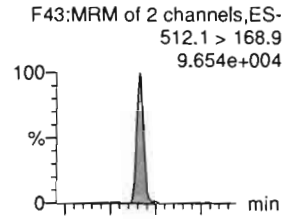


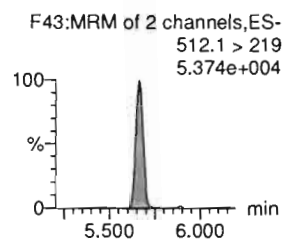
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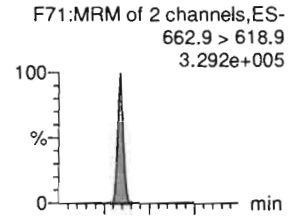


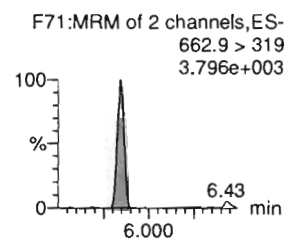
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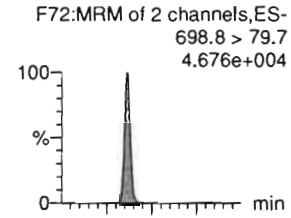


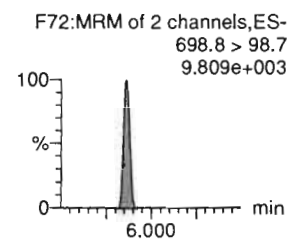
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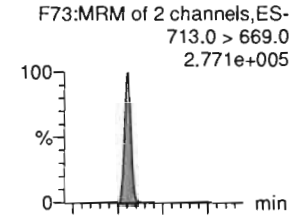


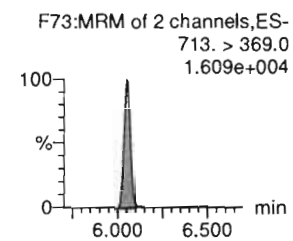
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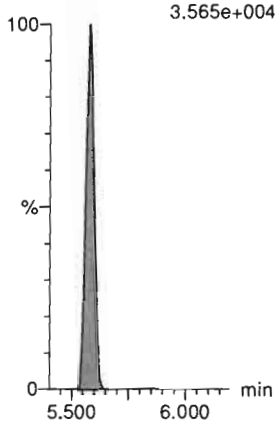


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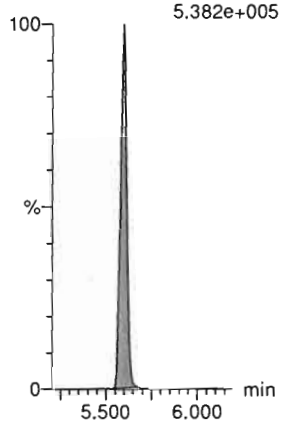




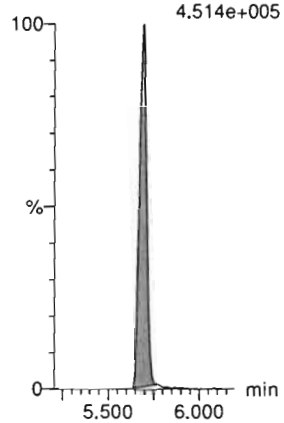
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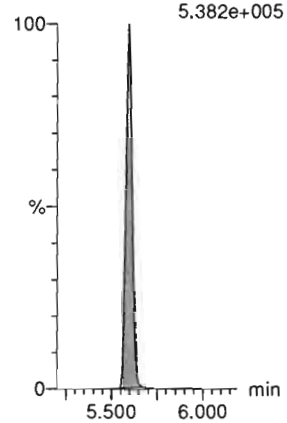
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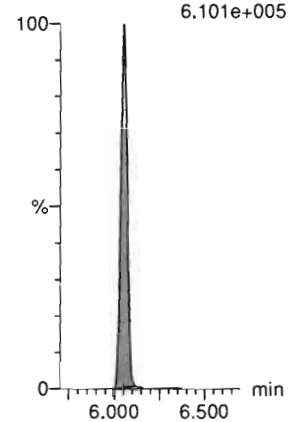
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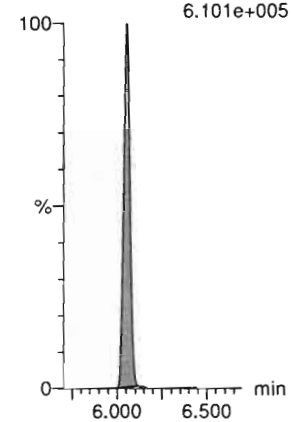
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

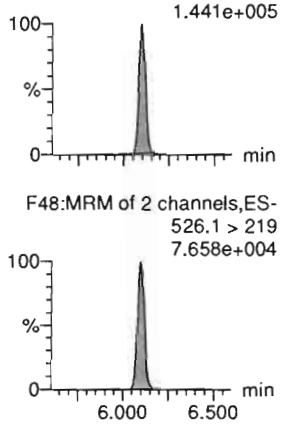


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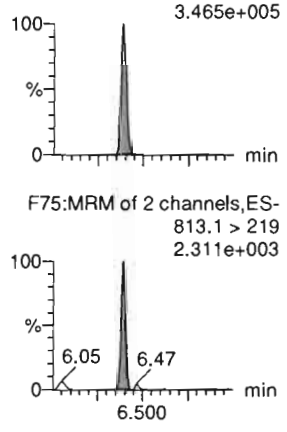
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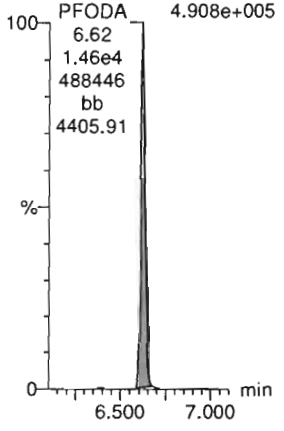
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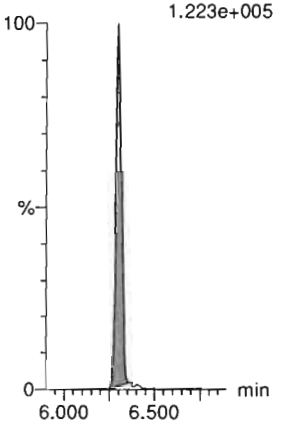
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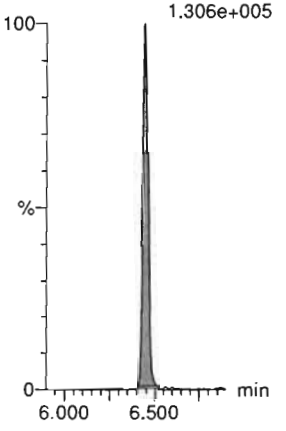
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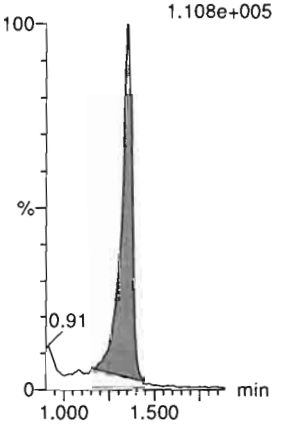
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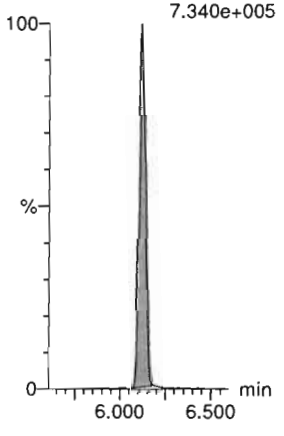
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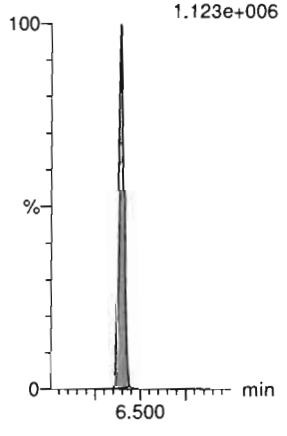
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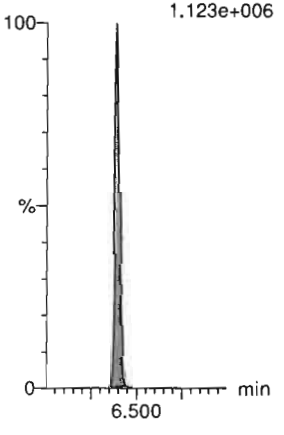
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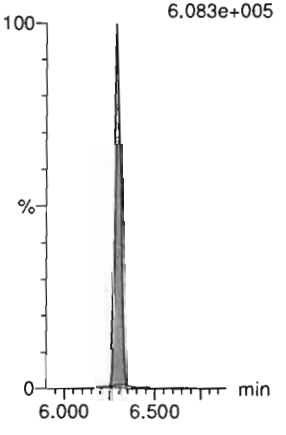
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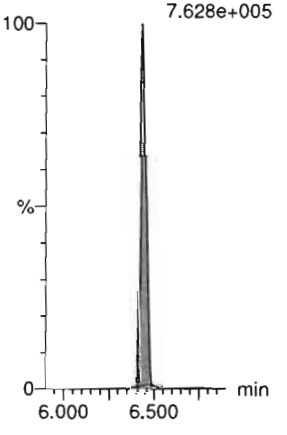
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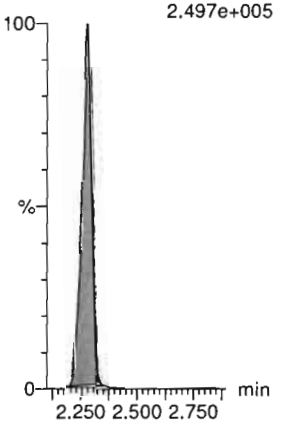
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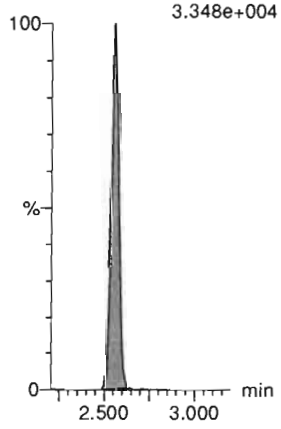


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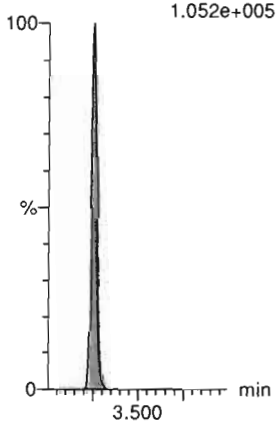
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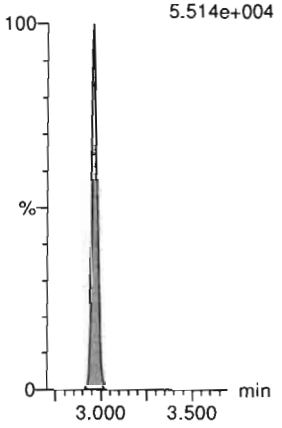
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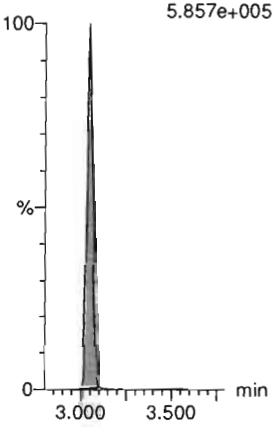
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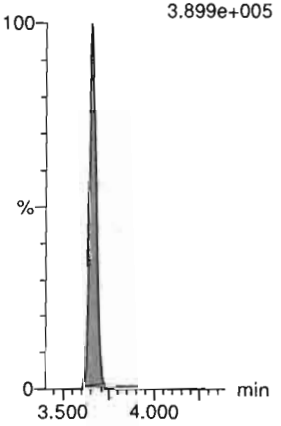
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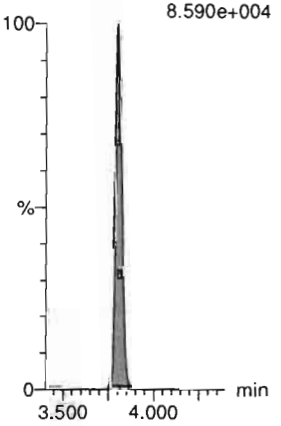
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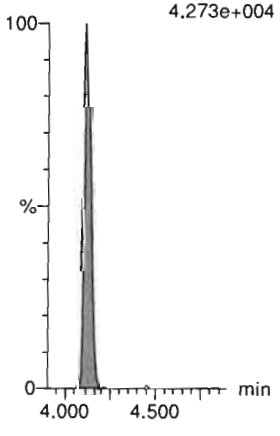
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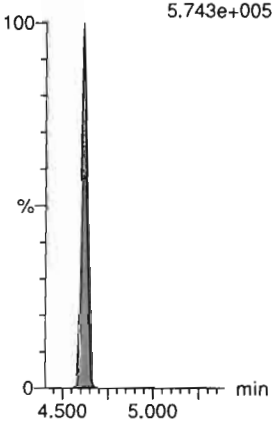
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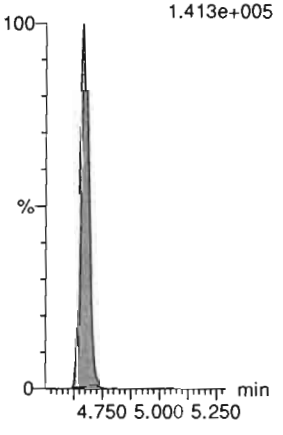
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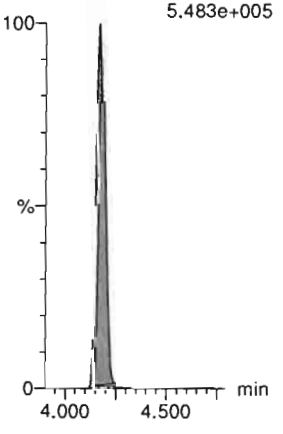
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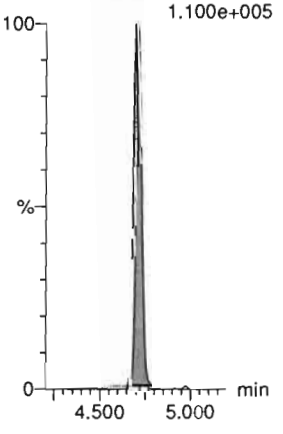
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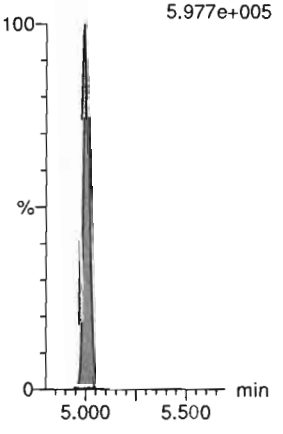
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13C8-PFOS-RSD



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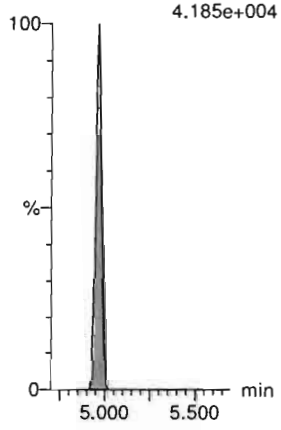


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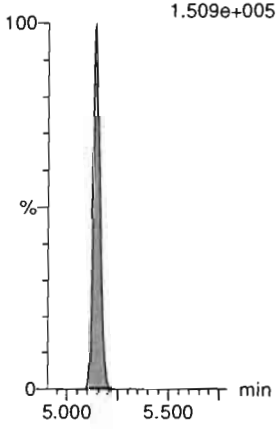
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Printed: Friday, February 28, 2020 09:08:38 Pacific Standard Time

Name: 200227P1-7, Date: 27-Feb-2020, Time: 16:26:17, ID: ST200227P1-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

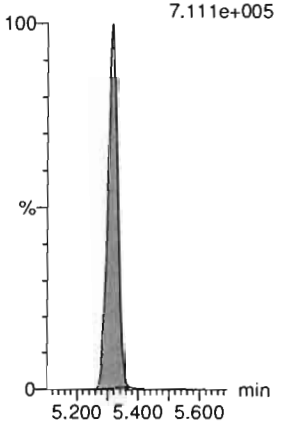
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
4.185e+004



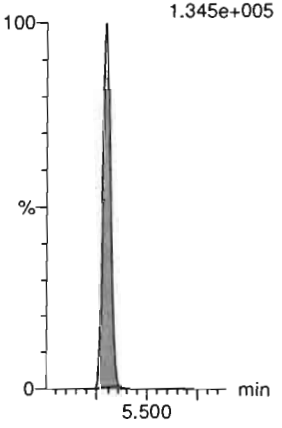
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.509e+005



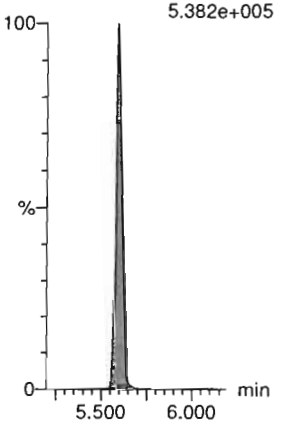
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
7.111e+005



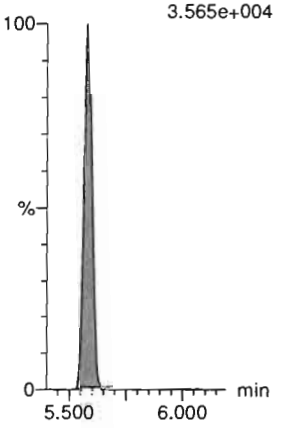
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F60:MRM of 1 channel,ES-
589.3 > 419
1.345e+005



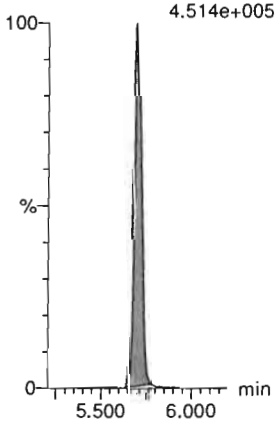
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.382e+005



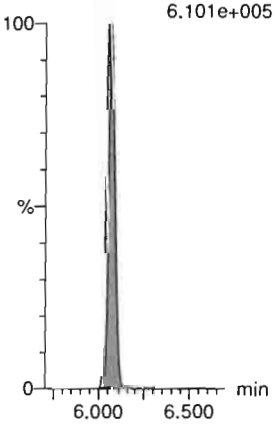
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
3.565e+004



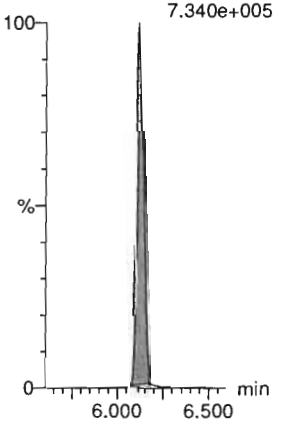
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.514e+005



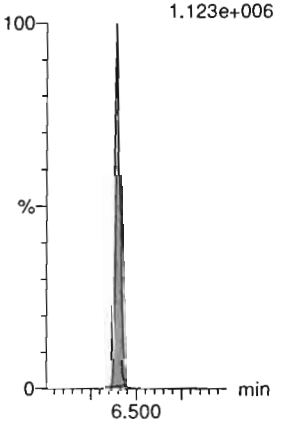
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F74:MRM of 2 channels,ES-
715.1 > 669.7
6.101e+005



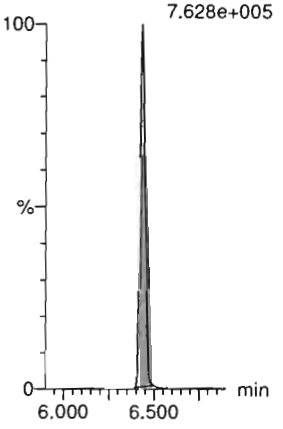
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.340e+005



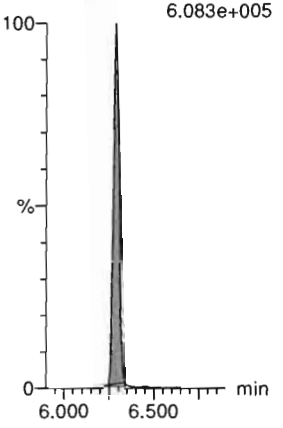
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.123e+006



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.628e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
6.083e+005

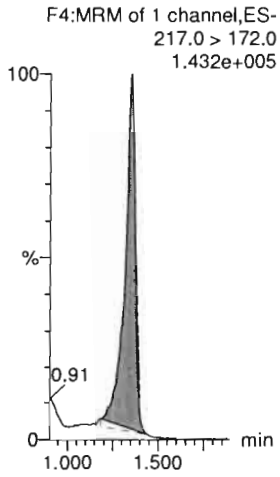


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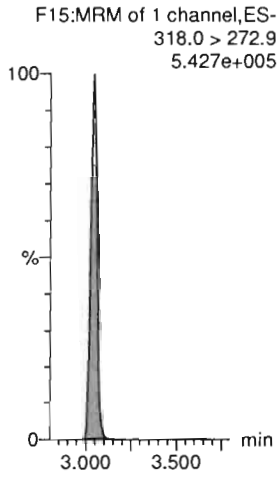
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Name: 200227P1-7, Date: 27-Feb-2020, Time: 16:26:17, ID: ST200227P1-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

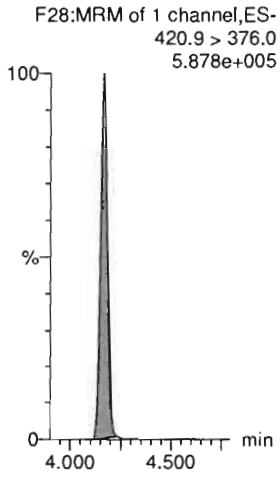
13C4-PFBA



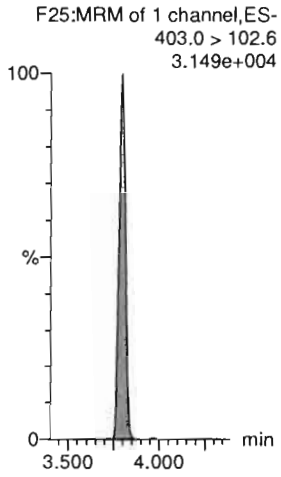
13C5-PFHxA



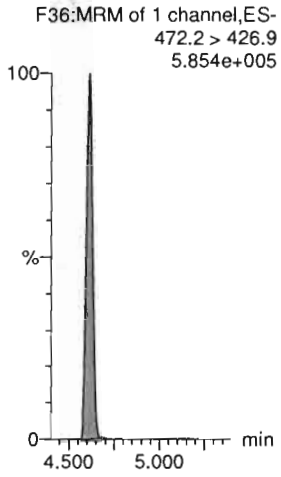
13C8-PFOA



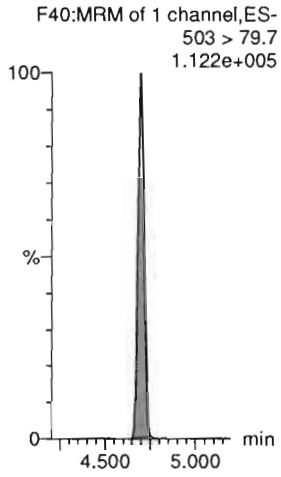
18O2-PFHxS



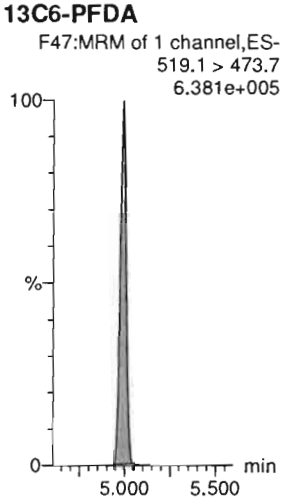
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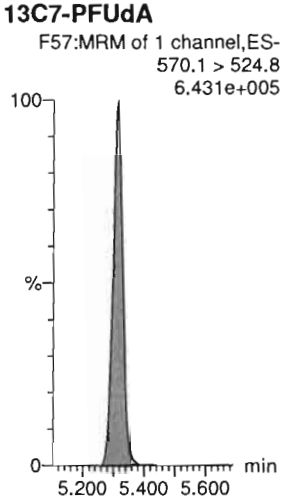
13C4-PFOS



13C6-PFDA



13C7-PFUdA

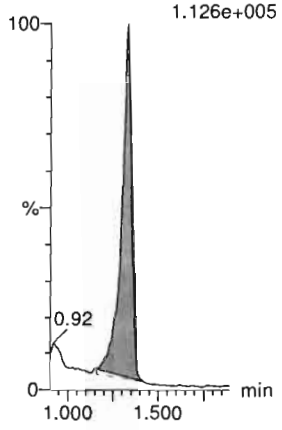


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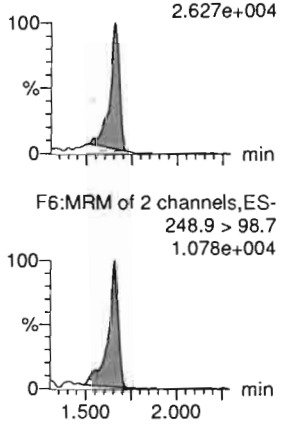
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Name: 200227P1-8, Date: 27-Feb-2020, Time: 16:36:51, ID: ST200227P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

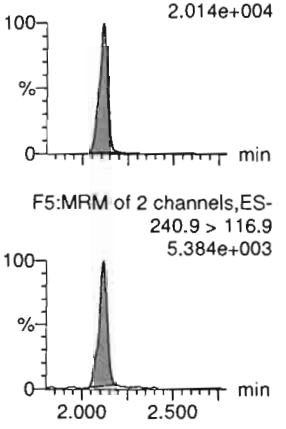
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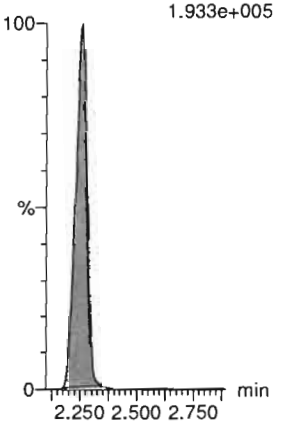
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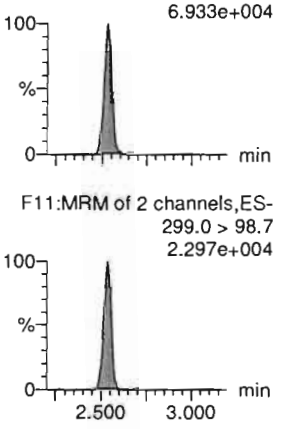
3:3 FTCA



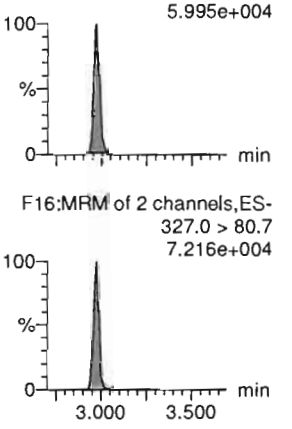
PFPeA



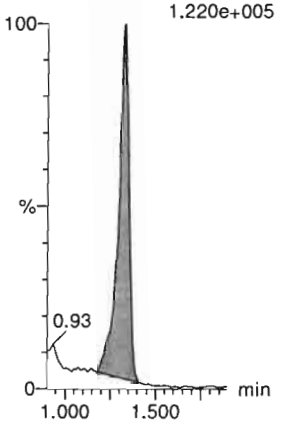
PFBS



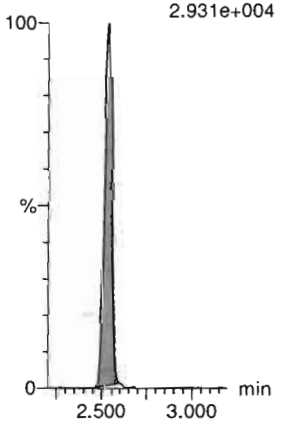
4:2 FTS



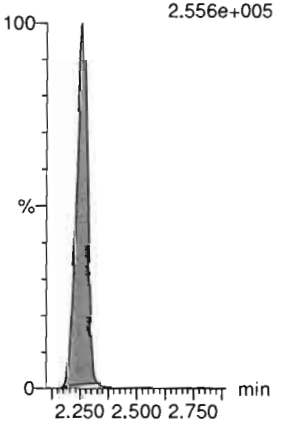
13C3-PFBA-EIS



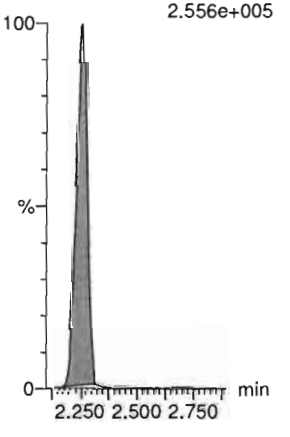
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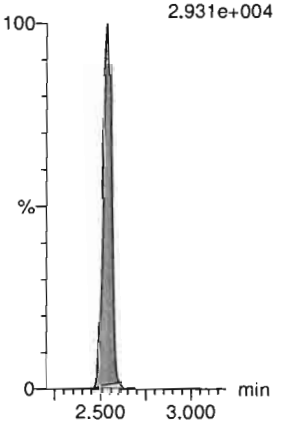
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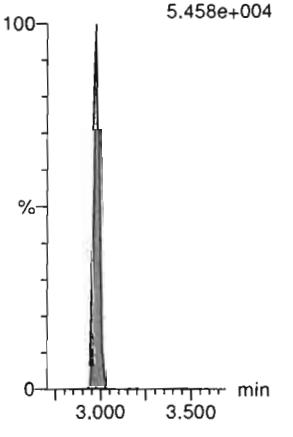
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

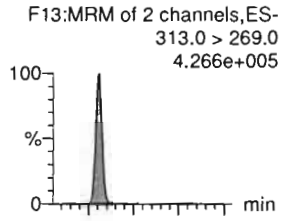


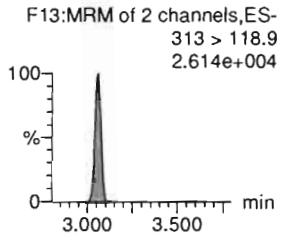
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Printed: Friday, February 28, 2020 09:08:38 Pacific Standard Time

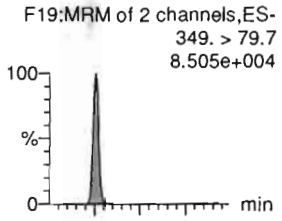
Name: 200227P1-8, Date: 27-Feb-2020, Time: 16:36:51, ID: ST200227P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

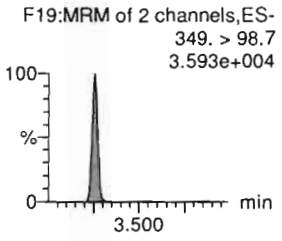
PFHxA



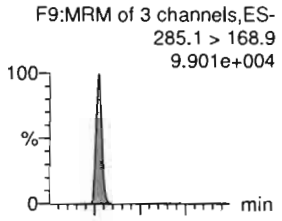


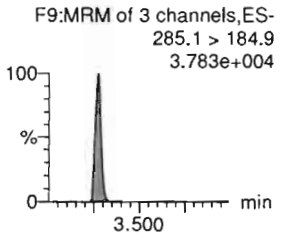
PFPeS



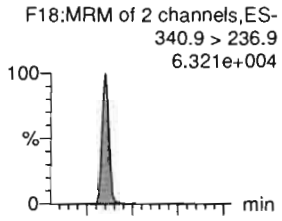


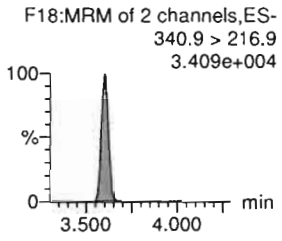
HFPO-DA



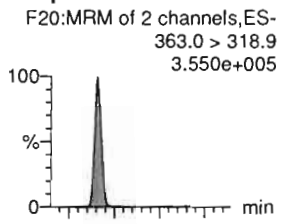


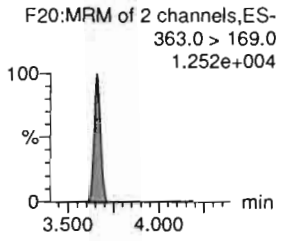
5:3 FTCA



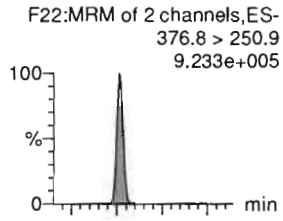


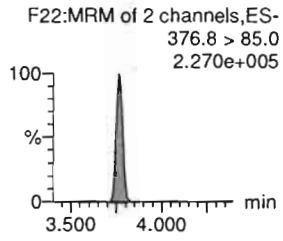
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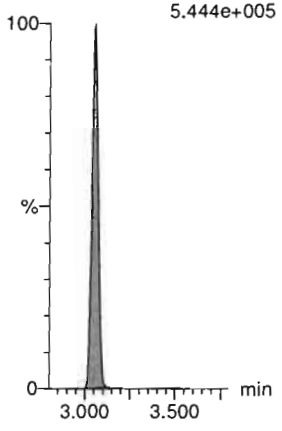


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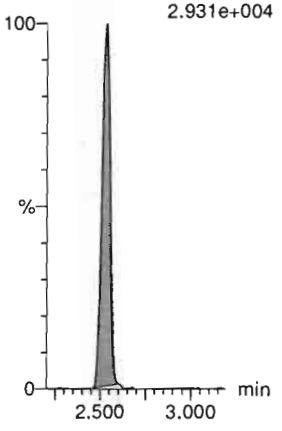




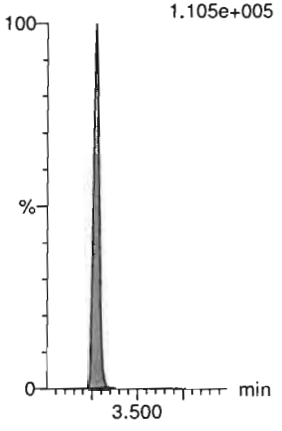
13C2-PFHxA-EIS



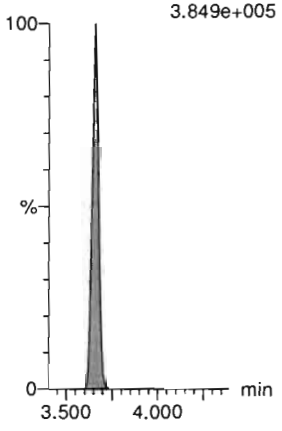
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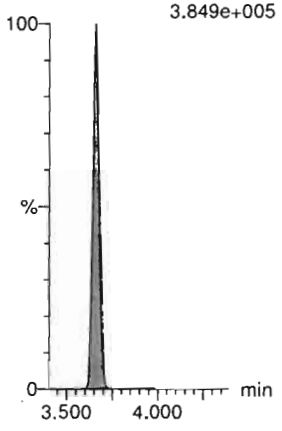
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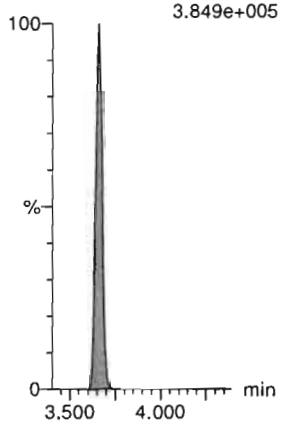
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

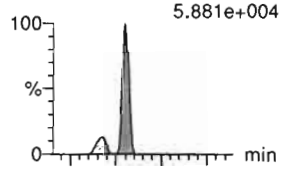


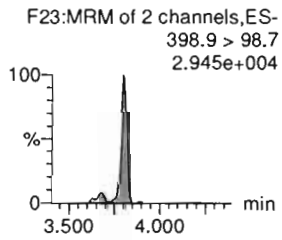
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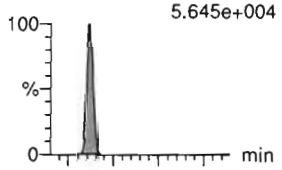
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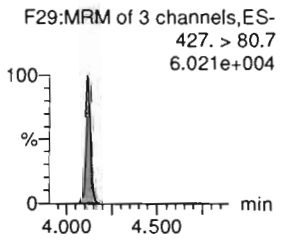
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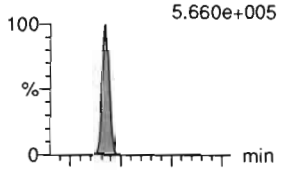


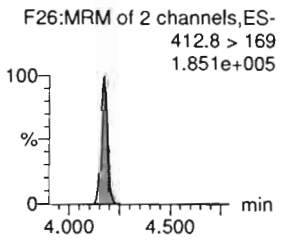
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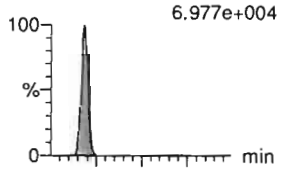


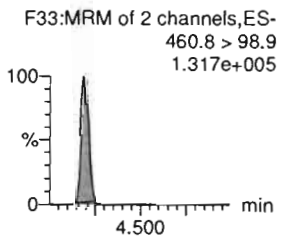
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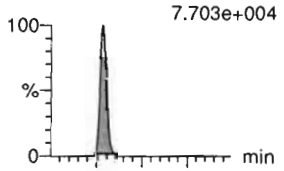


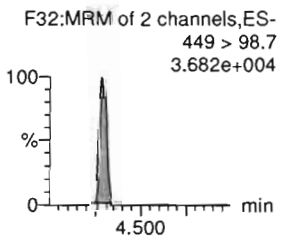
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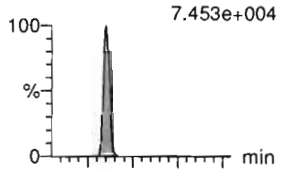


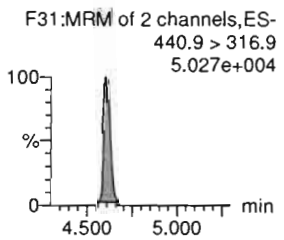
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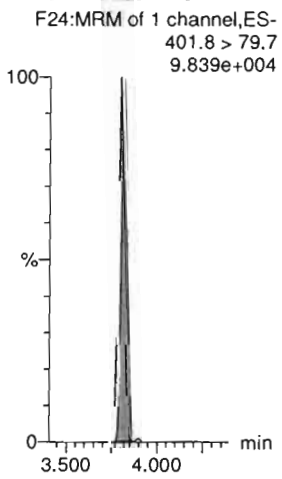


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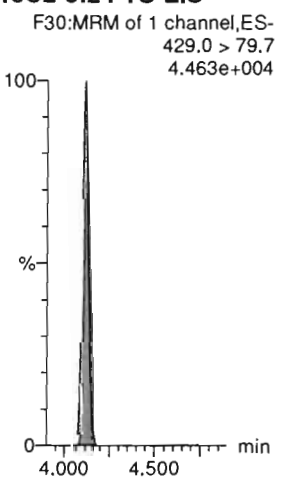




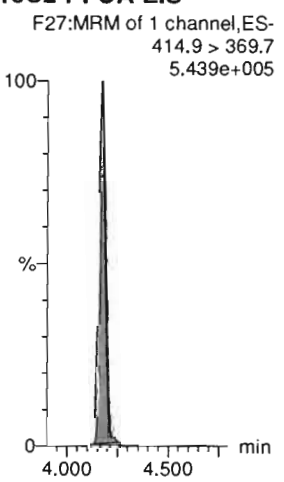
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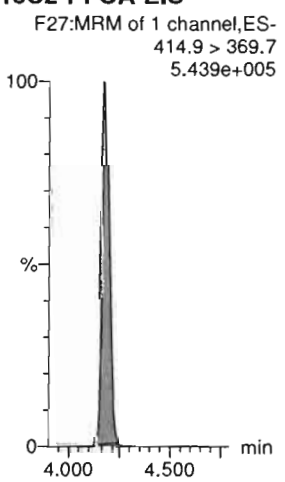
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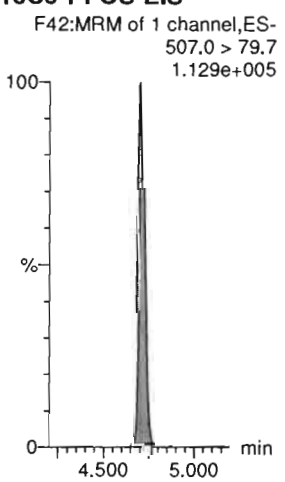
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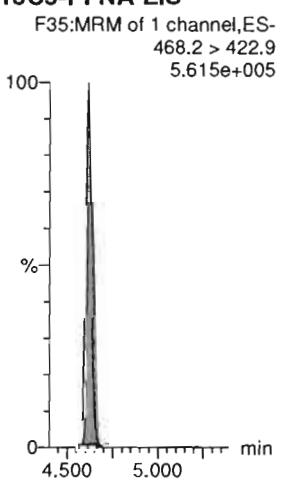
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

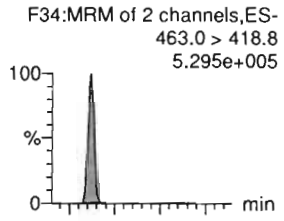


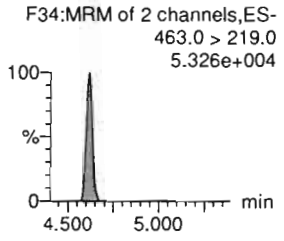
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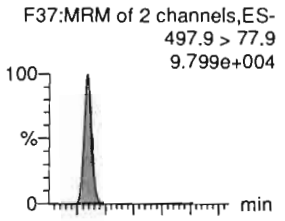
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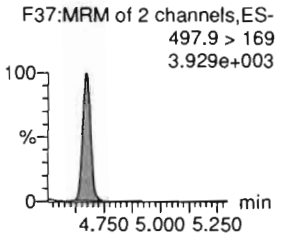
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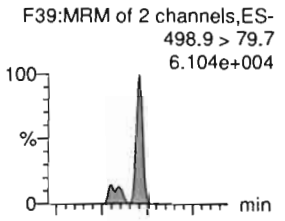


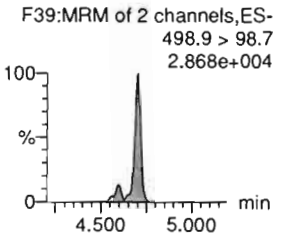
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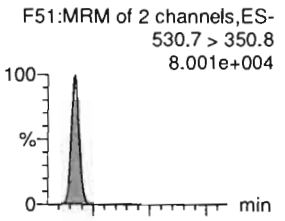


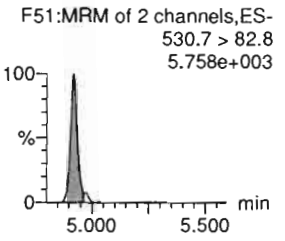
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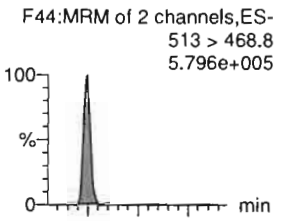


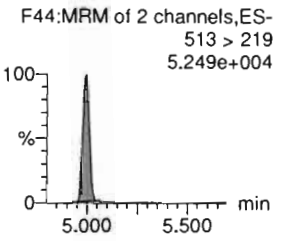
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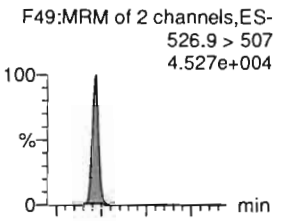


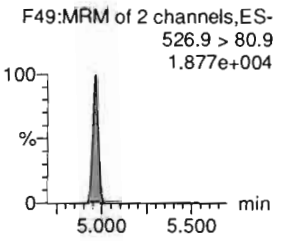
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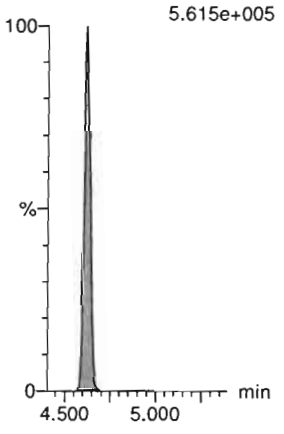


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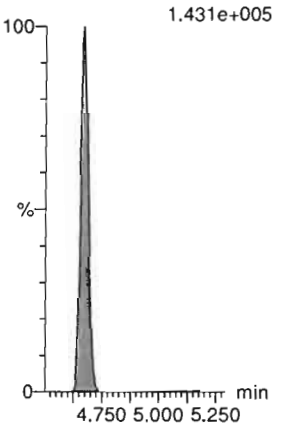




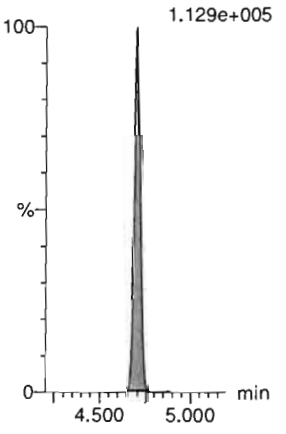
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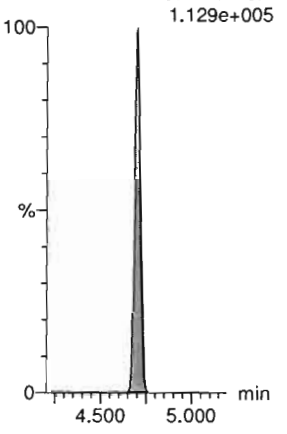
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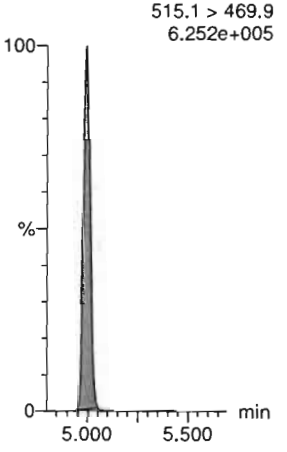
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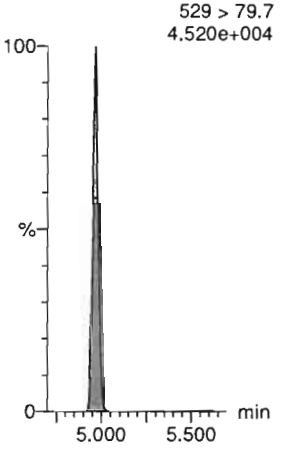
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

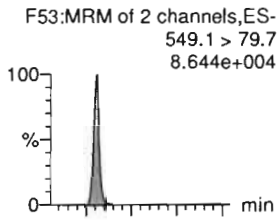


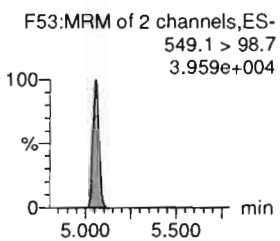
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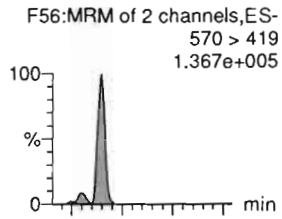
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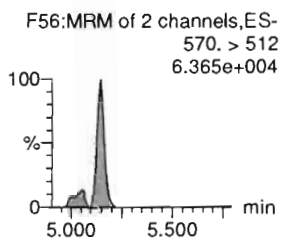
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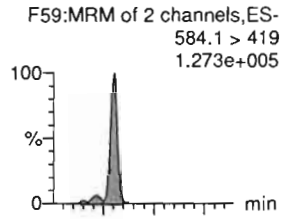


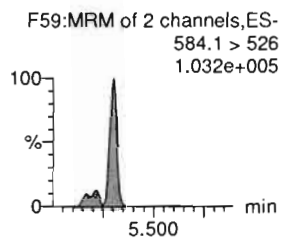
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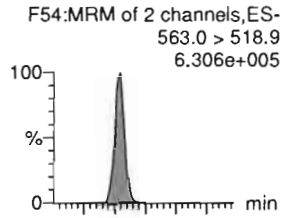


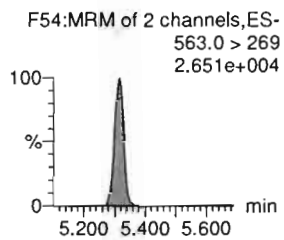
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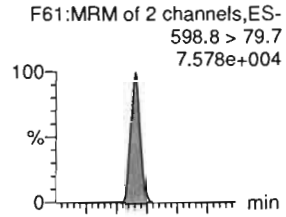


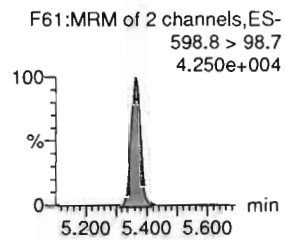
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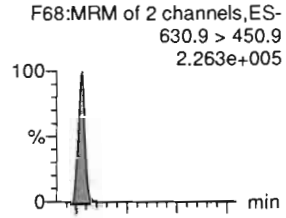


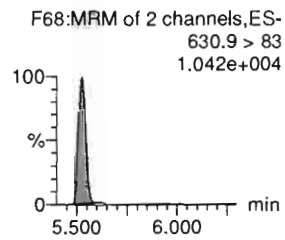
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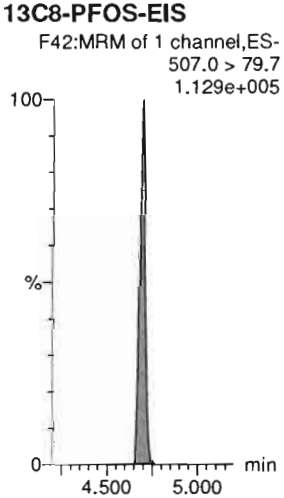


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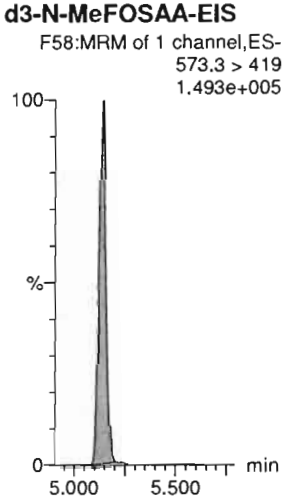




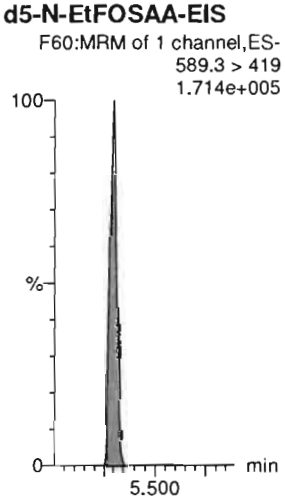
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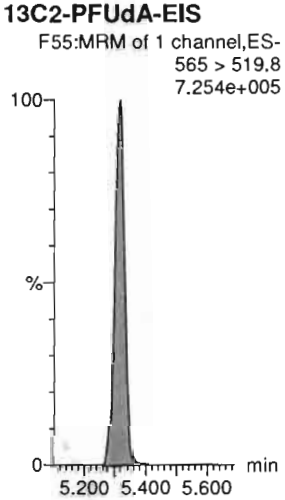
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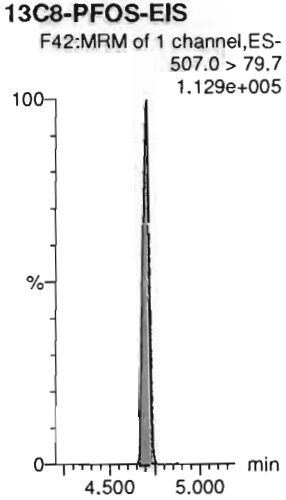
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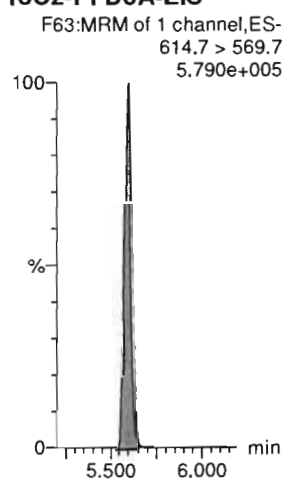
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13C8-PFOS-EIS



13C2-PFDoA-EIS

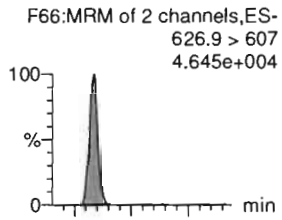


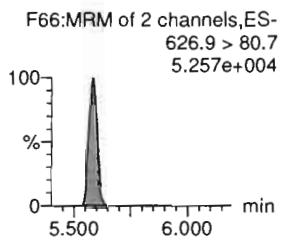
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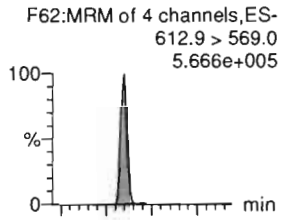
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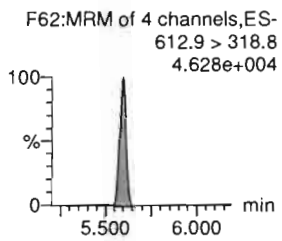
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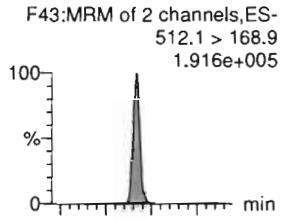


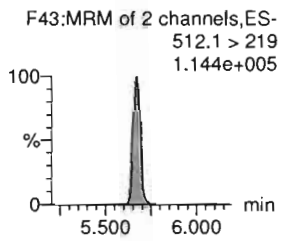
PFDoA



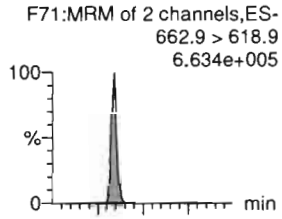


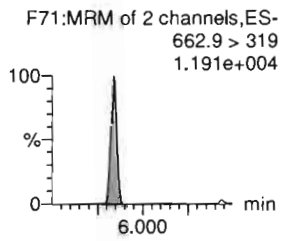
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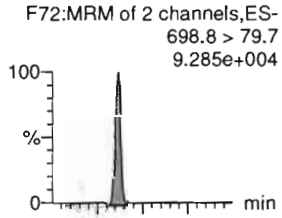


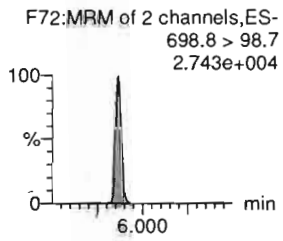
PFTrDA



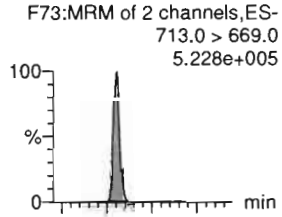


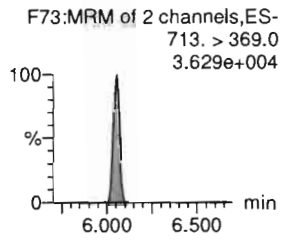
PFDoS



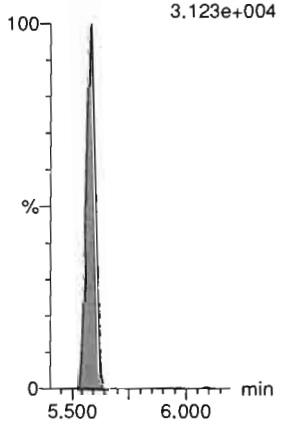


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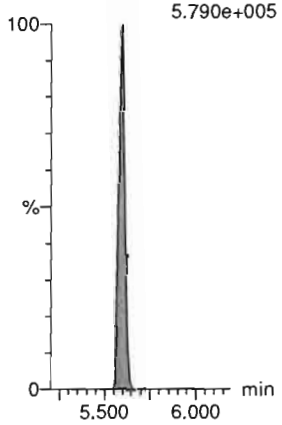




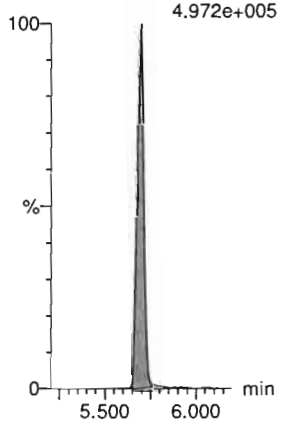
13C2-10:2 FTS-EIS



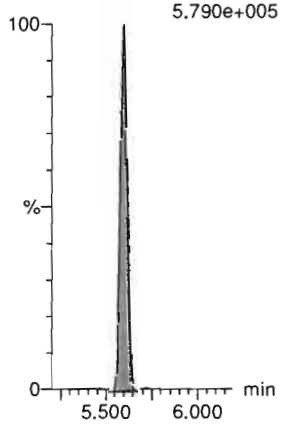
13C2-PFDoA-EIS



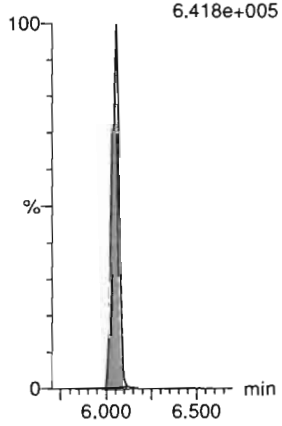
d3-N-MeFOSA-EIS



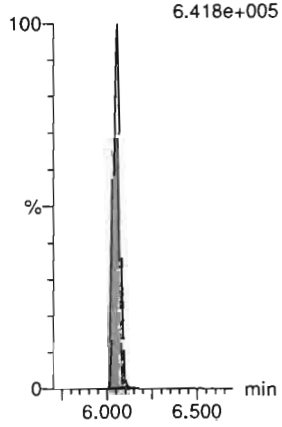
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

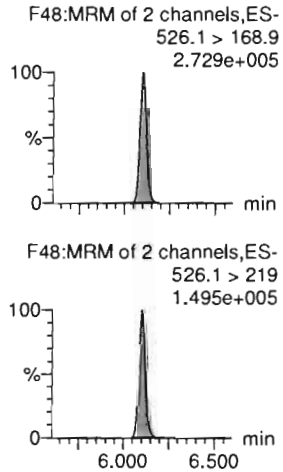


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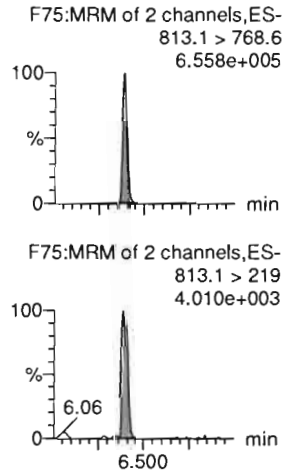
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Name: 200227P1-8, Date: 27-Feb-2020, Time: 16:36:51, ID: ST200227P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

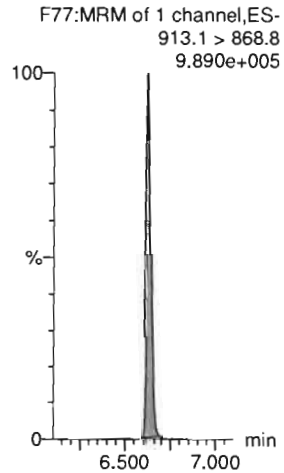
N-EtFOSA



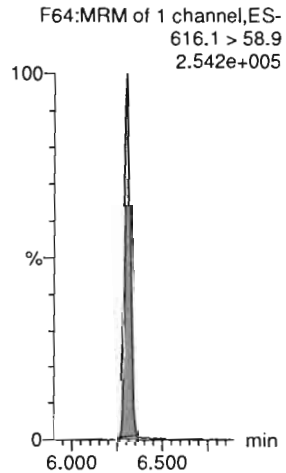
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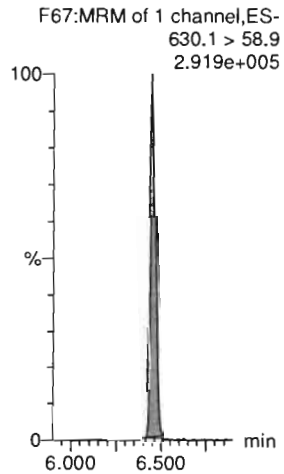
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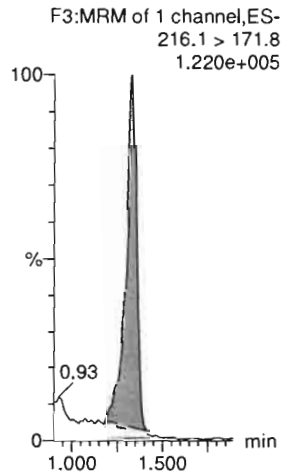
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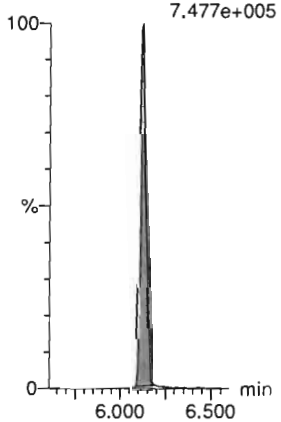
N-EtFOSE



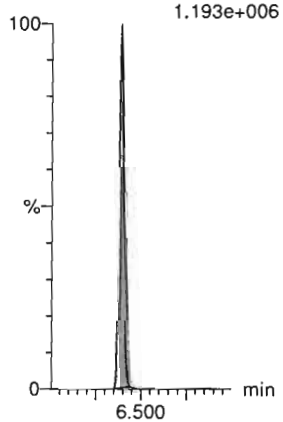
13C3-PFBA-RSD



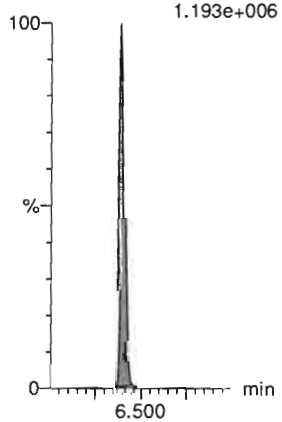
d5-N-ETFOSA-EIS



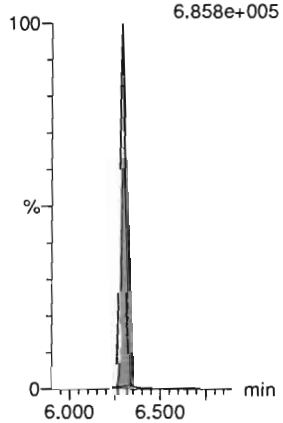
13C2-PFHxDA-EIS



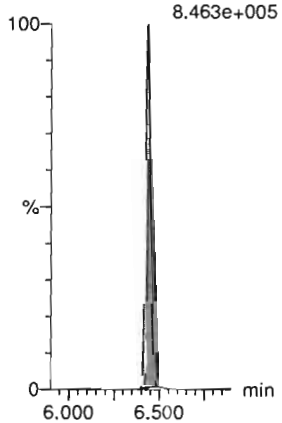
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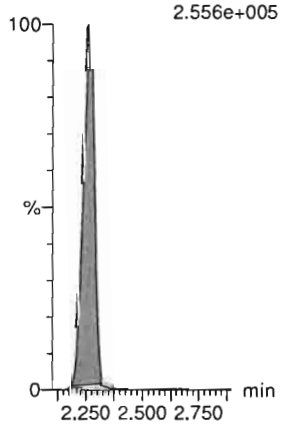
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

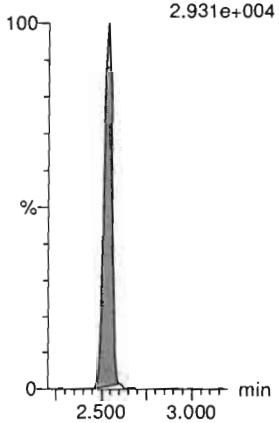


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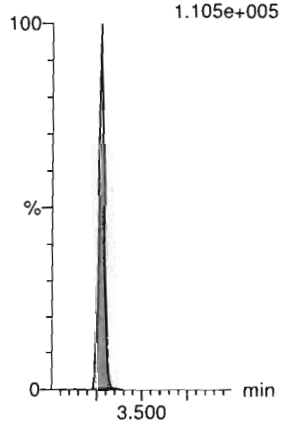
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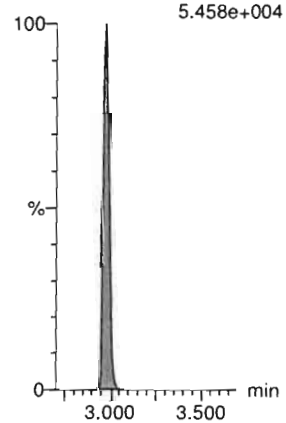
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.931e+004



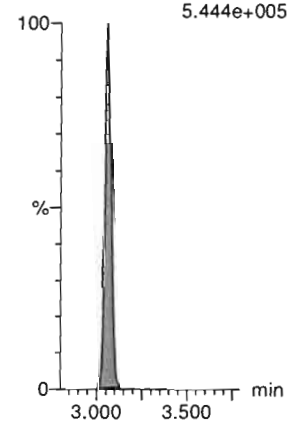
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.105e+005



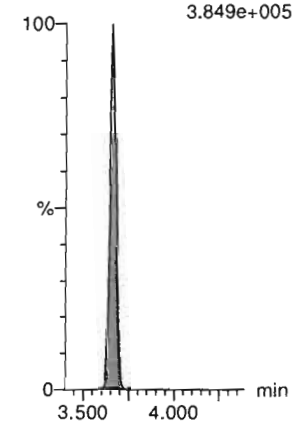
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
5.458e+004



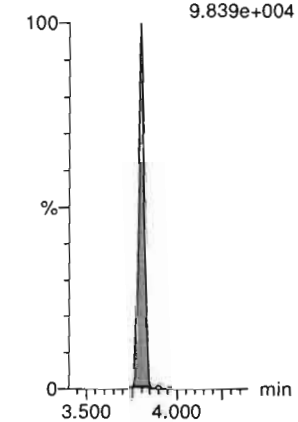
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.444e+005



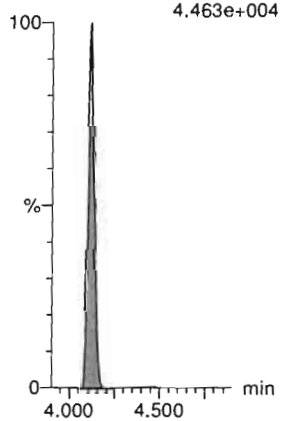
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.849e+005



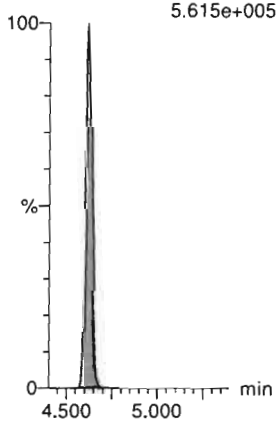
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
9.839e+004



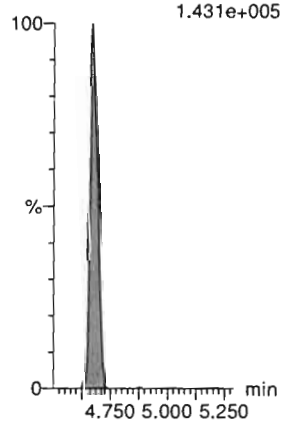
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.463e+004



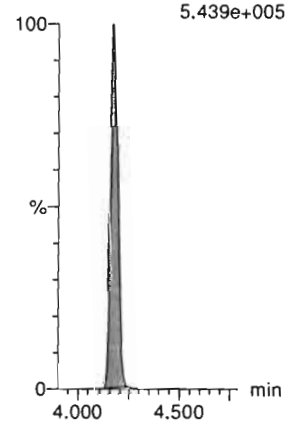
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.615e+005



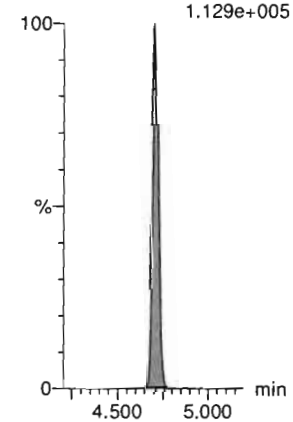
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.431e+005



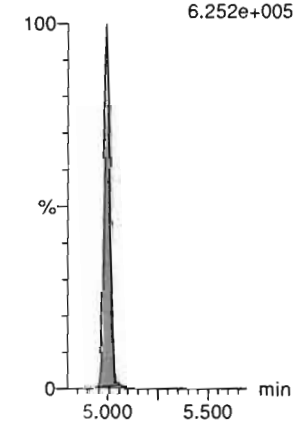
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.439e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
1.129e+005



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
6.252e+005

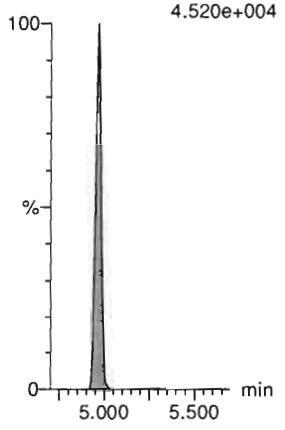


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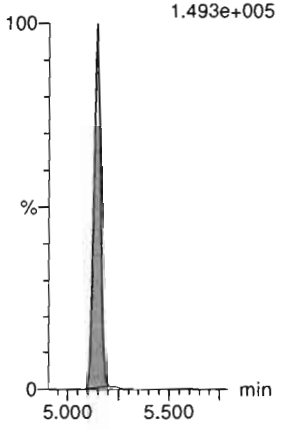
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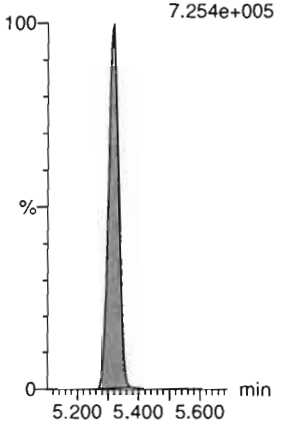
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
4.520e+004



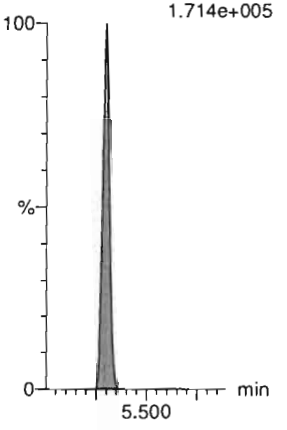
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.493e+005



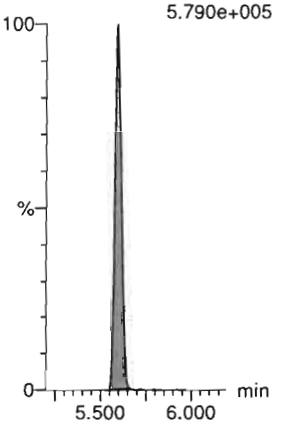
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
7.254e+005



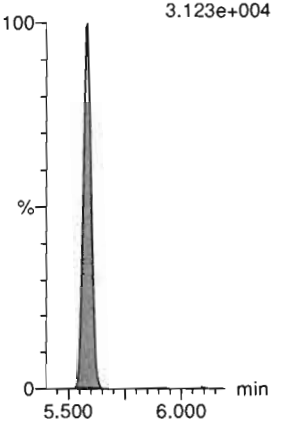
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F60:MRM of 1 channel,ES-
589.3 > 419
1.714e+005



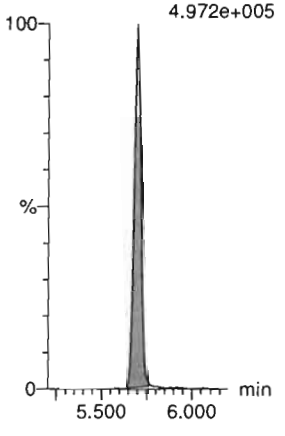
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.790e+005



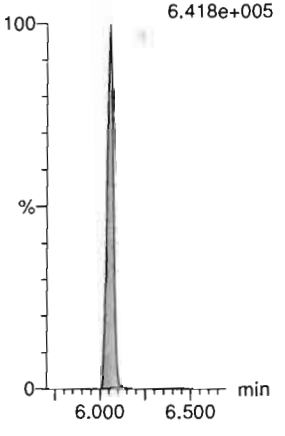
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
3.123e+004



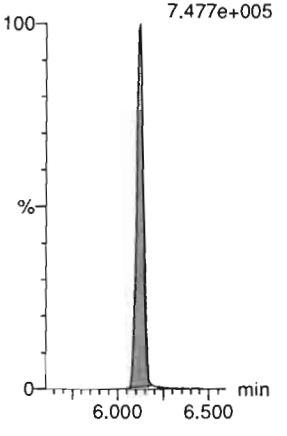
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.972e+005



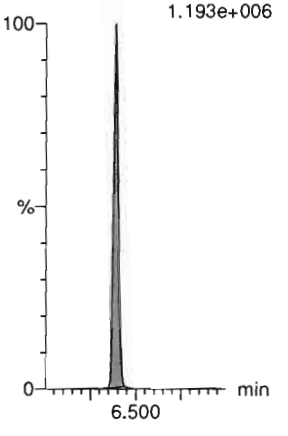
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F74:MRM of 2 channels,ES-
715.1 > 669.7
6.418e+005



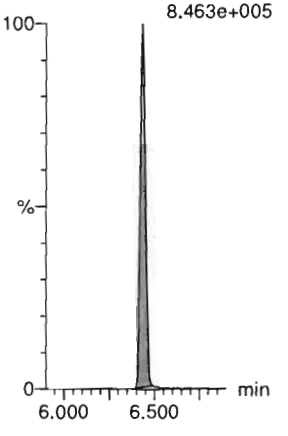
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.477e+005



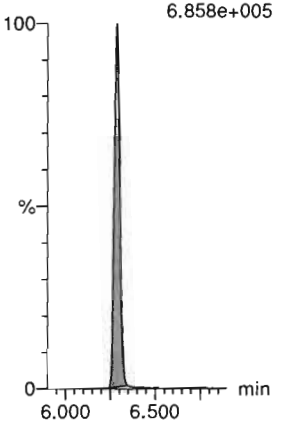
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.193e+006



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
8.463e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
6.858e+005

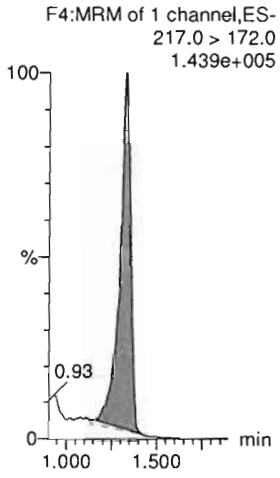


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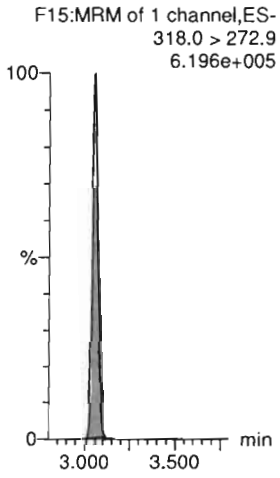
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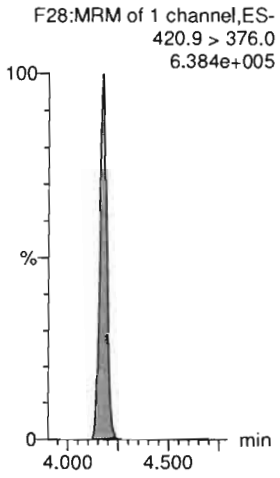
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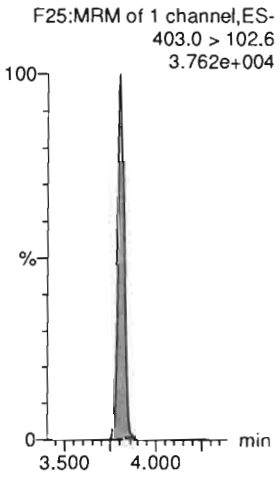
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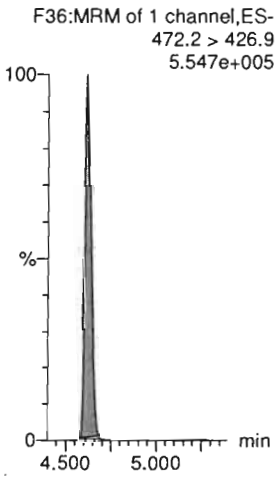
13C8-PFOA



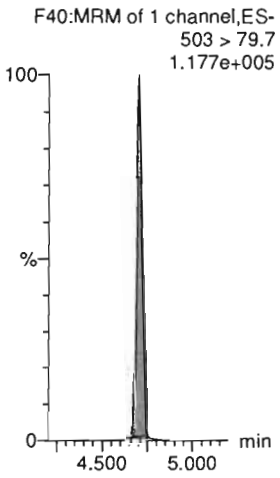
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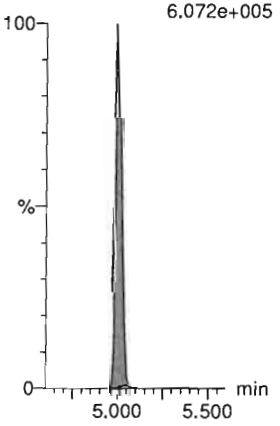
13C9-PFNA



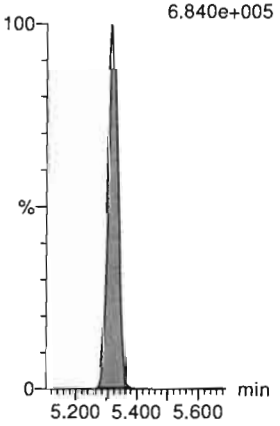
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13C6-PFDA



13C7-PFUdA

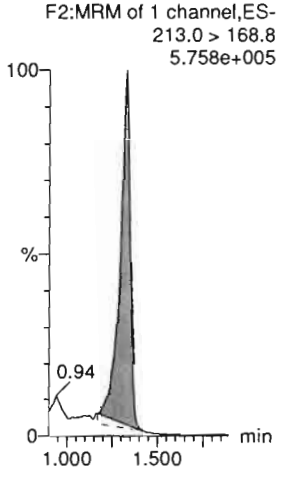


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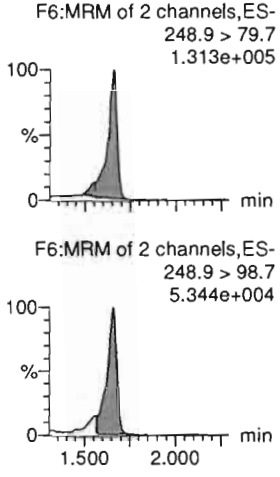
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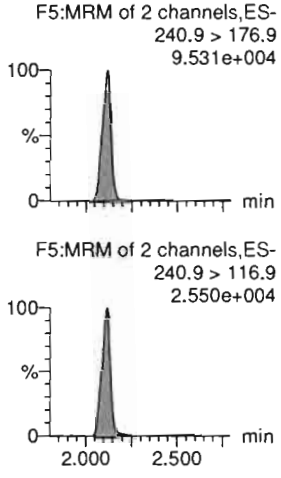
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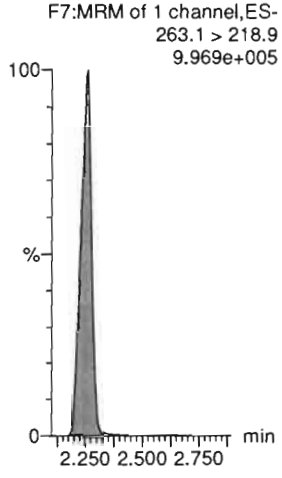
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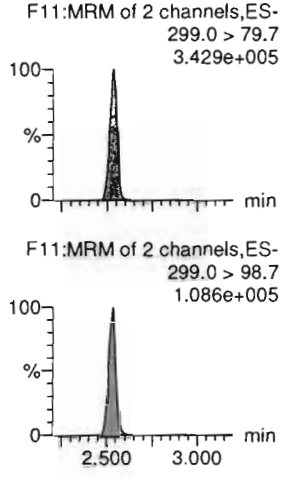
3:3 FTCA



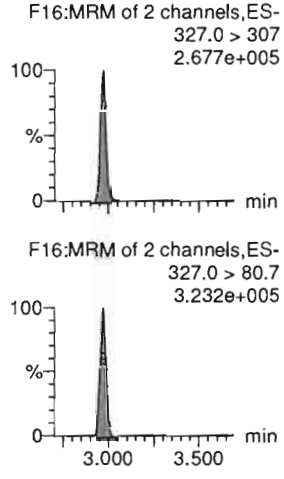
PFPeA



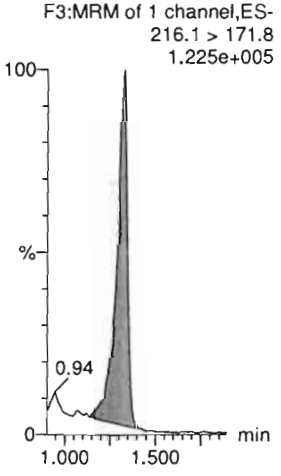
PFBS



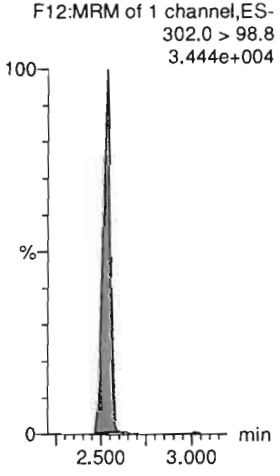
4:2 FTS



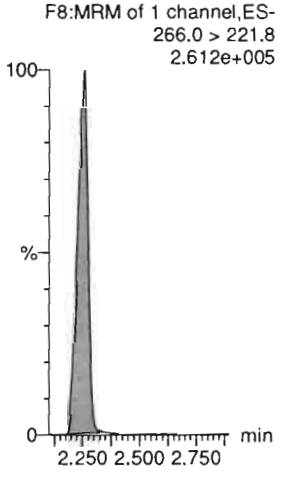
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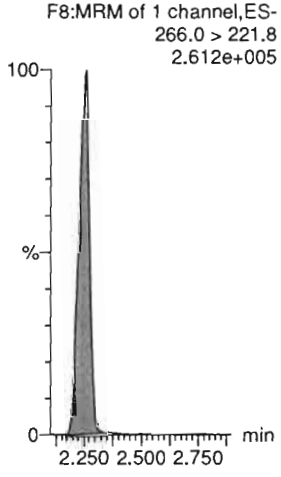
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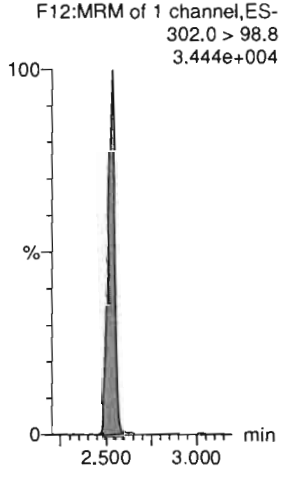
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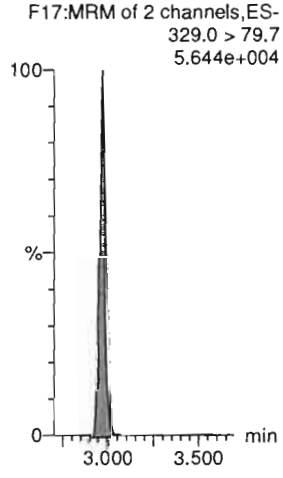
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13C3-PFBS-EIS



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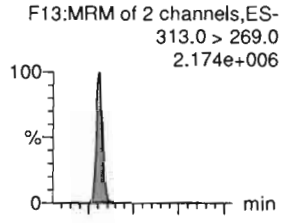


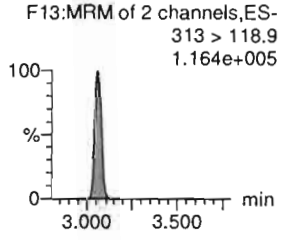
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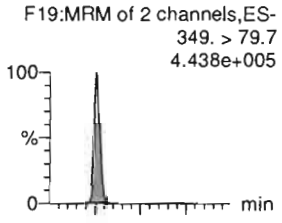
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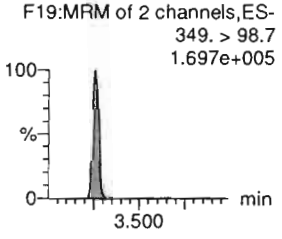
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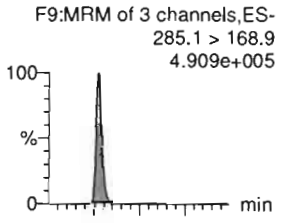


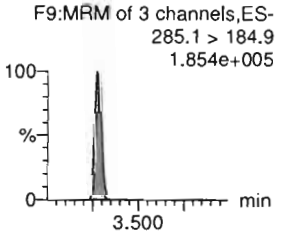
PFPeS



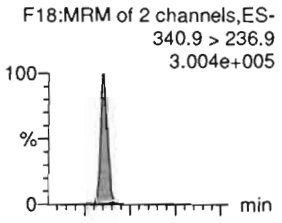


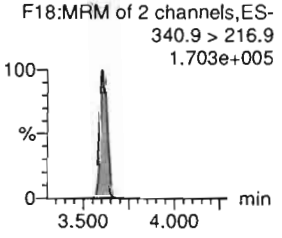
HFPO-DA



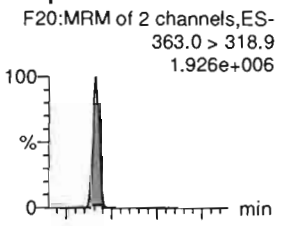


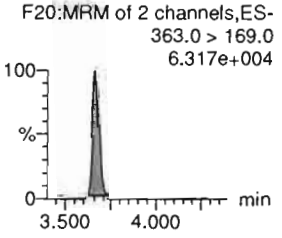
5:3 FTCA



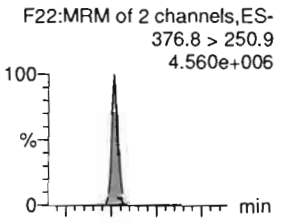


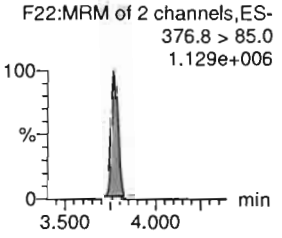
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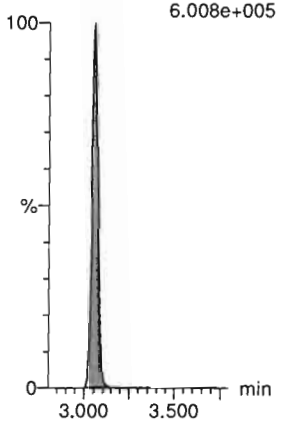


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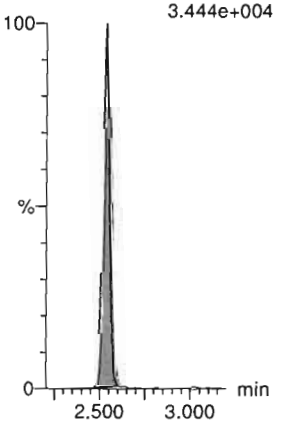




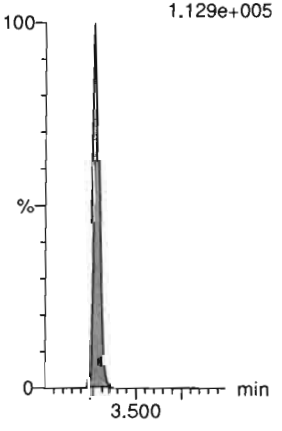
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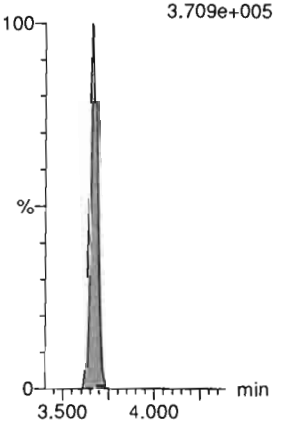
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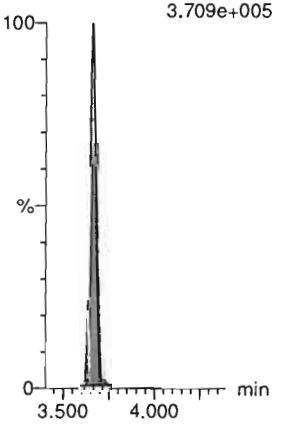
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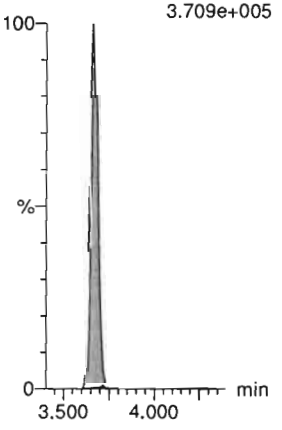
13C4-PFHpA-EIS



13C4-PFHpA-EIS



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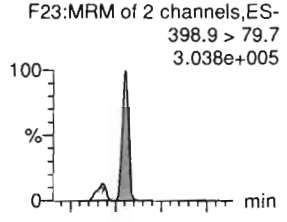


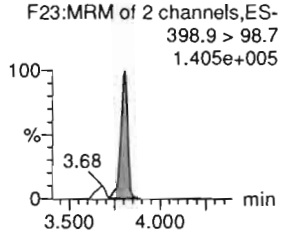
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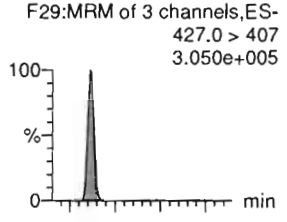
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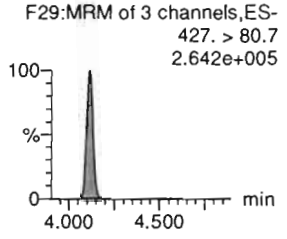
L-PFHxS



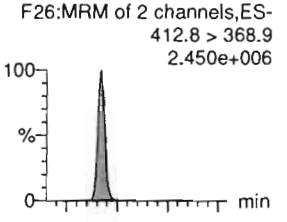


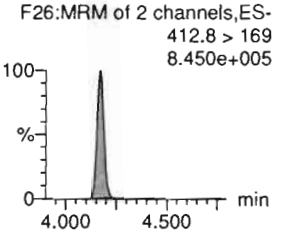
6:2 FTS



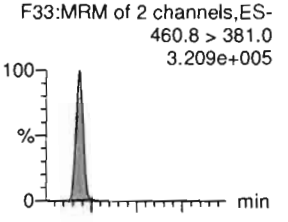


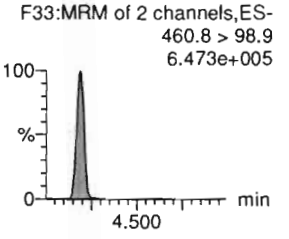
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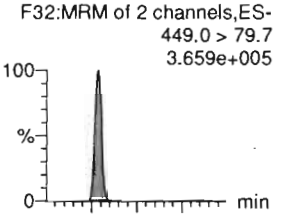


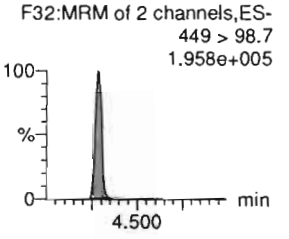
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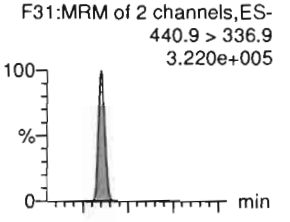


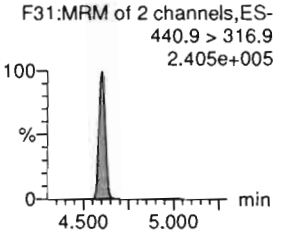
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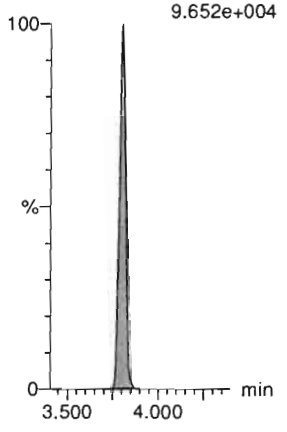


7:3 FTCA

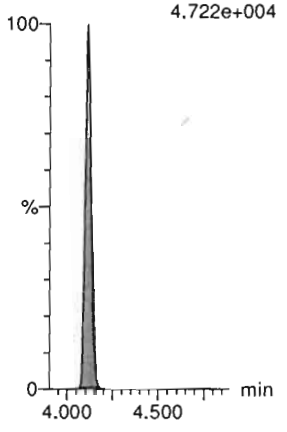




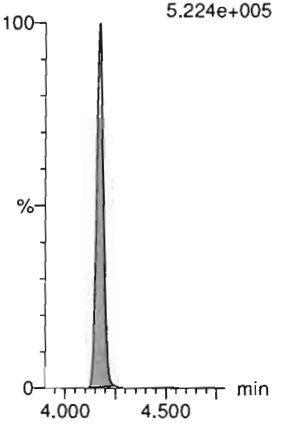
13C3-PFHxS-EIS



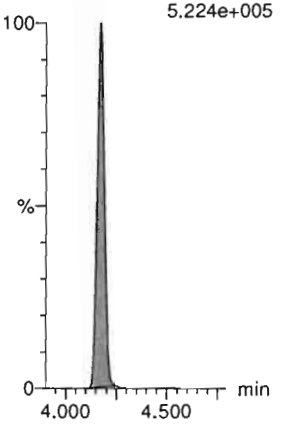
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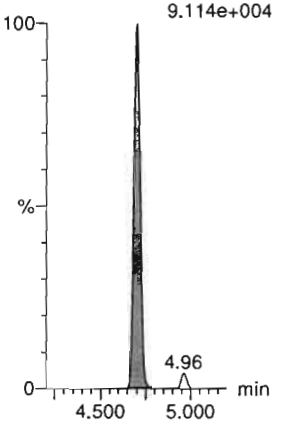
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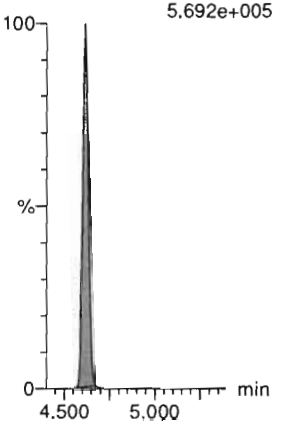
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13C8-PFOS-EIS



13C5-PFNA-EIS

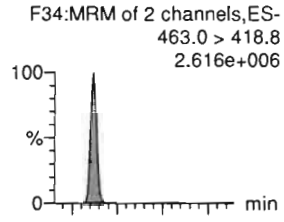


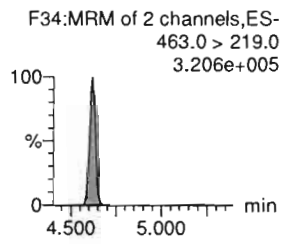
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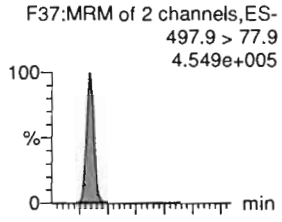
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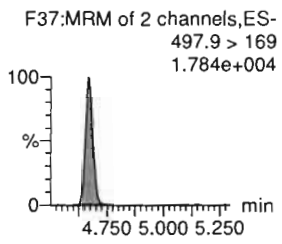
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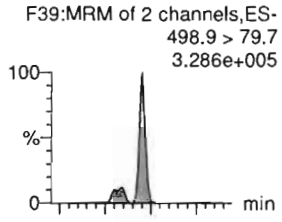


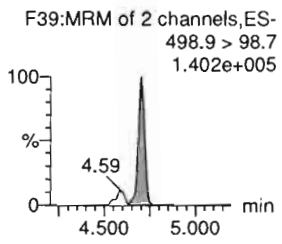
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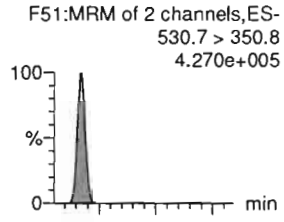


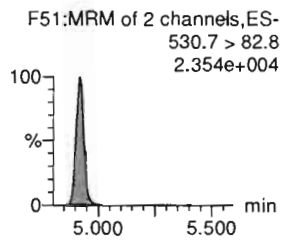
L-PFOS



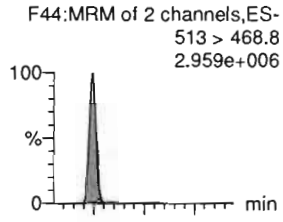


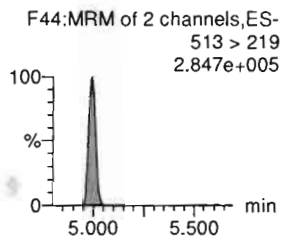
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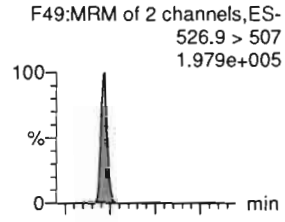


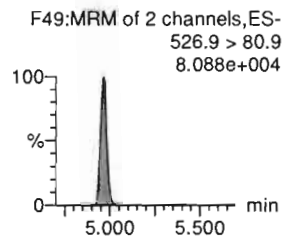
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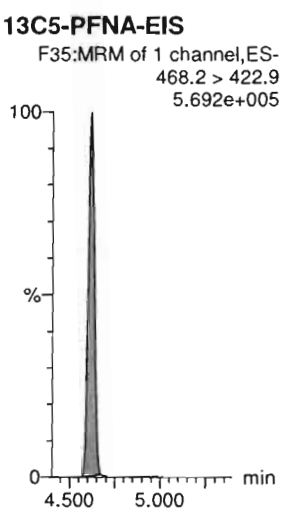


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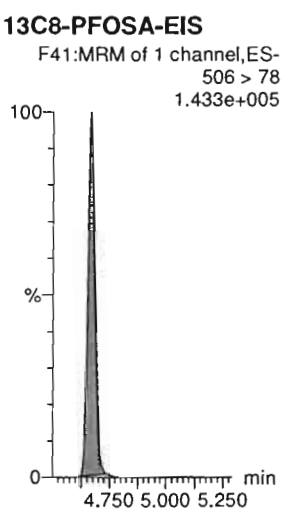




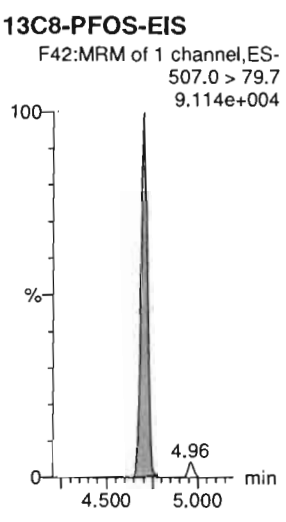
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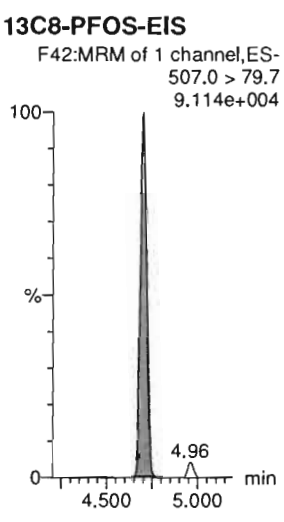
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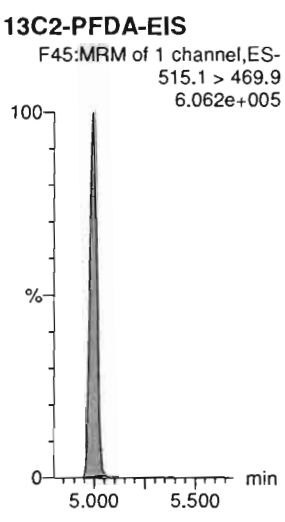
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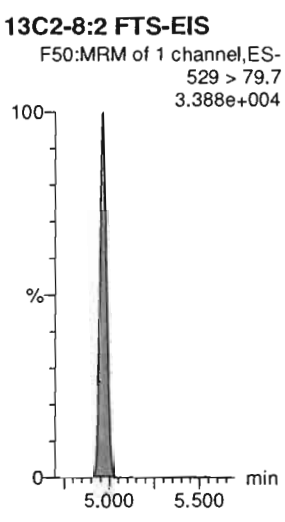
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

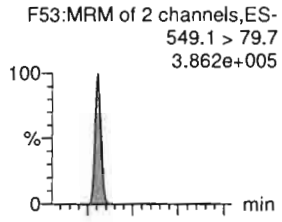


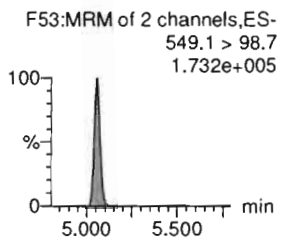
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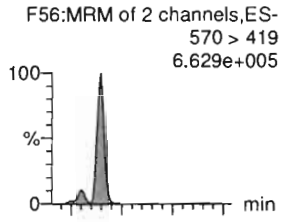
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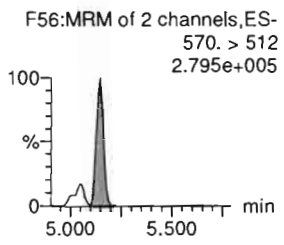
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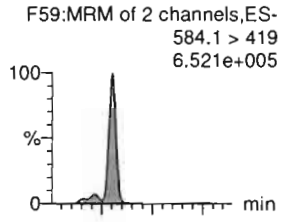


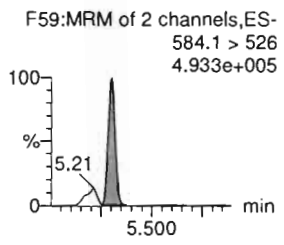
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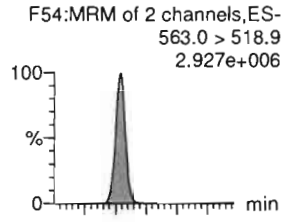


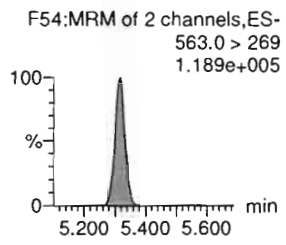
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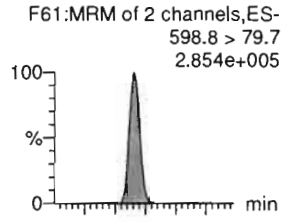


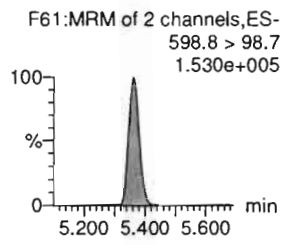
PFUdA



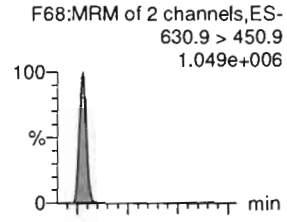


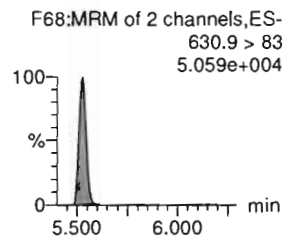
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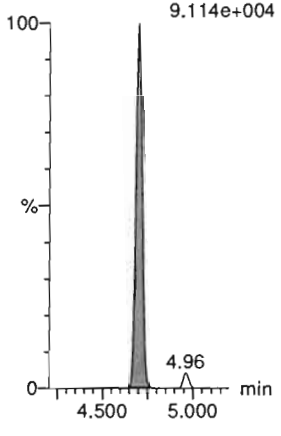


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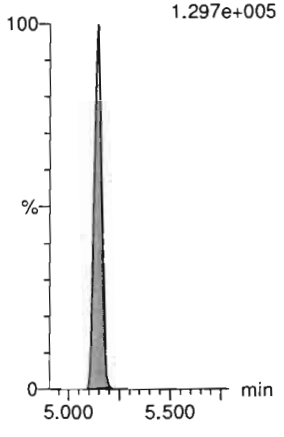




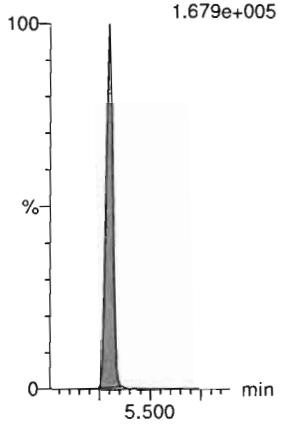
13C8-PFOS-EIS



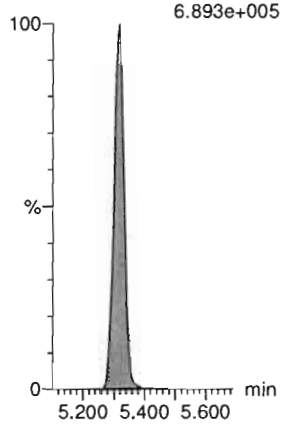
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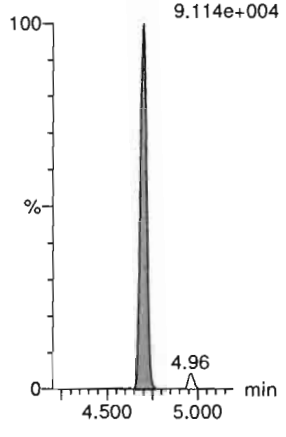
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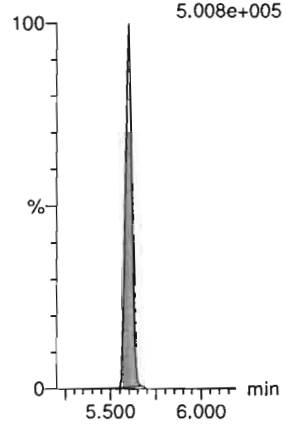
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13C8-PFOS-EIS



13C2-PFDoA-EIS

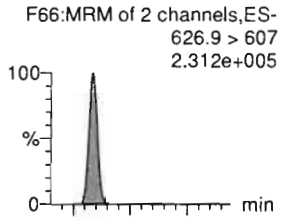


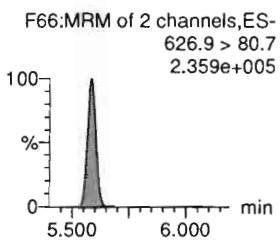
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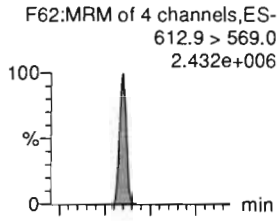
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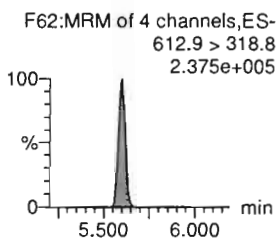
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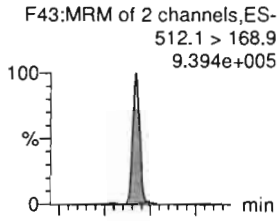


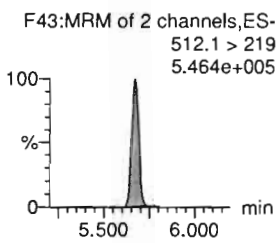
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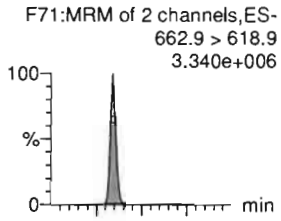


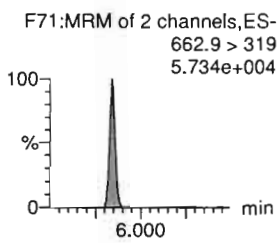
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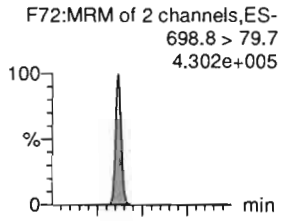


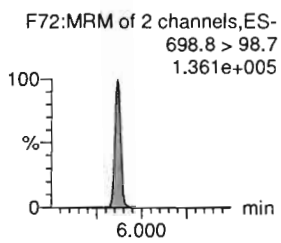
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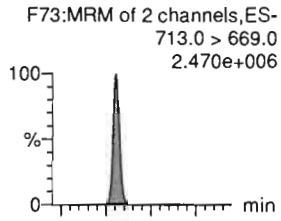


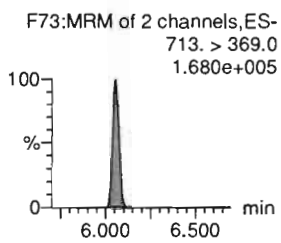
PFDoS



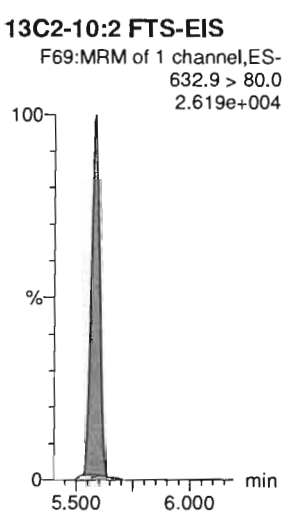


PFTeDA

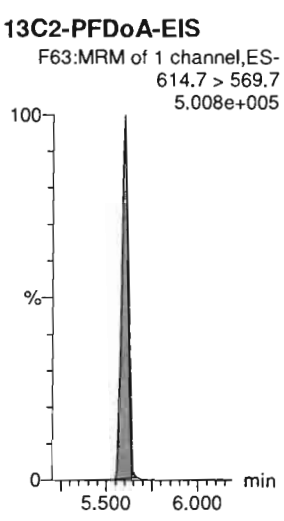




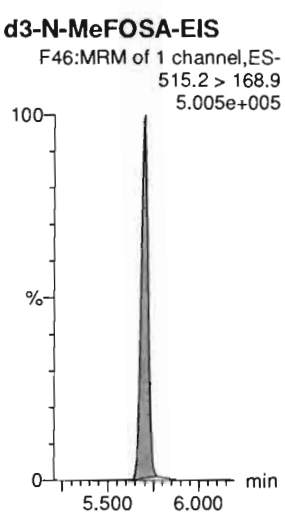
13C2-10:2 FTS-EIS



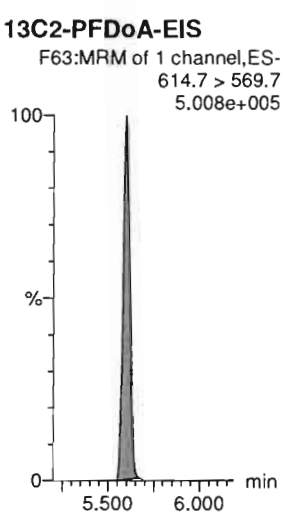
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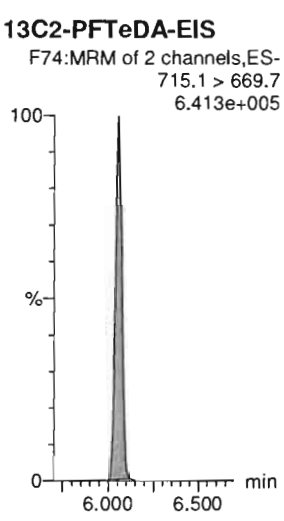
d3-N-MeFOSA-EIS



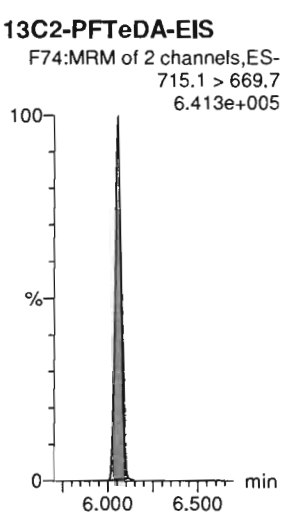
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

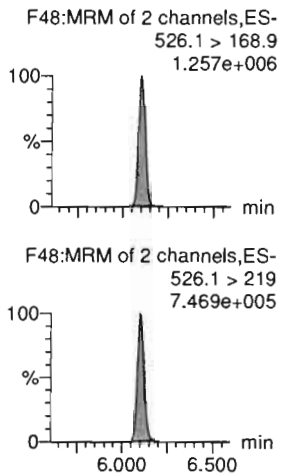


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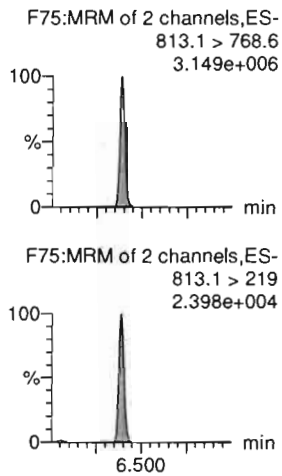
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Name: 200227P1-9, Date: 27-Feb-2020, Time: 16:47:20, ID: ST200227P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

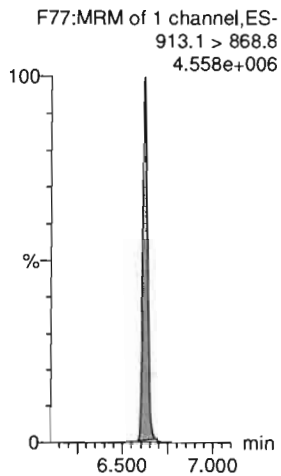
N-EtFOSA



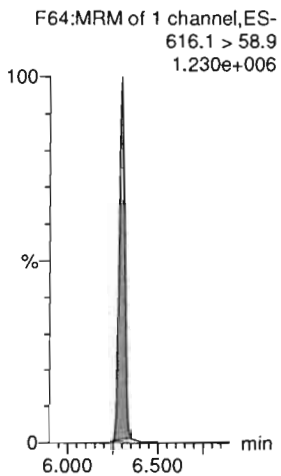
PFHxDA



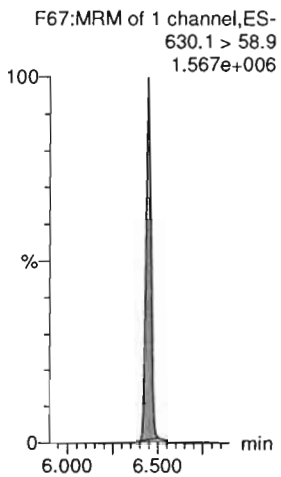
PFODA



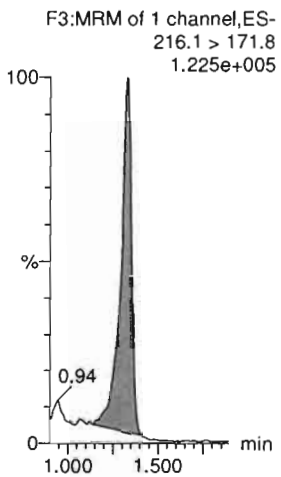
N-MeFOSE



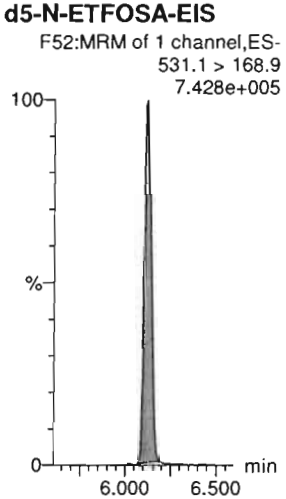
N-EtFOSE



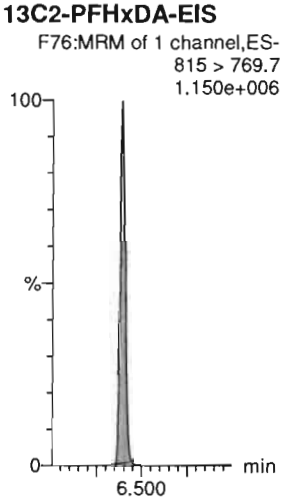
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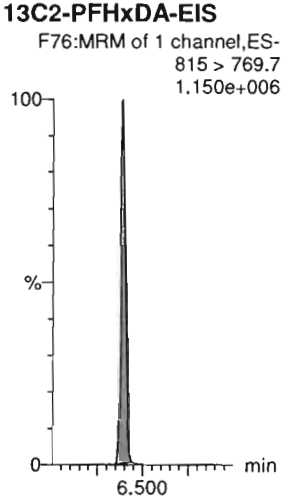
d5-N-ETFOSA-EIS



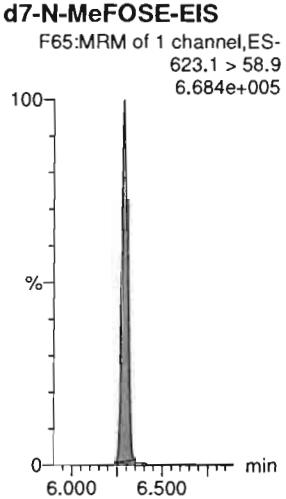
13C2-PFHxDA-EIS



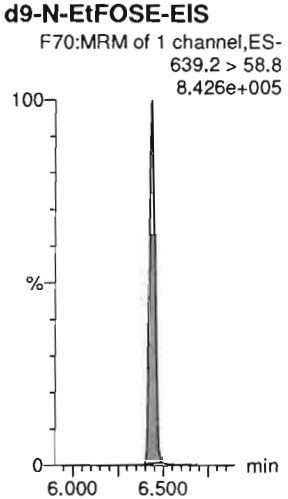
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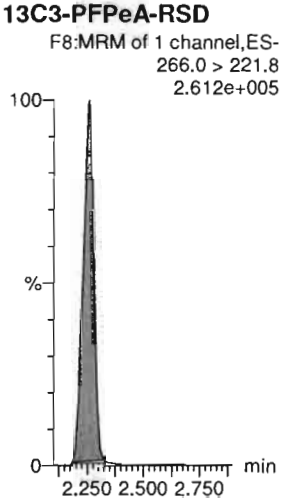
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

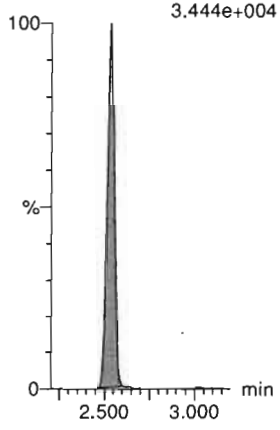


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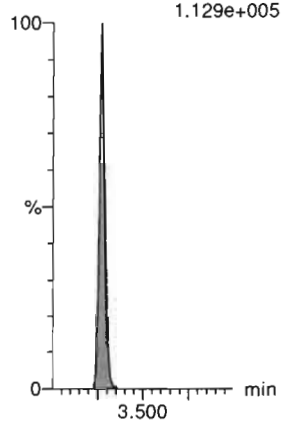
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Name: 200227P1-9, Date: 27-Feb-2020, Time: 16:47:20, ID: ST200227P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

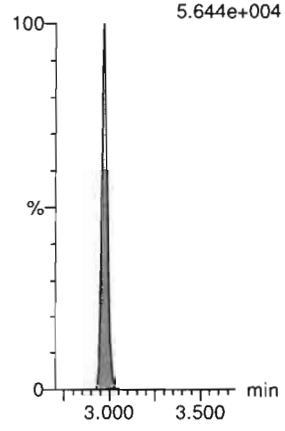
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.444e+004



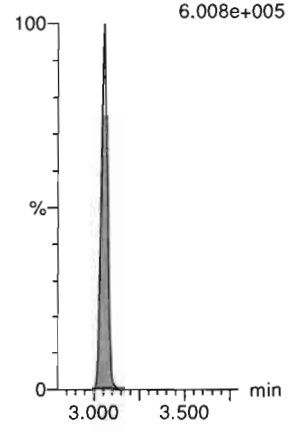
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.129e+005



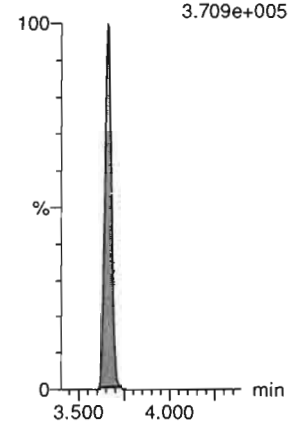
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
5.644e+004



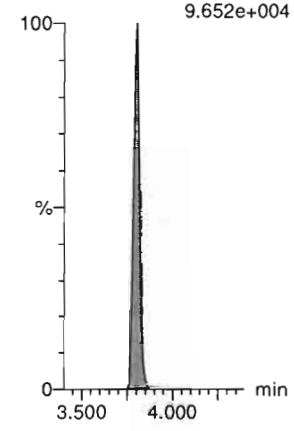
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
6.008e+005



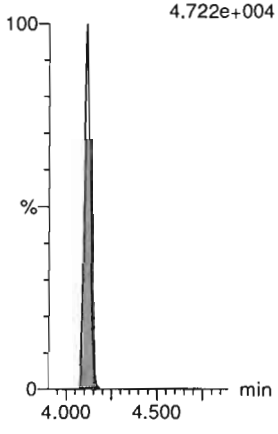
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.709e+005



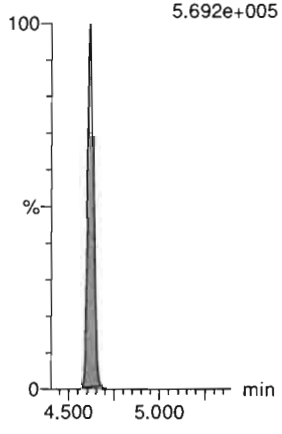
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
9.652e+004



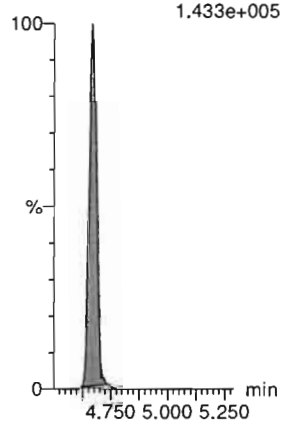
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.722e+004



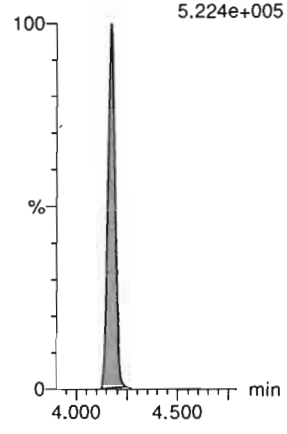
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.692e+005



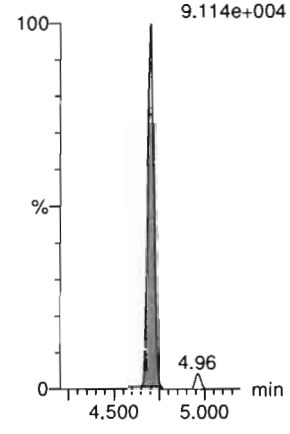
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.433e+005



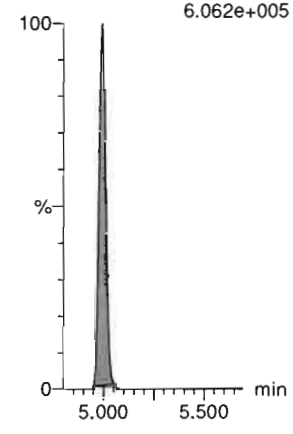
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.224e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.114e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
6.062e+005

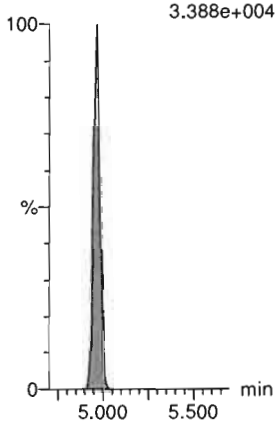


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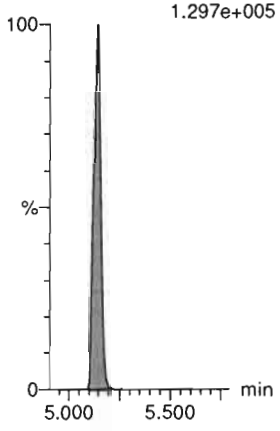
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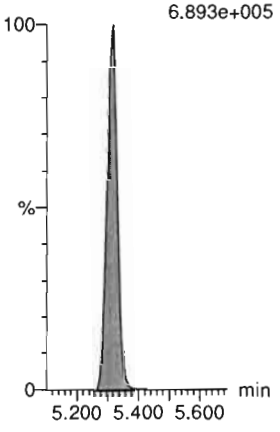
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.388e+004



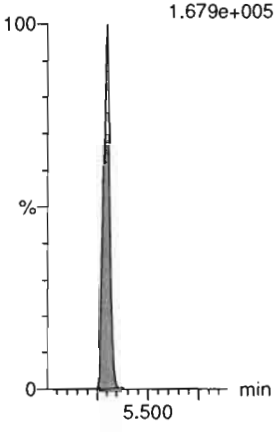
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F58:MRM of 1 channel,ES-
573.3 > 419
1.297e+005



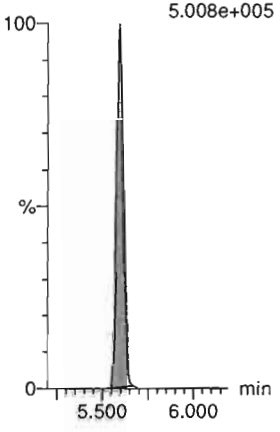
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.893e+005



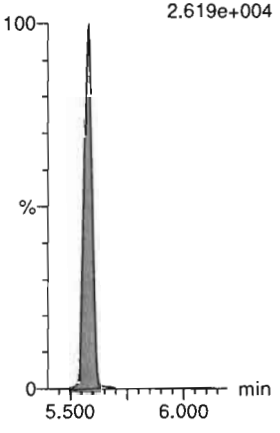
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.679e+005



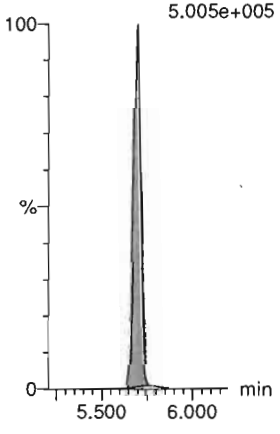
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.008e+005



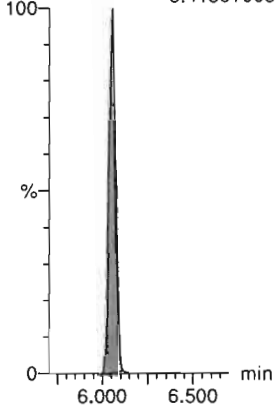
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.619e+004



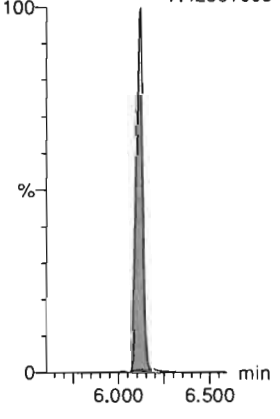
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.005e+005



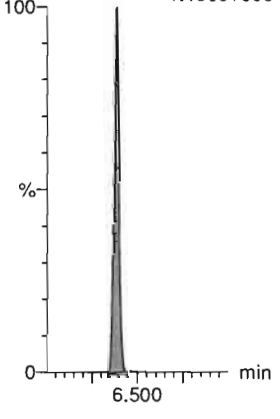
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
6.413e+005



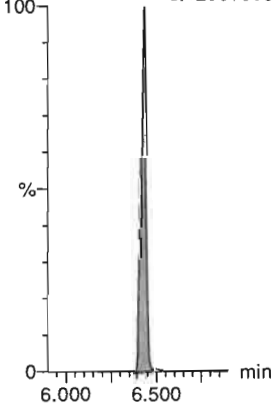
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.428e+005



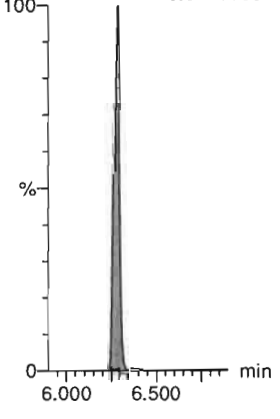
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.150e+006



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
8.426e+005



d7-N-MeFOSE-RSD
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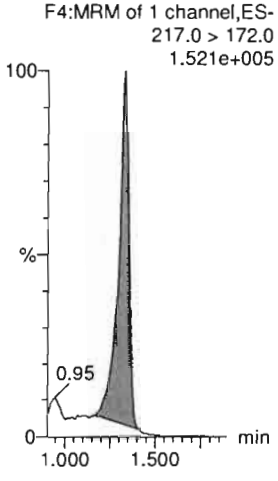


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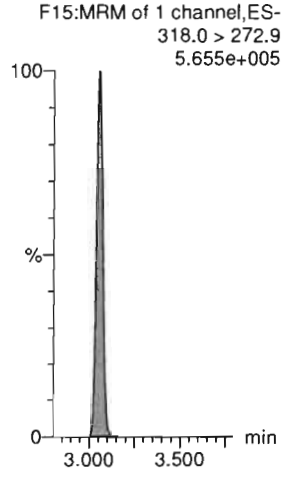
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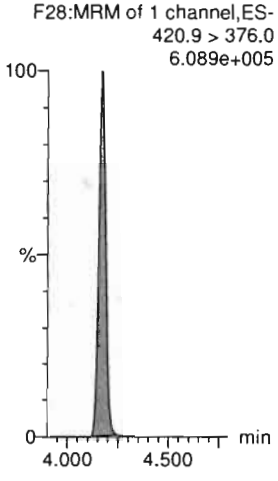
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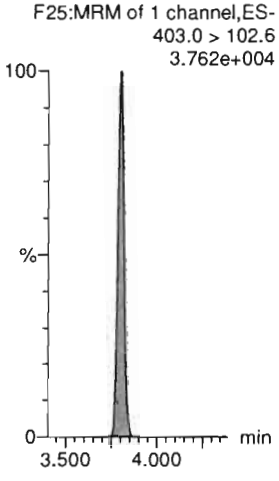
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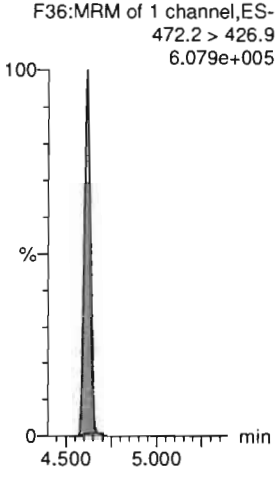
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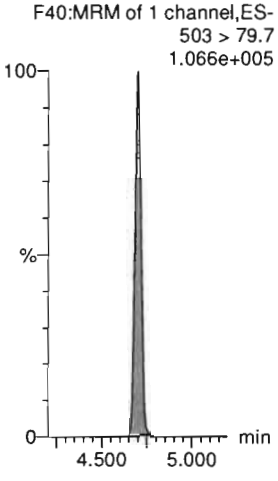
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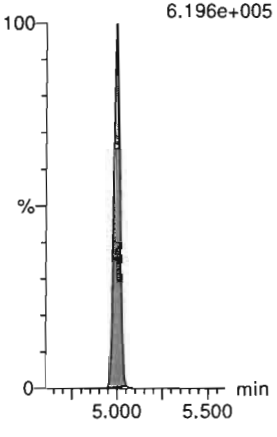
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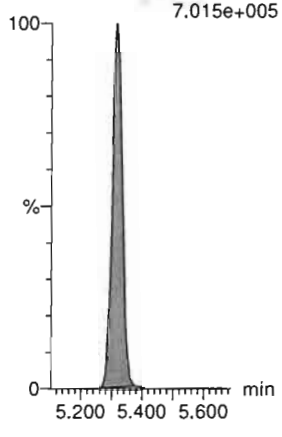
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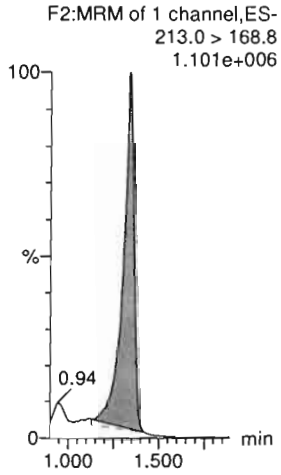


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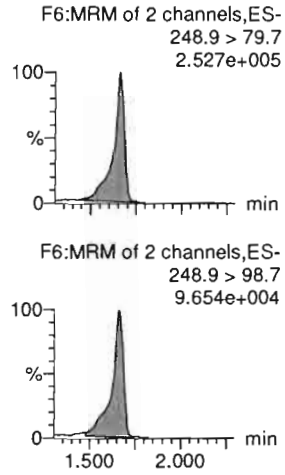
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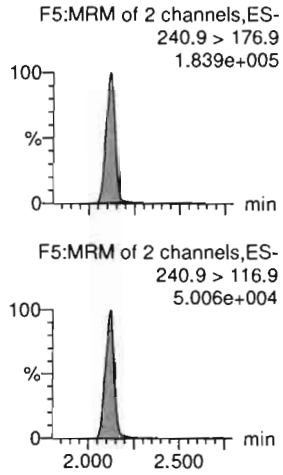
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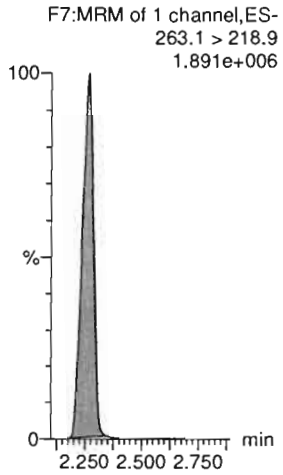
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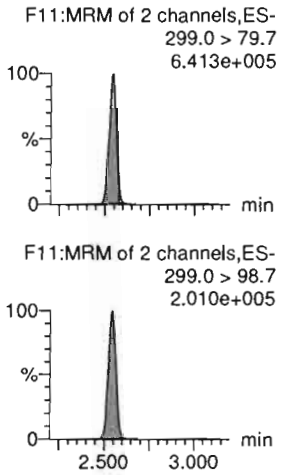
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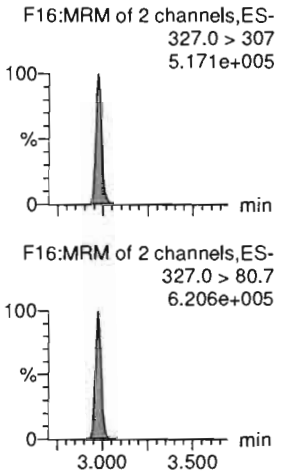
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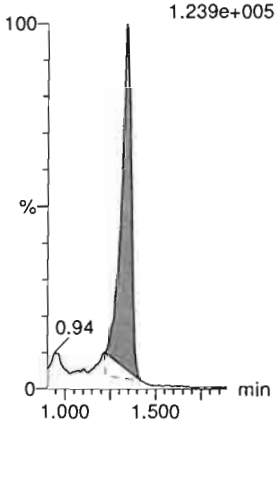
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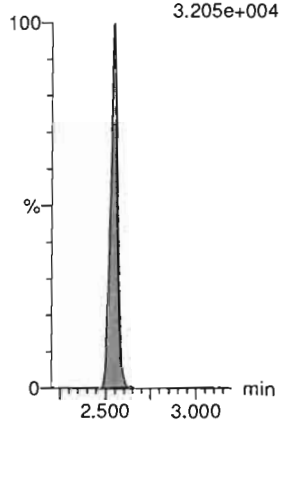
4:2 FTS



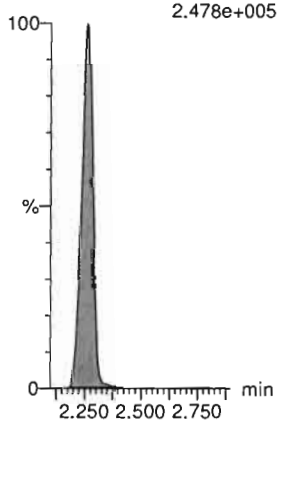
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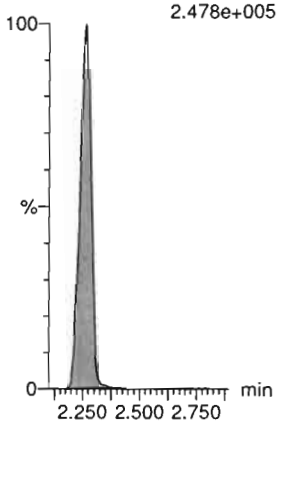
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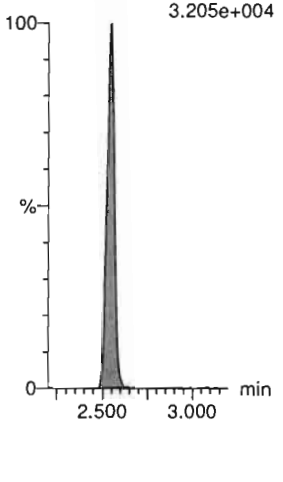
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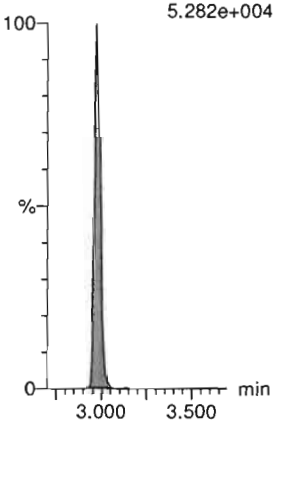
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

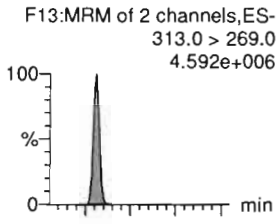


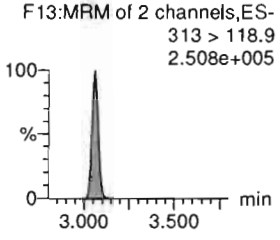
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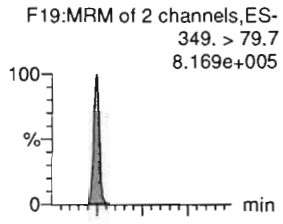
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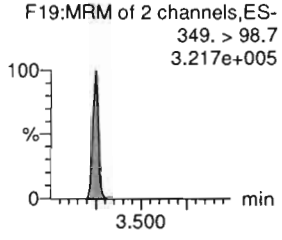
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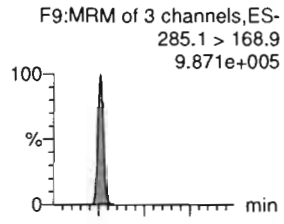


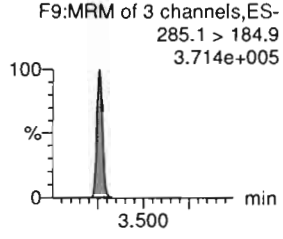
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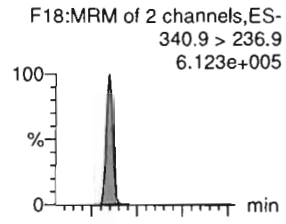


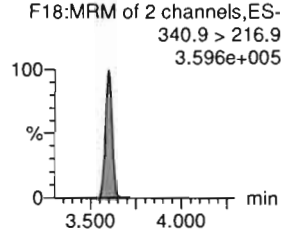
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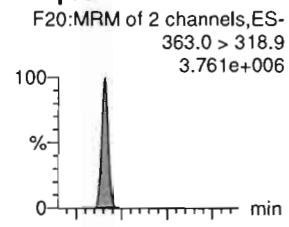


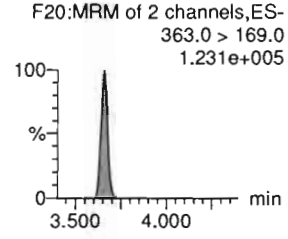
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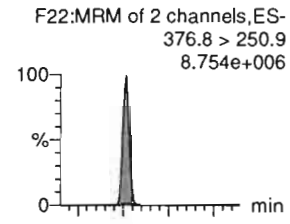


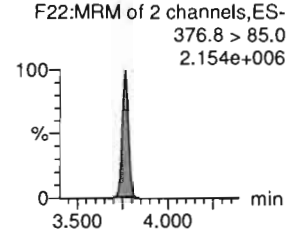
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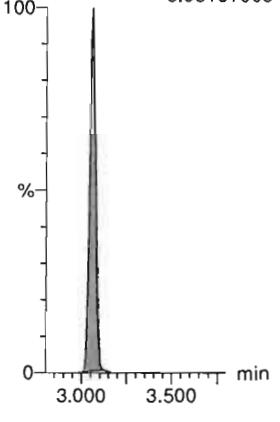


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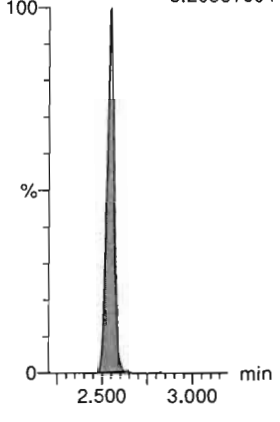




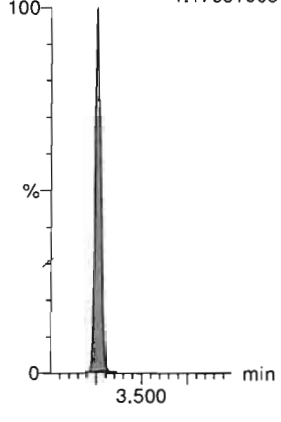
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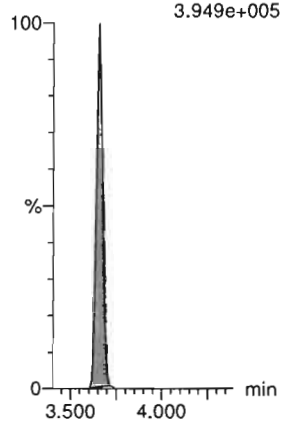
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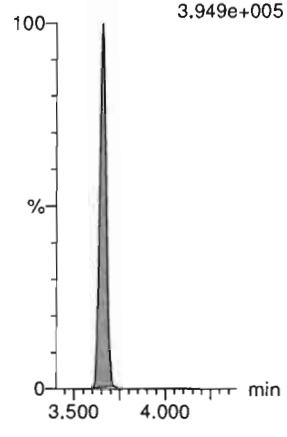
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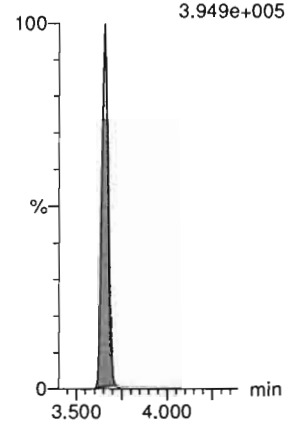
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13C4-PFHpA-EIS



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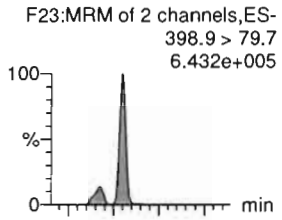


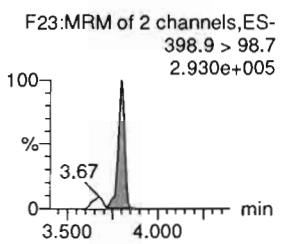
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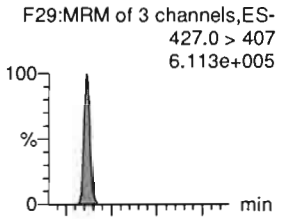
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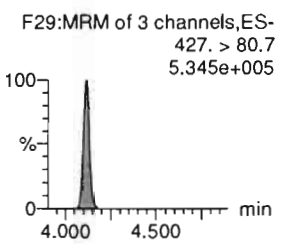
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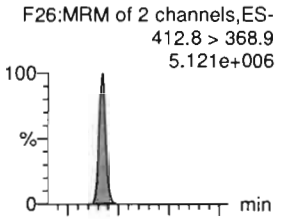


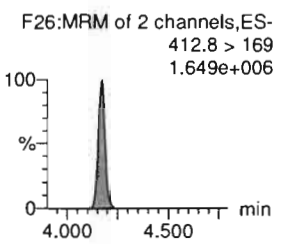
6:2 FTS



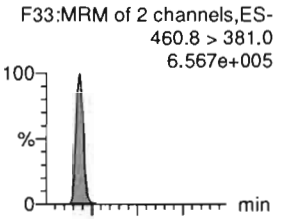


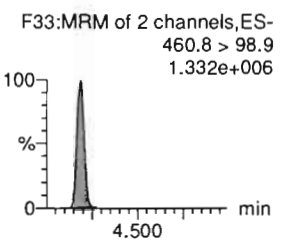
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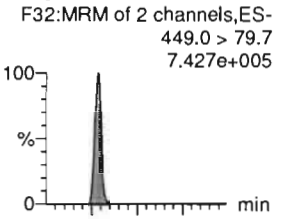


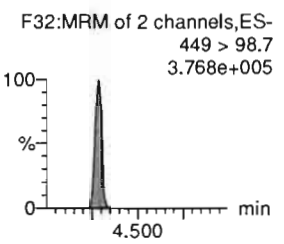
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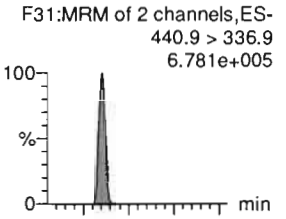


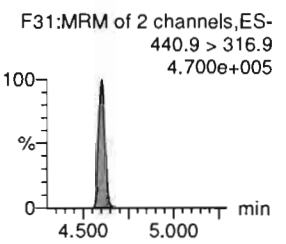
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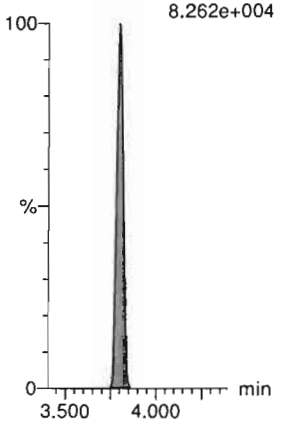


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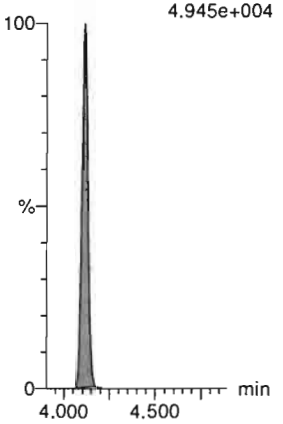




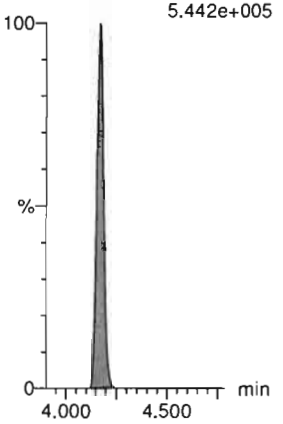
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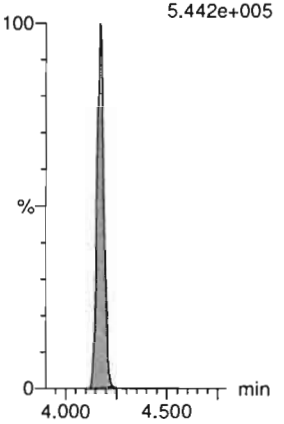
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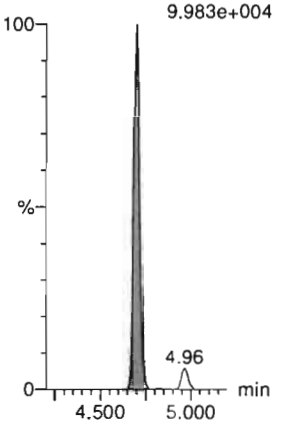
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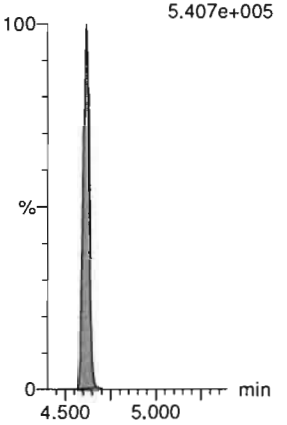
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13C8-PFOS-EIS



13C5-PFNA-EIS

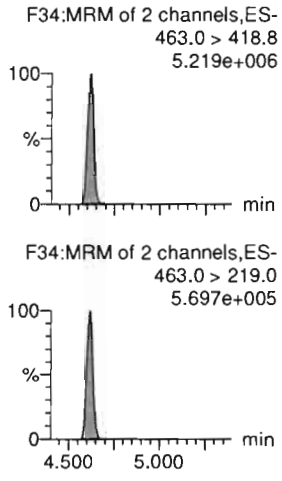


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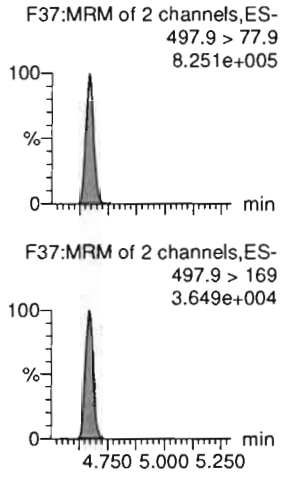
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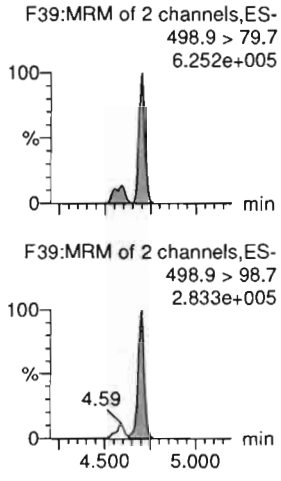
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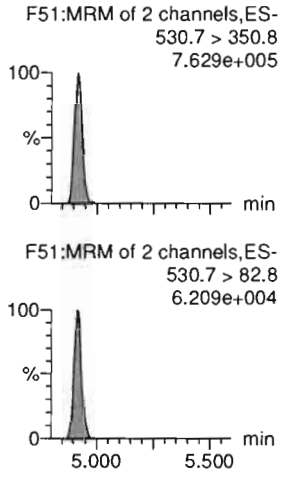
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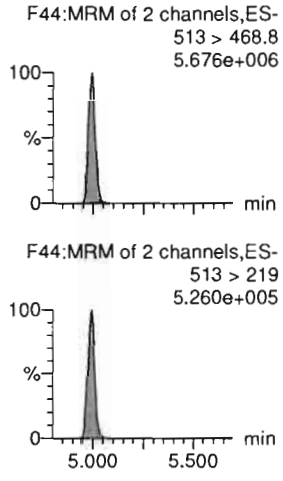
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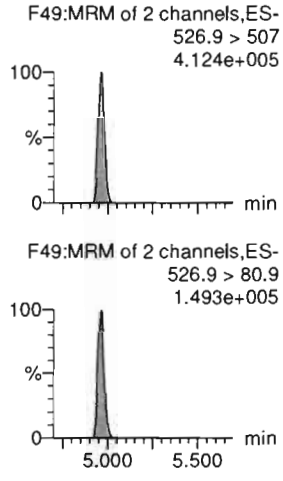
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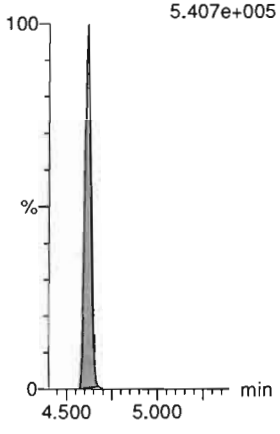
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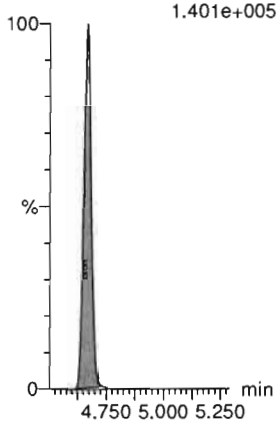
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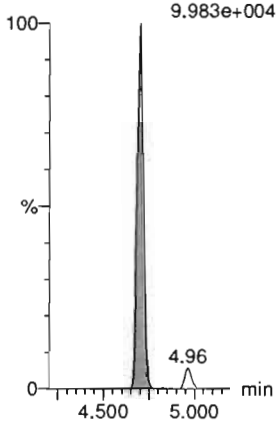
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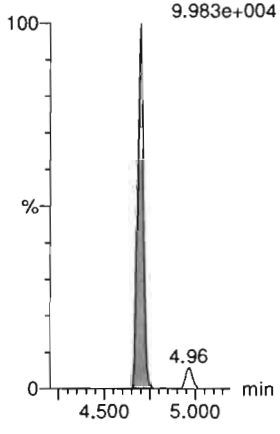
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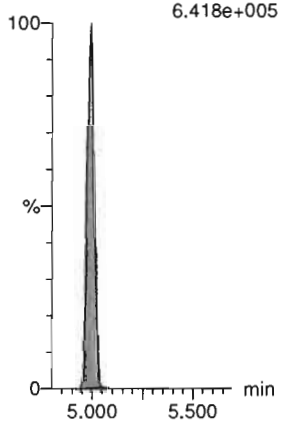
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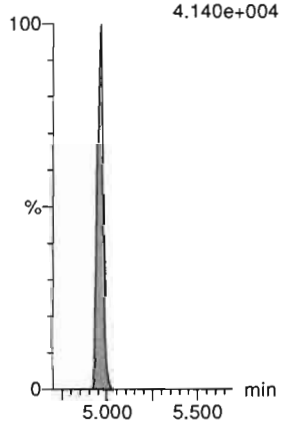
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13C2-PFDA-EIS



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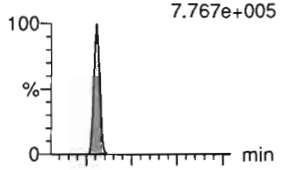


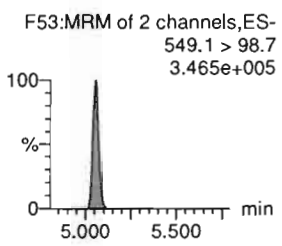
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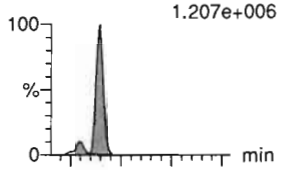
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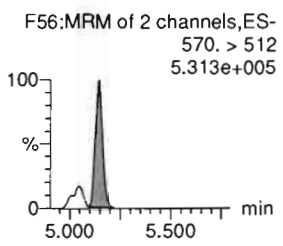
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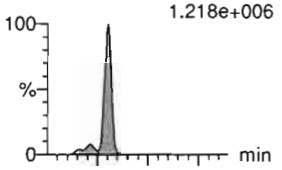


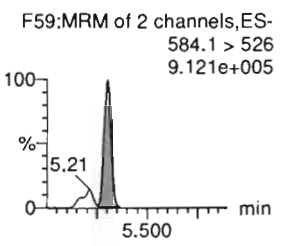
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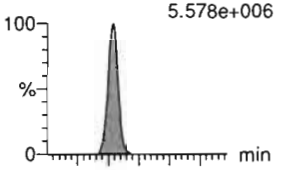


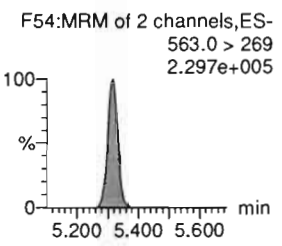
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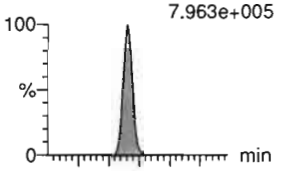


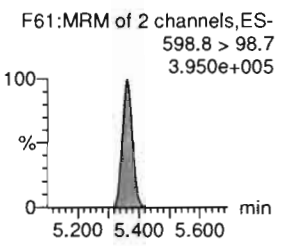
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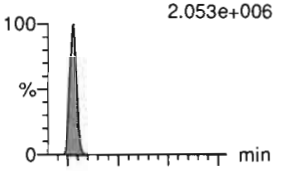


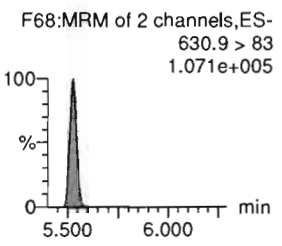
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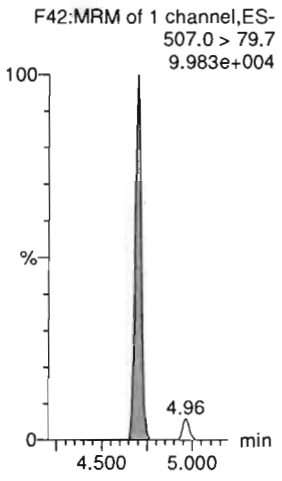


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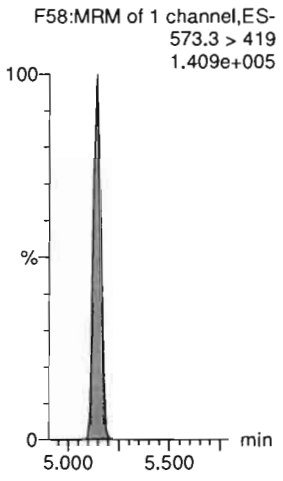




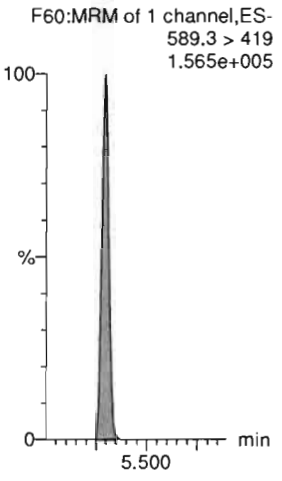
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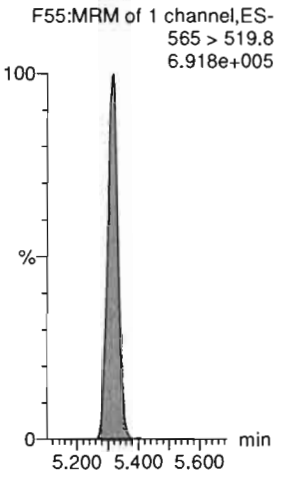
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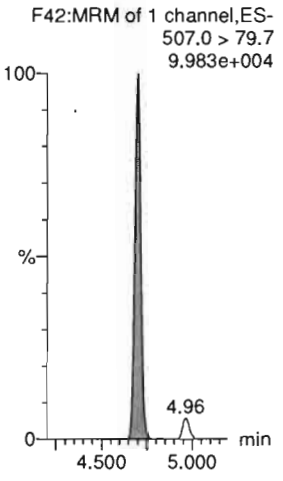
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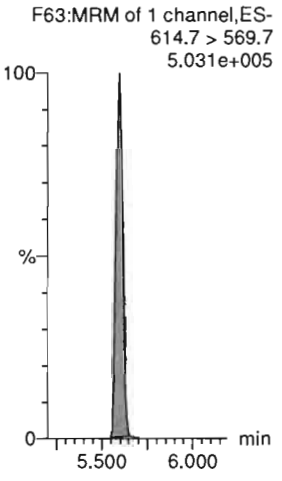
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13C8-PFOS-EIS



13C2-PFDoA-EIS

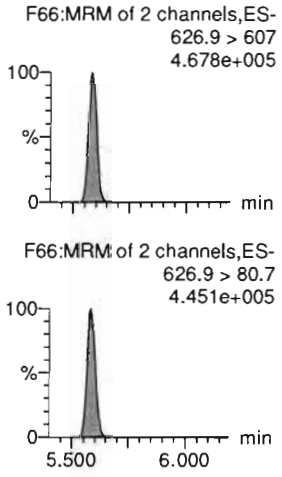


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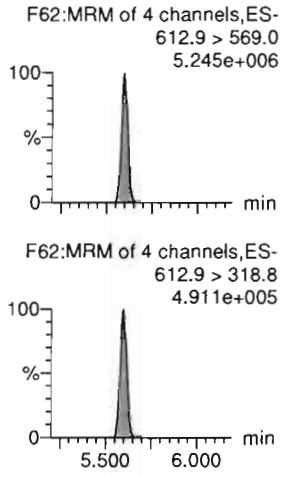
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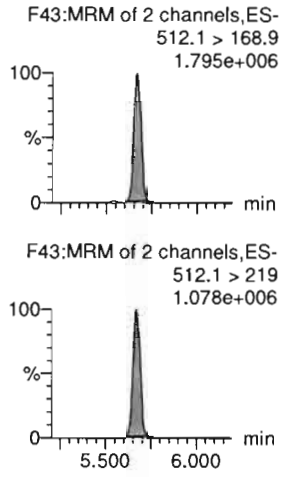
10:2 FTS



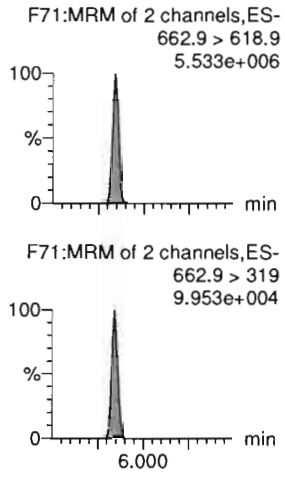
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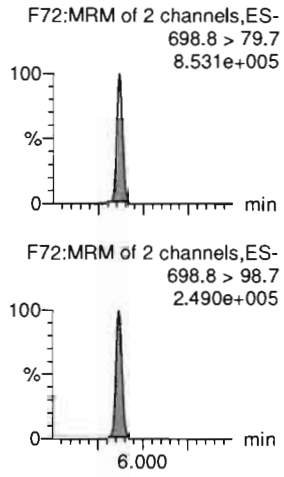
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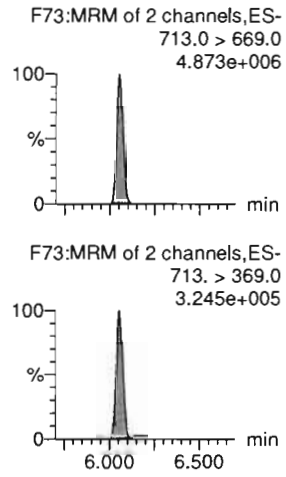
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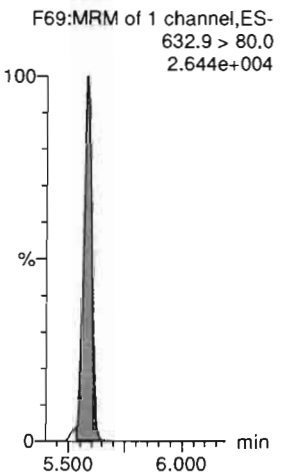
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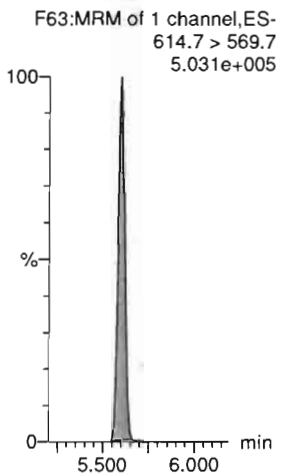
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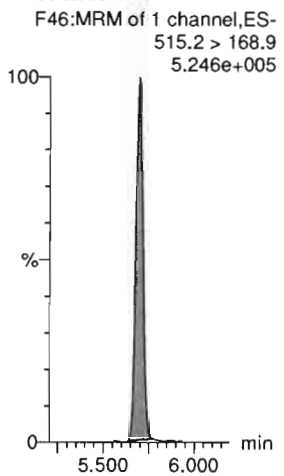
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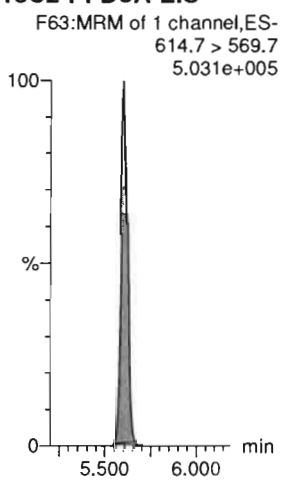
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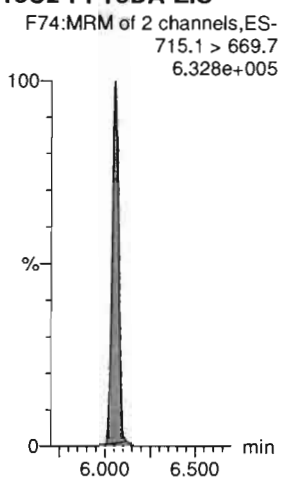
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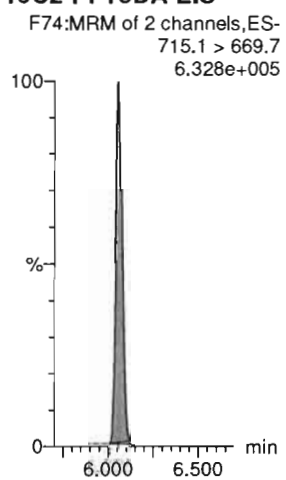
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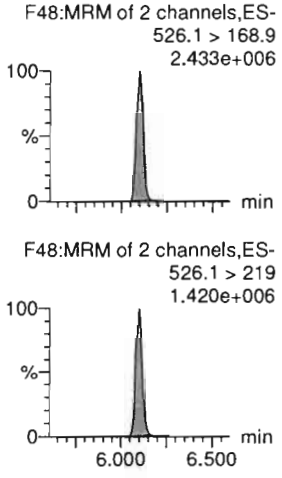


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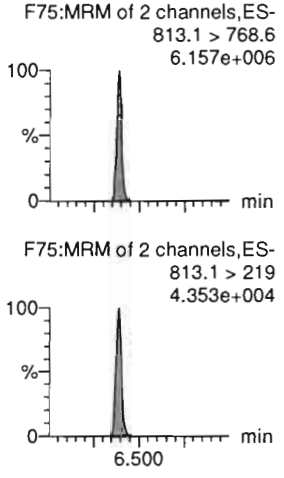
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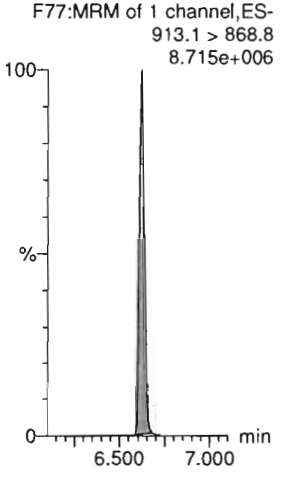
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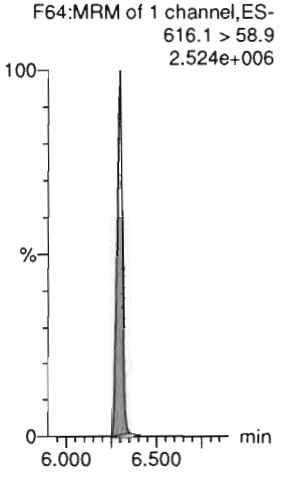
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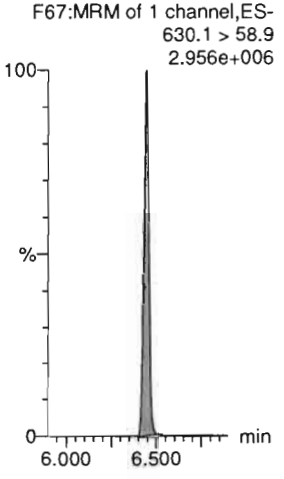
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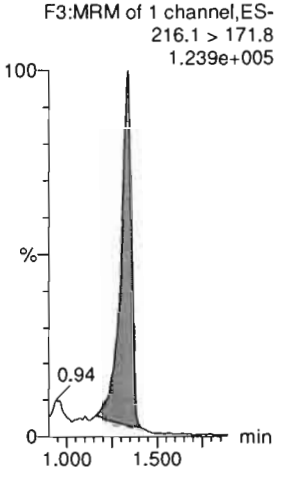
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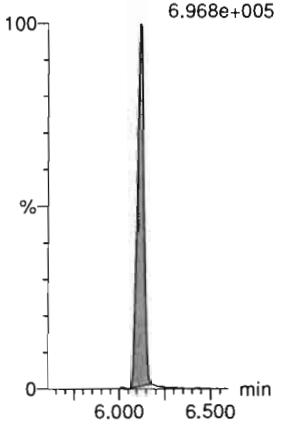
N-EtFOSE



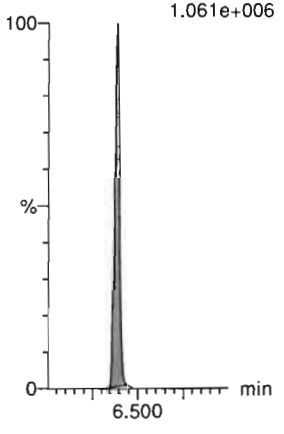
13C3-PFBA-RSD



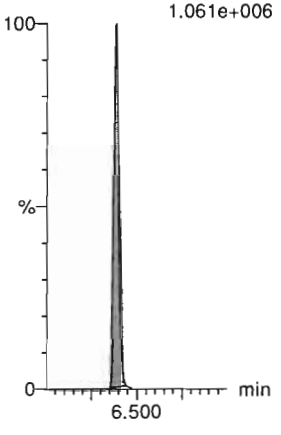
d5-N-ETFOSA-EIS



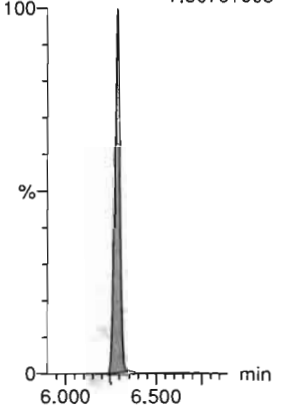
13C2-PFHxDA-EIS



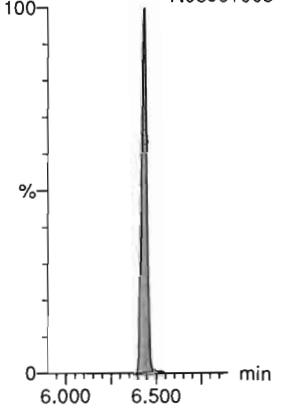
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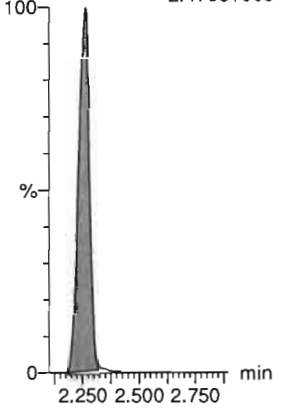
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

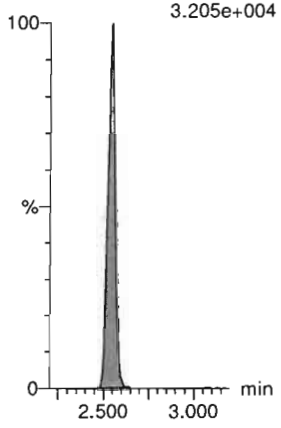


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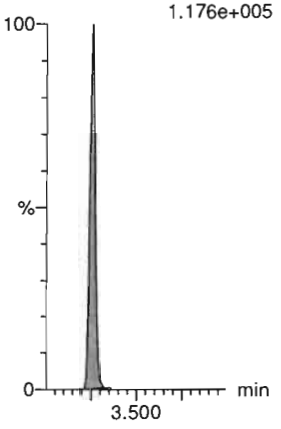
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Name: 200227P1-10, Date: 27-Feb-2020, Time: 16:58:53, ID: ST200227P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

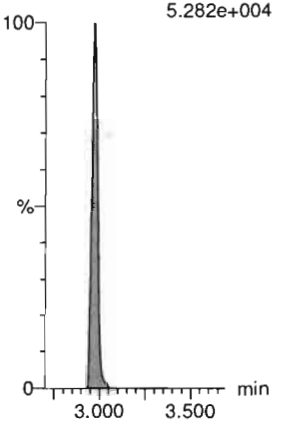
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.205e+004



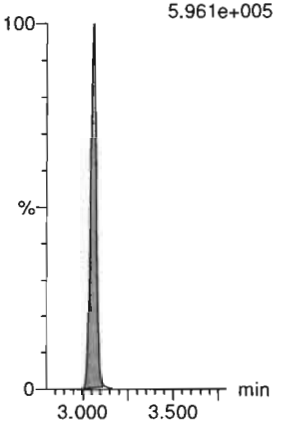
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.176e+005



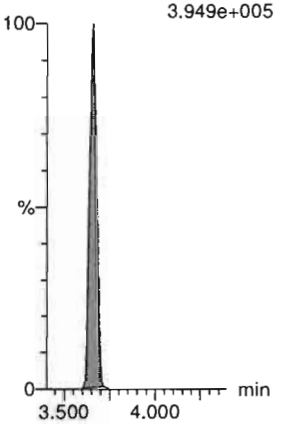
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
5.282e+004



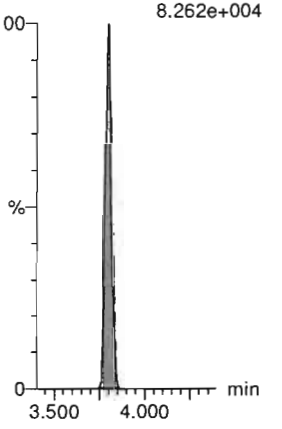
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.961e+005



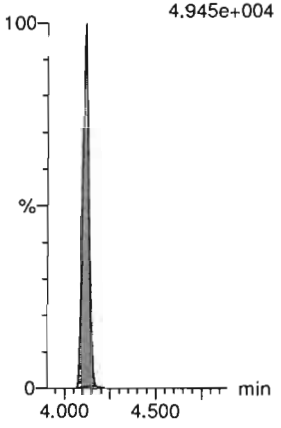
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.949e+005



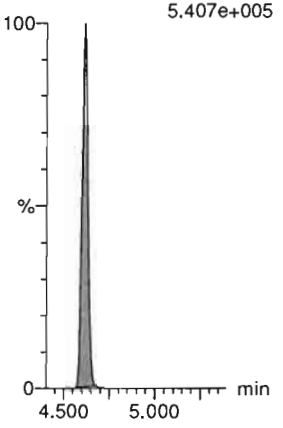
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.262e+004



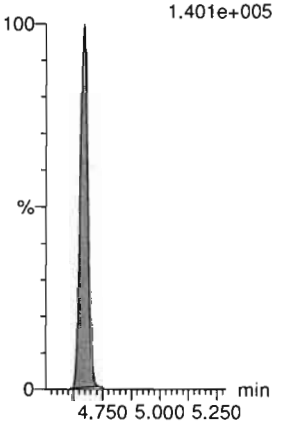
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.945e+004



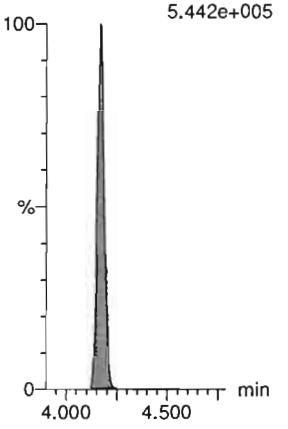
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.407e+005



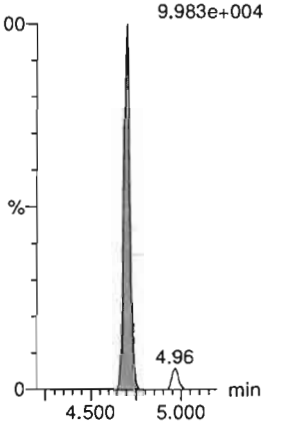
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.401e+005



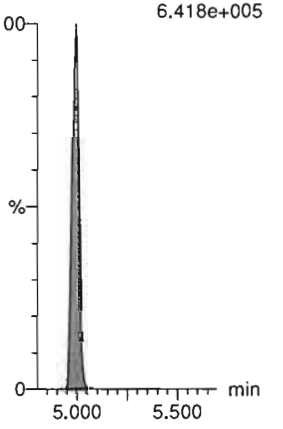
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.442e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.983e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
6.418e+005

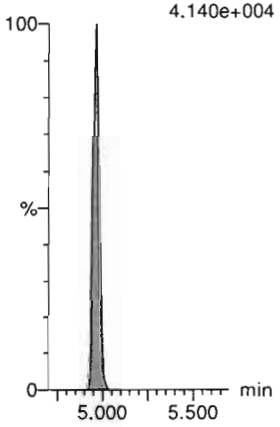


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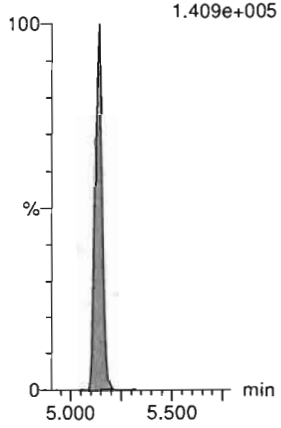
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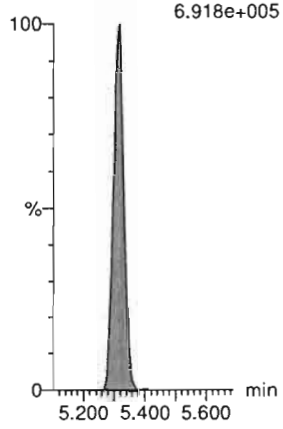
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F50:MRM of 1 channel,ES-
529 > 79.7
4.140e+004



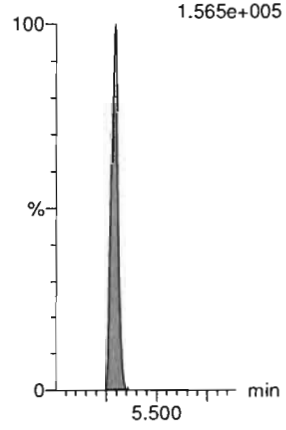
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.409e+005



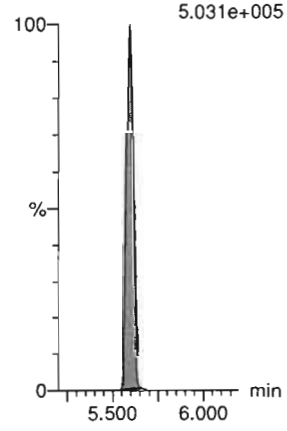
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.918e+005



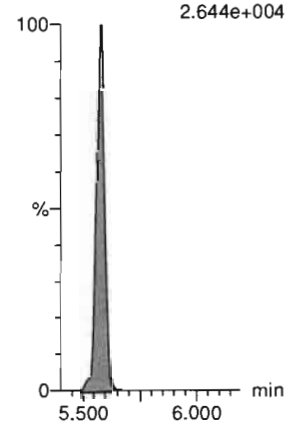
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F60:MRM of 1 channel,ES-
589.3 > 419
1.565e+005



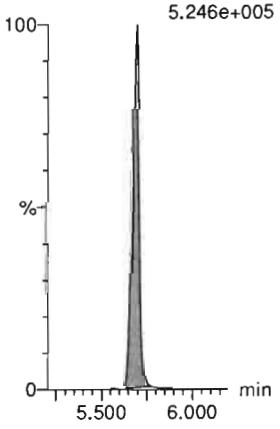
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.031e+005



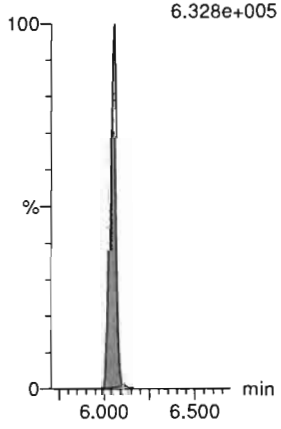
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.644e+004



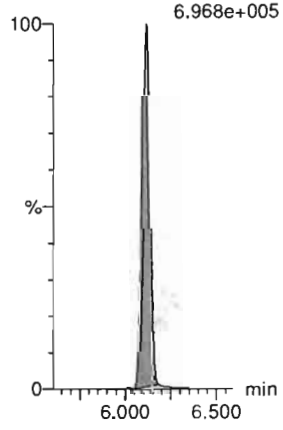
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.246e+005



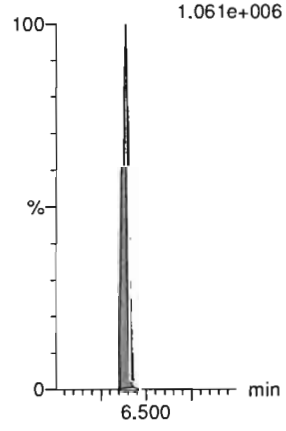
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F74:MRM of 2 channels,ES-
715.1 > 669.7
6.328e+005



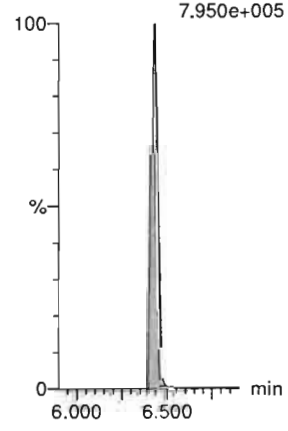
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.968e+005



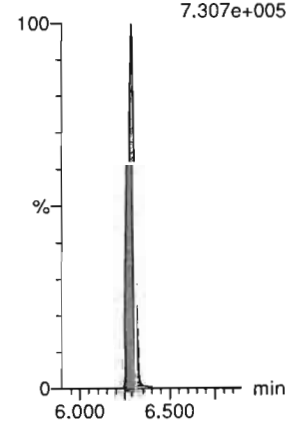
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.061e+006



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.950e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
7.307e+005

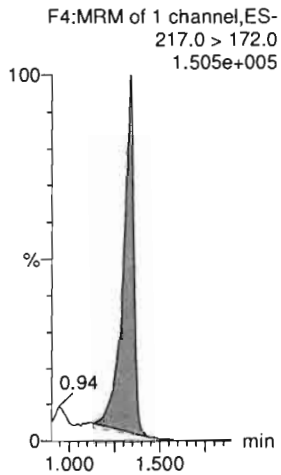


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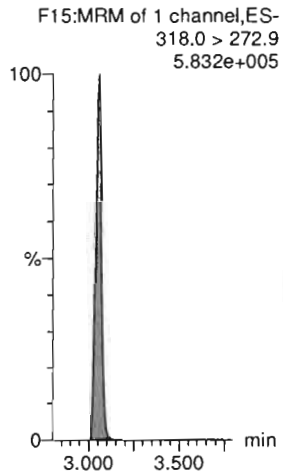
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Name: 200227P1-10, Date: 27-Feb-2020, Time: 16:58:53, ID: ST200227P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

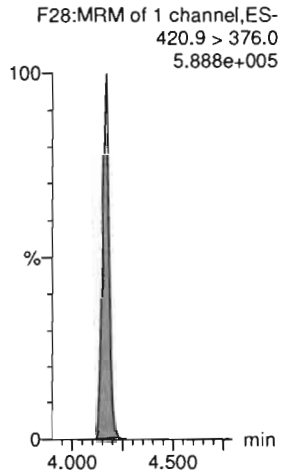
13C4-PFBA



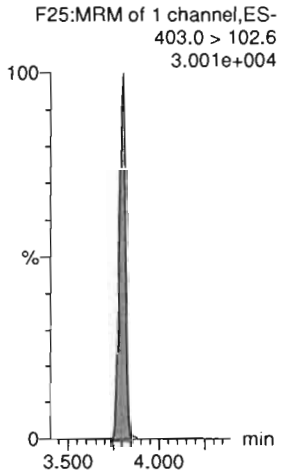
13C5-PFHxA



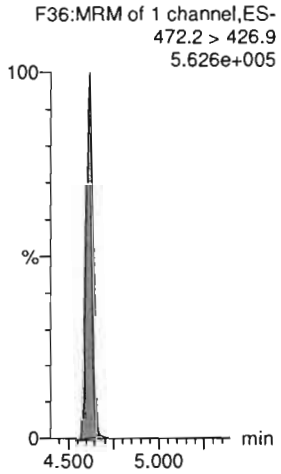
13C8-PFOA



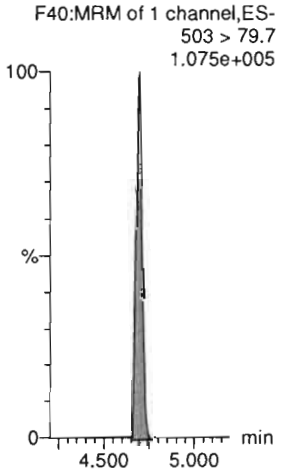
18O2-PFHxS



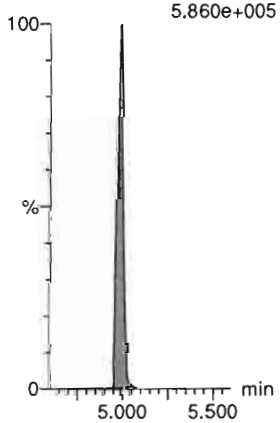
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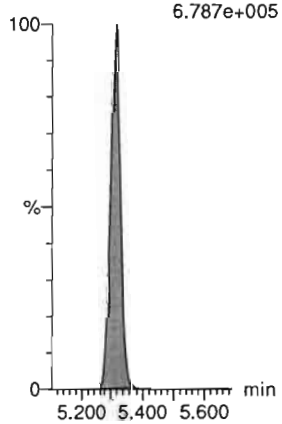
13C4-PFOS



13C6-PFDA



13C7-PFUdA

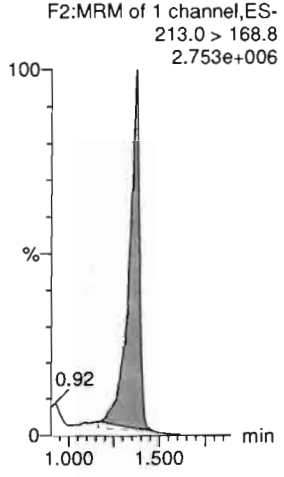


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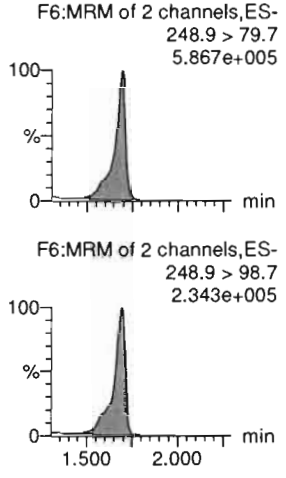
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Name: 200227P1-11, Date: 27-Feb-2020, Time: 17:16:12, ID: ST200227P1-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

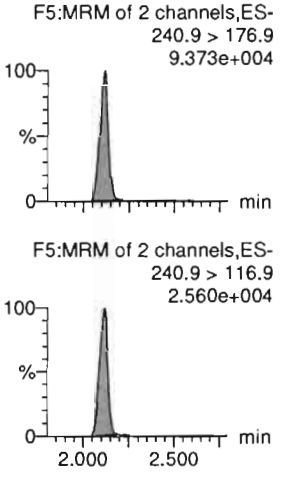
PFBA



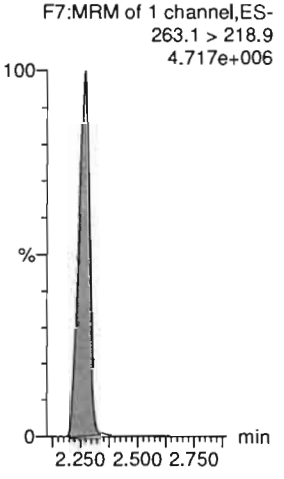
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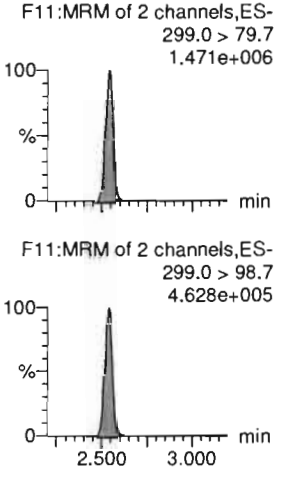
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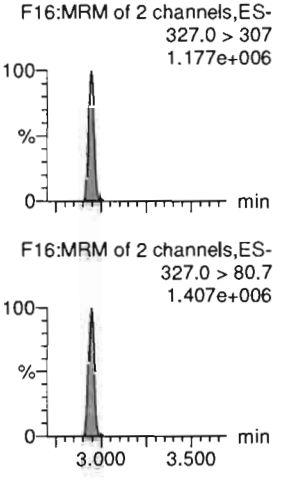
PFPeA



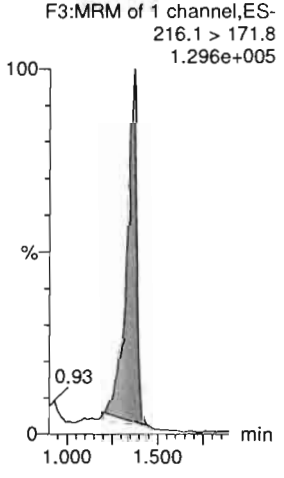
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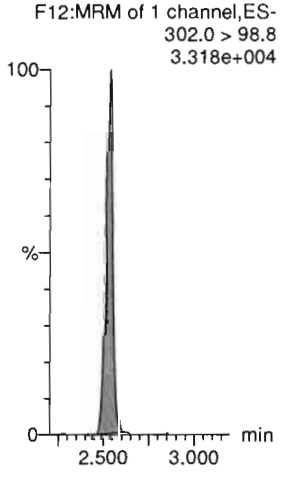
4:2 FTS



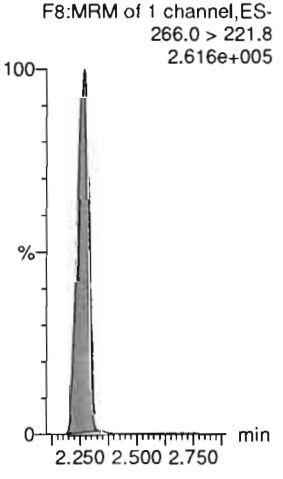
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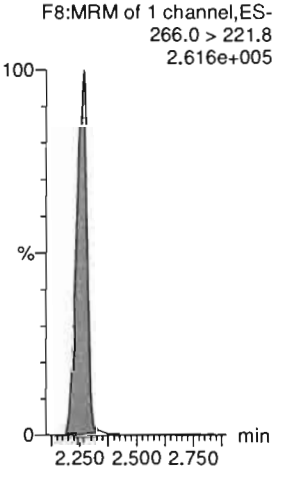
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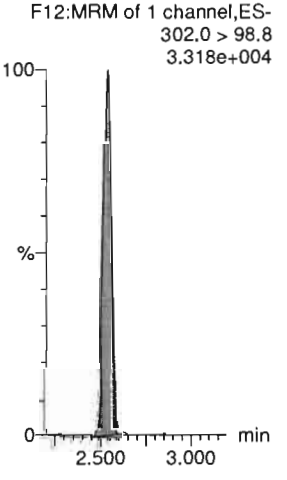
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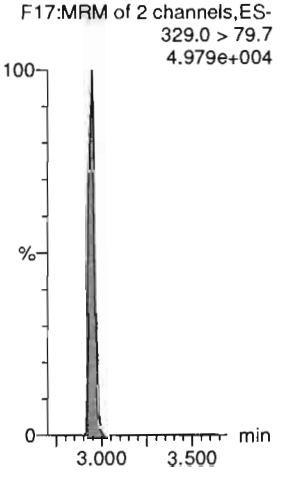
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13C3-PFBS-EIS



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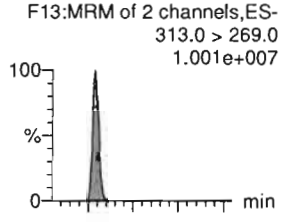


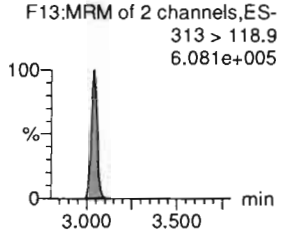
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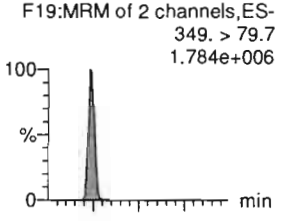
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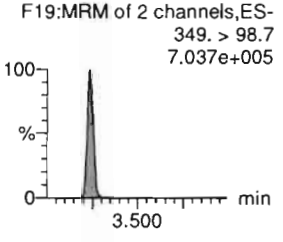
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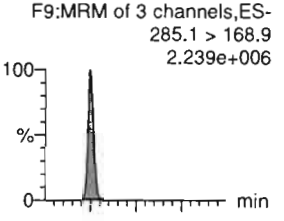


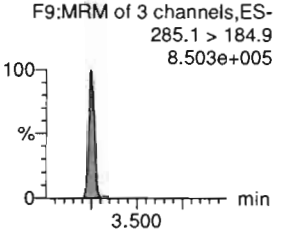
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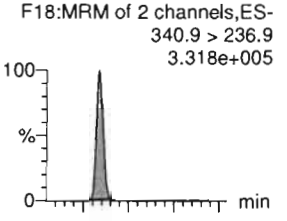


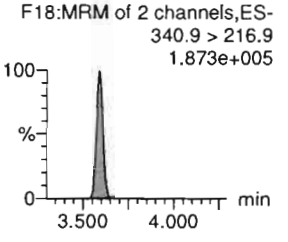
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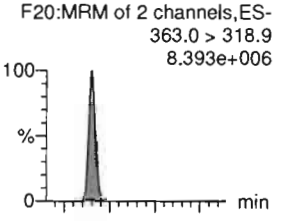


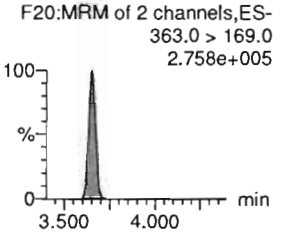
5:3 FTCA



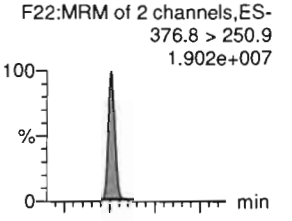


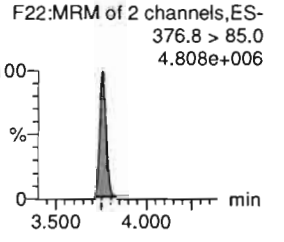
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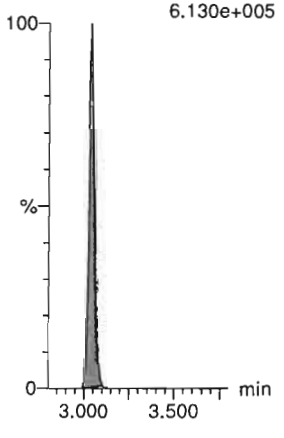


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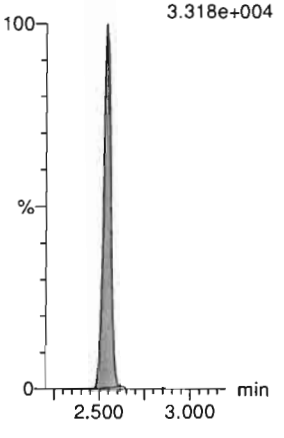




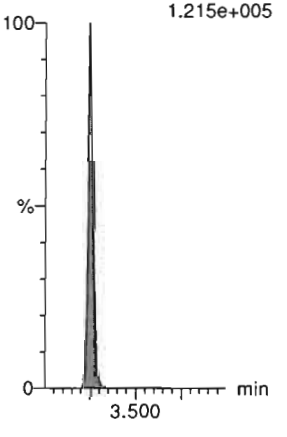
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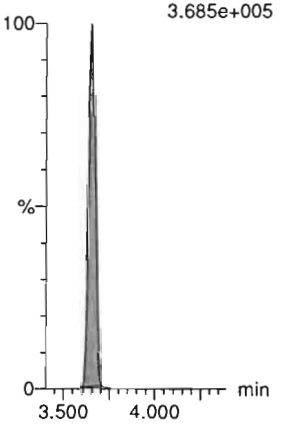
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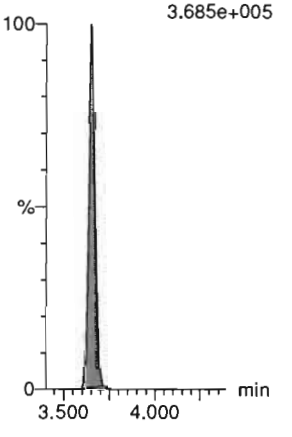
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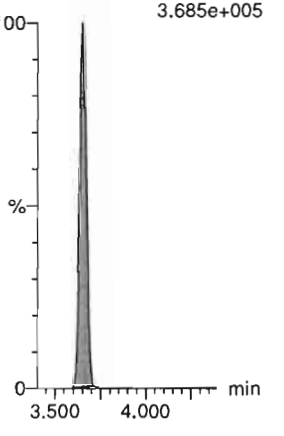
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

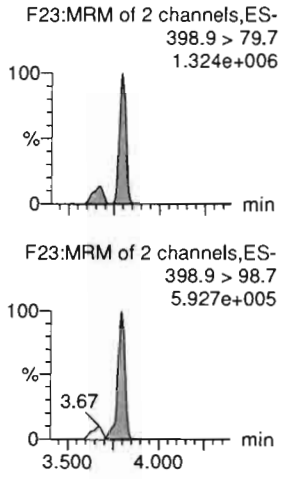


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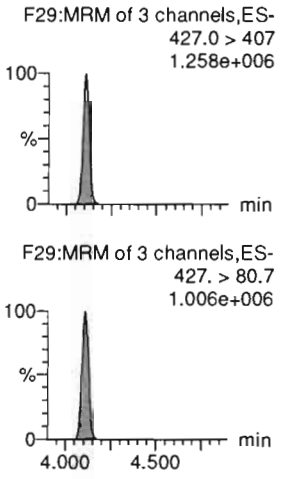
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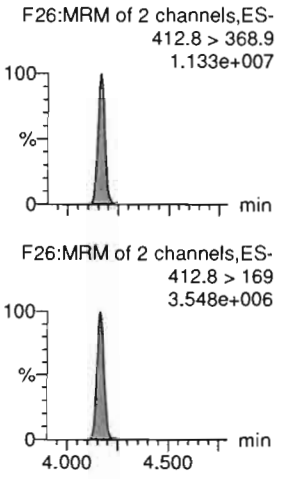
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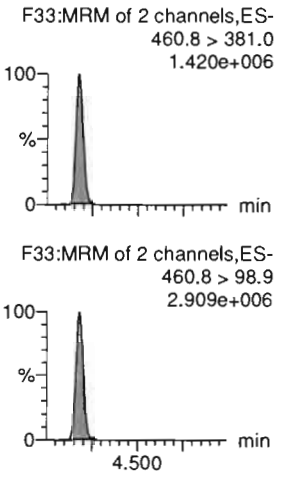
6:2 FTS



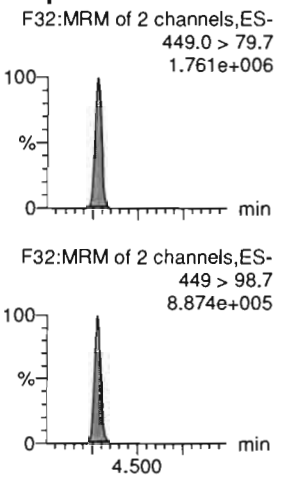
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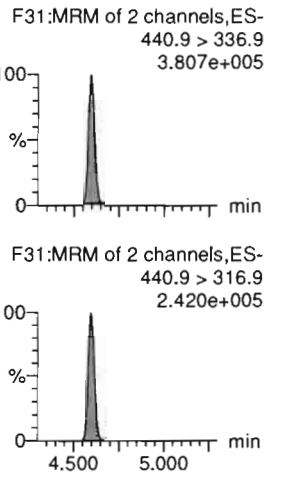
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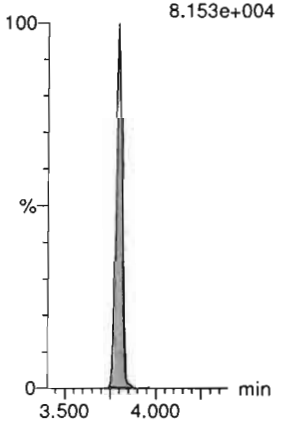
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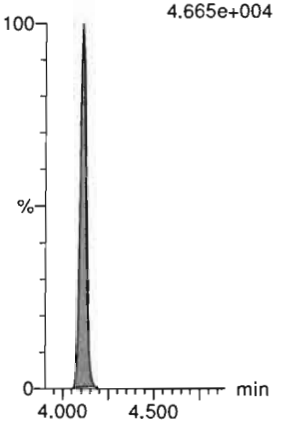
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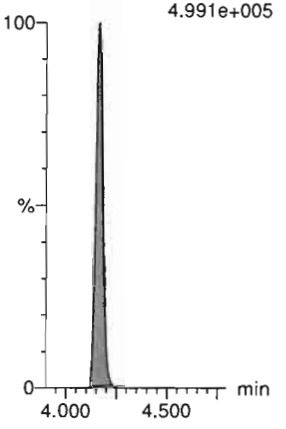
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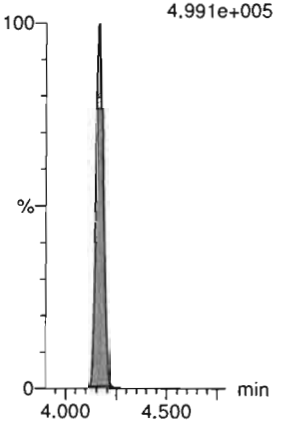
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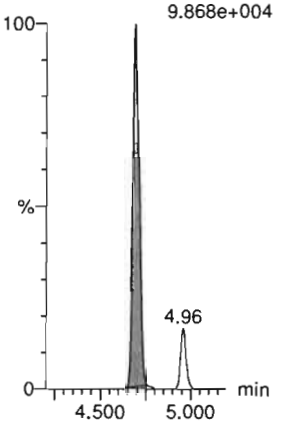
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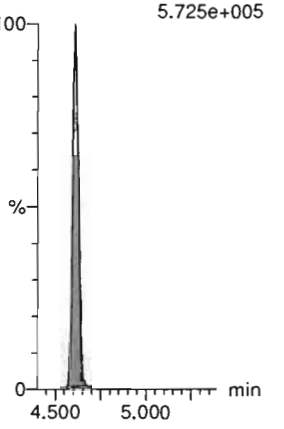
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13C8-PFOS-EIS



13C5-PFNA-EIS

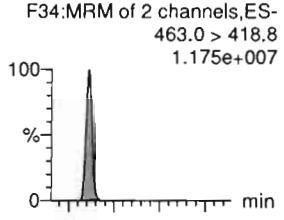


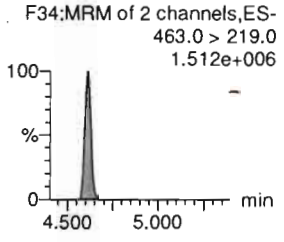
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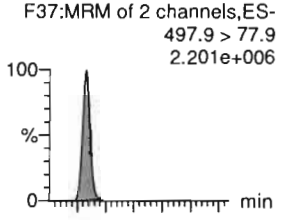
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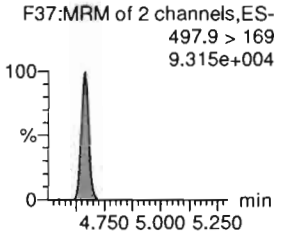
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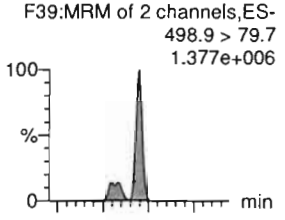


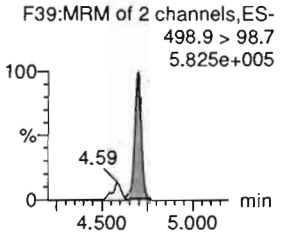
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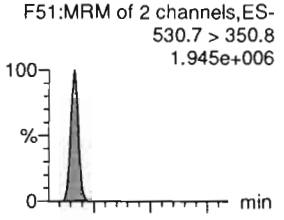


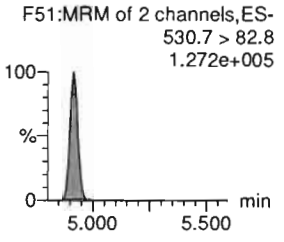
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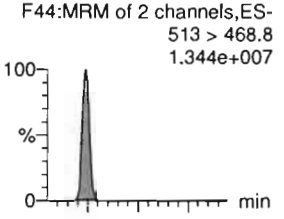


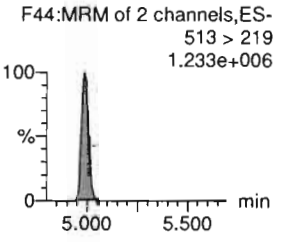
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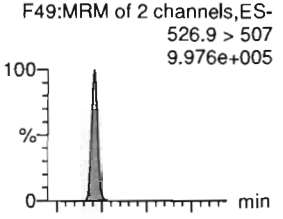


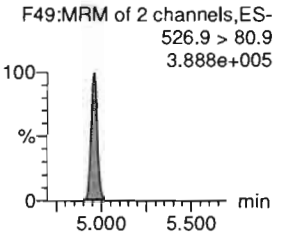
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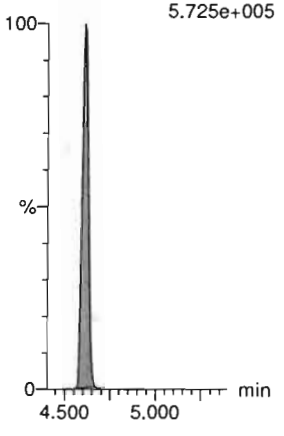


8:2 FTS

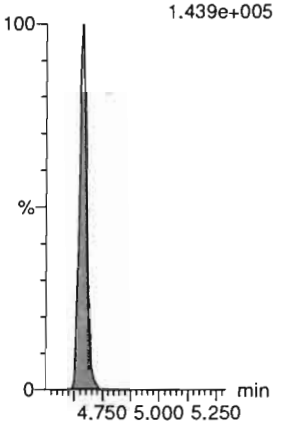




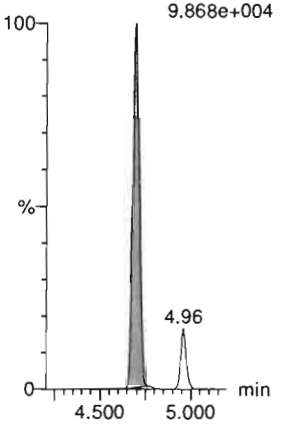
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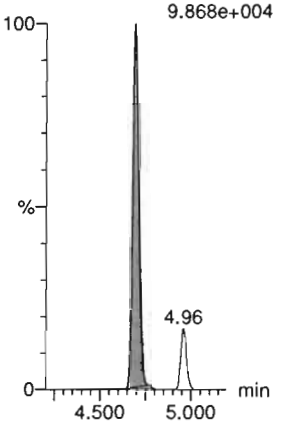
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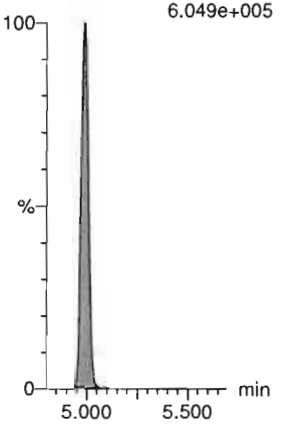
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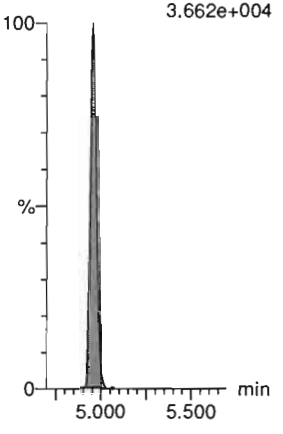
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

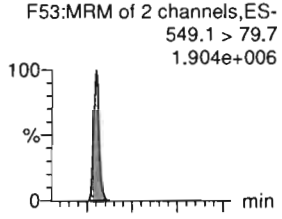


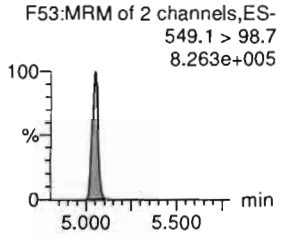
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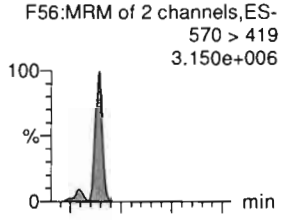
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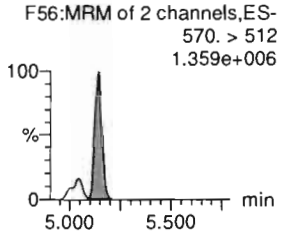
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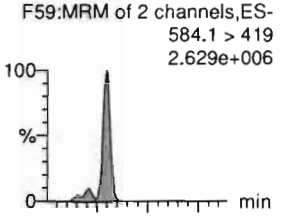


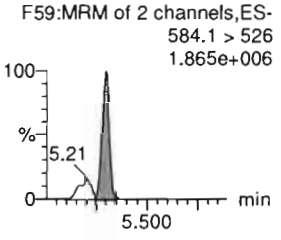
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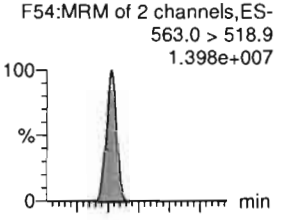


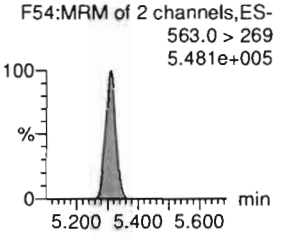
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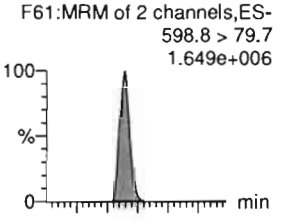


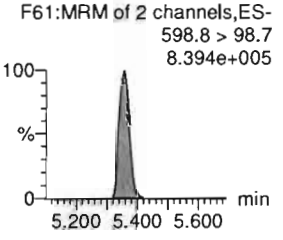
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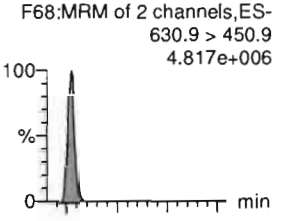


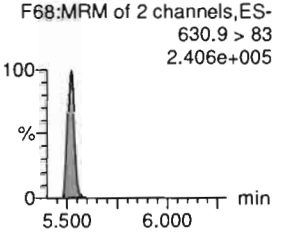
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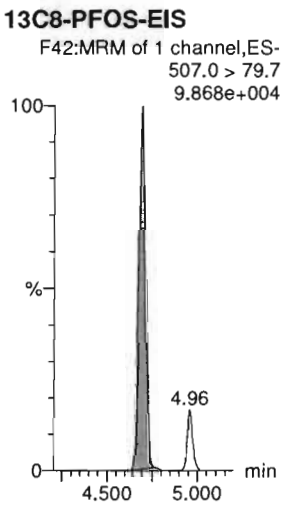


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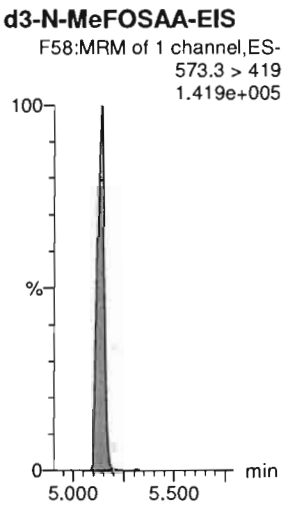




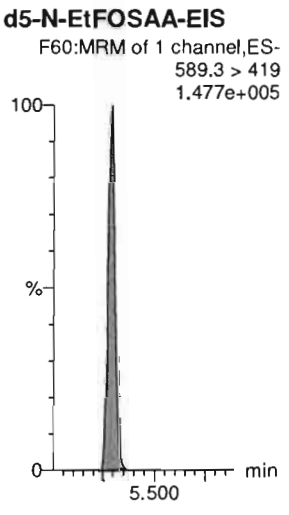
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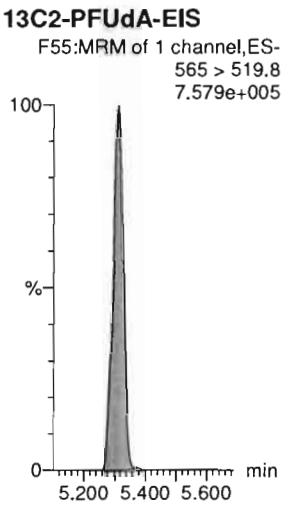
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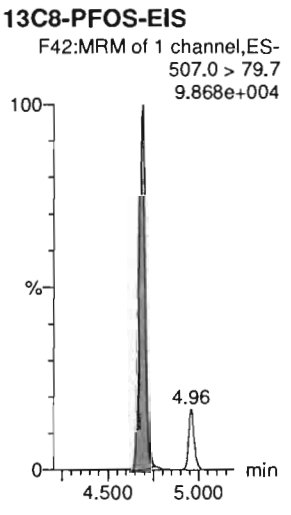
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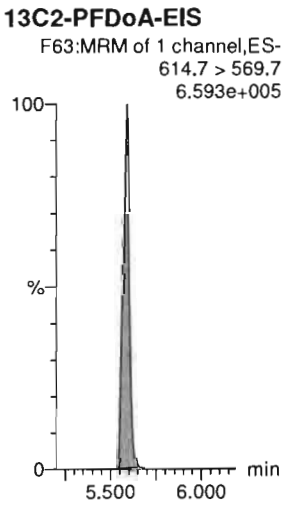
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

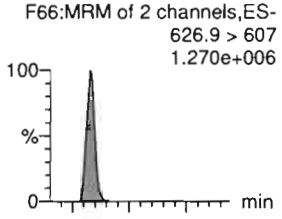


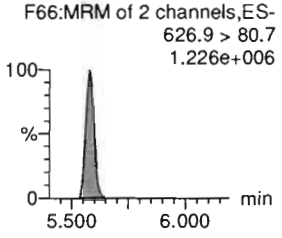
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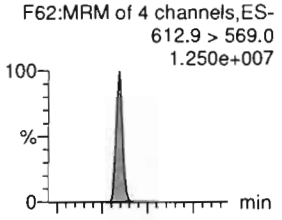
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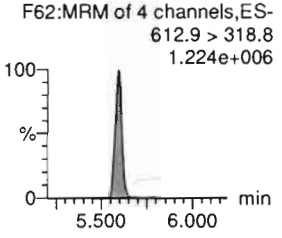
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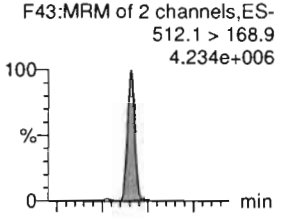


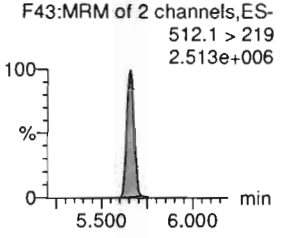
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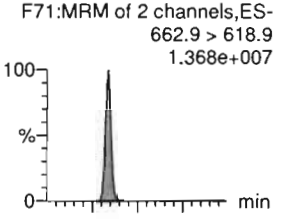


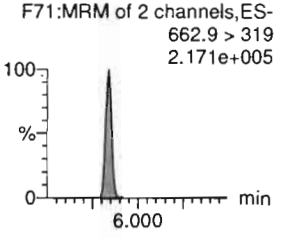
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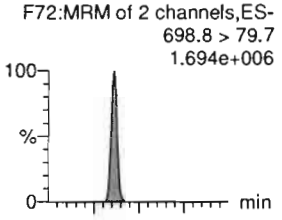


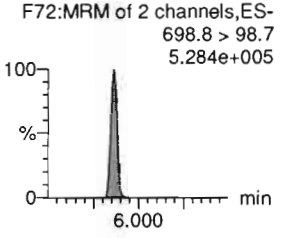
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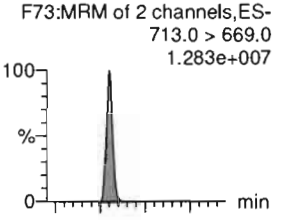


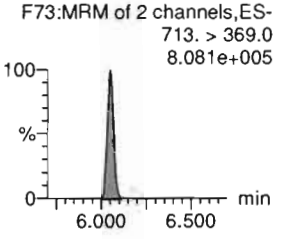
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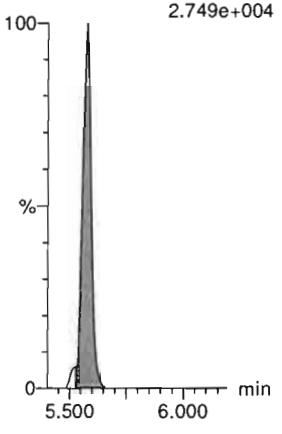


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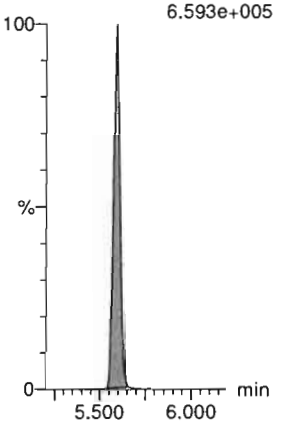




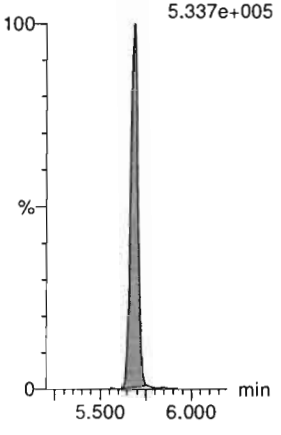
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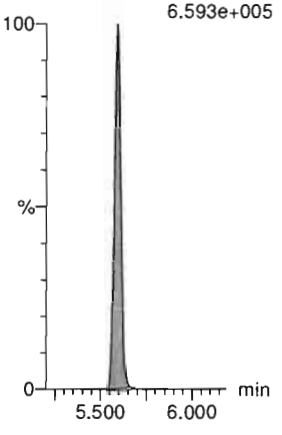
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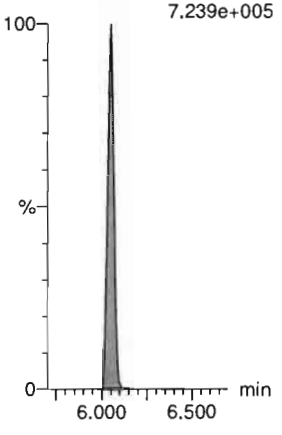
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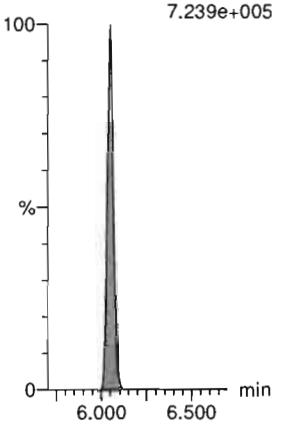
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13C2-PFTeDA-EIS



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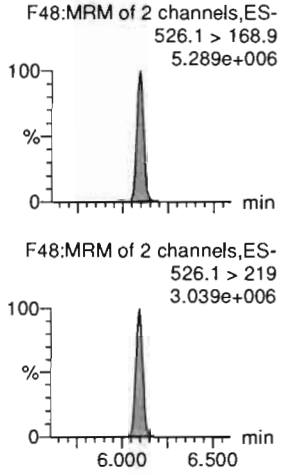


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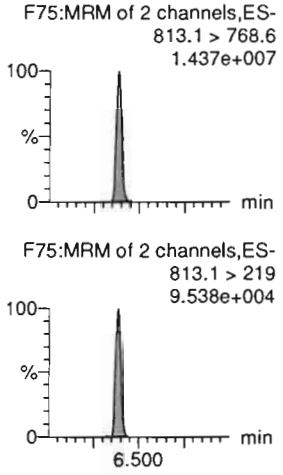
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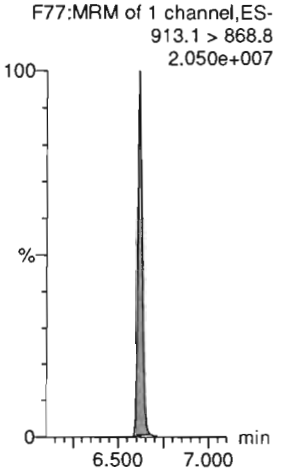
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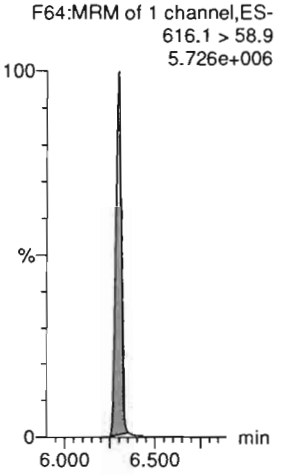
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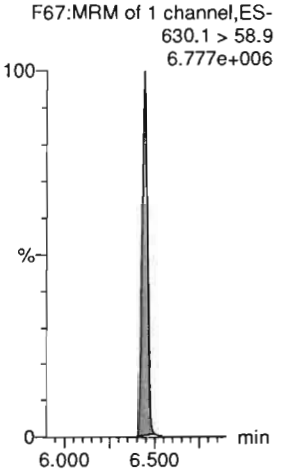
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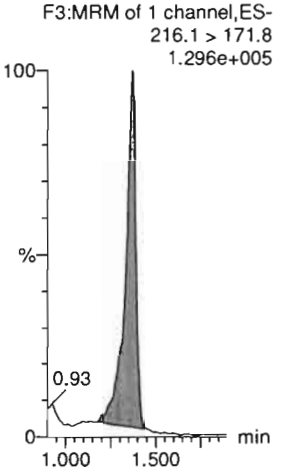
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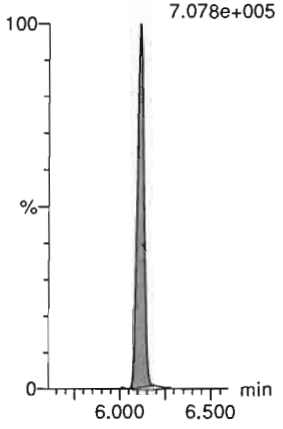
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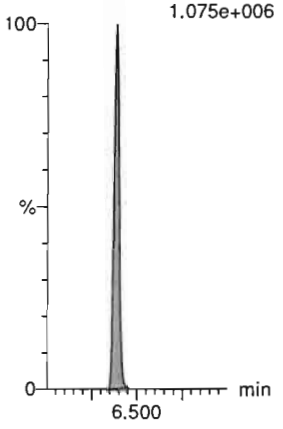
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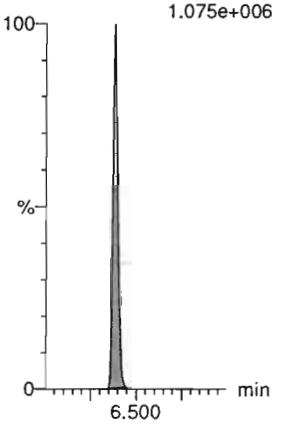
d5-N-ETFOSA-EIS



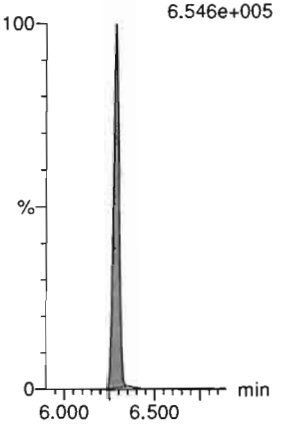
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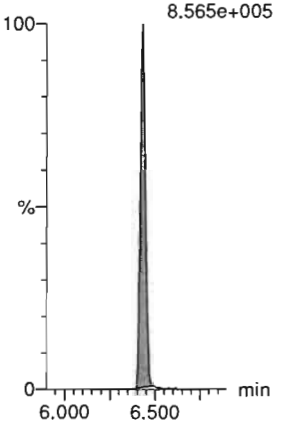
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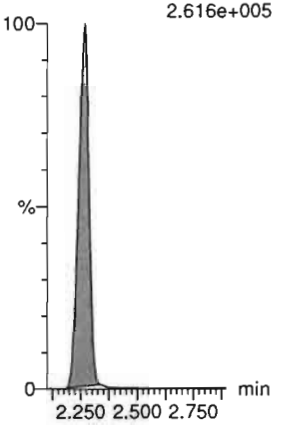
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d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

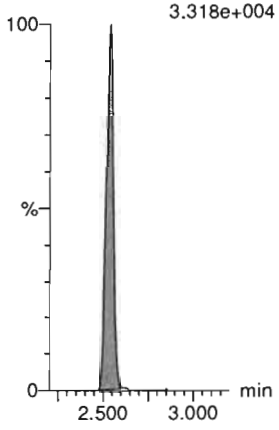


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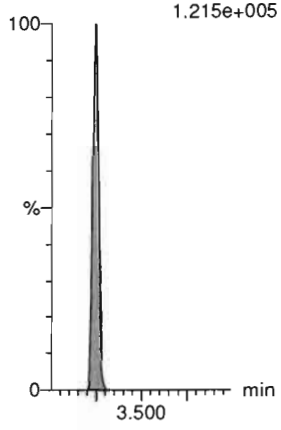
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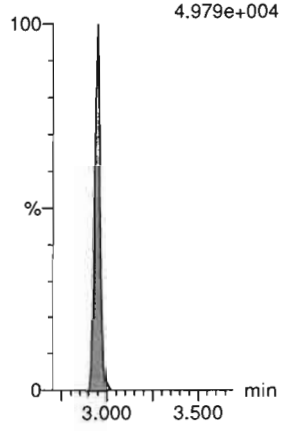
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.318e+004



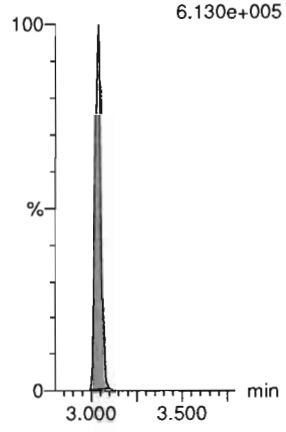
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.215e+005



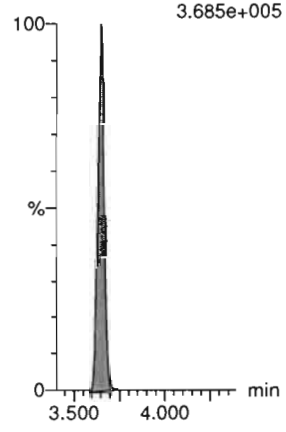
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.979e+004



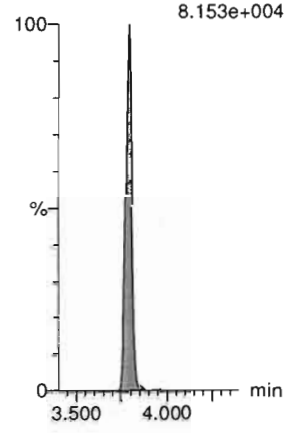
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
6.130e+005



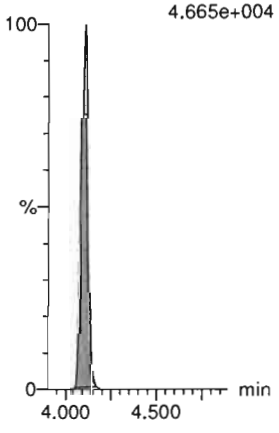
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.685e+005



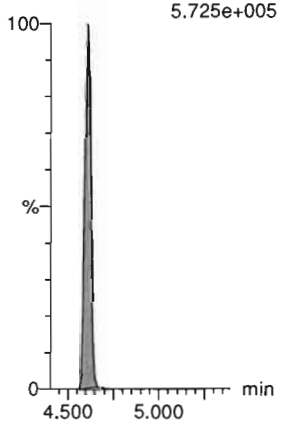
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.153e+004



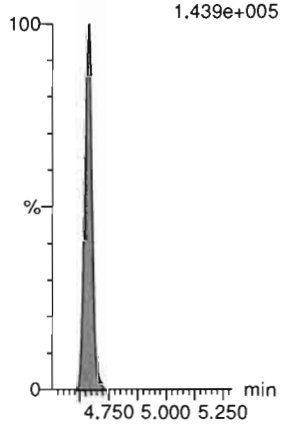
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.665e+004



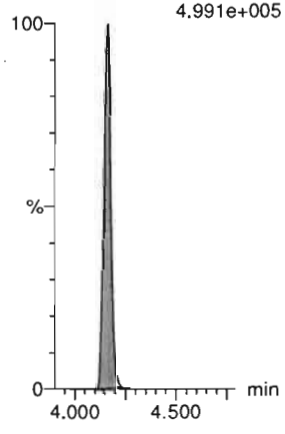
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.725e+005



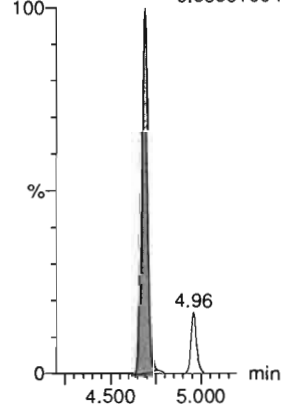
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.439e+005



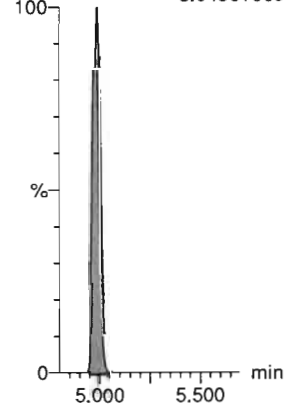
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.991e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.868e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
6.049e+005

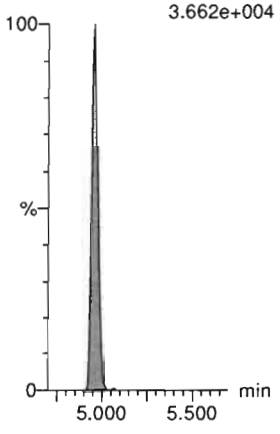


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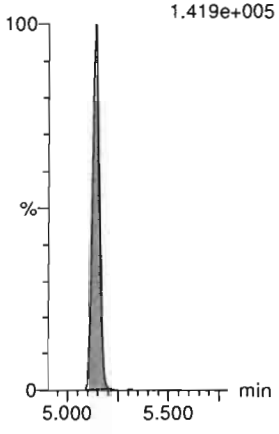
Last Altered: Friday, February 28, 2020 09:05:18 Pacific Standard Time
Printed: Friday, February 28, 2020 09:08:38 Pacific Standard Time

Name: 200227P1-11, Date: 27-Feb-2020, Time: 17:16:12, ID: ST200227P1-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

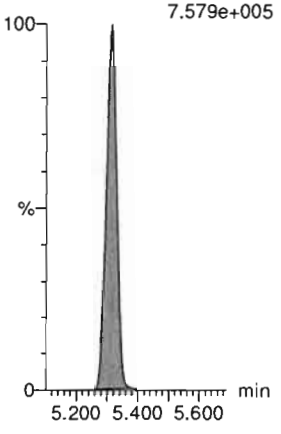
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F50:MRM of 1 channel,ES-
529 > 79.7
3.662e+004



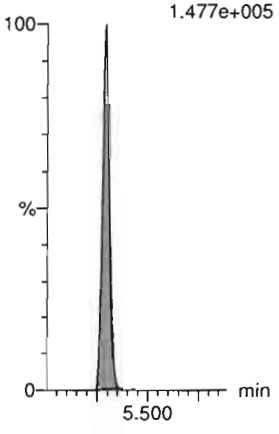
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.419e+005



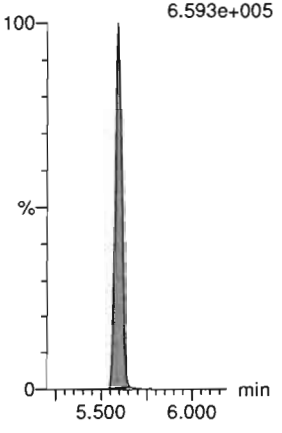
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
7.579e+005



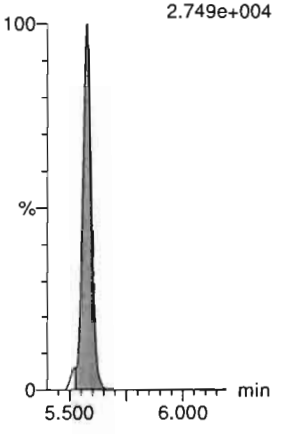
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.477e+005



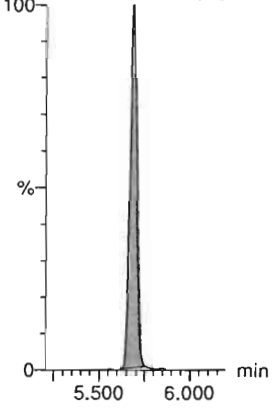
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
6.593e+005



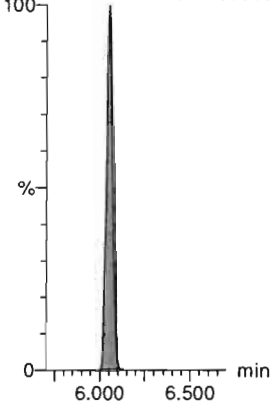
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.749e+004



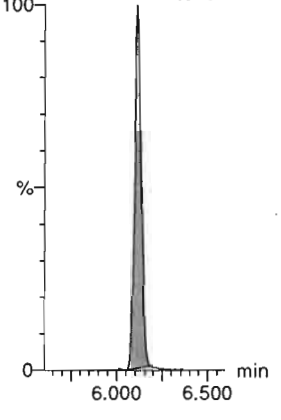
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.337e+005



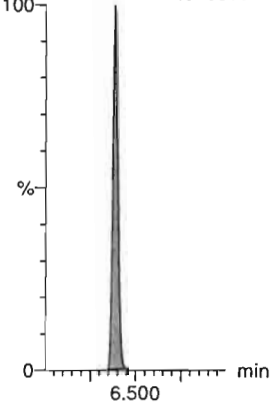
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
7.239e+005



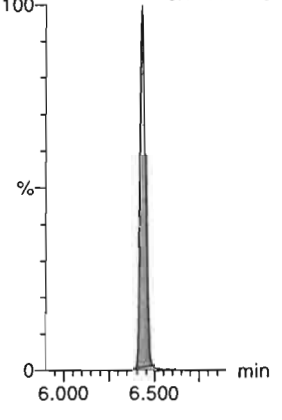
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.078e+005



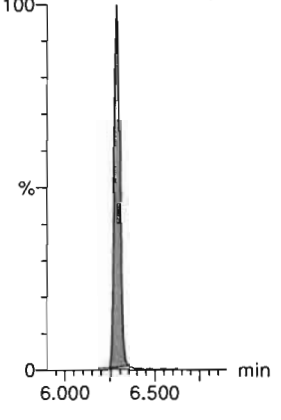
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.075e+006



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
8.565e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
6.546e+005

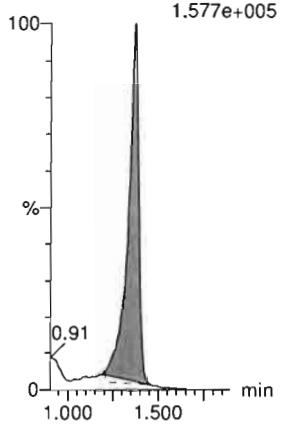


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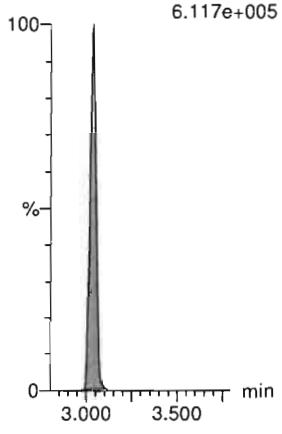
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Name: 200227P1-11, Date: 27-Feb-2020, Time: 17:16:12, ID: ST200227P1-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

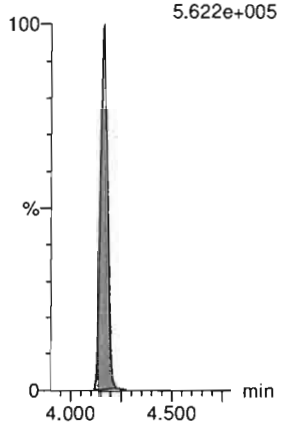
13C4-PFBA



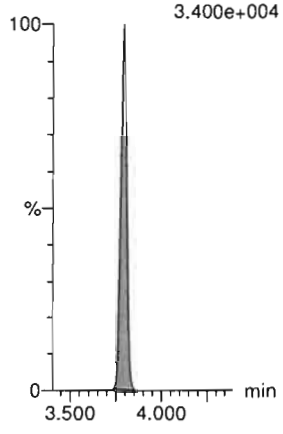
13C5-PFHxA



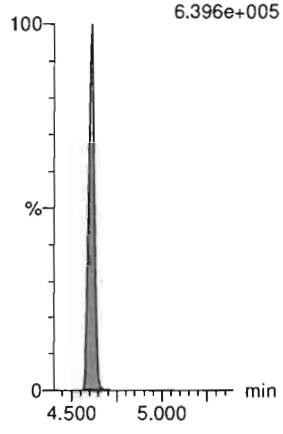
13C8-PFOA



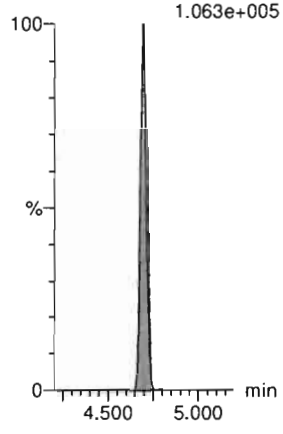
18O2-PFHxS



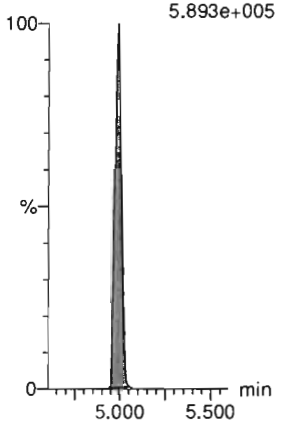
13C9-PFNA



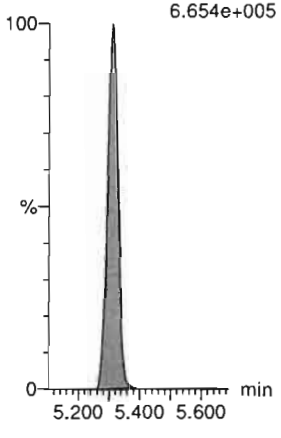
13C4-PFOS



13C6-PFDA



13C7-PFUdA

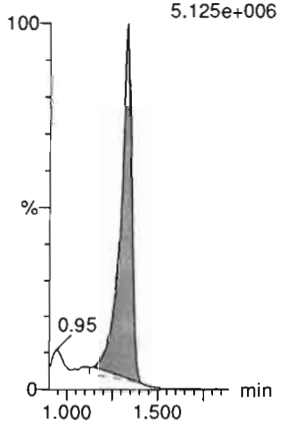


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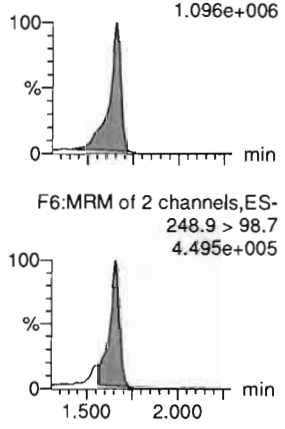
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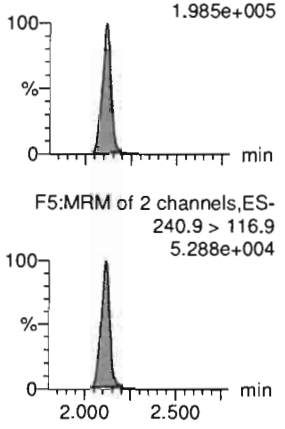
PFBA



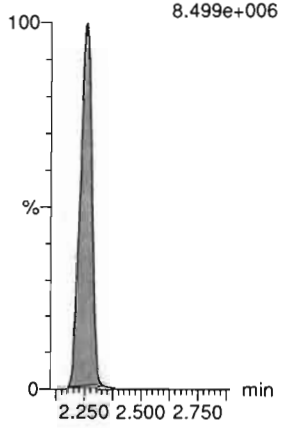
PFPrS



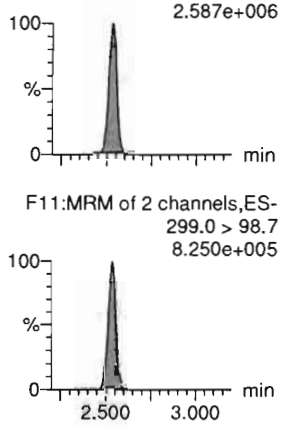
3:3 FTCA



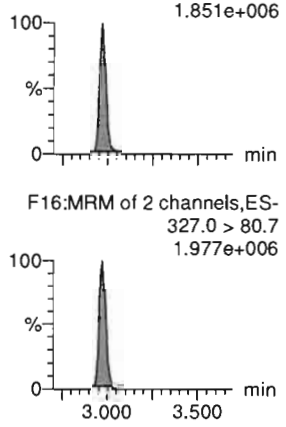
PFPeA



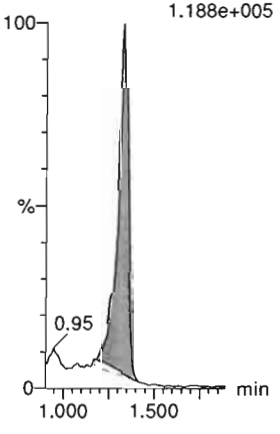
PFBS



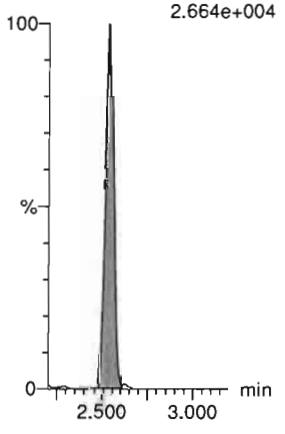
4:2 FTS



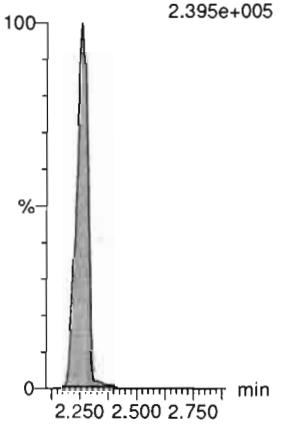
13C3-PFBA-EIS



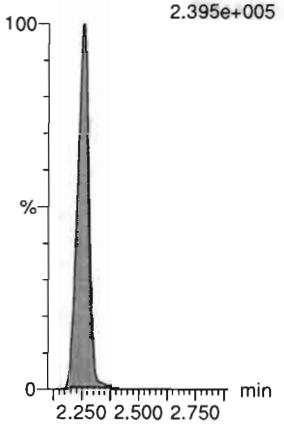
13C3-PFBS-EIS



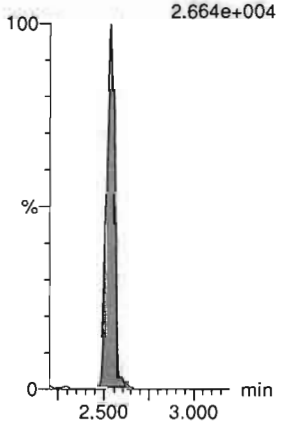
13C3-PFPeA-EIS



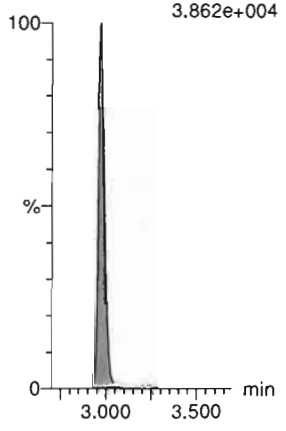
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

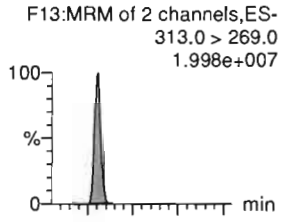


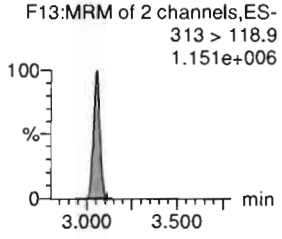
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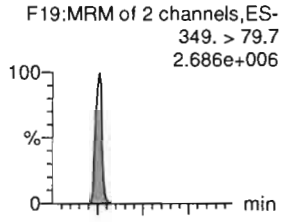
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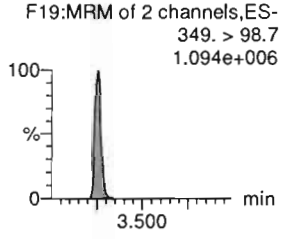
PFHxA



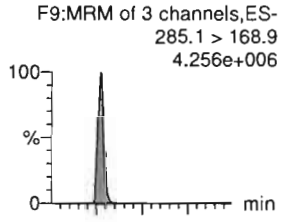


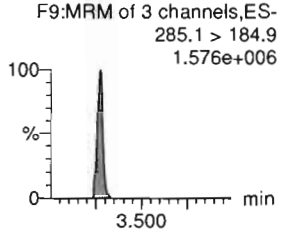
PFPeS



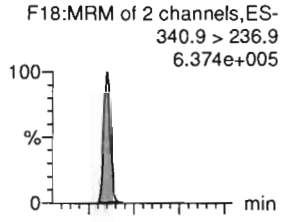


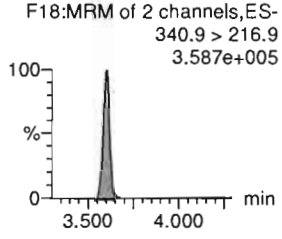
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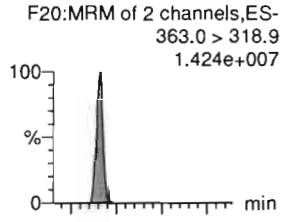


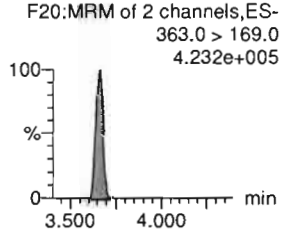
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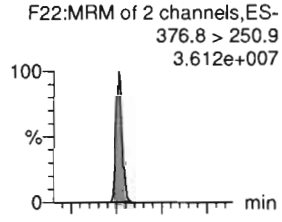


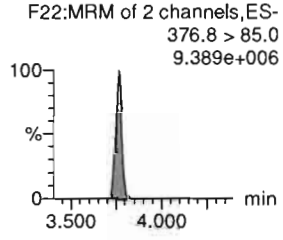
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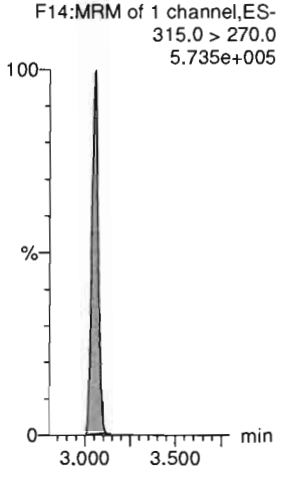


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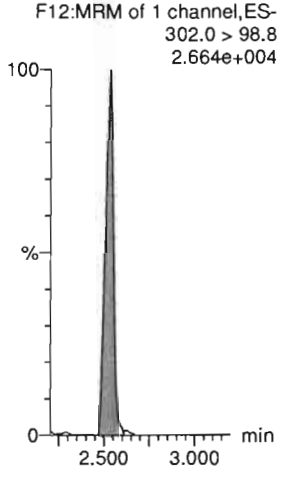




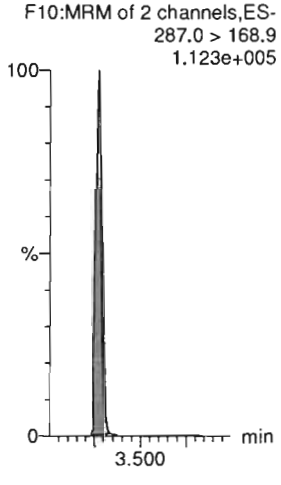
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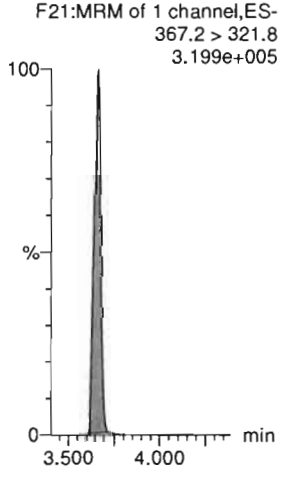
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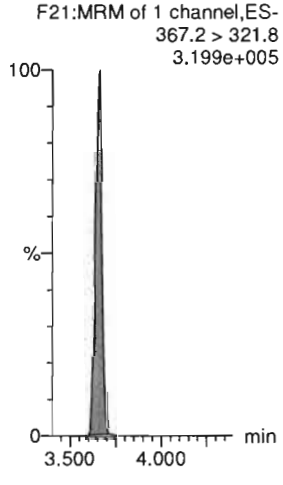
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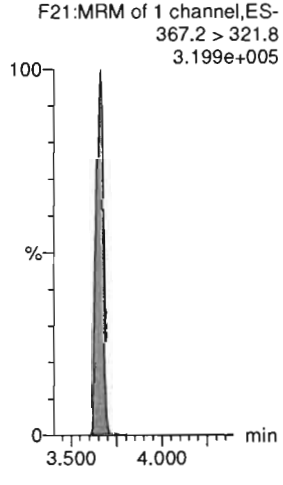
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13C4-PFHpA-EIS



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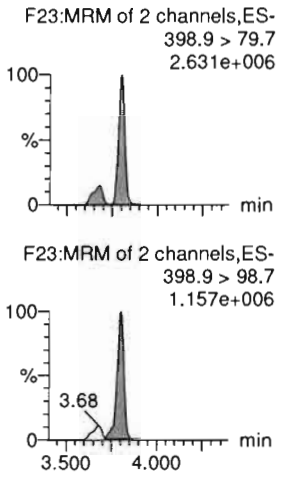


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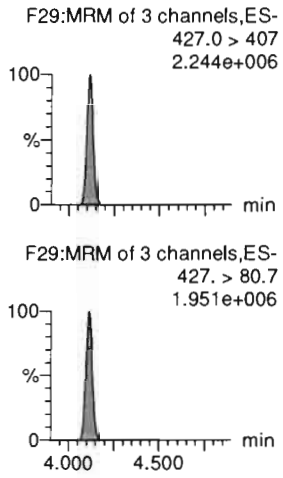
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Name: 200227P1-12, Date: 27-Feb-2020, Time: 17:26:40, ID: ST200227P1-10 PFC CS7 20B1111, Description: PFC CS7 20B1111

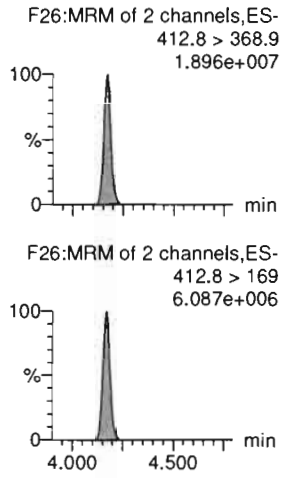
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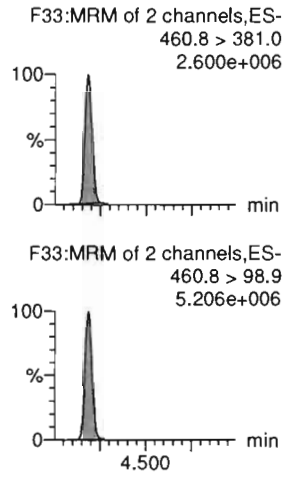
6:2 FTS



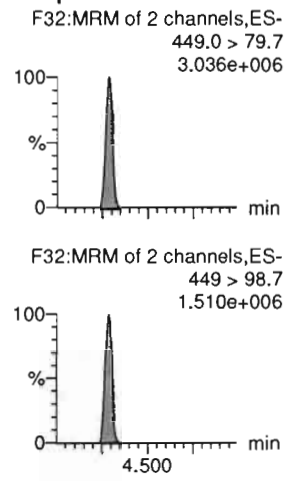
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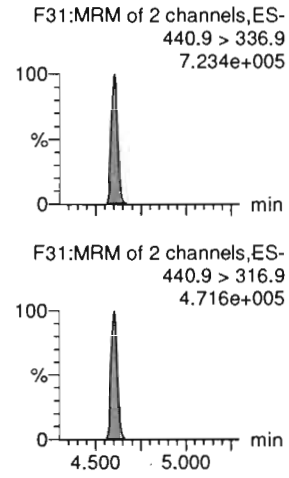
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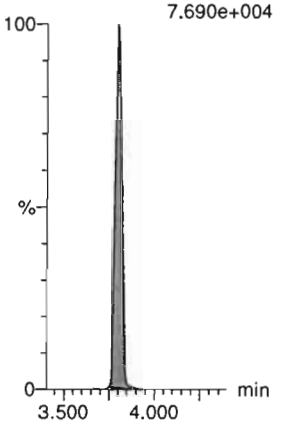
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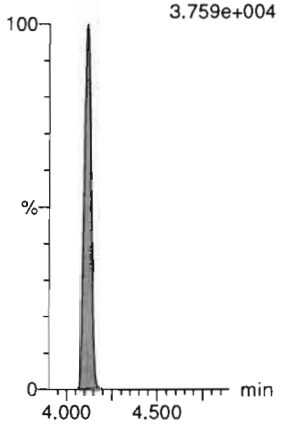
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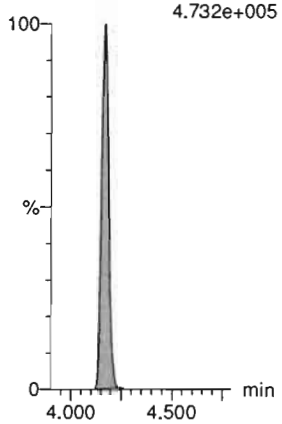
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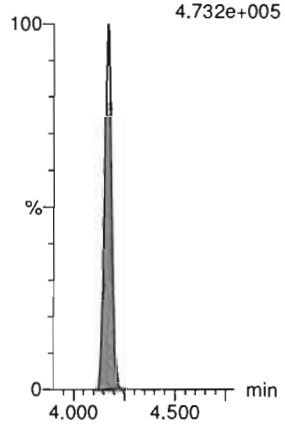
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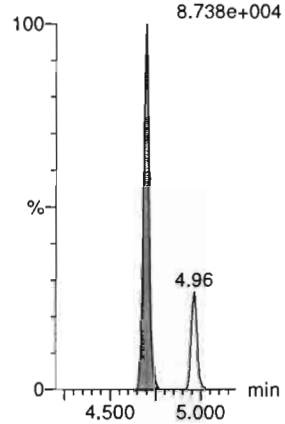
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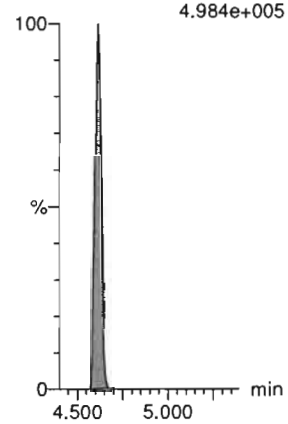
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13C8-PFOS-EIS



13C5-PFNA-EIS

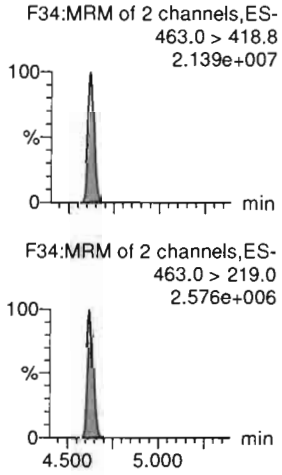


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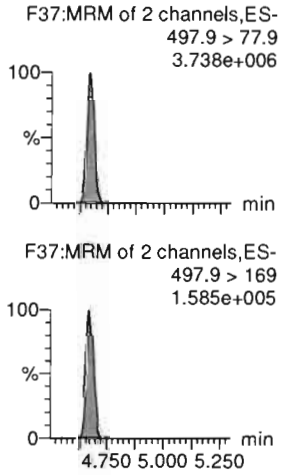
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Name: 200227P1-12, Date: 27-Feb-2020, Time: 17:26:40, ID: ST200227P1-10 PFC CS7 20B1111, Description: PFC CS7 20B1111

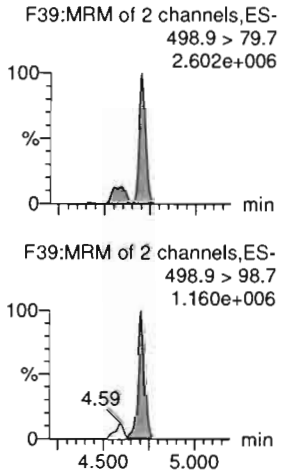
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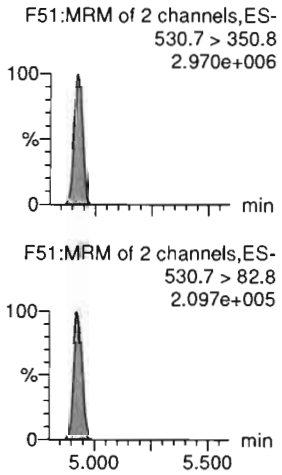
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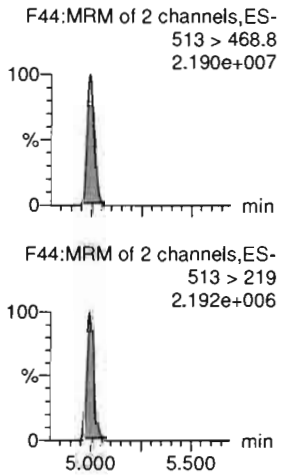
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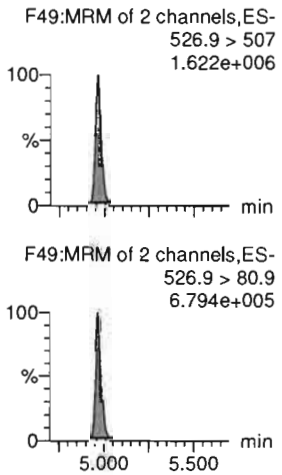
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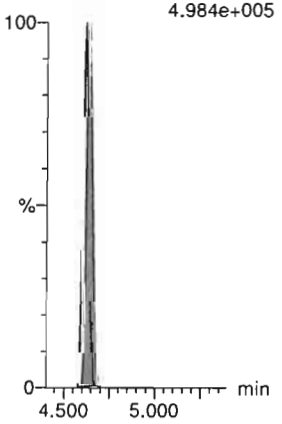
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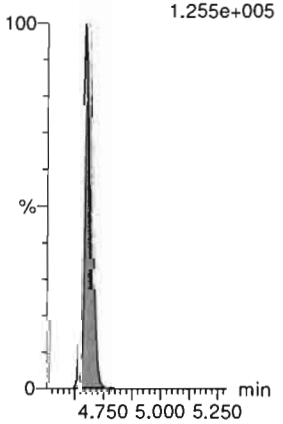
8:2 FTS



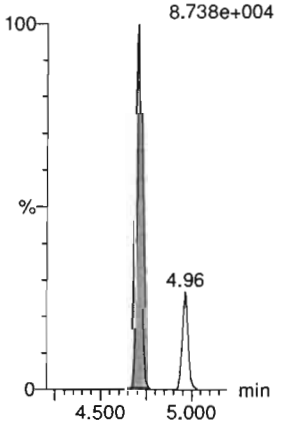
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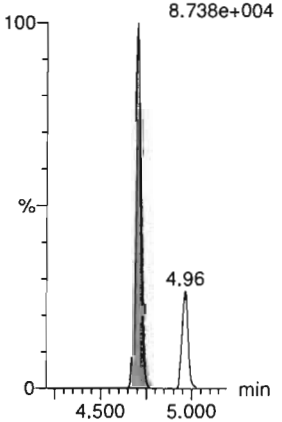
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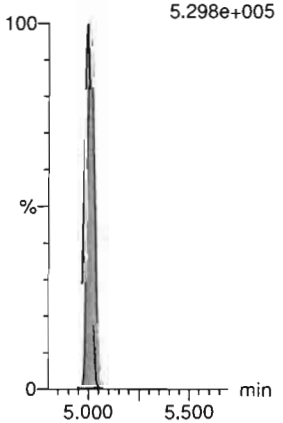
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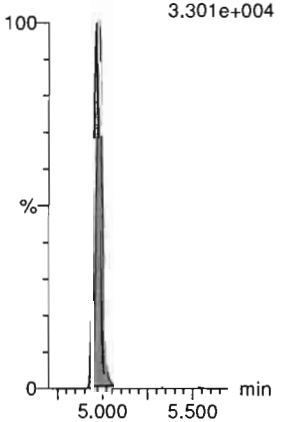
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

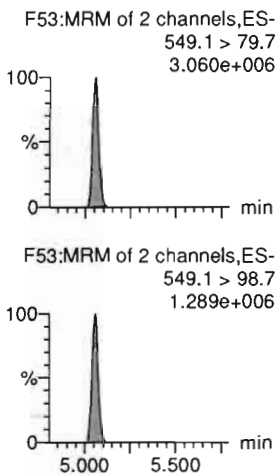


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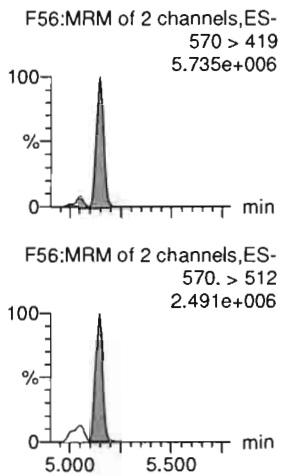
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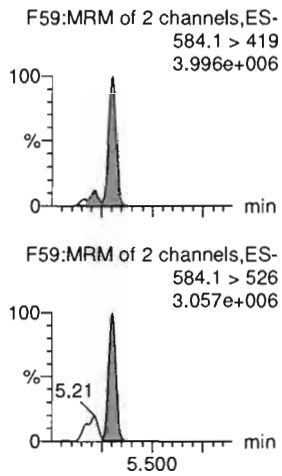
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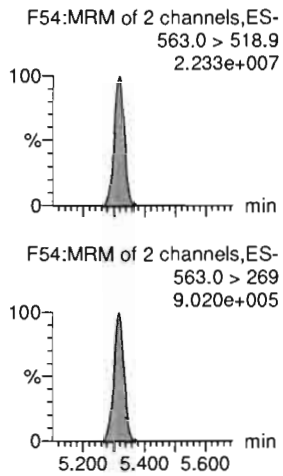
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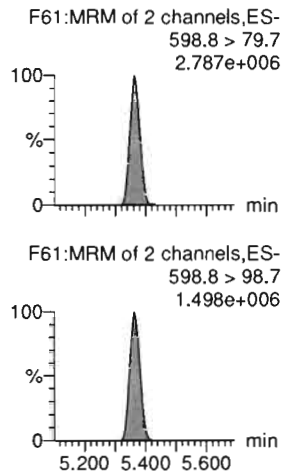
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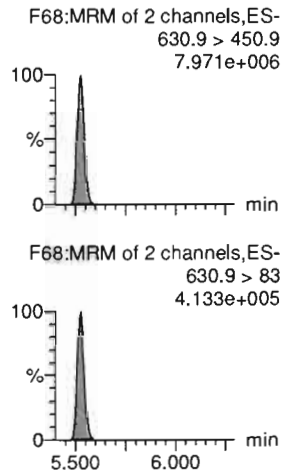
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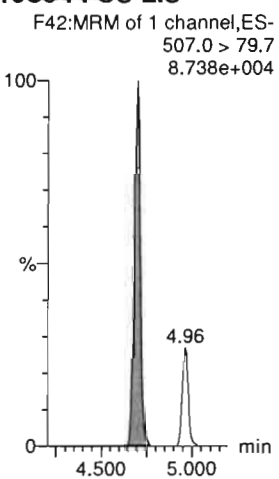
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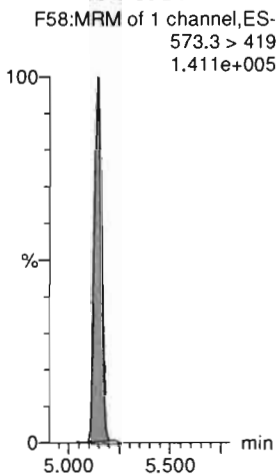
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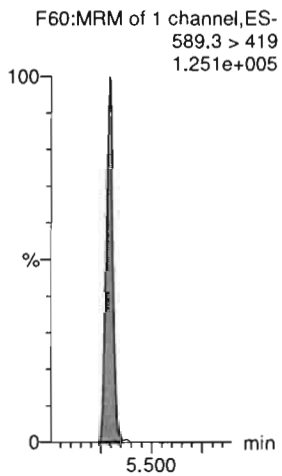
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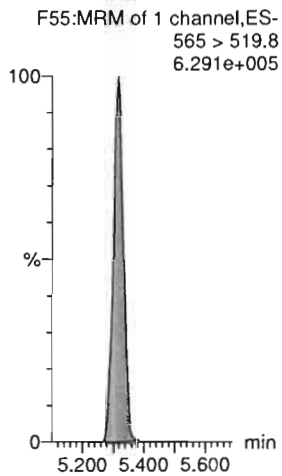
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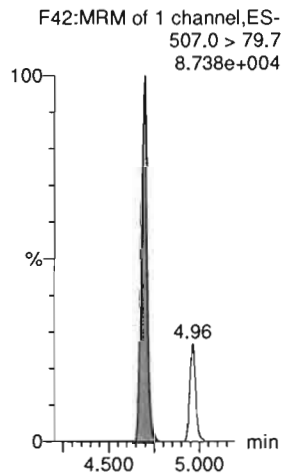
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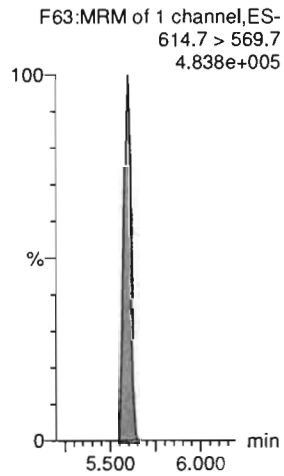
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

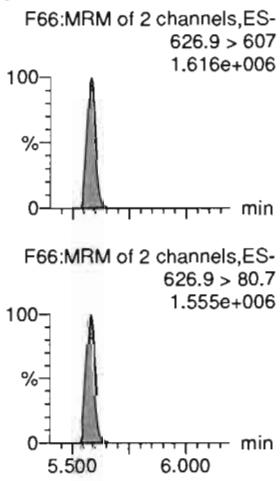


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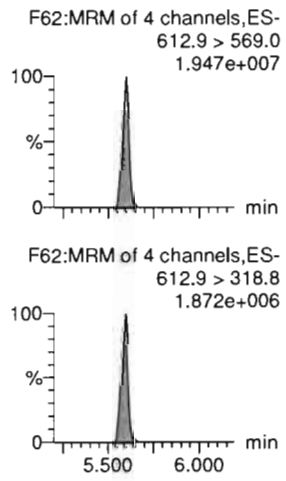
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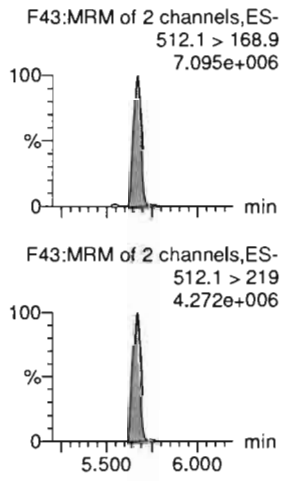
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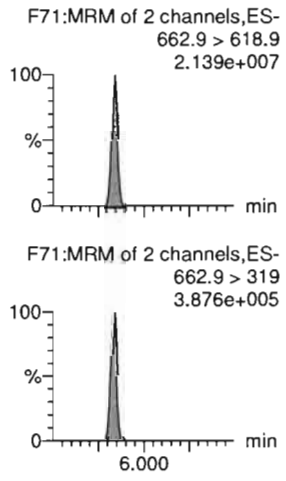
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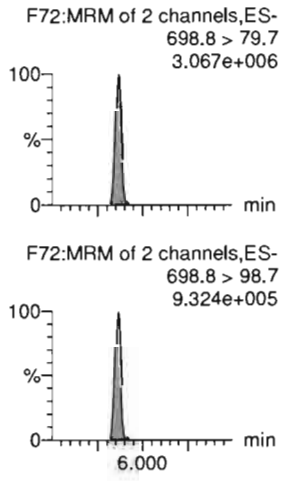
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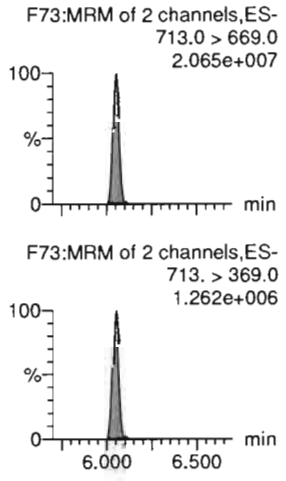
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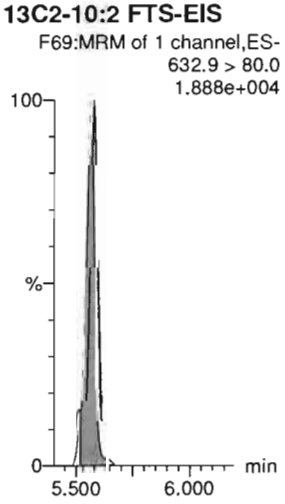
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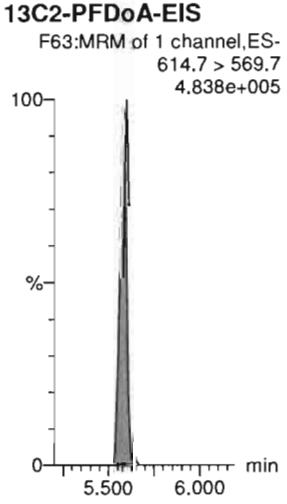
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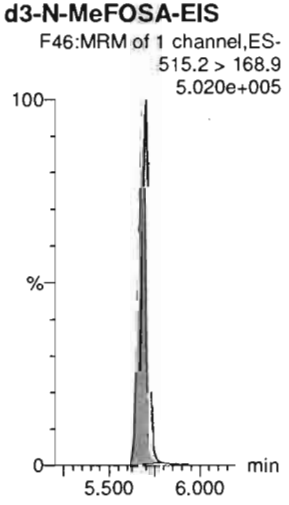
13C2-10:2 FTS-EIS



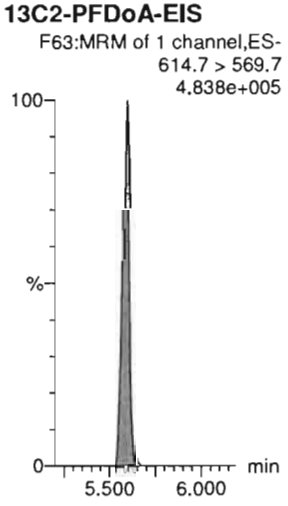
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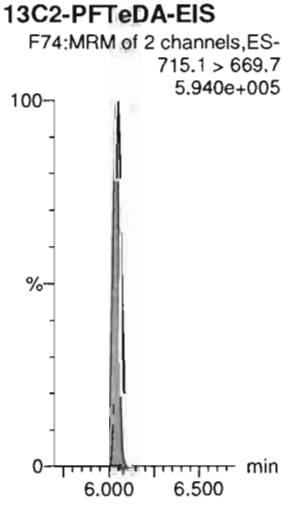
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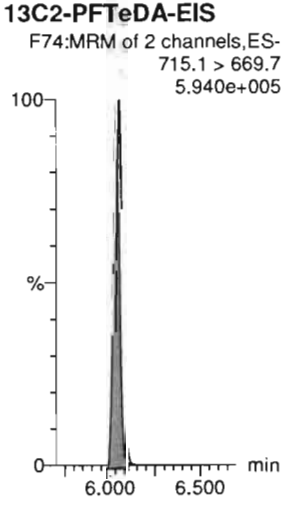
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

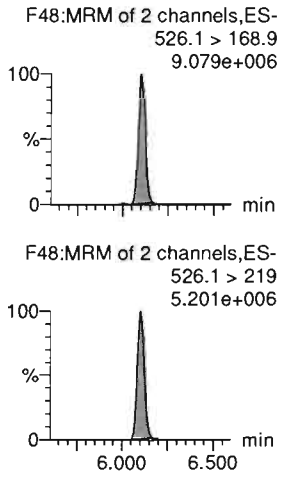


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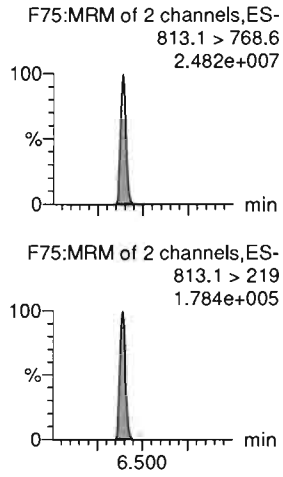
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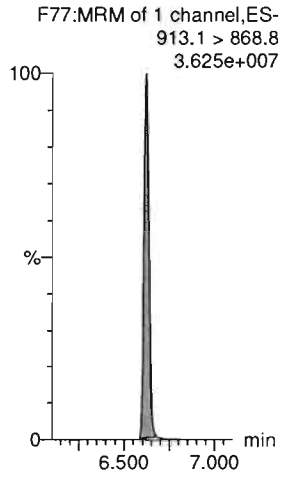
N-EtFOSA



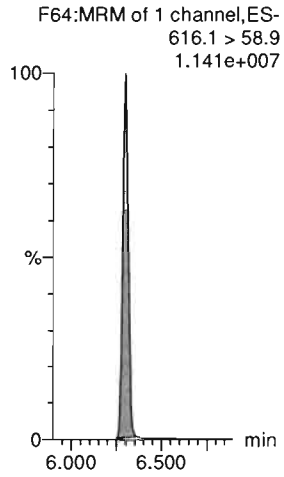
PFHxDA



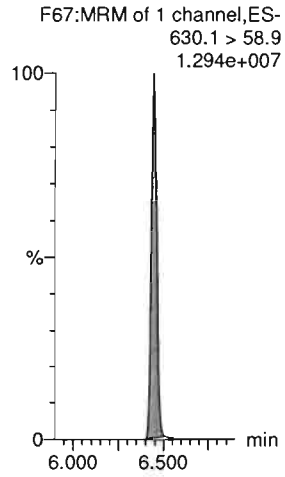
PFODA



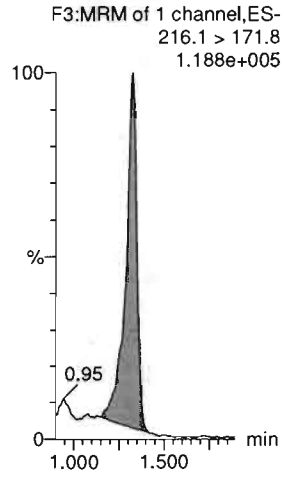
N-MeFOSE



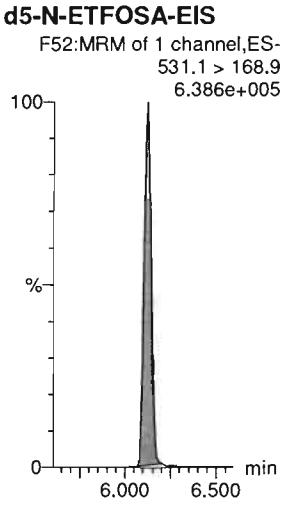
N-EtFOSE



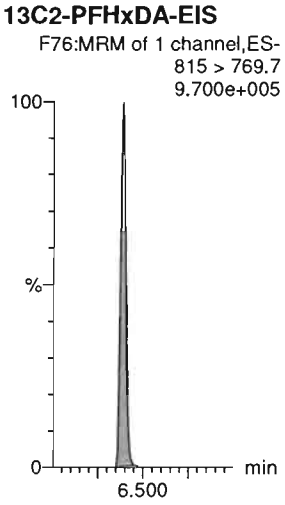
13C3-PFBA-RSD



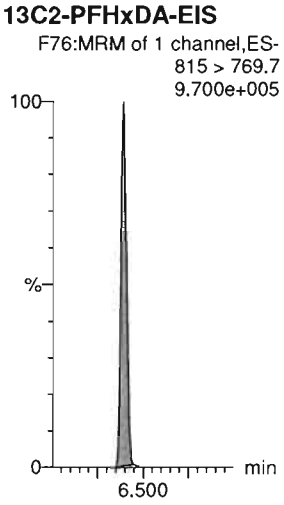
d5-N-ETFOSA-EIS



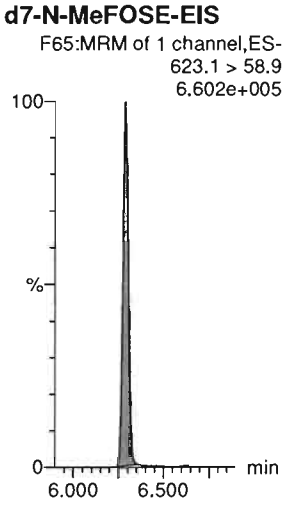
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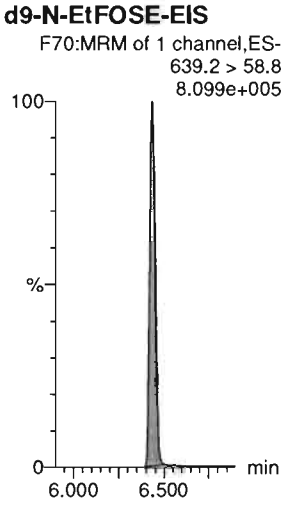
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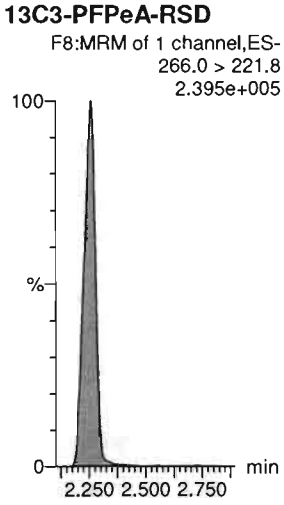
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

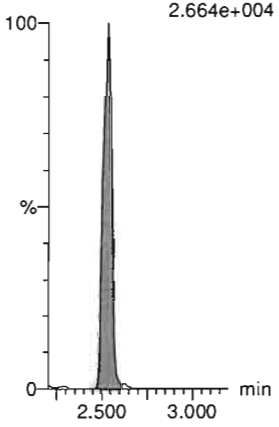


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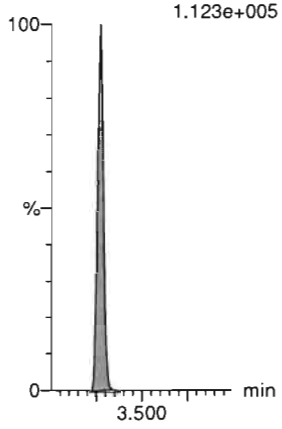
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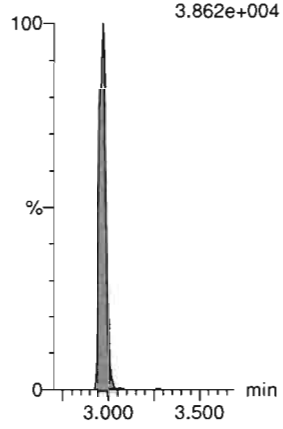
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F12:MRM of 1 channel,ES-
302.0 > 98.8
2.664e+004



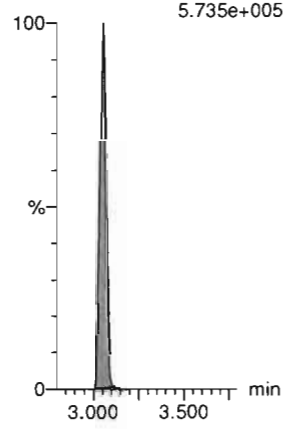
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.123e+005



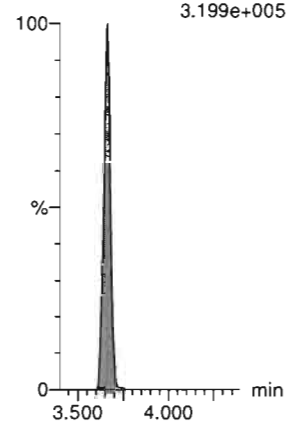
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.862e+004



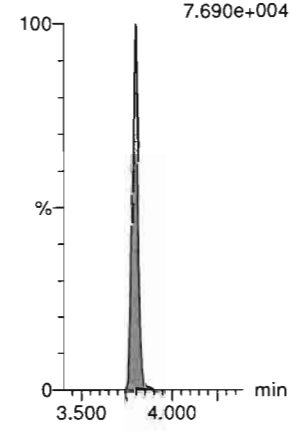
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.735e+005



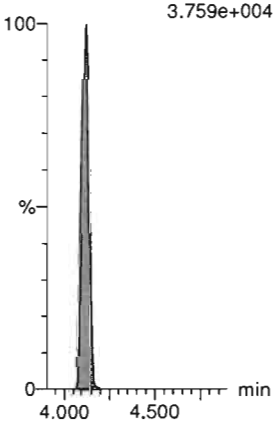
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.199e+005



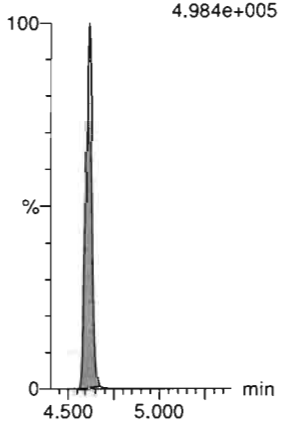
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.690e+004



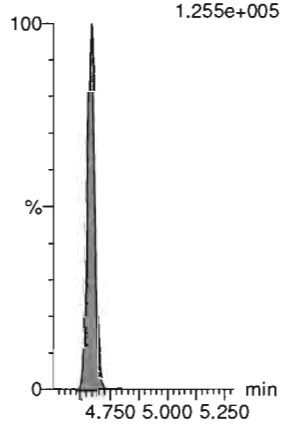
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.759e+004



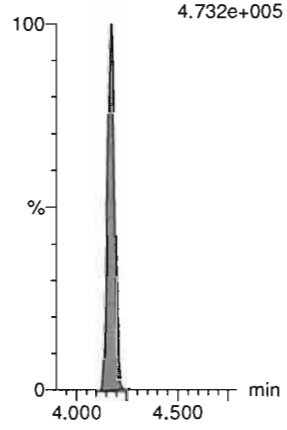
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.984e+005



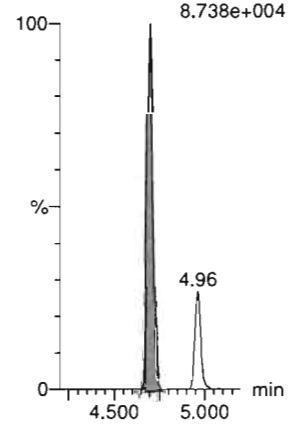
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.255e+005



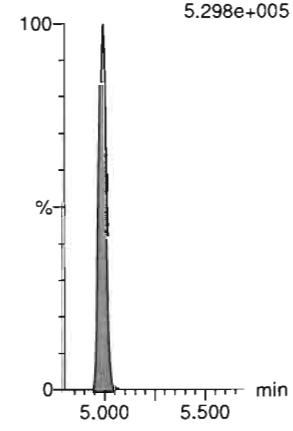
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.732e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.738e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.298e+005

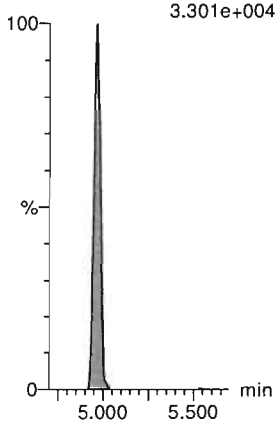


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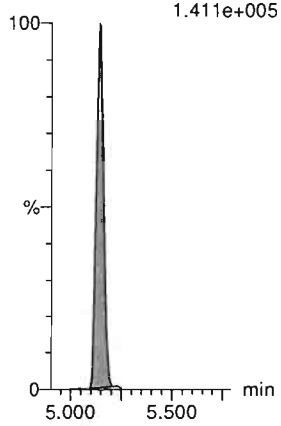
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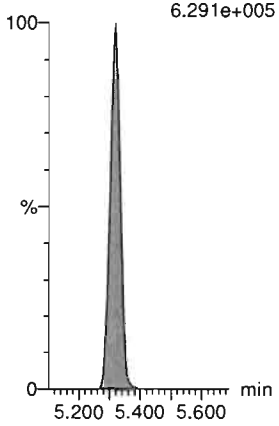
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.301e+004



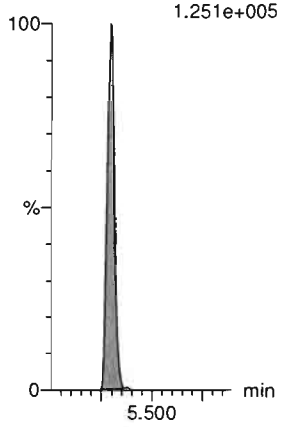
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.411e+005



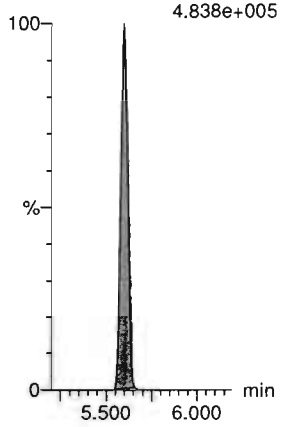
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.291e+005



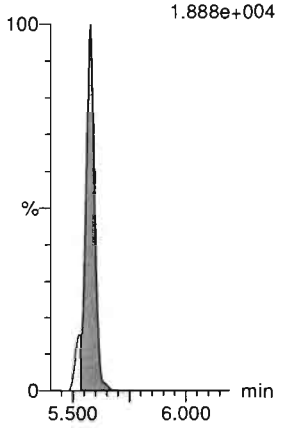
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.251e+005



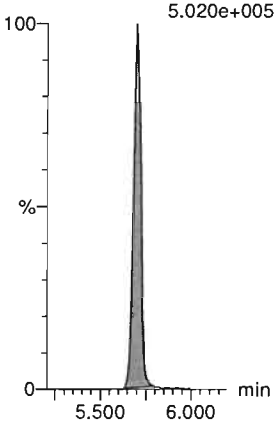
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F63:MRM of 1 channel,ES-
614.7 > 569.7
4.838e+005



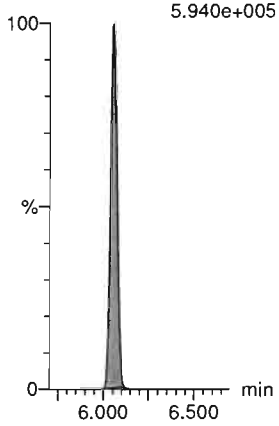
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
1.888e+004



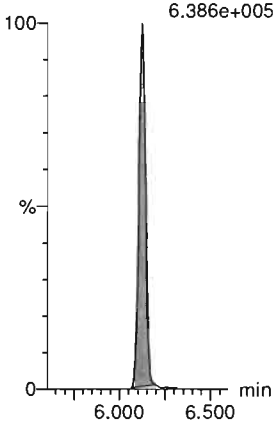
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.020e+005



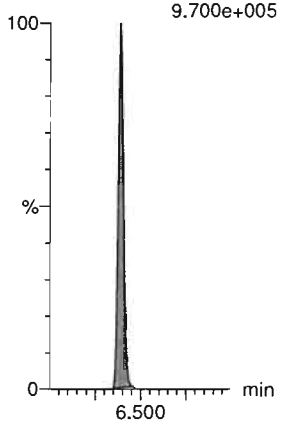
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F74:MRM of 2 channels,ES-
715.1 > 669.7
5.940e+005



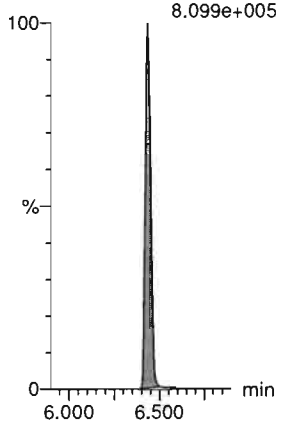
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.386e+005



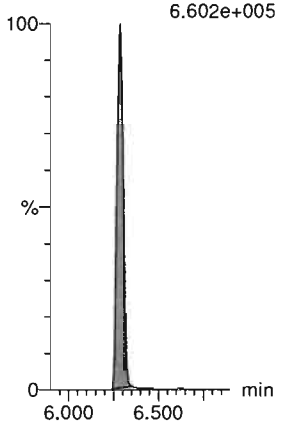
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.700e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
8.099e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
6.602e+005



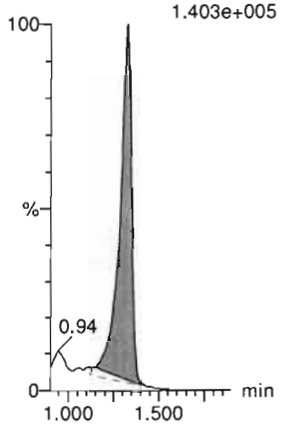
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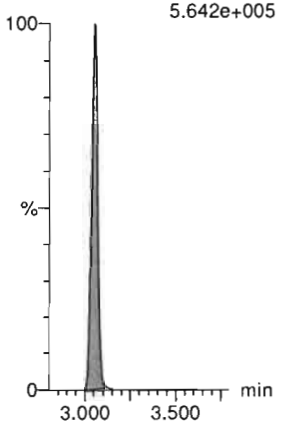
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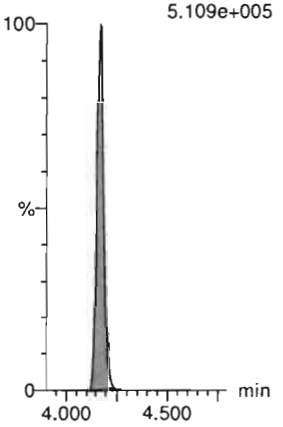
13C4-PFBA



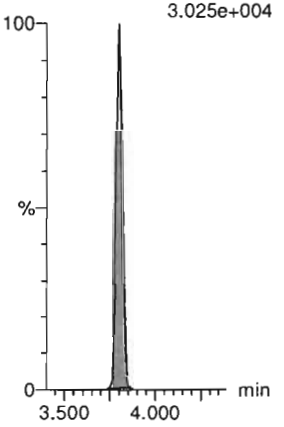
13C5-PFHxA



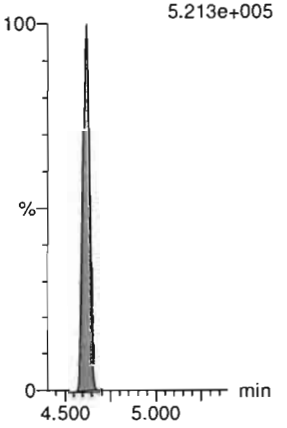
13C8-PFOA



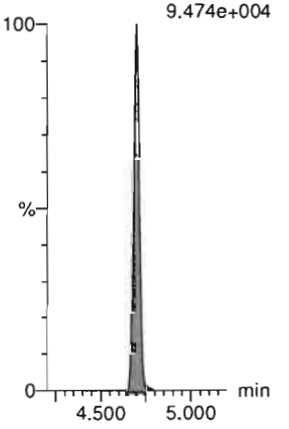
18O2-PFHxS



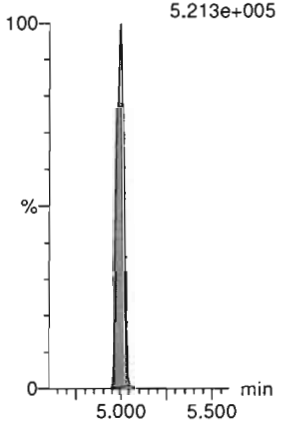
13C9-PFNA



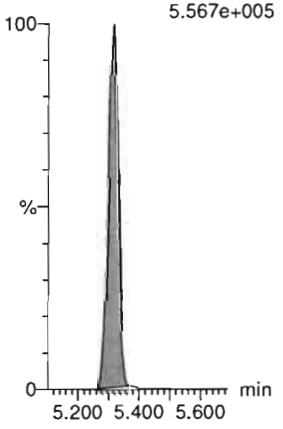
13C4-PFOS



13C6-PFDA



13C7-PFUdA



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B.P. 2/28/2020

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(A) NOT in ICV

Name: 200227P1-14, Date: 27-Feb-2020, Time: 17:47:42, ID: ICV200227P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	6322.493	8041.106	1.00	1.33	9.828	10.000	8.47	84.7	NO		
2	2	PFPrS	248.9 > 79.7		1555.507	1.00			10.000		(A)	NO		YES
3	3	3:3 FTCA	240.9 > 176.9		13751.161	1.00			10.000		↓	NO		YES
4	4	PFPeA	263.1 > 218.9	11481.687	13751.161	1.00	2.26	10.437	10.000	10.9	109.4	NO		
5	5	PFBS	299.0 > 79.7	2661.016	1555.507	1.00	2.54	21.384	8.840	8.96	101.3	NO	3.169	NO
6	6	4:2 FTS	327.0 > 307	2027.788	2009.013	1.00	2.97	12.617	9.360	9.72	103.8	NO	0.864	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	8041.106		1.00	1.33	8041.106	12.500	12.5	100.2	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1555.507		1.00	2.53	1555.507	12.500	12.7	101.4	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	13751.161		1.00	2.26	13751.161	12.500	11.9	94.8	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	13751.161		1.00	2.26	13751.161	12.500	11.9	94.8	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1555.507		1.00	2.53	1555.507	12.500	12.7	101.4	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	2009.013		1.00	2.98	2009.013	12.500	12.1	96.9	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	18872.977	22829.393	1.00	3.05	10.334	10.000	11.6	115.7	NO	20.416	NO
15	8	PFPeS	349.>79.7	3091.768	1555.507	1.00	3.25	24.845	9.360	10.1	107.7	NO	2.805	NO
16	9	HFPO-DA	285.1 > 168.9	3732.078	4052.387	1.00	3.27	11.512	10.000	11.0	110.2	NO	2.659	NO
17	10	5:3 FTCA	340.9 > 236.9		16330.987	1.00			10.000		(A)	NO		YES
18	11	PFHpA	363.0 > 318.9	16481.484	16330.987	1.00	3.66	12.615	10.000	10.8	108.2	NO	25.069	NO
19	12	ADONA	376.8 > 250.9	34749.301	16330.987	1.00	3.76	26.598	10.000	10.1	101.0	NO	3.858	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	22829.393		1.00	3.05	22829.393	12.500	13.0	103.7	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1555.507		1.00	2.53	1555.507	12.500	12.7	101.4	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	4052.387		1.00	3.27	4052.387	12.500	12.3	98.8	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	16330.987		1.00	3.66	16330.987	12.500	12.7	101.2	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	16330.987		1.00	3.66	16330.987	12.500	12.7	101.2	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	16330.987		1.00	3.66	16330.987	12.500	12.7	101.2	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2735.047	3444.199	1.00	3.80	9.926	9.120	9.42	103.3	NO	2.264	NO
28	15	6:2 FTS	427.0 > 407	2284.346	1920.103	1.00	4.12	14.871	9.480	9.38	98.9	NO	1.076	NO
29	16	L-PFOA	412.8 > 368.9	21233.619	21699.271	1.00	4.17	12.232	10.000	10.1	100.8	NO	2.967	NO
30	18	PFecHS	460.8 > 381.0		21699.271	1.00			10.000		(A)	NO		YES
31	19	PFHpS	449.0 > 79.7	3044.593	4525.175	1.00	4.28	8.410	9.480	8.65	91.3	NO	1.855	NO
32	20	7:3 FTCA	440.9 > 336.9		21178.857	1.00			10.000		(A)	NO		YES
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3444.199		1.00	3.80	3444.199	12.500	11.1	89.1	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1920.103		1.00	4.12	1920.103	12.500	12.9	103.2	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	21699.271		1.00	4.17	21699.271	12.500	12.2	97.4	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	21699.271		1.00	4.17	21699.271	12.500	12.2	97.4	NO		

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Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-ICV.qld

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Name: 200227P1-14, Date: 27-Feb-2020, Time: 17:47:42, ID: ICV200227P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	71	13C8-PFOS-EIS	507.0 > 79.7	4525.175		1.00	4.70	4525.175	12.500	13.1	104.5	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	21178.857		1.00	4.62	21178.857	12.500	12.1	96.8	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	20805.121	21178.857	1.00	4.62	12.279	10.000	11.3	113.4	NO	7.745	NO
41	22	PFOSA	497.9 > 77.9	3657.668	5462.565	1.00	4.67	8.370	10.000	10.6	106.4	NO	24.046	NO
42	23	L-PFOS	498.9 > 79.7	3202.209	4525.175	1.00	4.70	8.846	9.280	9.46	102.0	NO	2.620	NO
43	25	9Cl-PF30NS	530.7 > 350.8	3079.607	4525.175	1.00	4.92	8.507	9.280	8.47	91.3	NO	15.870	NO
44	26	PFDA	513 > 468.8	23411.055	21643.455	1.00	4.99	13.521	10.000	11.7	117.0	NO	12.086	NO
45	27	8:2 FTS	526.9 > 507	1831.183	1591.167	1.00	4.96	14.386	9.600	10.3	107.2	NO	2.912	YES
46	65	13C5-PFNA-EIS	468.2 > 422.9	21178.857		1.00	4.62	21178.857	12.500	12.1	96.8	NO		
47	67	13C8-PFOSA-EIS	506 > 78	5462.565		1.00	4.67	5462.565	12.500	12.2	97.3	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	4525.175		1.00	4.70	4525.175	12.500	13.1	104.5	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	4525.175		1.00	4.70	4525.175	12.500	13.1	104.5	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	21643.455		1.00	4.99	21643.455	12.500	11.3	90.4	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1591.167		1.00	4.96	1591.167	12.500	12.0	95.9	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	3378.034	4525.175	1.00	5.06	9.331	9.600	9.63	100.4	NO	2.539	NO
54	29	L-MeFOSAA	570 > 419	6524.342	6488.712	1.00	5.14	12.569	10.000	9.63	96.3	NO	2.080	NO
55	31	L-EtFOSAA	584.1 > 419	5605.035	6445.108	1.00	5.31	10.871	10.000	10.3	103.4	NO	1.149	NO
56	33	PFUdA	563.0 > 518.9	23800.664	26630.203	1.00	5.32	11.172	10.000	11.9	119.0	NO	25.441	NO
57	34	PFDS	598.8 > 79.7	2715.856	4525.175	1.00	5.36	7.502	9.600	8.97	93.4	NO	1.911	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	8095.046	24157.877	1.00	5.53	4.189	9.440	9.34	98.9	NO	19.549	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	4525.175		1.00	4.70	4525.175	12.500	13.1	104.5	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	6488.712		1.00	5.14	6488.712	12.500	13.4	107.6	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	6445.108		1.00	5.30	6445.108	12.500	11.6	93.2	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	26630.203		1.00	5.32	26630.203	12.500	12.1	97.1	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	4525.175		1.00	4.70	4525.175	12.500	13.1	104.5	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	24157.877		1.00	5.60	24157.877	12.500	12.4	99.3	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607		1227.195	1.00			10.000		(A)	NO		YES
67	37	PFDoA	612.9 > 569.0	22950.121	24157.877	1.00	5.60	11.875	10.000	10.2	101.6	NO	10.550	NO
68	38	N-MeFOSA	512.1 > 168.9		22795.076	1.00			9.600		(A)	NO		YES
69	39	PFTrDA	662.9 > 618.9	25021.367	24157.877	1.00	5.84	12.947	10.000	10.5	105.5	NO	61.276	NO
70	40	PFDoS	698.8 > 79.7		28012.779	1.00			10.000		(A)	NO		YES
71	41	PFTeDA	713.0 > 669.0	22588.549	28012.779	1.00	6.06	10.080	10.000	11.1	111.2	NO	15.957	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	1227.195		1.00	5.58	1227.195	10.000	11.8	117.8	NO		

Dataset: Untitled

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Name: 200227P1-14, Date: 27-Feb-2020, Time: 17:47:42, ID: ICV200227P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83	13C2-PFDoA-EIS	614.7 > 569.7	24157.877		1.00	5.60	24157.877	12.500	12.4	99.3	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	22795.076		1.00	5.70	22795.076	149.200	155	103.8	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	24157.877		1.00	5.60	24157.877	12.500	12.4	99.3	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	28012.779		1.00	6.06	28012.779	12.500	13.4	107.5	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	28012.779		1.00	6.06	28012.779	12.500	13.4	107.5	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9		32882.824	1.00			9.600			NO		YES
80	43	PFHxDA	813.1 > 768.6		37459.668	1.00			10.000			NO		YES
81	44	PFODA	913.1 > 868.8		37459.668	1.00			10.000			NO		
82	45	N-MeFOSE	616.1 > 58.9		24710.654	1.00			9.600			NO		
83	46	N-EtFOSE	630.1 > 58.9		28454.996	1.00			9.600			NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	32882.824		1.00	6.12	32882.824	149.200	152	102.1	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	37459.668		1.00	6.39	37459.668	12.500	12.2	97.5	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	37459.668		1.00	6.39	37459.668	12.500	12.2	97.5	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	24710.654		1.00	6.29	24710.654	149.200	148	99.4	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	28454.996		1.00	6.44	28454.996	149.200	147	98.7	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	4525.175		1.00	4.70	4525.175	12.500	13.1	104.5	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	8041.106	9951.637	1.00	1.33	10.100	12.500	12.4	99.4	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	13978.176	23919.768	1.00	2.26	7.305	12.500	12.4	98.9	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	1555.507	1374.318	1.00	2.53	14.148	12.500	13.0	103.8	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	4052.387	23919.768	1.00	3.27	2.118	12.500	12.1	97.0	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	2009.013	1374.318	1.00	2.98	18.273	12.500	13.0	103.6	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	22829.393	23919.768	1.00	3.05	11.930	12.500	12.2	97.5	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	16330.987	23919.768	1.00	3.66	8.534	12.500	12.6	101.1	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	3444.199	1374.318	1.00	3.80	31.326	12.500	12.9	103.3	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1920.103	4550.261	1.00	4.12	5.275	12.500	12.1	96.8	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	21178.857	23781.623	1.00	4.62	11.132	12.500	11.7	93.7	NO		
101	68	13C8-PFOSA-RSD	506 > 78	5462.565	25451.531	1.00	4.67	2.683	12.500	12.4	99.3	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	21699.271	24416.922	1.00	4.17	11.109	12.500	12.1	96.9	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	4593.541	4550.261	1.00	4.70	12.619	12.500	13.6	108.9	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	21643.455	21341.871	1.00	4.99	12.677	12.500	12.9	103.2	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1591.167	4550.261	1.00	4.96	4.371	12.500	11.9	95.2	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	6488.712	25451.531	1.00	5.14	3.187	12.500	14.0	112.3	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	26630.203	25451.531	1.00	5.32	13.079	12.500	12.4	99.4	NO		

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Name: 200227P1-14, Date: 27-Feb-2020, Time: 17:47:42, ID: ICV200227P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82	d5-N-EtFOSAA-RSD	589.3 > 419	6445.108	25451.531	1.00	5.30	3.165	12.500	13.1	104.7	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	24157.877	21341.871	1.00	5.60	14.149	12.500	14.6	116.6	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	1227.195	4550.261	1.00	5.58	3.371	10.000	11.8	117.9	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	22795.076	25451.531	1.00	5.70	11.195	149.200	150	100.4	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	28012.779	25451.531	1.00	6.06	13.758	12.500	13.1	105.0	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	32882.824	25451.531	1.00	6.12	16.150	149.200	155	104.1	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	37459.668	25451.531	1.00	6.39	18.398	12.500	12.6	100.4	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	24710.654	25451.531	1.00	6.29	12.136	149.200	149	99.6	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	28454.996	25451.531	1.00	6.44	13.975	149.200	149	99.9	NO		
119	99	13C4-PFBA	217.0 > 172.0	9951.637	9951.637	1.00	1.33	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	23919.768	23919.768	1.00	3.05	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	24416.922	24416.922	1.00	4.17	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1374.318	1374.318	1.00	3.80	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	23781.623	23781.623	1.00	4.62	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	4550.261	4550.261	1.00	4.70	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	21341.871	21341.871	1.00	4.99	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	25451.531	25451.531	1.00	5.32	12.500	12.500	12.5	100.0	NO		

OPV 2/28/2020

Vista Analytical Laboratory

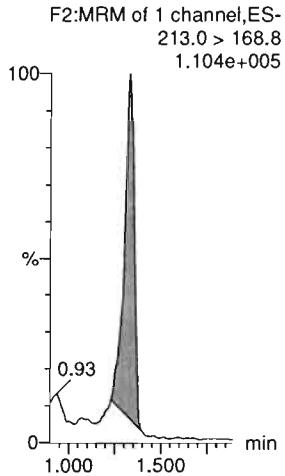
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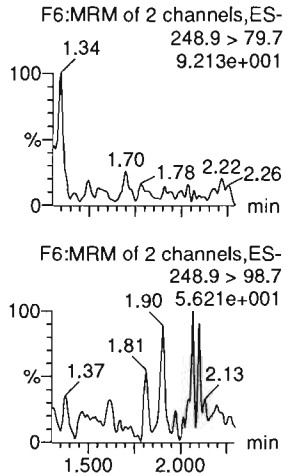
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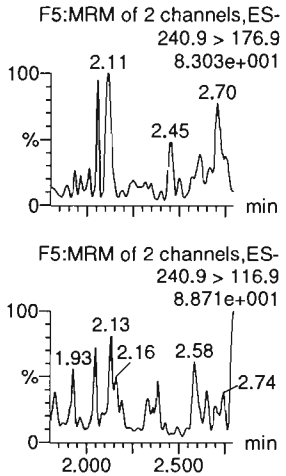
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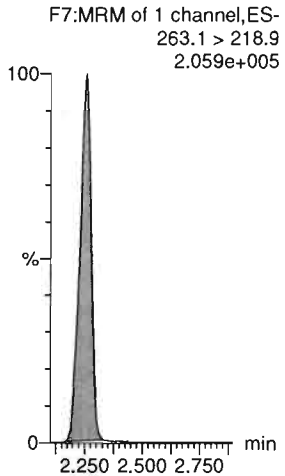
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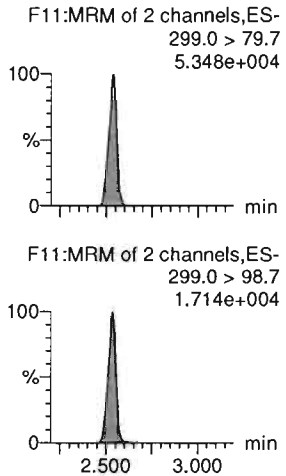
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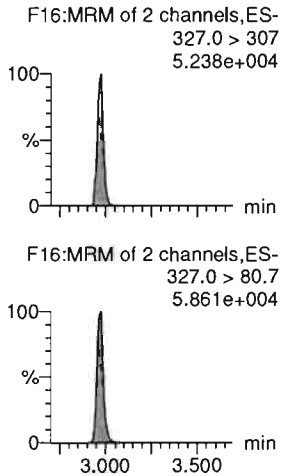
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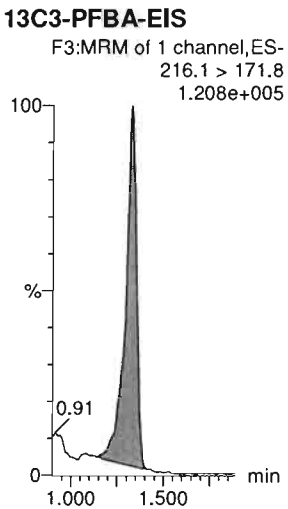
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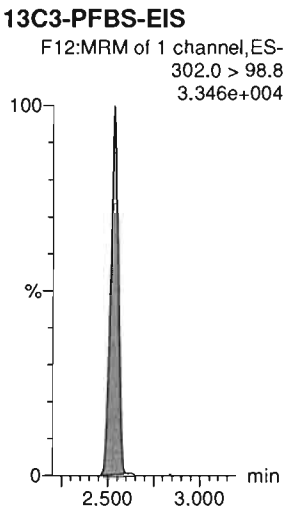
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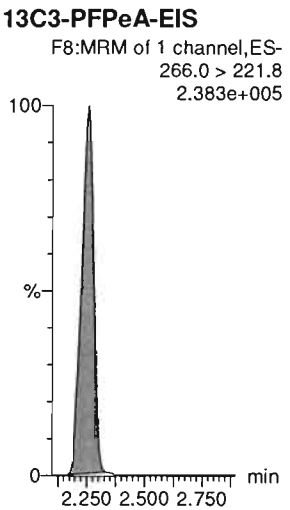
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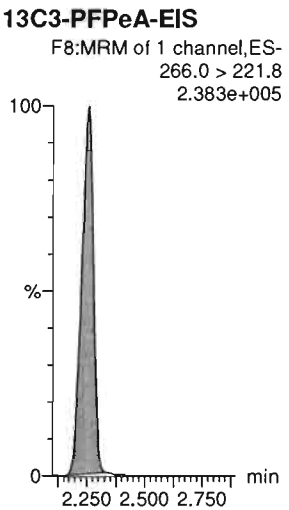
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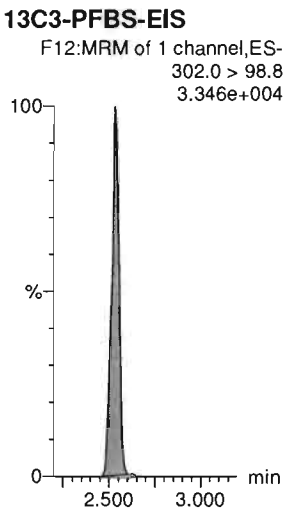
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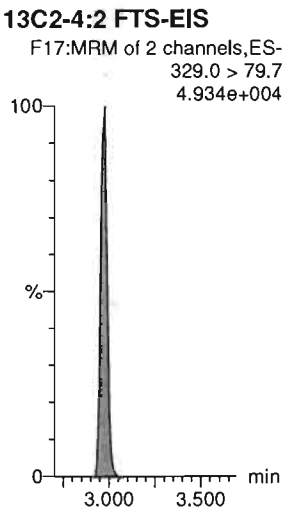
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS



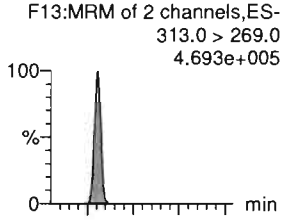
OPV 2/28/2020

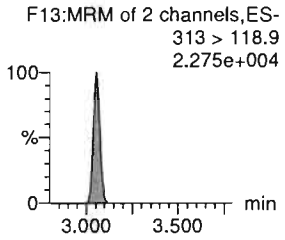
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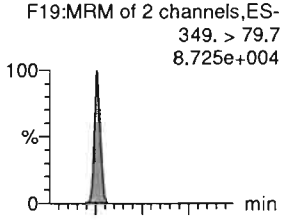
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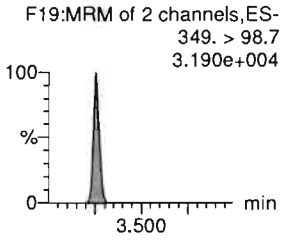
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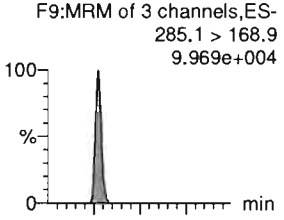


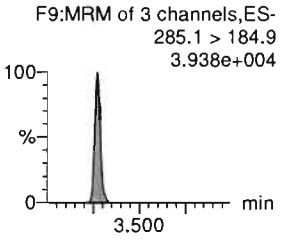
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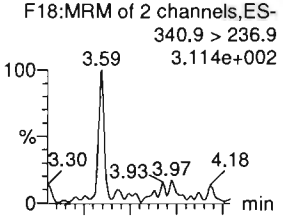


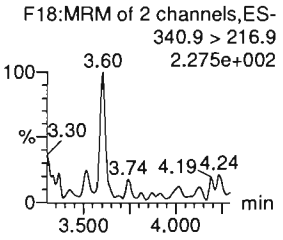
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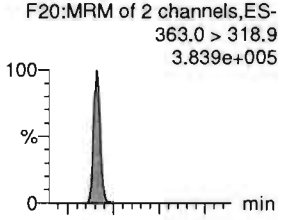


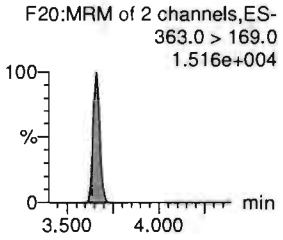
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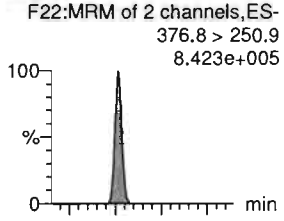


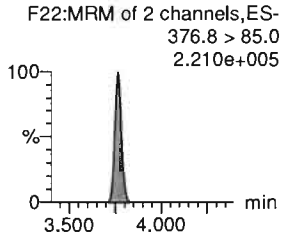
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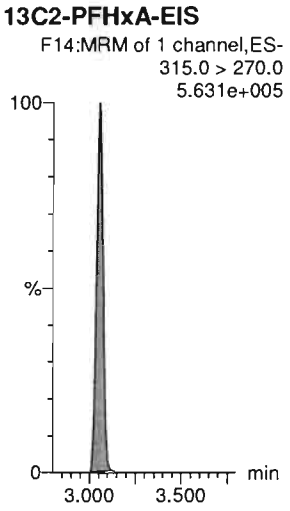


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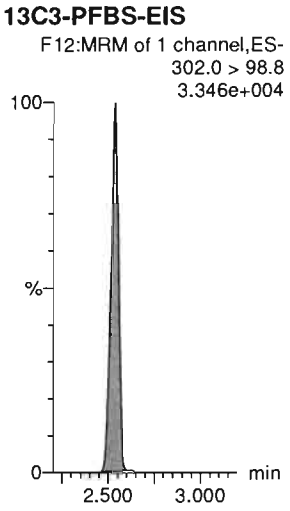




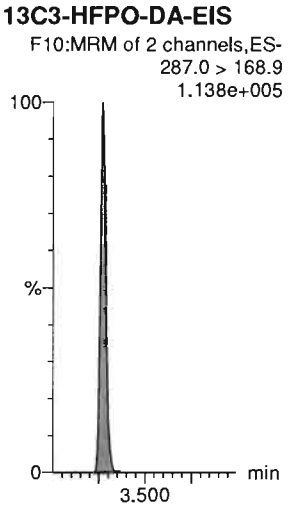
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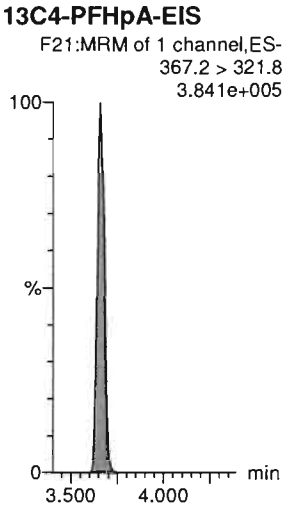
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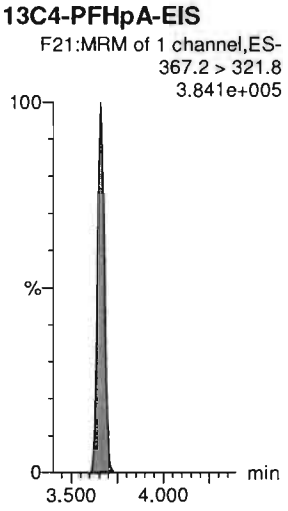
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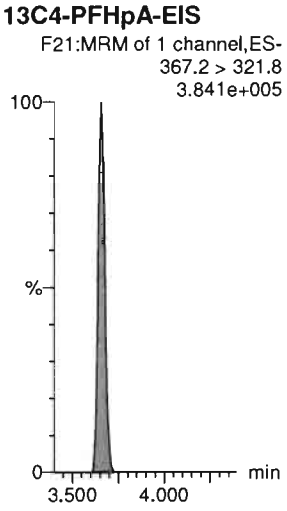
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13C4-PFHpA-EIS



13C4-PFHpA-EIS



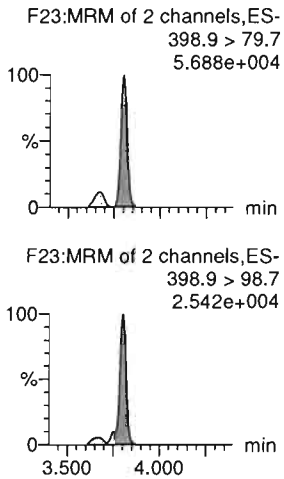
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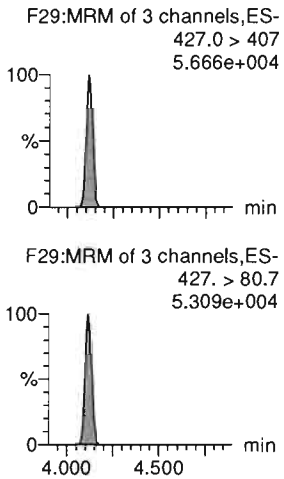
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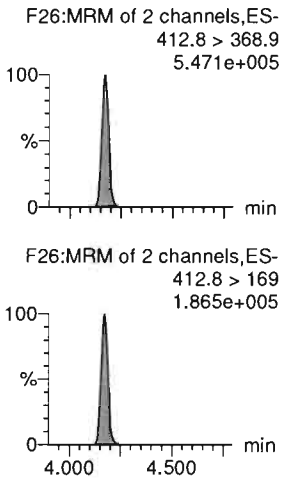
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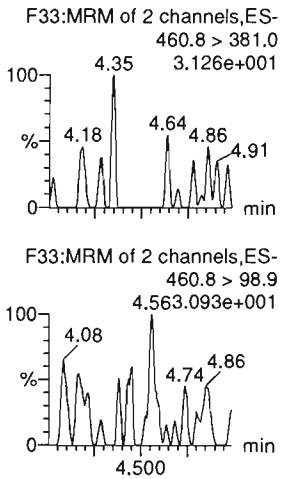
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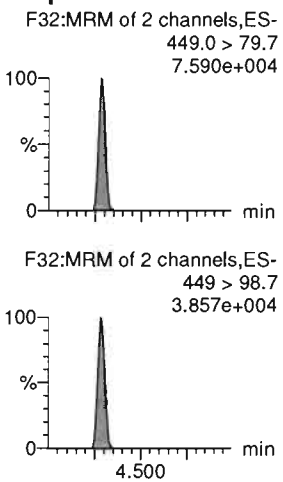
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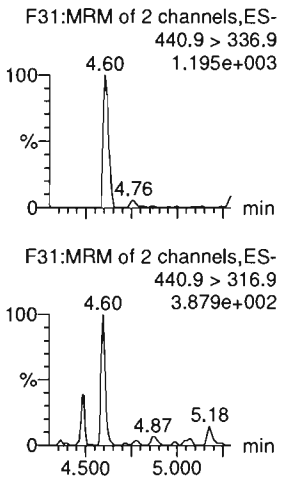
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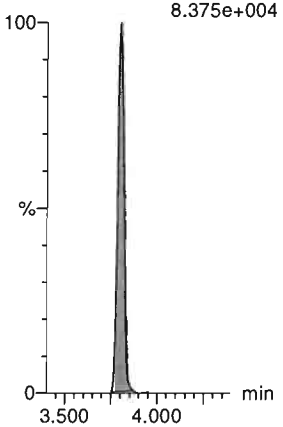
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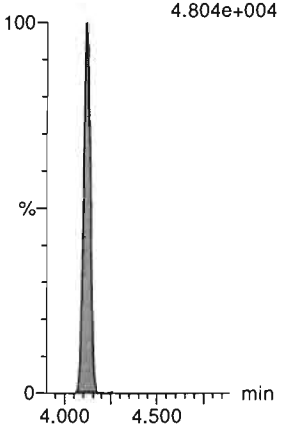
7:3 FTCA



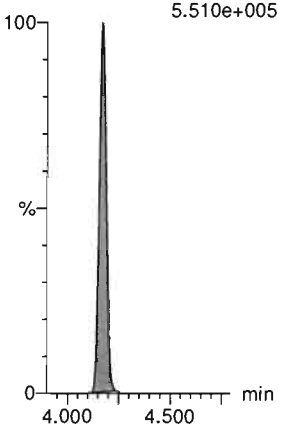
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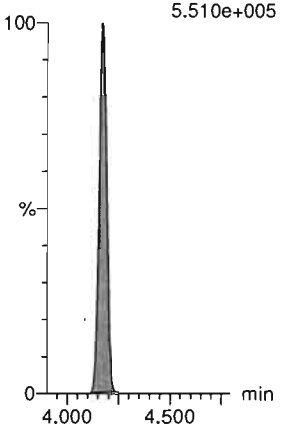
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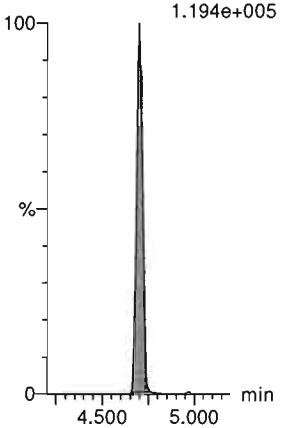
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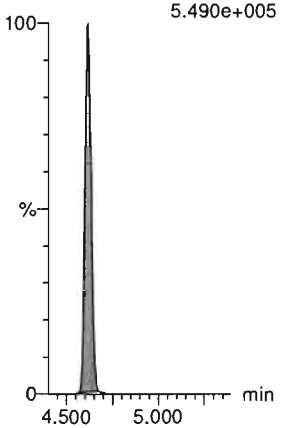
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13C8-PFOS-EIS



13C5-PFNA-EIS



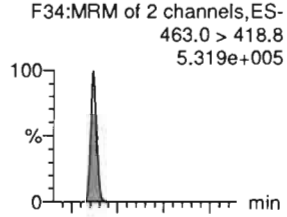
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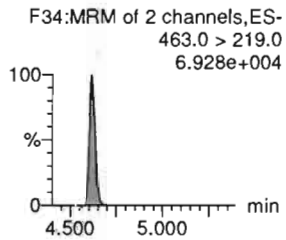
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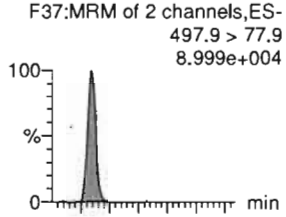
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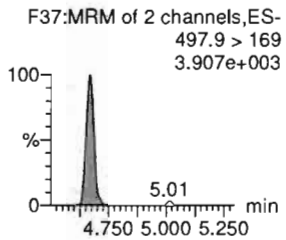
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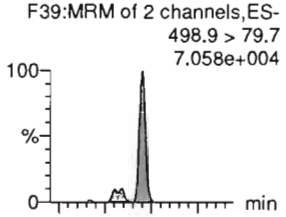


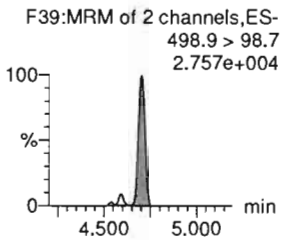
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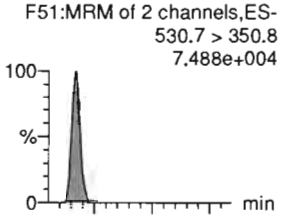


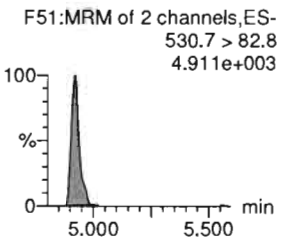
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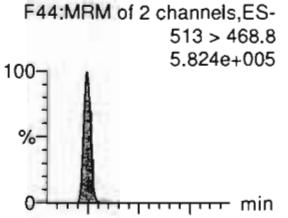


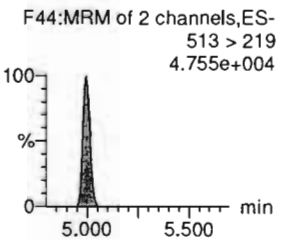
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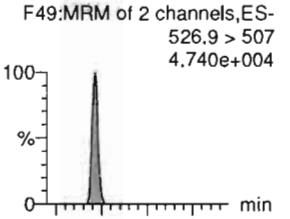


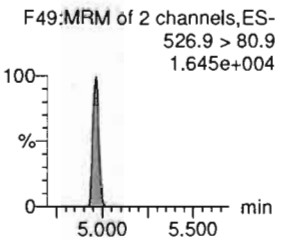
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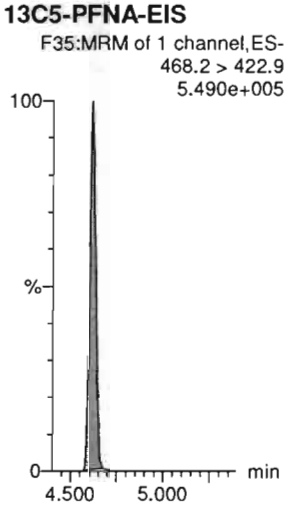


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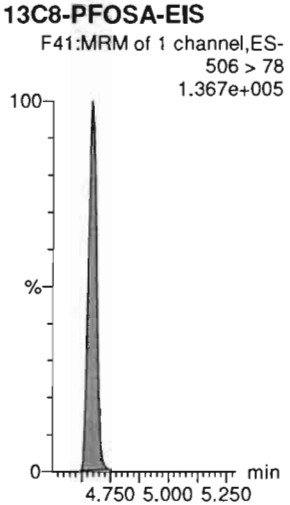




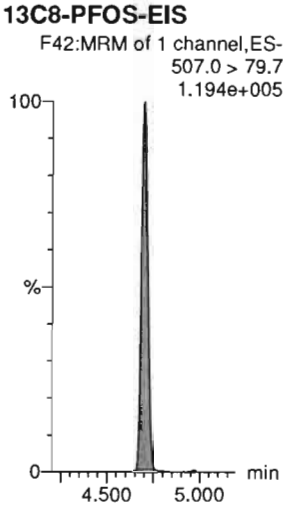
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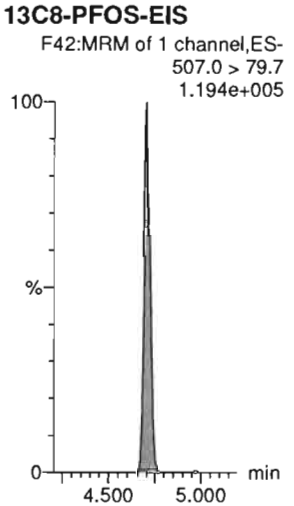
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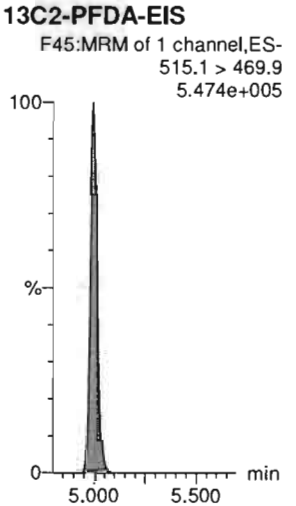
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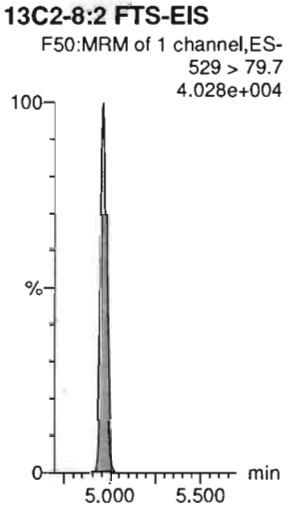
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS



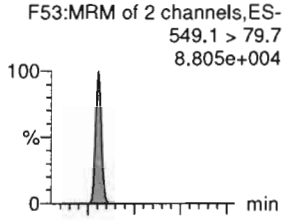
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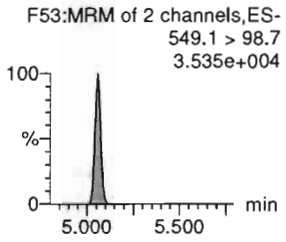
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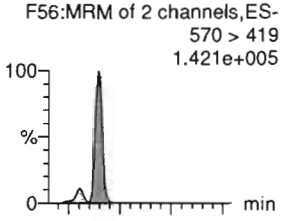
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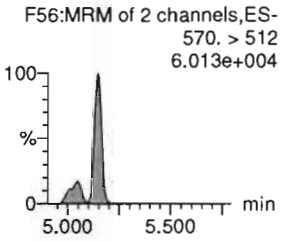
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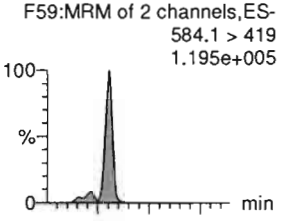


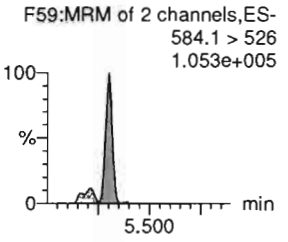
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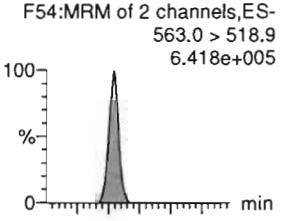


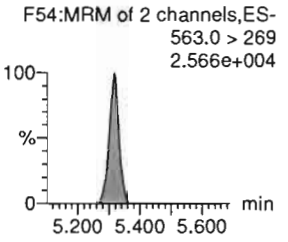
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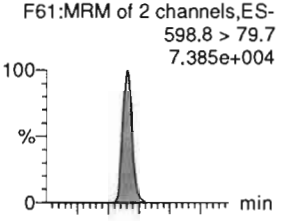


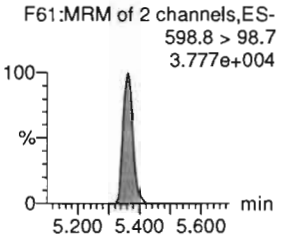
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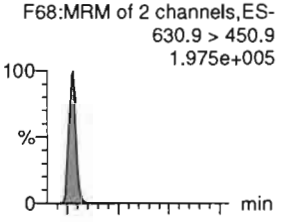


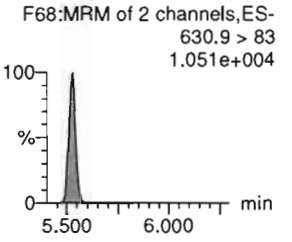
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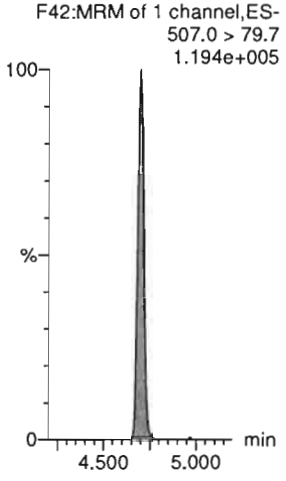


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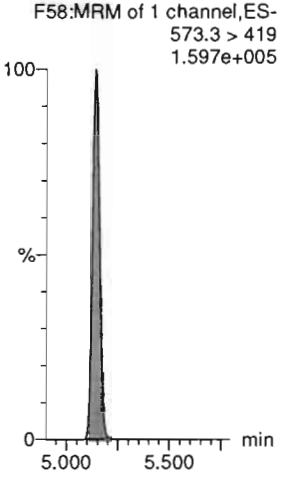




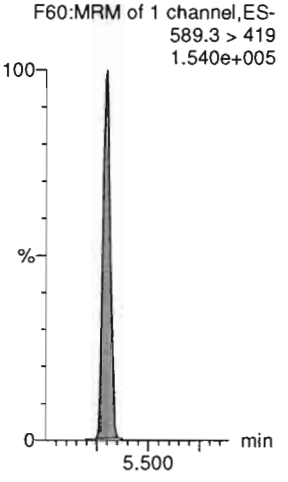
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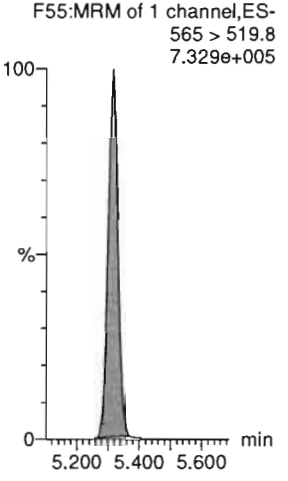
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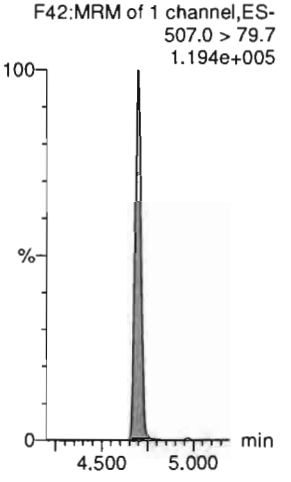
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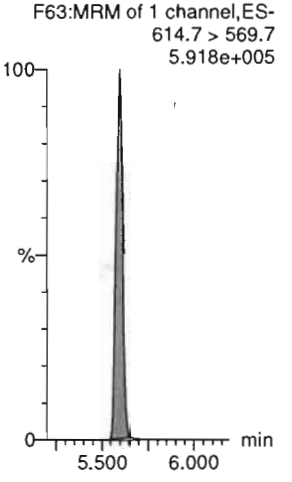
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13C8-PFOS-EIS



13C2-PFDoA-EIS



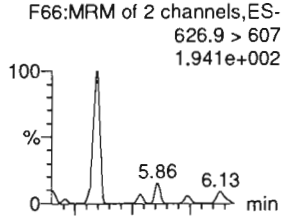
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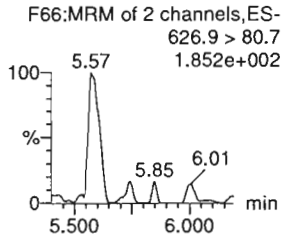
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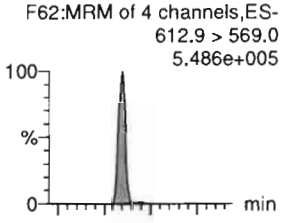
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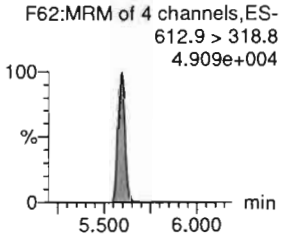
10:2 FTS



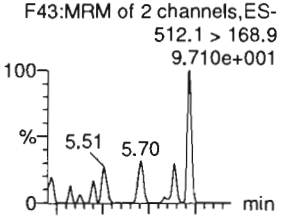


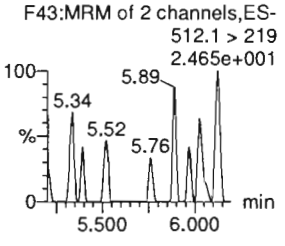
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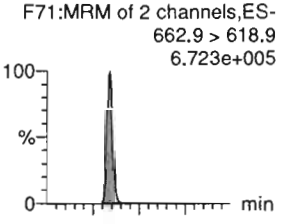


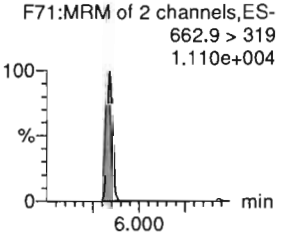
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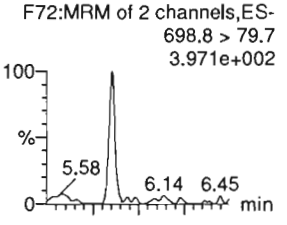


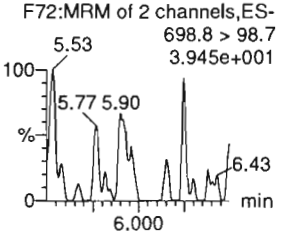
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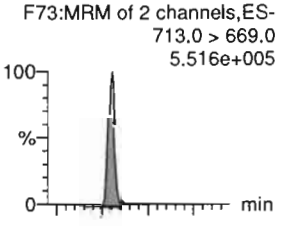


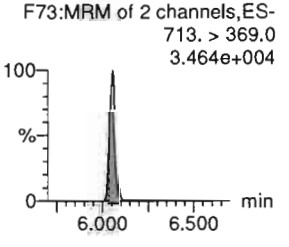
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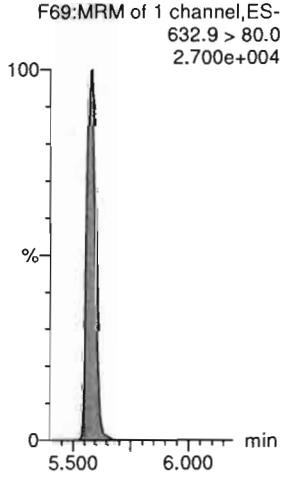


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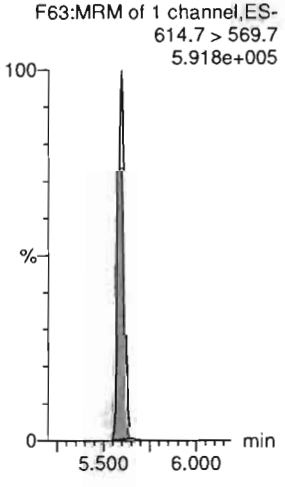




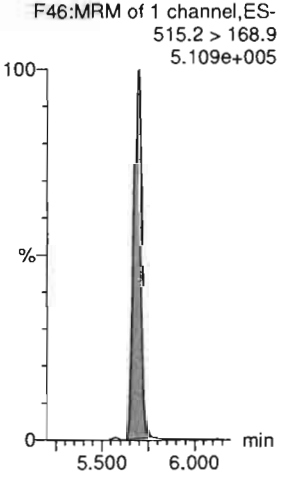
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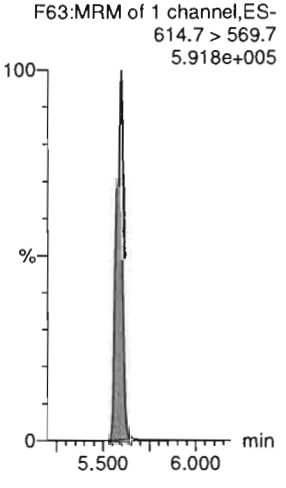
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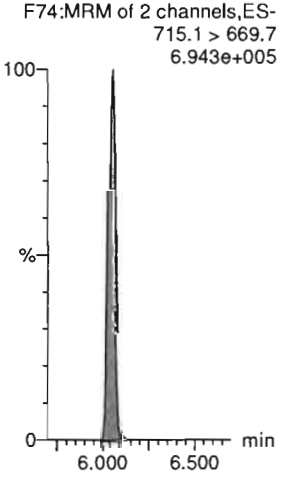
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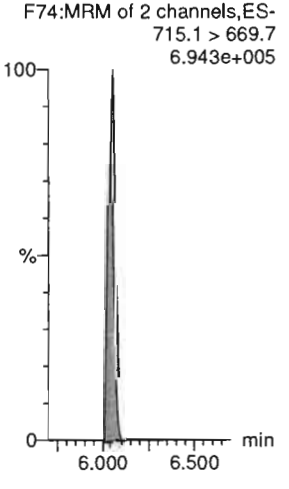
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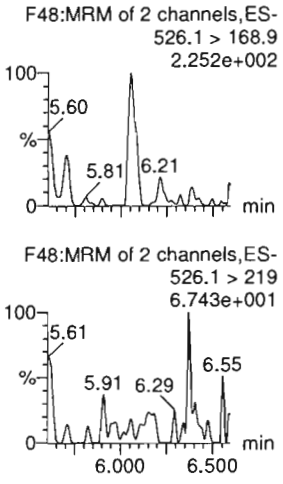


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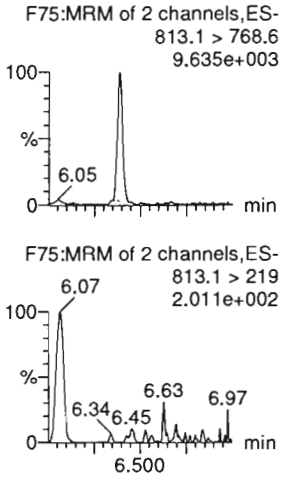
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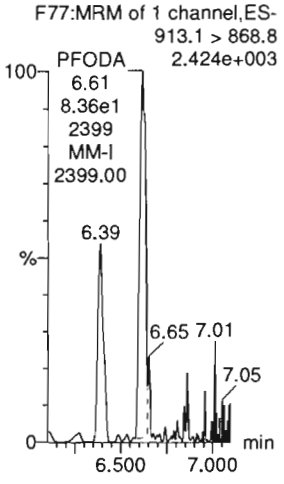
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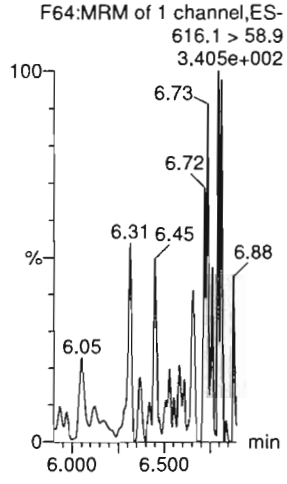
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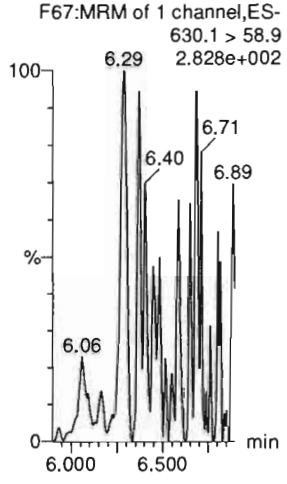
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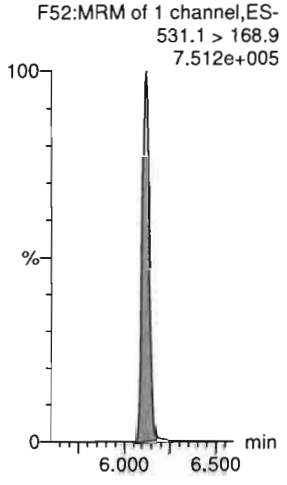
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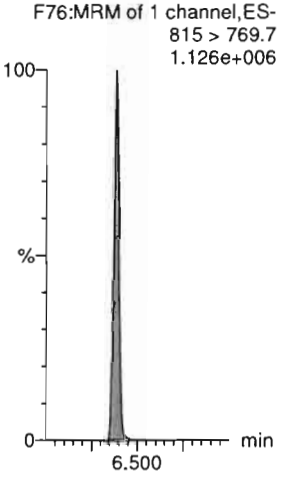
N-EtFOSE



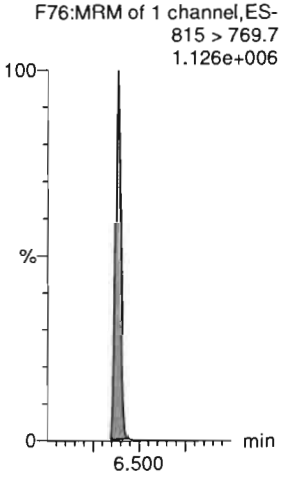
d5-N-ETFOSA-EIS



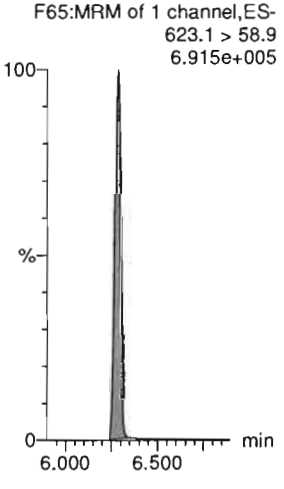
13C2-PFHxDA-EIS



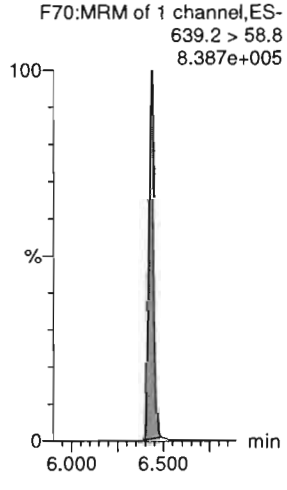
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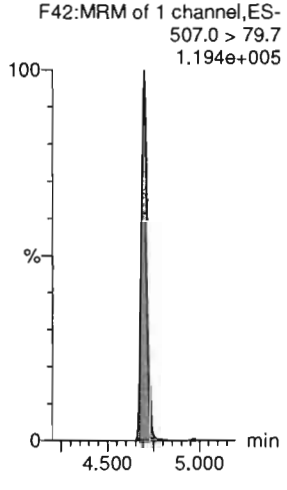
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS



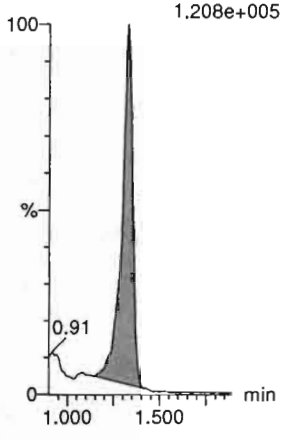
OPV 2/28/2020

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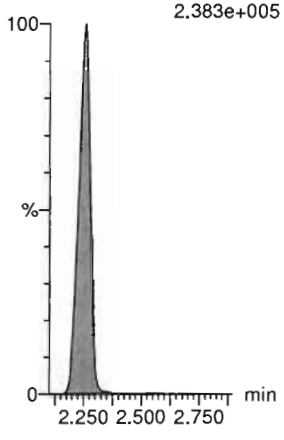
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Printed: Friday, February 28, 2020 10:27:20 Pacific Standard Time

Name: 200227P1-14, Date: 27-Feb-2020, Time: 17:47:42, ID: ICV200227P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

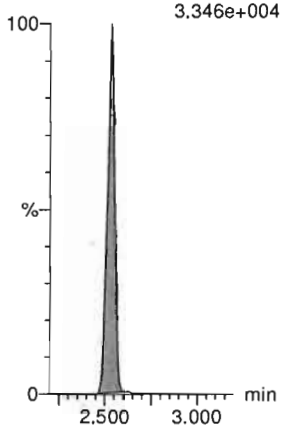
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.208e+005



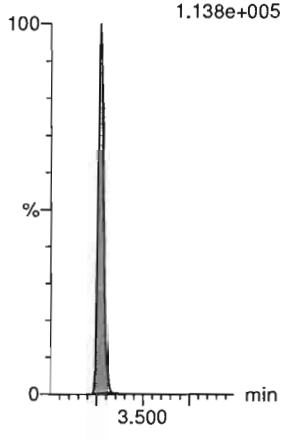
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.383e+005



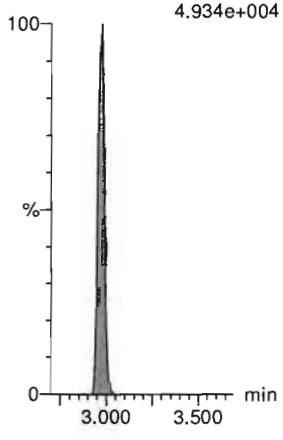
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.346e+004



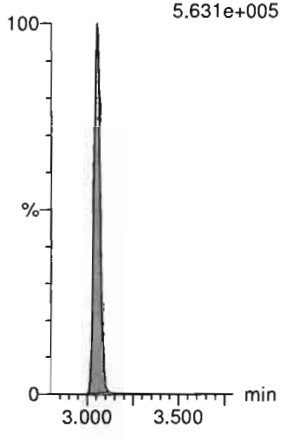
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.138e+005



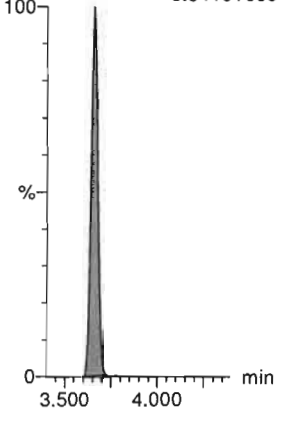
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.934e+004



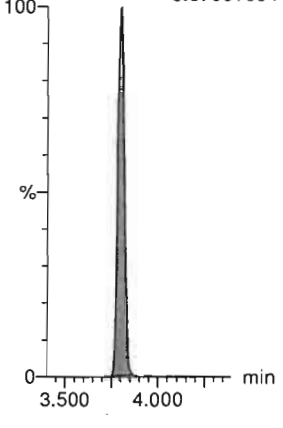
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.631e+005



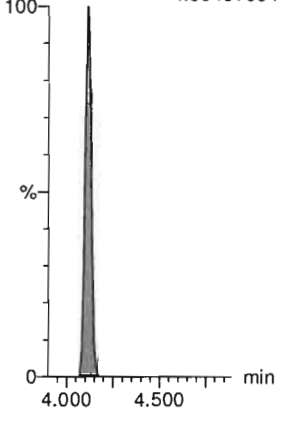
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.841e+005



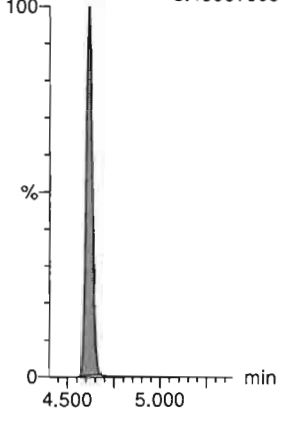
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.375e+004



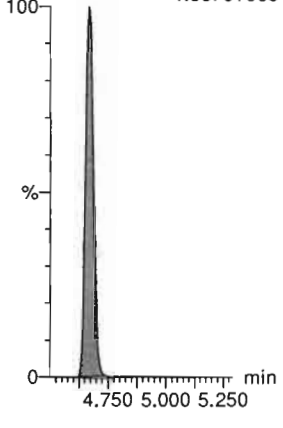
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.804e+004



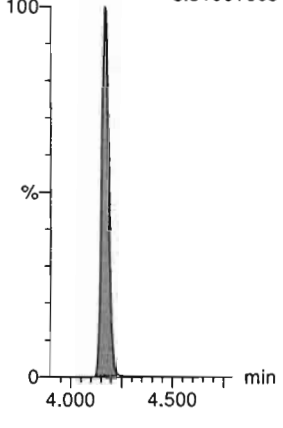
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.490e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.367e+005



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.510e+005



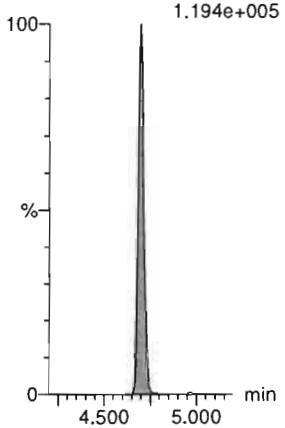
OPV 2/28/2020

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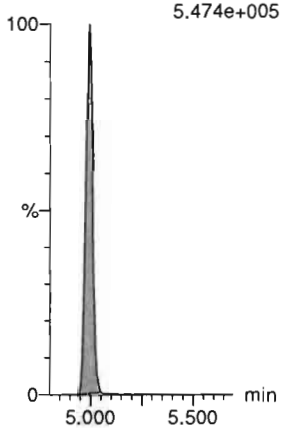
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Name: 200227P1-14, Date: 27-Feb-2020, Time: 17:47:42, ID: ICV200227P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

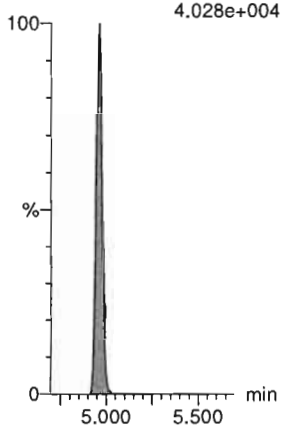
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
1.194e+005



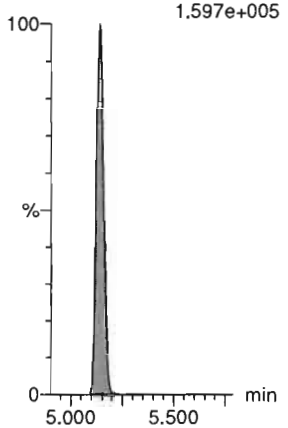
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.474e+005



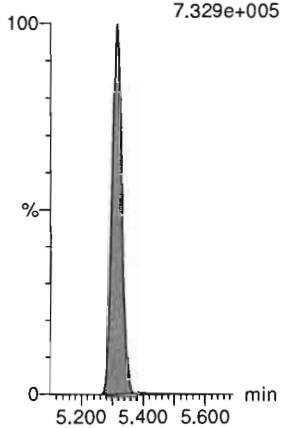
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
4.028e+004



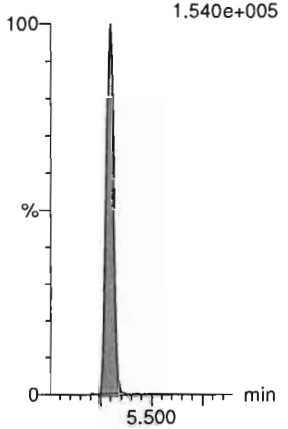
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.597e+005



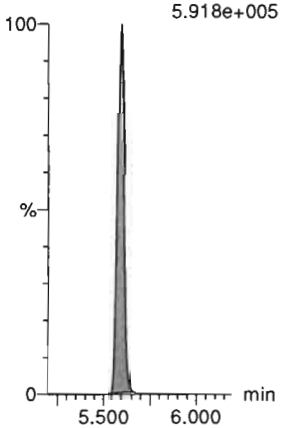
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
7.329e+005



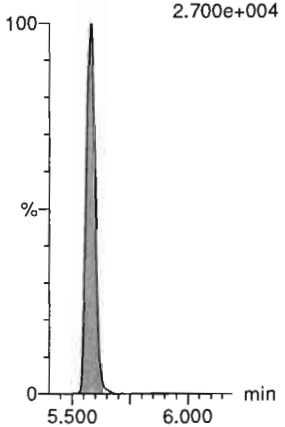
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.540e+005



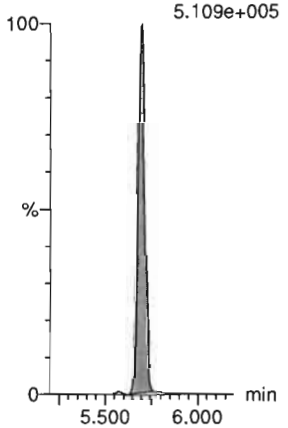
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.918e+005



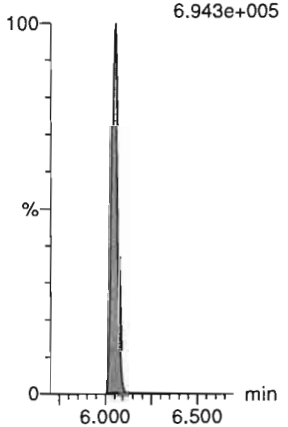
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.700e+004



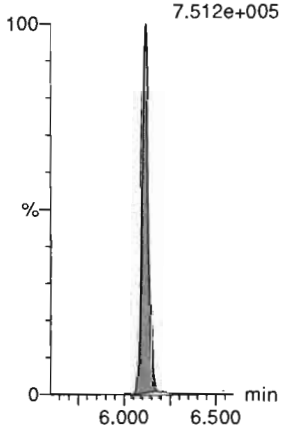
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.109e+005



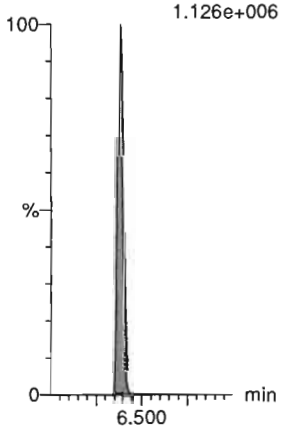
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
6.943e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.512e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.126e+006



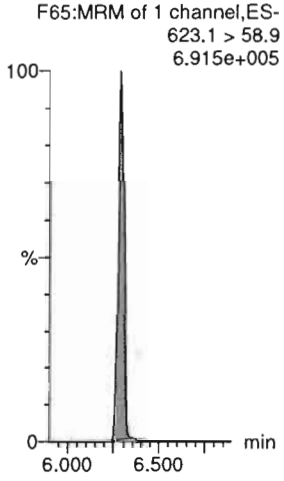
OPV 2/28/2020

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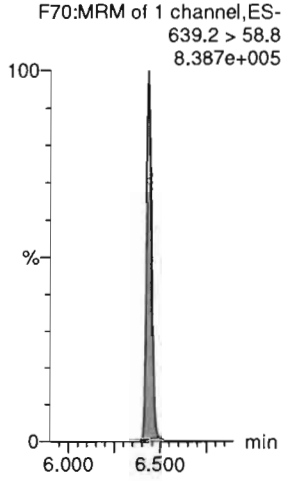
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Name: 200227P1-14, Date: 27-Feb-2020, Time: 17:47:42, ID: ICV200227P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

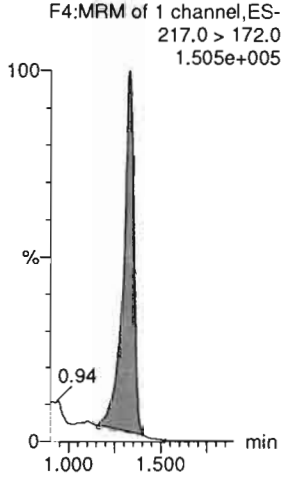
d7-N-MeFOSE-RSD



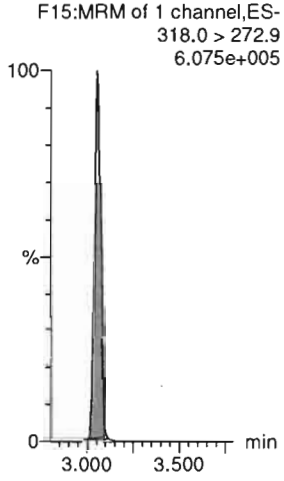
d9-N-EtFOSE-RSD



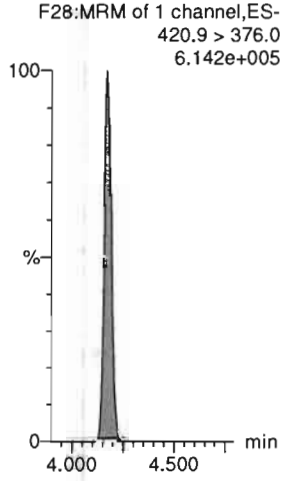
13C4-PFBA



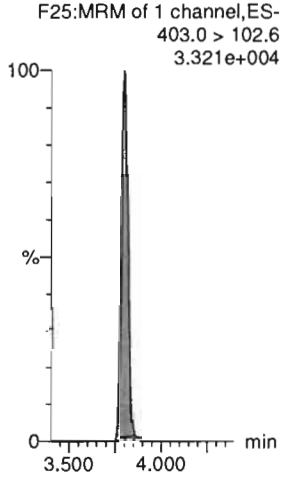
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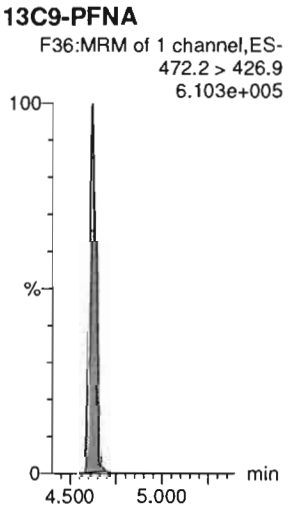
13C8-PFOA



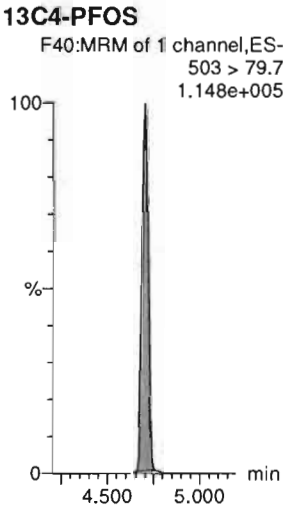
18O2-PFHxS



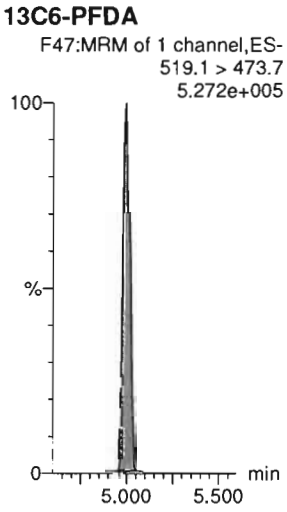
13C9-PFNA



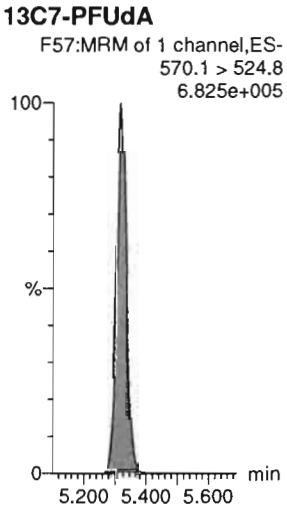
13C4-PFOS



13C6-PFDA



13C7-PFUdA



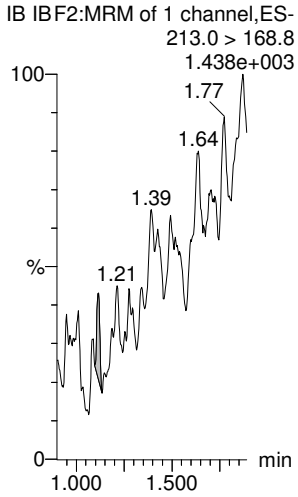
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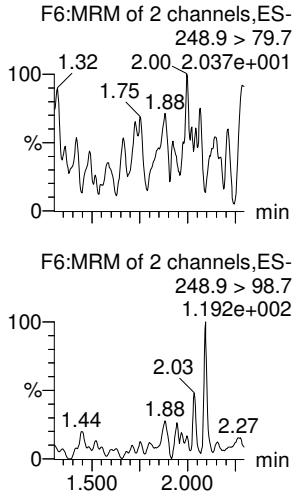
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Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-27-20.cdb 28 Feb 2020 09:57:55

Name: 200227P1-15, Date: 27-Feb-2020, Time: 17:58:10, ID: IB, Description: IB

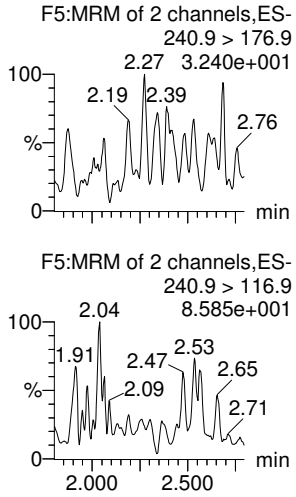
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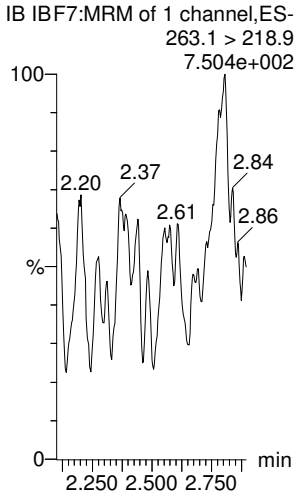
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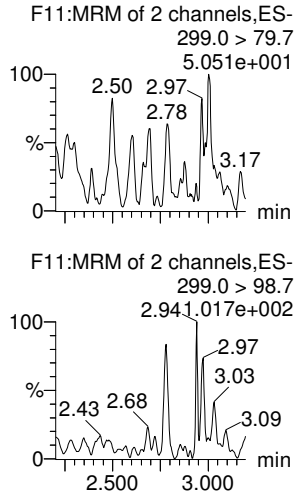
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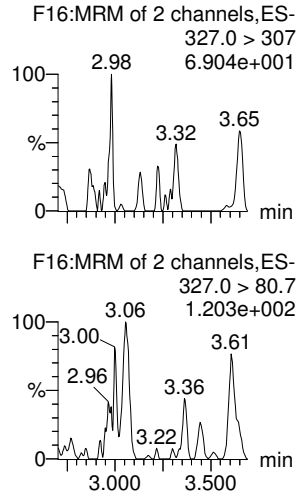
PFPeA



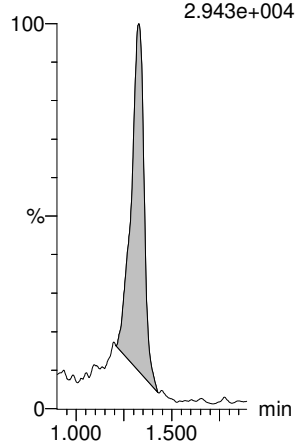
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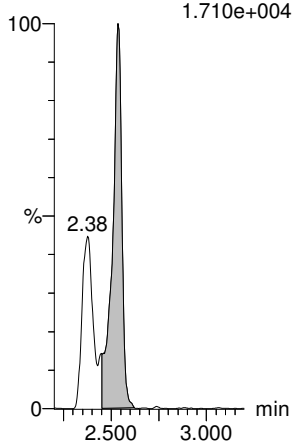
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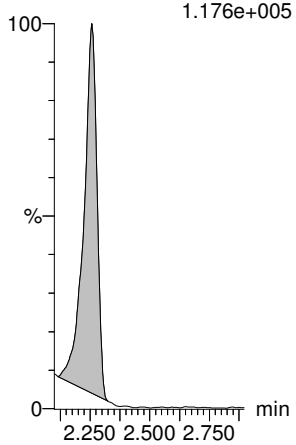
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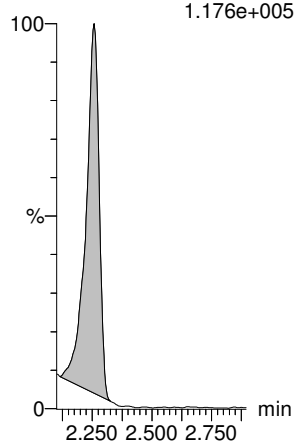
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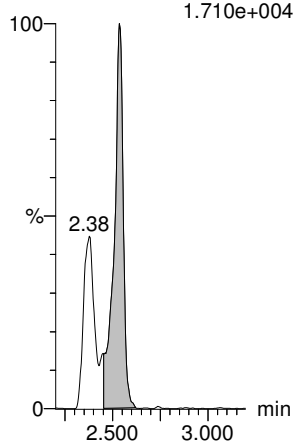
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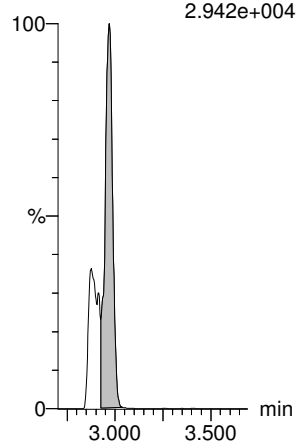
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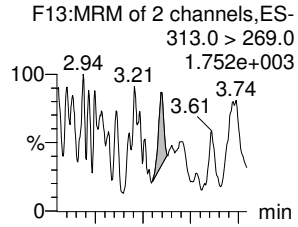


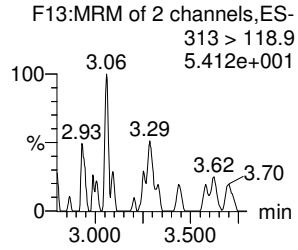
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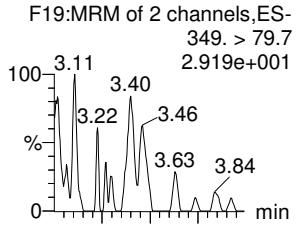
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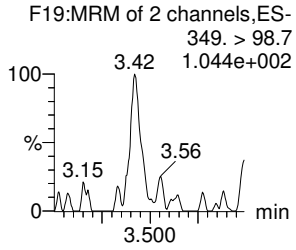
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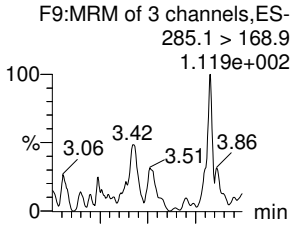


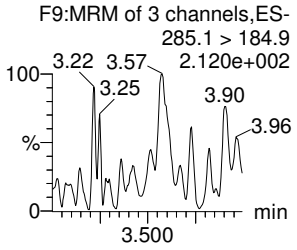
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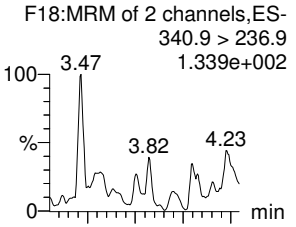


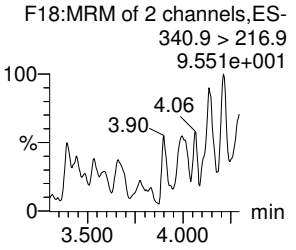
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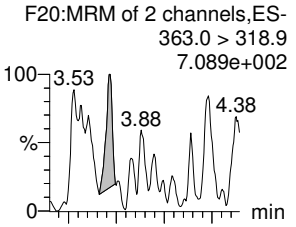


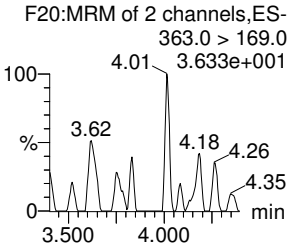
5:3 FTCA



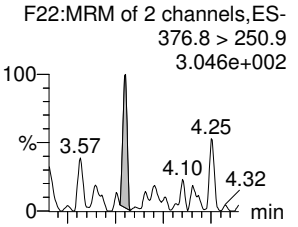


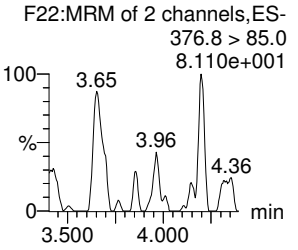
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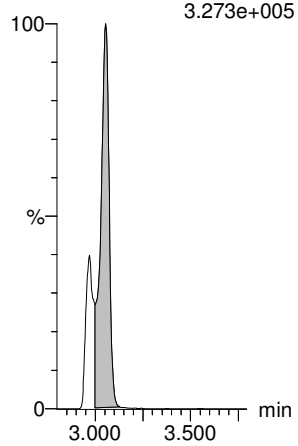


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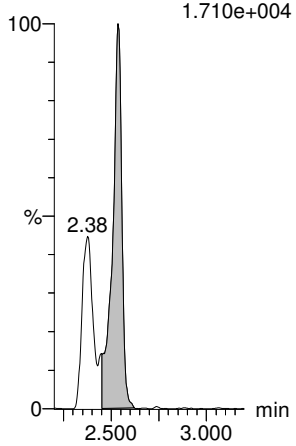




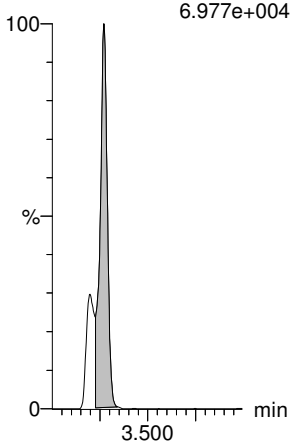
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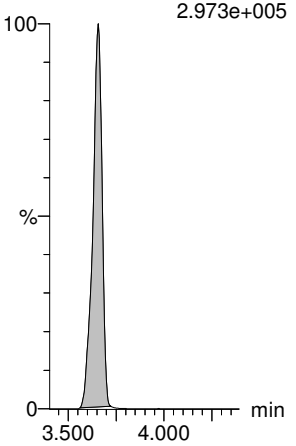
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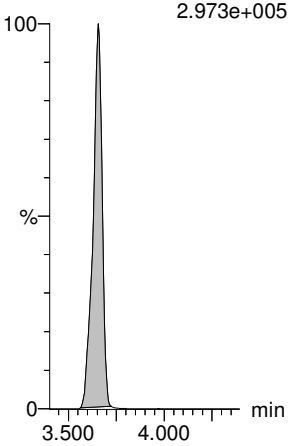
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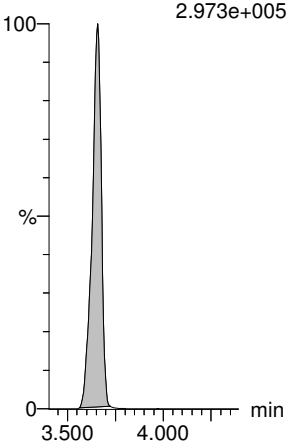
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13C4-PFHpA-EIS



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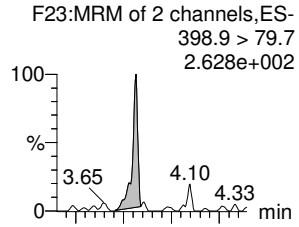


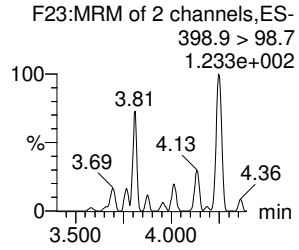
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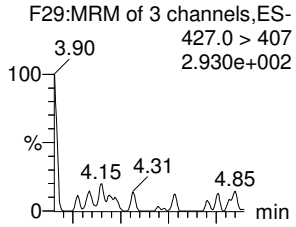
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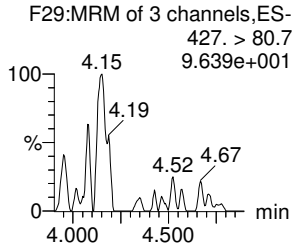
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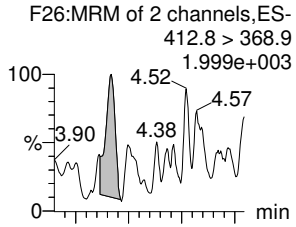


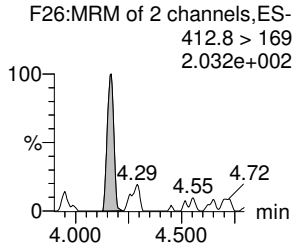
6:2 FTS



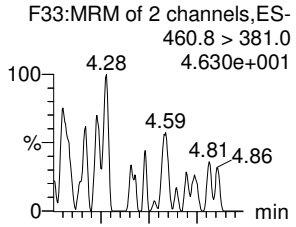


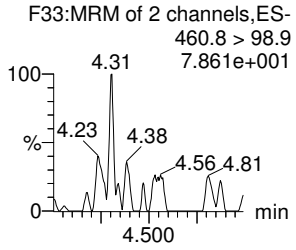
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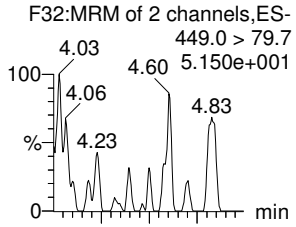


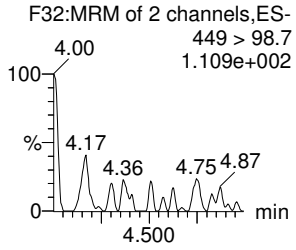
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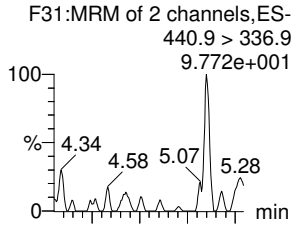


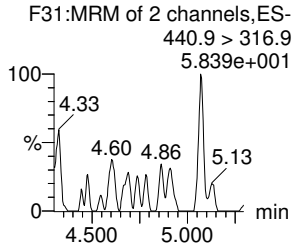
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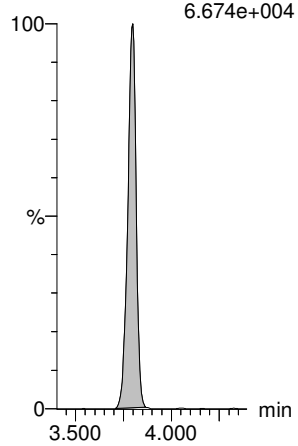


7:3 FTCA

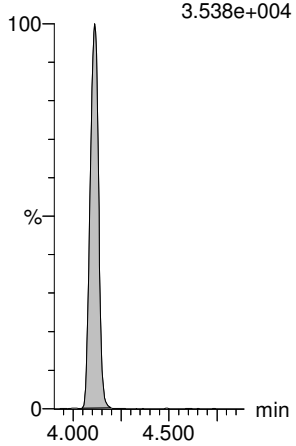




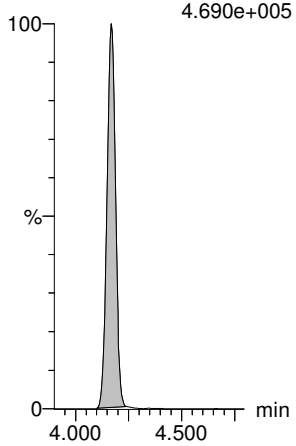
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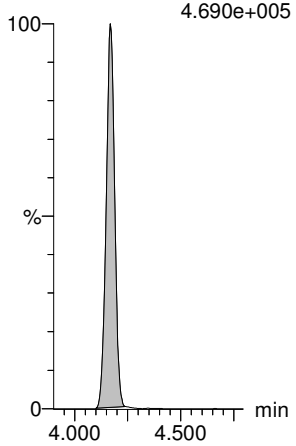
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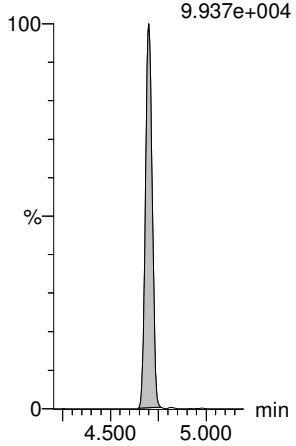
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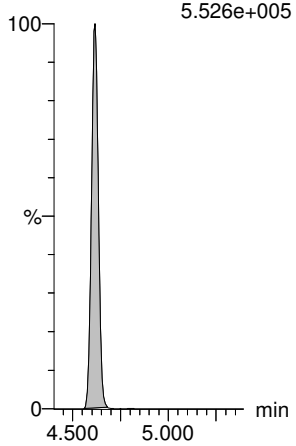
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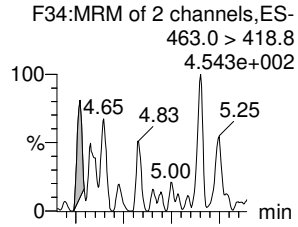


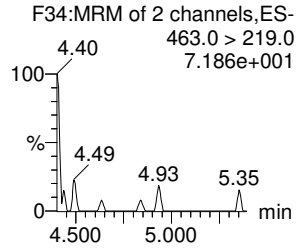
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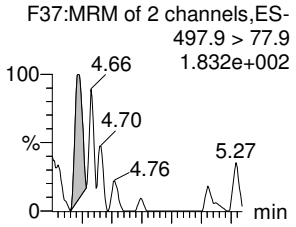
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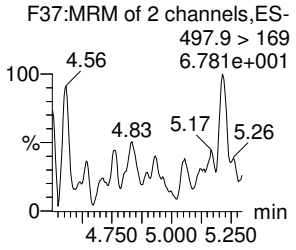
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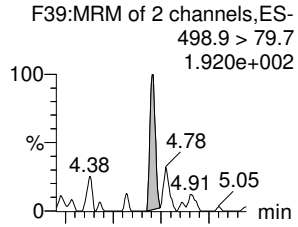


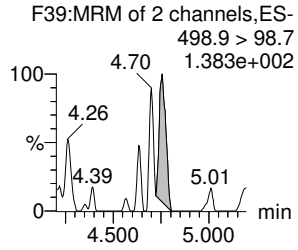
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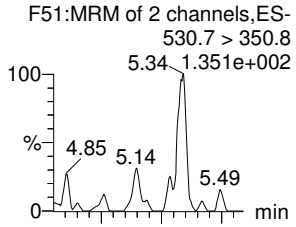


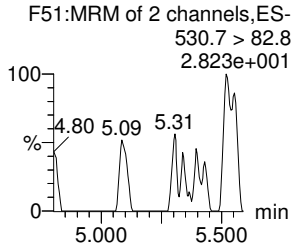
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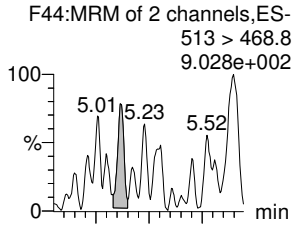


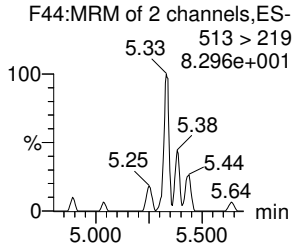
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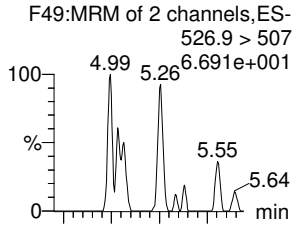


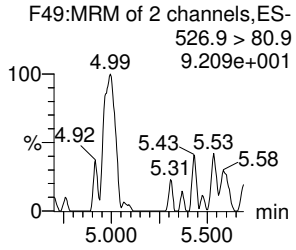
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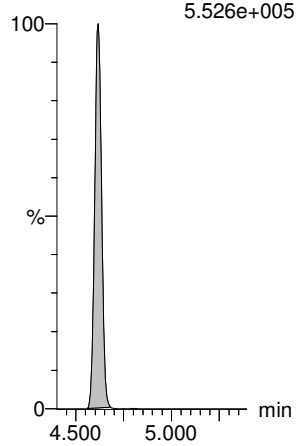


8:2 FTS

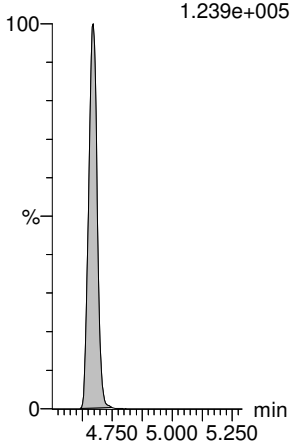




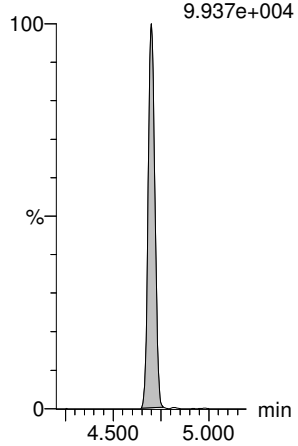
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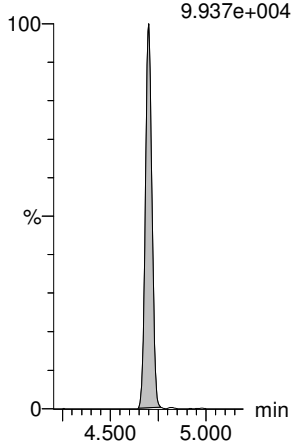
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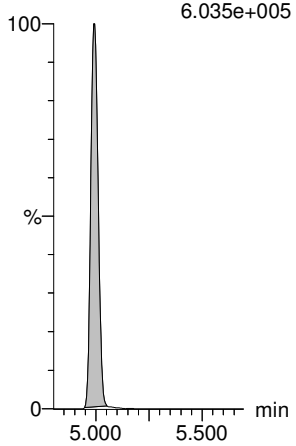
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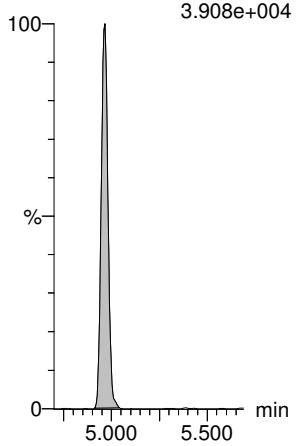
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

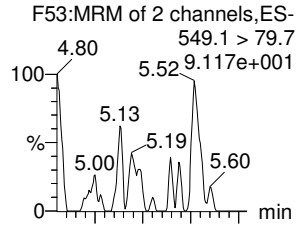


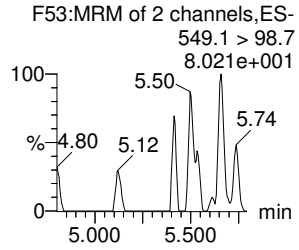
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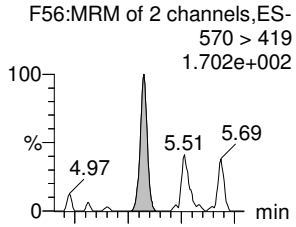
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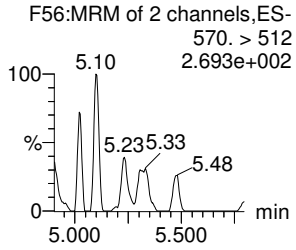
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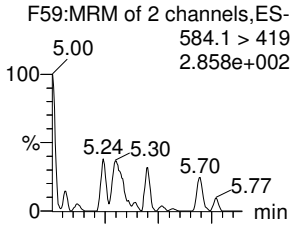


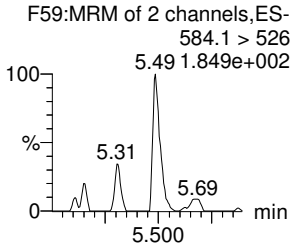
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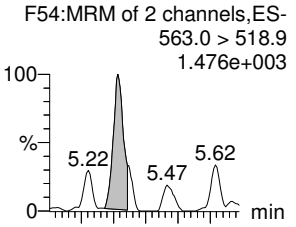


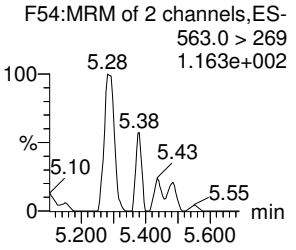
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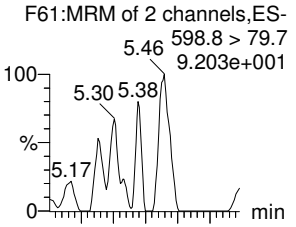


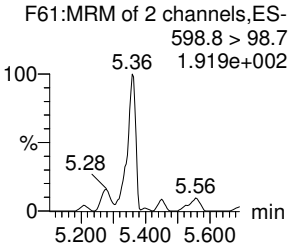
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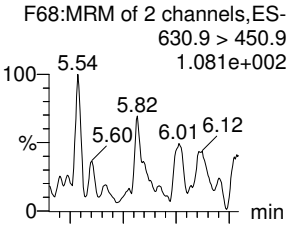


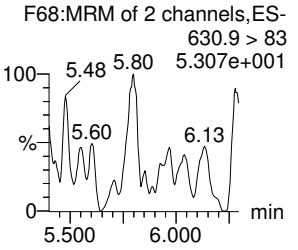
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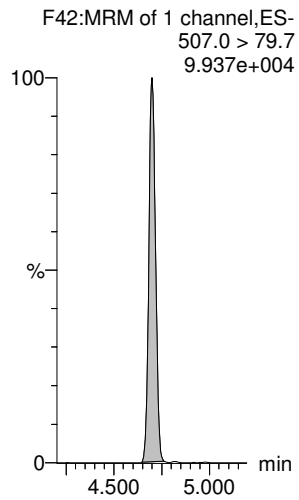


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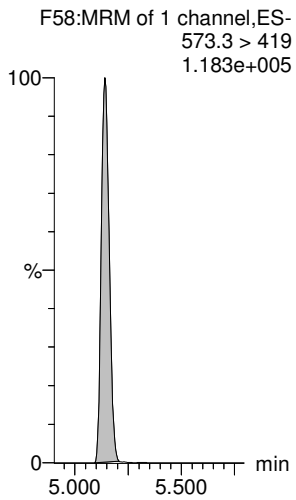




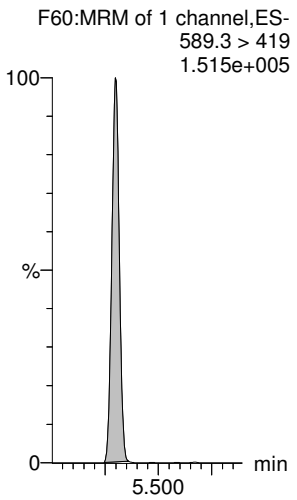
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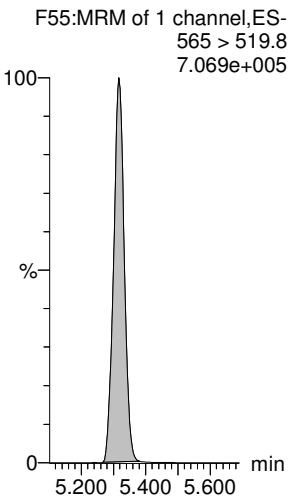
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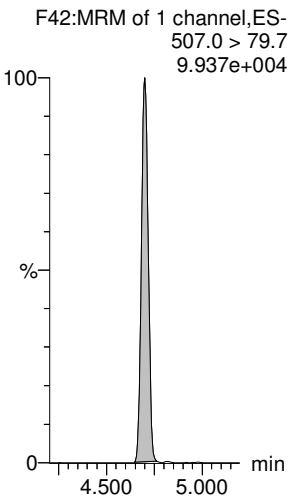
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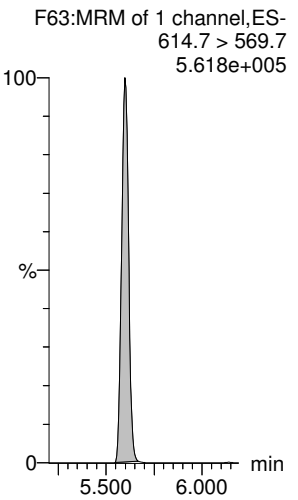
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13C8-PFOS-EIS



13C2-PFDoA-EIS

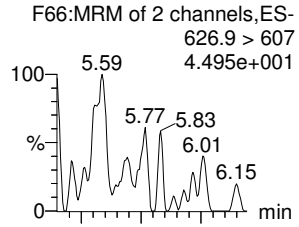


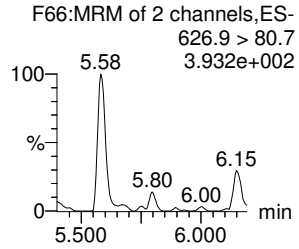
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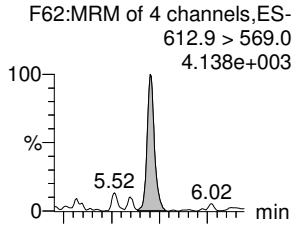
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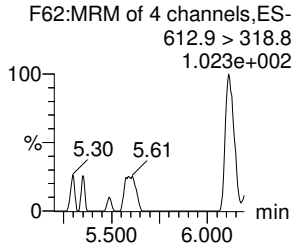
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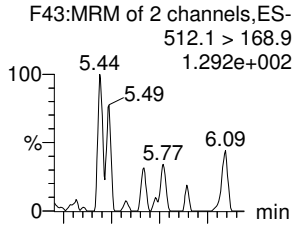


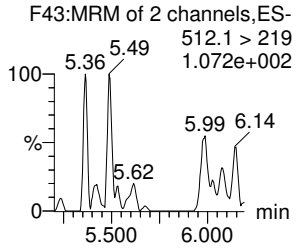
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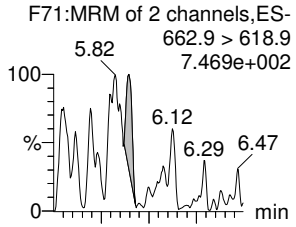


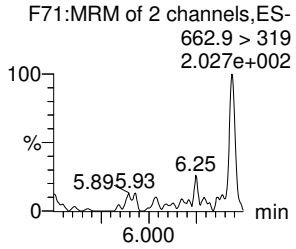
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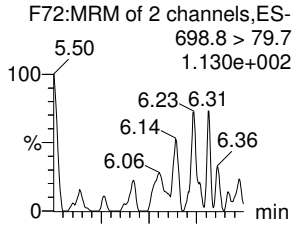


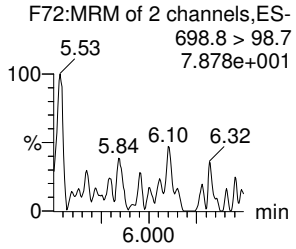
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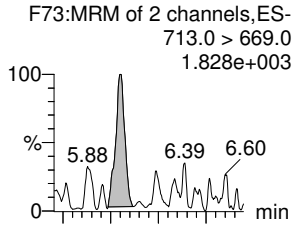


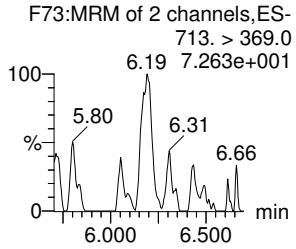
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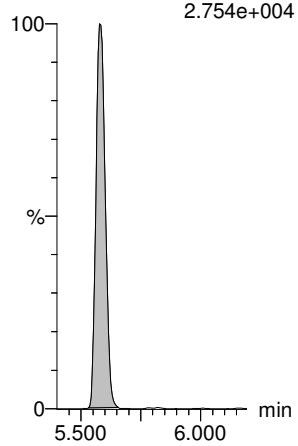


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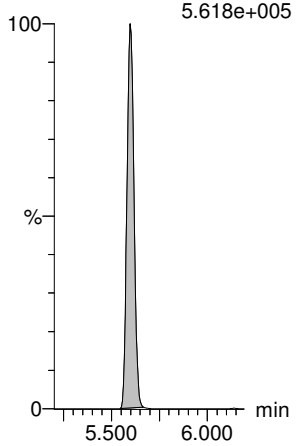




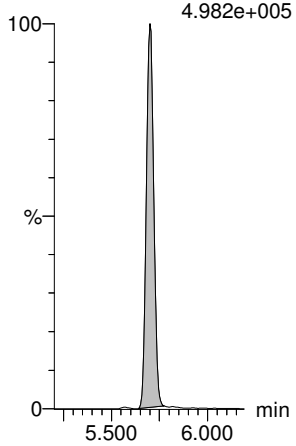
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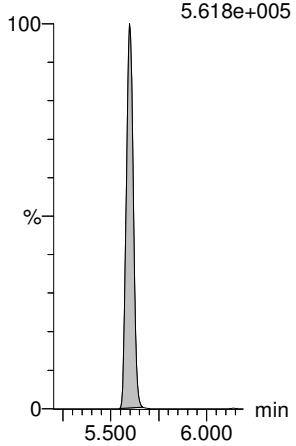
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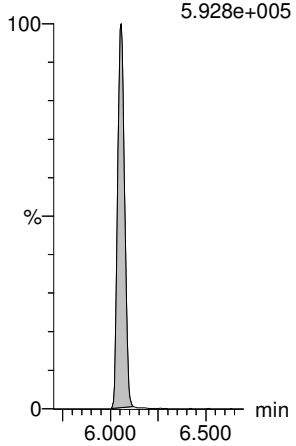
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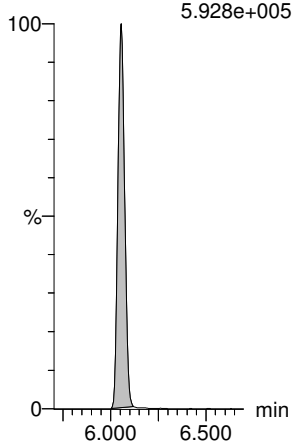
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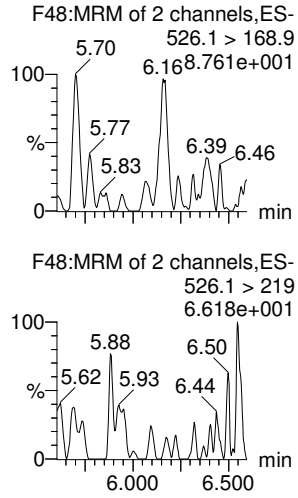


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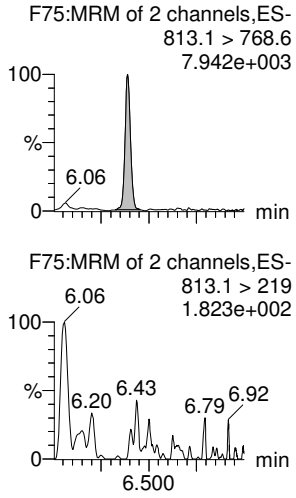
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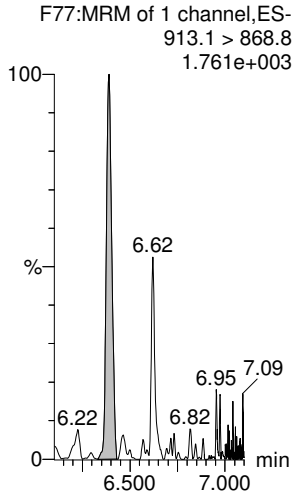
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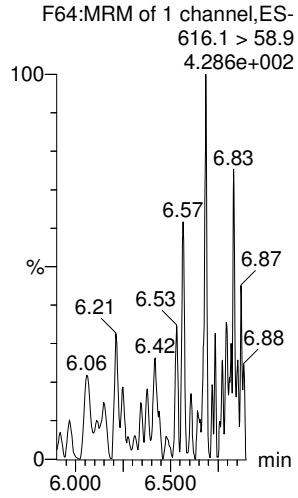
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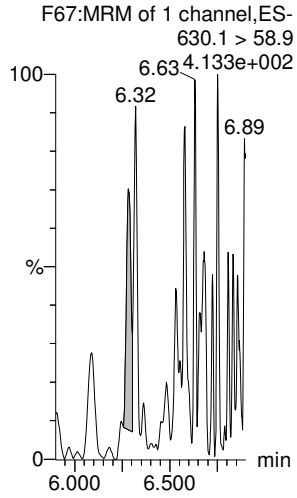
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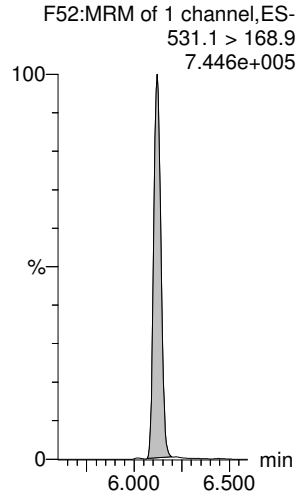
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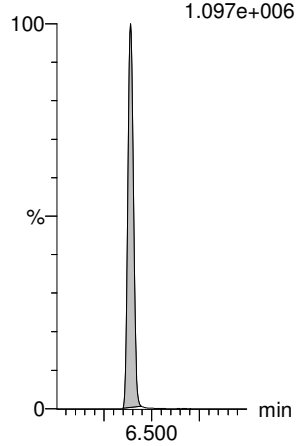
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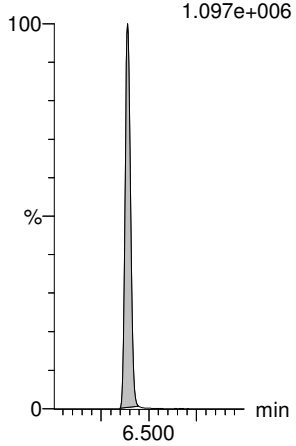
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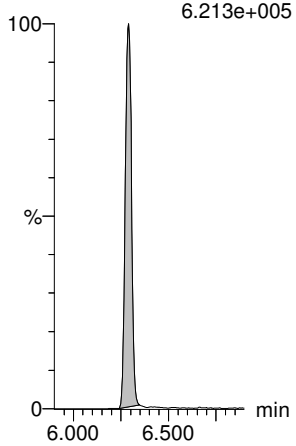
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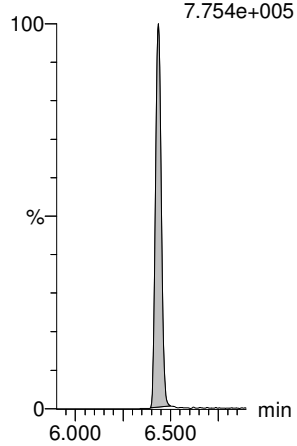
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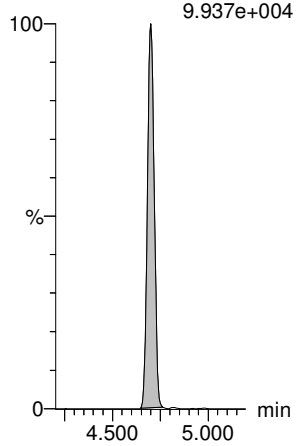
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS

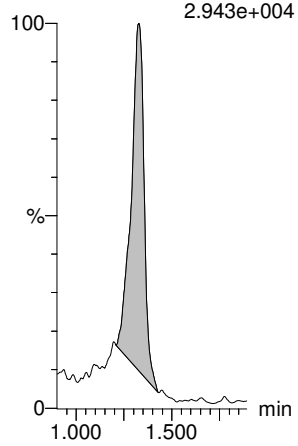


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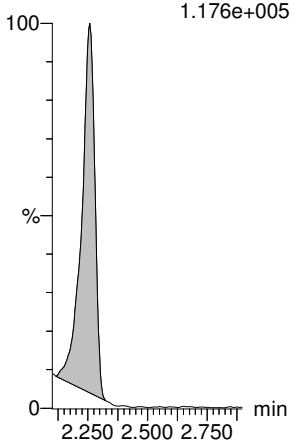
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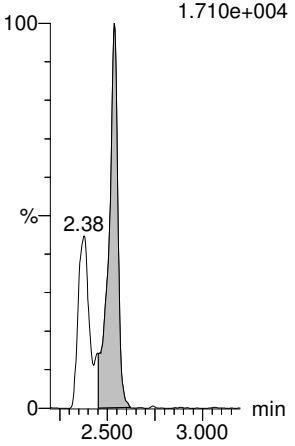
13C3-PFBA-RSD



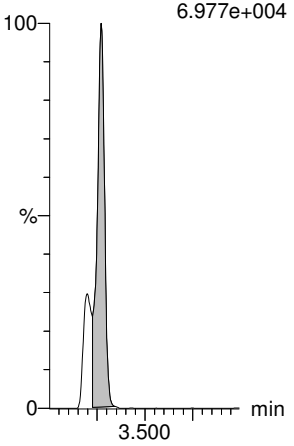
13C3-PFPeA-RSD



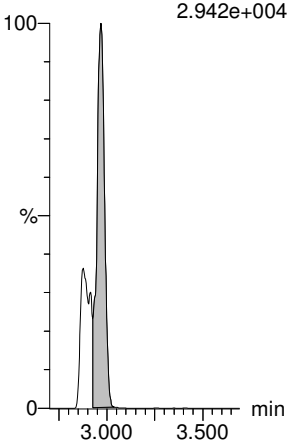
13C3-PFBS-RSD



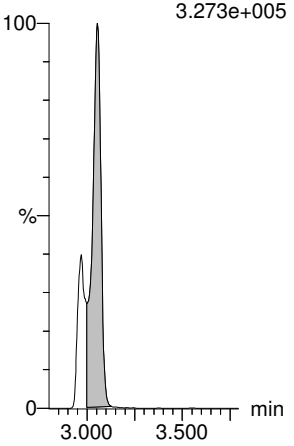
13C3-HFPO-DA-RSD



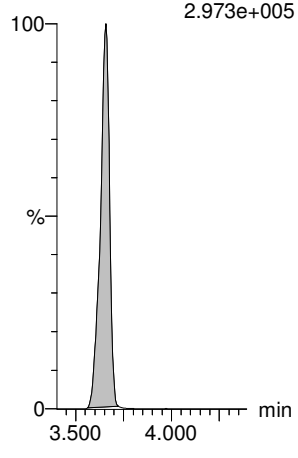
13C2-4:2 FTS-RSD



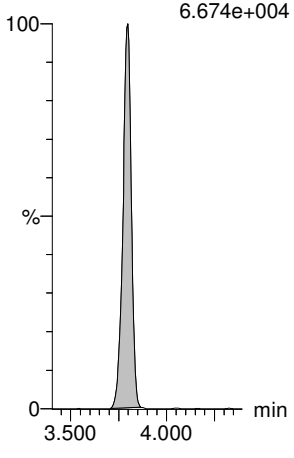
13C2-PFHxA-RSD



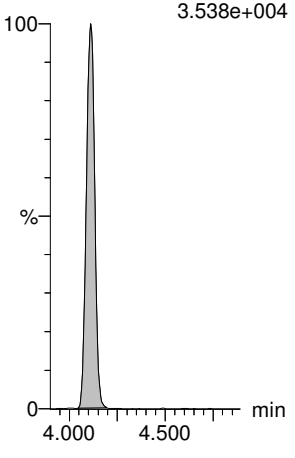
13C4-PFHpA-RSD



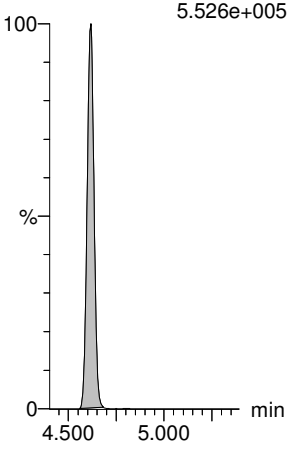
13C3-PFHxS-RSD



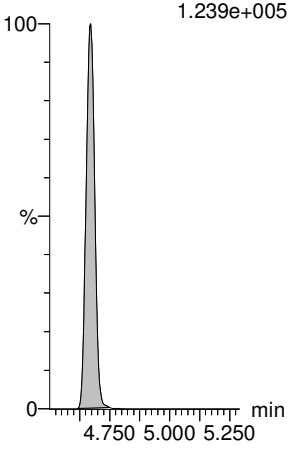
13C2-6:2 FTS-RSD



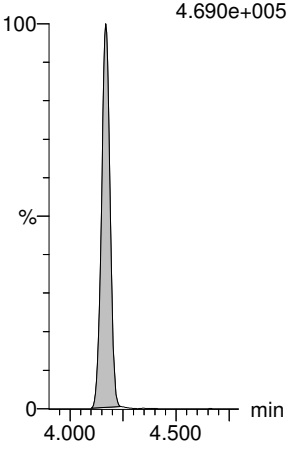
13C5-PFNA-RSD



13C8-PFOSA-RSD



13C2-PFOA-RSD

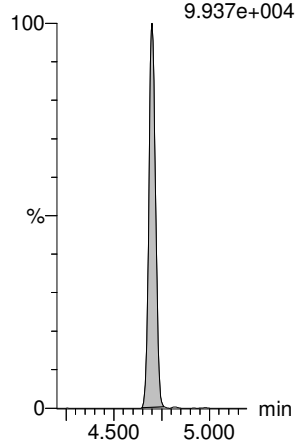


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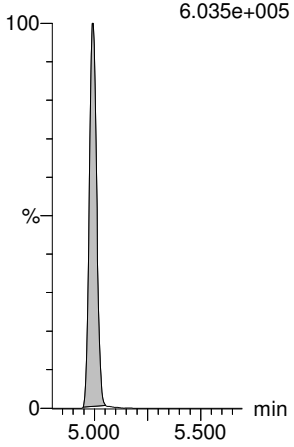
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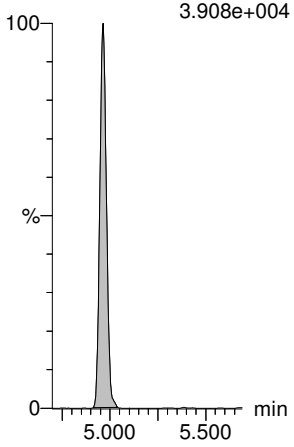
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.937e+004



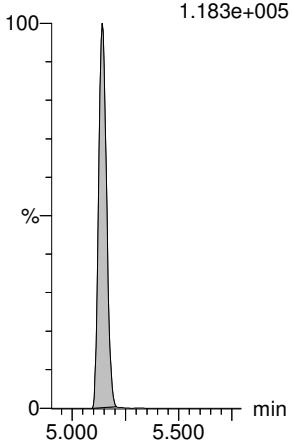
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
6.035e+005



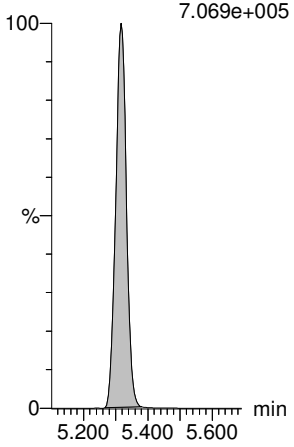
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.908e+004



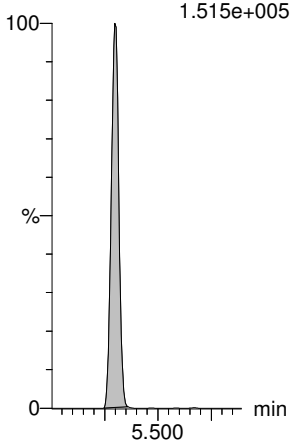
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.183e+005



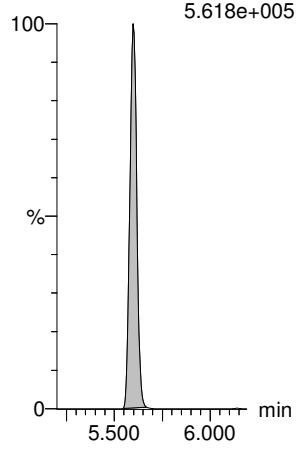
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
7.069e+005



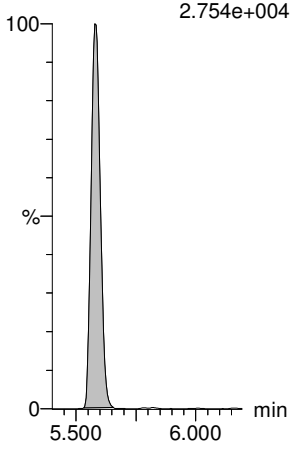
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.515e+005



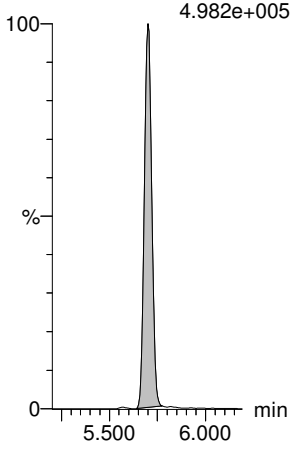
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.618e+005



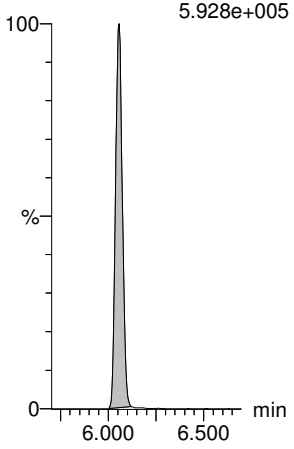
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.754e+004



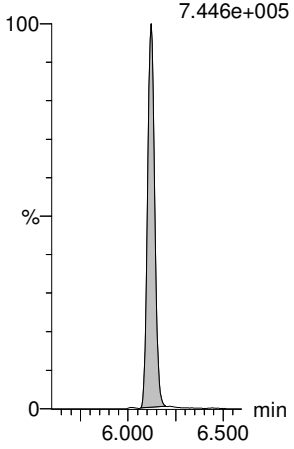
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.982e+005



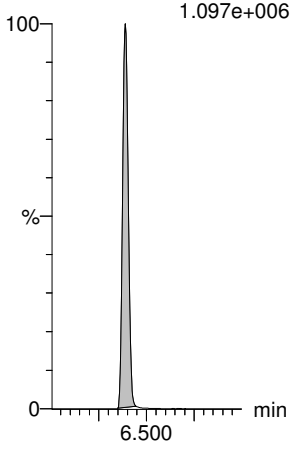
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.928e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.446e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.097e+006

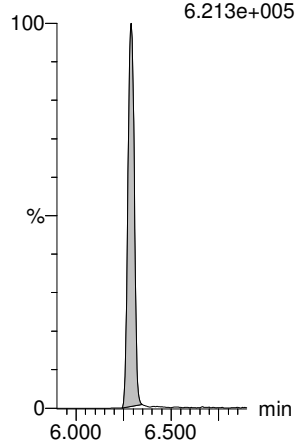


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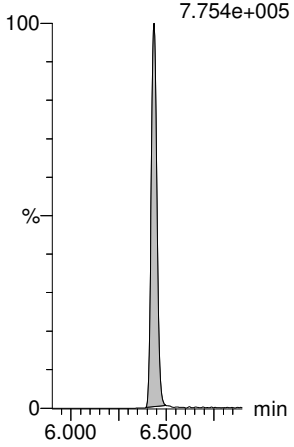
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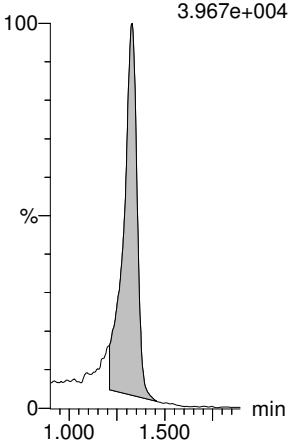
d7-N-MeFOSE-RSD



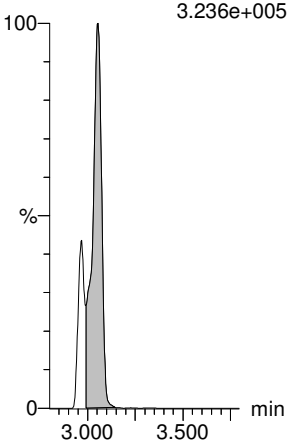
d9-N-EtFOSE-RSD



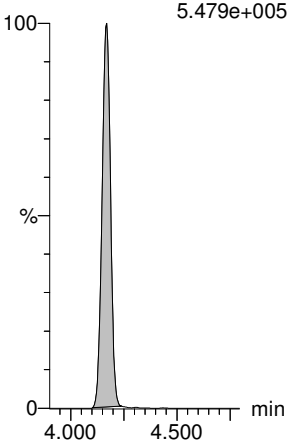
13C4-PFBA



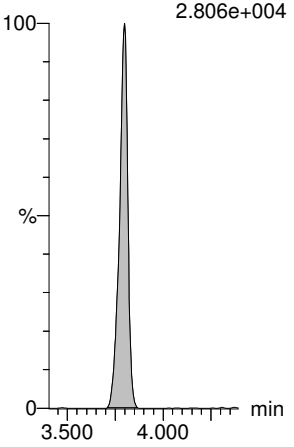
13C5-PFHxA



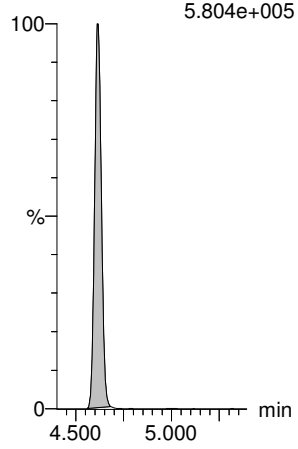
13C8-PFOA



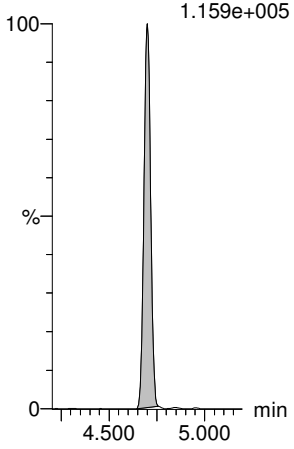
18O2-PFHxS



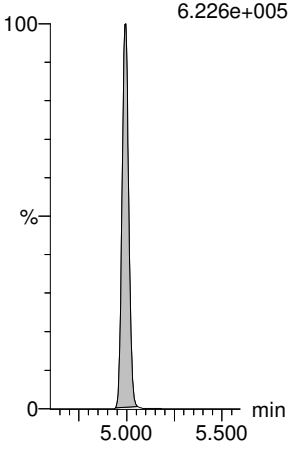
13C9-PFNA



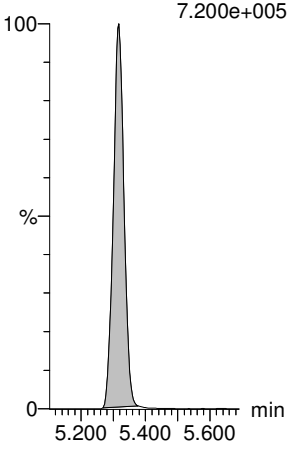
13C4-PFOS



13C6-PFDA



13C7-PFUdA



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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	5.979	2056.498	1.00	1.12	0.036				NO		
2	2	PFPrS	248.9 > 79.7		941.691	1.00						NO		YES
3	3	3:3 FTCA	240.9 > 176.9		7211.878	1.00						NO		YES
4	4	PFPeA	263.1 > 218.9		7211.878	1.00						NO		
5	5	PFBS	299.0 > 79.7		941.691	1.00						NO		YES
6	6	4:2 FTS	327.0 > 307		1347.511	1.00						NO		YES
7	47	13C3-PFBA-EIS	216.1 > 171.8	2056.498		1.00	1.33	2056.498	12.500	3.20	25.6	YES		
8	51	13C3-PFBS-EIS	302.0 > 98.8	941.691		1.00	2.54	941.691	12.500	7.67	61.4	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	7211.878		1.00	2.26	7211.878	12.500	6.22	49.7	YES		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	7211.878		1.00	2.26	7211.878	12.500	6.22	49.7	YES		
11	51	13C3-PFBS-EIS	302.0 > 98.8	941.691		1.00	2.54	941.691	12.500	7.67	61.4	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1347.511		1.00	2.97	1347.511	12.500	8.13	65.0	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	30.188	16627.254	1.00	3.34	0.023				NO		YES
15	8	PFPeS	349.>79.7		941.691	1.00						NO		YES
16	9	HFPO-DA	285.1 > 168.9		3047.664	1.00						NO		YES
17	10	5:3 FTCA	340.9 > 236.9		16200.894	1.00						NO		YES
18	11	PFHpA	363.0 > 318.9	22.115	16200.894	1.00	3.72	0.017				NO		YES
19	12	ADONA	376.8 > 250.9	7.452	16200.894	1.00	3.80	0.006				NO		YES
20	57	13C2-PFHxA-EIS	315.0 > 270.0	16627.254		1.00	3.05	16627.254	12.500	9.44	75.5	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	941.691		1.00	2.54	941.691	12.500	7.67	61.4	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3047.664		1.00	3.27	3047.664	12.500	9.29	74.3	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	16200.894		1.00	3.66	16200.894	12.500	12.5	100.4	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	16200.894		1.00	3.66	16200.894	12.500	12.5	100.4	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	16200.894		1.00	3.66	16200.894	12.500	12.5	100.4	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	8.346	3327.413	1.00	3.81	0.031				NO		YES
28	15	6:2 FTS	427.0 > 407		1771.795	1.00						NO		YES
29	16	L-PFOA	412.8 > 368.9	90.800	21312.219	1.00	4.17	0.053				NO	12.907	YES
30	18	PFecHS	460.8 > 381.0		21312.219	1.00						NO		YES
31	19	PFHpS	449.0 > 79.7		3967.881	1.00						NO		YES
32	20	7:3 FTCA	440.9 > 336.9		22886.457	1.00						NO		YES
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3327.413		1.00	3.80	3327.413	12.500	10.8	86.1	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1771.795		1.00	4.11	1771.795	12.500	11.9	95.2	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	21312.219		1.00	4.17	21312.219	12.500	12.0	95.7	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	21312.219		1.00	4.17	21312.219	12.500	12.0	95.7	NO		

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37	71	13C8-PFOS-EIS	507.0 > 79.7	3967.881		1.00	4.70	3967.881	12.500	11.5	91.6	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	22886.457		1.00	4.62	22886.457	12.500	13.1	104.6	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	9.171	22886.457	1.00	4.52	0.005				NO		YES
41	22	PFOSA	497.9 > 77.9	5.847	5021.423	1.00	4.61	0.015				NO		YES
42	23	L-PFOS	498.9 > 79.7	6.075	3967.881	1.00	4.70	0.019		0.0491		NO	1.168	YES
43	25	9Cl-PF30NS	530.7 > 350.8		3967.881	1.00						NO		YES
44	26	PFDA	513 > 468.8	23.281	23565.637	1.00	5.11	0.012				NO		YES
45	27	8:2 FTS	526.9 > 507		1579.977	1.00						NO		YES
46	65	13C5-PFNA-EIS	468.2 > 422.9	22886.457		1.00	4.62	22886.457	12.500	13.1	104.6	NO		
47	67	13C8-PFOSA-EIS	506 > 78	5021.423		1.00	4.67	5021.423	12.500	11.2	89.4	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3967.881		1.00	4.70	3967.881	12.500	11.5	91.6	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3967.881		1.00	4.70	3967.881	12.500	11.5	91.6	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	23565.637		1.00	4.99	23565.637	12.500	12.3	98.4	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1579.977		1.00	4.96	1579.977	12.500	11.9	95.2	NO		
52	-1													
53	28	PFNS	549.1 > 79.7		3967.881	1.00						NO		YES
54	29	L-MeFOSAA	570 > 419	6.307	5008.103	1.00	5.32	0.016		0.0311		NO		YES
55	31	L-EtFOSAA	584.1 > 419		6147.624	1.00						NO		YES
56	33	PFUdA	563.0 > 518.9	52.471	26762.389	1.00	5.31	0.025				NO		YES
57	34	PFDS	598.8 > 79.7		3967.881	1.00						NO		YES
58	35	11Cl-PF30UdS	630.9 > 450.9		23202.117	1.00						NO		YES
59	71	13C8-PFOS-EIS	507.0 > 79.7	3967.881		1.00	4.70	3967.881	12.500	11.5	91.6	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	5008.103		1.00	5.14	5008.103	12.500	10.4	83.0	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	6147.624		1.00	5.30	6147.624	12.500	11.1	88.9	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	26762.389		1.00	5.32	26762.389	12.500	12.2	97.6	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3967.881		1.00	4.70	3967.881	12.500	11.5	91.6	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	23202.117		1.00	5.60	23202.117	12.500	11.9	95.4	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607		1208.054	1.00						NO		YES
67	37	PFDoA	612.9 > 569.0	182.153	23202.117	1.00	5.70	0.098		0.0513		NO		YES
68	38	N-MeFOSA	512.1 > 168.9		21771.527	1.00						NO		YES
69	39	PFTrDA	662.9 > 618.9	17.942	23202.117	1.00	5.89	0.010				NO		YES
70	40	PFDoS	698.8 > 79.7		24353.959	1.00						NO		YES
71	41	PFTeDA	713.0 > 669.0	97.627	24353.959	1.00	6.05	0.050				NO		YES
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	1208.054		1.00	5.58	1208.054	12.500	11.6	92.8	NO		

Dataset: Untitled

Last Altered: Friday, February 28, 2020 10:18:53 Pacific Standard Time
Printed: Friday, February 28, 2020 10:19:02 Pacific Standard Time

Name: 200227P1-15, Date: 27-Feb-2020, Time: 17:58:10, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	83	13C2-PFDoA-EIS	614.7 > 569.7	23202.117		1.00	5.60	23202.117	12.500	11.9	95.4	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	21771.527		1.00	5.70	21771.527	149.200	148	99.1	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	23202.117		1.00	5.60	23202.117	12.500	11.9	95.4	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	24353.959		1.00	6.06	24353.959	12.500	11.7	93.4	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	24353.959		1.00	6.06	24353.959	12.500	11.7	93.4	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9		32100.252	1.00						NO		YES
80	43	PFHxDA	813.1 > 768.6	262.426	36299.520	1.00	6.39	0.090				NO		YES
81	44	PFODA	913.1 > 868.8	57.165	36299.520	1.00	6.39	0.020				NO		
82	45	N-MeFOSE	616.1 > 58.9		23417.418	1.00						NO		
83	46	N-EtFOSE	630.1 > 58.9	7.379	26461.822	1.00	6.28	0.042				NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	32100.252		1.00	6.12	32100.252	149.200	149	99.6	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	36299.520		1.00	6.39	36299.520	12.500	11.8	94.4	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	36299.520		1.00	6.39	36299.520	12.500	11.8	94.4	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	23417.418		1.00	6.29	23417.418	149.200	141	94.2	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	26461.822		1.00	6.44	26461.822	149.200	137	91.8	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3967.881		1.00	4.70	3967.881	12.500	11.5	91.6	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	2056.498	3104.933	1.00	1.33	8.279	12.500	10.2	81.5	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	7211.878	17555.361	1.00	2.26	5.135	12.500	8.69	69.6	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	941.691	1388.647	1.00	2.54	8.477	12.500	7.78	62.2	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	3047.664	17555.361	1.00	3.27	2.170	12.500	12.4	99.4	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1347.511	1388.647	1.00	2.97	12.130	12.500	8.60	68.8	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	16627.254	17555.361	1.00	3.05	11.839	12.500	12.1	96.7	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	16200.894	17555.361	1.00	3.66	11.536	12.500	17.1	136.6	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	3327.413	1388.647	1.00	3.80	29.952	12.500	12.3	98.7	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1771.795	4646.858	1.00	4.11	4.766	12.500	10.9	87.4	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	22886.457	23611.387	1.00	4.62	12.116	12.500	12.8	102.0	NO		
101	68	13C8-PFOSA-RSD	506 > 78	5021.423	27172.432	1.00	4.67	2.310	12.500	10.7	85.5	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	21312.219	24551.977	1.00	4.17	10.851	12.500	11.8	94.7	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3967.881	4646.858	1.00	4.70	10.674	12.500	11.5	92.1	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	23565.637	24918.301	1.00	4.99	11.821	12.500	12.0	96.2	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1579.977	4646.858	1.00	4.96	4.250	12.500	11.6	92.6	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	5008.103	27172.432	1.00	5.14	2.304	12.500	10.2	81.2	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	26762.389	27172.432	1.00	5.32	12.311	12.500	11.7	93.6	NO		

Dataset: Untitled

Last Altered: Friday, February 28, 2020 10:18:53 Pacific Standard Time
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Name: 200227P1-15, Date: 27-Feb-2020, Time: 17:58:10, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Std. Conc	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
109	82	d5-N-EtFOSAA-RSD	589.3 > 419	6147.624	27172.432	1.00	5.30	2.828	12.500	11.7	93.6	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	23202.117	24918.301	1.00	5.60	11.639	12.500	12.0	95.9	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	1208.054	4646.858	1.00	5.58	3.250	12.500	11.4	91.0	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	21771.527	27172.432	1.00	5.70	10.015	149.200	134	89.8	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	24353.959	27172.432	1.00	6.06	11.203	12.500	10.7	85.5	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	32100.252	27172.432	1.00	6.12	14.767	149.200	142	95.2	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	36299.520	27172.432	1.00	6.39	16.699	12.500	11.4	91.2	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	23417.418	27172.432	1.00	6.29	10.773	149.200	132	88.4	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	26461.822	27172.432	1.00	6.44	12.173	149.200	130	87.0	NO		
119	99	13C4-PFBA	217.0 > 172.0	3104.933	3104.933	1.00	1.33	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	17555.361	17555.361	1.00	3.05	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	24551.977	24551.977	1.00	4.17	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1388.647	1388.647	1.00	3.80	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	23611.387	23611.387	1.00	4.61	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	4646.858	4646.858	1.00	4.70	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	24918.301	24918.301	1.00	4.99	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	27172.432	27172.432	1.00	5.32	12.500	12.500	12.5	100.0	NO		

TUNE CHECKS

VY 02/21/20
~~Q4(P)~~ Q5(P)

tune check VY 02/20/20

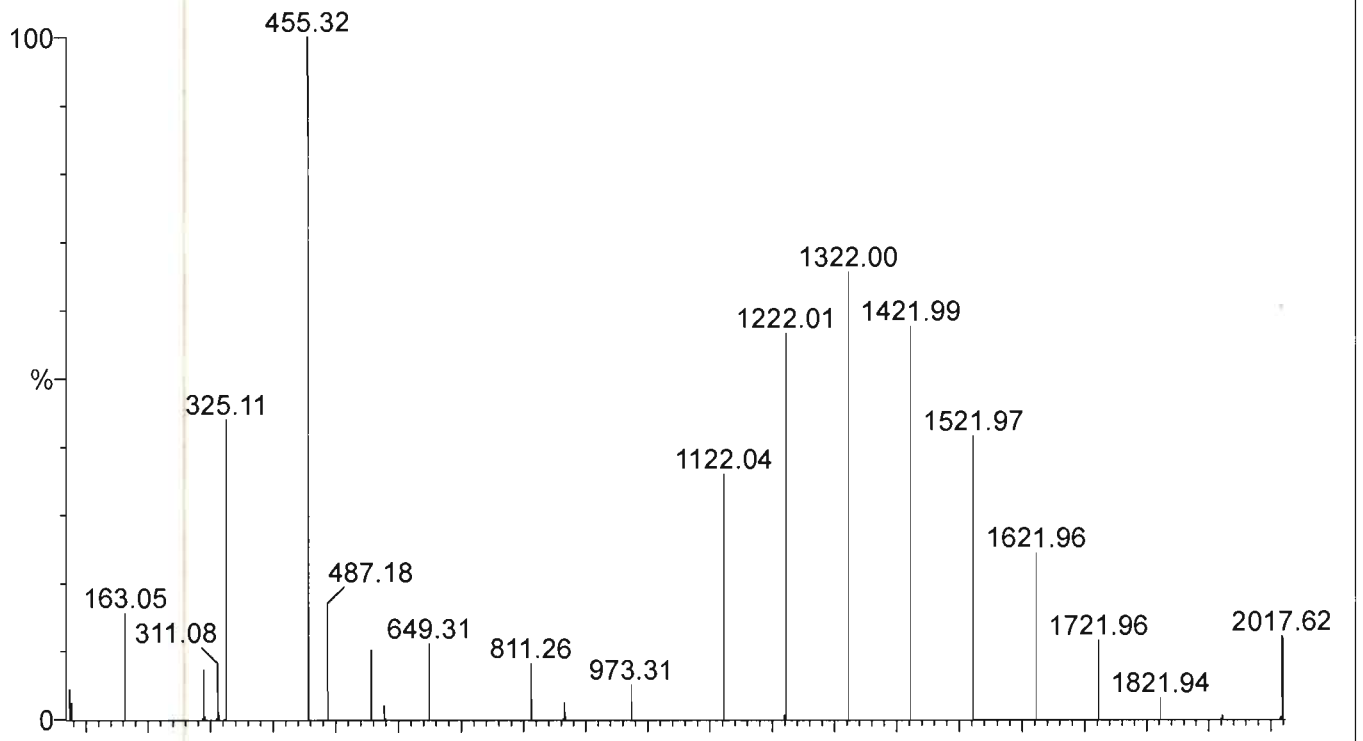
Calibration Verification Report - MS1 Static

Printed: **Thu Feb 20 16:50:36 2020**

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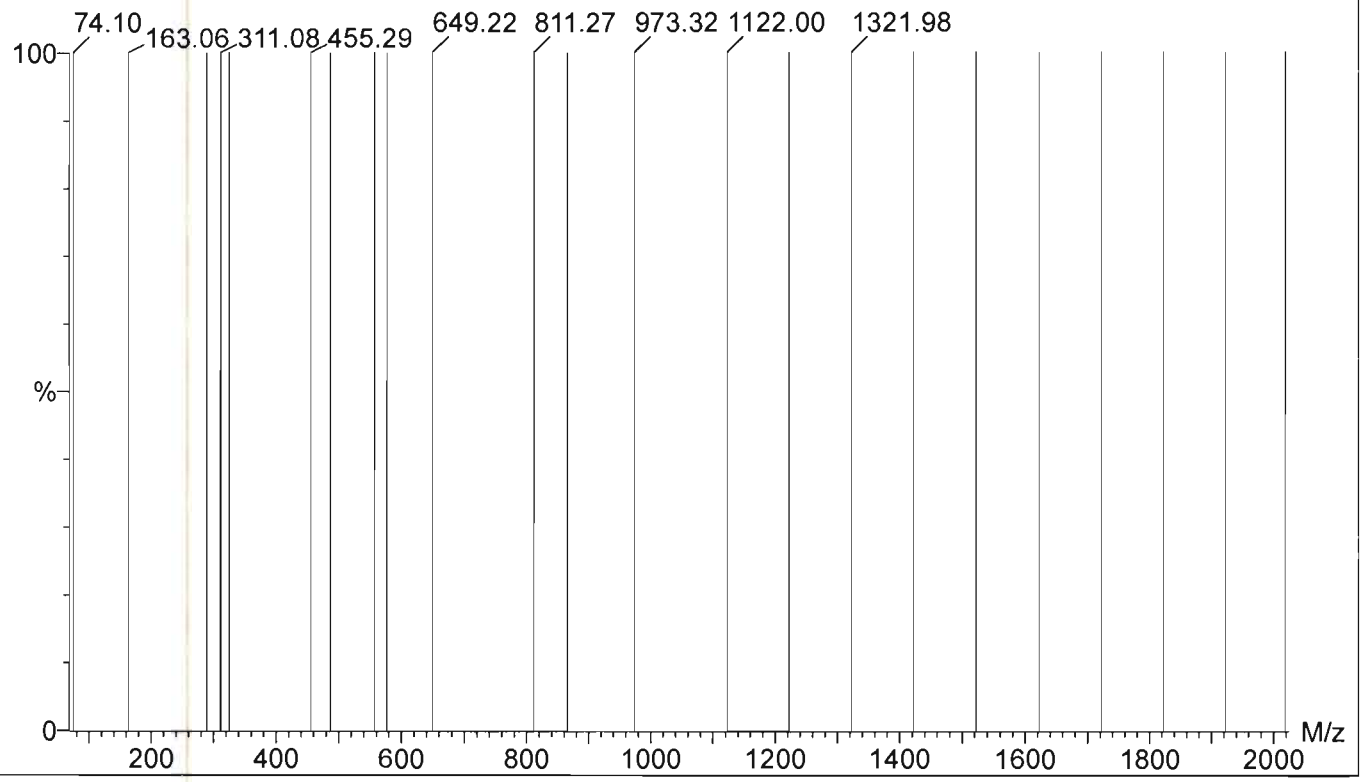
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22 matches of 23 tested references

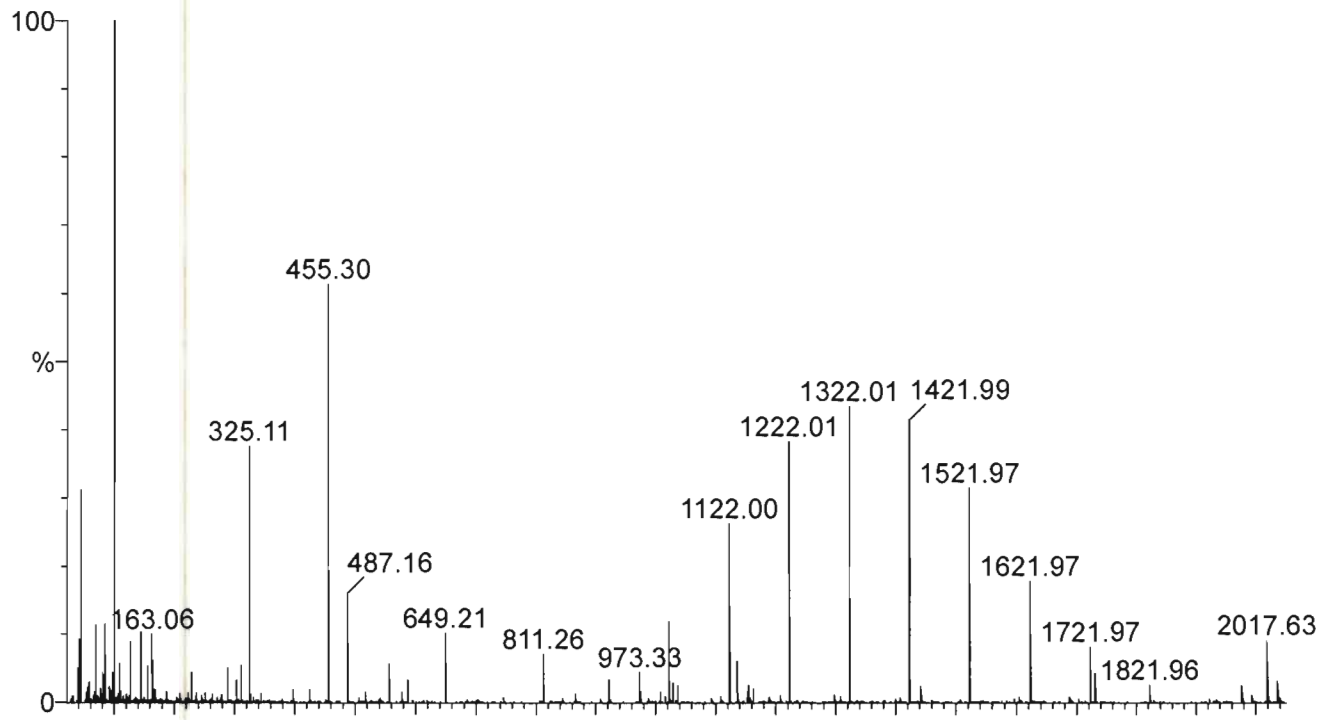


Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref

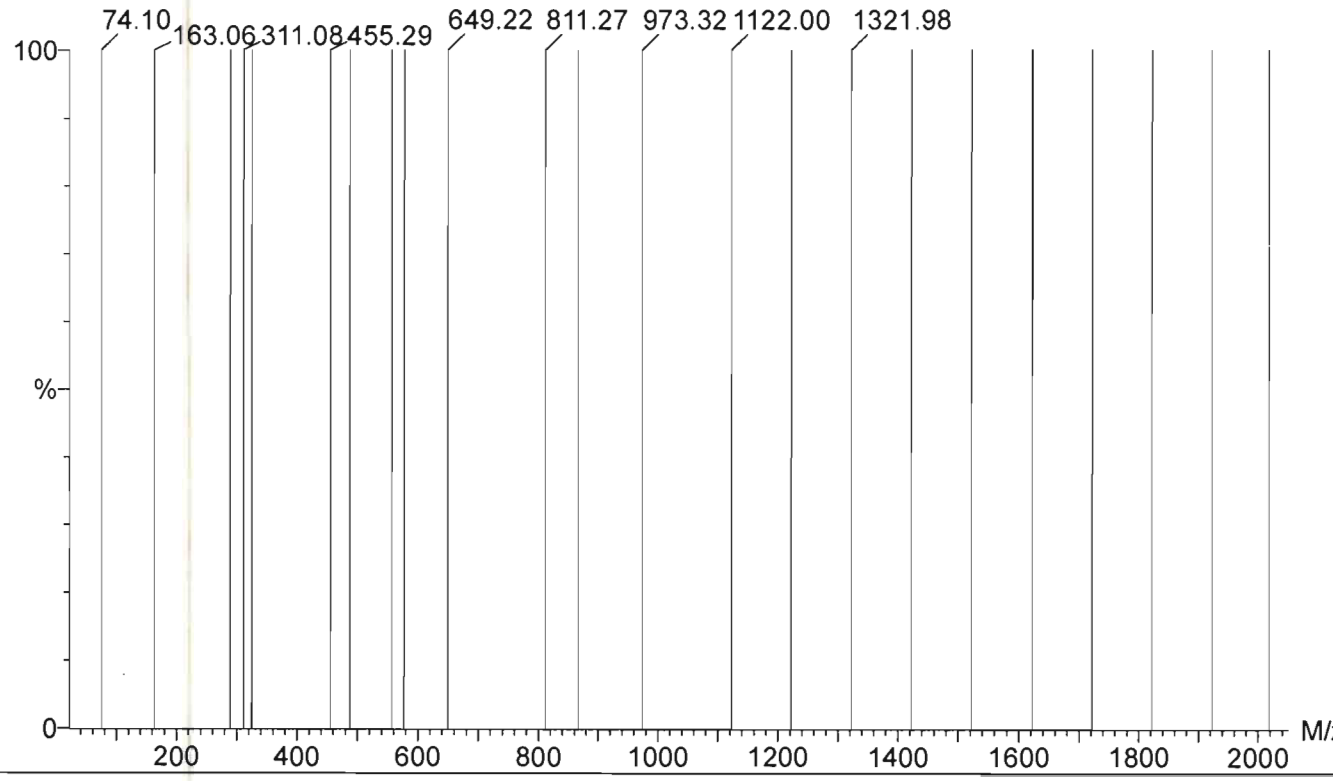
Mean residual = 0.0165 amu



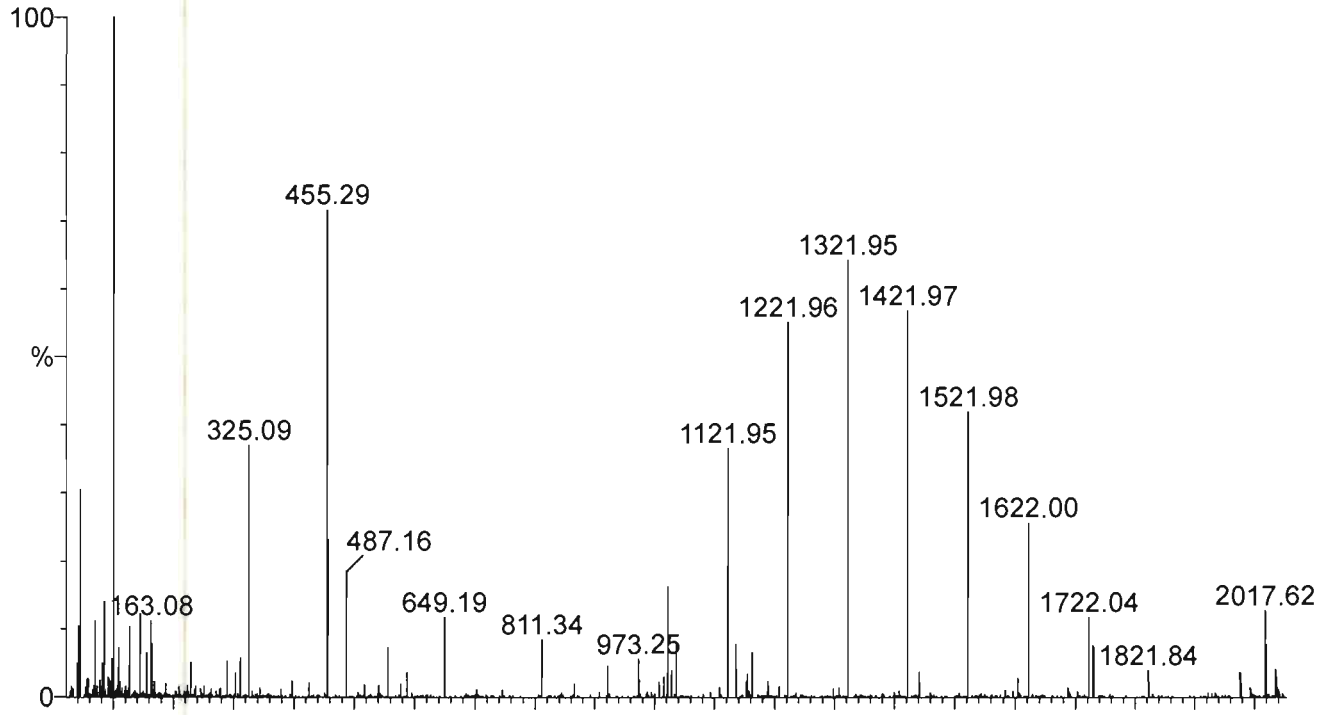
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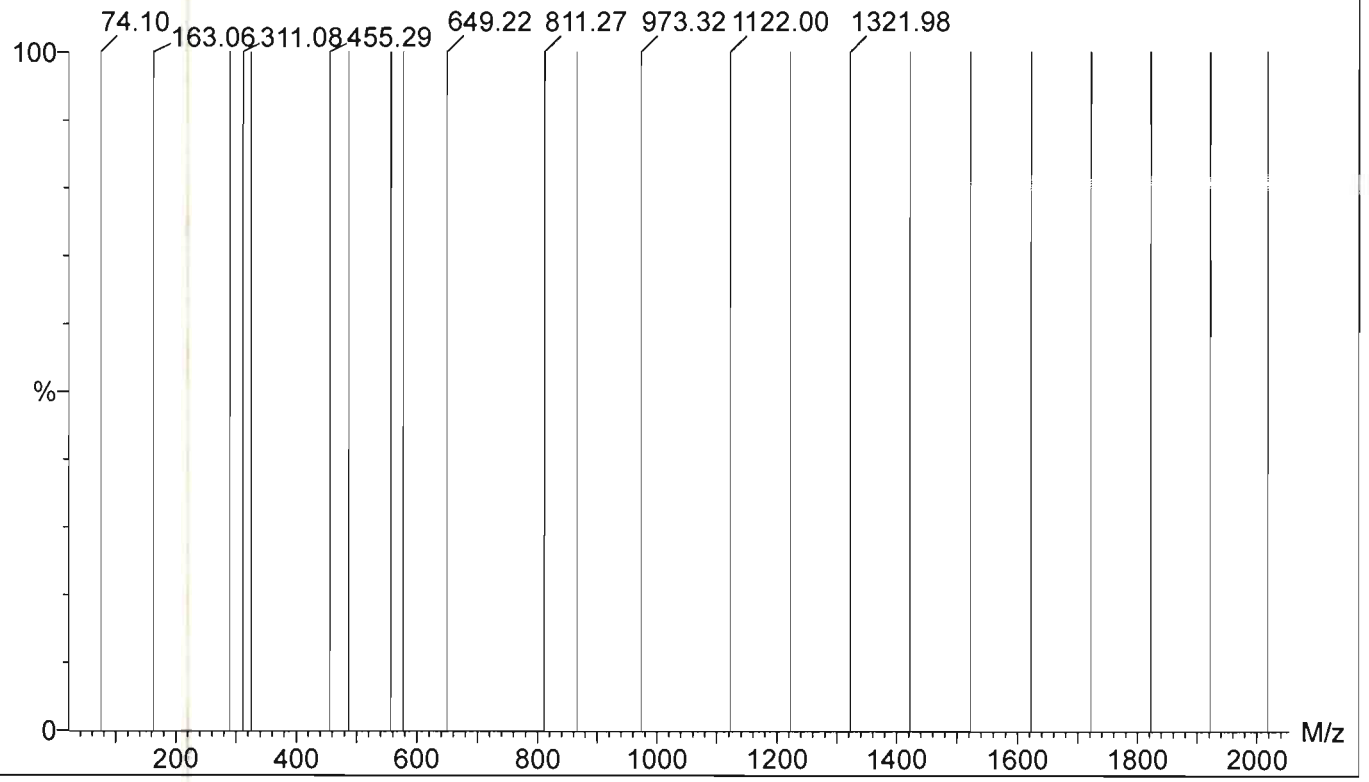
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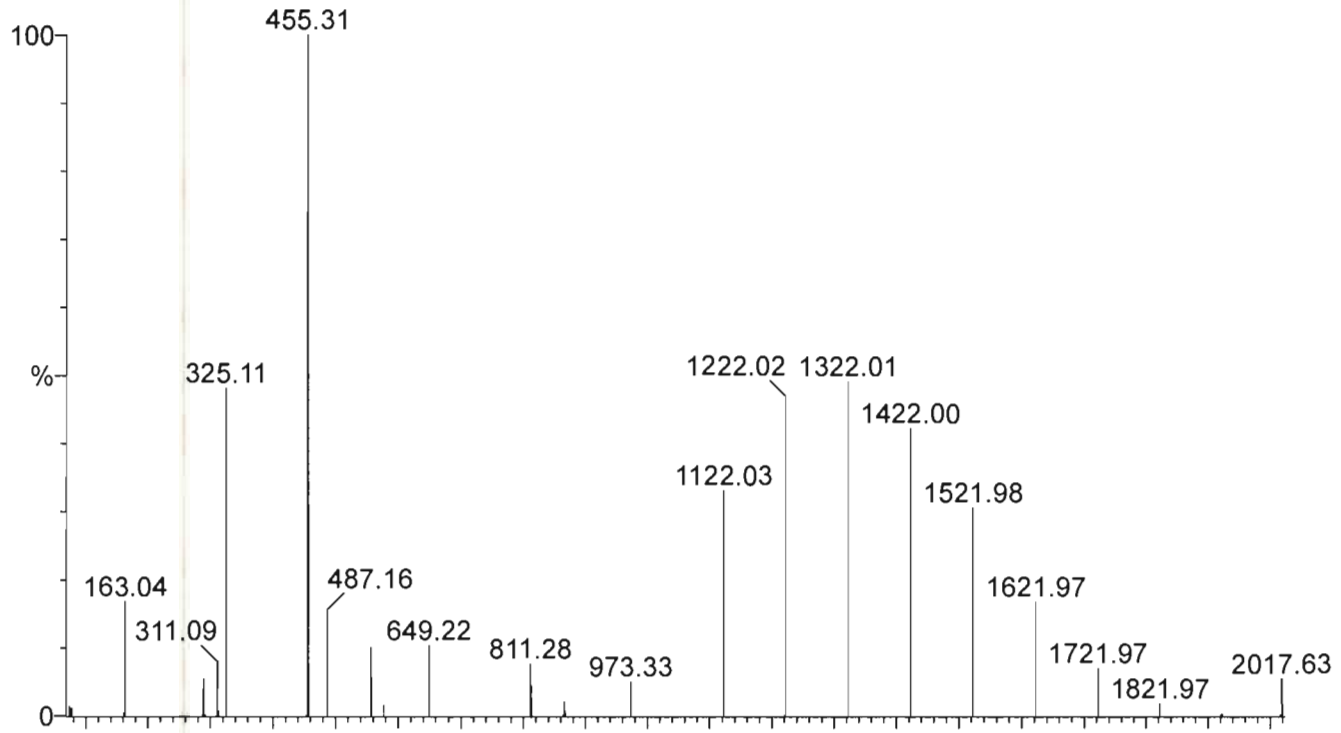
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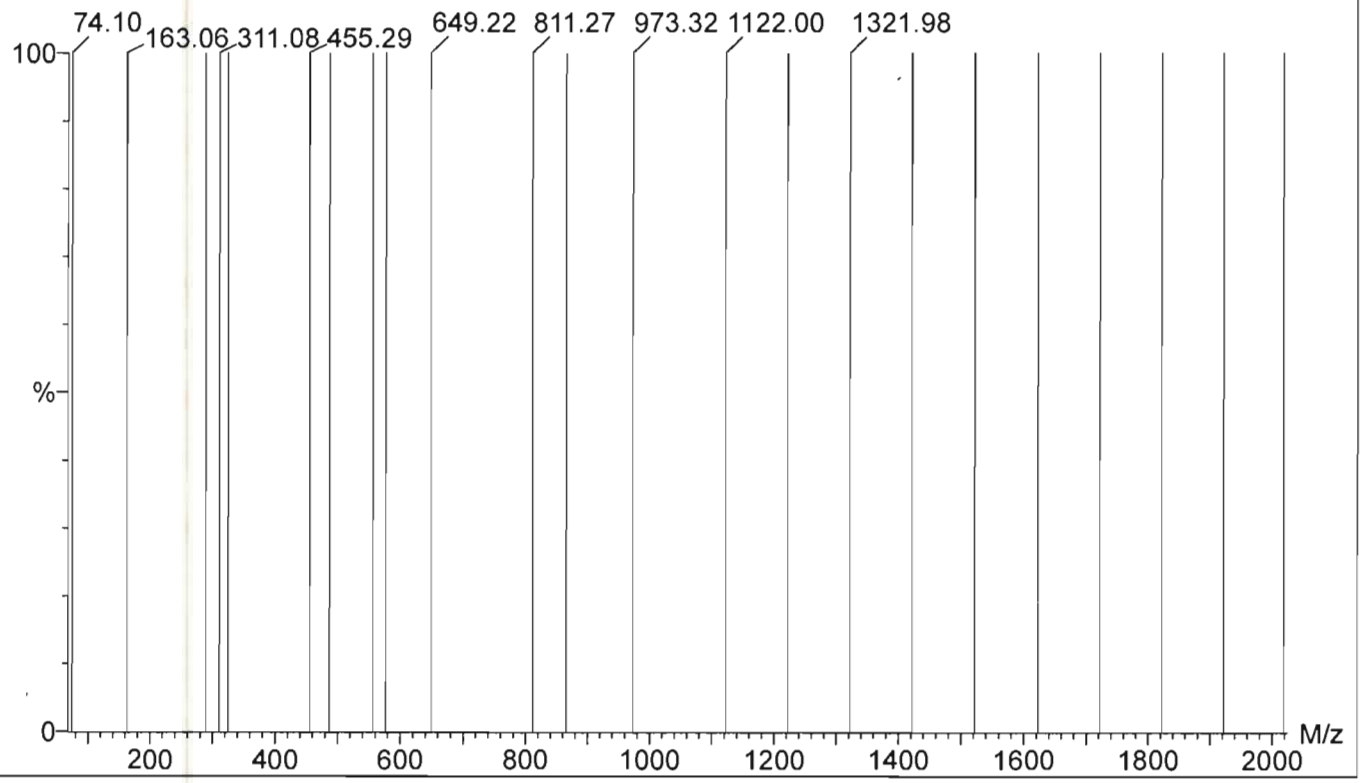
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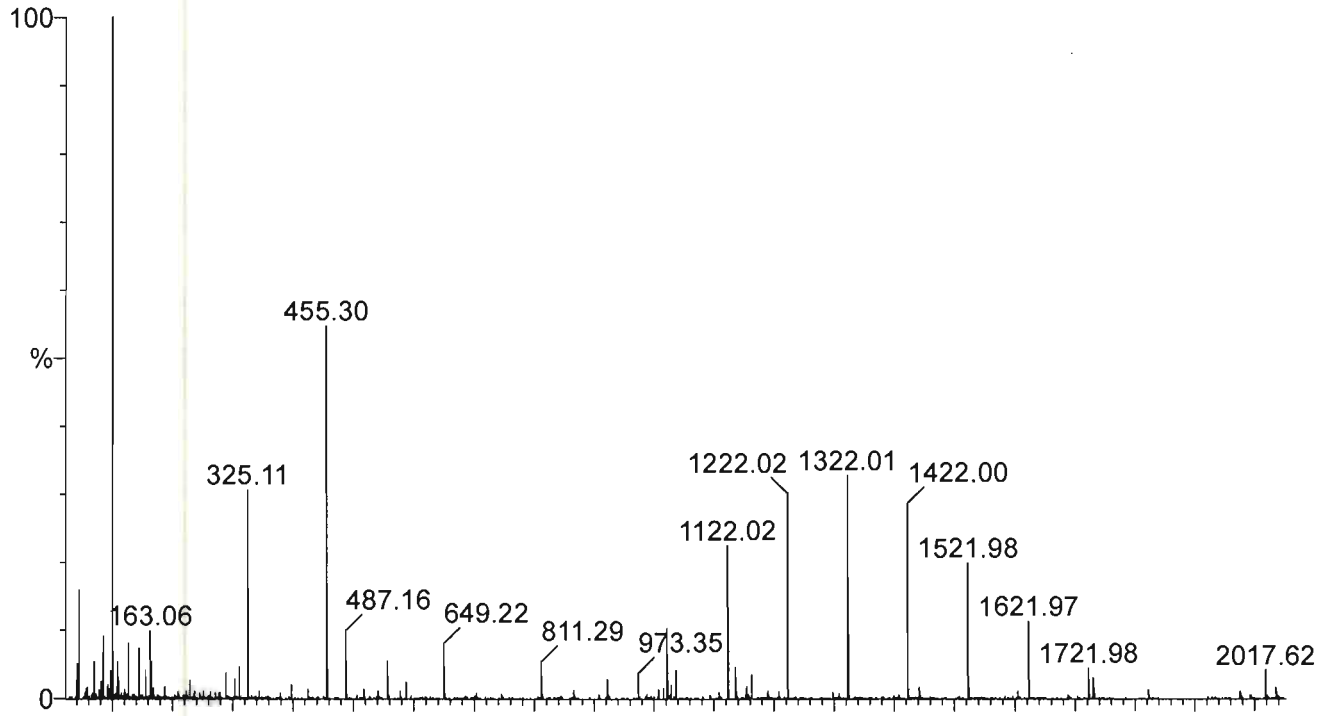
Data file: STATMS2V - Calibrated 22 matches of 23 tested references



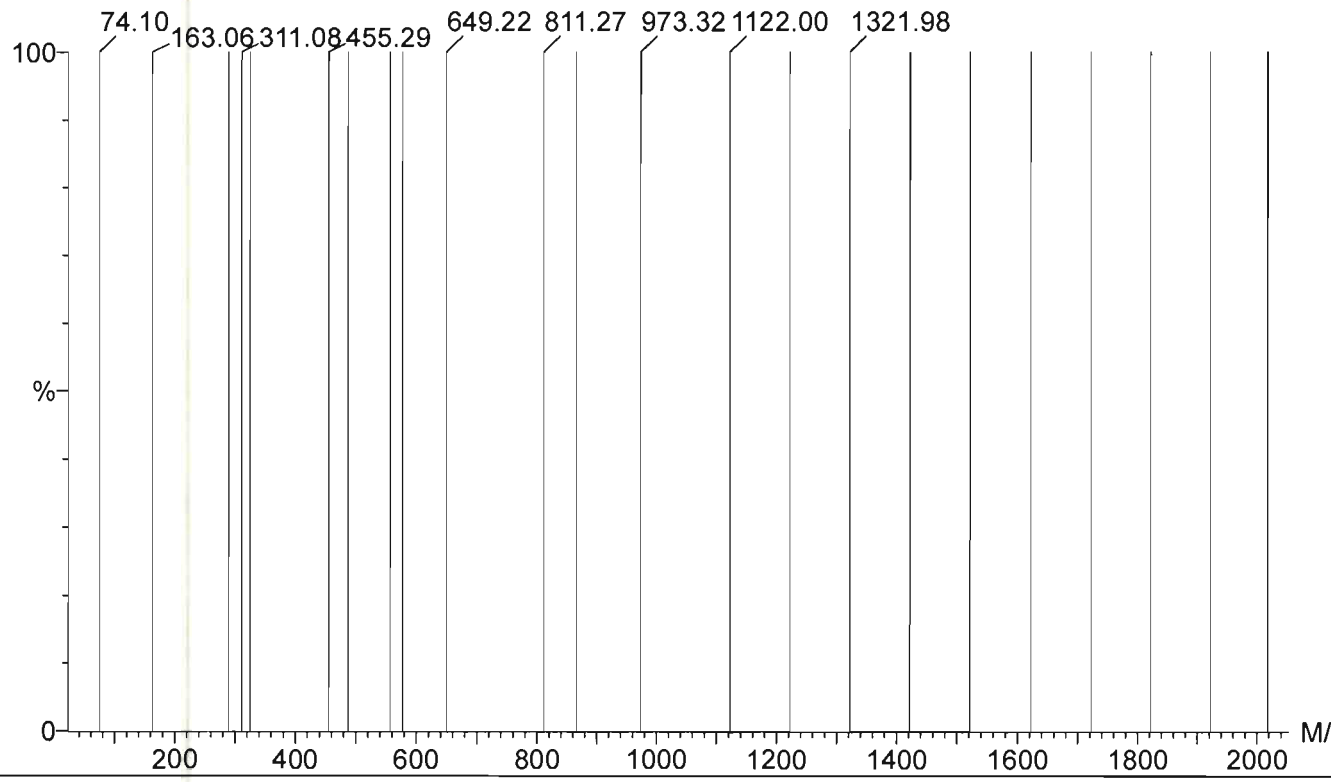
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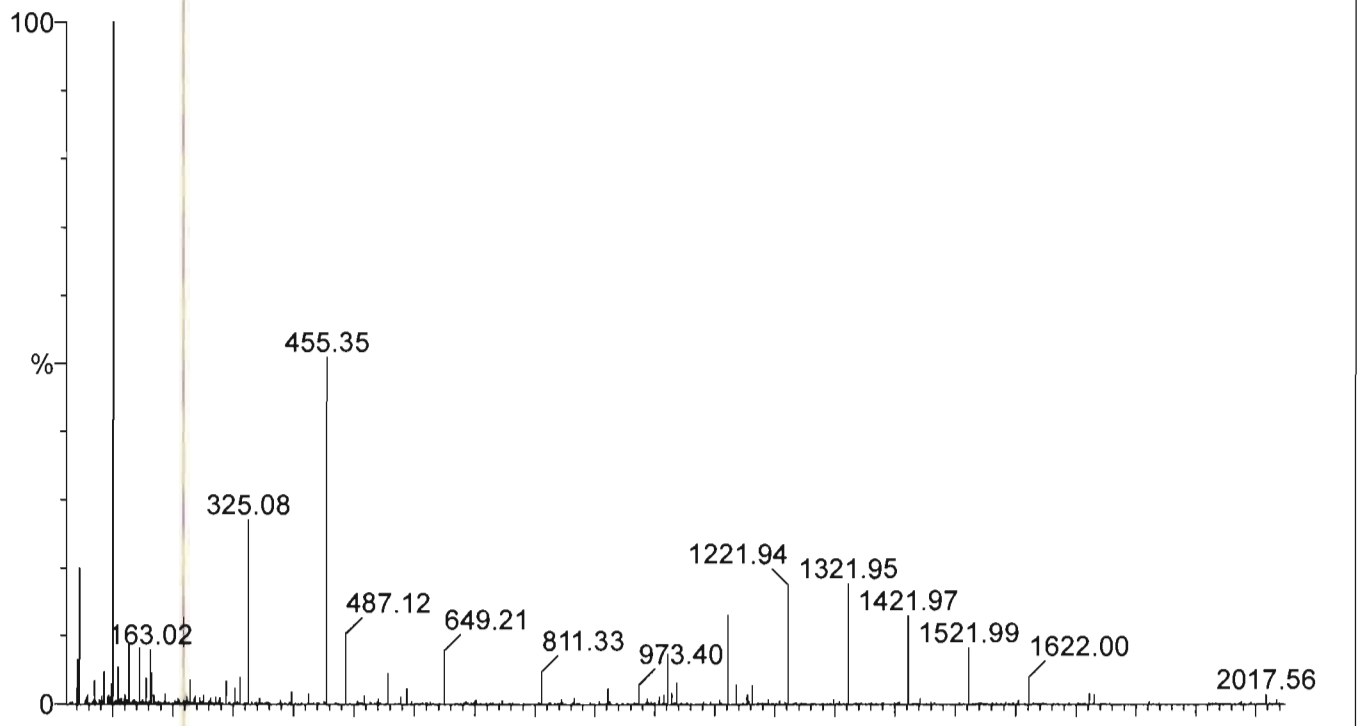
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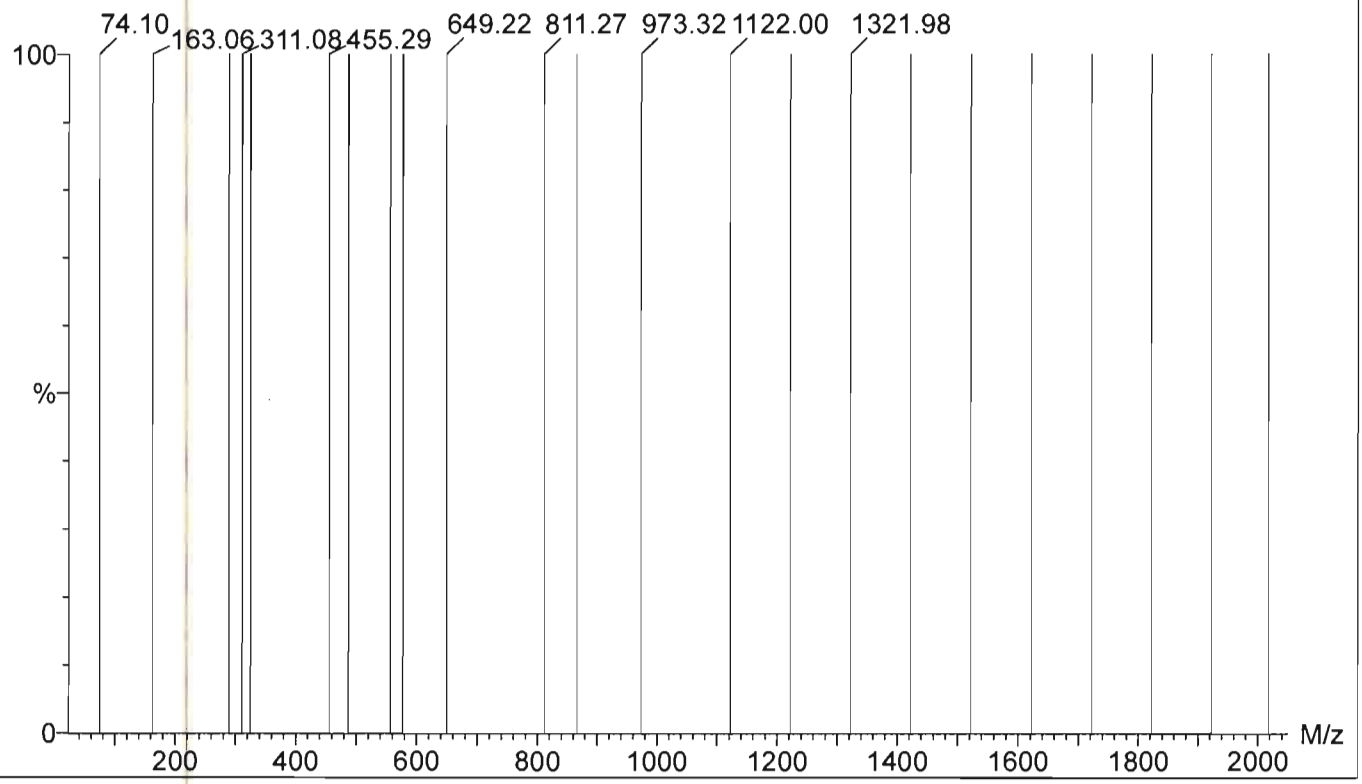
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Data file: FASTMS2V - Calibrated 23 matches of 23 tested references



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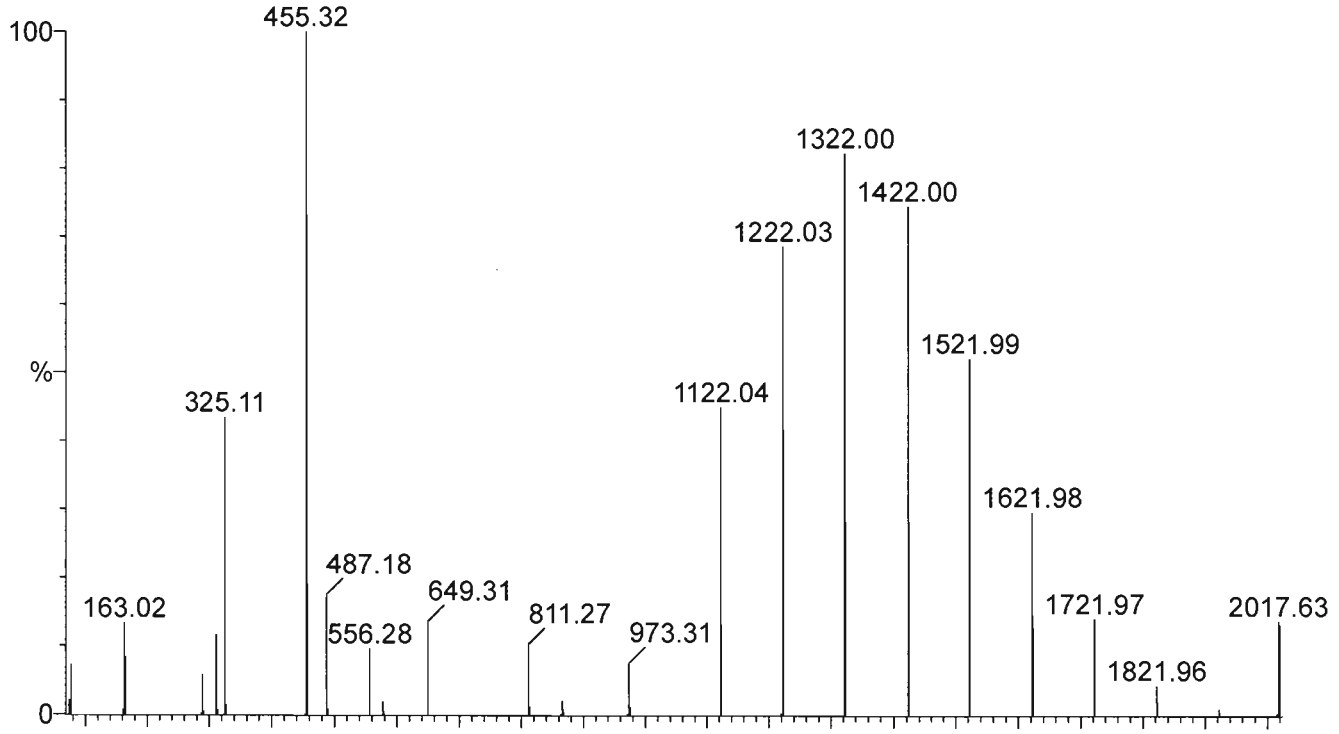
Calibration Verification Report - MS1 Static

Printed: **Tue Feb 25 16:12:27 2020**

20200207

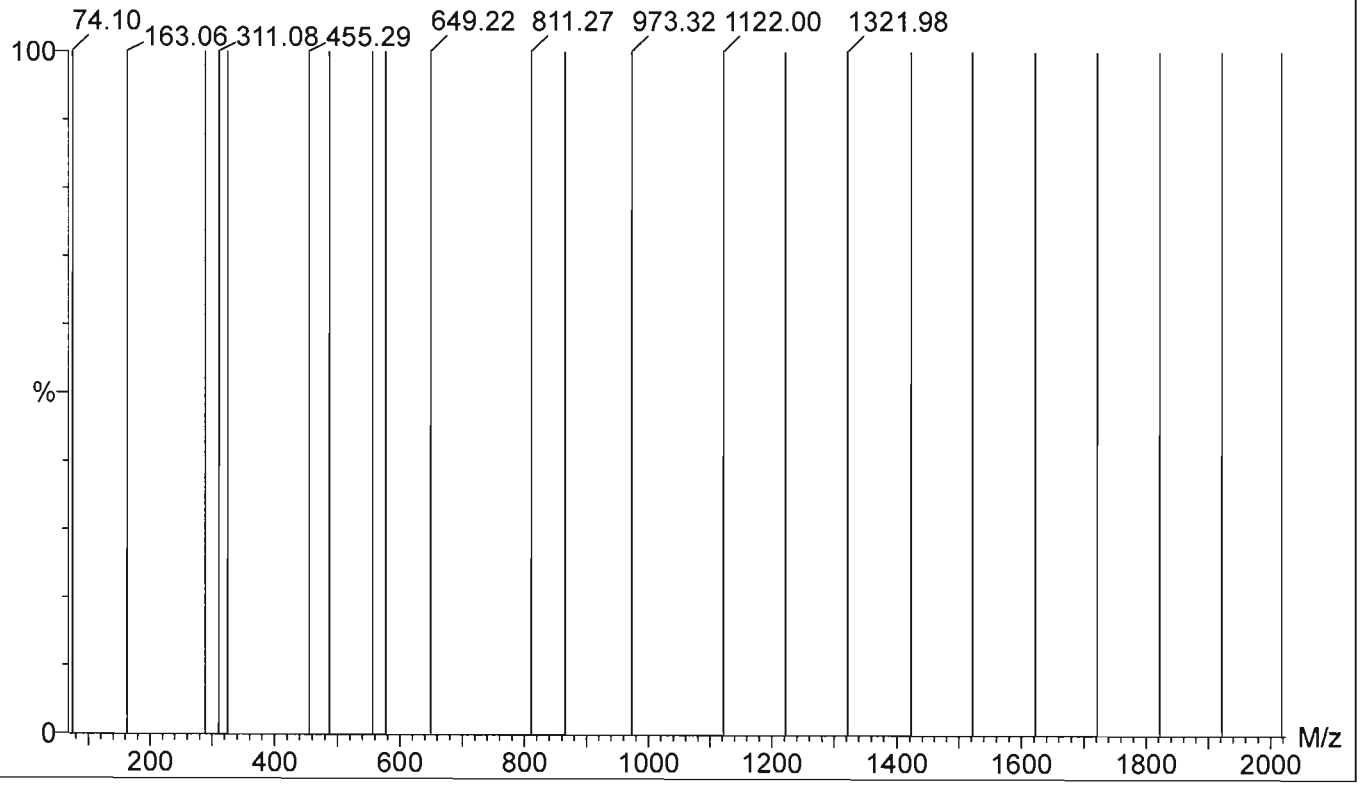
Data file: STATMS1V - Calibrated

23 matches of 23 tested references

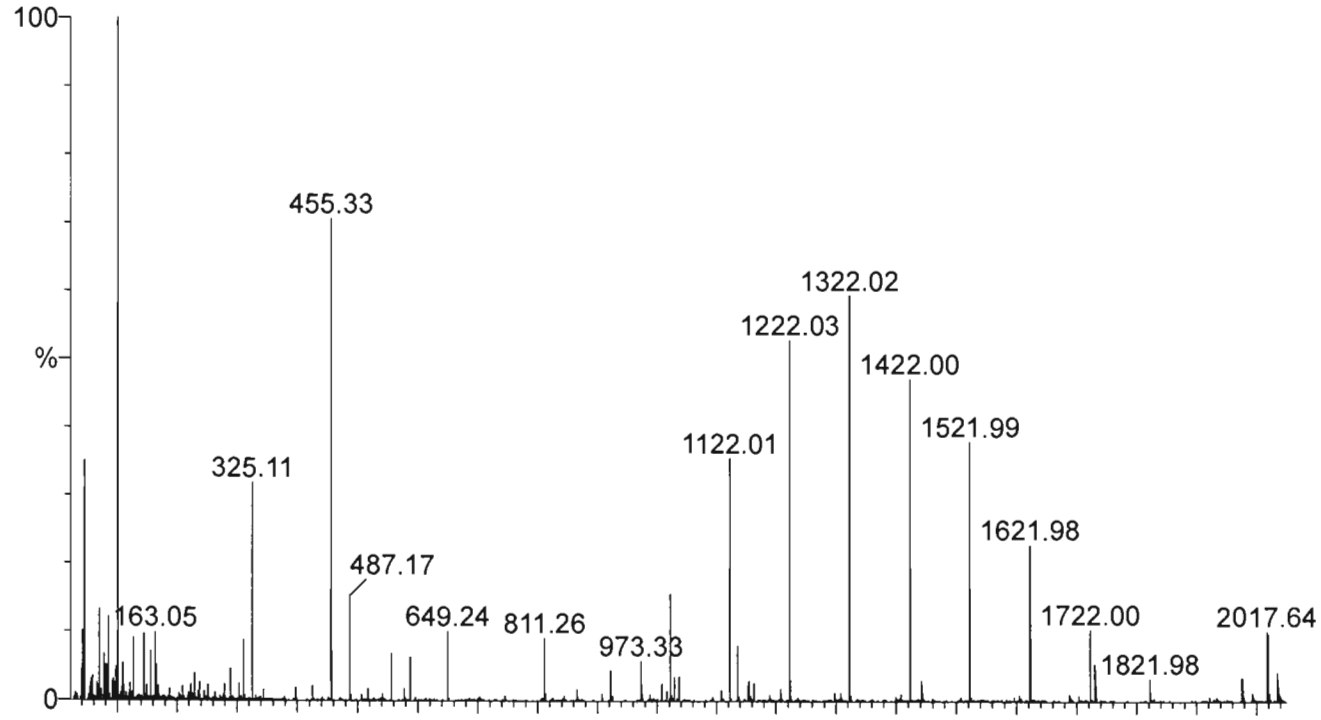


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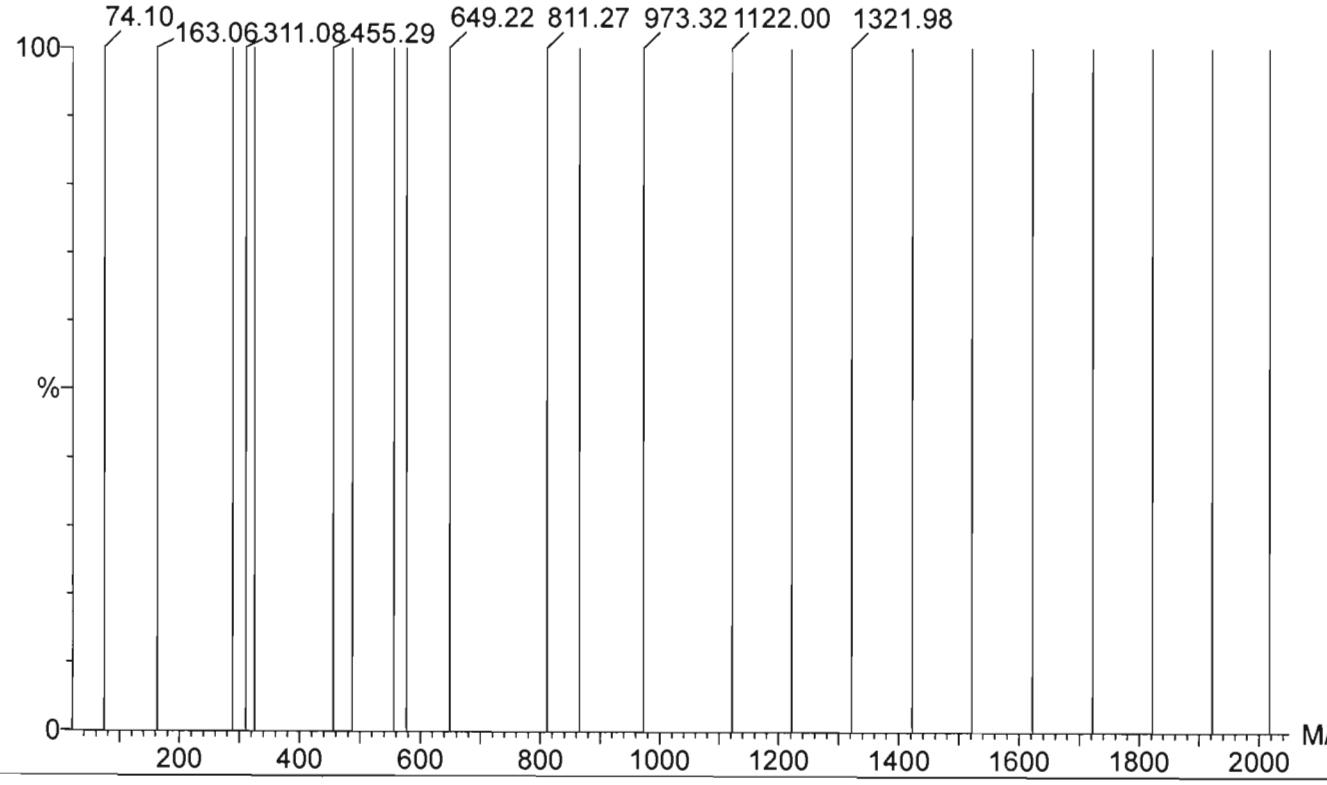
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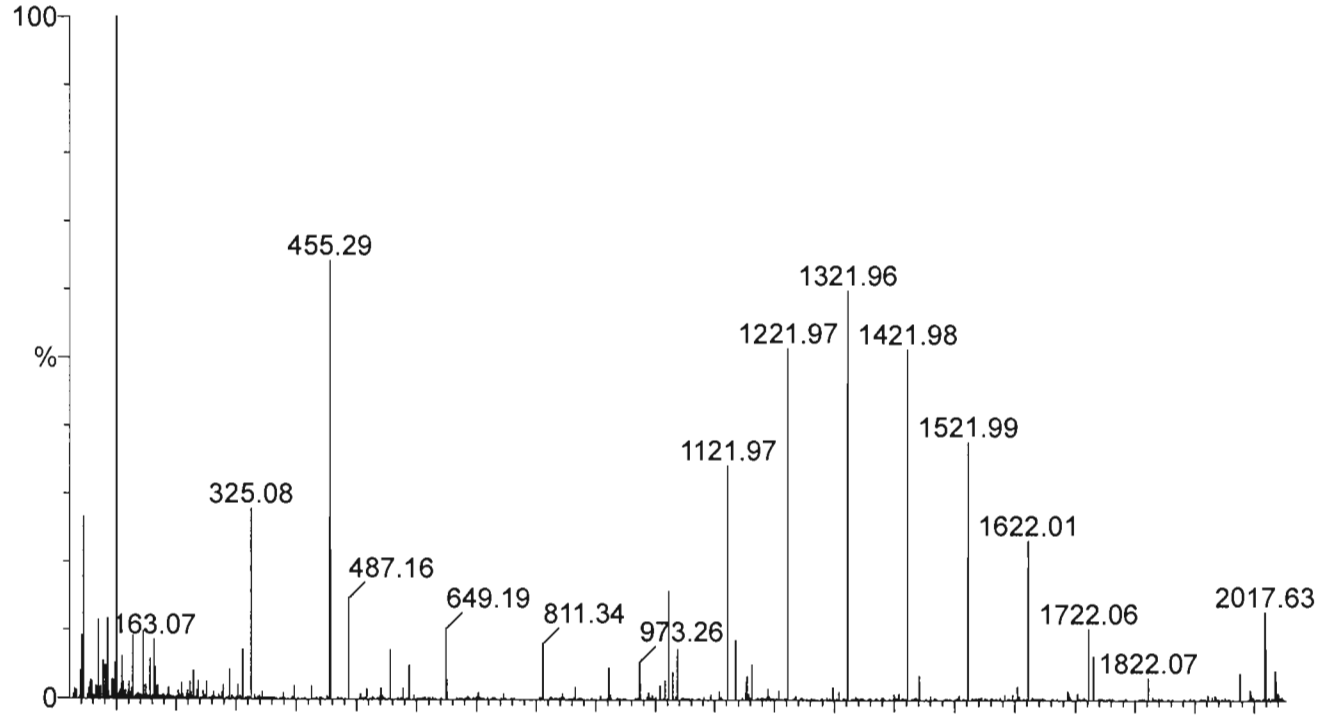
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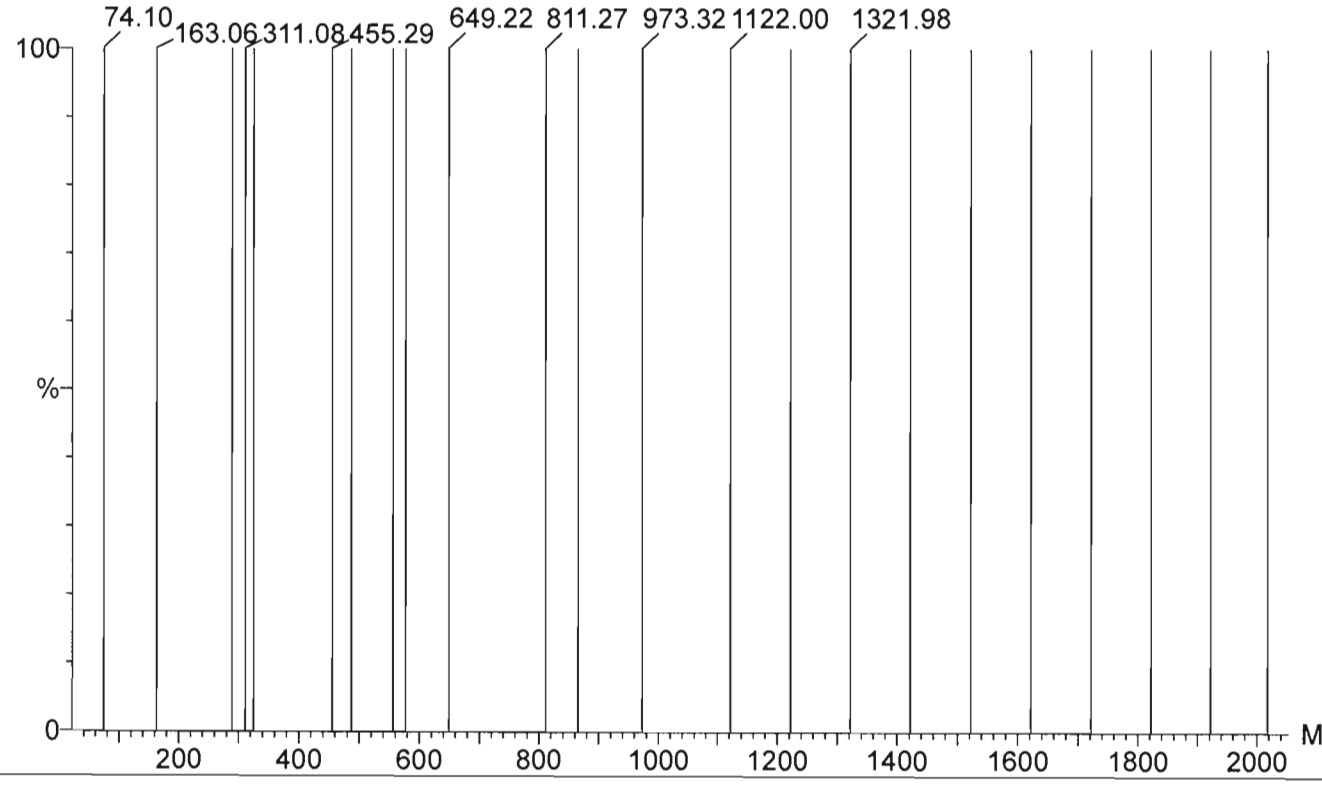
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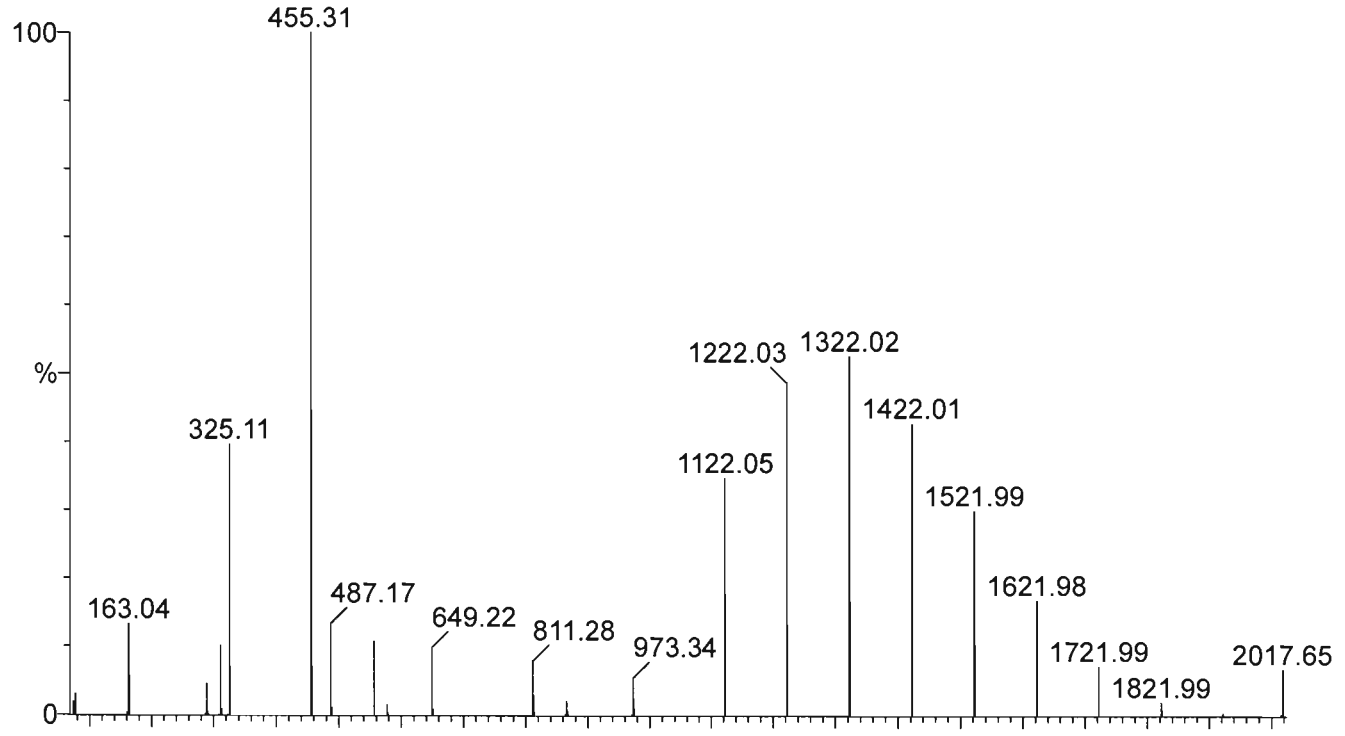
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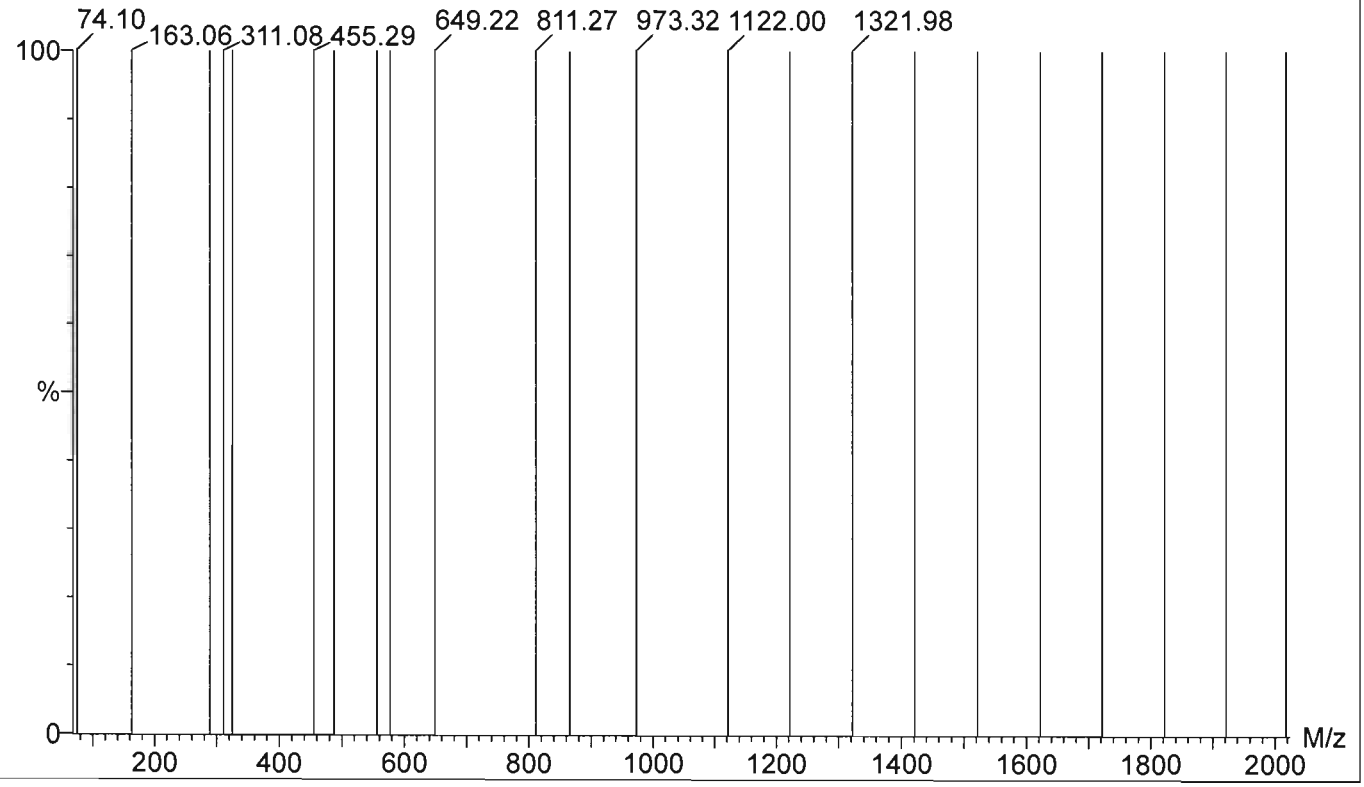
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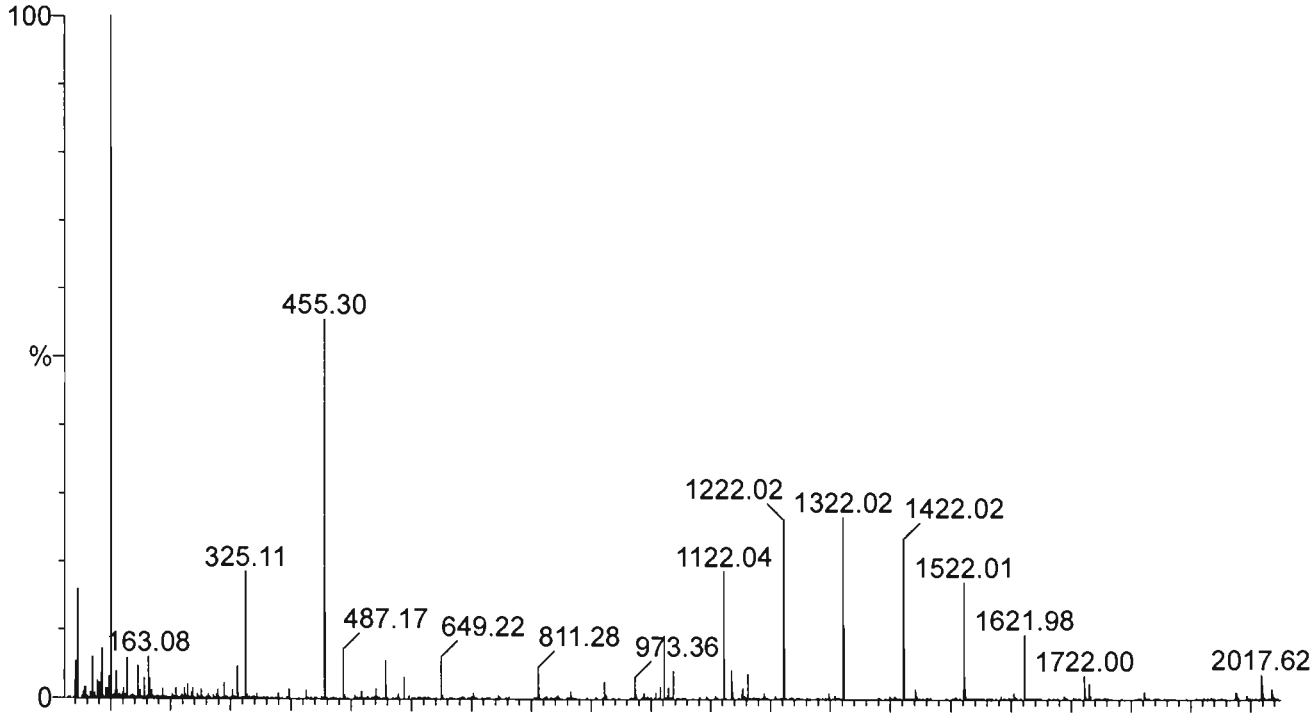
Data file: STATMS2V - Calibrated 22 matches of 23 tested references



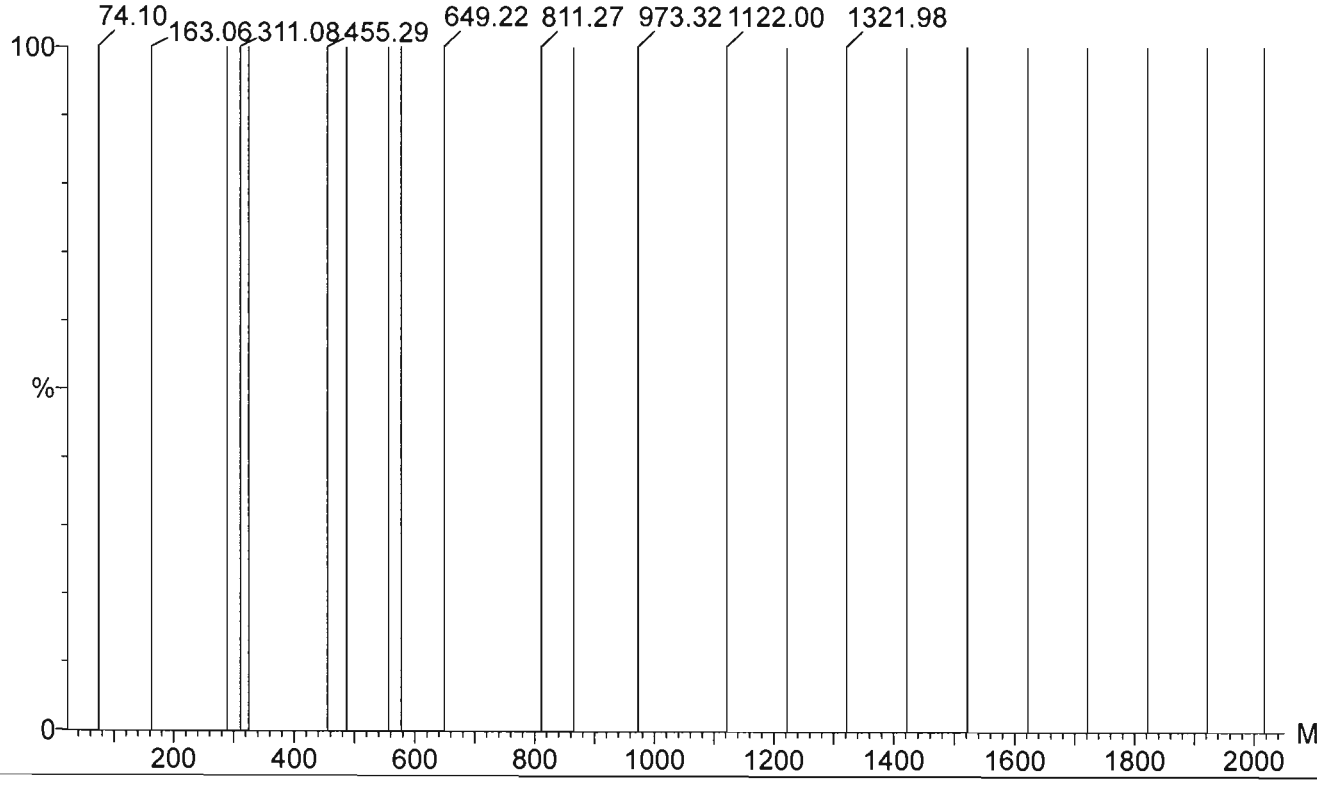
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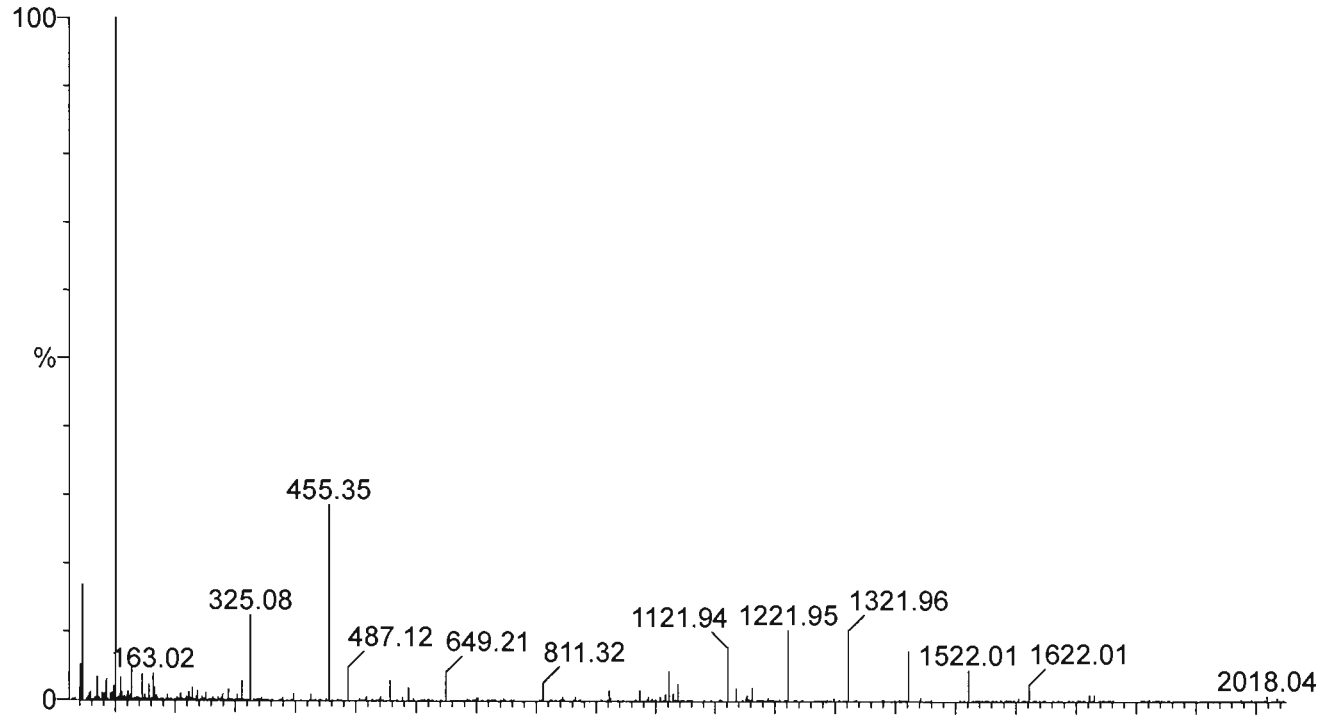
Data file: SCNMS2V - Calibrated 23 matches of 23 tested references



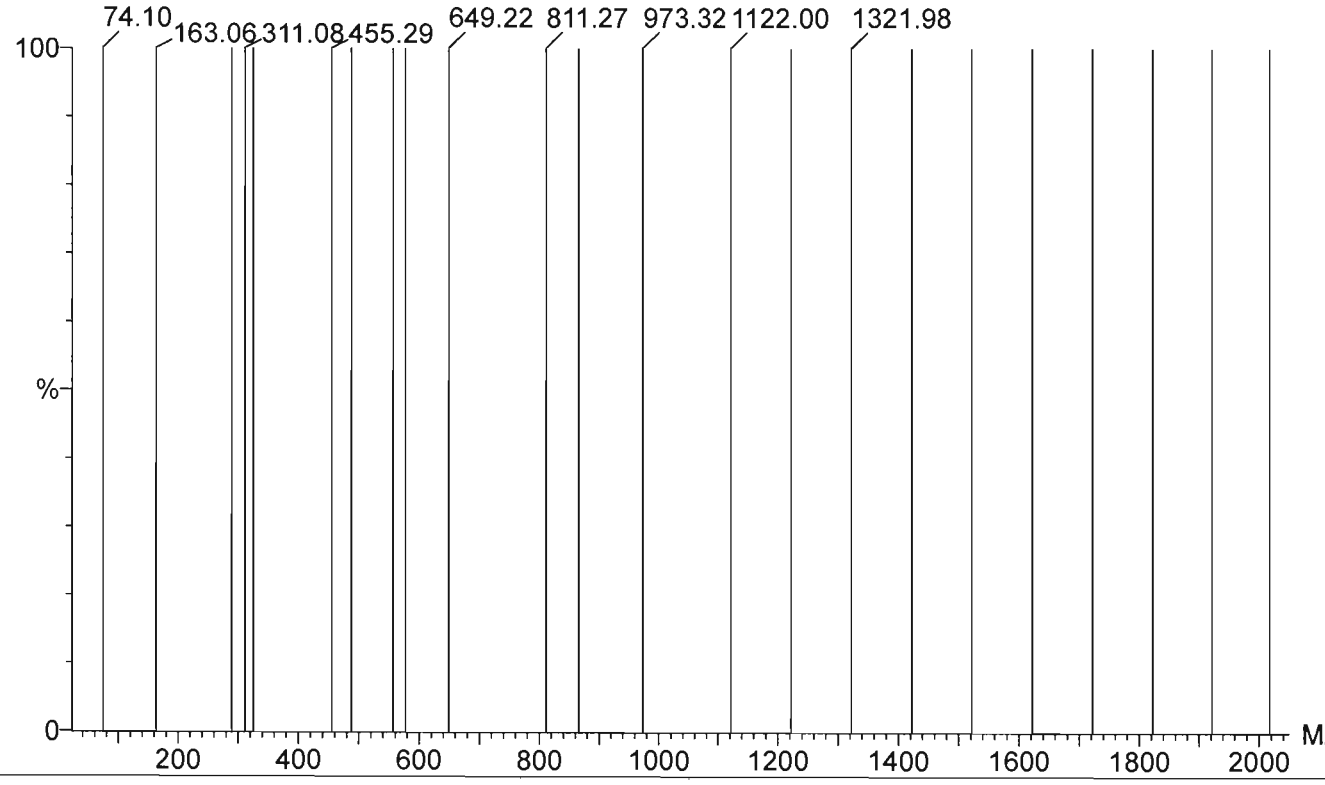
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Data file: FASTMS2V - Calibrated 23 matches of 23 tested references



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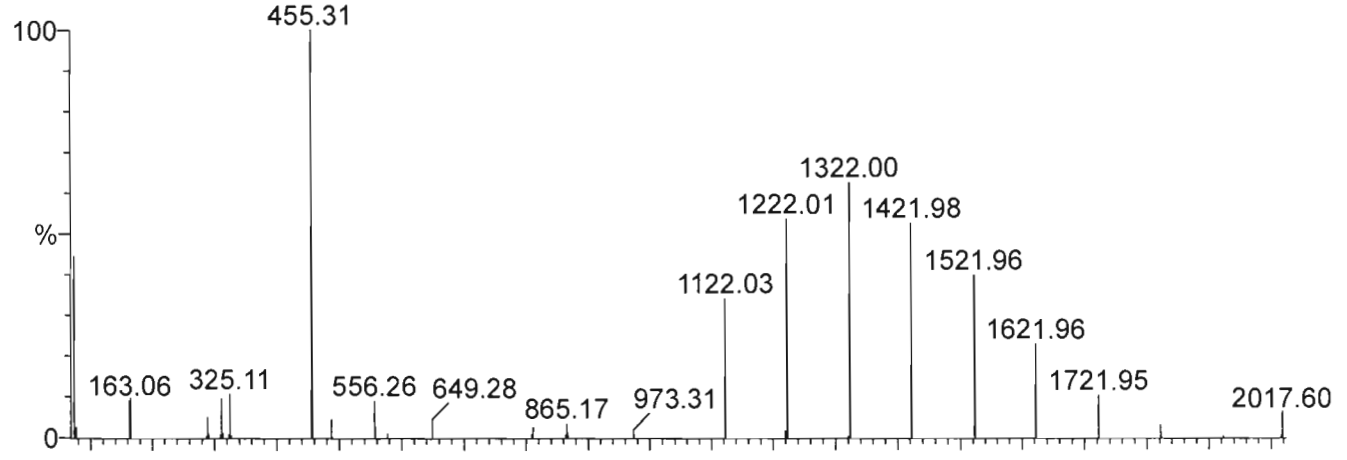


QSP Tune check 02/27/20 20200226

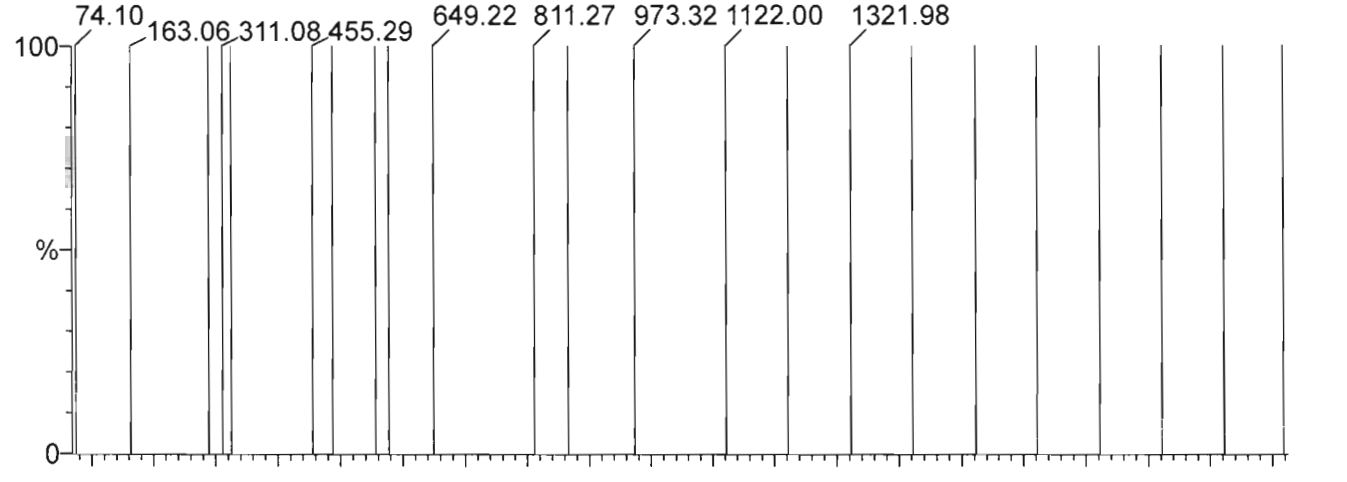
Calibration Report - MS1 Static

Printed: **Thu Feb 27 14:34:02 2020**

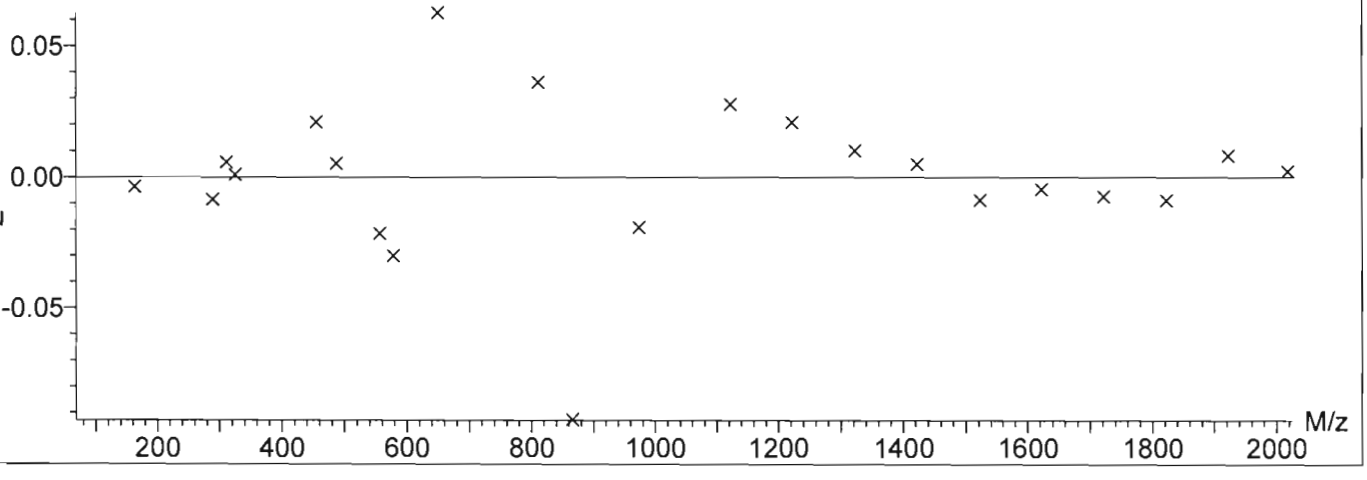
Data file: STATMS1 - Calibrated 22 matches of 23 tested references



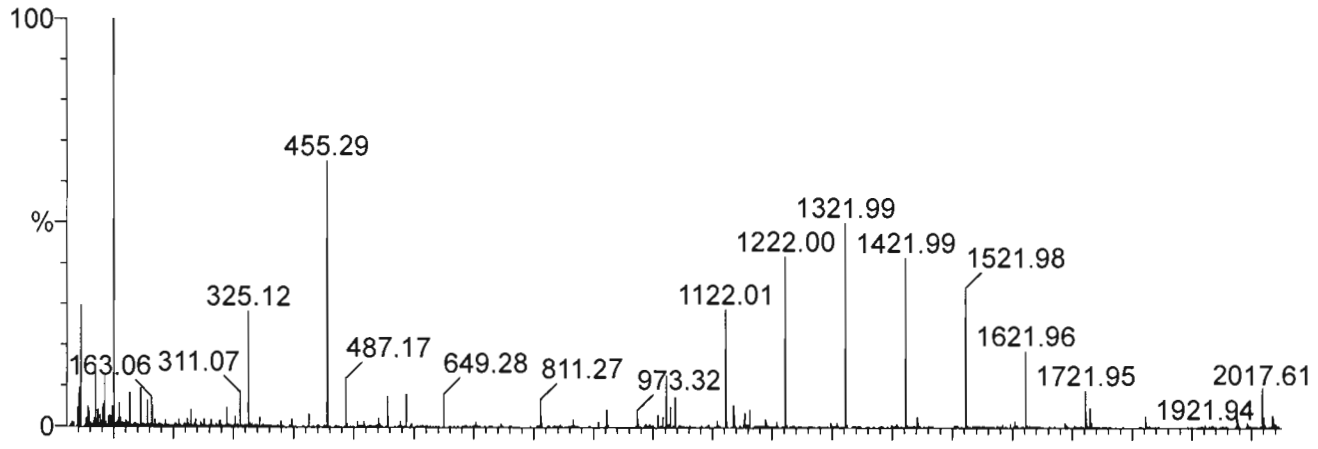
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0186 amu



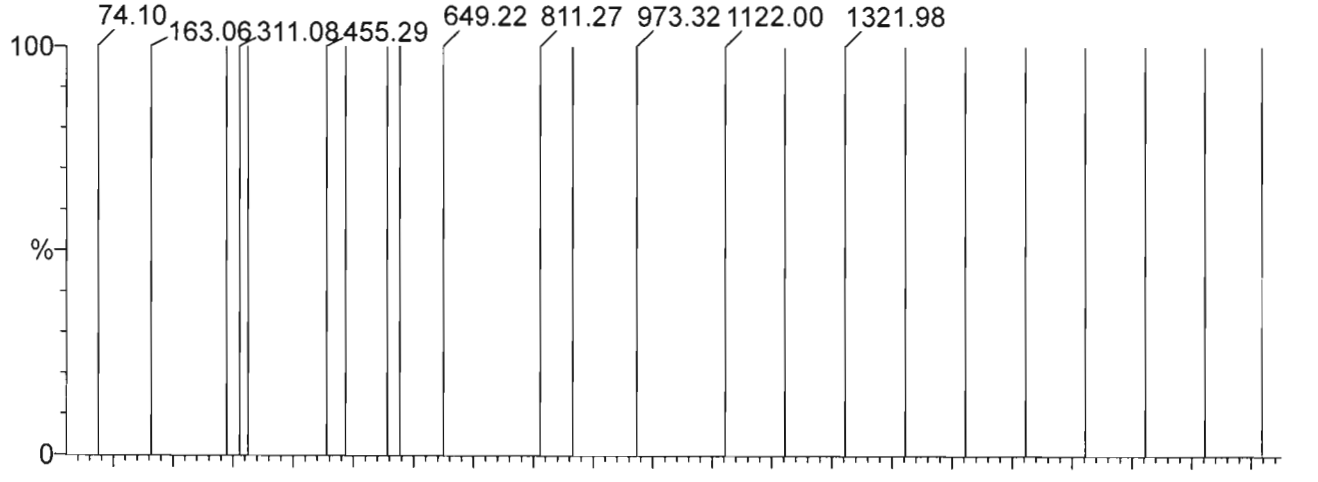
Residual Polynomial order = 4 RMS residual = 0.0284 amu



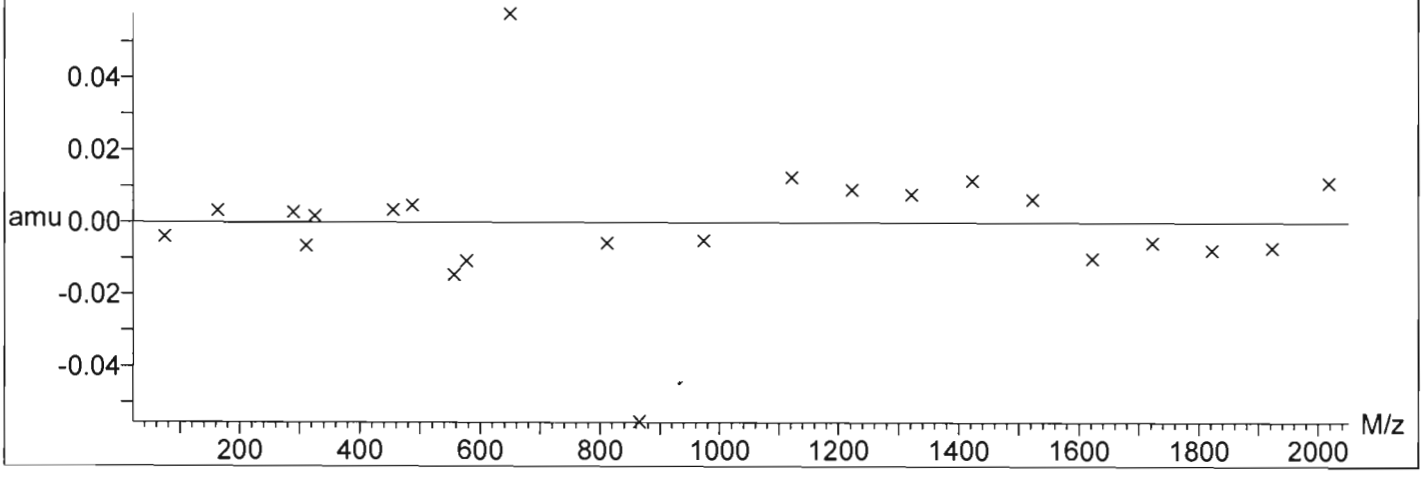
Data file: SCNMS1 - Calibrated 23 matches of 23 tested references



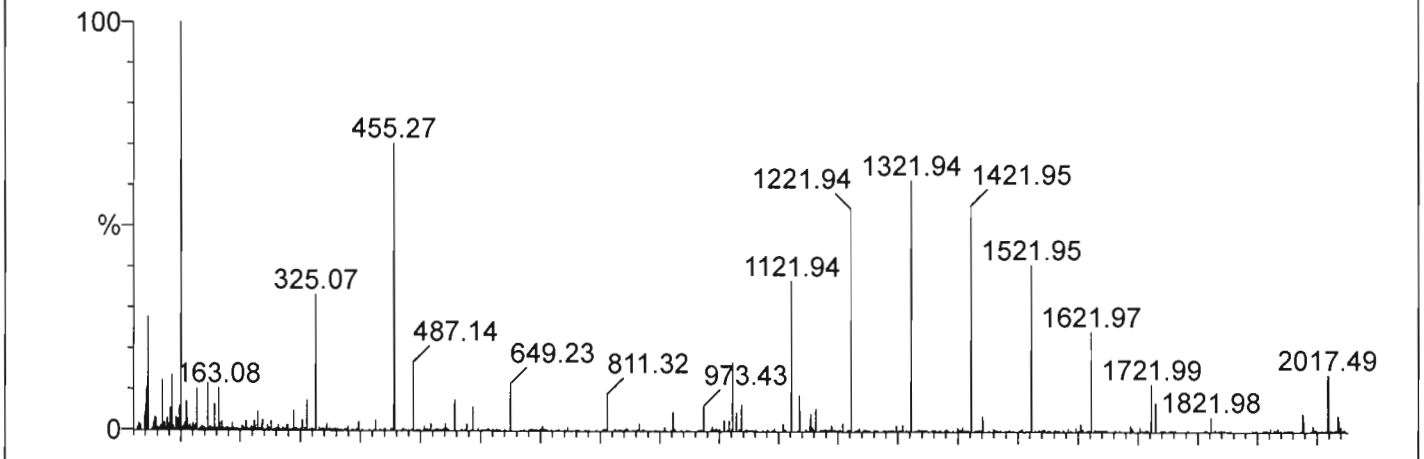
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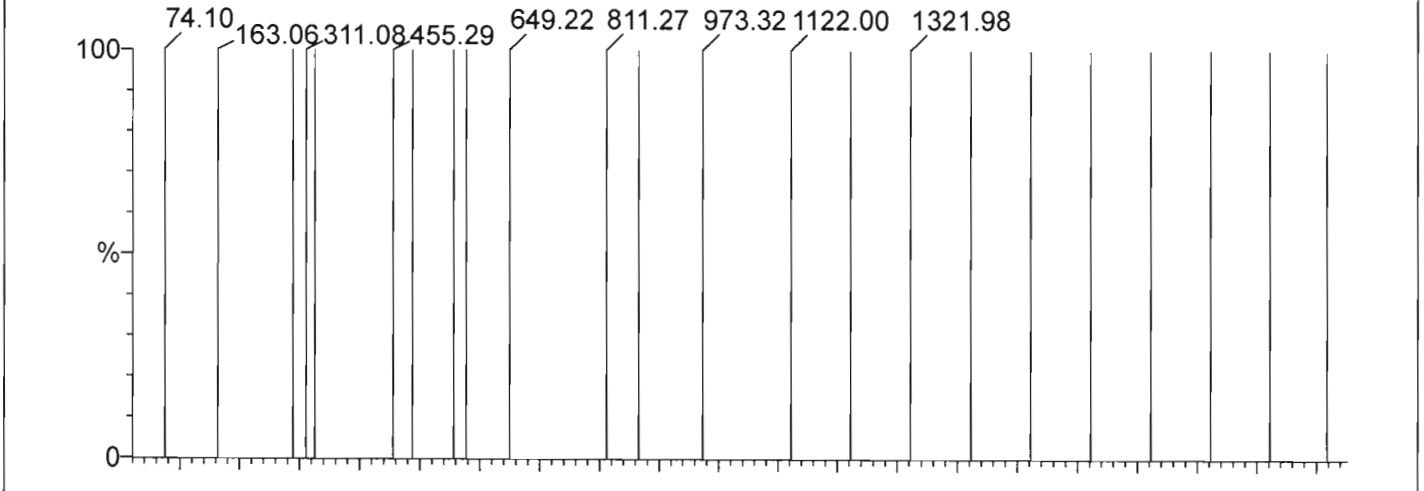
Residual Polynomial order = 4 RMS residual = 0.0183 amu



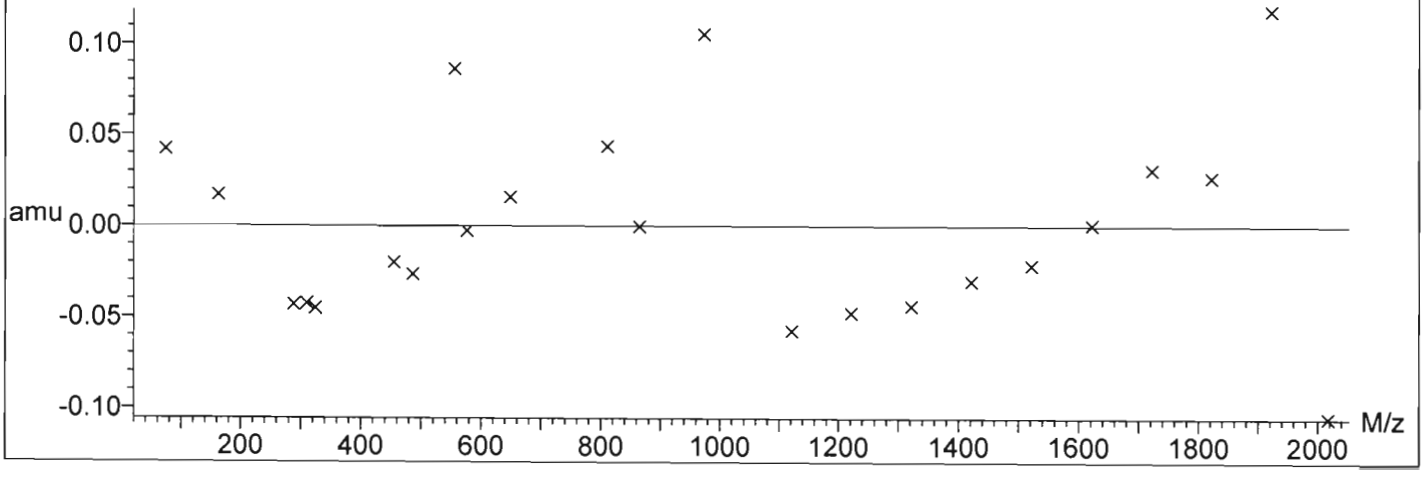
Data file: FASTMS1 - Calibrated 23 matches of 23 tested references



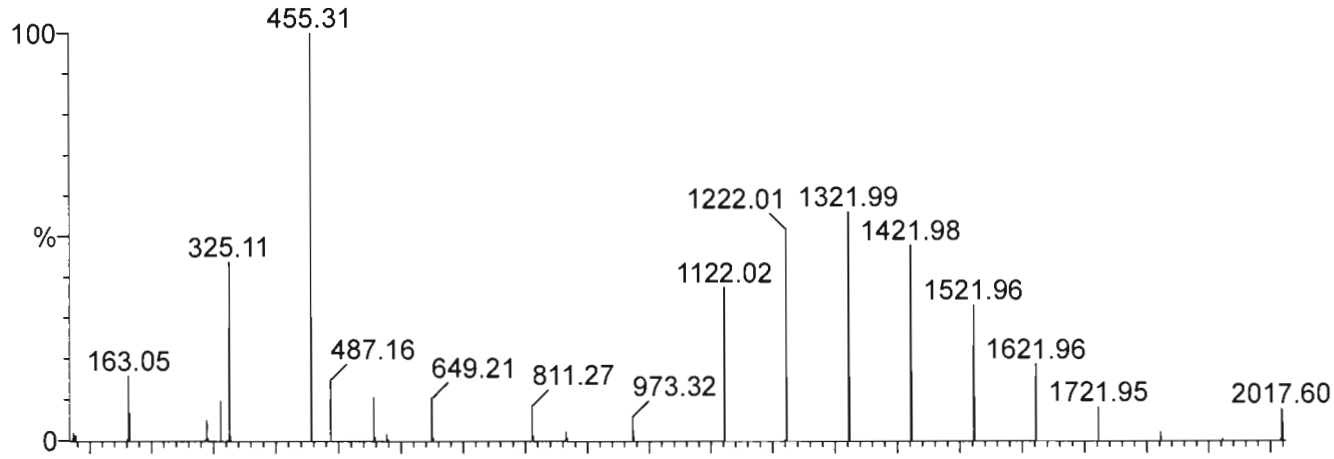
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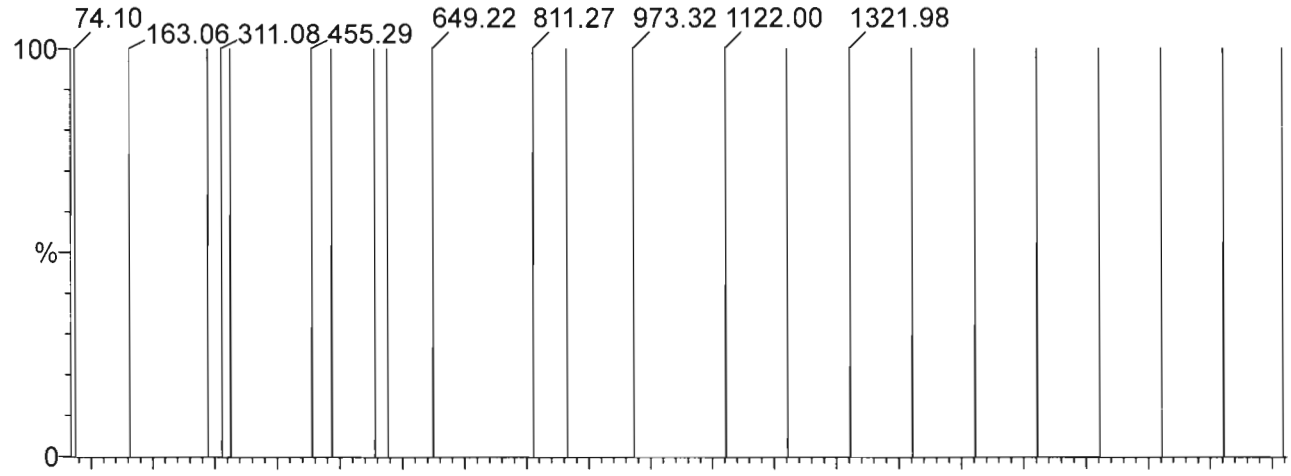
Residual Polynomial order = 4 RMS residual = 0.0533 amu



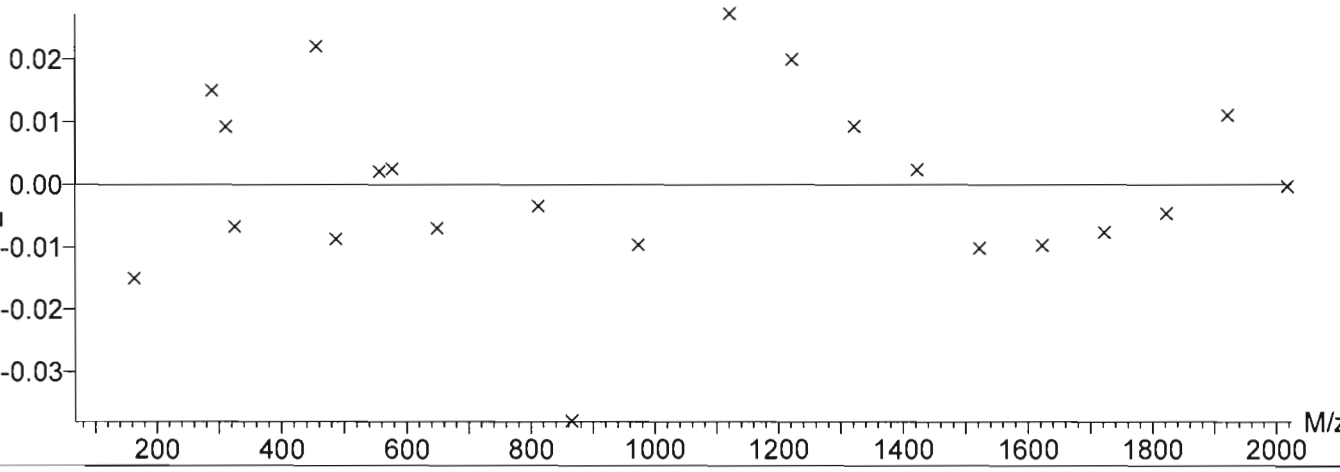
Data file: STATMS2 - Calibrated 22 matches of 23 tested references



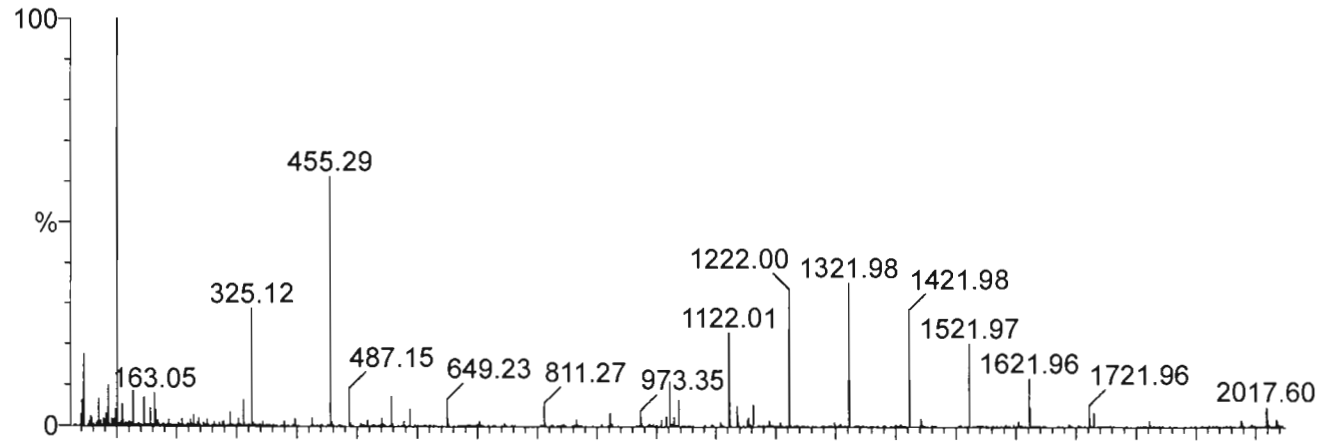
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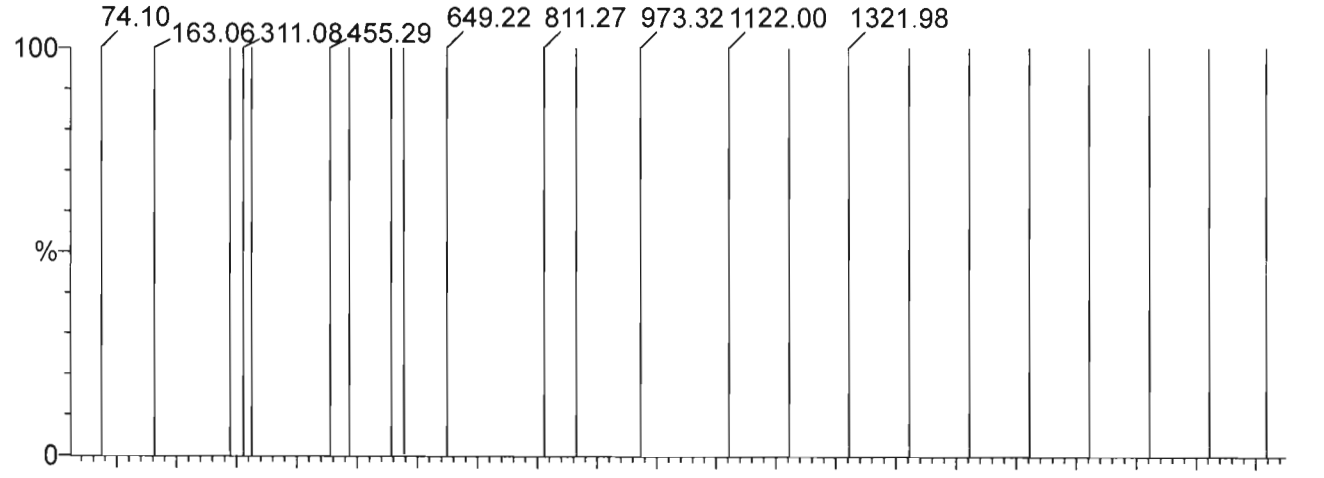
Residual Polynomial order = 4 RMS residual = 0.0141 amu



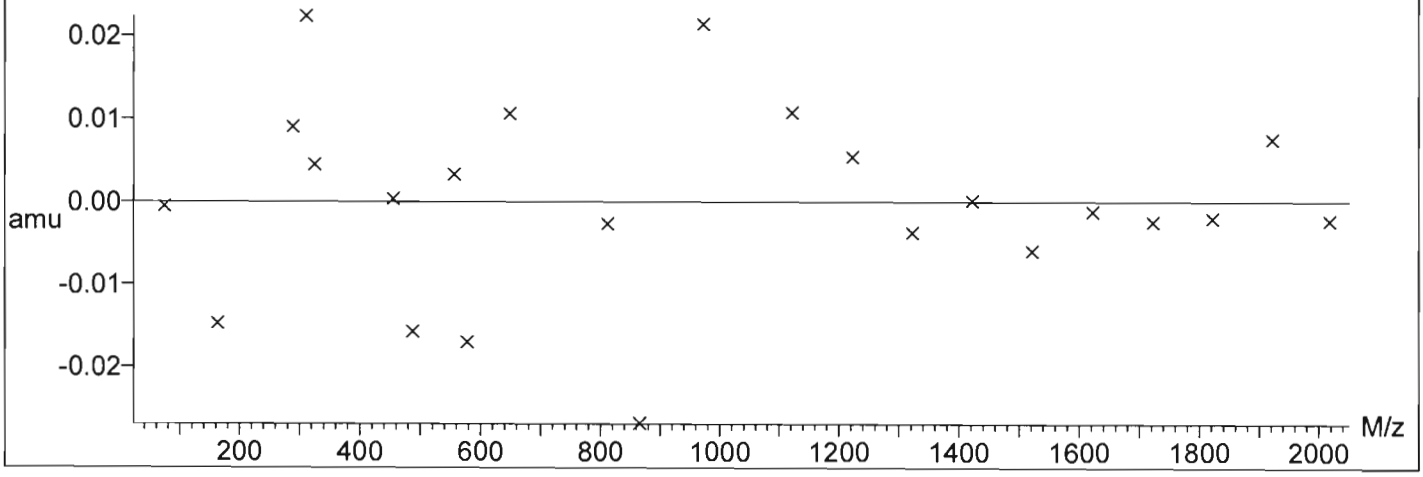
Data file: SCNMS2 - Calibrated 23 matches of 23 tested references



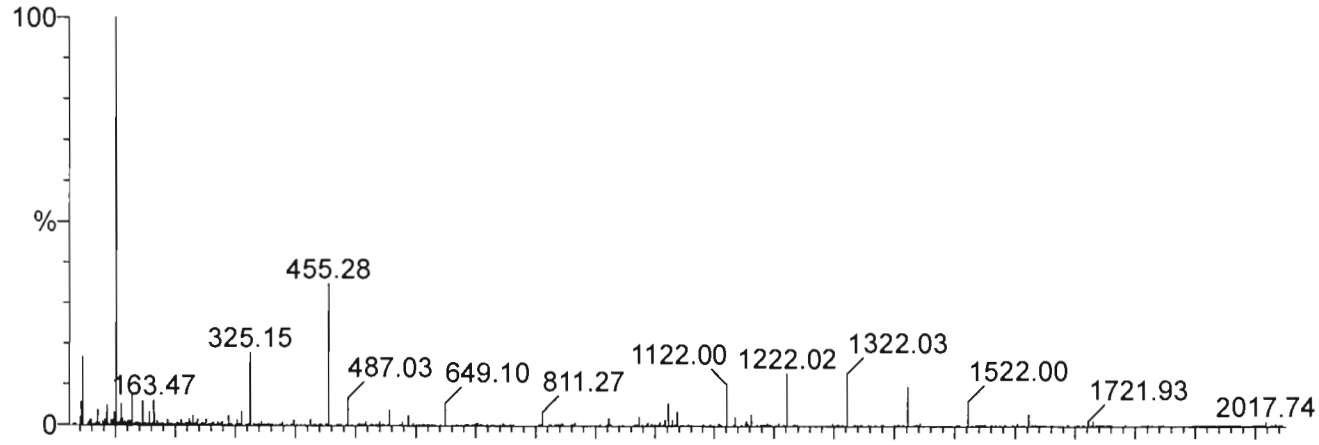
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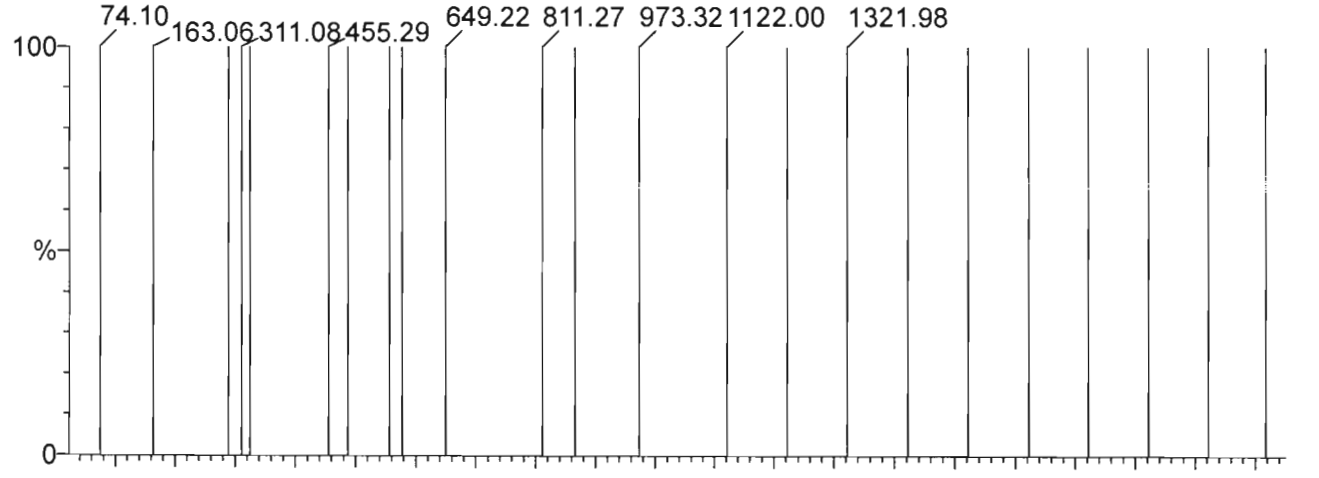
Residual Polynomial order = 4 RMS residual = 0.0113 amu



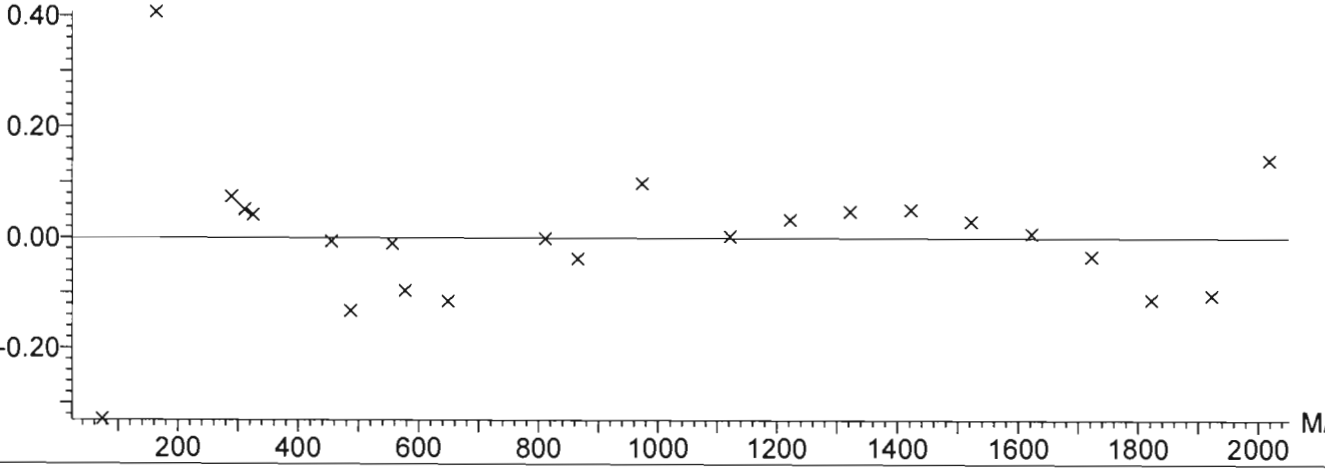
Data file: FASTMS2 - Calibrated 23 matches of 23 tested references



Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0854 amu



Residual Polynomial order = 4 RMS residual = 0.13 amu



STANDARDS

Analytical Standard Record

Vista Analytical Laboratory

20A0801

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	(mls)
19H2706	13C2-10:2 FTS	21-Aug-19	** Vendor **	21-Aug-24	1
19L0601	13C2-4:2 FTS	06-Dec-19	** Vendor **	29-Oct-24	1.07
19L0602	13C2-6:2 FTS	06-Dec-19	** Vendor **	21-Nov-24	1.05
19L0603	13C2-8:2 FTS	06-Dec-19	** Vendor **	11-Oct-24	1.04
19L0604	13C3-PFBA	06-Dec-19	** Vendor **	14-Dec-22	1
19L0605	13C2-PFDA	06-Dec-19	** Vendor **	05-Sep-24	1
19L0606	13C2-PFUdA	06-Dec-19	** Vendor **	04-Jul-24	1
19L0607	13C2-PFTeDA	06-Dec-19	** Vendor **	11-Dec-23	1
19L0608	13C5-PFNA	06-Dec-19	** Vendor **	05-Dec-23	1
19L0609	13C2-PFDoA	06-Dec-19	** Vendor **	11-Dec-23	1
19L0610	13C4-PFHpA	06-Dec-19	** Vendor **	06-May-24	1
19L0611	13C2-PFOA	06-Dec-19	** Vendor **	21-Jun-24	1
19L0612	13C3-PFPeA	06-Dec-19	** Vendor **	08-Mar-24	1
19L0613	13C8-FOSA-I	06-Dec-19	** Vendor **	19-Jun-24	1
19L0614	d3-N-Me-FOSAA	06-Dec-19	** Vendor **	24-Jul-24	1
19L0615	d5-N-EtFOSAA	06-Dec-19	** Vendor **	25-Jul-24	1
19L0616	13C3-PFBS	06-Dec-19	** Vendor **	29-Oct-24	1.075
19L0617	13C8-PFOS	06-Dec-19	** Vendor **	06-May-24	1.045
19L0618	13C3-PFHxS	06-Dec-19	** Vendor **	15-Oct-24	1.06
19L0619	13C2-PFHxA	06-Dec-19	** Vendor **	11-Oct-24	1
19L0620	13C2-PFHxDA	06-Dec-19	** Vendor **	11-Oct-24	1
19L0621	13C3-HFPO-DA	06-Dec-19	** Vendor **	20-Sep-22	1

Description:	PFC - IS	Expires:	07-Jan-21
Standard Type:	Reagent	Prepared:	08-Jan-20
Solvent:	MeOH	Prepared By:	Brittany M. Lamb
Final Volume (mls):	40	Department:	LCMS
Vials:	1	Last Edit:	23-Jan-20 14:53 by BML

10:2 added
10 uL spike

Analyte	CAS Number	Concentration	Units
13C3-HFPO-DA		1.25	ug/mL
13C2-4:2 FTS		1.25	ug/mL
13C2-6:2 FTS		1.25	ug/mL
13C2-8:2 FTS		1.25	ug/mL
13C2-PFDA		1.25	ug/mL
13C2-PFDoA		1.25	ug/mL
13C2-PFHxA		1.25	ug/mL
13C2-PFHxDA		1.25	ug/mL
13C2-PFOA		1.25	ug/mL
13C2-10:2 FTS		1.25	ug/mL
13C2-PFUnA		1.25	ug/mL
d5-EtFOSAA		1.25	ug/mL

Analytical Standard Record

Vista Analytical Laboratory

20A0801

Description:	PFC - IS	Expires:	07-Jan-21
Standard Type:	Reagent	Prepared:	08-Jan-20
Solvent:	MeOH	Prepared By:	Brittany M. Lamb
Final Volume (mls):	40	Department:	LCMS
Vials:	1	Last Edit:	23-Jan-20 14:53 by BML

10:2 added
10 uL spike

Analyte	CAS Number	Concentration	Units
13C3-PFBA		1.25	ug/mL
13C3-PFBS		1.25	ug/mL
13C3-PFHxS		1.25	ug/mL
13C3-PFPeA		1.25	ug/mL
13C4-PFHpA		1.25	ug/mL
13C5-PFNA		1.25	ug/mL
13C8-PFOS		1.25	ug/mL
13C8-PFOSA		1.25	ug/mL
d3-MeFOSAA		1.25	ug/mL
13C2-PFTeDA		1.25	ug/mL

19H27016

Cambridge Isotope Laboratories, Inc.

Certificate of Analysis

Product Name:
(Isotopic Label & Enrichment Specification)
1H,1H,2H,2H-PERFLUORODODECANE SULFONATE(10:2 FTS), SODIUM SALT (13C2, 99%; D4, 98%) 50 UG/ML IN MEOH

Lot Number: SDIJ-019A

Catalog Number: CDLM-10750-S

Product Information

Chemical Purity Specification:	≥ 98%
MW*: * *For isotopically labeled compounds, MW listed is for the fully enriched product.*	656.19
Labeled CAS Number:	NA
Unlabeled CAS Number:	108026-35-3
Chemical Formula:	C10*C2D4F21NaO3S
Storage:	Store at room temperature away from light and moisture.
Stability:	See storage and expiration date.

Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated. CIL Certificates of Analysis are occasionally updated with new data following recertification. We recommend checking the website for the latest version.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

Approved by: Sashi Sivendran-Basak

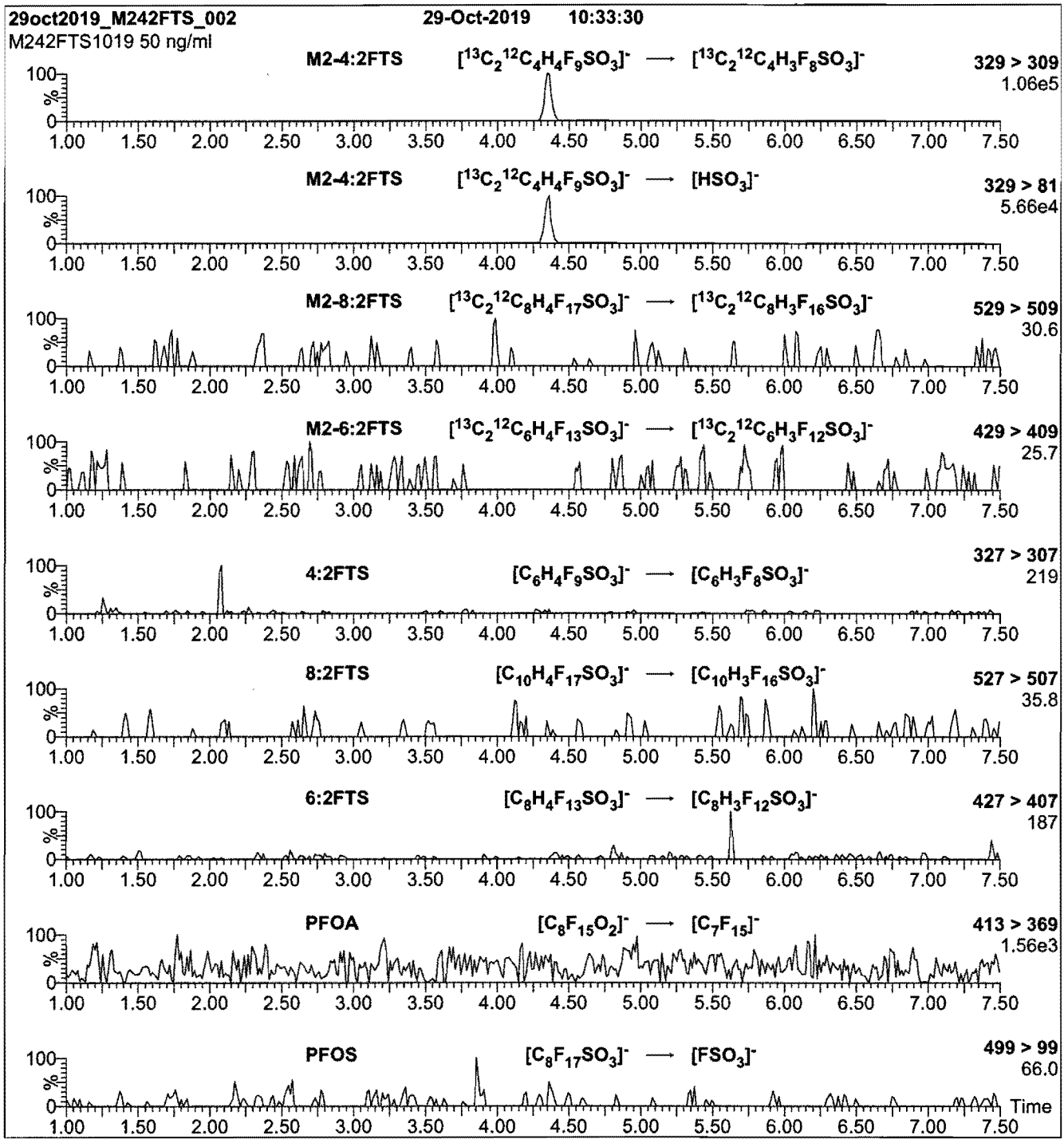
Sashi Sivendran-Basak, Ph.D., Quality Review

Quality Control Tests and Results

QC Release Date	8/21/2019
Expiration Date	8/21/2024
Concentration Based on Gravimetry	50.0 ± 0.5 µg/mL (k=2)
Chemical Purity of Neat Material(s)	100.0%

CIL subscribes to the following standards for different products: ISO Guide 34, ISO/IEC 17025, ISO 13485 and cGMP as appropriate.

Figure 2: **M2-4:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M2-4:2FTS)

Mobile phase: Same as Figure 1

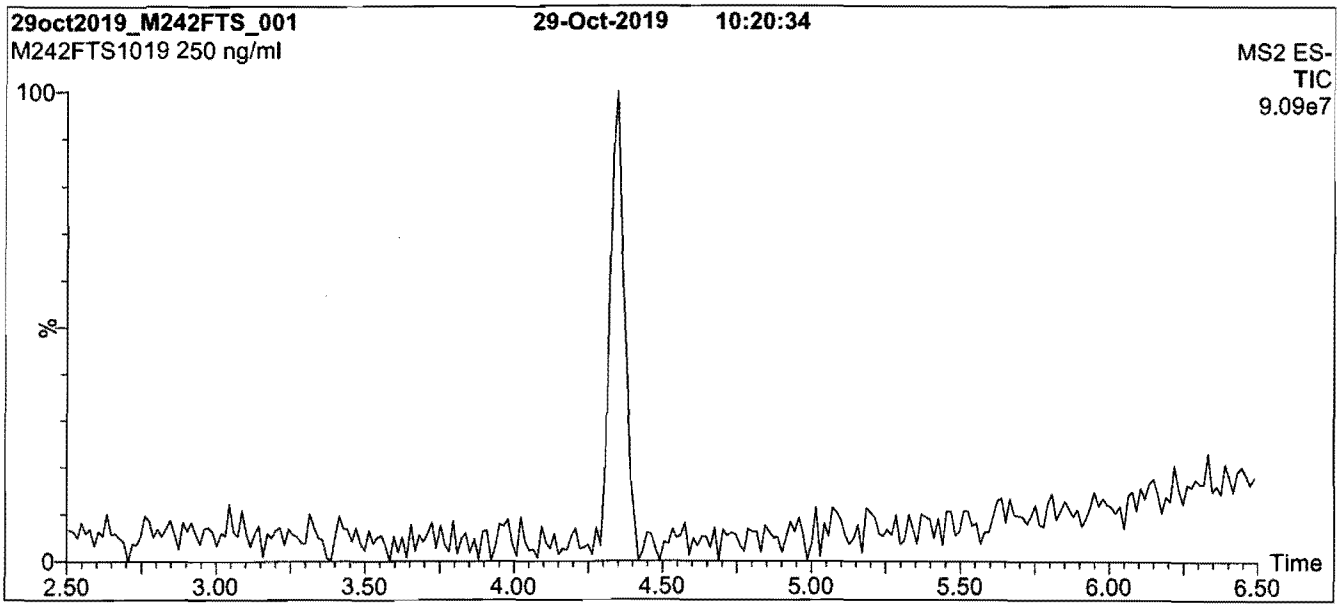
Flow: 300 µl/min

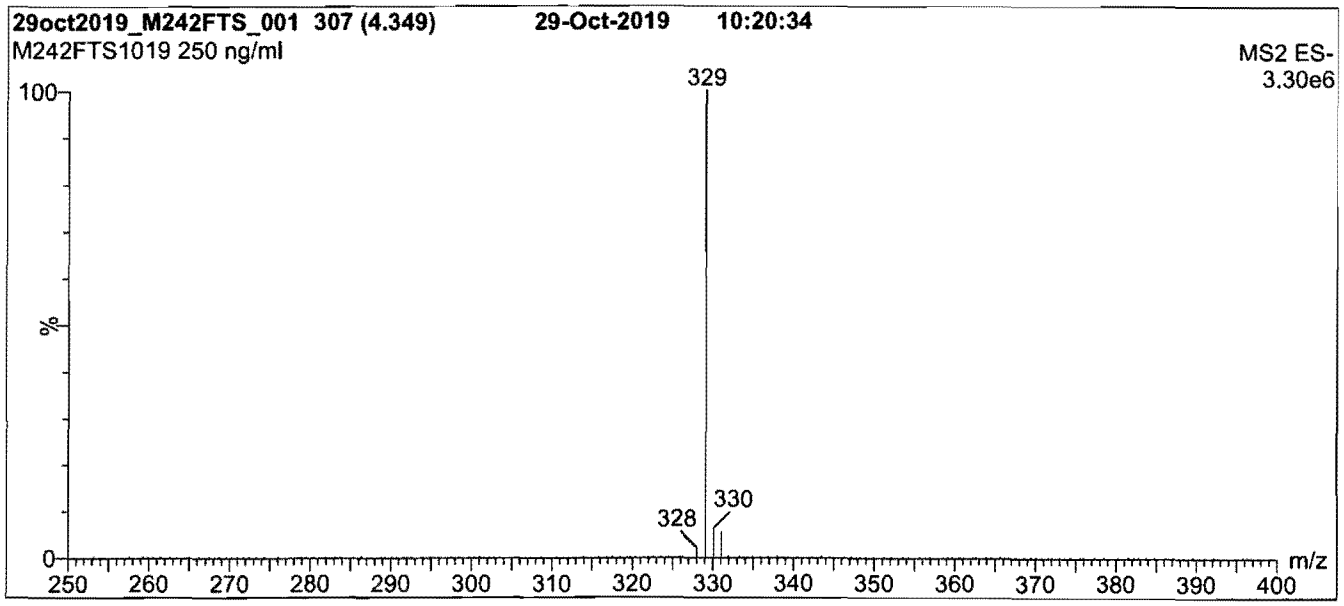
MS Parameters

Collision Gas (mbar) = 3.51e-3
Collision Energy (eV) = 18

19L0601

Figure 1: **M2-4:2FTS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% (80:20 MeOH:ACN) / 60% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2,...x_n$ on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

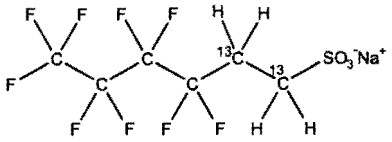
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0601

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M2-4:2FTS	**LOT NUMBER:**	M242FTS1019
COMPOUND:	Sodium 1H,1H,2H,2H-perfluoro-[1,2-$^{13}C_2$]hexane sulfonate		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_4H_4F_9SO_3Na$	**MOLECULAR WEIGHT:**	352.12
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt)	**SOLVENT(S):**	Methanol
	46.7 ± 2.3 µg/ml (M2-4:2FTS anion)		
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	10/29/2019		
EXPIRY DATE: (mm/dd/yyyy)	10/29/2024		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- The native 4:2FTS contains 4.22% of ^{34}S (due to natural isotopic abundance) therefore both native 4:2FTS and M2-4:2FTS will produce signals in the m/z 329 to m/z 309 channel during SRM analysis. We recommend using the m/z 329 to m/z 81 transition to monitor for M2-4:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

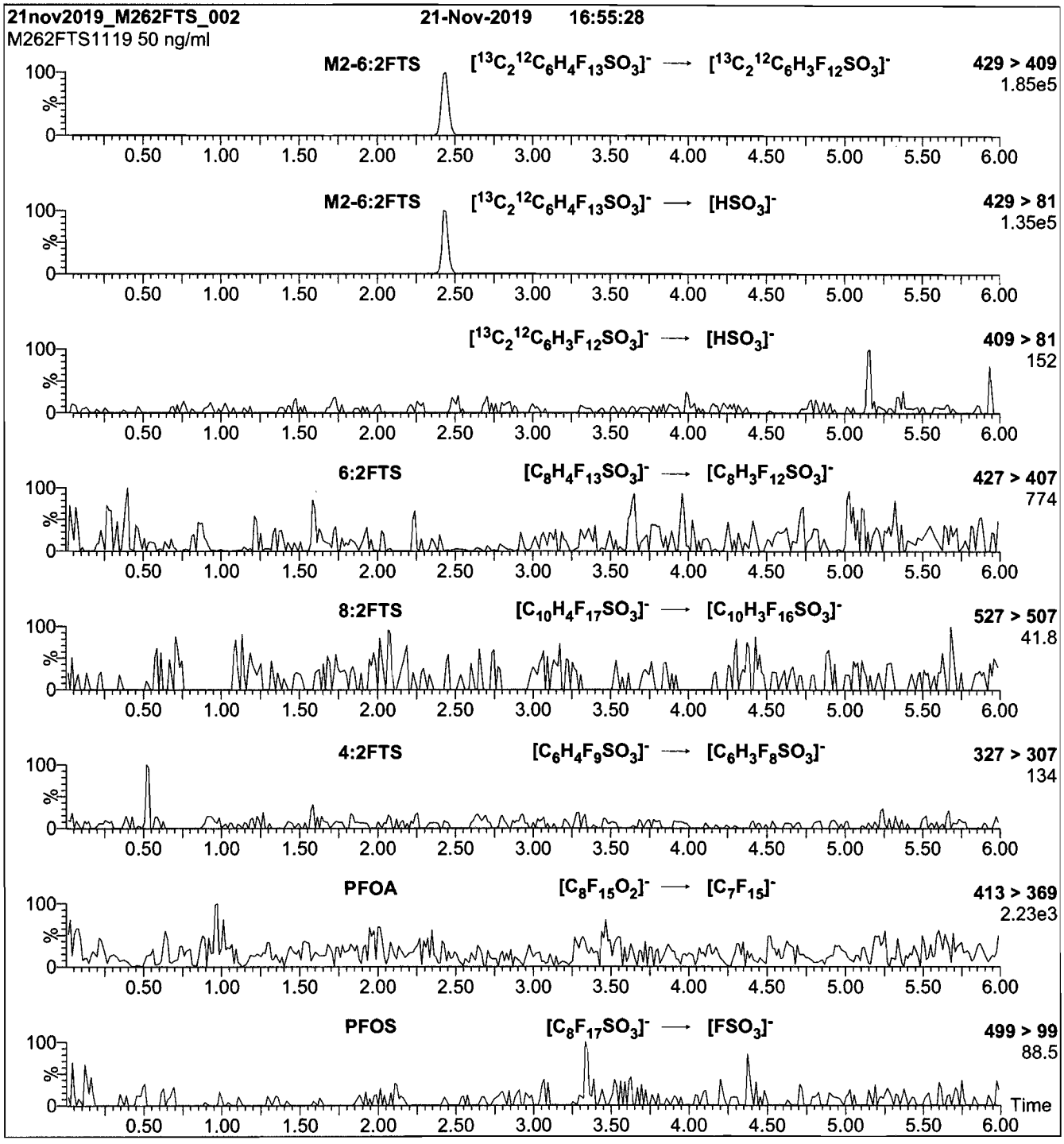
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/05/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0602

Figure 2: **M2-6:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M2-6:2FTS)

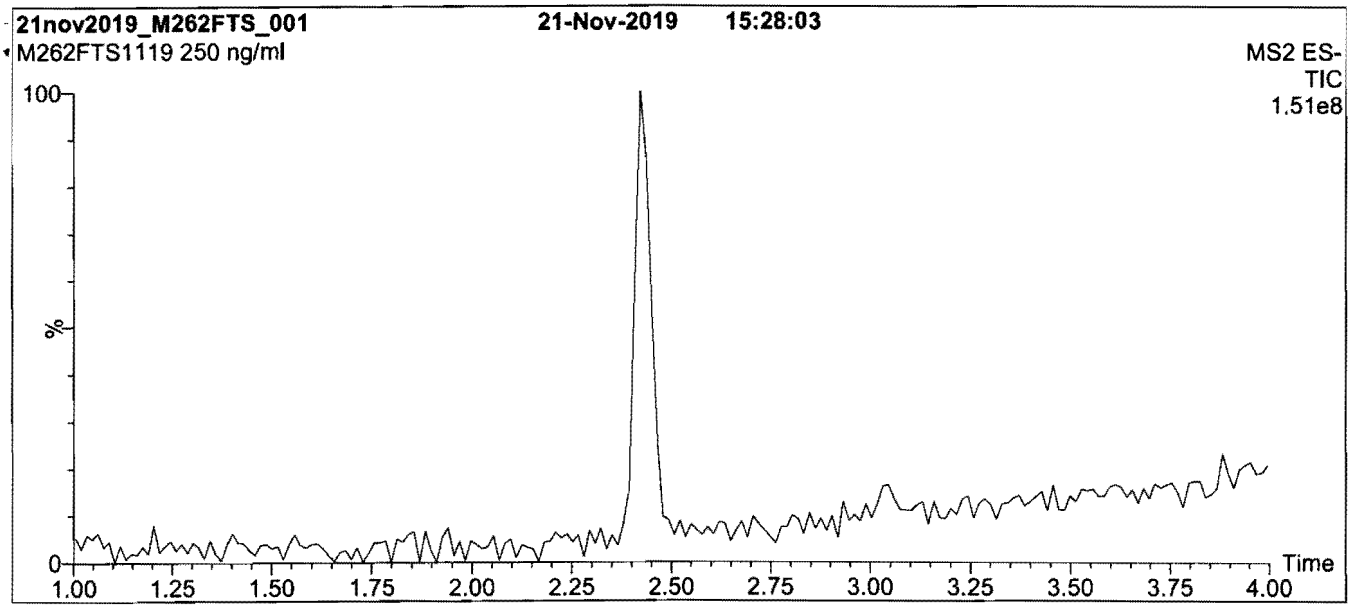
Mobile phase: Same as Figure 1

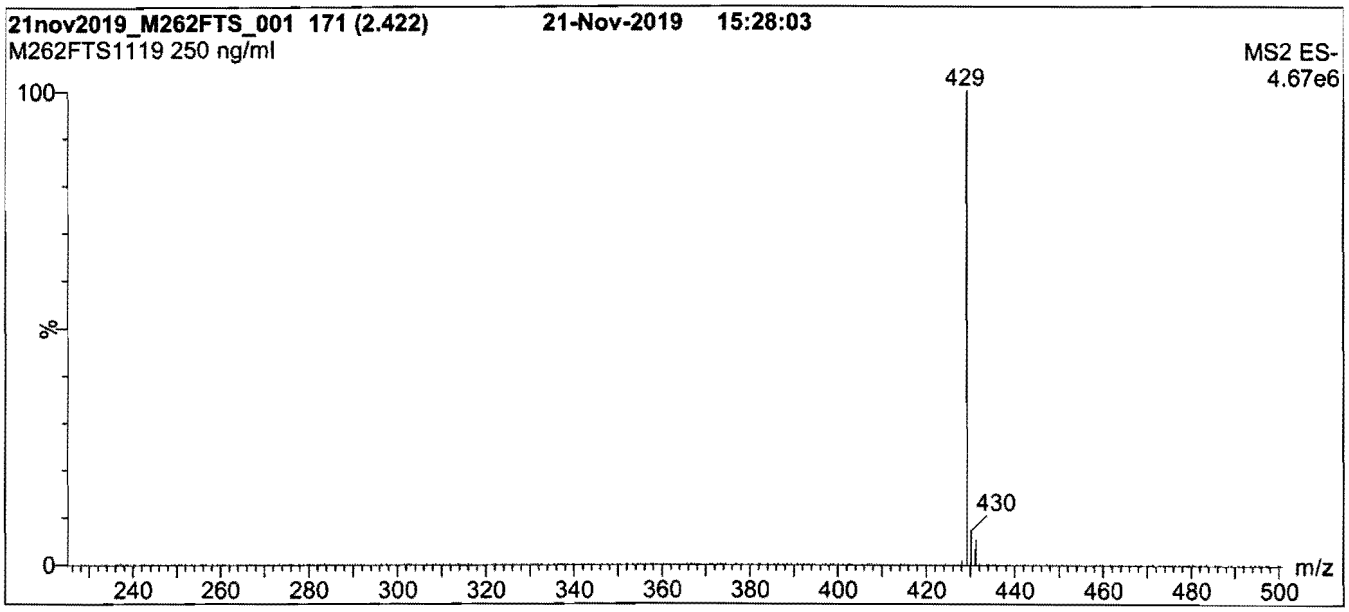
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.31e-3
Collision Energy (eV) = 20

Figure 1: **M2-6:2FTS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

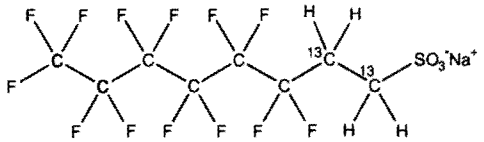
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0602

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M2-6:2FTS	**LOT NUMBER:**	M262FTS1119
COMPOUND:	Sodium 1H,1H,2H,2H-perfluoro-[1,2-$^{13}C_2$]octane sulfonate		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_6H_4F_{13}SO_3Na$	**MOLECULAR WEIGHT:**	452.13
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.5 ± 2.4 µg/ml (M2-6:2FTS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	11/21/2019		
EXPIRY DATE: (mm/dd/yyyy)	11/21/2024		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

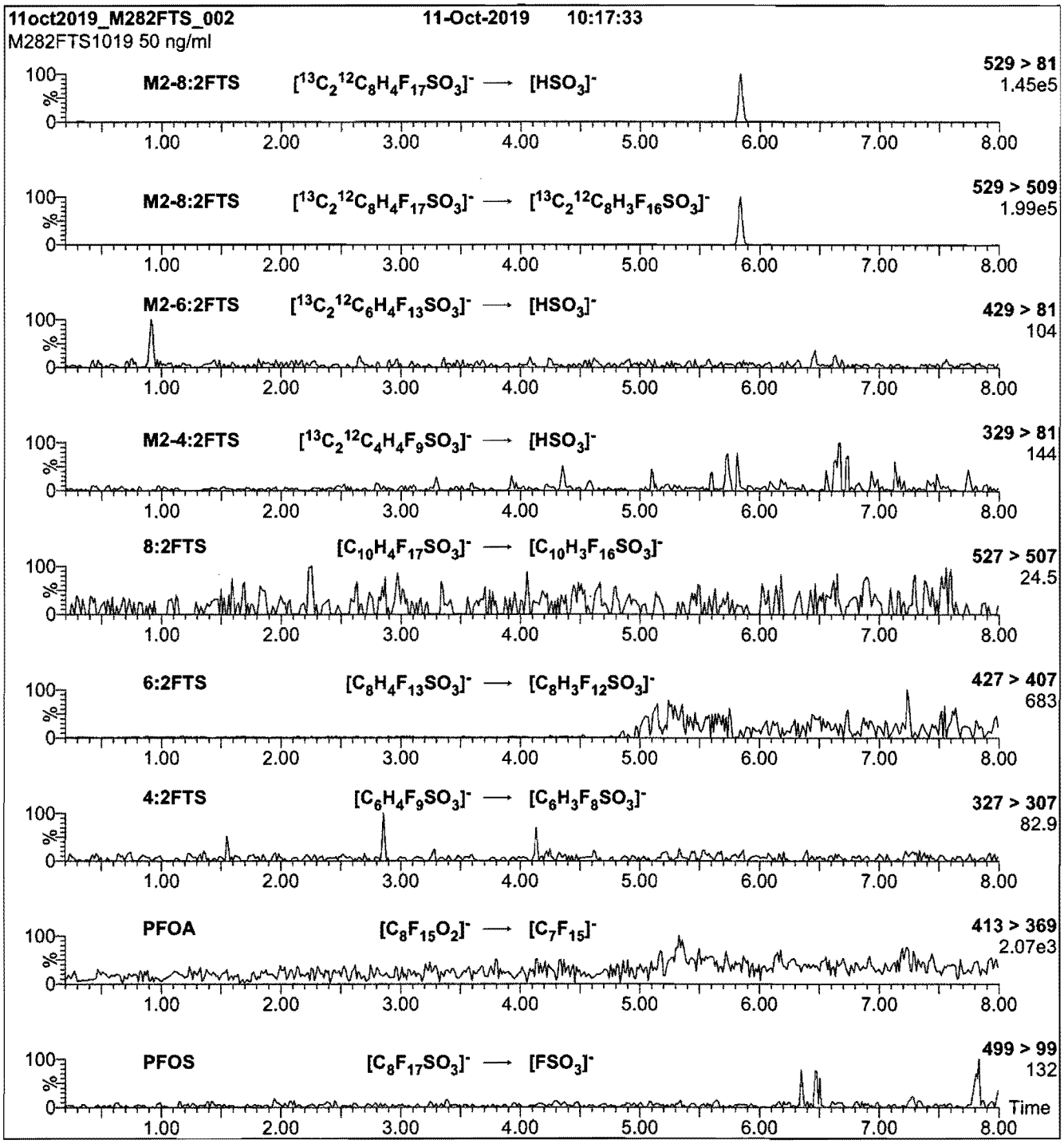
- See page 2 for further details.
- The native 6:2FTS contains 4.22% of ^{34}S (due to natural isotopic abundance) therefore both native 6:2FTS and M2-6:2FTS will produce signals in the m/z 429 to m/z 409 channel during SRM analysis. We recommend using the m/z 429 to m/z 81 transition to monitor for M2-6:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/25/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **M2-8:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M2-8:2FTS)

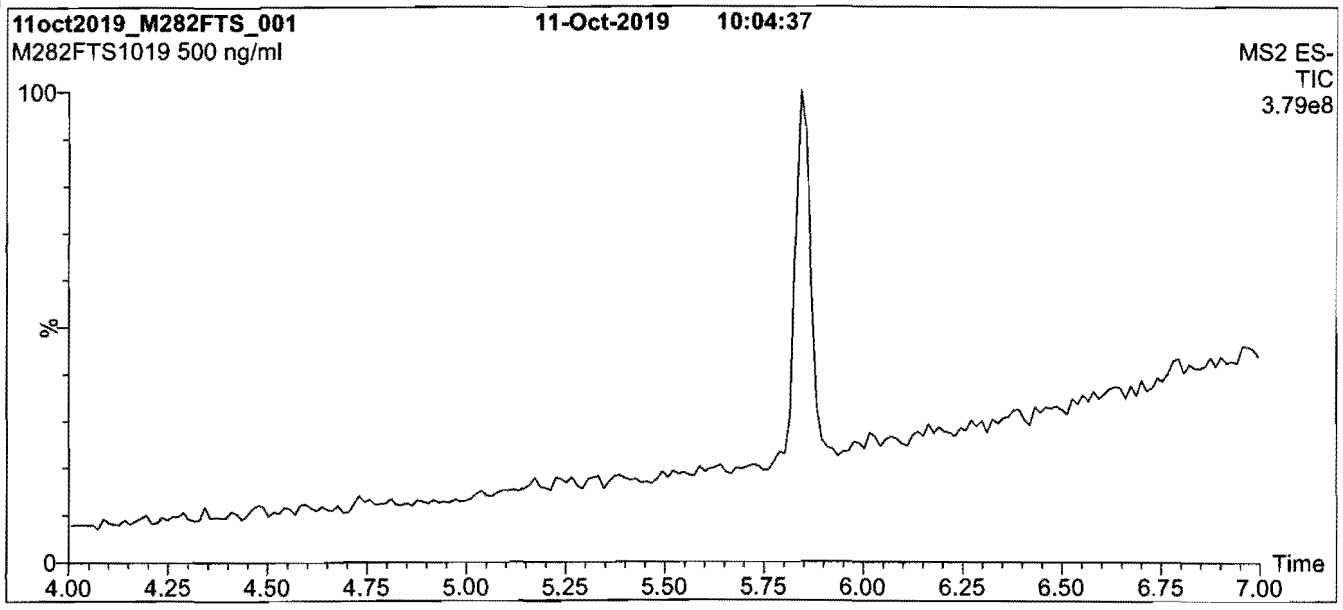
Mobile phase: Same as Figure 1

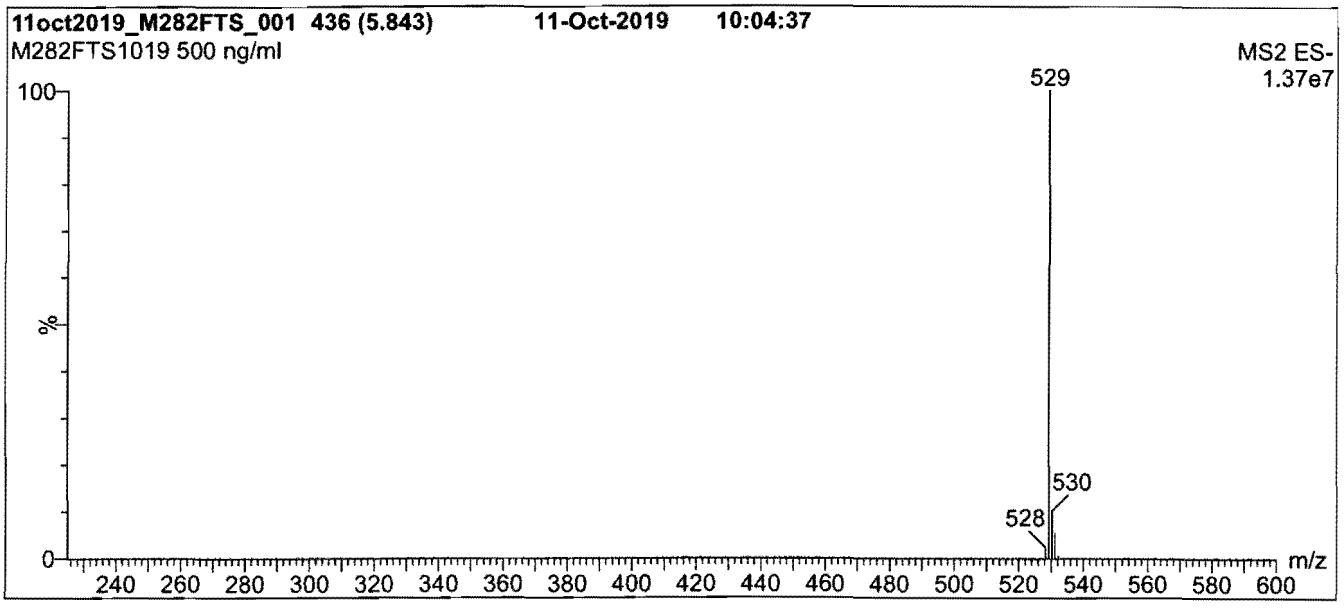
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.87e-3
Collision Energy (eV) = 26

Figure 1: **M2-8:2FTS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

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The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

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All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0603

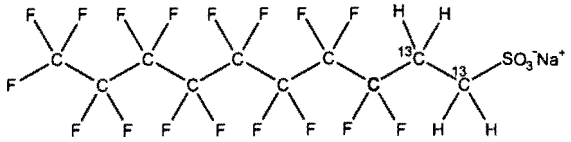
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M2-8:2FTS **LOT NUMBER:** M282FTS1019

COMPOUND: Sodium 1H,1H,2H,2H-perfluoro-[1,2-$^{13}C_2$]decane sulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_8H_4F_{17}SO_3Na$	**MOLECULAR WEIGHT:**	552.15
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt)	**SOLVENT(S):**	Methanol
	47.9 ± 2.4 µg/ml (M2-8:2FTS anion)		
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	10/11/2019		
EXPIRY DATE: (mm/dd/yyyy)	10/11/2024		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- The native 8:2FTS contains 4.22% of ^{34}S (due to natural isotopic abundance) therefore both native 8:2FTS and M2-8:2FTS will produce signals in the m/z 529 to m/z 509 channel during SRM analysis. We recommend using the m/z 529 to m/z 81 transition to monitor for M2-8:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

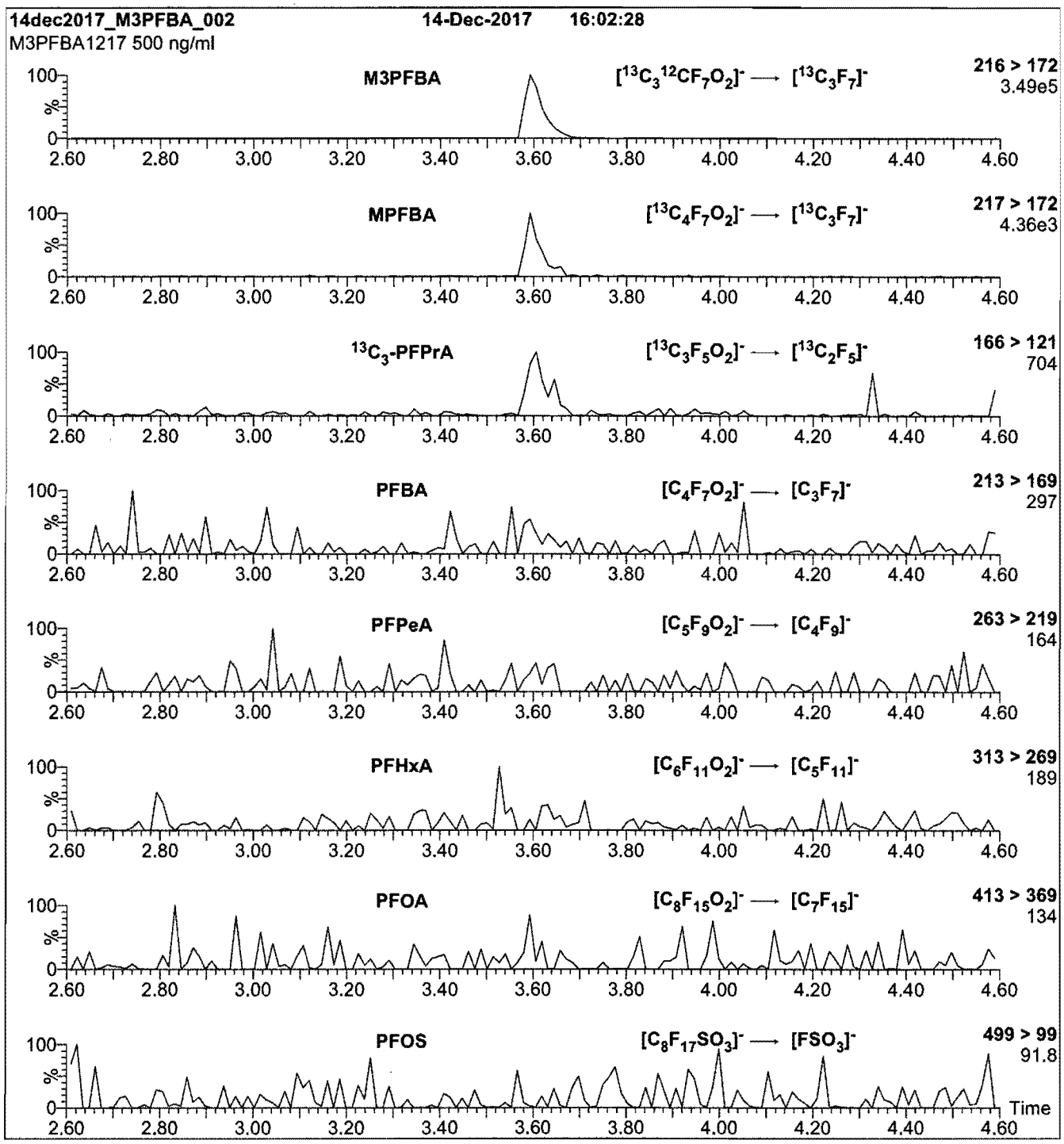
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 10/15/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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Figure 2: **M3PFBA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M3PFBA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

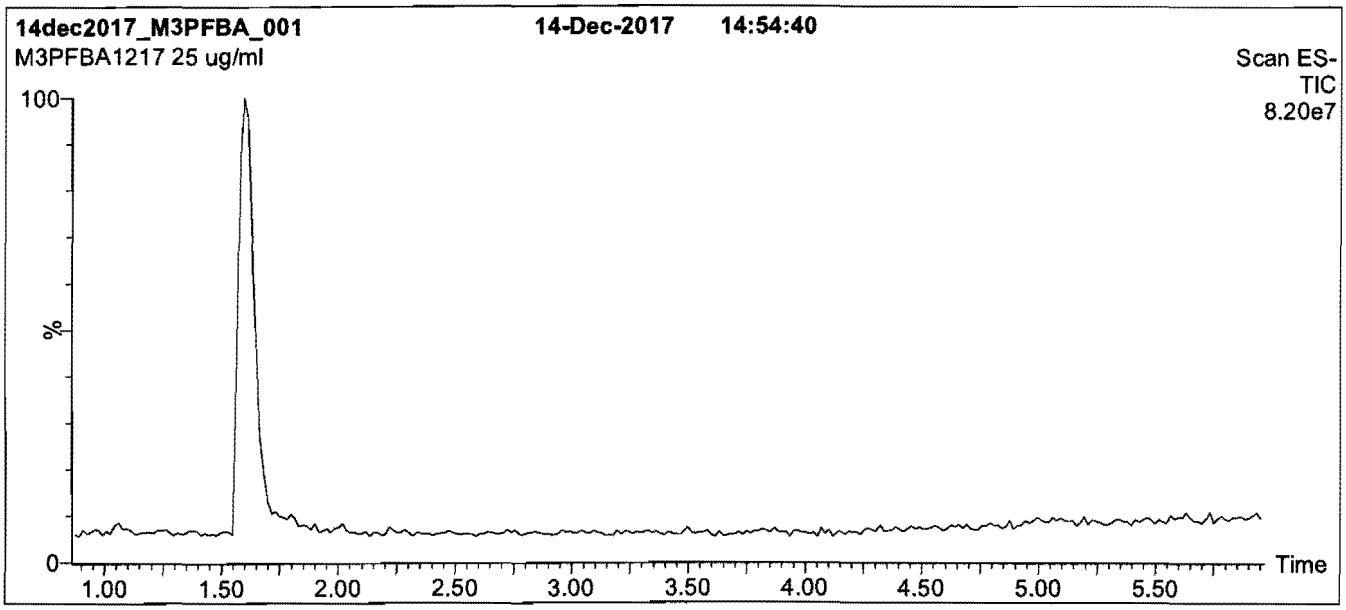
Flow: 300 µl/min

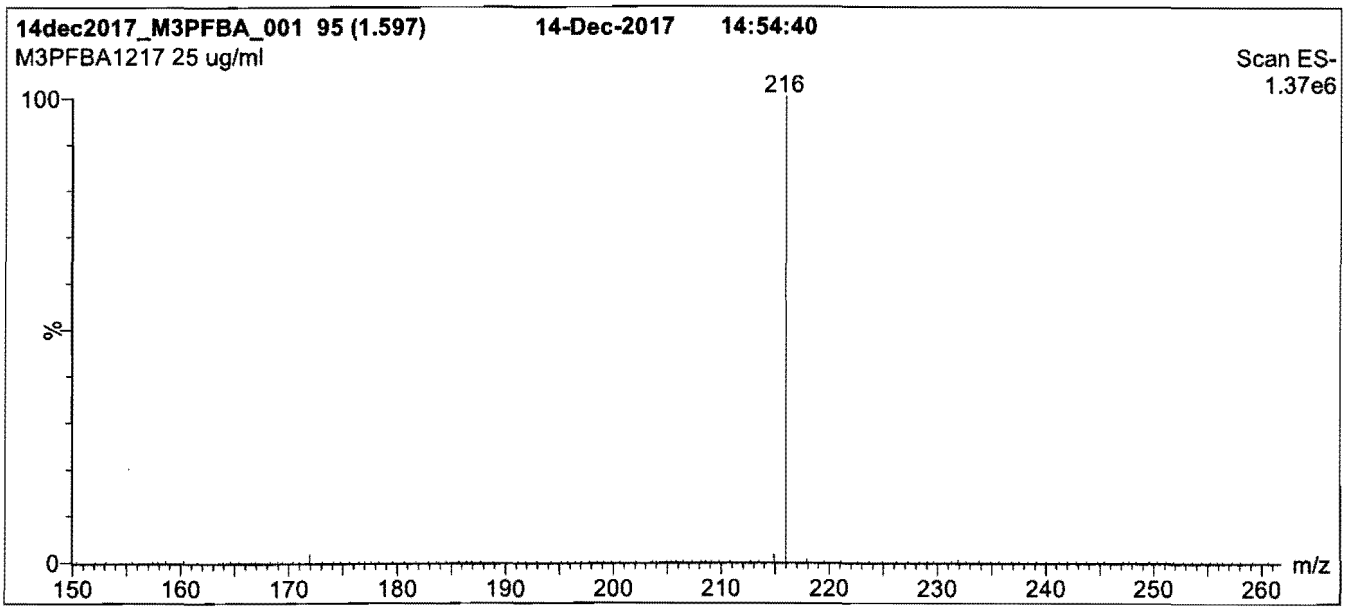
MS Parameters

Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 10

19L0604

Figure 1: **M3PFBA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 30% (80:20 MeOH:ACN) / 70% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 10.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

19L0604

INTENDED USE:

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HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using calibrated NIST and/or NRC traceable external weights. All volumetric glassware used is calibrated, of Class A tolerance, and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

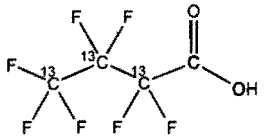
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0604

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	M3PFBA	**LOT NUMBER:**	M3PFBA1217
COMPOUND:	Perfluoro-n-[2,3,4-$^{13}C_3$]butanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_3{}^{12}CHF_7O_2$	**MOLECULAR WEIGHT:**	217.02
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C (2,3,4-$^{13}C_3$)
LAST TESTED: (mm/dd/yyyy)	12/14/2017		
EXPIRY DATE: (mm/dd/yyyy)	12/14/2022		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

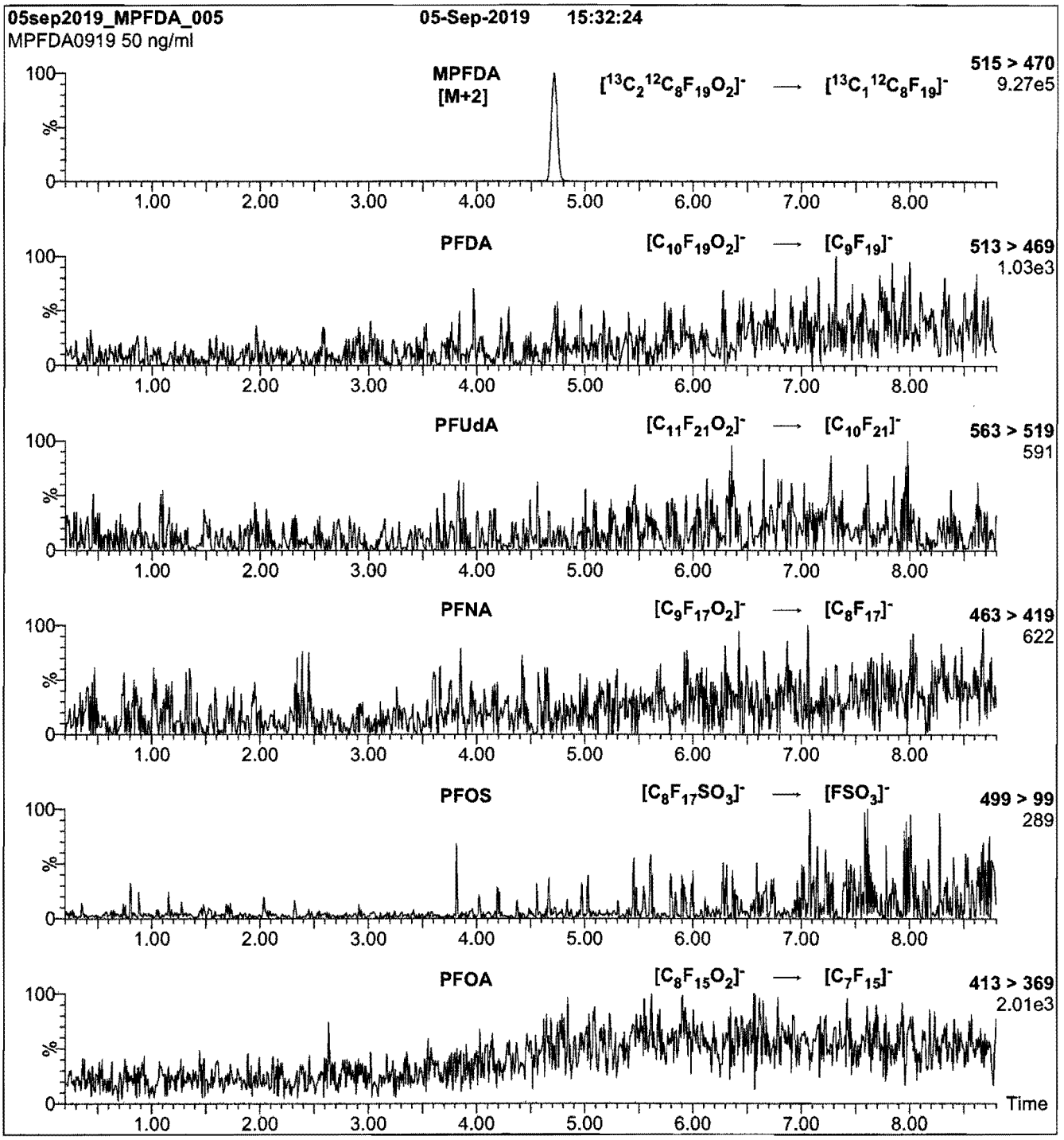
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.2% of perfluoro-n-[$^{13}C_3$]propanoic acid and also contains ~ 1.0% of perfluoro-n-[1,2,3,4-$^{13}C_4$]butanoic acid due to the naturally occurring isotopic abundance of ^{13}C in the unlabelled carbon atom.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/22/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **MPFDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFDA)

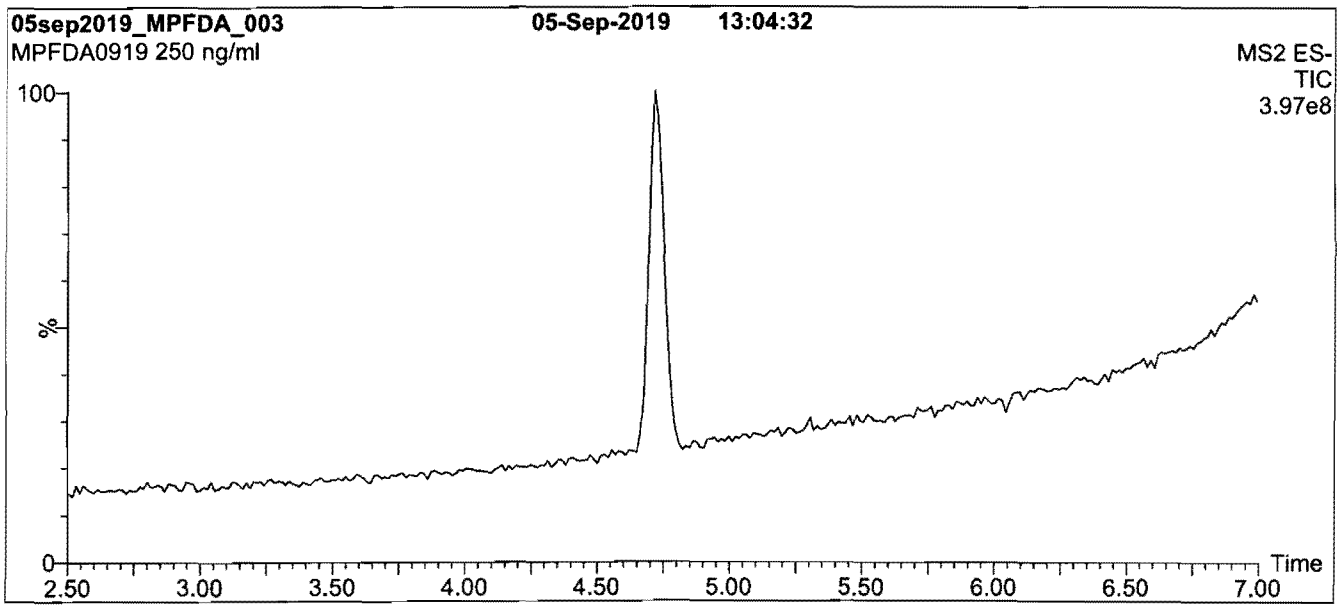
Mobile phase: Same as Figure 1

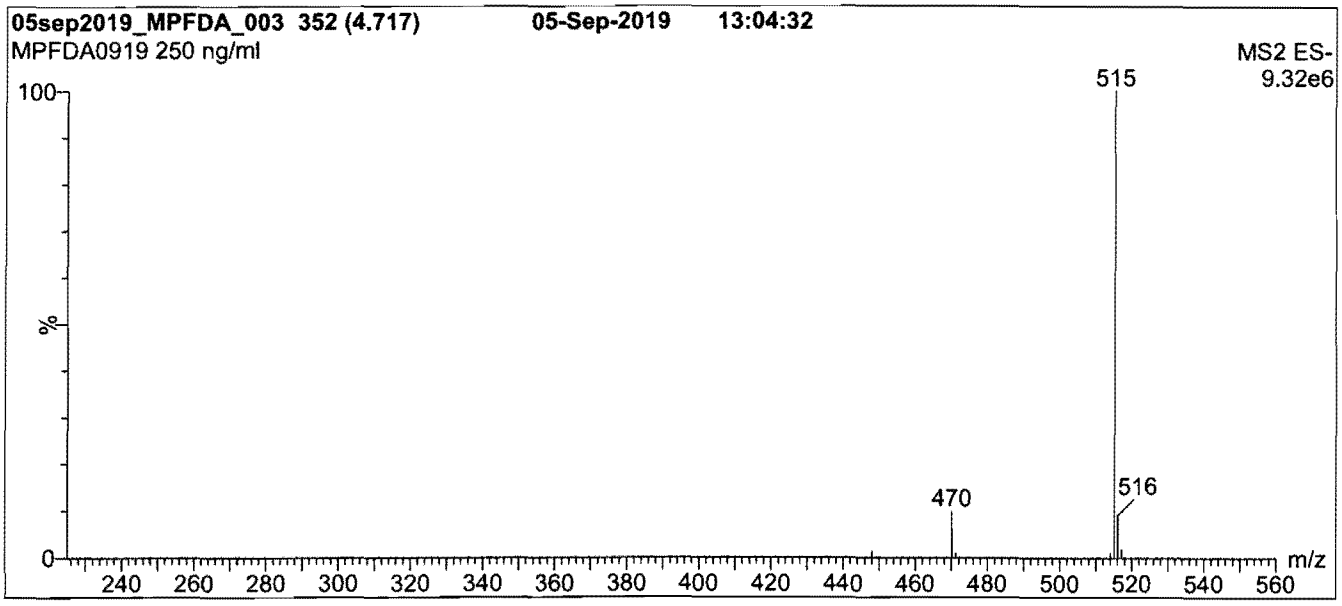
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.45e-3
Collision Energy (eV) = 10

Figure 1: **MPFDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0605

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

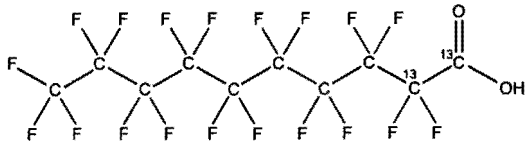
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0605

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MPFDA	**LOT NUMBER:**	MPFDA0919
COMPOUND:	Perfluoro-n-[1,2-$^{13}C_2$]decanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_8HF_{19}O_2$	**MOLECULAR WEIGHT:**	516.07
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	09/05/2019		
EXPIRY DATE: (mm/dd/yyyy)	09/05/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

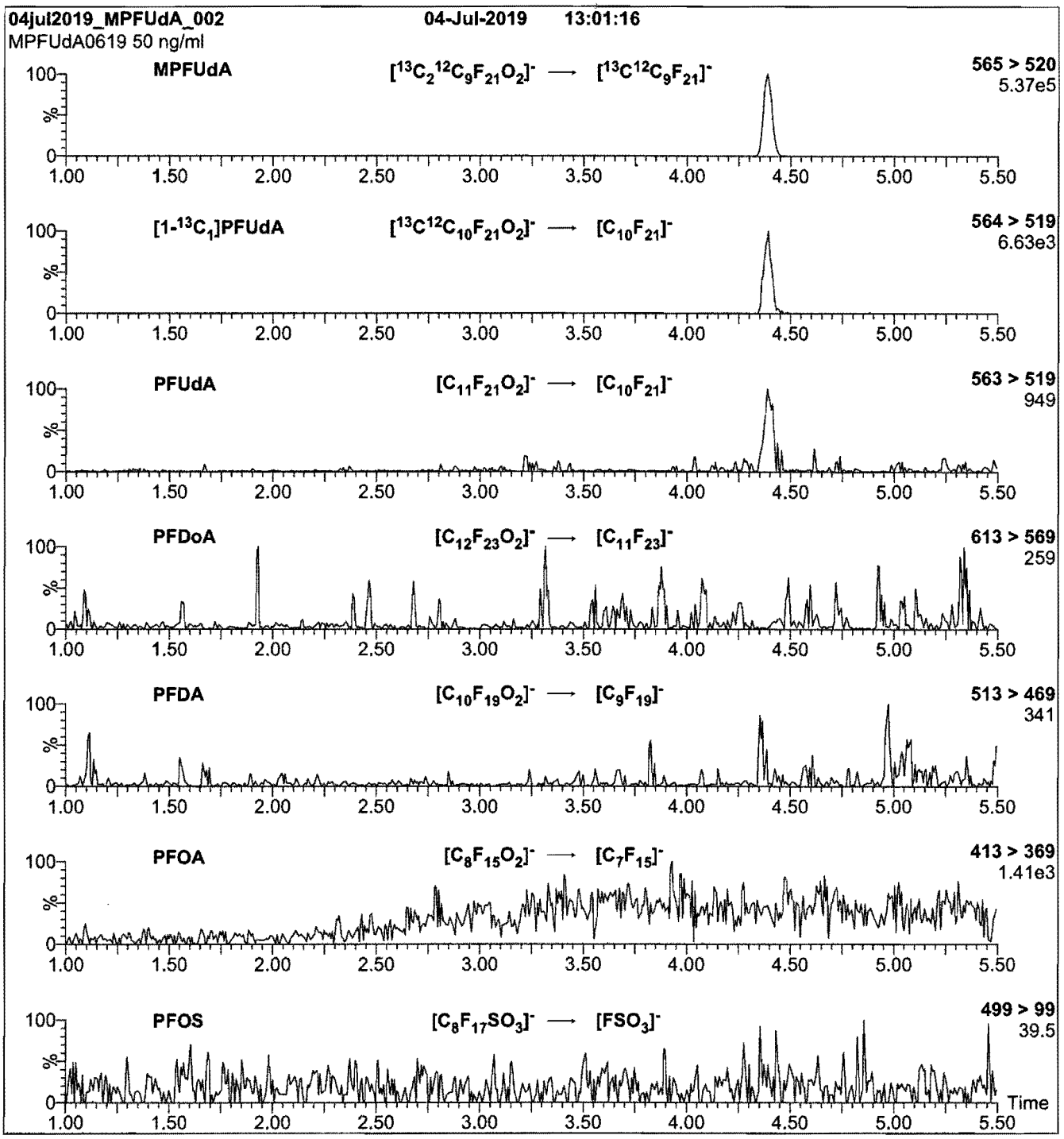
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 09/09/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L06006

Figure 2: **MPFUdA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFUdA)

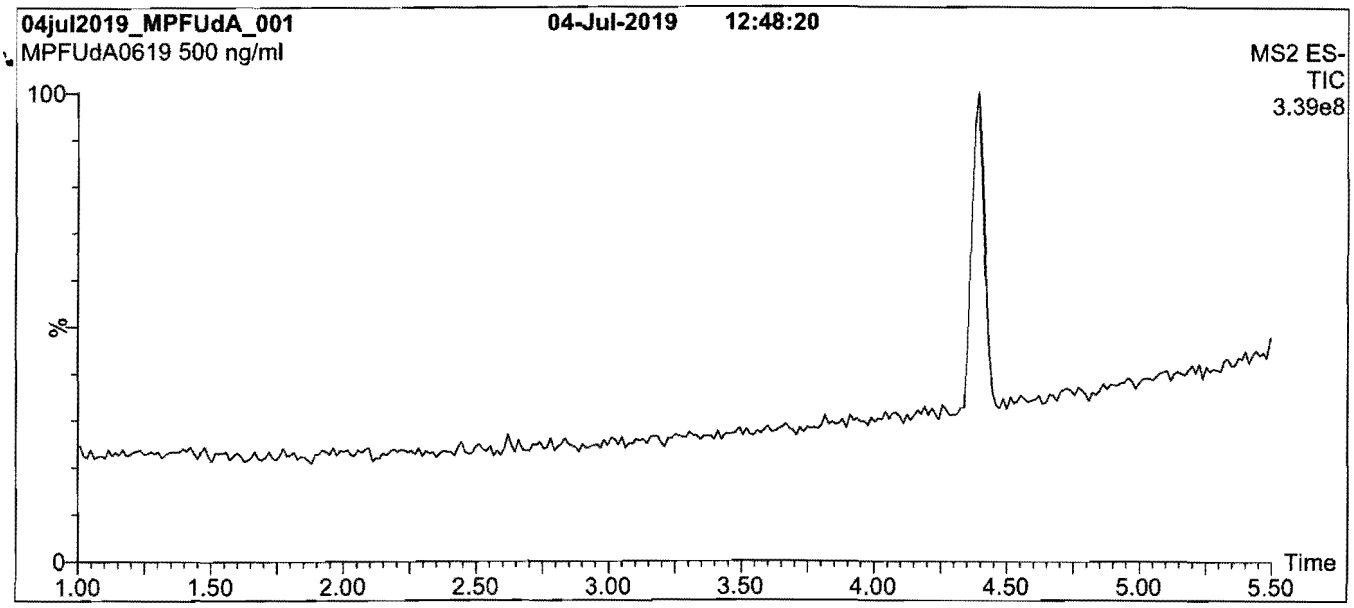
Mobile phase: Same as Figure 1

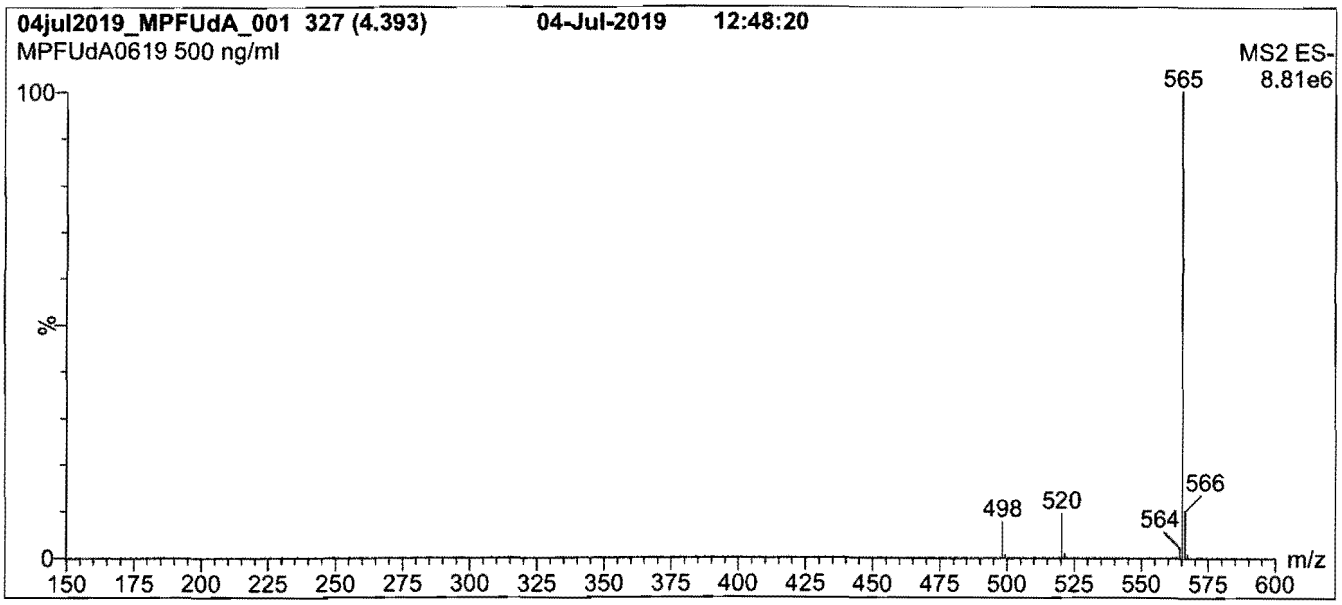
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 12

Figure 1: **MPFUdA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

INTENDED USE:

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HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

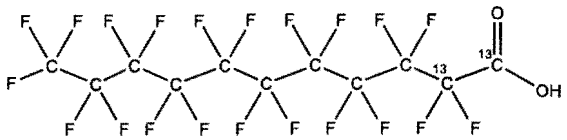
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0606

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MPFUdA	**LOT NUMBER:**	MPFUdA0619
COMPOUND:	Perfluoro-n-[1,2-$^{13}C_2$]undecanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_9HF_{21}O_2$	**MOLECULAR WEIGHT:**	566.08
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	07/04/2019		
EXPIRY DATE: (mm/dd/yyyy)	07/04/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

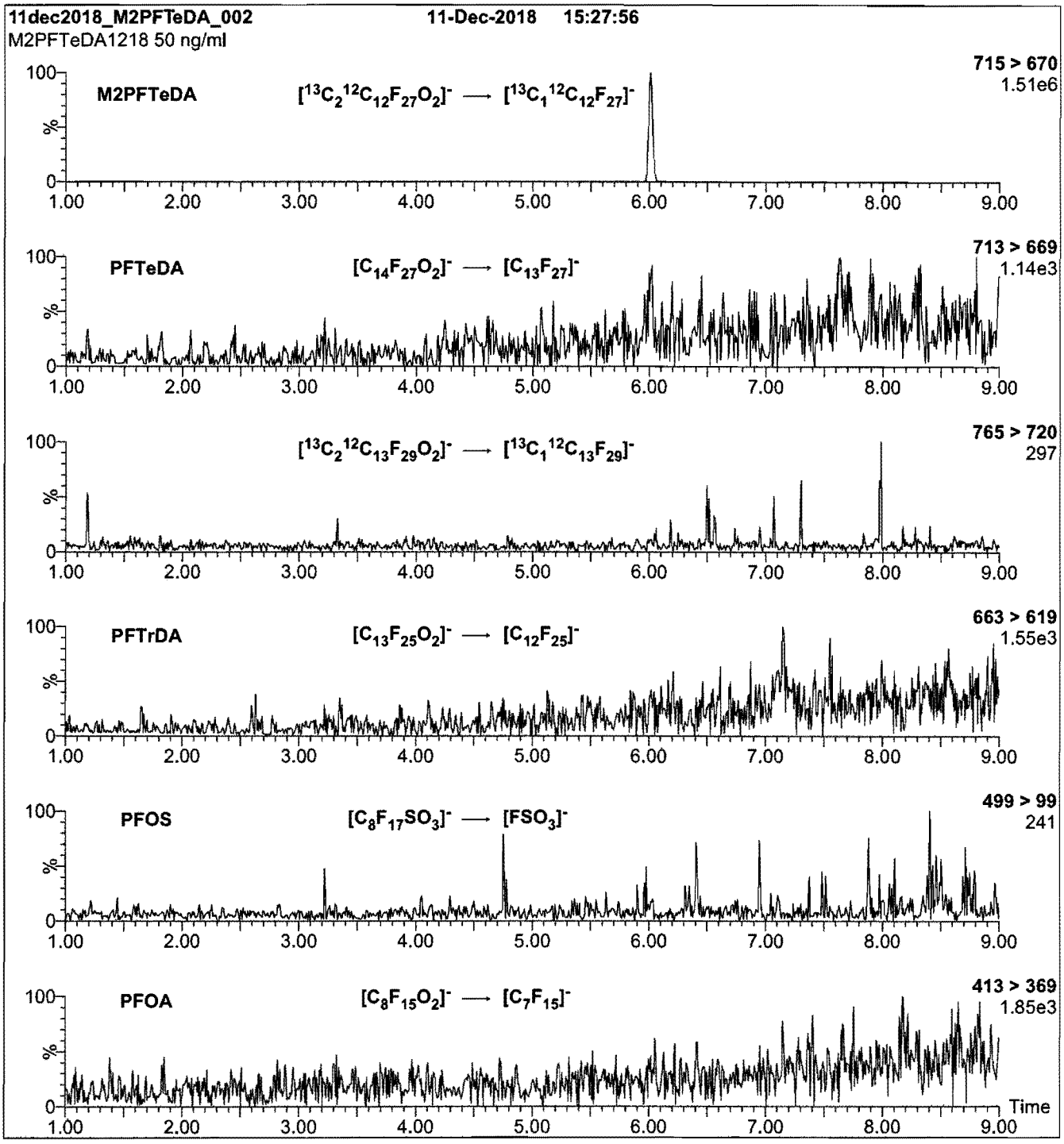
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Presence of 1-$^{13}C_1$-PFUdA (~1%; see Figure 2), 2-$^{13}C_1$-PFUdA (~1%), and PFUdA (~0.2%; see Figure 2) are due to the isotopic purity of the ^{13}C-precursor.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/05/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **M2PFTeDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M2PFTeDA)

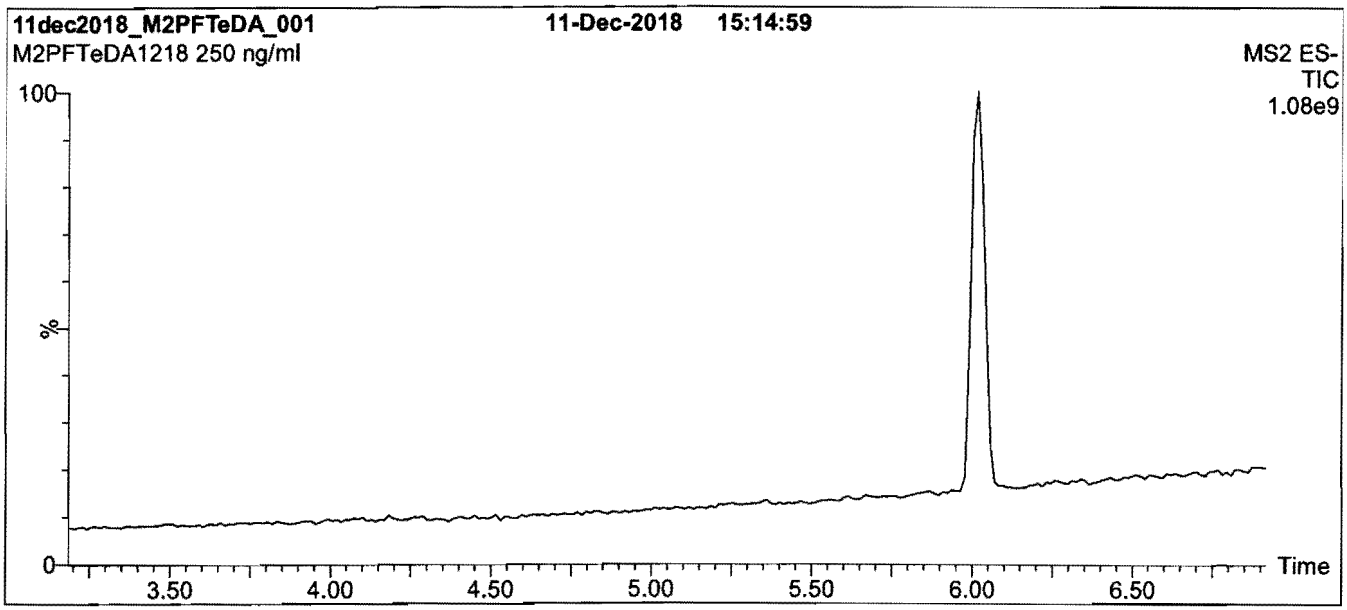
Mobile phase: Same as Figure 1

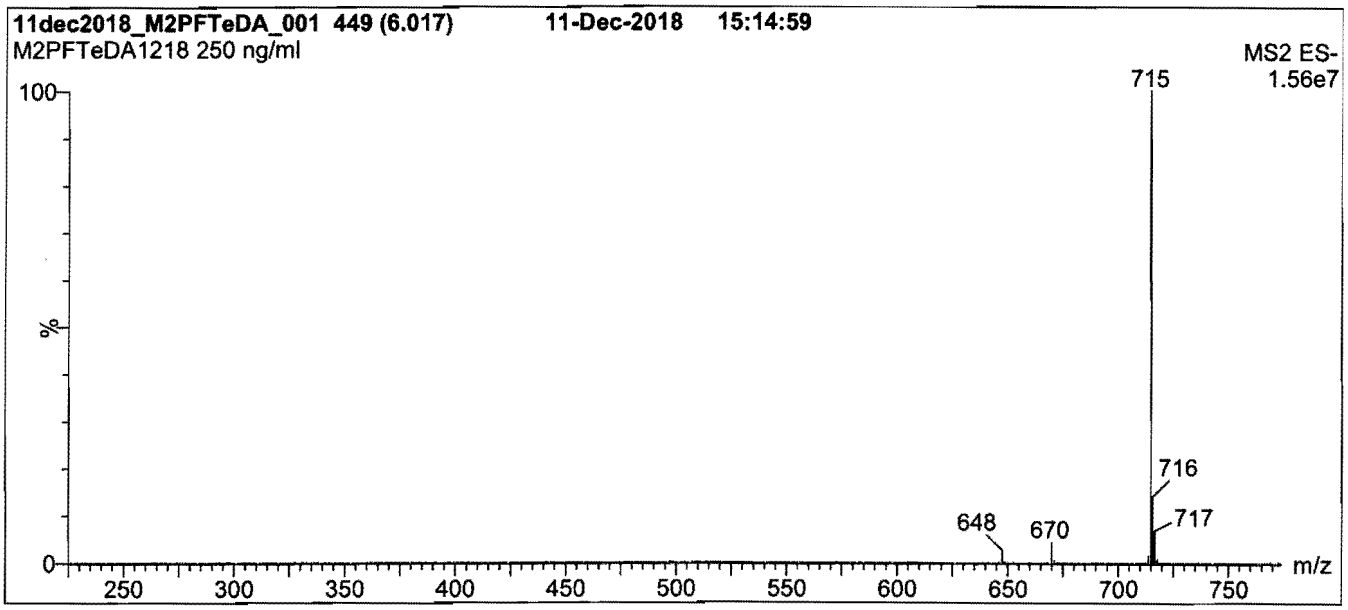
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.16e-3
Collision Energy (eV) = 14

Figure 1: **M2PFTeDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

INTENDED USE:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

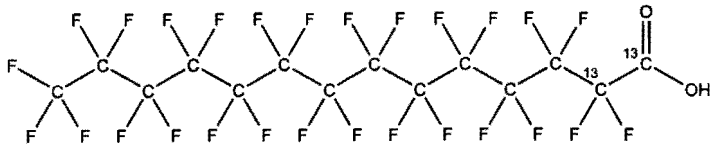
19L0607

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M2PFTeDA
LOT NUMBER: M2PFTeDA1218
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]tetradecanoic acid

STRUCTURE:
CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_{12}HF_{27}O_2$	**MOLECULAR WEIGHT:**	716.10
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	12/11/2018		
EXPIRY DATE: (mm/dd/yyyy)	12/11/2023		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

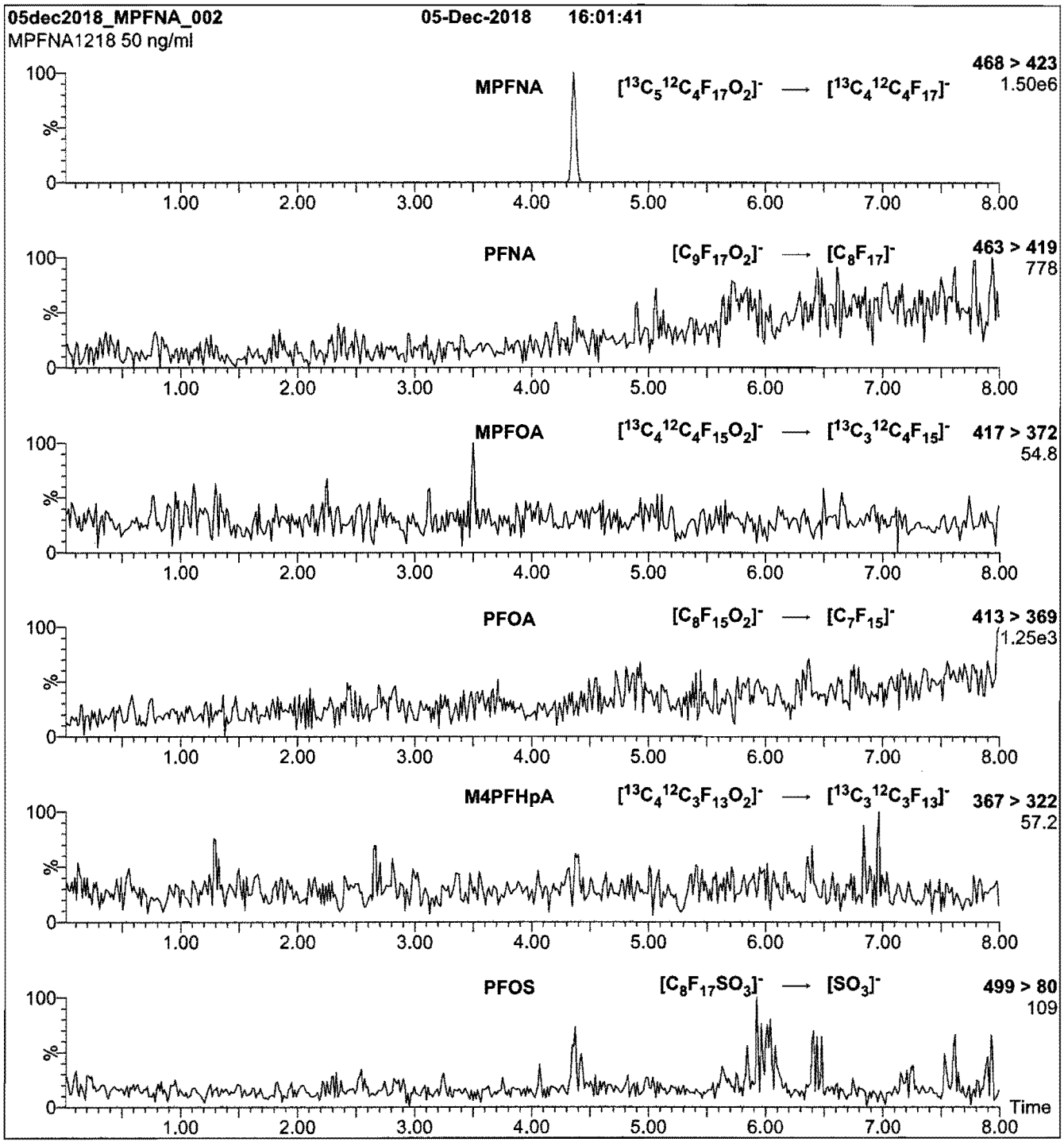
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/20/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **MPFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFNA)

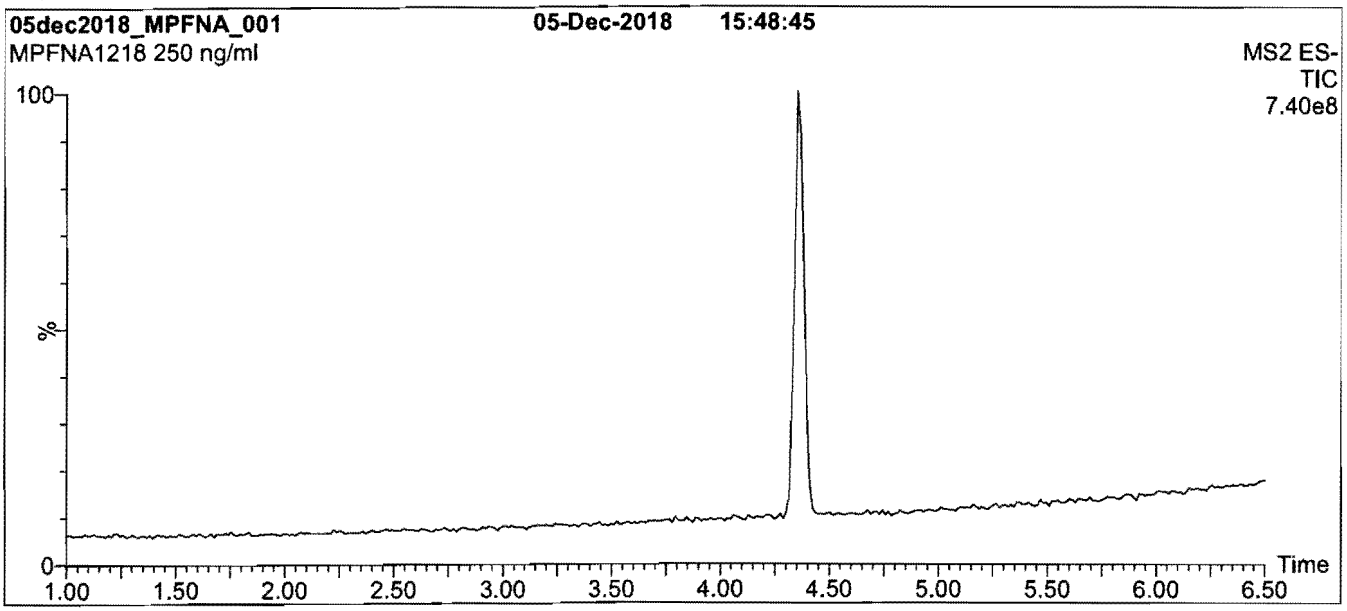
Mobile phase: Same as Figure 1

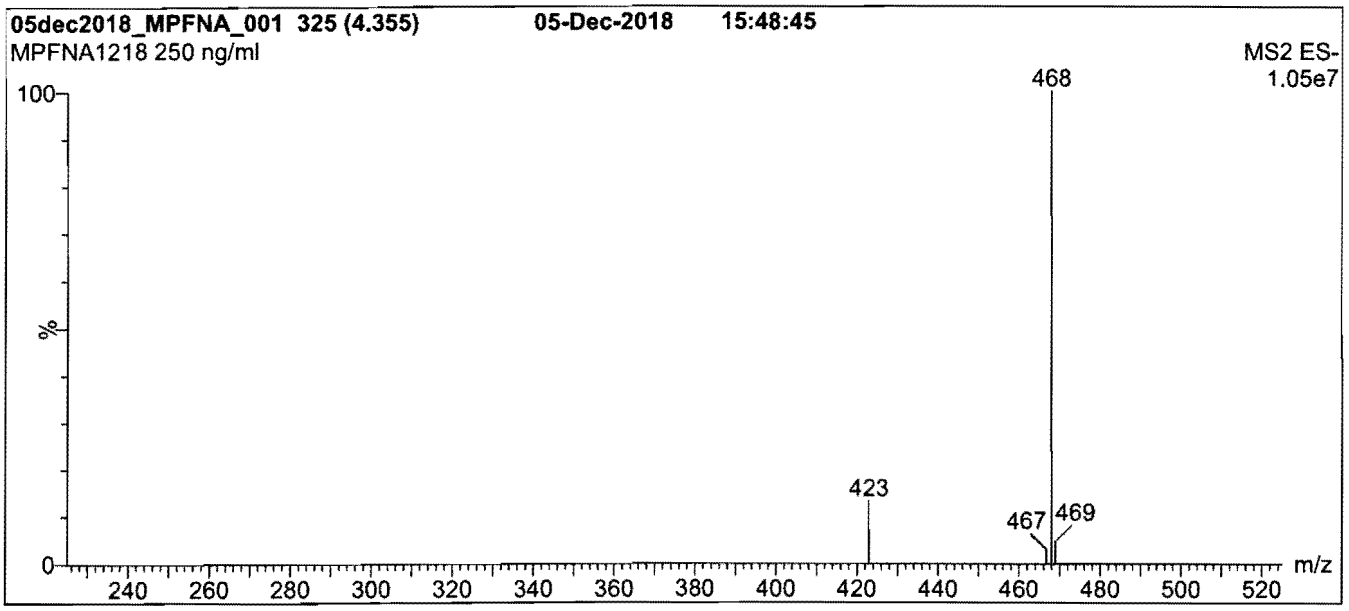
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.88e-3
Collision Energy (eV) = 10

Figure 1: **MPFNA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

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UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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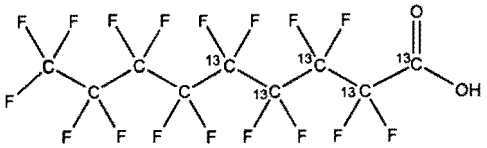
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFNA
COMPOUND: Perfluoro-n-[1,2,3,4,5-$^{13}C_5$]nonanoic acid

LOT NUMBER: MPFNA1218

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_5{}^{12}C_4HF_{17}O_2$	**MOLECULAR WEIGHT:**	469.04
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2,3,4,5$-$^{13}C_5$)
LAST TESTED: (mm/dd/yyyy)	12/05/2018		
EXPIRY DATE: (mm/dd/yyyy)	12/05/2023		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/10/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

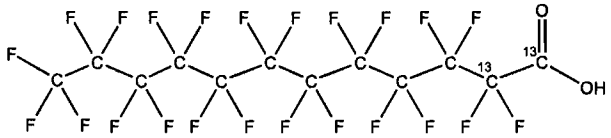
19L0609

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFDoA
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]dodecanoic acid
LOT NUMBER: MPFDoA1218

STRUCTURE:
CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_{10}HF_{23}O_2$	**MOLECULAR WEIGHT:**	616.08
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	12/11/2018		
EXPIRY DATE: (mm/dd/yyyy)	12/11/2023		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/18/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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INTENDED USE:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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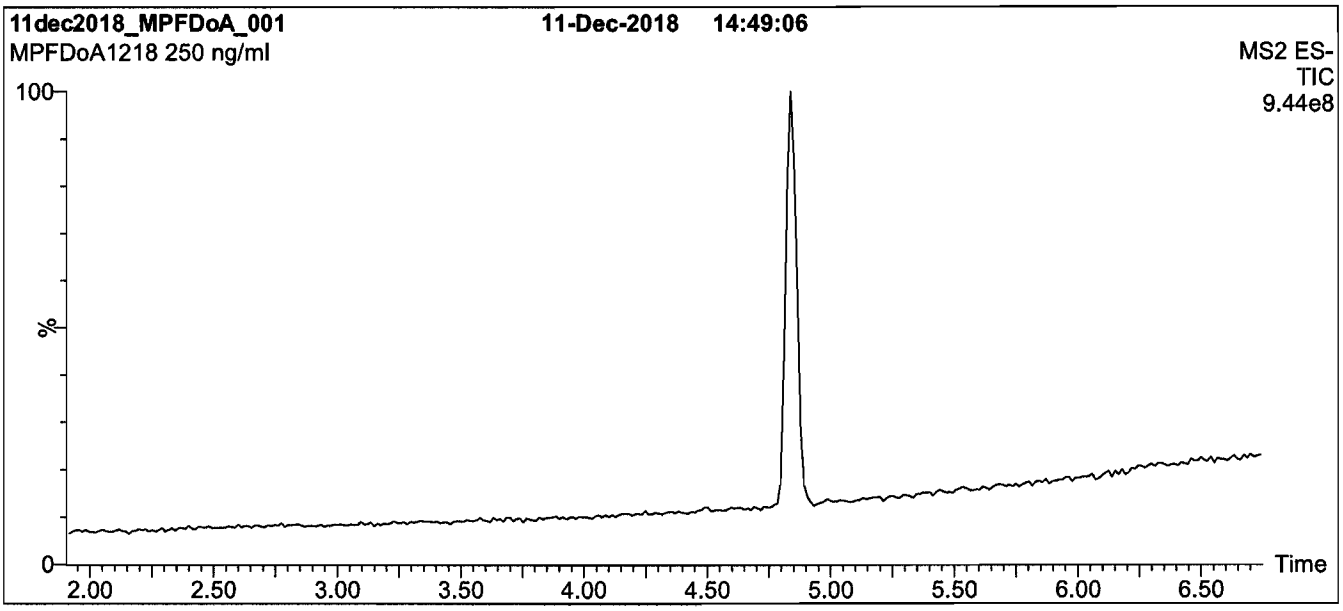
CALA Testing Accreditation No. A1226

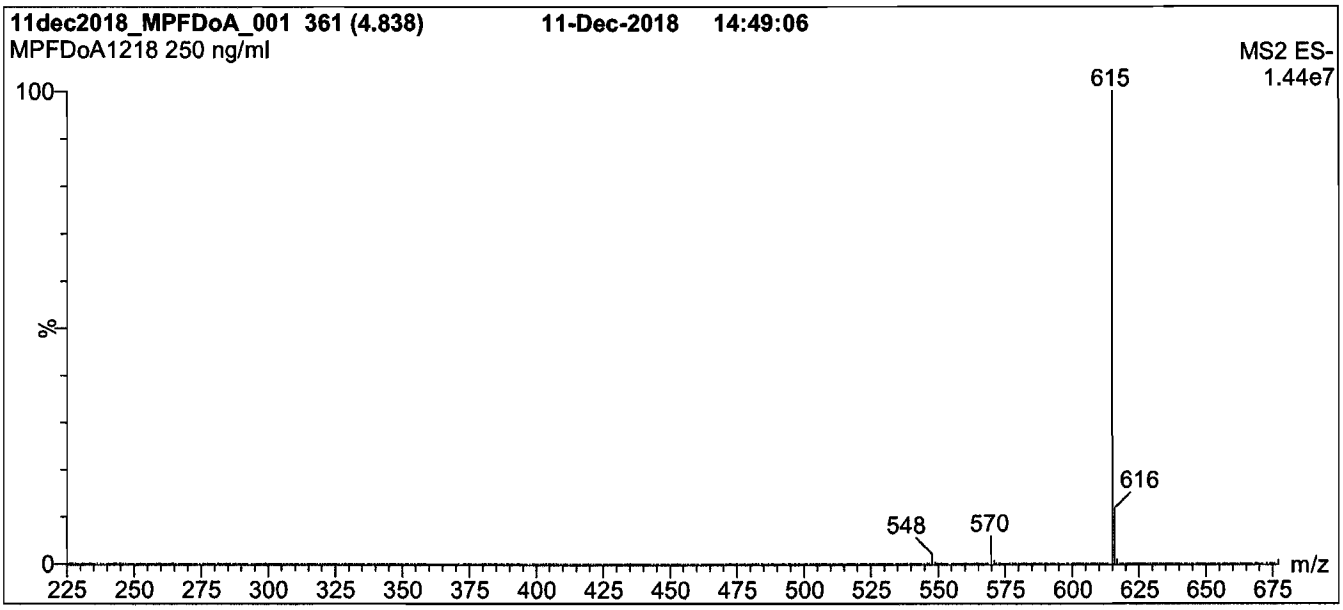
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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19L0609

Figure 1: **MPFDoA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 3 min
before returning to initial conditions in 0.75 min.
Time: 12 min

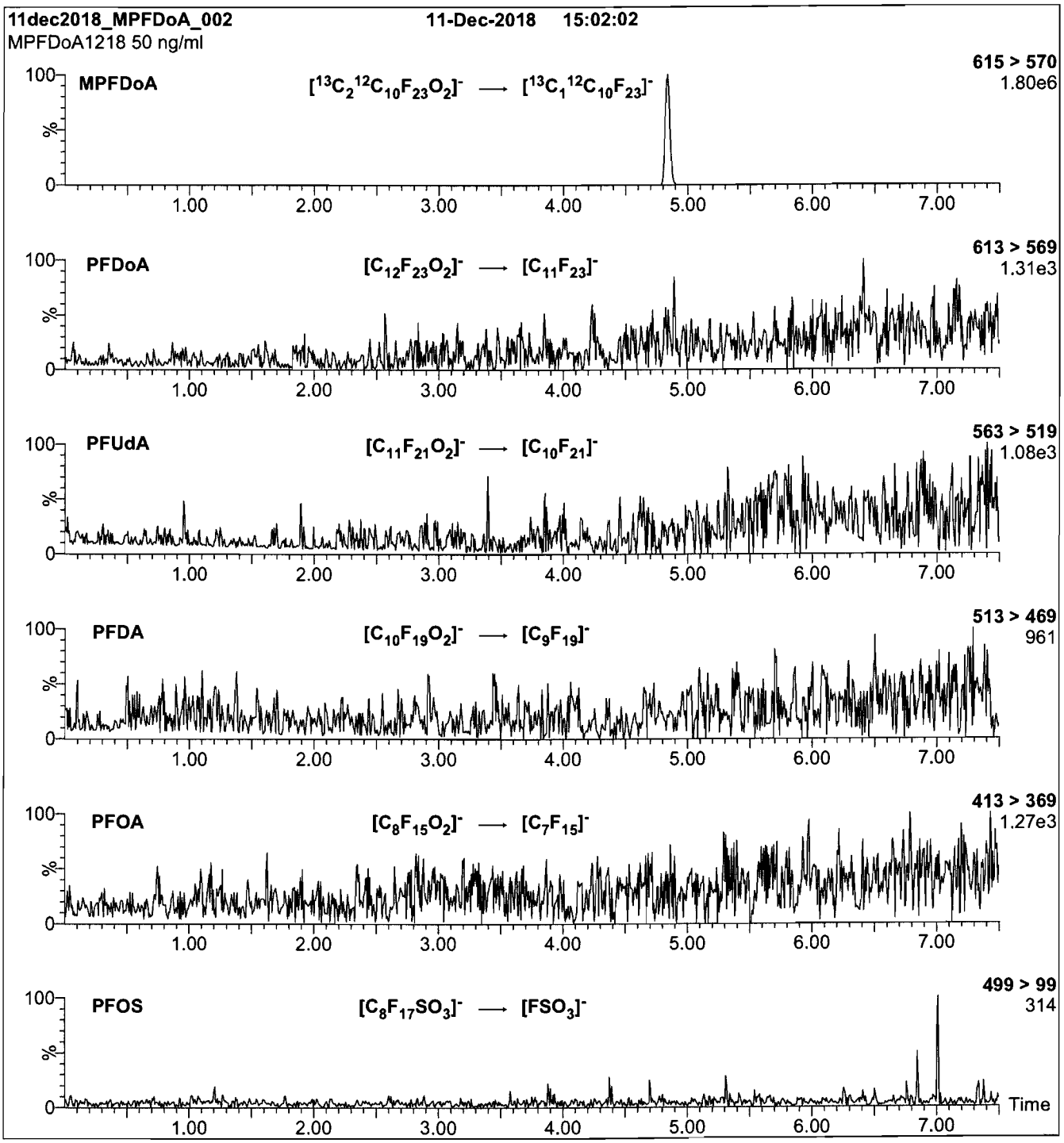
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

Figure 2: **MPFDoA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFDoA)

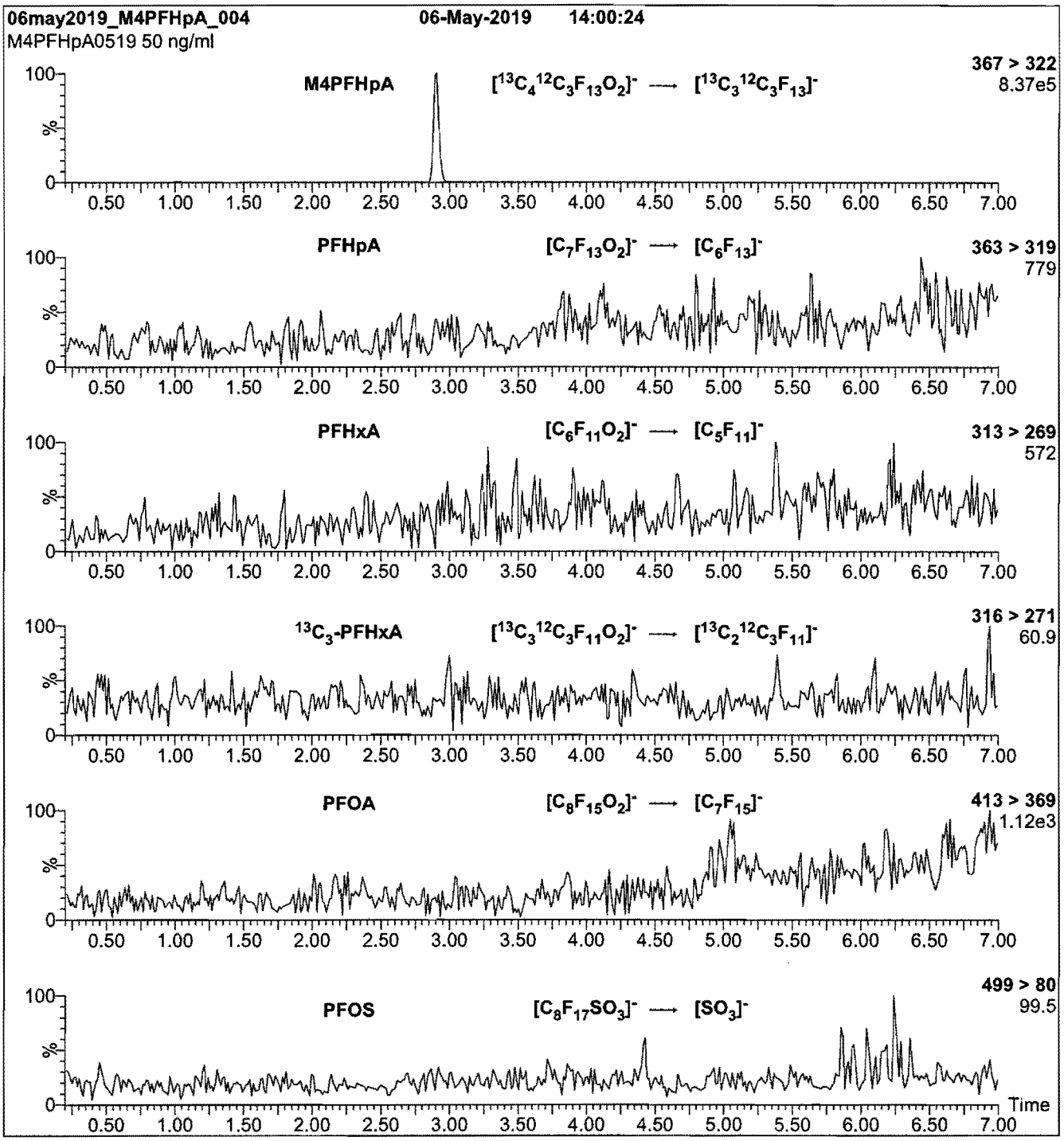
Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.16e-3
Collision Energy (eV) = 12

Figure 2: **M4PFHpA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M4PFHpA)

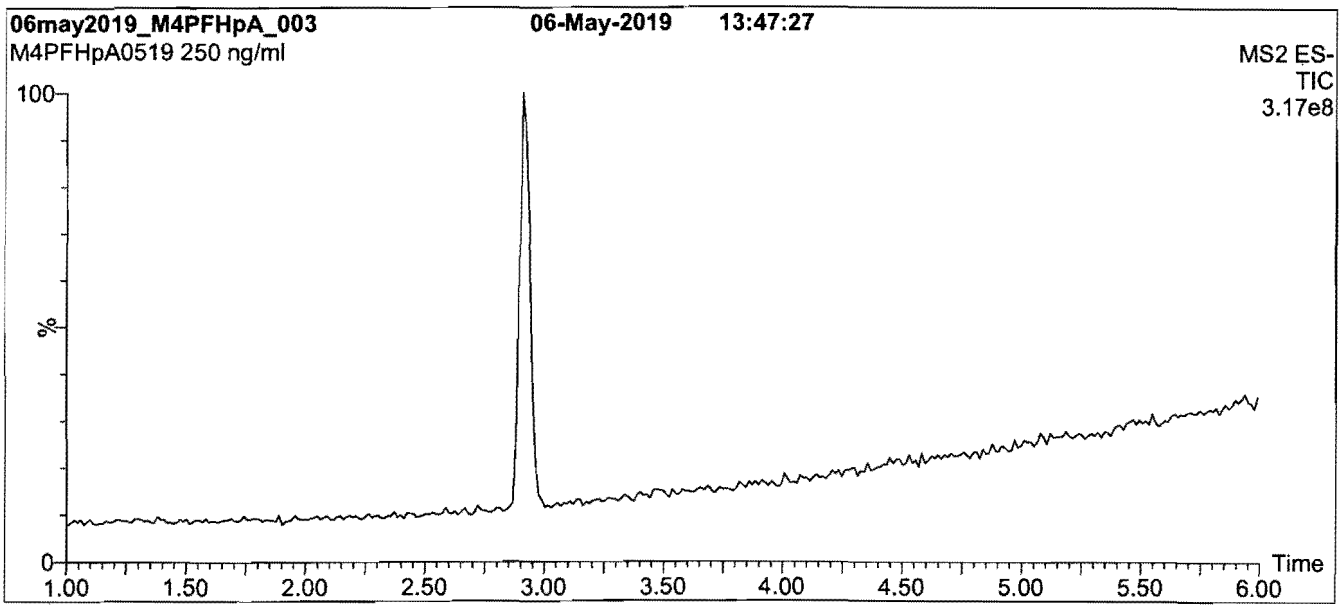
Mobile phase: Same as Figure 1

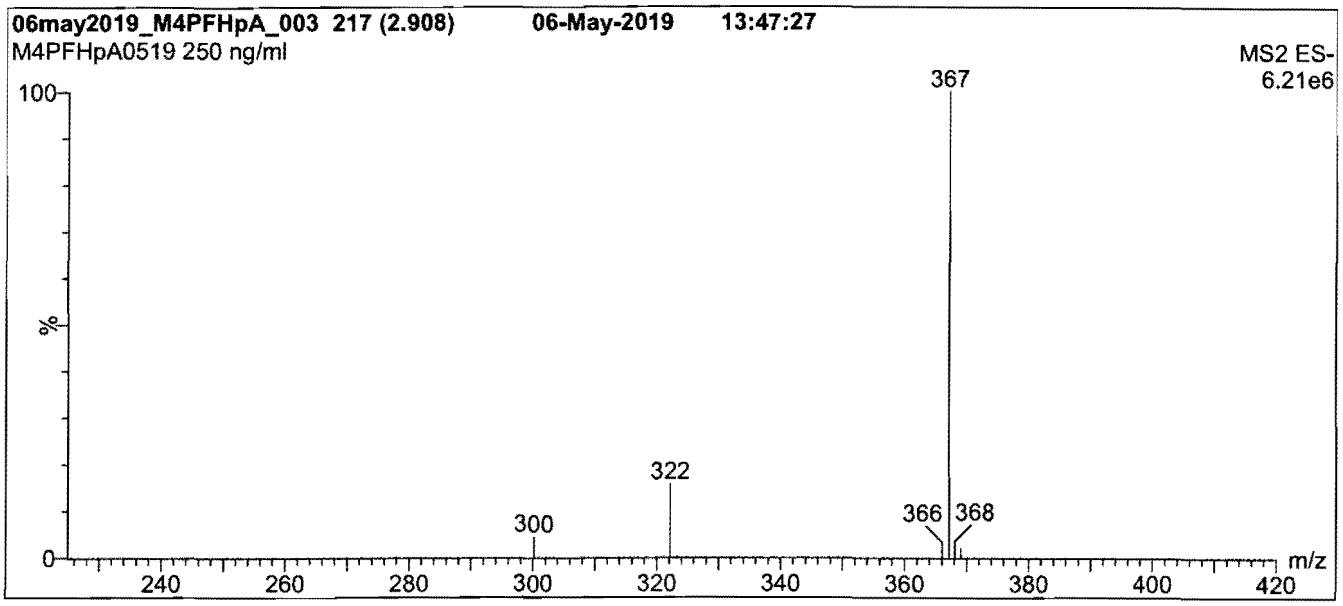
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.87e-3
Collision Energy (eV) = 8

Figure 1: **M4PFHpA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 11 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0610

INTENDED USE:

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HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

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where x is expressed as a relative standard uncertainty of the individual parameter.

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

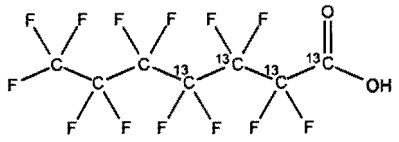
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19L0610

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M4PFHpA	**LOT NUMBER:**	M4PFHpA0519
COMPOUND:	Perfluoro-n-[1,2,3,4-$^{13}C_4$]heptanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_4{}^{12}C_3HF_{13}O_2$	**MOLECULAR WEIGHT:**	368.03
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2,3,4$-$^{13}C_4$)
LAST TESTED: (mm/dd/yyyy)	05/06/2019		
EXPIRY DATE: (mm/dd/yyyy)	05/06/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

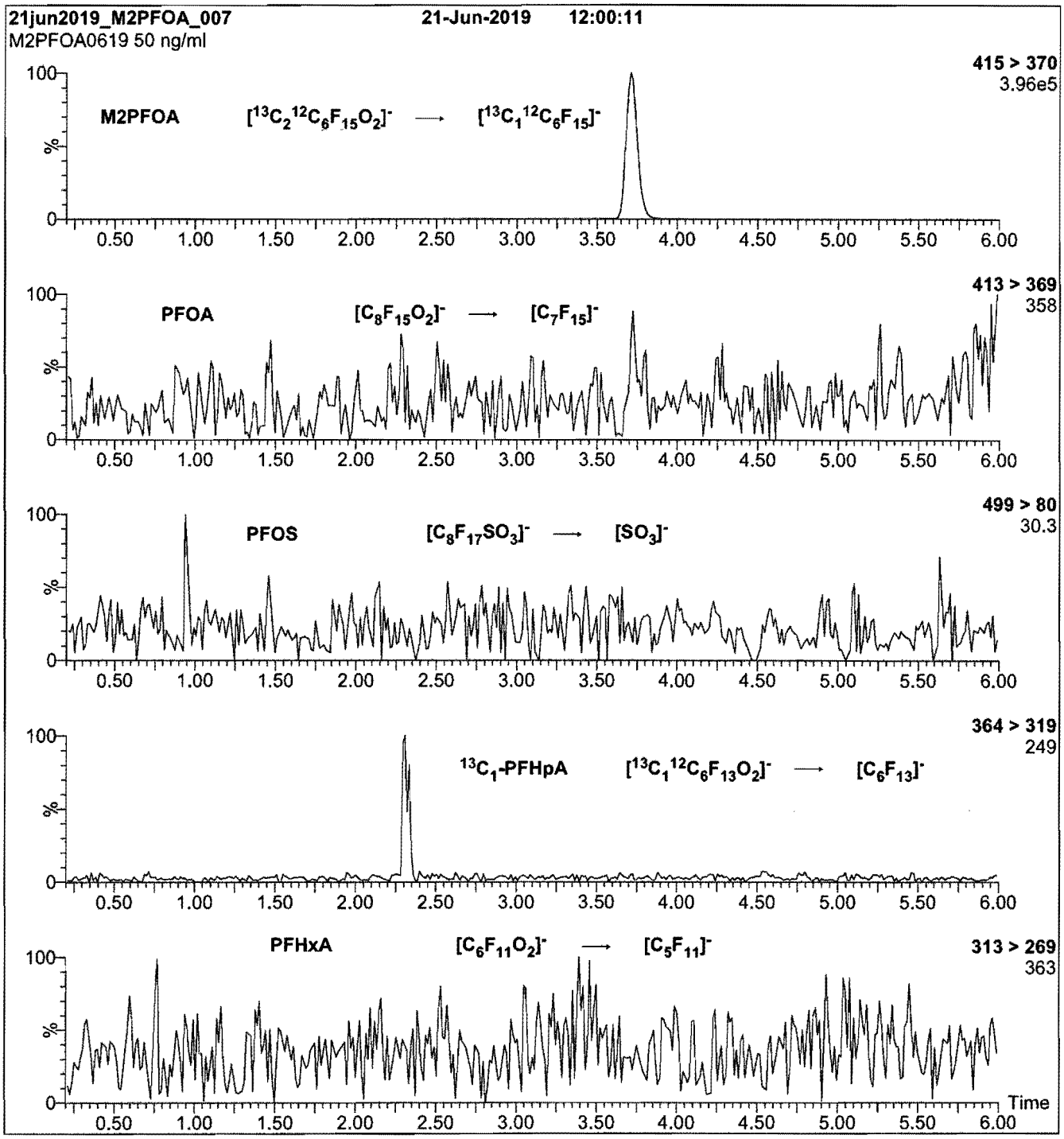
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/17/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0611

Figure 2: **M2PFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M2PFOA)

Mobile phase: Same as Figure 1

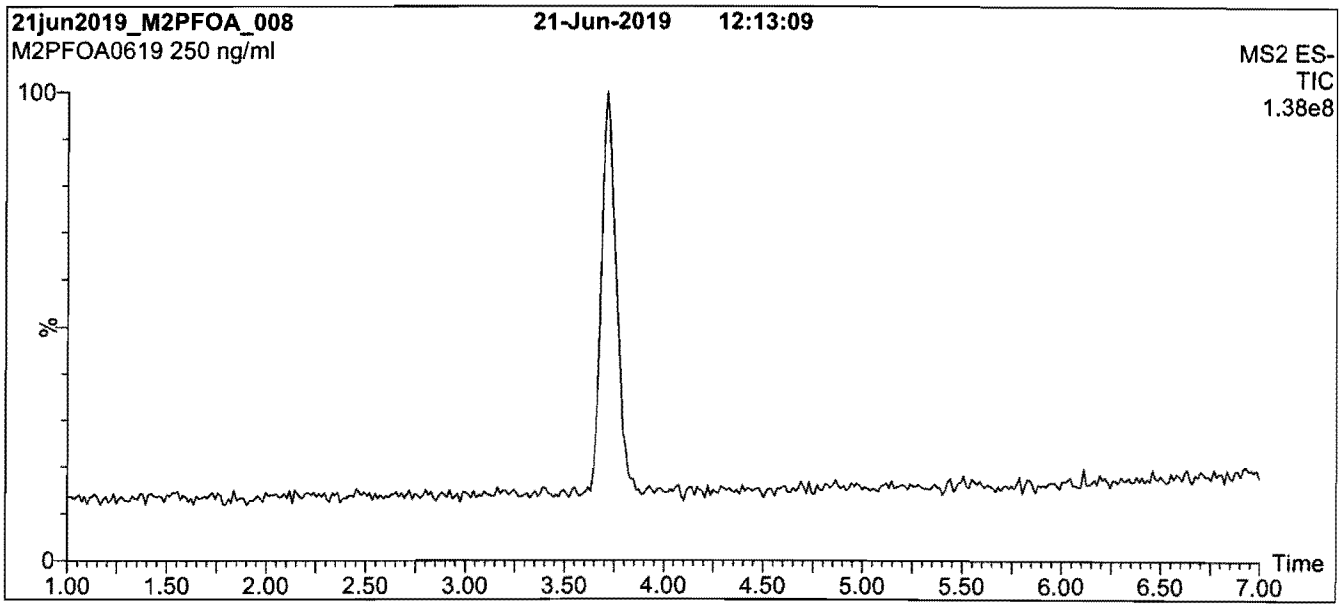
Flow: 300 µl/min

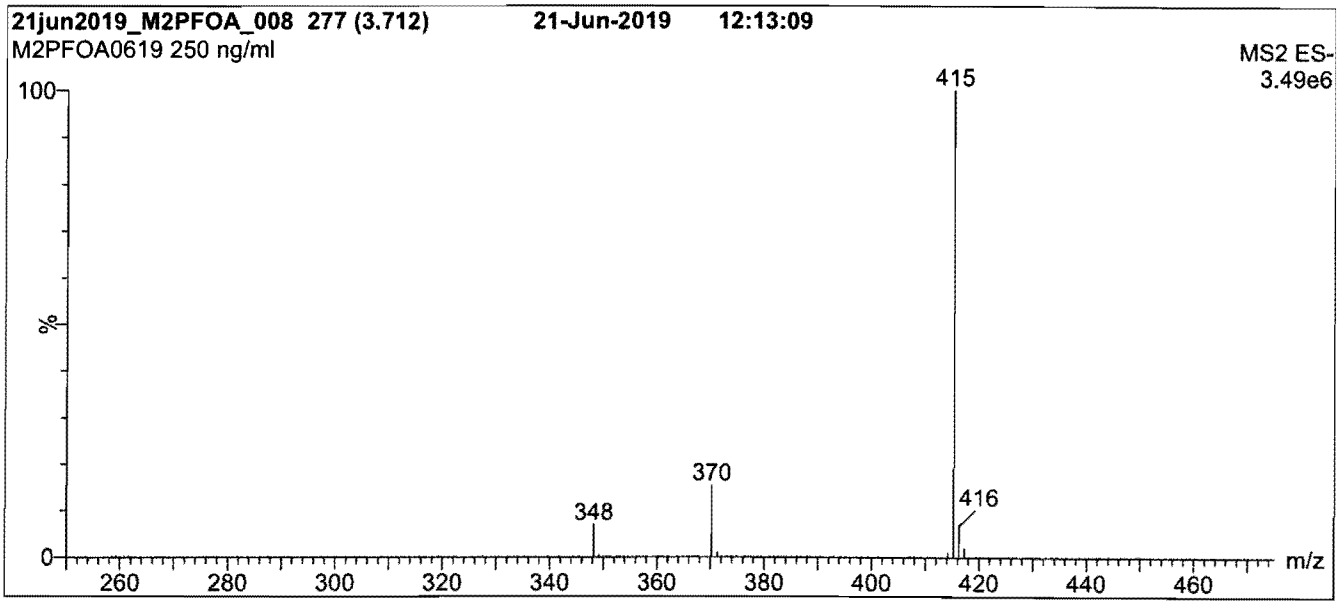
MS Parameters

Collision Gas (mbar) = 2.88e-3
Collision Energy (eV) = 8

19L0611

Figure 1: **M2PFOA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 80% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

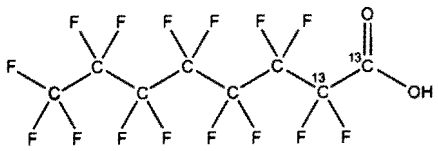
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L 0611

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M2PFOA	**LOT NUMBER:**	M2PFOA0619
COMPOUND:	Perfluoro-n-[1,2-$^{13}C_2$]octanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_6HF_{15}O_2$	**MOLECULAR WEIGHT:**	416.05
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	06/21/2019		
EXPIRY DATE: (mm/dd/yyyy)	06/21/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of perfluoro-n-[$^{13}C_1$]heptanoic acid ($^{13}C_1$-PFHpA).

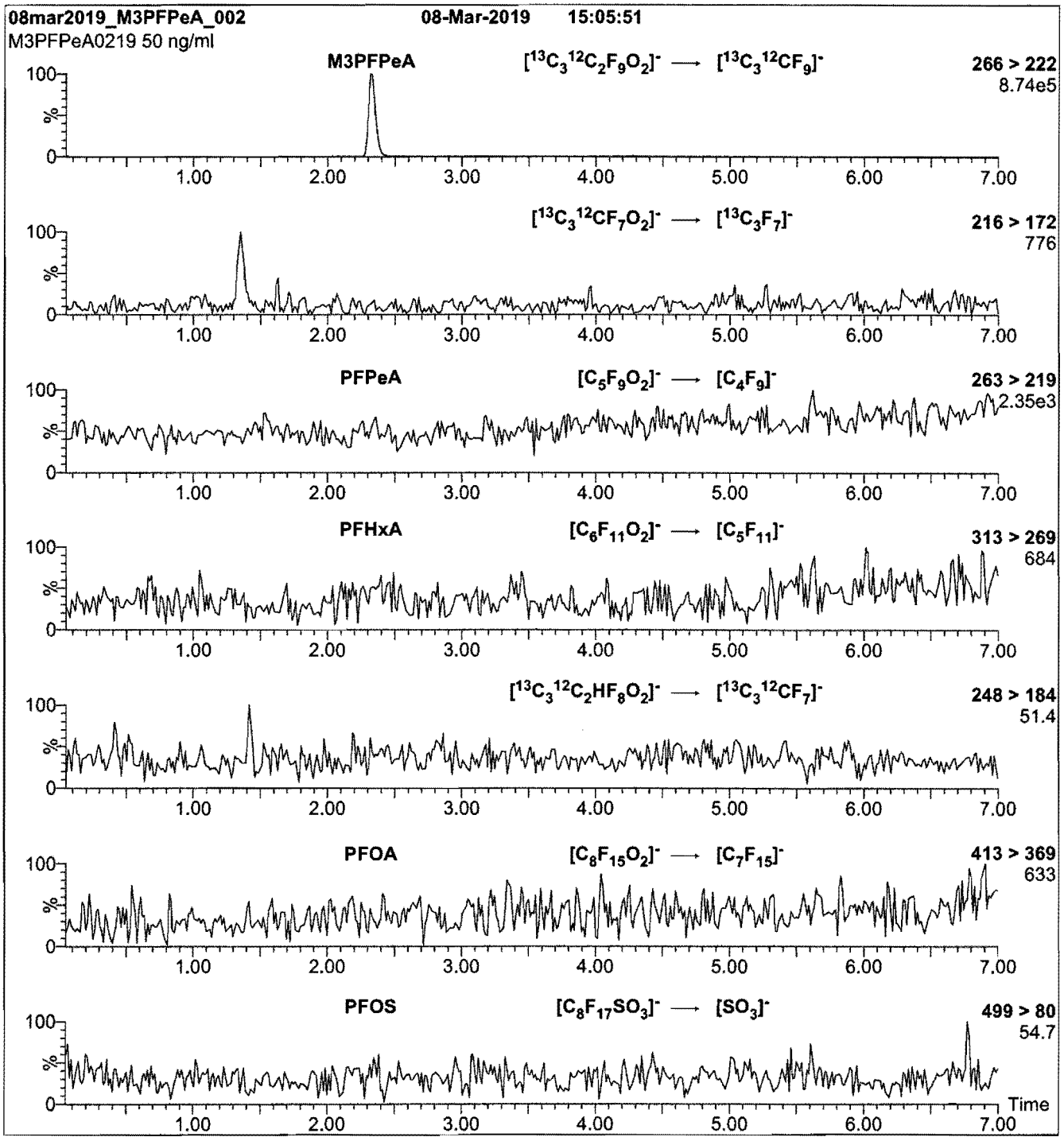
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 06/21/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0612

Figure 2: **M3PFPeA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M3PFPeA)

Mobile phase: Same as Figure 1

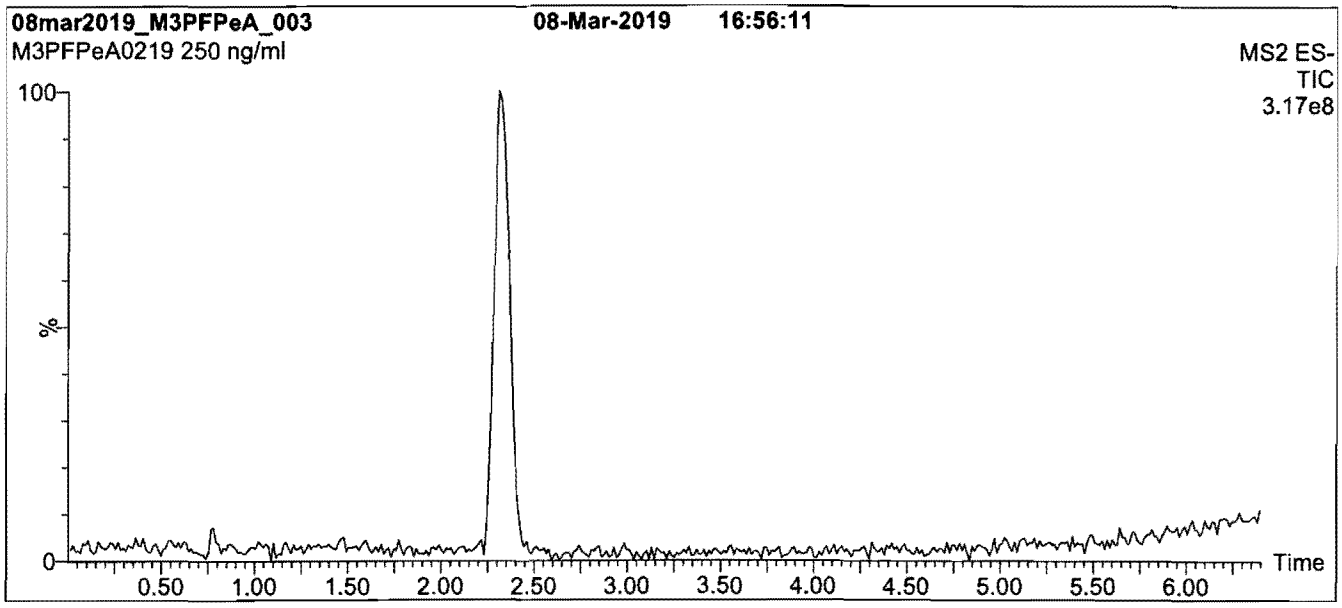
Flow: 300 µl/min

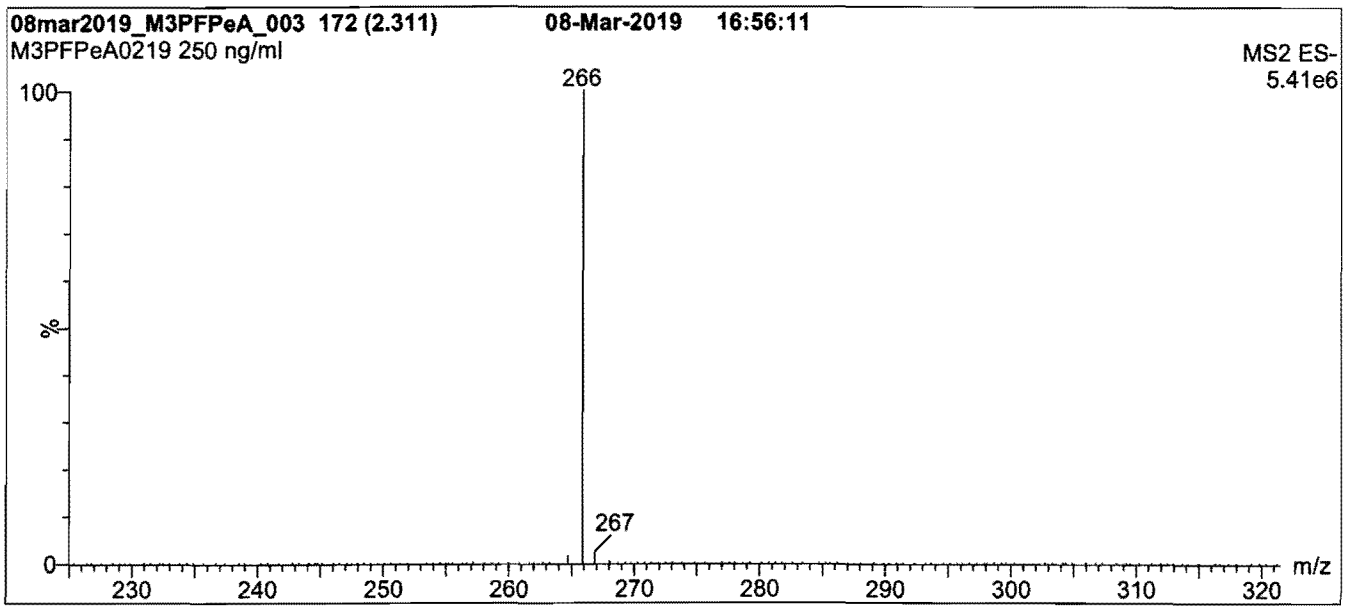
MS Parameters

Collision Gas (mbar) = 2.84e-3
Collision Energy (eV) = 8

19L0612

Figure 1: **M3PFPeA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% (80:20 MeOH:ACN) / 60% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

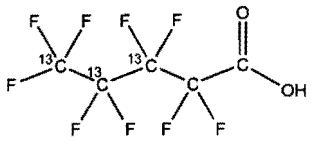
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19L0612

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M3PFPeA	**LOT NUMBER:**	M3PFPeA0219
COMPOUND:	Perfluoro-n-[3,4,5-$^{13}C_3$]pentanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_3{}^{12}C_2HF_9O_2$	**MOLECULAR WEIGHT:**	267.02
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C (3,4,5-$^{13}C_3$)
LAST TESTED: (mm/dd/yyyy)	03/08/2019		
EXPIRY DATE: (mm/dd/yyyy)	03/08/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.95% of perfluoro-n-[$^{13}C_3$]butanoic acid and 0.05% of perfluoro-1-pentanoic acid.

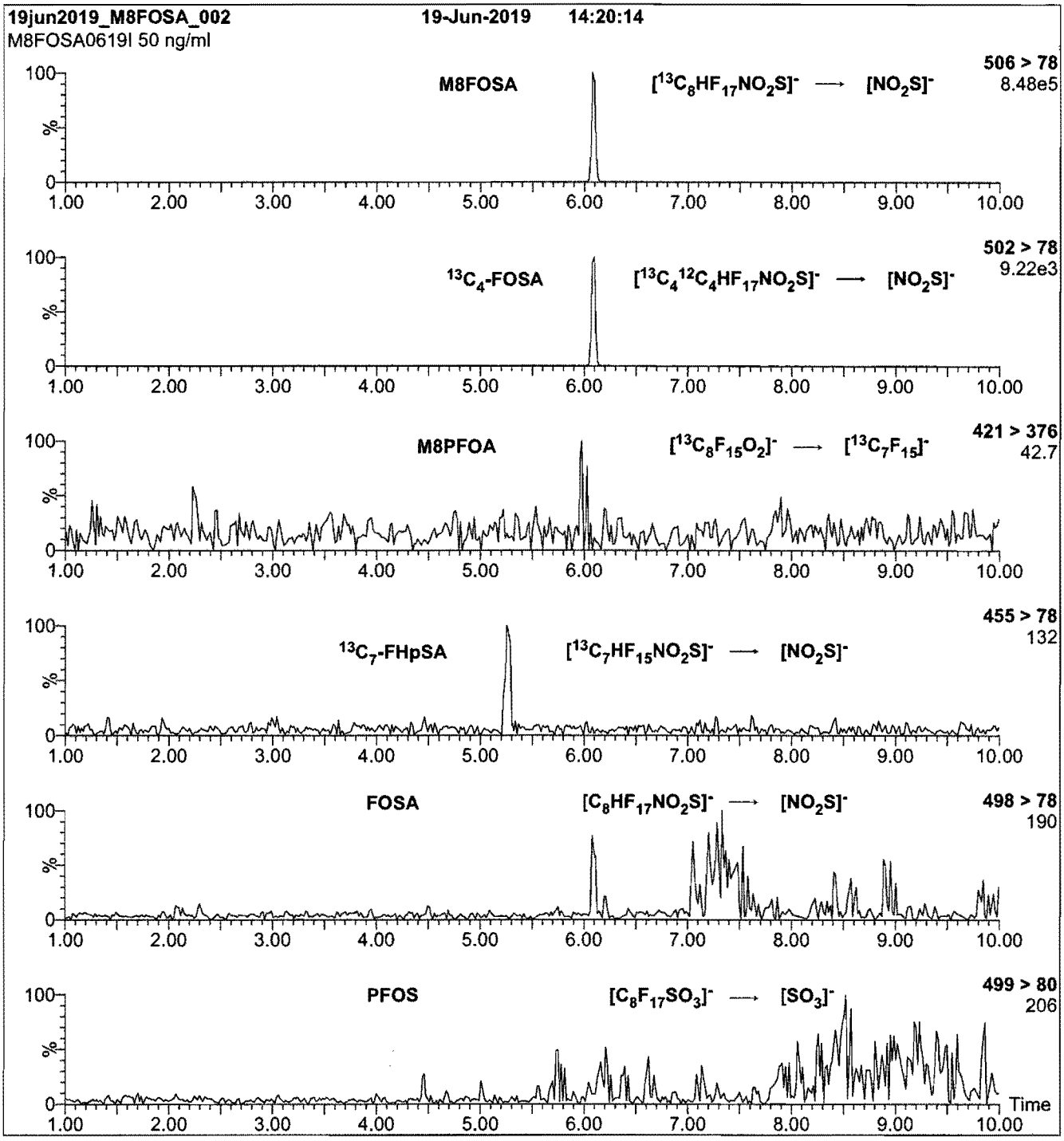
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 03/19/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0613

Figure 2: **M8FOSA-I; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M8FOSA-I)

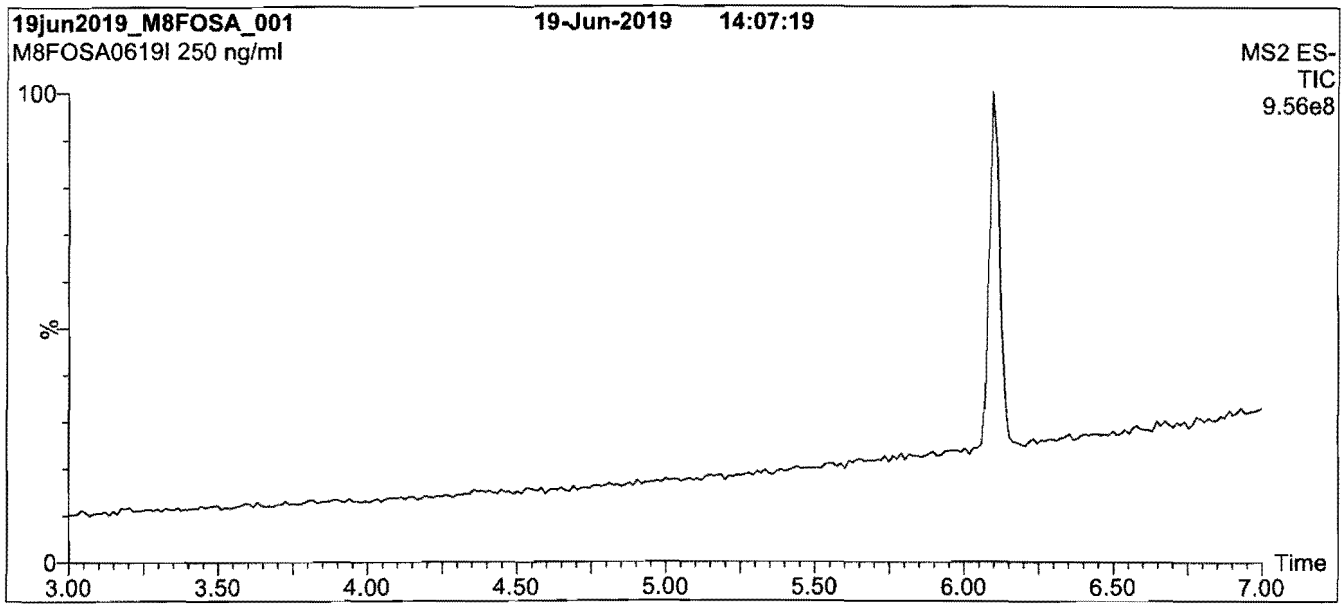
Mobile phase: Same as Figure 1

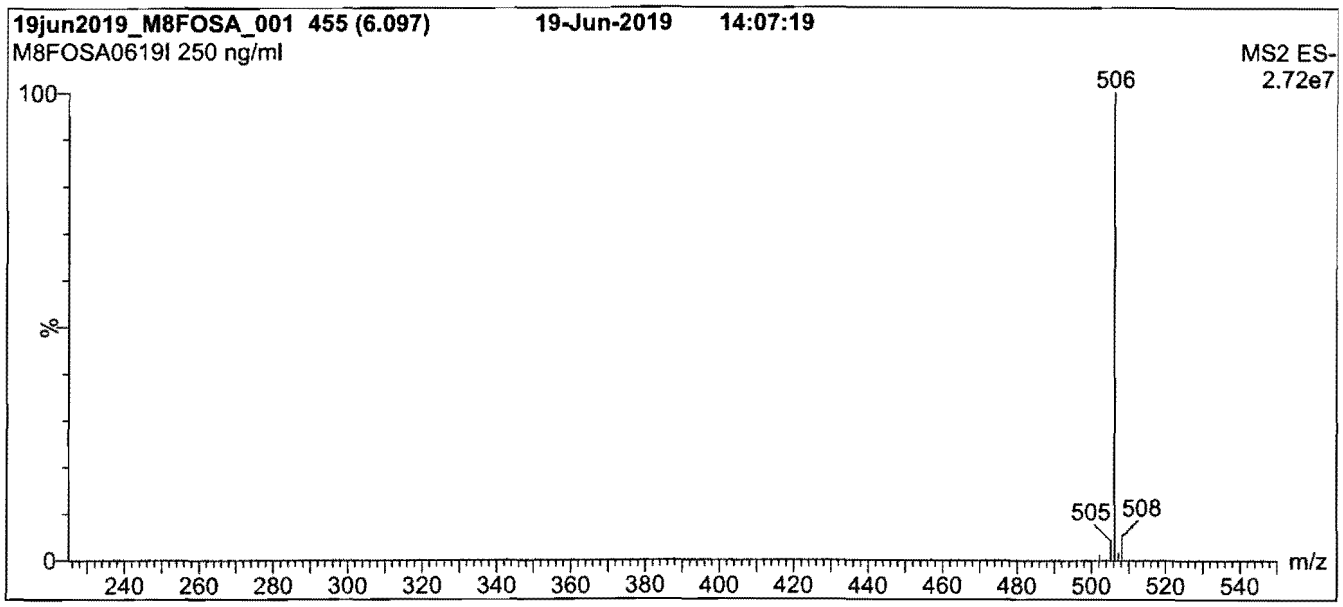
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.94e-3
Collision Energy (eV) = 30

Figure 1: **M8FOSA-I; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0613

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

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UNCERTAINTY:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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WELLINGTON LABORATORIES

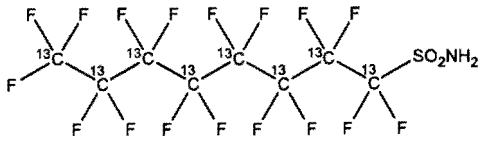
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M8FOSA-I
COMPOUND: Perfluoro-1-[$^{13}C_8$]octanesulfonamide

LOT NUMBER: M8FOSA0619I

STRUCTURE:

CAS #: 1365803-60-6



MOLECULAR FORMULA:	$^{13}C_8H_2F_{17}NO_2S$	**MOLECULAR WEIGHT:**	507.09
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Isopropanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_8$)
LAST TESTED: (mm/dd/yyyy)	06/19/2019		
EXPIRY DATE: (mm/dd/yyyy)	06/19/2024		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 1.2% of perfluoro-1-[$^{13}C_4$]octanesulfonamide and ~ 0.02% of perfluoro-1-[$^{13}C_7$]heptanesulfonamide.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 06/21/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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19L0614

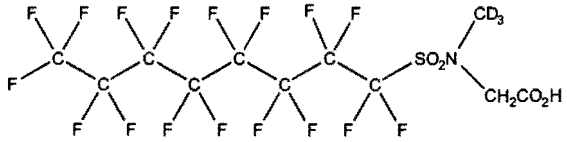
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: d3-N-MeFOSAA **LOT NUMBER:** d3NMeFOSAA0719

COMPOUND: N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** 1400690-70-1



MOLECULAR FORMULA:	$C_{11}D_3H_3F_{17}NO_4S$	**MOLECULAR WEIGHT:**	574.23
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥98% $^2H_3$
LAST TESTED: (mm/dd/yyyy)	07/24/2019		
EXPIRY DATE: (mm/dd/yyyy)	07/24/2024		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/26/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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19LC064

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

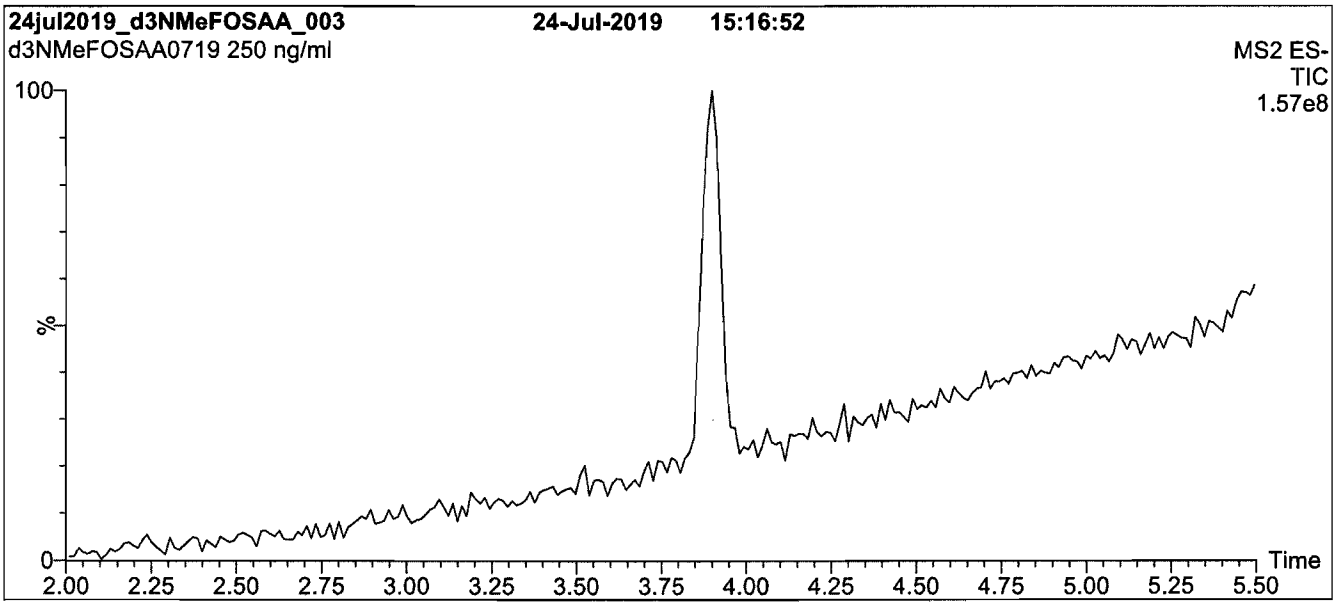
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

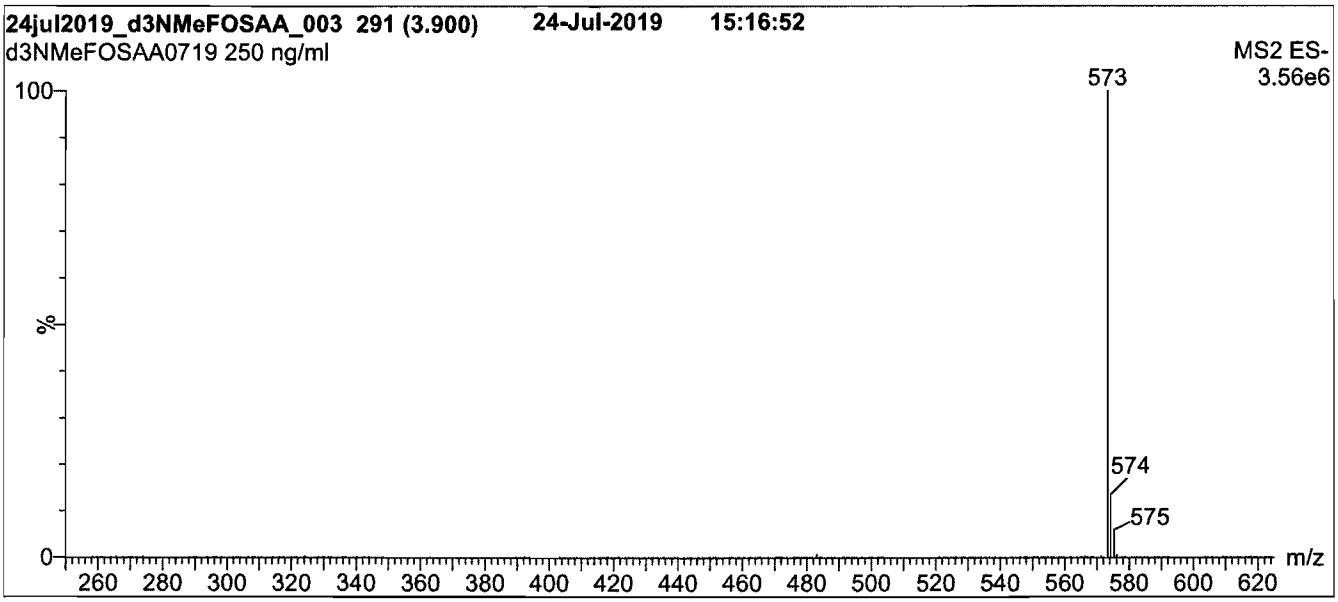
CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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Figure 1: **d3-N-MeFOSAA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

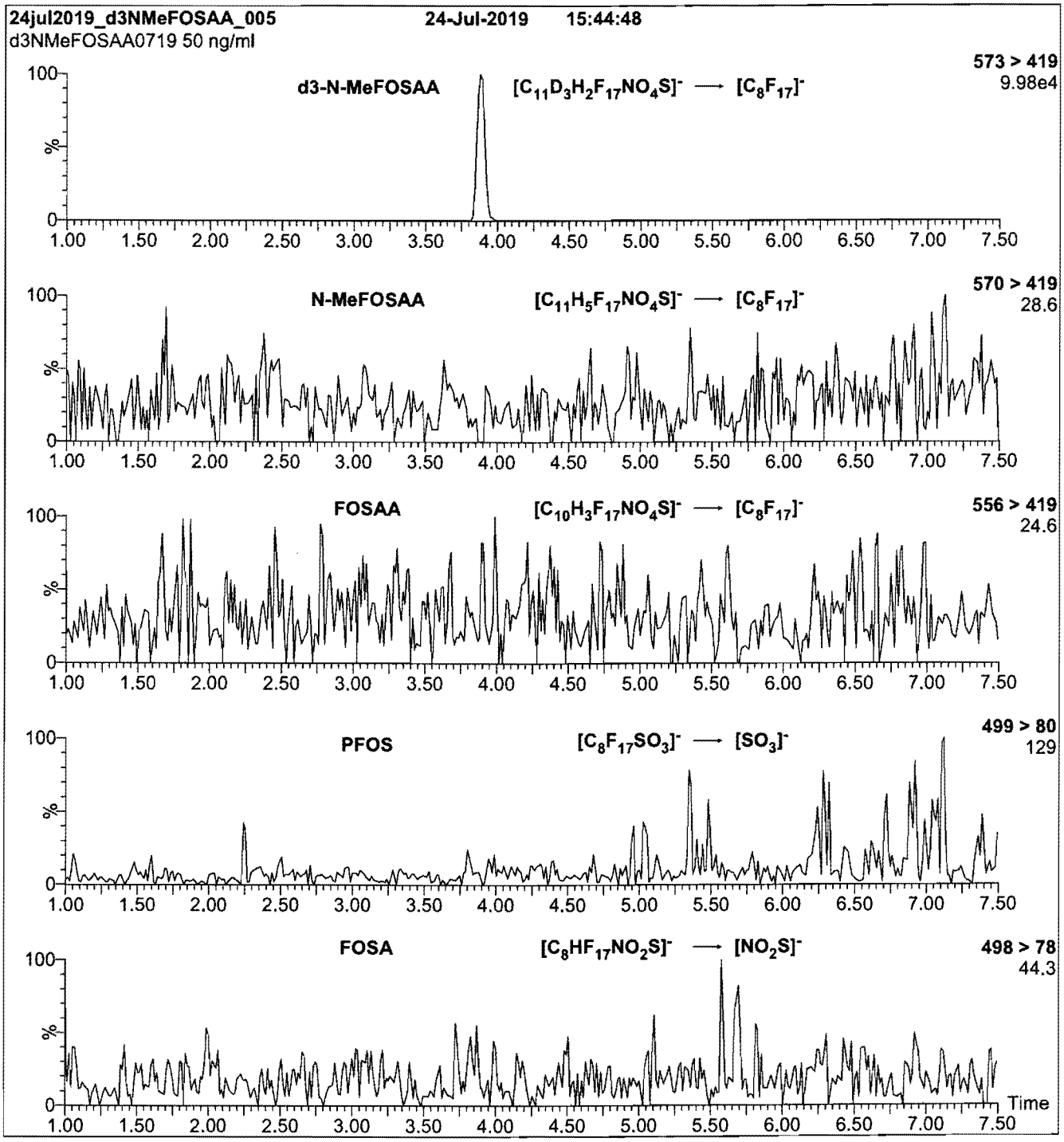
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

Figure 2: **d3-N-MeFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (d3-N-MeFOSAA)

Mobile phase: Same as Figure 1

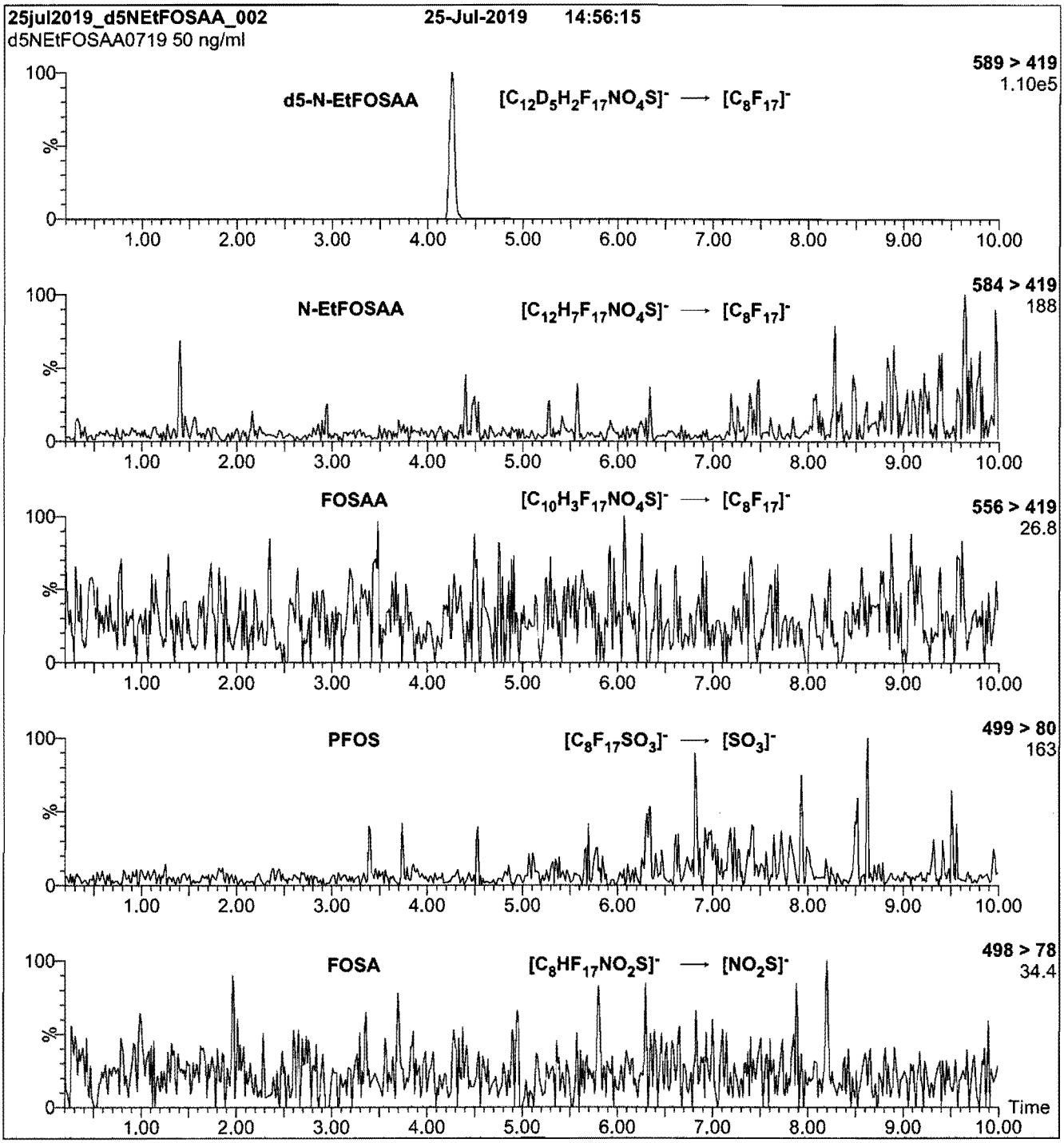
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.33e-3
Collision Energy (eV) = 18

19L0615

Figure 2: **d5-N-EtFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (d5-N-EtFOSAA)

Mobile phase: Same as Figure 1

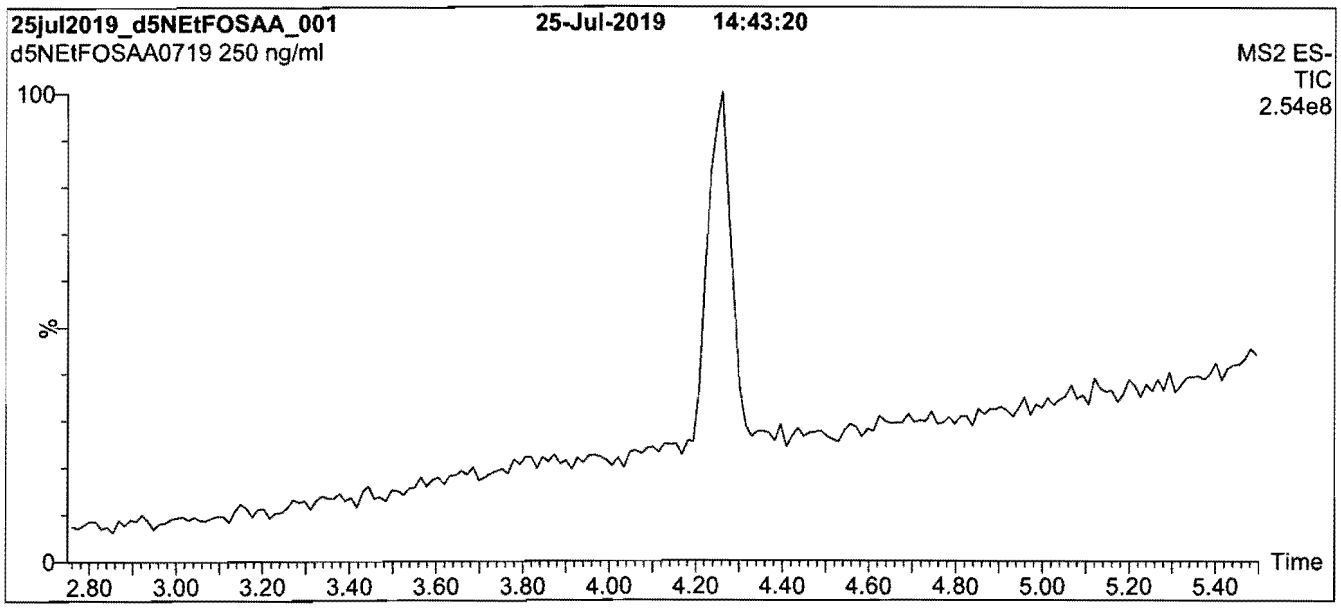
Flow: 300 µl/min

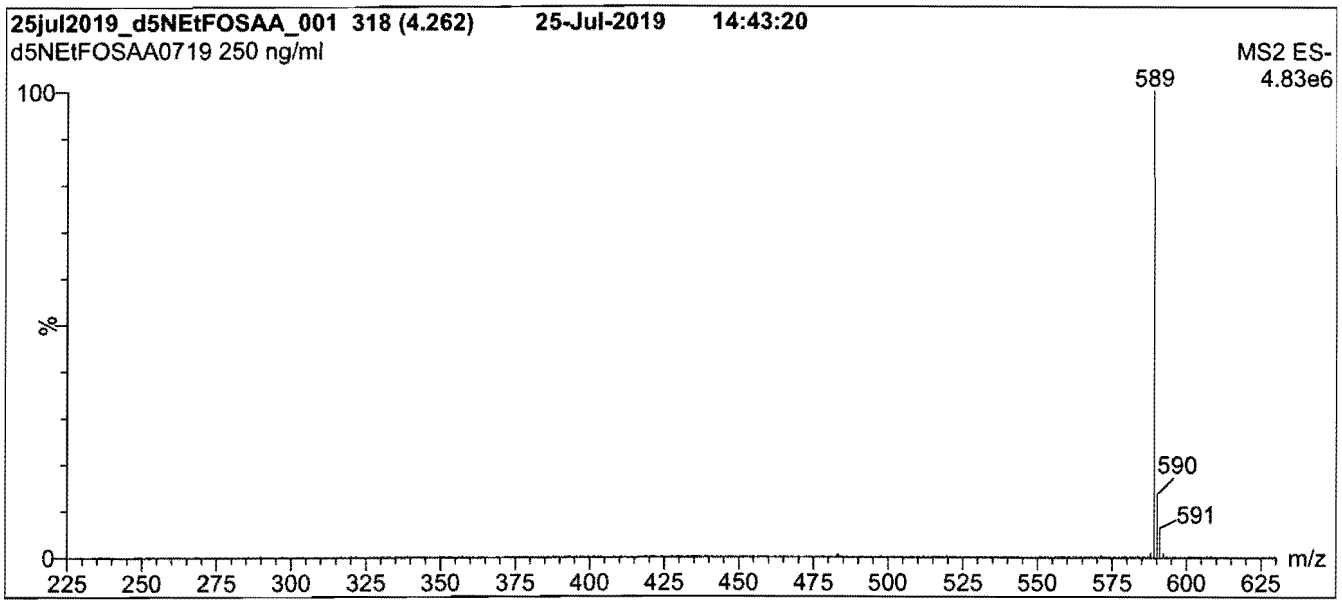
MS Parameters

Collision Gas (mbar) = 3.29e-3
Collision Energy (eV) = 18

19L0615

Figure 1: **d5-N-EtFOSAA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0615

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

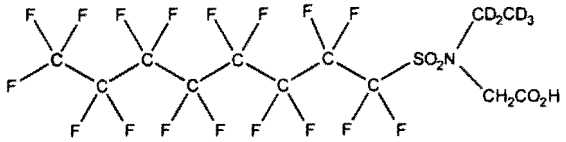
1910615

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: d5-N-EtFOSAA **LOT NUMBER:** d5NEtFOSAA0719
COMPOUND: N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: $C_{12}D_5H_3F_{17}NO_4S$ **MOLECULAR WEIGHT:** 590.26
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥98% $^2H_5$
LAST TESTED: (mm/dd/yyyy) 07/25/2019
EXPIRY DATE: (mm/dd/yyyy) 07/25/2024
RECOMMENDED STORAGE: Refrigerate ampoule

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

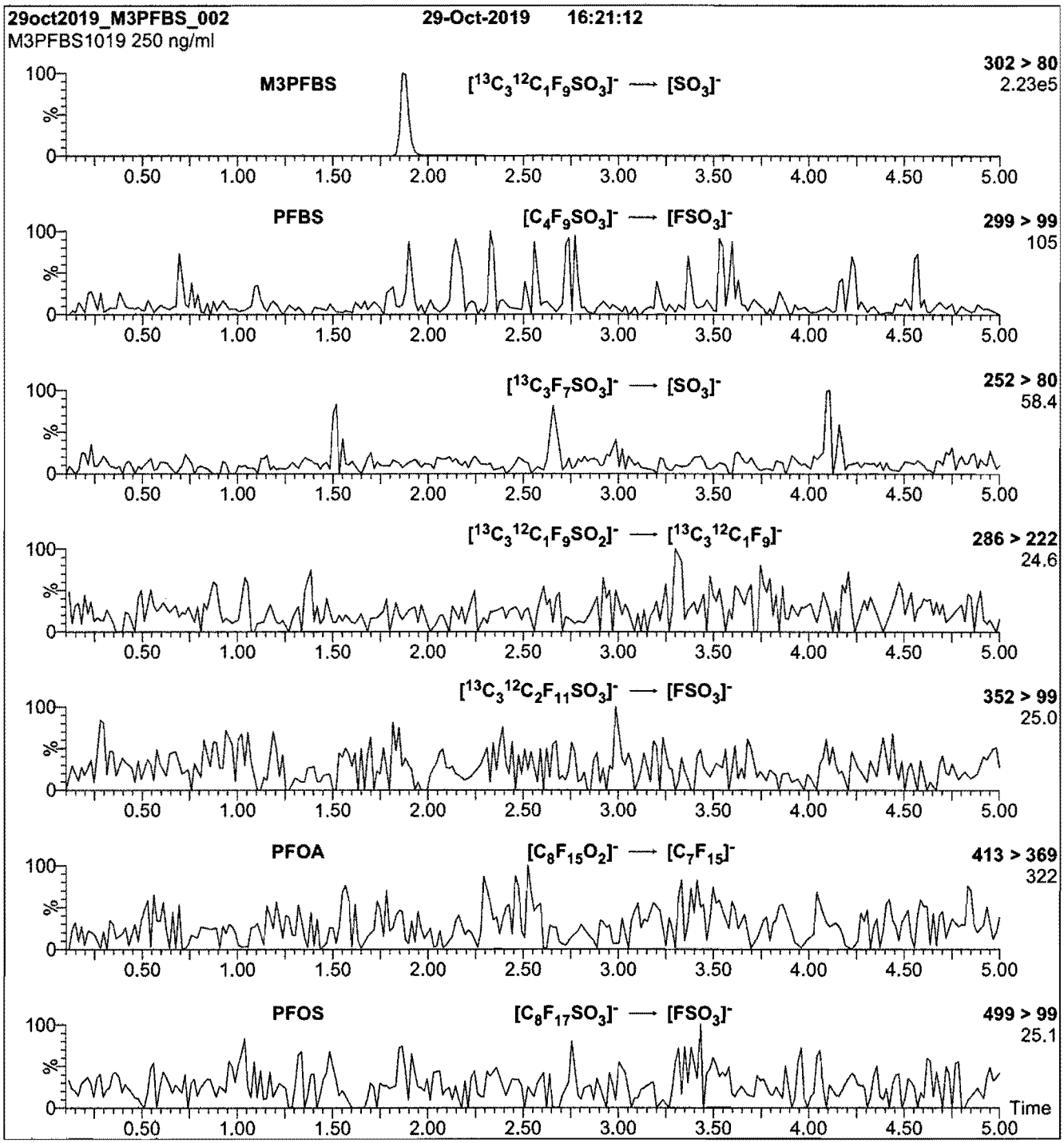
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/26/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **M3PFBS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M3PFBS)

Mobile phase: Same as Figure 1

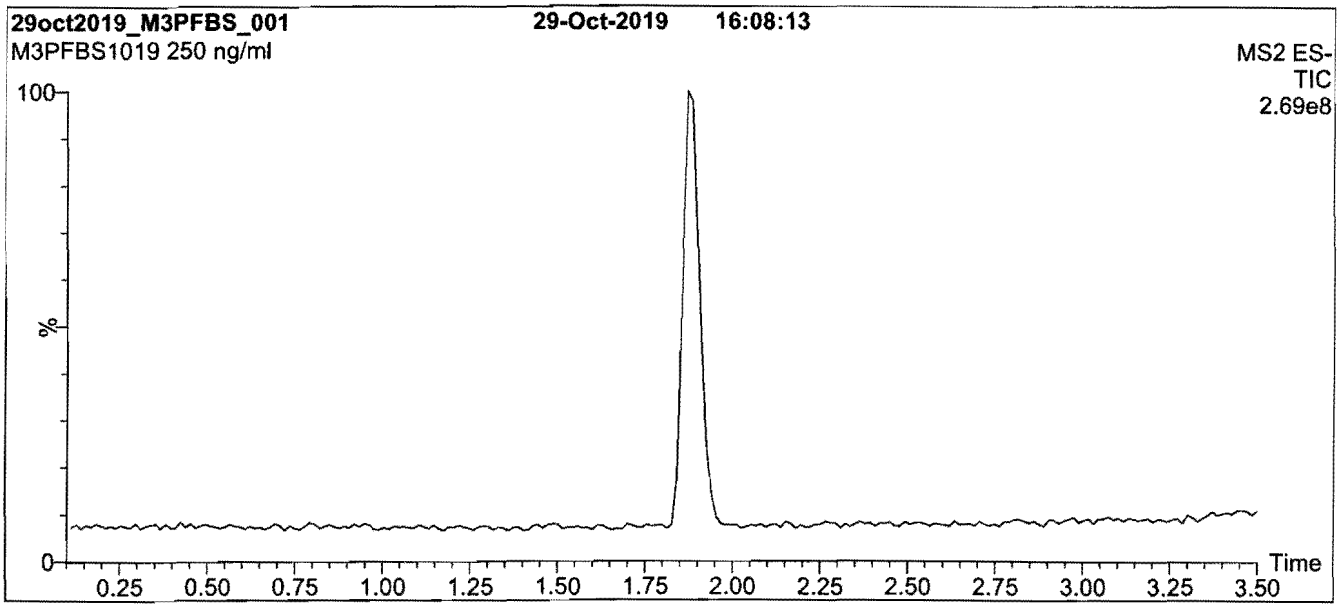
Flow: 300 µl/min

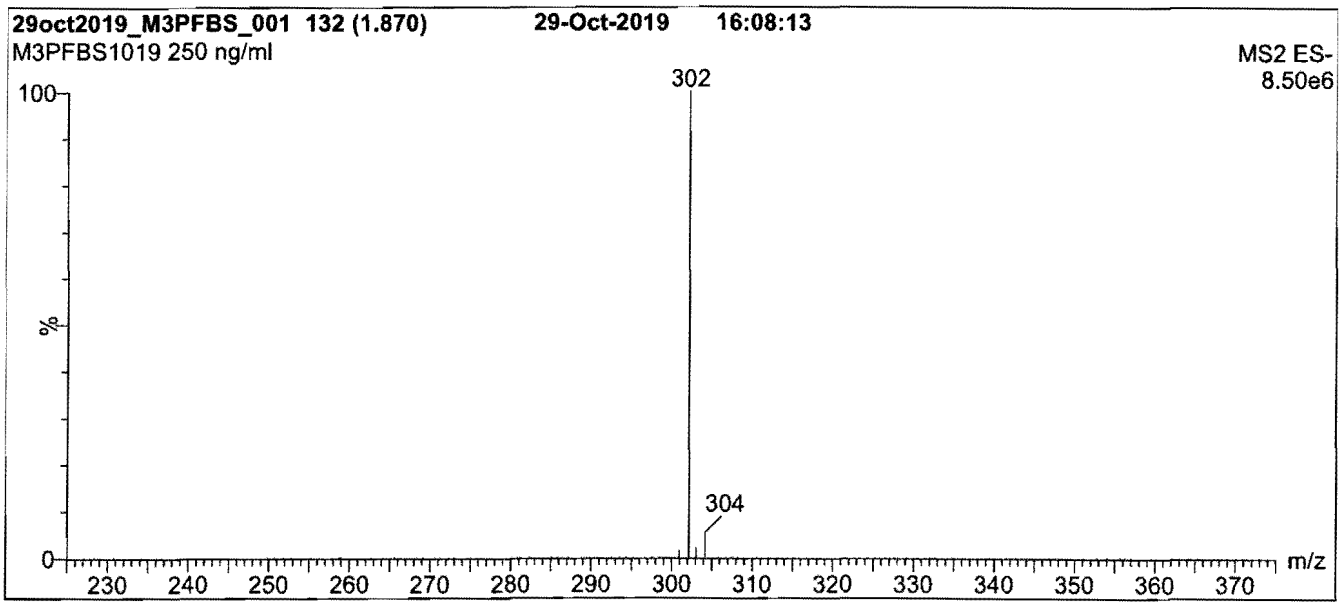
MS Parameters

Collision Gas (mbar) = 3.57e-3
Collision Energy (eV) = 30

19L0616

Figure 1: **M3PFBS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0616

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

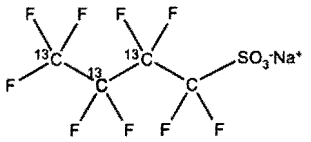
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0616

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M3PFBS	**LOT NUMBER:**	M3PFBS1019
COMPOUND:	Sodium perfluoro-1-[2,3,4-$^{13}C_3$]butanesulfonate		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_3{}^{12}CF_9SO_3Na$	**MOLECULAR WEIGHT:**	325.06
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 46.5 ± 2.3 µg/ml (M3PFBS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($2,3,4\text{-}^{13}C_3$)
LAST TESTED: (mm/dd/yyyy)	10/29/2019		
EXPIRY DATE: (mm/dd/yyyy)	10/29/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

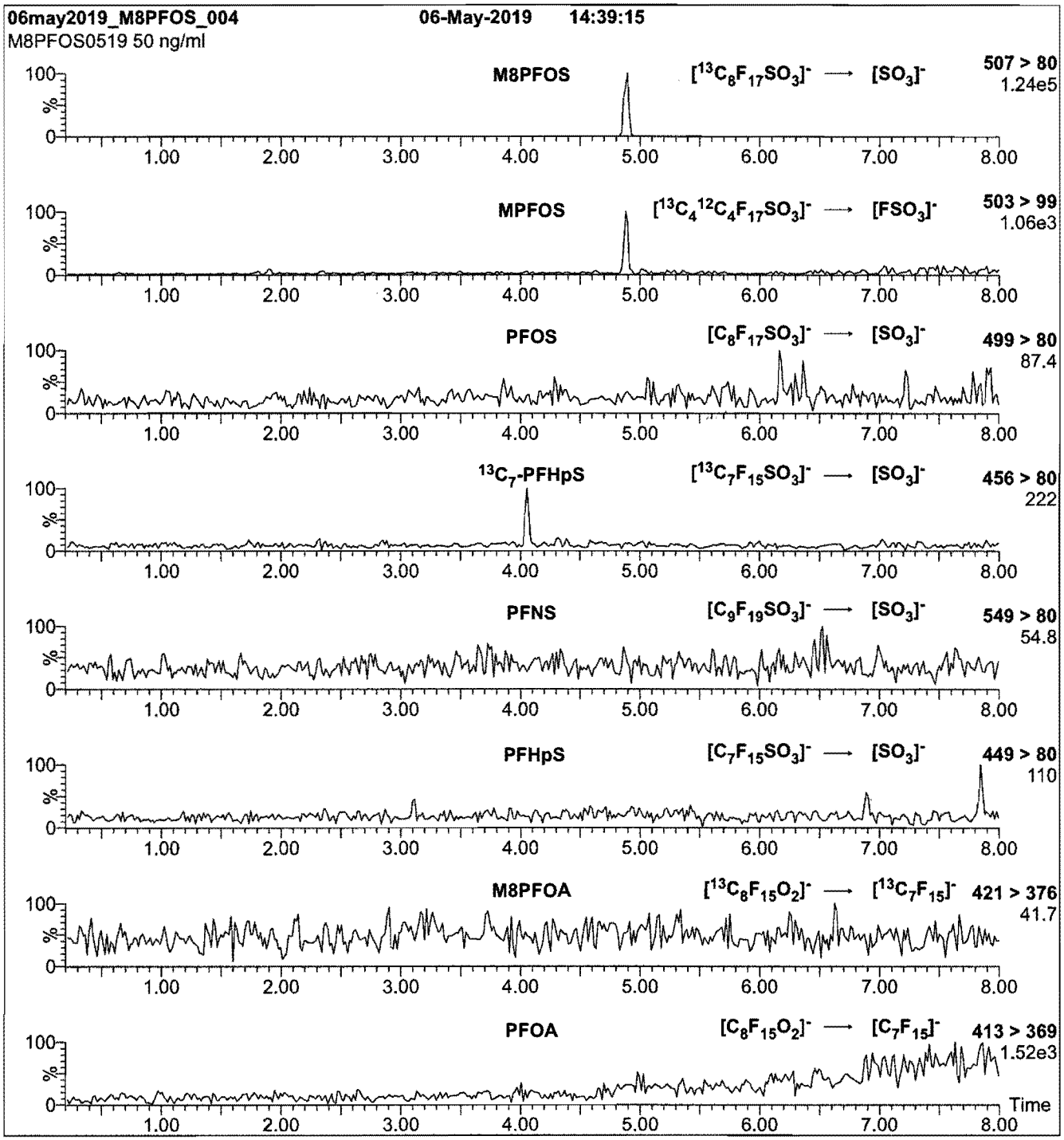
- See page 2 for further details.
- Contains < 0.1% of perfluoro-1-butanesulfonate.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/08/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **M8PFOS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M8PFOS)

Mobile phase: Same as Figure 1

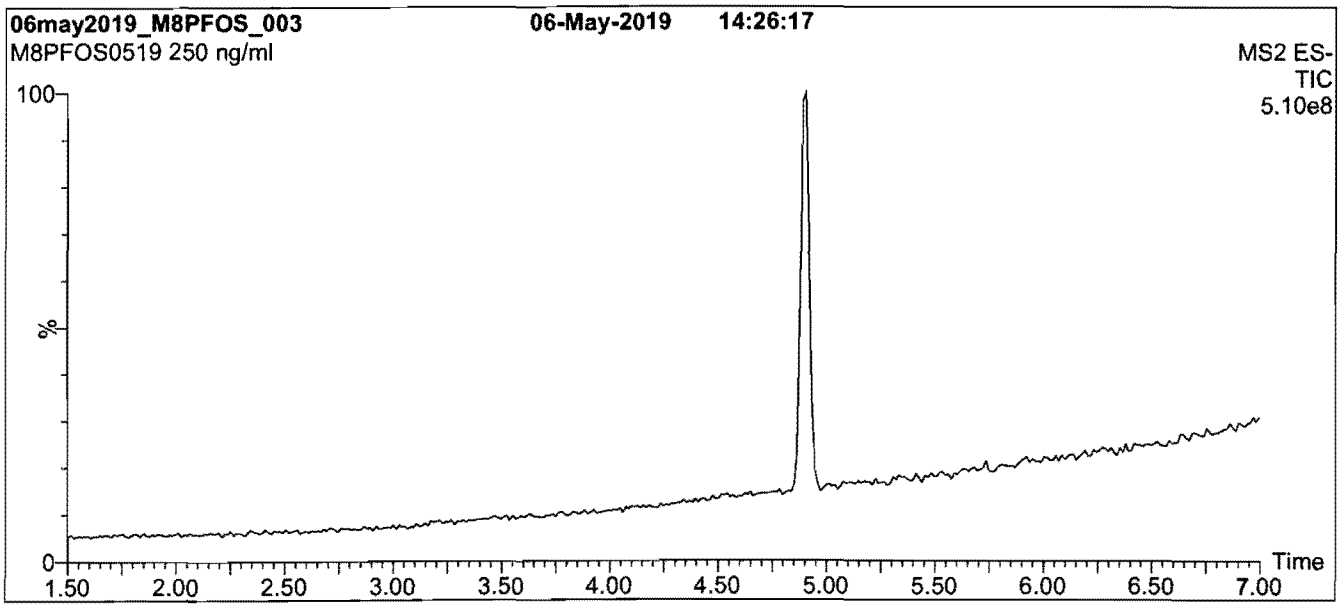
Flow: 300 µl/min

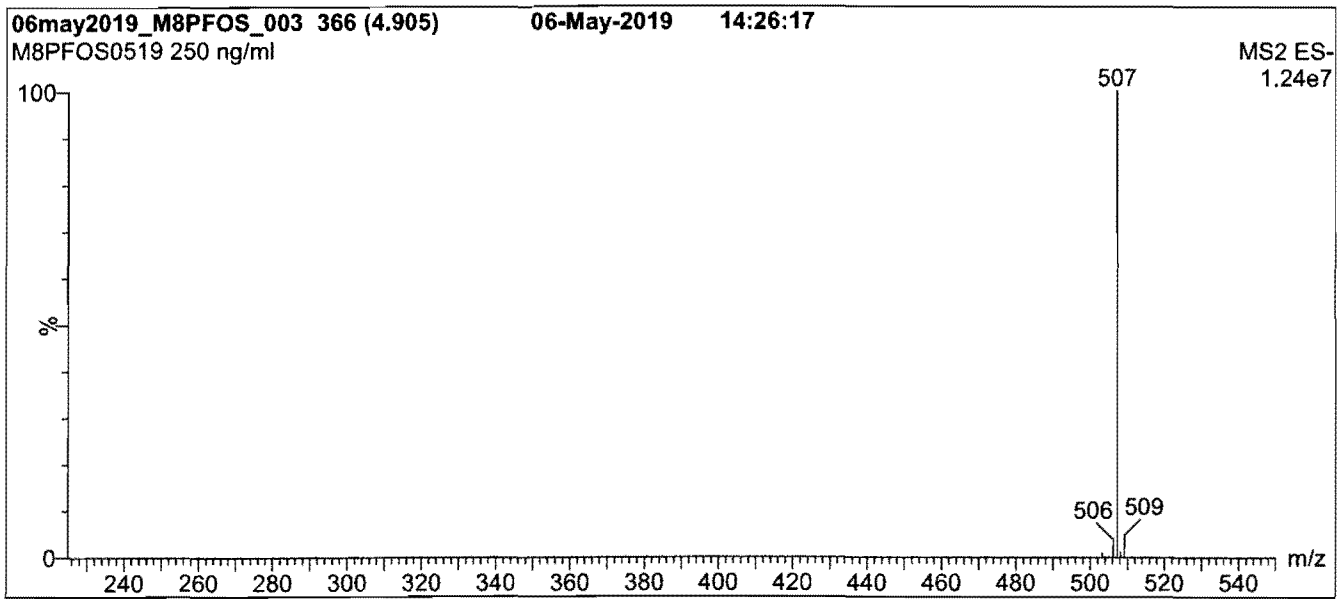
MS Parameters

Collision Gas (mbar) = 2.85e-3
Collision Energy (eV) = 42

19L0617

Figure 1: **M8PFOS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.75 min.
Time: 11 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

INTENDED USE:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

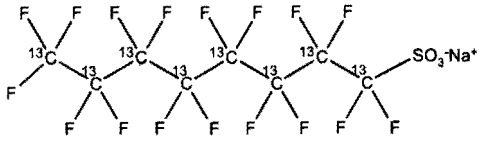
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0617

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M8PFOS	**LOT NUMBER:**	M8PFOS0519
COMPOUND:	Sodium perfluoro-1-[$^{13}C_8$]octanesulfonate		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_8F_{17}SO_3Na$	**MOLECULAR WEIGHT:**	530.05
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.8 ± 2.4 µg/ml (M8PFOS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	>99% ^{13}C ($^{13}C_8$)
LAST TESTED: (mm/dd/yyyy)	05/06/2019		
EXPIRY DATE: (mm/dd/yyyy)	05/06/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

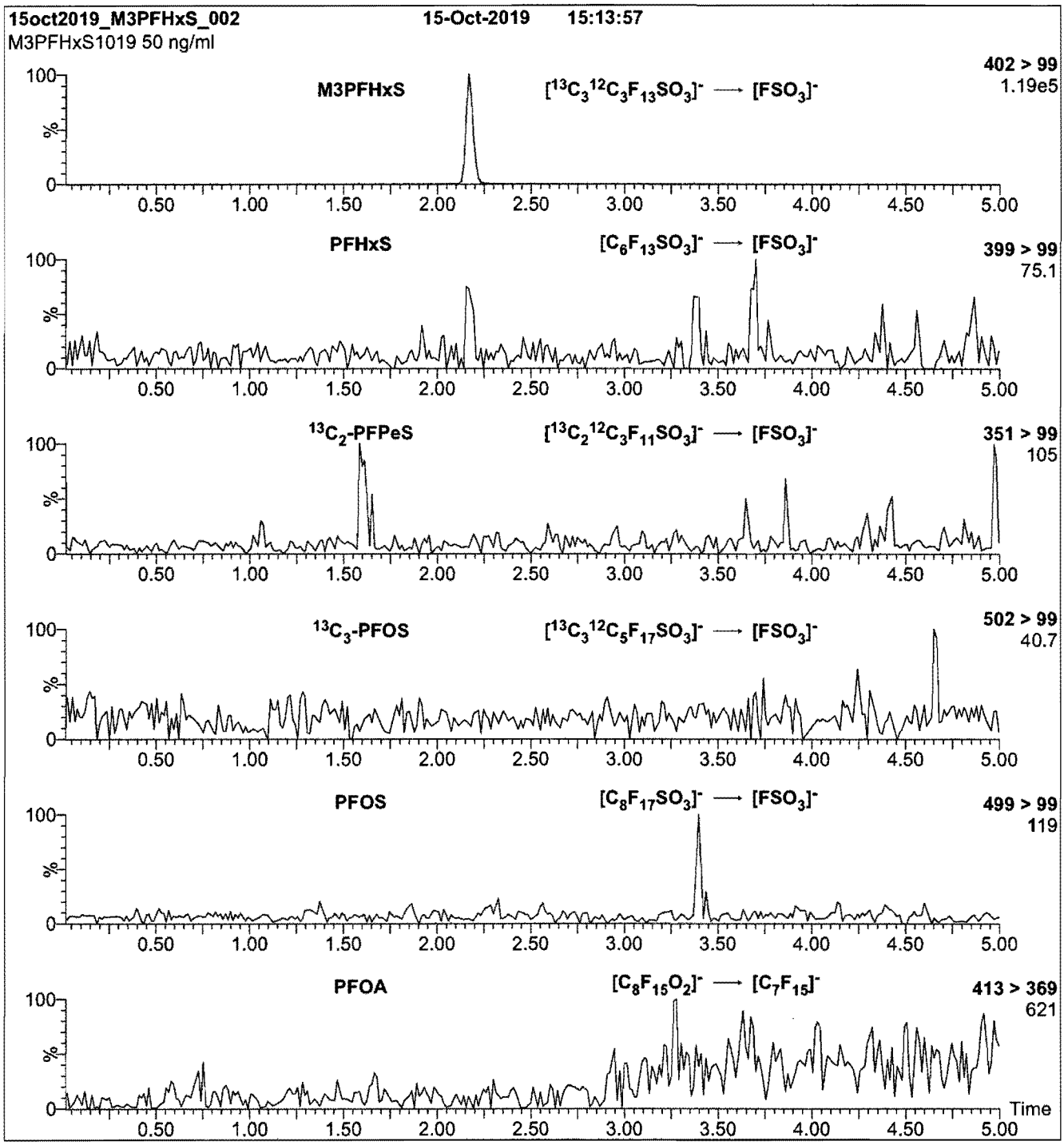
- See page 2 for further details.
- Contains ~ 0.2% of sodium perfluoro-1-[$^{13}C_7$]heptanesulfonate ($^{13}C_7$-PFHpS) and ~ 1.0% of sodium perfluoro-1-[$^{13}C_4$]octanesulfonate (MPFOS).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/23/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **M3PFHxS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M3PFHxS)

Mobile phase: Same as Figure 1

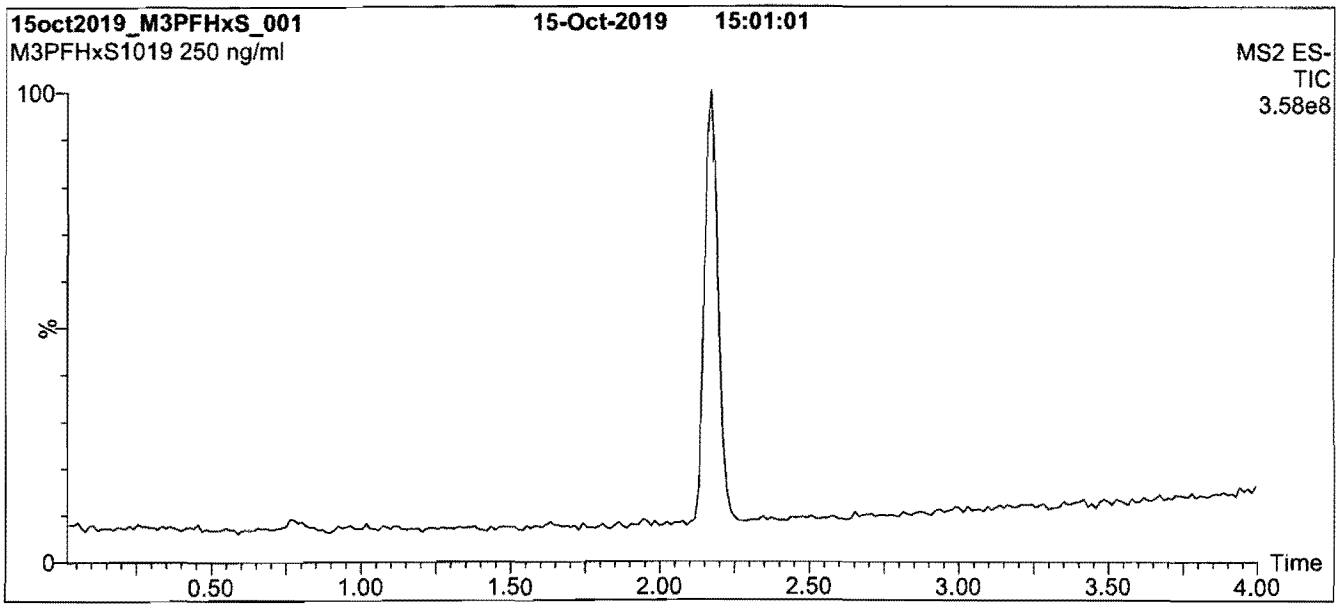
Flow: 300 µl/min

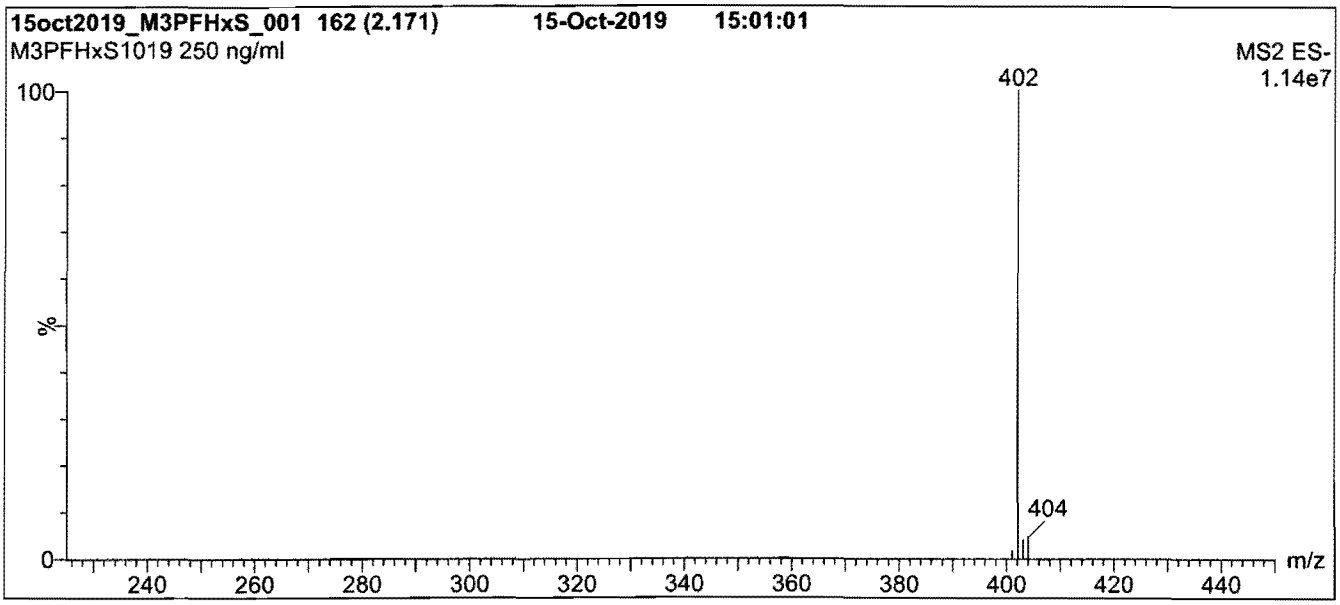
MS Parameters

Collision Gas (mbar) = 3.91e-3
Collision Energy (eV) = 32

19L0618

Figure 1: **M3PFHxS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

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UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0618

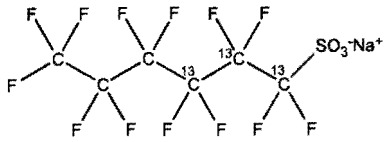
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M3PFHxS **LOT NUMBER:** M3PFHxS1019

COMPOUND: Sodium perfluoro-1-[1,2,3-$^{13}C_3$]hexanesulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_3{}^{12}C_3F_{13}SO_3Na$	**MOLECULAR WEIGHT:**	425.07
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.3 ± 2.4 µg/ml (M3PFHxS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2,3\text{-}^{13}C_3$)
LAST TESTED: (mm/dd/yyyy)	10/15/2019		
EXPIRY DATE: (mm/dd/yyyy)	10/15/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.1% perfluoro-1-[1,2-$^{13}C_2$]pentanesulfonate, ~ 0.1% perfluoro-1-octanesulfonate, and ~ 0.05% of perfluoro-1-hexanesulfonate.

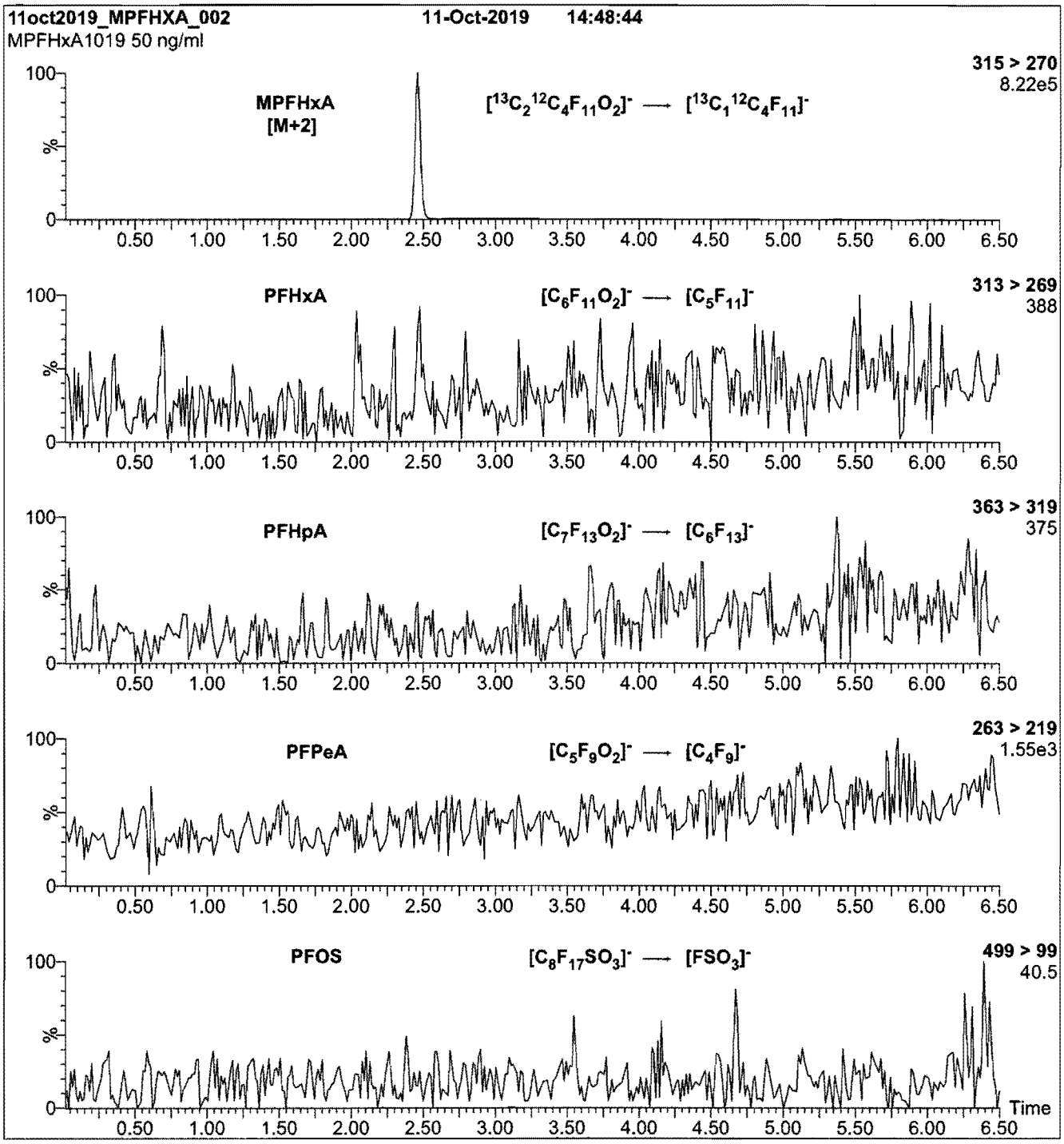
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 10/16/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0619

Figure 2: **MPFHxA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFHxA)

Mobile phase: Same as Figure 1

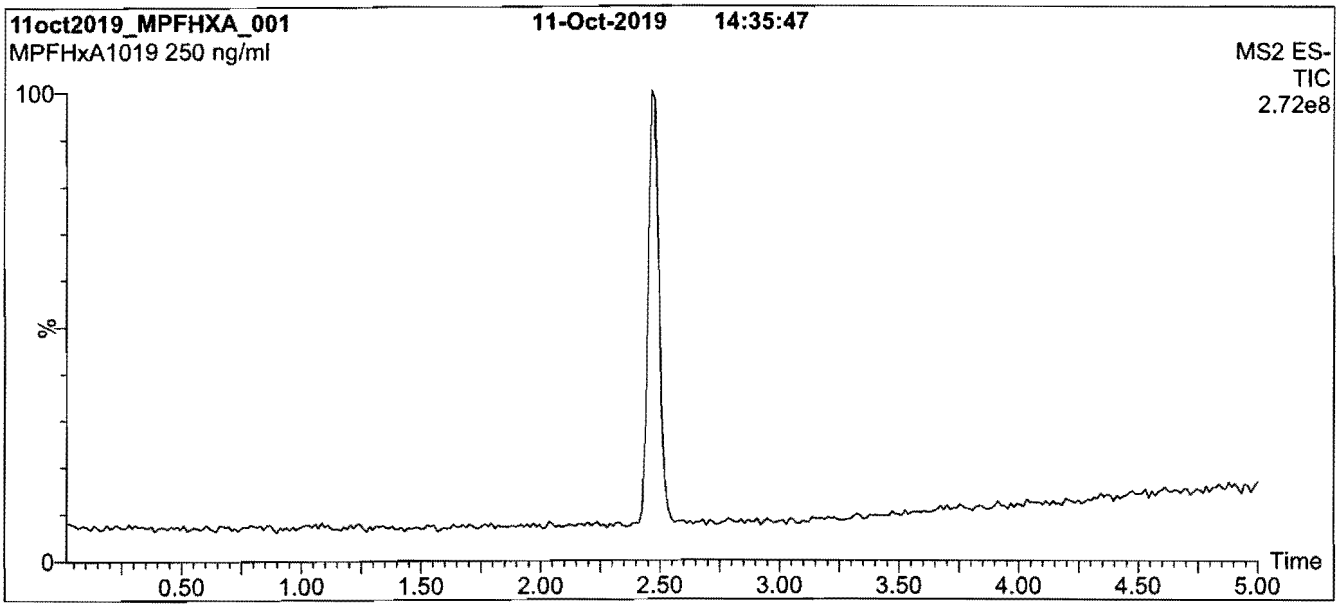
Flow: 300 µl/min

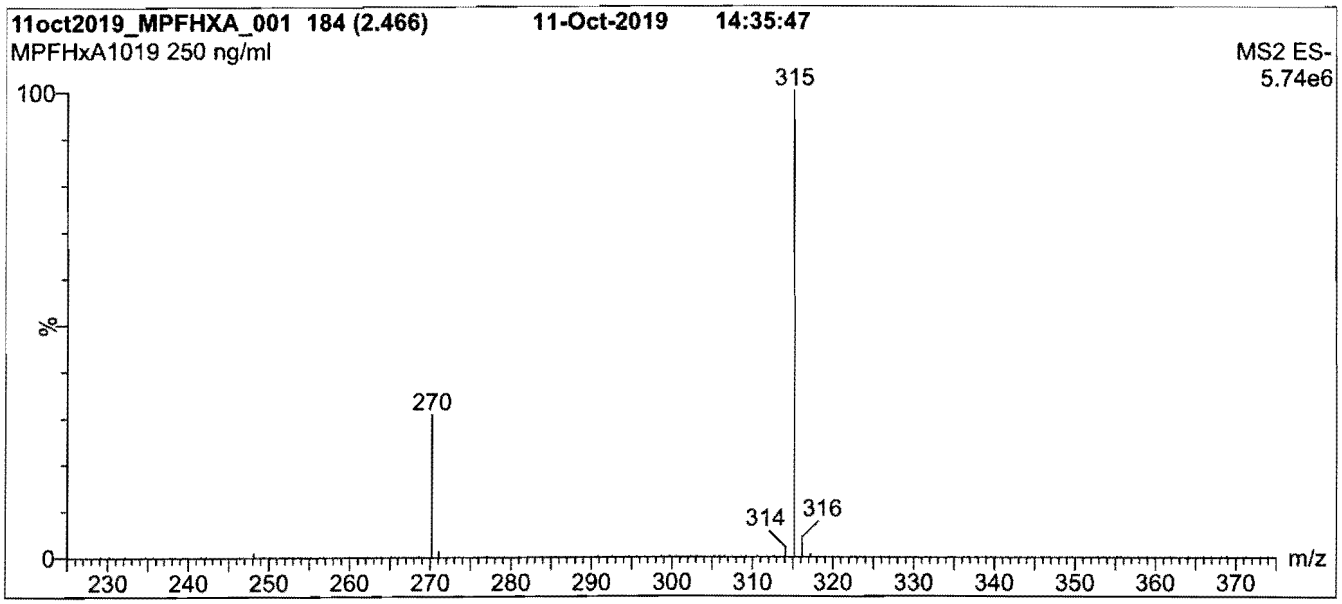
MS Parameters

Collision Gas (mbar) = 3.80e-3
Collision Energy (eV) = 8

19L0619

Figure 1: **MPFHxA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

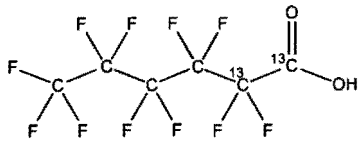
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19L0619

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MPFHxA	**LOT NUMBER:**	MPFHxA1019
COMPOUND:	Perfluoro-n-[1,2-$^{13}C_2$]hexanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_4HF_{11}O_2$	**MOLECULAR WEIGHT:**	316.04
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	10/11/2019		
EXPIRY DATE: (mm/dd/yyyy)	10/11/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

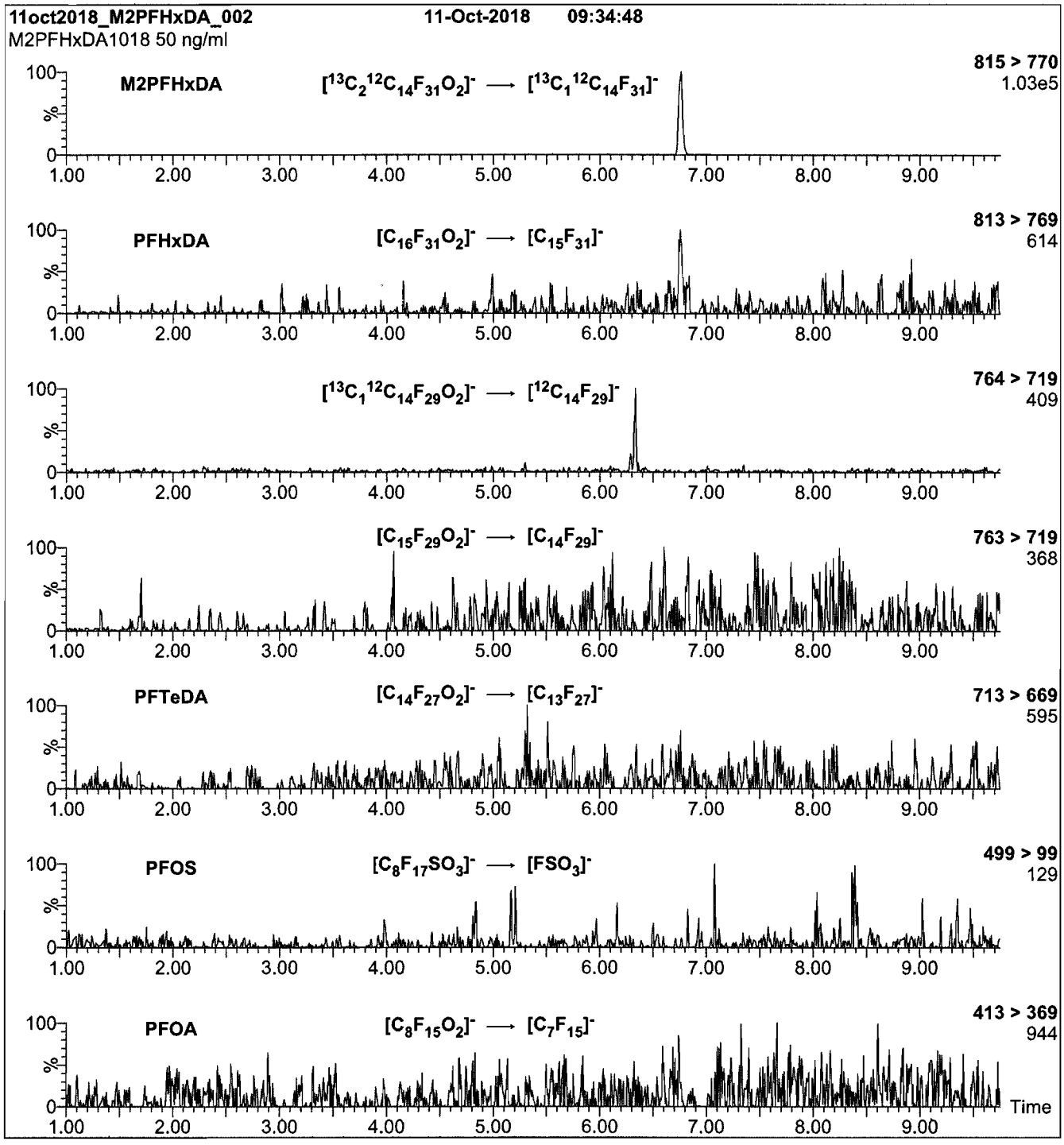
Certified By: _____ **Date:** 10/22/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:6, Revised 2018-08-14

19L0620

Figure 2: **M2PFHxDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M2PFHxDA)

Mobile phase: Same as Figure 1

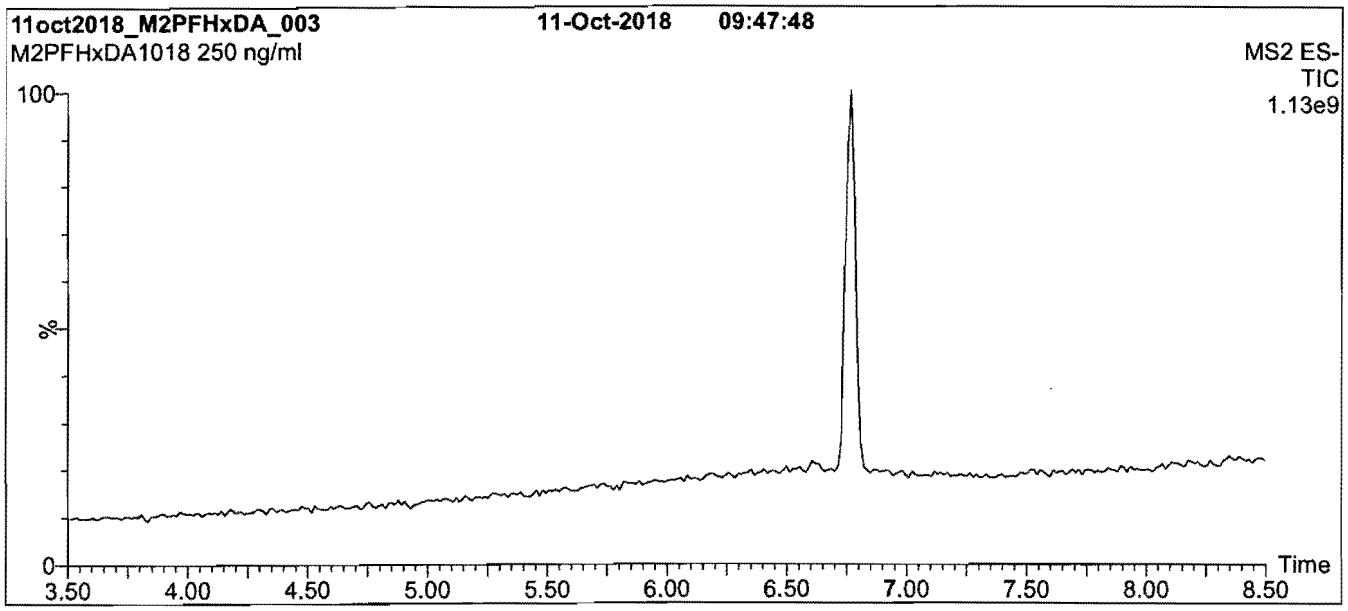
Flow: 300 µl/min

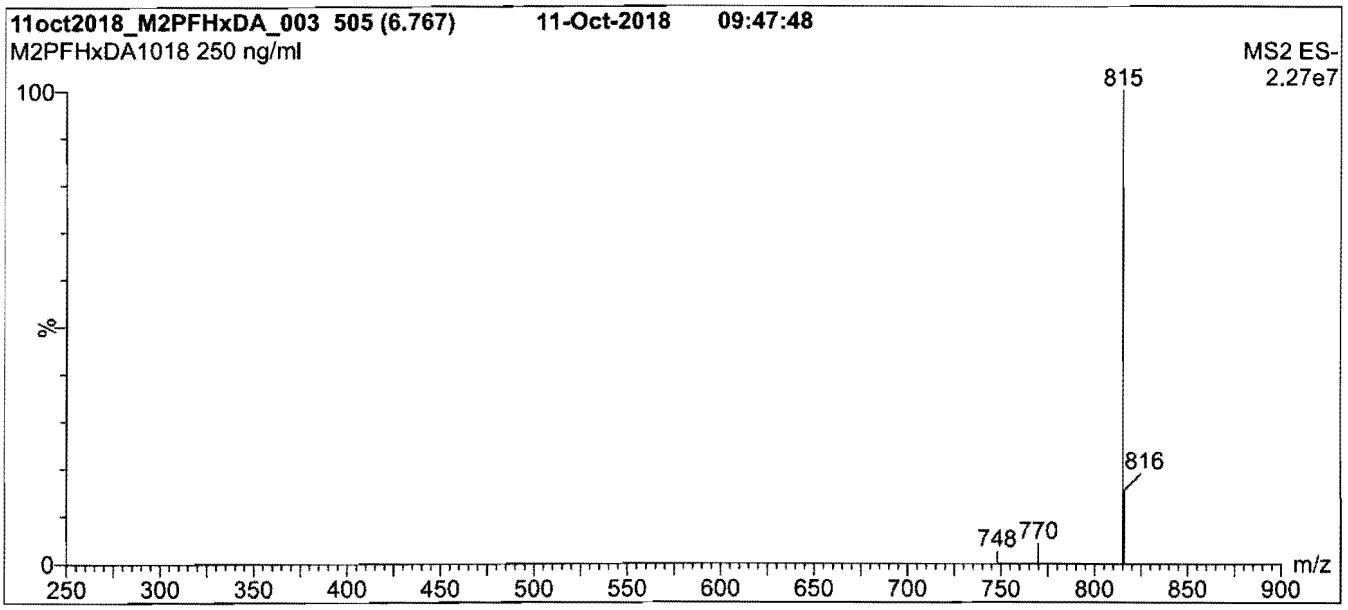
MS Parameters

Collision Gas (mbar) = 2.97e-3
Collision Energy (eV) = 15

19L0620

Figure 1: **M2PFHxDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 1200 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

INTENDED USE:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED 9001 REFERENCE MATERIAL PRODUCER

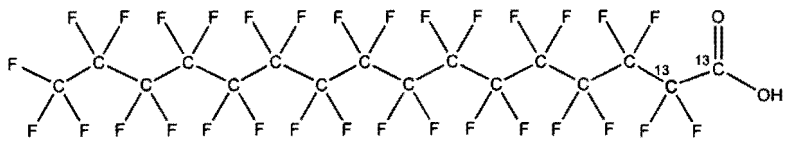
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19L0620

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M2PFHxDA	**LOT NUMBER:**	M2PFHxDA1018
COMPOUND:	Perfluoro-n-[1,2-$^{13}C_2$]hexadecanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_{14}HF_{31}O_2$	**MOLECULAR WEIGHT:**	816.11
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	10/11/2018		
EXPIRY DATE: (mm/dd/yyyy)	10/11/2023		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

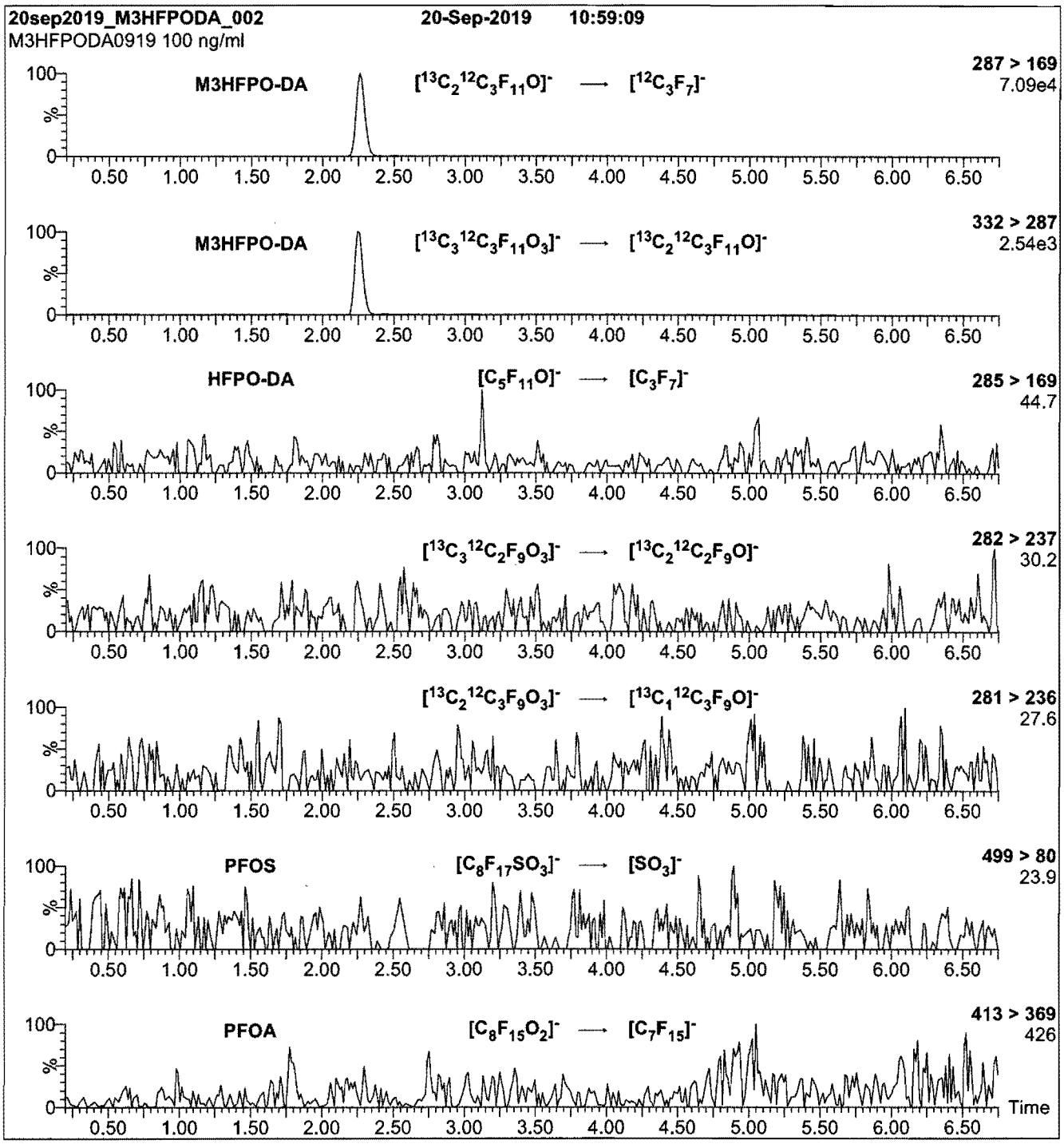
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.3% of native perfluoro-n-hexadecanoic acid and ~ 0.2% of perfluoro-n-[$^{13}C_1$]pentadecanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 10/19/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **M3HFPO-DA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M3HFPO-DA)

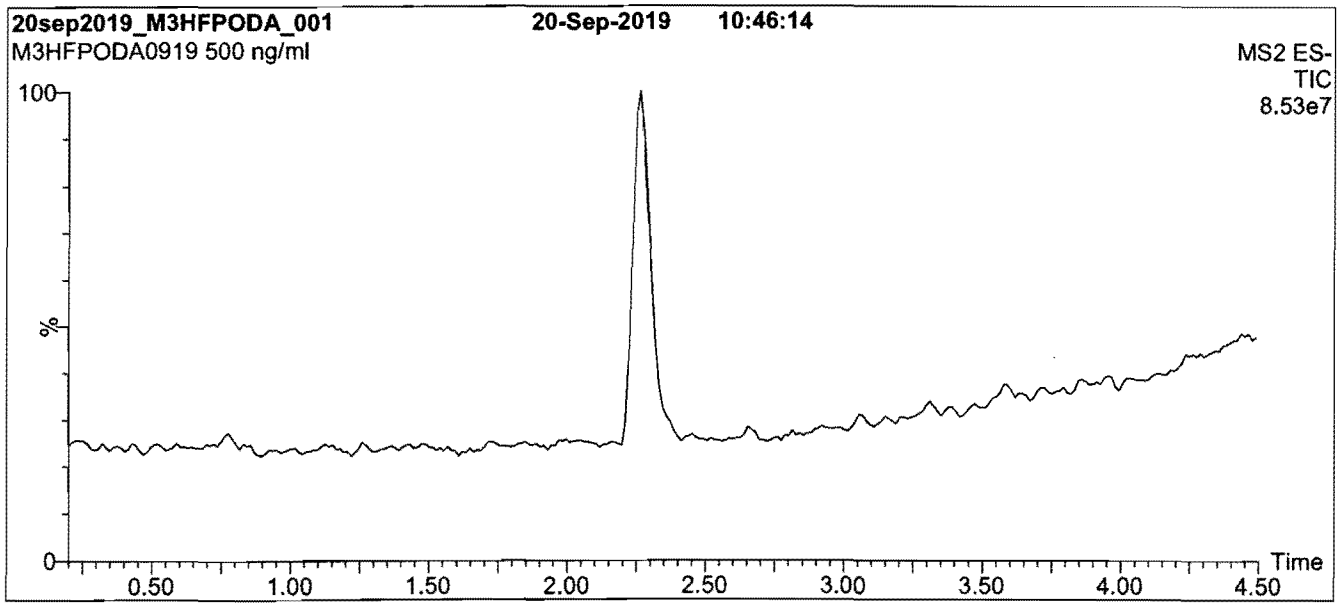
Mobile phase: Same as Figure 1

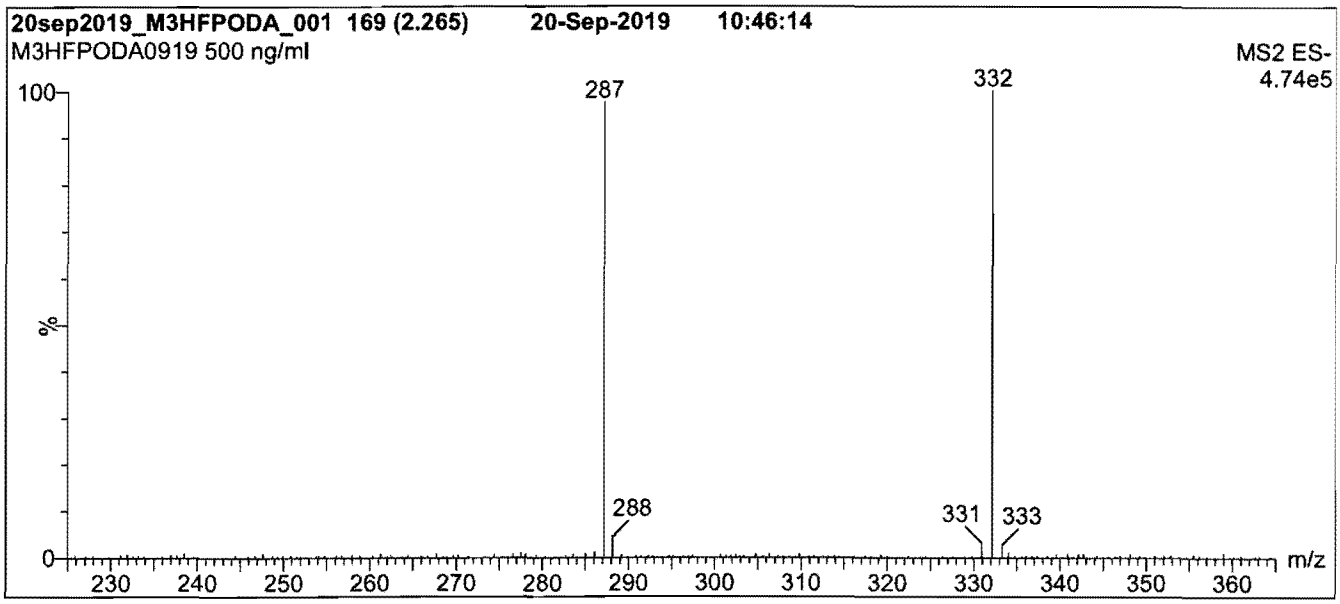
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.60e-3
Collision Energy (eV) = 8

Figure 1: **M3HFPO-DA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15.00
Desolvation Temperature (°C) = 325
Desolvation Gas Flow (l/hr) = 1000

19L0621

INTENDED USE:

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TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0621

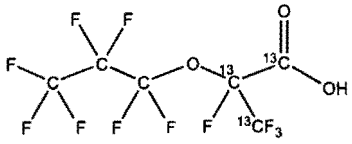
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M3HFPO-DA **LOT NUMBER:** M3HFPODA0919

COMPOUND: 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-$^{13}C_3$-propanoic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_3{}^{12}C_3HF_{11}O_3$	**MOLECULAR WEIGHT:**	333.03
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_3$)
LAST TESTED: (mm/dd/yyyy)	09/20/2019		
EXPIRY DATE: (mm/dd/yyyy)	09/20/2022		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 1.9% of the linear M3HFPO-DA isomer.
- Product is commercially known as GenX.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 09/30/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Analytical Standard Record

Vista Analytical Laboratory

20A0803

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	(mls)
19L0635	PFDoA	06-Dec-19	** Vendor **	23-Jan-24	0.4
19L0636	PFBA	06-Dec-19	** Vendor **	10-Jul-24	0.4
19L0637	PFPeA	06-Dec-19	** Vendor **	04-Sep-24	0.4
19L0638	PFHxA	06-Dec-19	** Vendor **	08-Aug-24	0.4
19L0639	PFDA	06-Dec-19	** Vendor **	01-May-24	0.4
19L0640	PFUdA	06-Dec-19	** Vendor **	19-Mar-24	0.4
19L0641	PFTrDA	06-Dec-19	** Vendor **	26-Sep-24	0.4
19L0642	PFHpA	06-Dec-19	** Vendor **	05-Mar-24	0.4
19L0643	PFOA	06-Dec-19	** Vendor **	06-Sep-24	0.4
19L0644	PFNA	06-Dec-19	** Vendor **	08-Jul-24	0.4
19L0645	PFTeDA	06-Dec-19	** Vendor **	11-Mar-24	0.4
19L0646	PFHxDA	06-Dec-19	** Vendor **	03-Nov-24	0.4
19L0647	PFODA	06-Dec-19	** Vendor **	02-May-24	0.4
19L0648	L-PFBS	06-Dec-19	** Vendor **	10-Jul-24	0.454
19L0649	L-PFPeS	06-Dec-19	** Vendor **	08-Jul-24	0.428
19L0650	L-PFHpS	06-Dec-19	** Vendor **	16-Aug-24	0.42
19L0651	L-PFNS	06-Dec-19	** Vendor **	06-Aug-24	0.418
19L0652	L-PFDS	06-Dec-19	** Vendor **	04-Apr-24	0.415
19L0653	br-PFHxSK	06-Dec-19	** Vendor **	02-Oct-23	0.44
19L0654	br-PFOSK anion	06-Dec-19	** Vendor **	07-Jun-24	0.431
19L0655	4:2 FTS	06-Dec-19	** Vendor **	08-May-24	0.43
19L0656	6:2FTS	06-Dec-19	** Vendor **	09-Sep-24	0.422
19L0657	8:2FTS	06-Dec-19	** Vendor **	11-Sep-24	0.418
19L0658	FOSA-I	06-Dec-19	** Vendor **	12-Sep-24	0.4
19L0659	br-NMeFOSAA	06-Dec-19	** Vendor **	08-Jan-24	0.4
19L0660	br-NEtFOSAA	06-Dec-19	** Vendor **	20-Aug-24	0.4
19L0661	N-MeFOSA-M	06-Dec-19	** Vendor **	07-May-24	2
19L0662	N-EtFOSA-M	06-Dec-19	** Vendor **	07-May-24	2
19L0663	N-MeFOSE-M	06-Dec-19	** Vendor **	08-Apr-24	2
19L0664	N-EtFOSE-M	06-Dec-19	** Vendor **	08-Apr-24	2
19L0665	10:2FTS	06-Dec-19	** Vendor **	11-Jun-22	0.415
19L0666	HFPO-DA	06-Dec-19	** Vendor **	20-Sep-22	0.4
19L0667	11Cl-PF3OUdS	06-Dec-19	** Vendor **	23-Nov-24	0.425
19L0668	9Cl-PF3ONS	06-Dec-19	** Vendor **	30-Oct-24	0.43
19L0669	NaDONA	06-Dec-19	** Vendor **	15-Jul-24	0.425
19L0670	PFECHS	06-Dec-19	** Vendor **	04-Apr-24	0.435
19L0671	L-PFPrS	06-Dec-19	** Vendor **	14-Dec-24	0.438
19L1707	L-PFDoS	17-Dec-19	** Vendor **	06-Dec-23	0.415

Analytical Standard Record

Vista Analytical Laboratory

20A0803

Description:	PFC NS Stock	Expires:	07-Jan-21
Standard Type:	Analyte Spike	Prepared:	08-Jan-20
Solvent:	MeOH	Prepared By:	Brittany M. Lamb
Final Volume (mls):	20	Department:	LCMS
Vials:	1	Last Edit:	08-Jan-20 14:18 by BML

Analyte	CAS Number	Concentration	Units
L-PFHpA		1	ug/mL
L-PFOS		0.789	ug/mL
L-MeFOSA	31506-32-8	5	ug/mL
L-MeFOSAA	2355-31-9	0.76	ug/mL
L-MeFOSE	24448-09-7	5	ug/mL
L-PFBA		1	ug/mL
L-PFBS		1	ug/mL
L-PFDA		1	ug/mL
L-PFDoA		1	ug/mL
L-EtFOSAA	2991-50-6	0.776	ug/mL
L-PFDS		1	ug/mL
L-EtFOSA	4151-50-2	5	ug/mL
L-PFHpS		1	ug/mL
L-PFHxA		1	ug/mL
L-PFHxDA		1	ug/mL
L-PFHxS		0.812	ug/mL
L-PFNA		1	ug/mL
L-PFNS	68259-12-1	1	ug/mL
L-PFOA		1	ug/mL
10:2 FTS	120226-60-0	1	ug/mL
L-PFDoS		1	ug/mL
cis-PFECHS		0.668	ug/mL
11Cl-PF3OUdS	763051-92-9	1	ug/mL
4:2 FTS	757124-72-4	1	ug/mL
6:2 FTS	27619-97-2	1	ug/mL
8:2 FTS	39108-34-4	1	ug/mL
9Cl-PF3ONS	756426-58-1	1	ug/mL
ADONA	919005-14-4	1	ug/mL
Br-EtFOSAA		0.224	ug/mL
Br-MeFOSAA		0.24	ug/mL
L-EtFOSE	1691-99-2	5	ug/mL
Br-PFOS	2795-39-3	0.211	ug/mL
L-PFOSA		1	ug/mL
EtFOSA	4151-50-2	5	ug/mL

Analytical Standard Record

Vista Analytical Laboratory

20A0803

Description:	PFC NS Stock	Expires:	07-Jan-21
Standard Type:	Analyte Spike	Prepared:	08-Jan-20
Solvent:	MeOH	Prepared By:	Brittany M. Lamb
Final Volume (mls):	20	Department:	LCMS
Vials:	1	Last Edit:	08-Jan-20 14:18 by BML

Analyte	CAS Number	Concentration	Units
EtFOSAA	2991-50-6	1	ug/mL
EtFOSE	1691-99-2	5	ug/mL
F-53B Total		2	ug/mL
HFPO-DA	13252-13-6	1	ug/mL
L-4:2 FTS	75124-72-4	1	ug/mL
L-6:2 FTS		1	ug/mL
L-8:2FTS		1	ug/mL
Br-PFHxS	3871-99-6	0.189	ug/mL
Total 6:2 FTS		1	ug/mL
L-PFODA		1	ug/mL
PFODA	16517-11-6	1	ug/mL
PFOS	1763-23-1	1	ug/mL
PFOSA	754-91-6	1	ug/mL
PFPeA	2706-90-3	1	ug/mL
PFPeS	2706-91-4	1	ug/mL
PFPrS	423-41-6	1	ug/mL
PFTeDA	376-06-7	1	ug/mL
PFNS	68259-12-1	1	ug/mL
PFUnA	2058-94-8	1	ug/mL
PFNA	375-95-1	1	ug/mL
Total EtFOSAA		1	ug/mL
Total MeFOSAA		1	ug/mL
Total PFDS		1	ug/mL
Total PFHpS		1	ug/mL
Total PFHxS		1	ug/mL
Total PFOA		1	ug/mL
Total PFOS		1	ug/mL
Total PFUnA		1	ug/mL
PFTrDA	72629-94-8	1	ug/mL
PFDA	335-76-2	1	ug/mL
L-PFPeA		1	ug/mL
L-PFPeS	2706-91-4	1	ug/mL
L-PFTeDA		1	ug/mL
L-PFTrDA		1	ug/mL

Analytical Standard Record

Vista Analytical Laboratory

20A0803

Description:	PFC NS Stock	Expires:	07-Jan-21
Standard Type:	Analyte Spike	Prepared:	08-Jan-20
Solvent:	MeOH	Prepared By:	Brittany M. Lamb
Final Volume (mls):	20	Department:	LCMS
Vials:	1	Last Edit:	08-Jan-20 14:18 by BML

Analyte	CAS Number	Concentration	Units
L-PFUnA		1	ug/mL
MeFOSA	31506-32-8	5	ug/mL
MeFOSAA	2355-31-9	1	ug/mL
MeFOSE	24448-09-7	5	ug/mL
PFOA	335-67-1	1	ug/mL
PFBS	375-73-5	1	ug/mL
trans-PFECHS		0.335	ug/mL
PFDoA	307-55-1	1	ug/mL
PFDS	335-77-3	1	ug/mL
PFecHS	646-83-3	1	ug/mL
PFHpA	375-85-9	1	ug/mL
PFHpS	375-92-8	1	ug/mL
PFHxA	307-24-4	1	ug/mL
PFHxDA	67905-19-5	1	ug/mL
PFHxS	355-46-4	1	ug/mL
PFBA	375-22-4	1	ug/mL

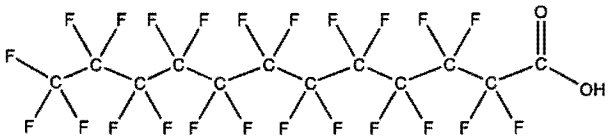
19L0635

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFDoA
COMPOUND: Perfluoro-n-dodecanoic acid
LOT NUMBER: PFDoA0119

STRUCTURE:
CAS #: 307-55-1



MOLECULAR FORMULA: $C_{12}HF_{23}O_2$
MOLECULAR WEIGHT: 614.10
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/23/2019
EXPIRY DATE: (mm/dd/yyyy) 01/23/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 01/30/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0635

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

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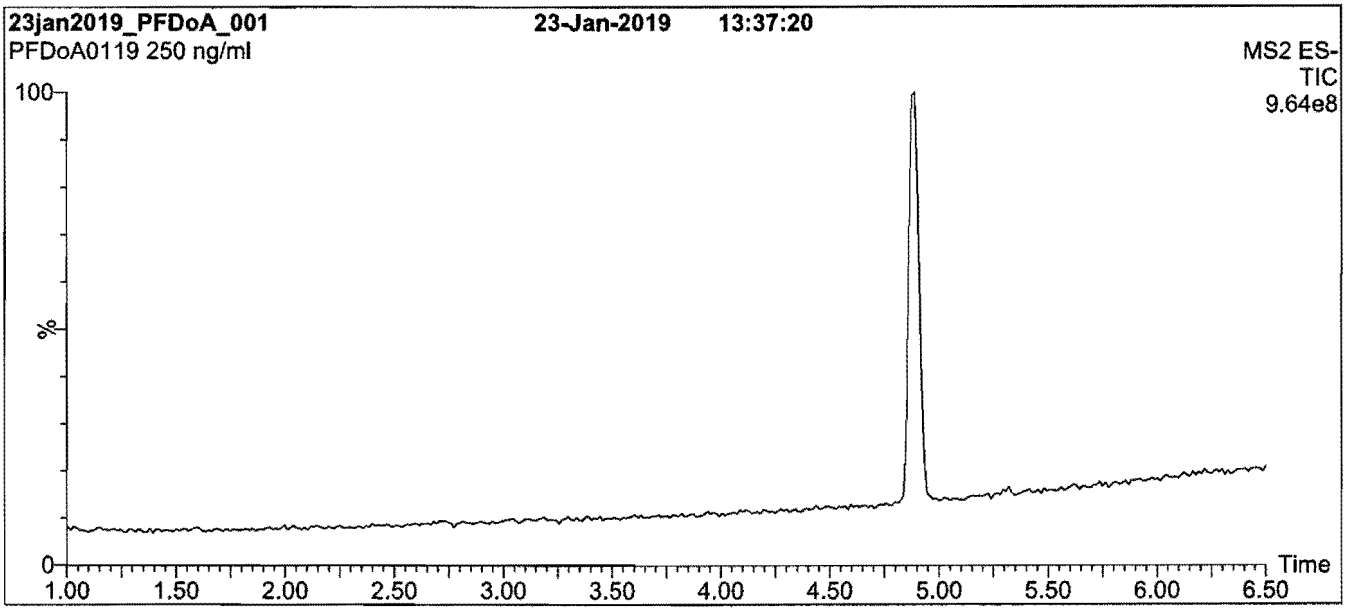
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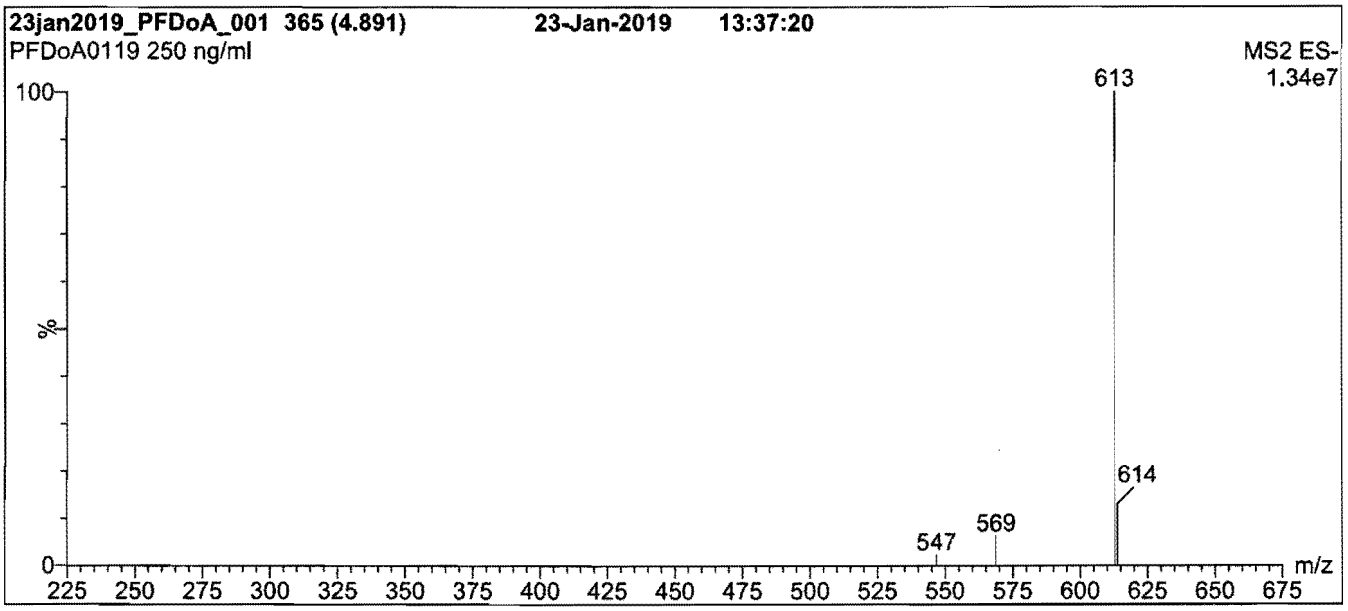
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0635

- **Figure 1:** **PFDoA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 3 min
before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

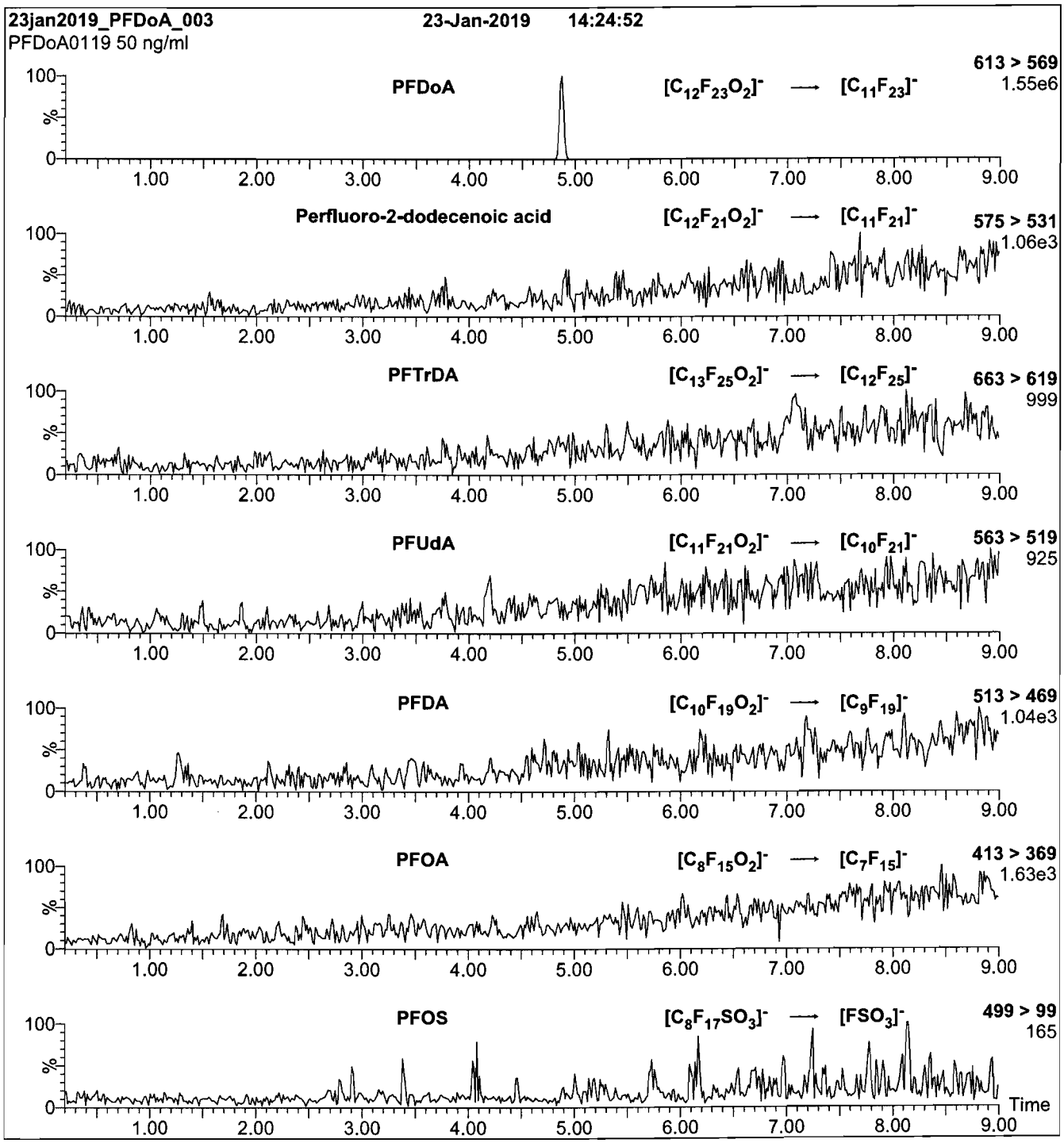
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Cone Gas Flow (l/hr) = 500
Desolvation Gas Flow (l/hr) = 1000

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Figure 2: **PFDoA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFDoA)

Mobile phase: Same as Figure 1

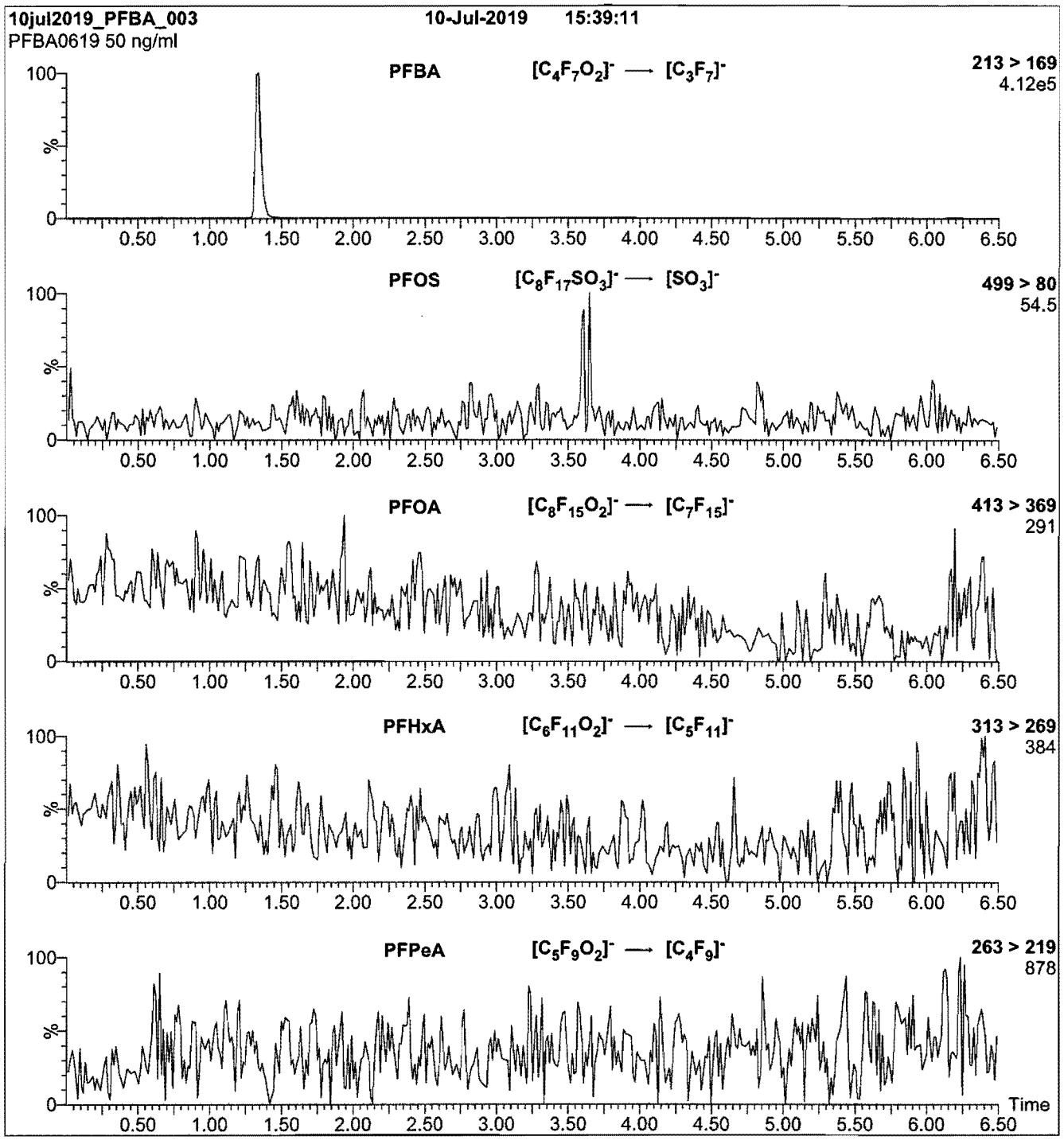
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.72e-3
Collision Energy (eV) = 12

19L0636

Figure 2: **PFBA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFBA)

Mobile phase: Same as Figure 1

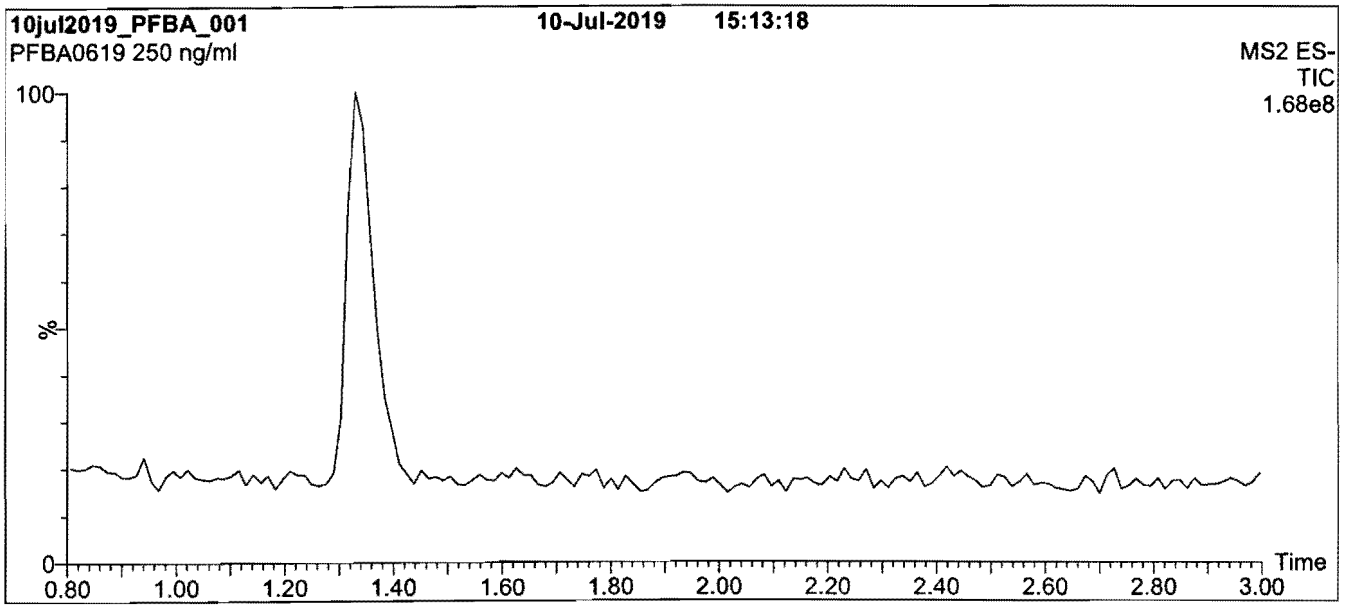
Flow: 300 µl/min

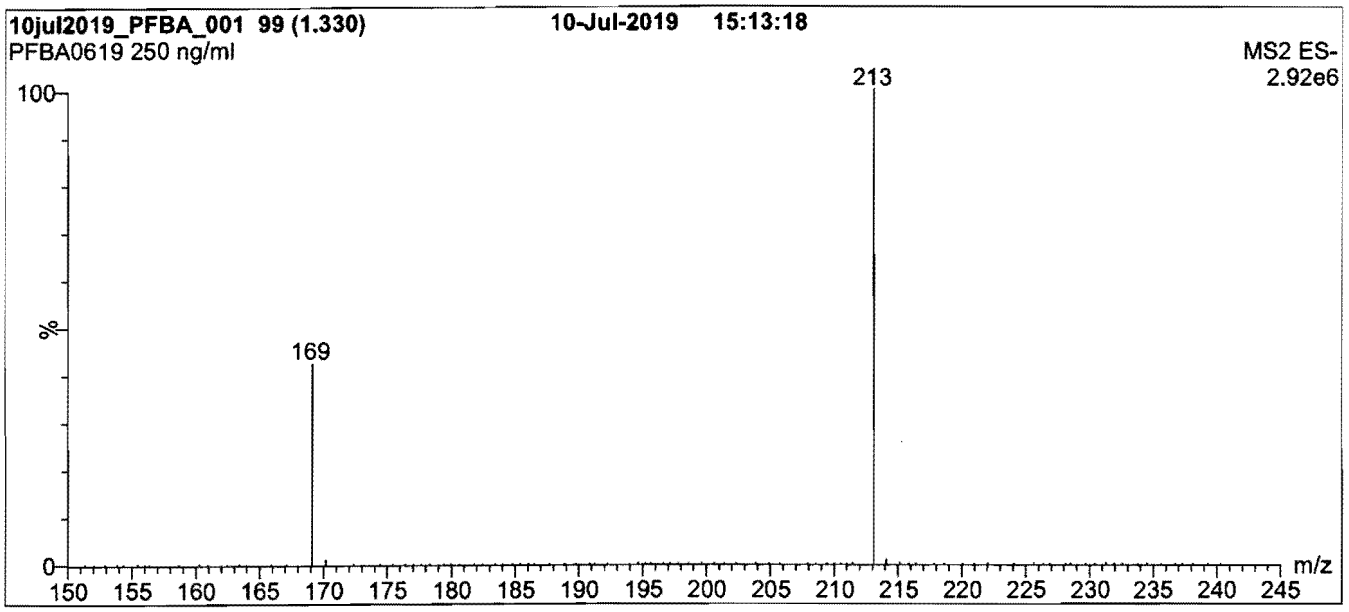
MS Parameters

Collision Gas (mbar) = 3.43e-3
Collision Energy (eV) = 8

1910636

Figure 1: **PFBA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% (80:20 MeOH:ACN) / 60% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 70% organic over 7 min.
Ramp to 90% organic over 2 min and hold for
1.5 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0636

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

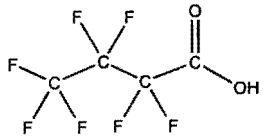
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19L0636

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFBA	**LOT NUMBER:**	PFBA0619
COMPOUND:	Perfluoro-n-butanoic acid		
STRUCTURE:		**CAS #:**	375-22-4



MOLECULAR FORMULA:	$C_4HF_7O_2$	**MOLECULAR WEIGHT:**	214.04
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	07/10/2019		
EXPIRY DATE: (mm/dd/yyyy)	07/10/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

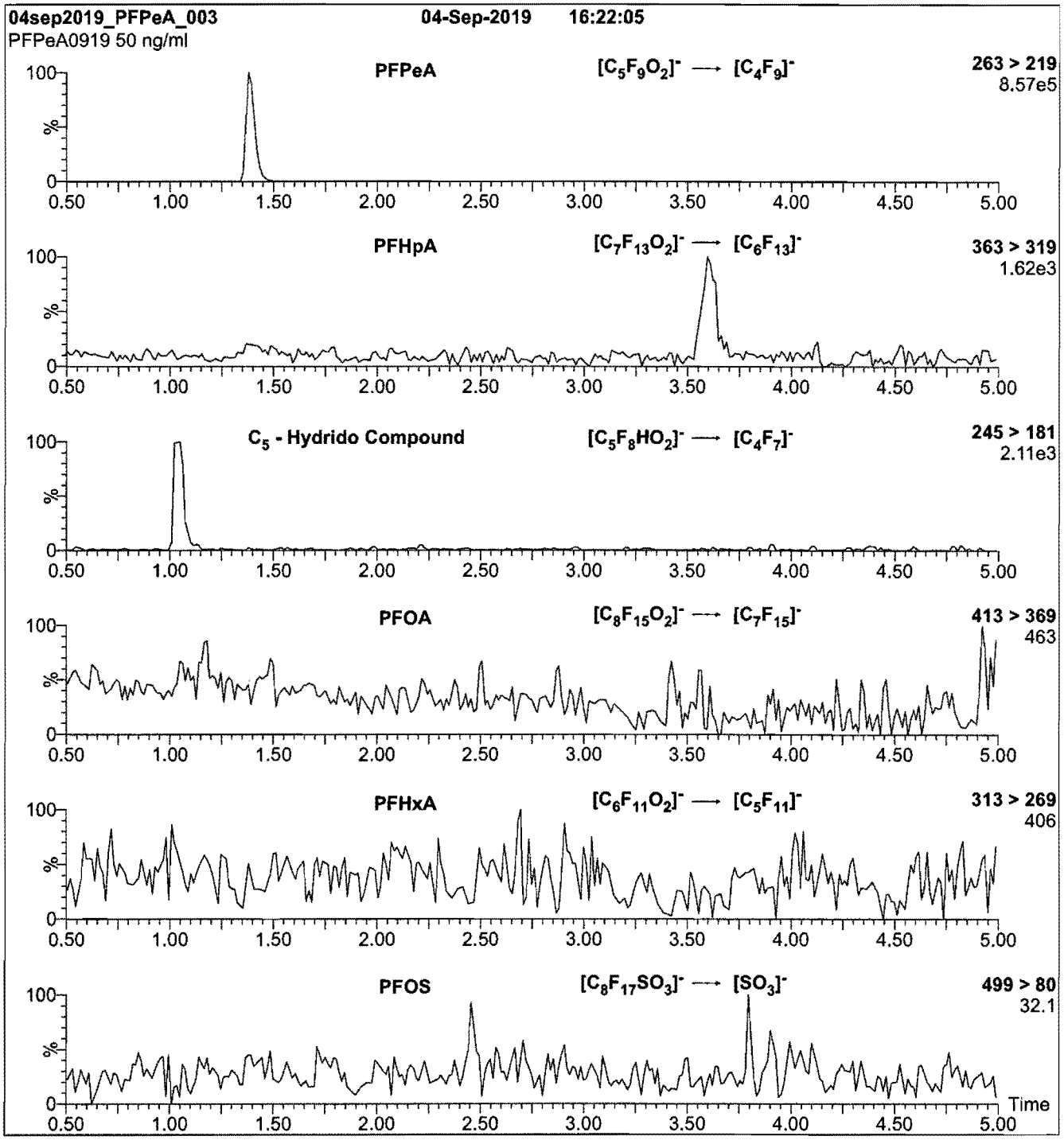
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/22/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **PFPeA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFPeA)

Mobile phase: Same as Figure 1

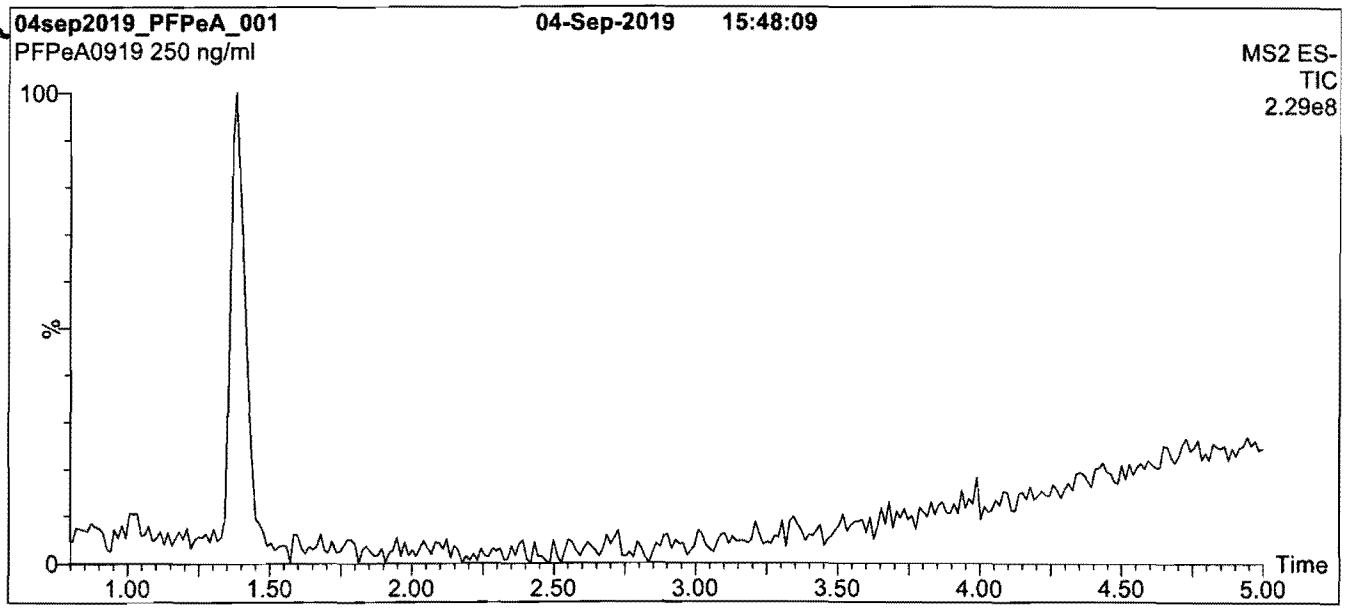
Flow: 300 µl/min

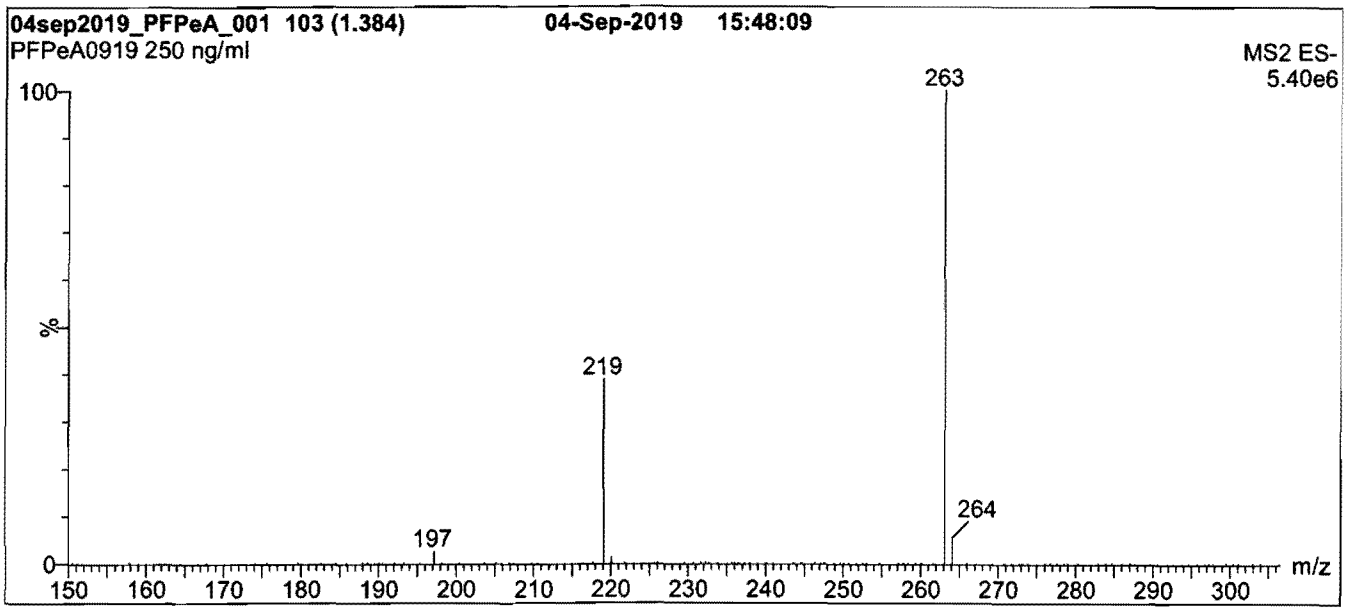
MS Parameters

Collision Gas (mbar) = 3.51e-3
Collision Energy (eV) = 8

1920637

Figure 1: **PFPeA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

1926637

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

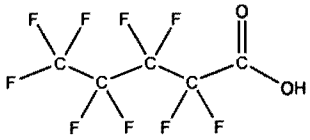
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19L0637

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFPeA	**LOT NUMBER:**	PFPeA0919
COMPOUND:	Perfluoro-n-pentanoic acid		
STRUCTURE:		**CAS #:**	2706-90-3



MOLECULAR FORMULA:	$C_5HF_9O_2$	**MOLECULAR WEIGHT:**	264.05
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	09/04/2019		
EXPIRY DATE: (mm/dd/yyyy)	09/04/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

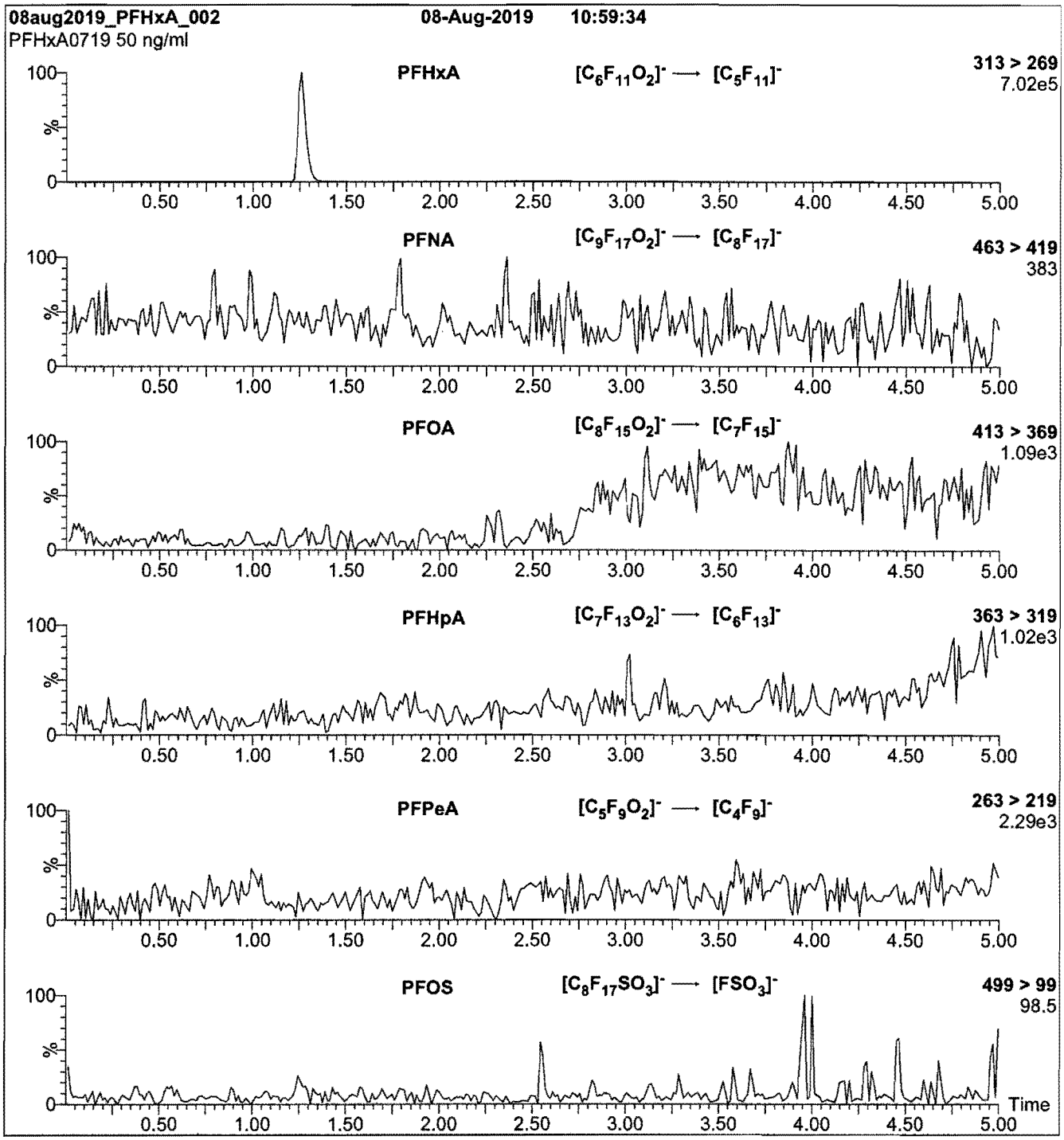
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.3% of Perfluoro-n-heptanoic acid (PFHpA) and ~ 0.2% of $C_5H_2F_8O_2$ (hydrido - derivative) as measured by ^{19}F NMR.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 09/05/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **PFHxA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFHxA)

Mobile phase: Same as Figure 1

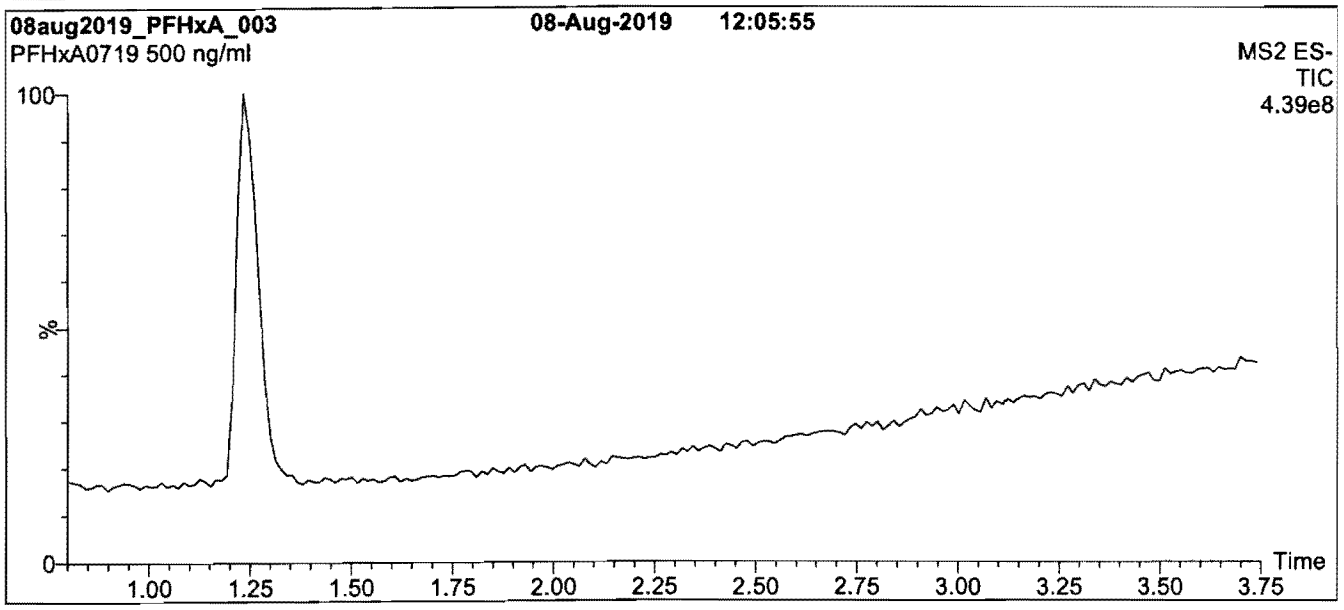
Flow: 300 µl/min

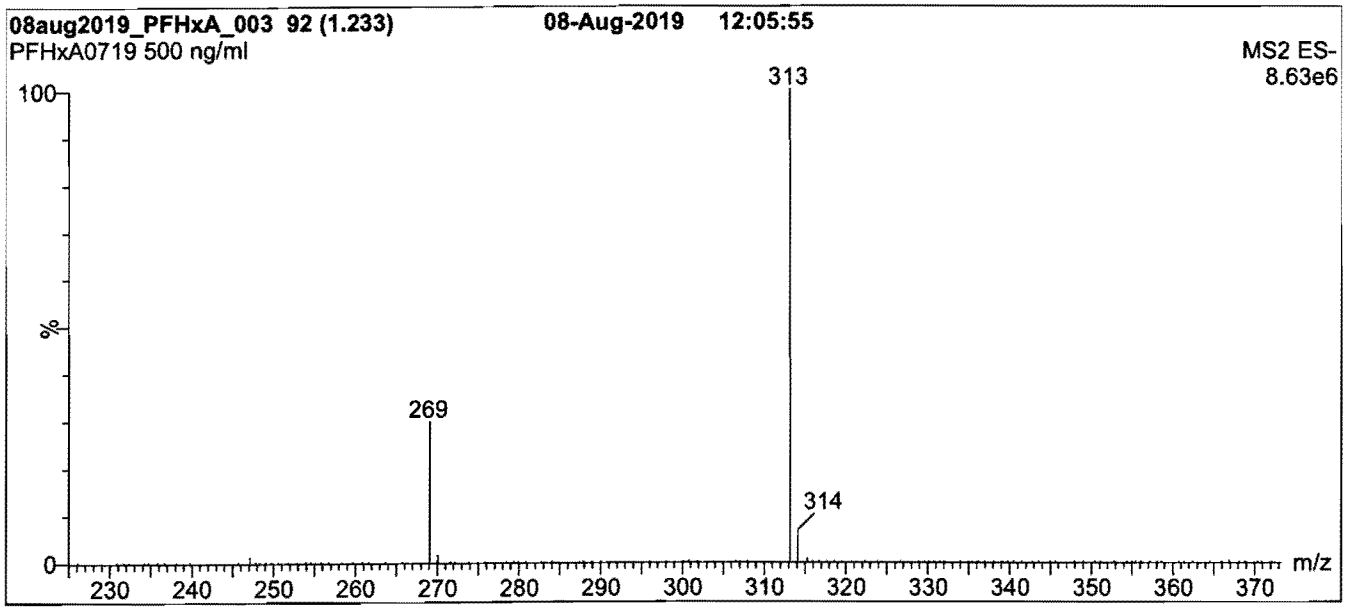
MS Parameters

Collision Gas (mbar) = 3.49e-3
Collision Energy (eV) = 8

19L0638

Figure 1: **PFHxA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

INTENDED USE:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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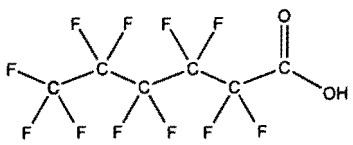
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFHxA
LOT NUMBER: PFHxA0719
COMPOUND: Perfluoro-n-hexanoic acid

STRUCTURE:

CAS #: 307-24-4



MOLECULAR FORMULA: $C_6HF_{11}O_2$
MOLECULAR WEIGHT: 314.05
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/08/2019
EXPIRY DATE: (mm/dd/yyyy) 08/08/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 1.0% of branched isomers.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/15/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

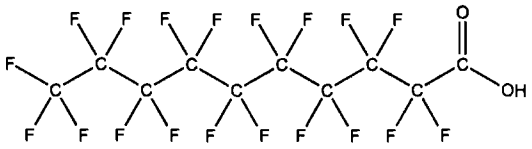
Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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19L0639

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	PFDA	**LOT NUMBER:**	PFDA0419
COMPOUND:	Perfluoro-n-decanoic acid		
STRUCTURE:		**CAS #:**	335-76-2



MOLECULAR FORMULA:	$C_{10}HF_{19}O_2$	**MOLECULAR WEIGHT:**	514.08
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	05/01/2019		
EXPIRY DATE: (mm/dd/yyyy)	05/01/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.2% of perfluoro-n-nonanoic acid (PFNA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/02/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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INTENDED USE:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

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where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

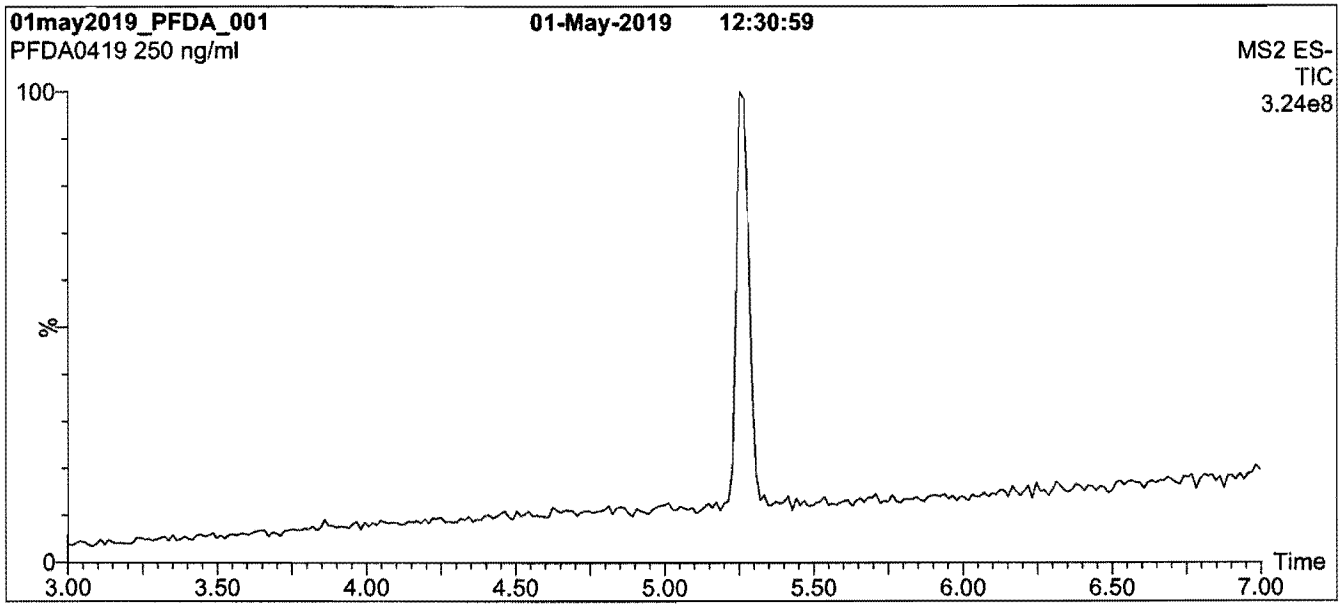
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

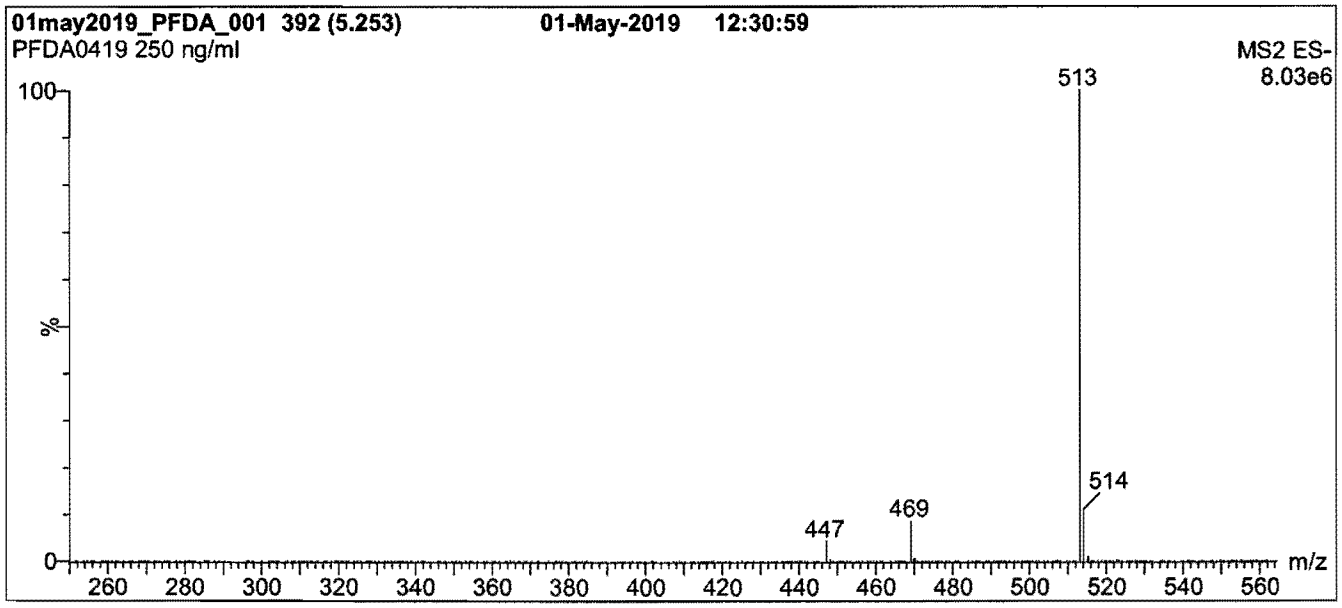
CALA Testing Accreditation No. A 1226

ANAB ACCREDITED 17034 REFERENCE MATERIAL PRODUCER

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Figure 1: **PFDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 11 min

Flow: 300 µl/min

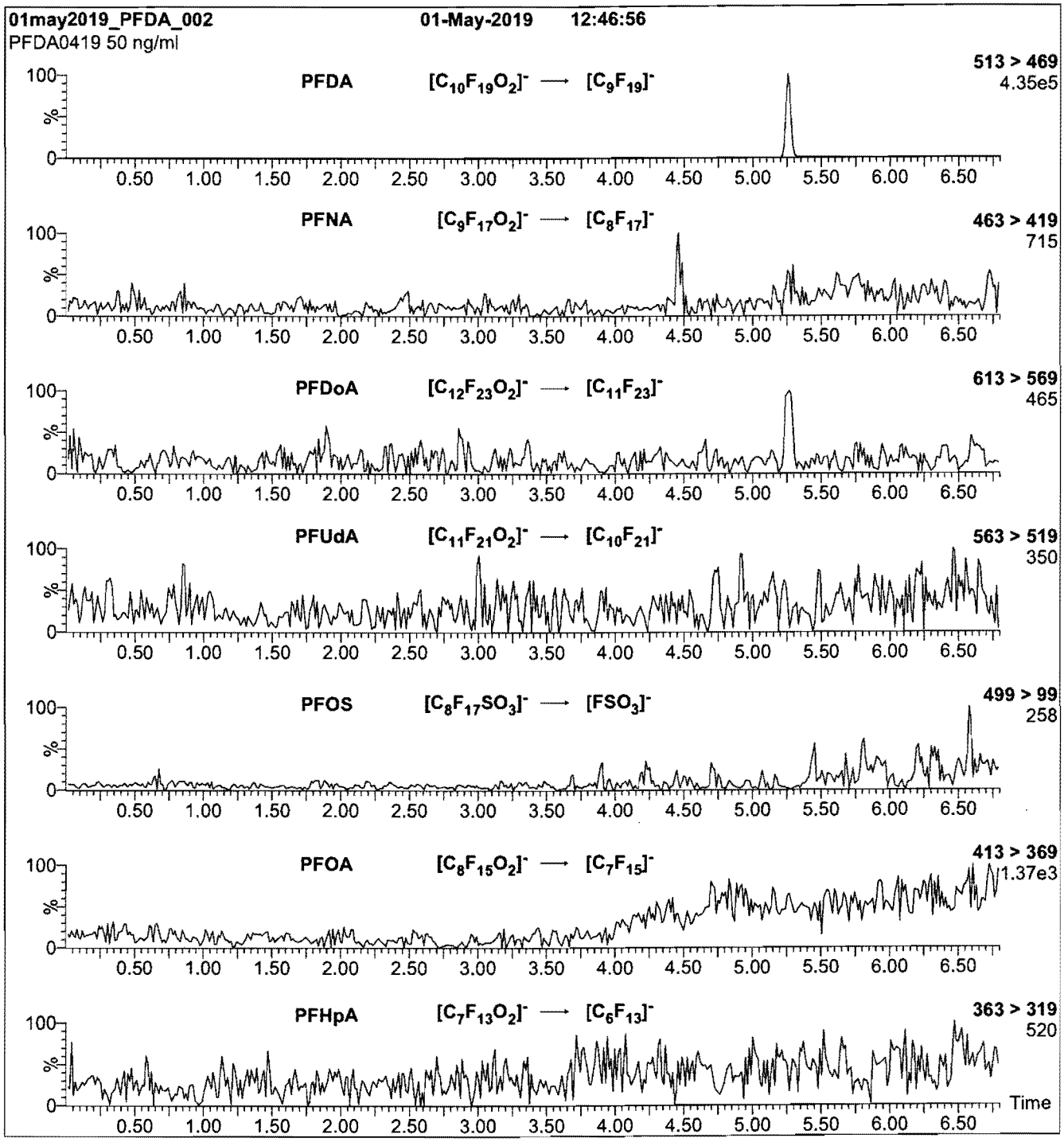
MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0639

Figure 2: **PFDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFDA)

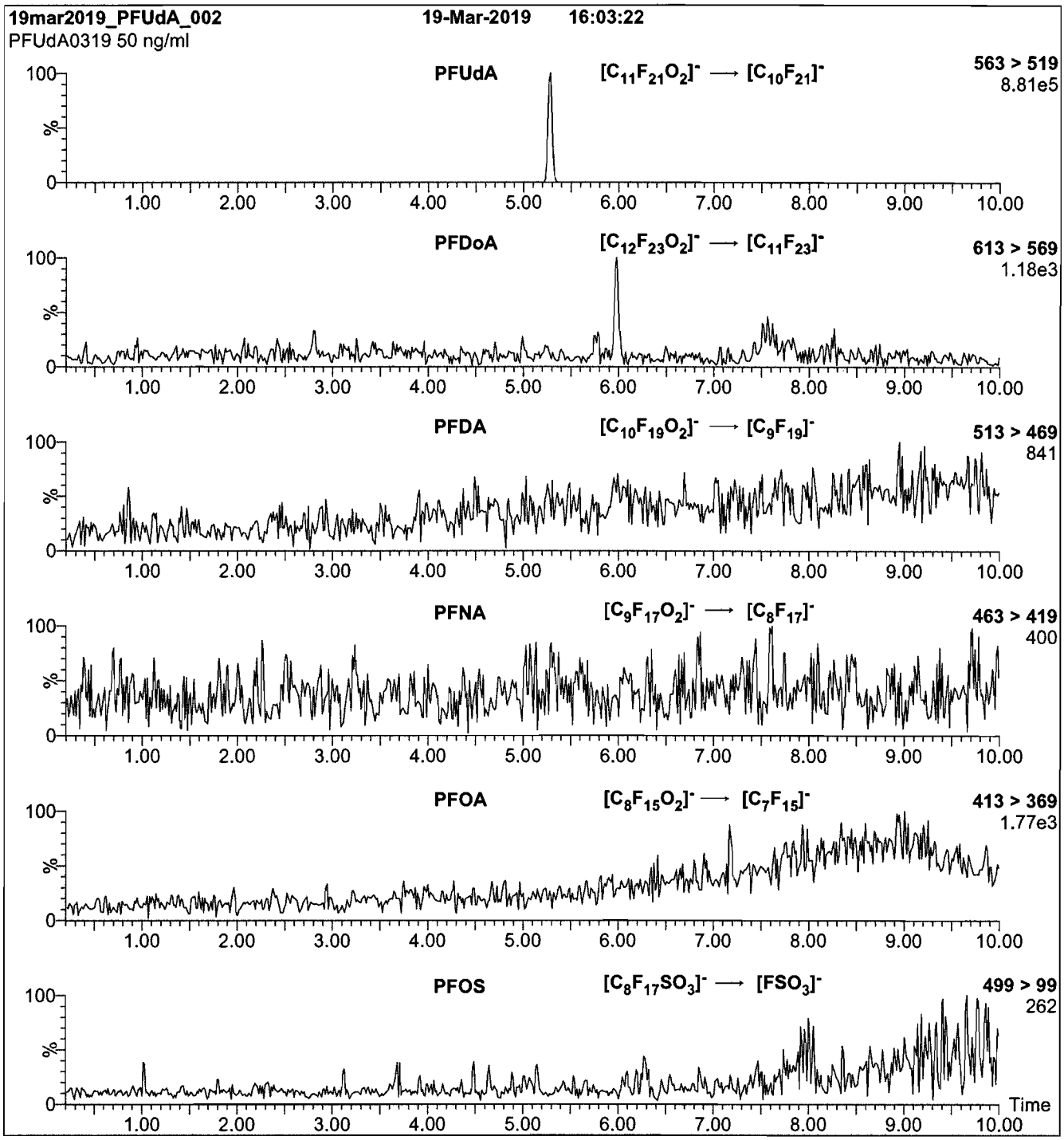
Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.88e-3
Collision Energy (eV) = 10

Figure 2: **PFUdA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFUdA)

Mobile phase: Same as Figure 1

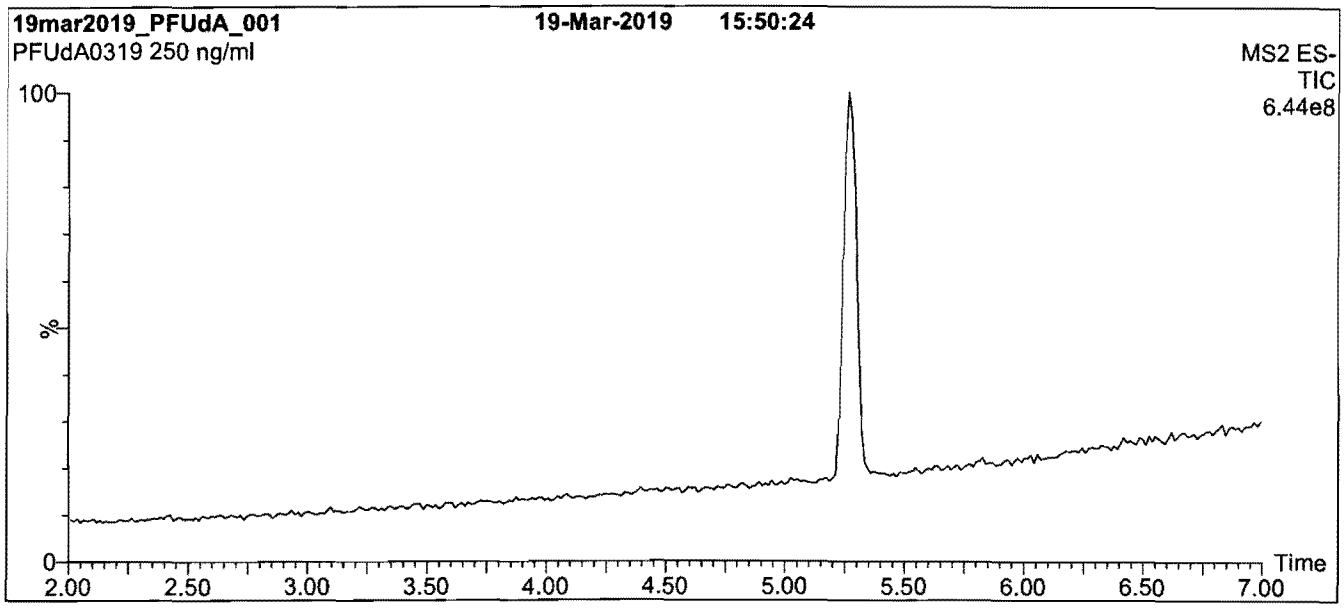
Flow: 300 µl/min

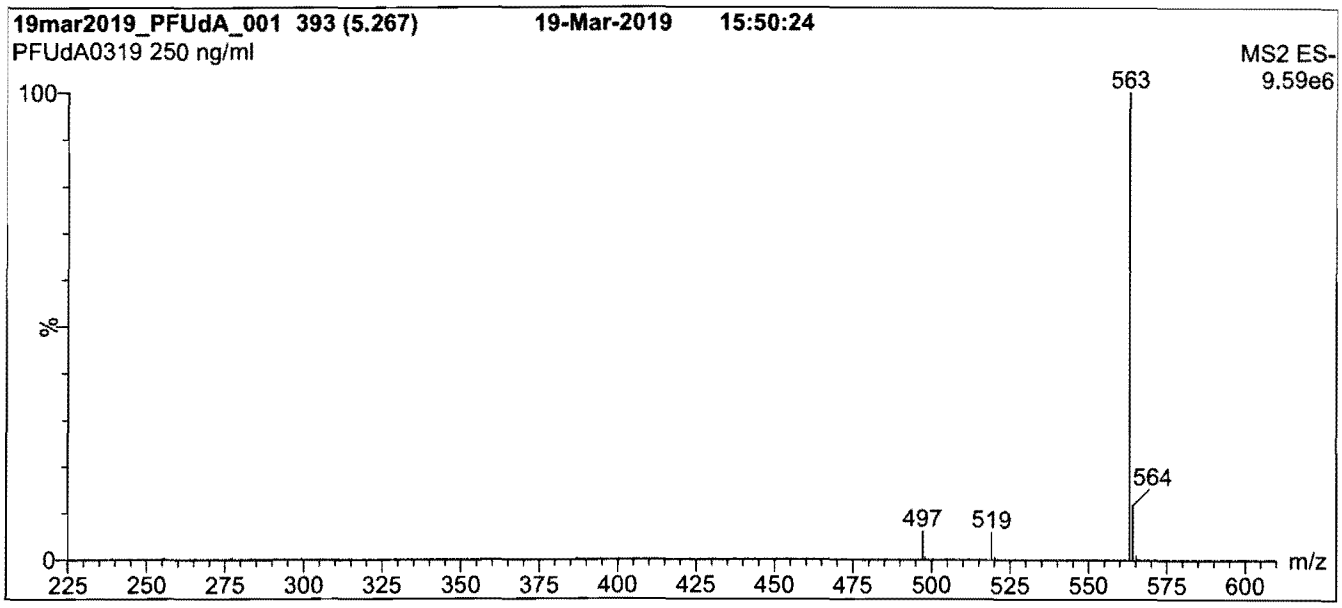
MS Parameters

Collision Gas (mbar) = 3.04e-3
Collision Energy (eV) = 12

19L0690

Figure 1: **PFUdA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0640

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

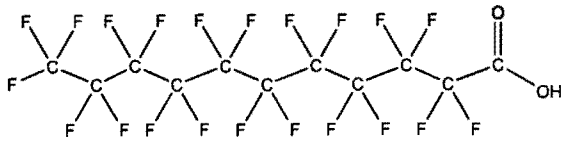
19L0640

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFUdA
COMPOUND: Perfluoro-n-undecanoic acid
LOT NUMBER: PFUdA0319

STRUCTURE:
CAS #: 2058-94-8



MOLECULAR FORMULA: $C_{11}HF_{21}O_2$
MOLECULAR WEIGHT: 564.09
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 03/19/2019
EXPIRY DATE: (mm/dd/yyyy) 03/19/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.1% of pefluoro-n-dodecanoic acid (PFDoA).

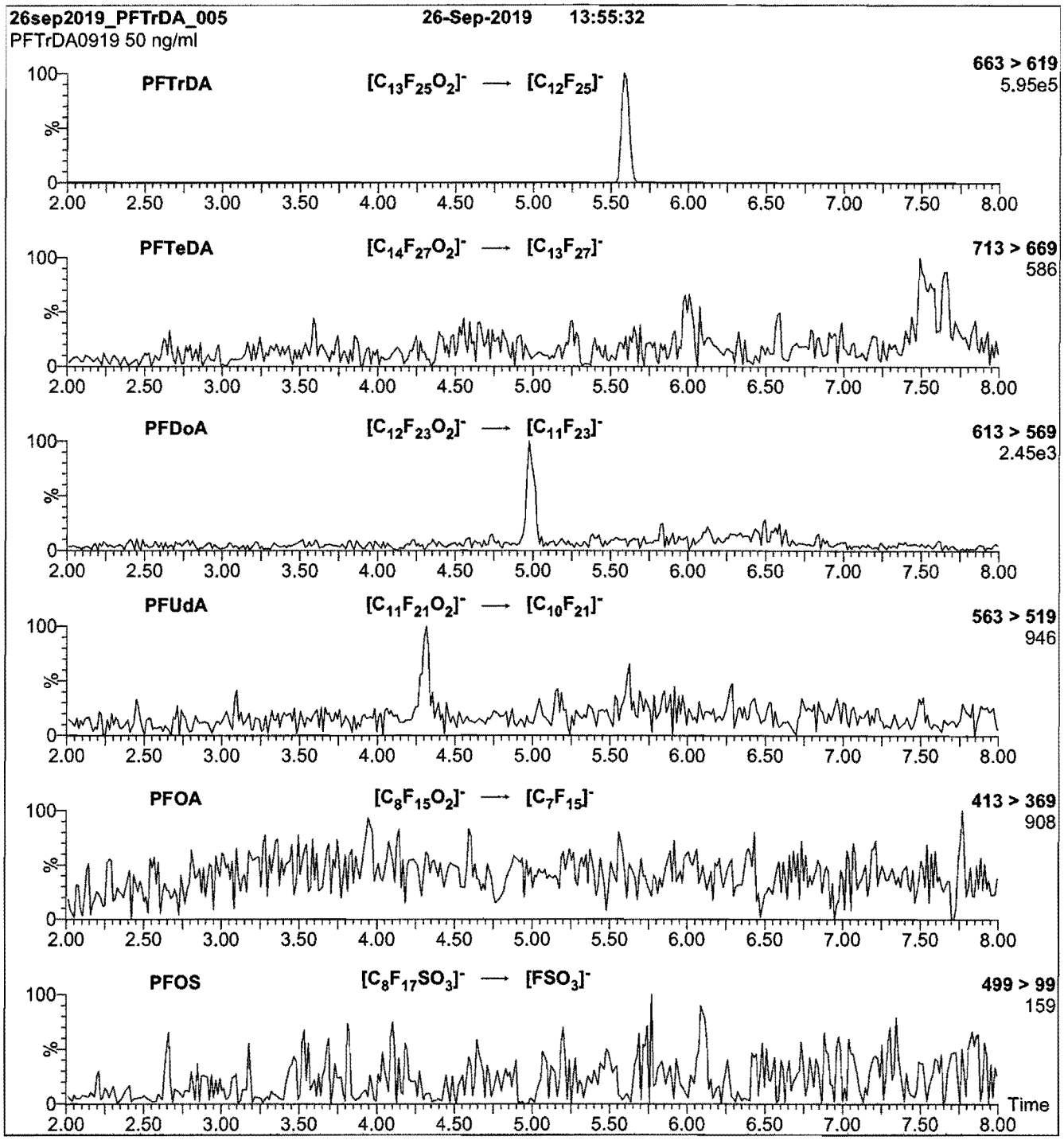
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 03/21/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0641

Figure 2: **PFTrDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFTrDA)

Mobile phase: Same as Figure 1

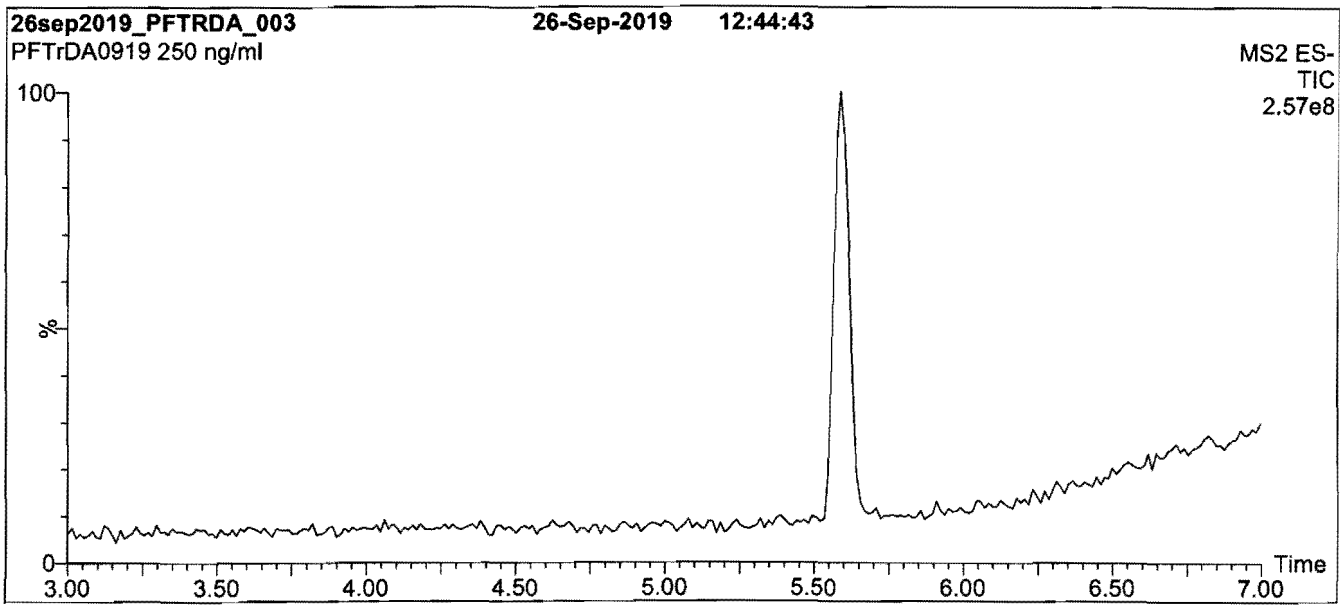
Flow: 300 µl/min

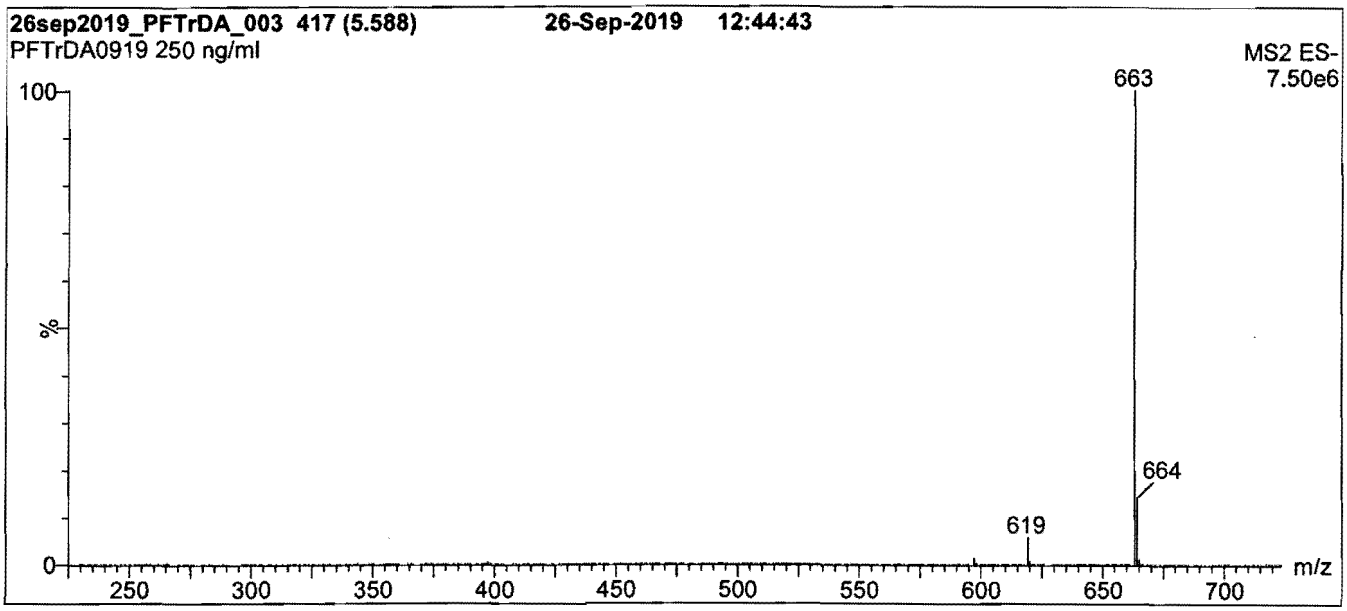
MS Parameters

Collision Gas (mbar) = 3.73e-3
Collision Energy (eV) = 12

1920641

Figure 1: **PFTrDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0641

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

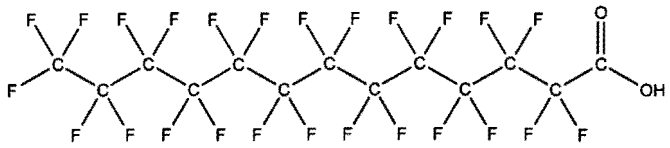
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0691

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFTrDA	**LOT NUMBER:**	PFTrDA0919
COMPOUND:	Perfluoro-n-tridecanoic acid		
STRUCTURE:		**CAS #:**	72629-94-8



MOLECULAR FORMULA:	$C_{13}HF_{25}O_2$	**MOLECULAR WEIGHT:**	664.11
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	09/26/2019		
EXPIRY DATE: (mm/dd/yyyy)	09/26/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.1% of PFUdA ($C_{11}HF_{21}O_2$), ~ 0.4% of PFDoA ($C_{12}HF_{23}O_2$), and ~ 0.1% of PFTeDA ($C_{14}HF_{27}O_2$).

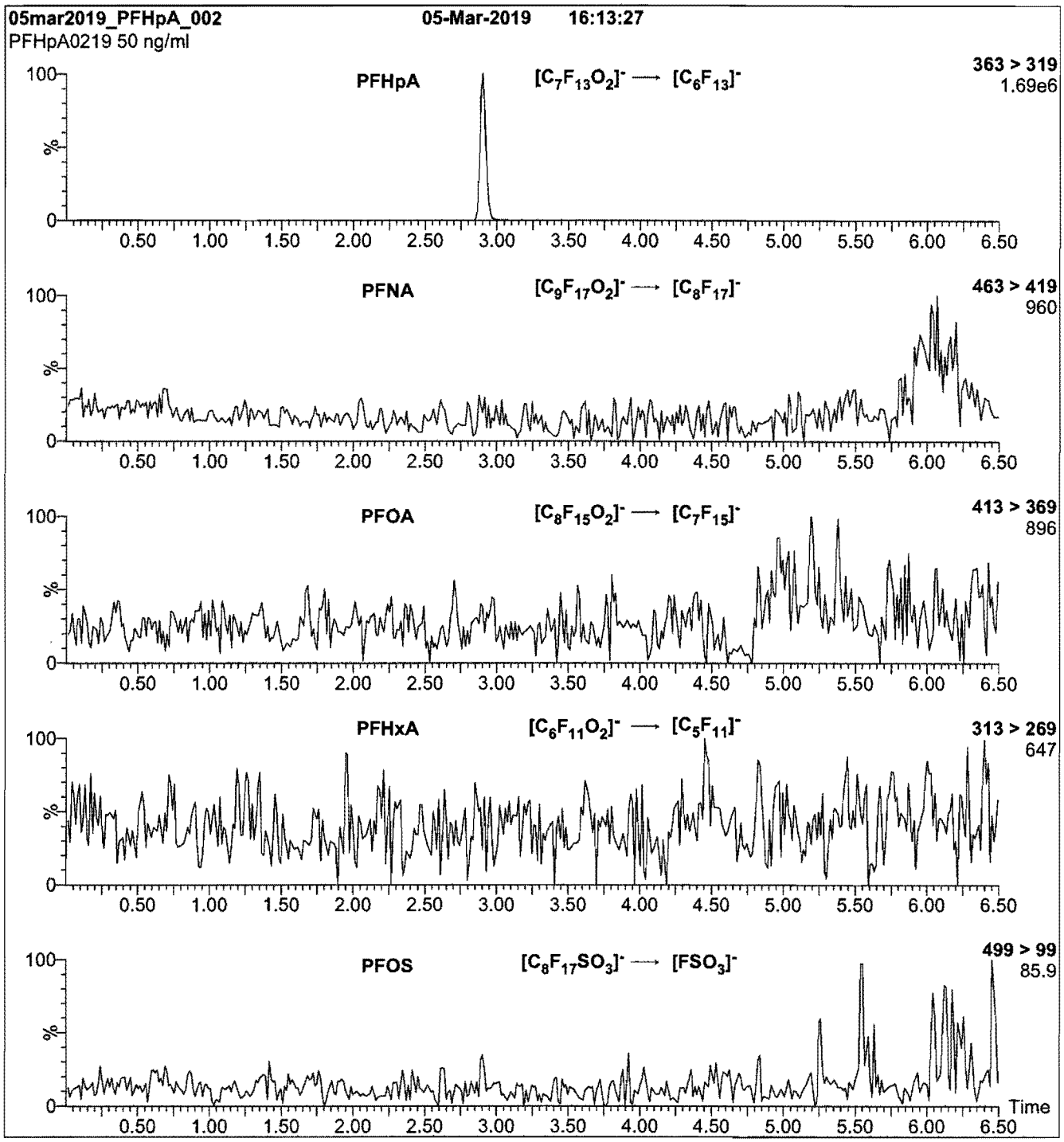
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 10/03/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0642

Figure 2: **PFHpA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFHpA)

Mobile phase: Same as Figure 1

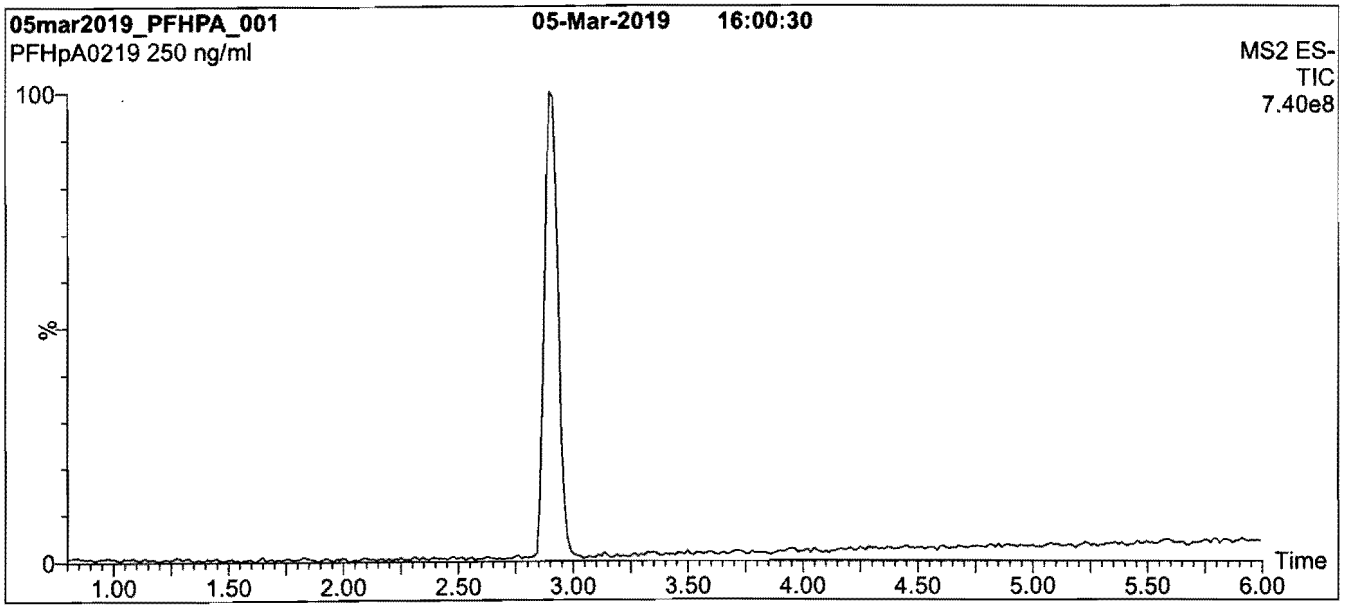
Flow: 300 µl/min

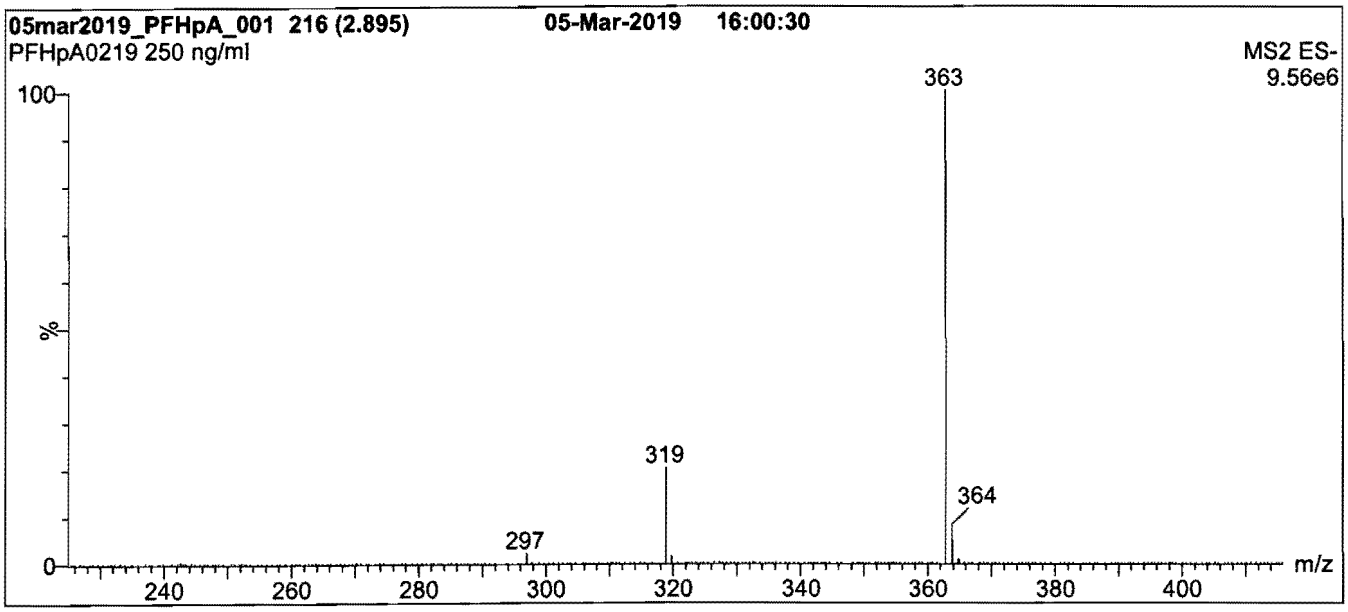
MS Parameters

Collision Gas (mbar) = 2.74e-3
Collision Energy (eV) = 8

19L0642

Figure 1: **PFHpA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0642

INTENDED USE:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

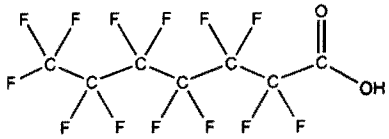
19L0642

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFHpA
COMPOUND: Perfluoro-n-heptanoic acid
LOT NUMBER: PFHpA0219

STRUCTURE:
CAS #: 375-85-9



MOLECULAR FORMULA: $C_7HF_{13}O_2$
MOLECULAR WEIGHT: 364.06
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 03/05/2019
EXPIRY DATE: (mm/dd/yyyy) 03/05/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

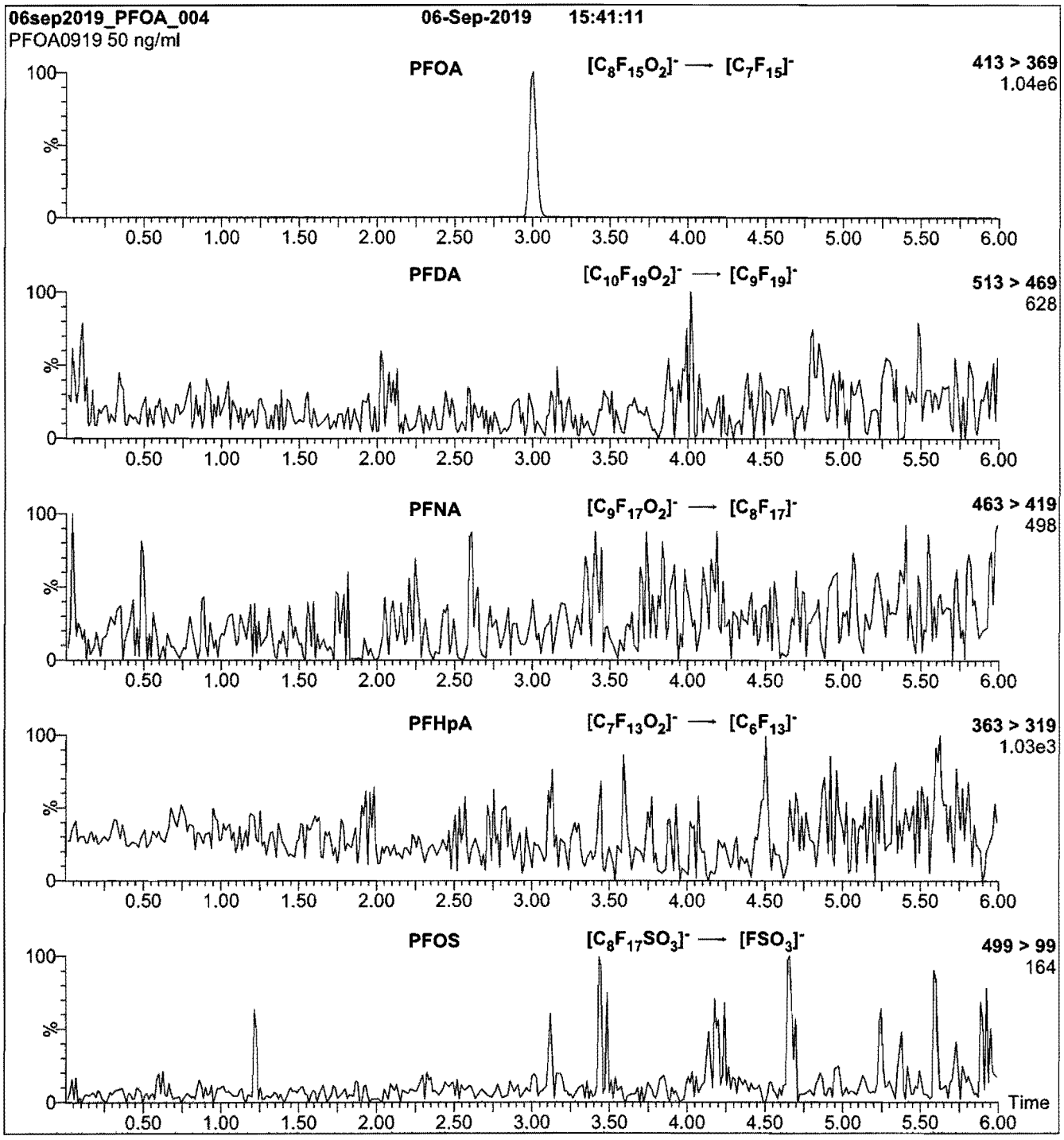
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 03/18/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **PFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFOA)

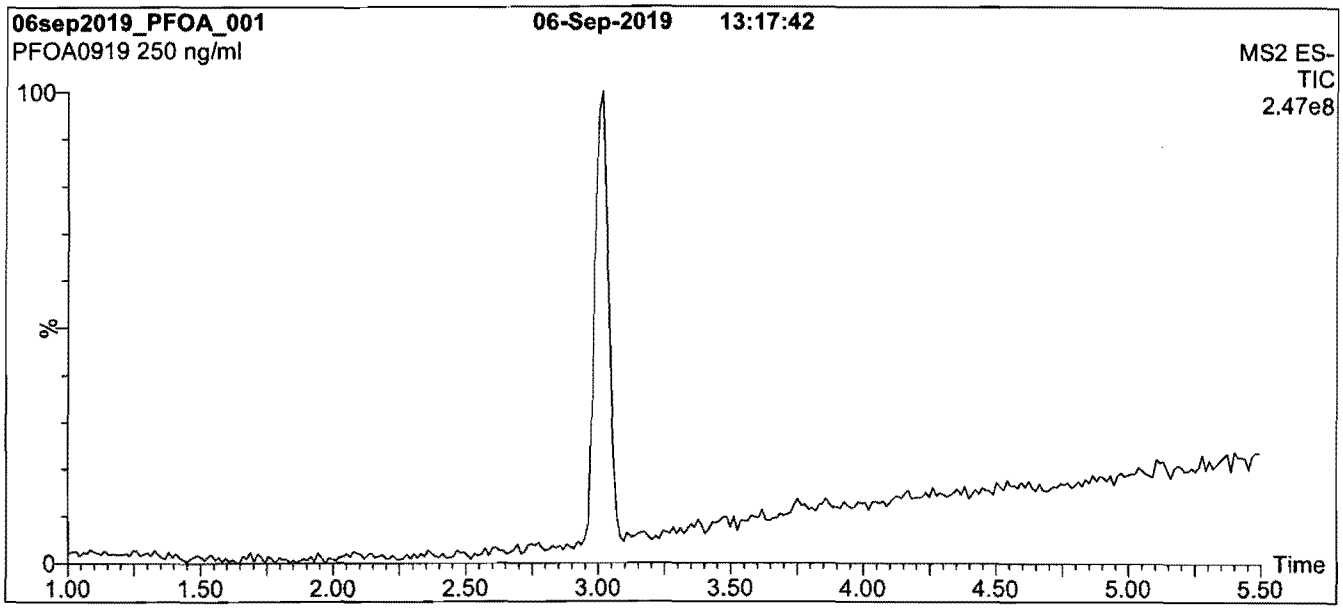
Mobile phase: Same as Figure 1

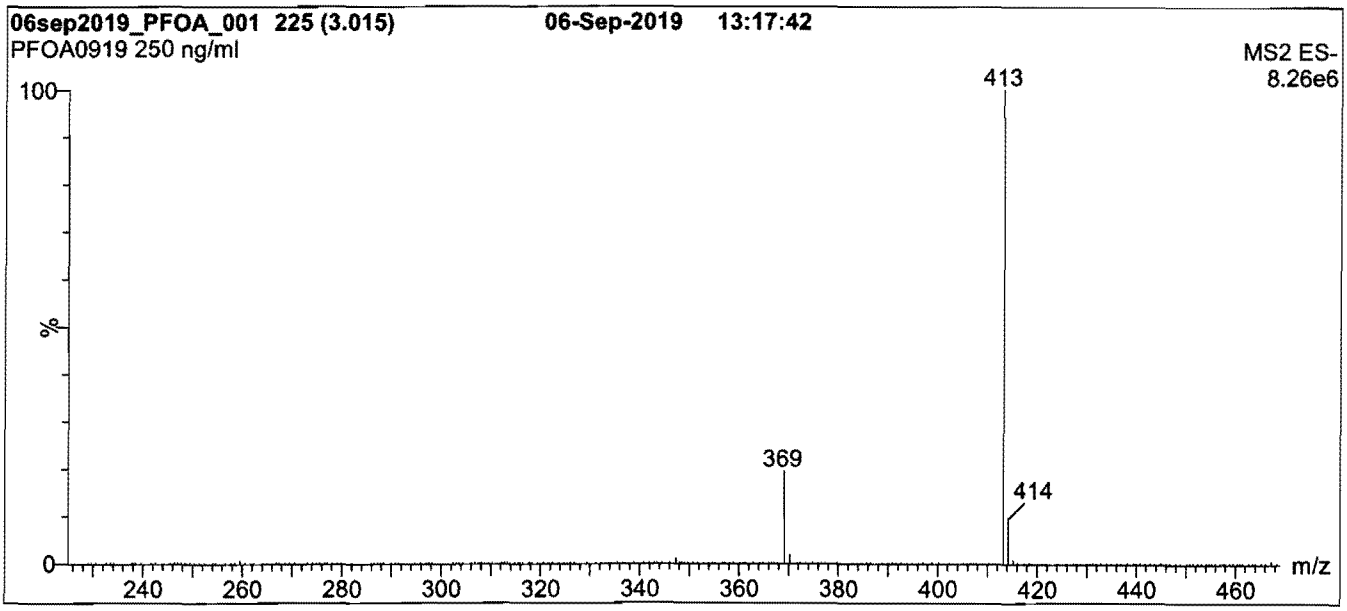
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.49e-3
Collision Energy (eV) = 8

Figure 1: **PFOA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0643

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

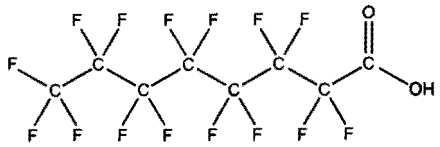
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0643

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFOA	**LOT NUMBER:**	PFOA0919
COMPOUND:	Perfluoro-n-octanoic acid		
STRUCTURE:		**CAS #:**	335-67-1



MOLECULAR FORMULA:	$C_8HF_{15}O_2$	**MOLECULAR WEIGHT:**	414.07
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	09/06/2019		
EXPIRY DATE: (mm/dd/yyyy)	09/06/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

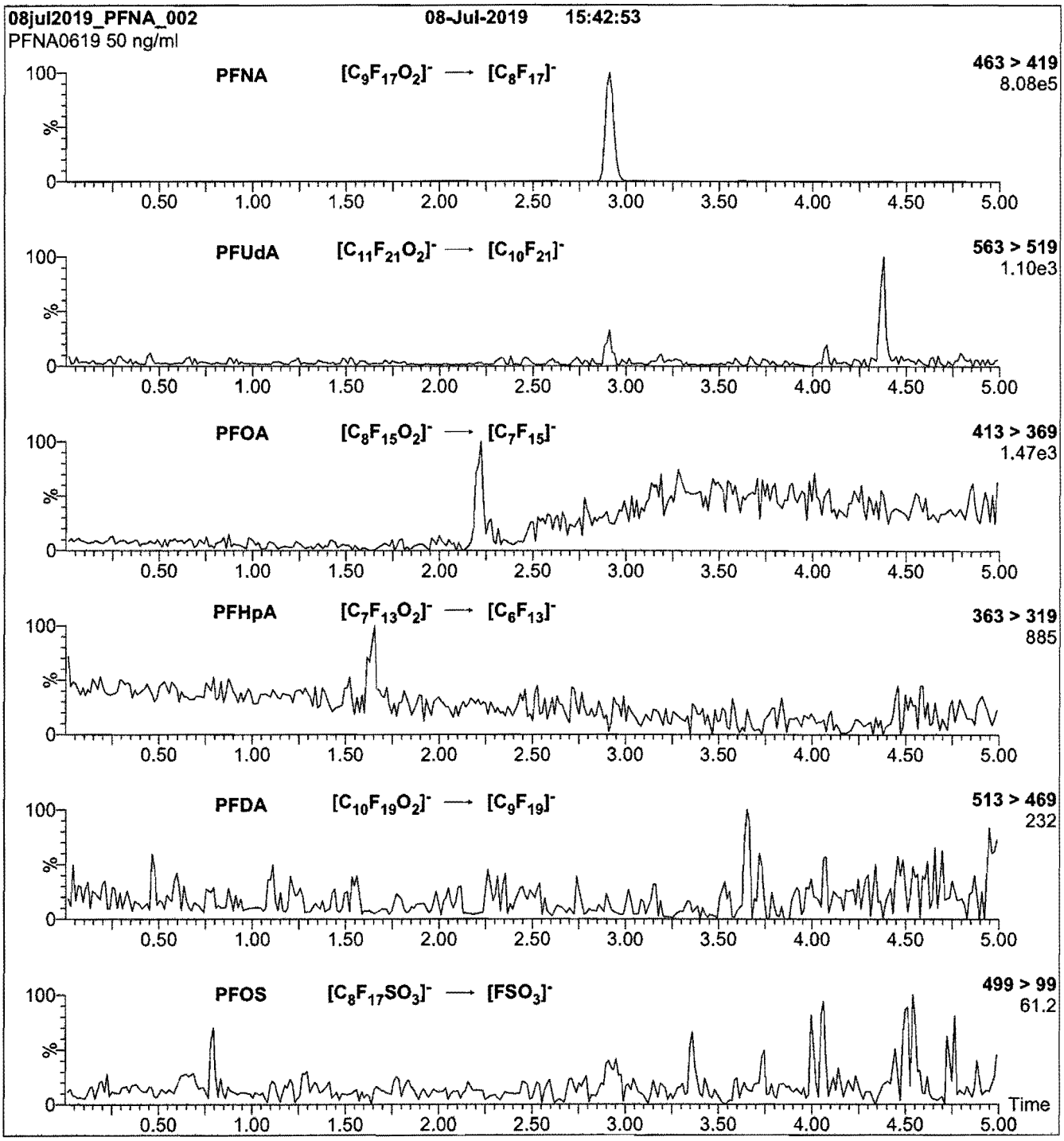
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 09/09/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0644

Figure 2: **PFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFNA)

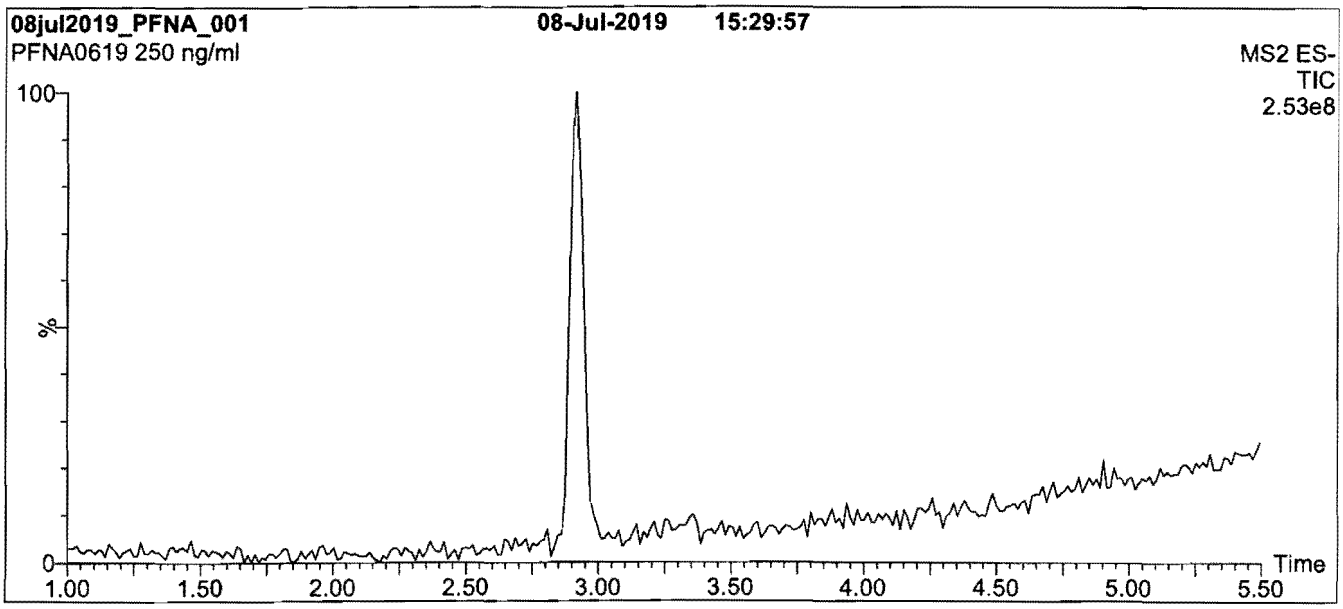
Mobile phase: Same as Figure 1

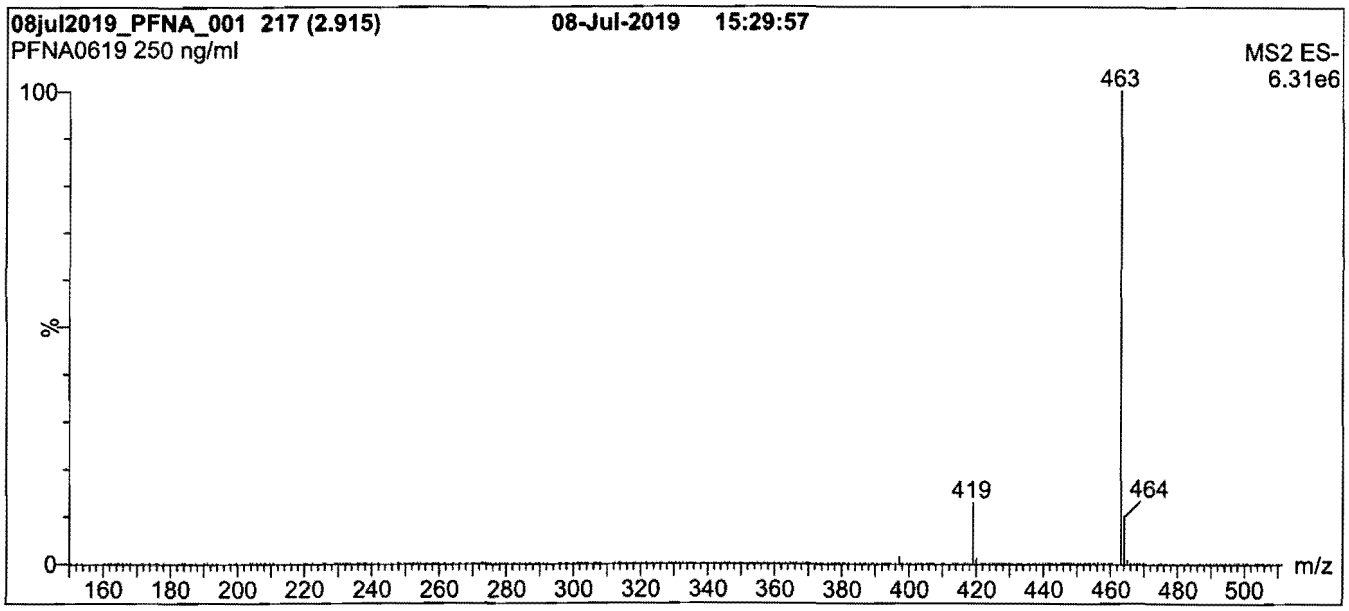
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.35e-3
Collision Energy (eV) = 10

Figure 1: **PFNA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0644

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

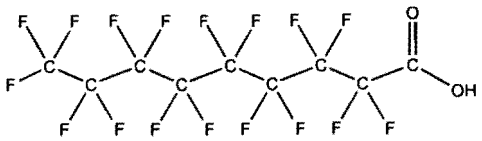
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0644

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFNA
LOT NUMBER: PFNA0619
COMPOUND: Perfluoro-n-nonanoic acid
STRUCTURE:
CAS #: 375-95-1



MOLECULAR FORMULA: $C_9HF_{17}O_2$
MOLECULAR WEIGHT: 464.08
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/08/2019
EXPIRY DATE: (mm/dd/yyyy) 07/08/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.2% of perfluoro-n-octanoic acid (PFOA), < 0.1% of perfluoro-n-heptanoic acid (PFHpA), and < 0.1% of perfluoro-n-undecanoic acid (PFUdA).

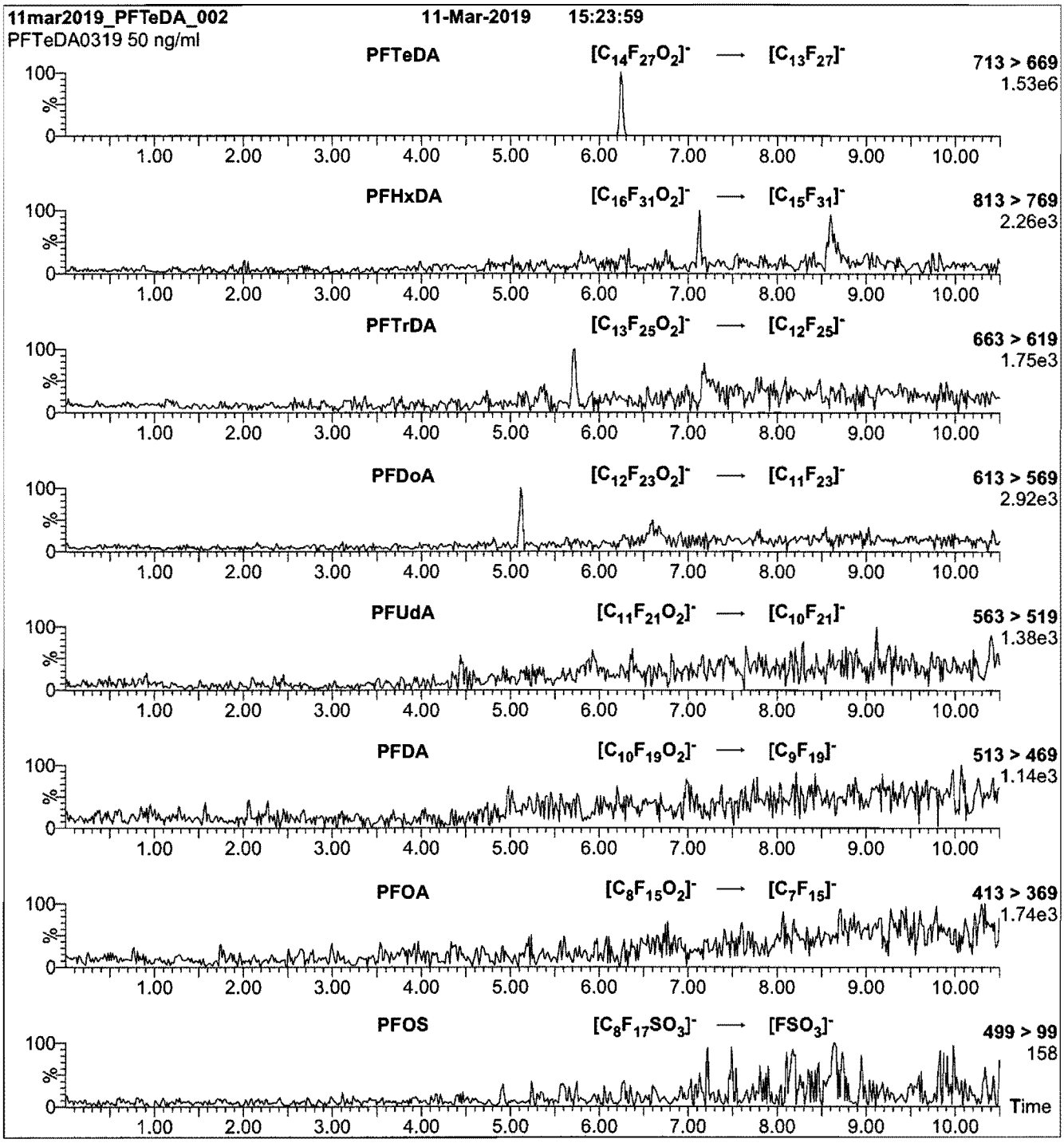
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/11/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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Figure 2: **PFTeDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFTeDA)

Mobile phase: Same as Figure 1

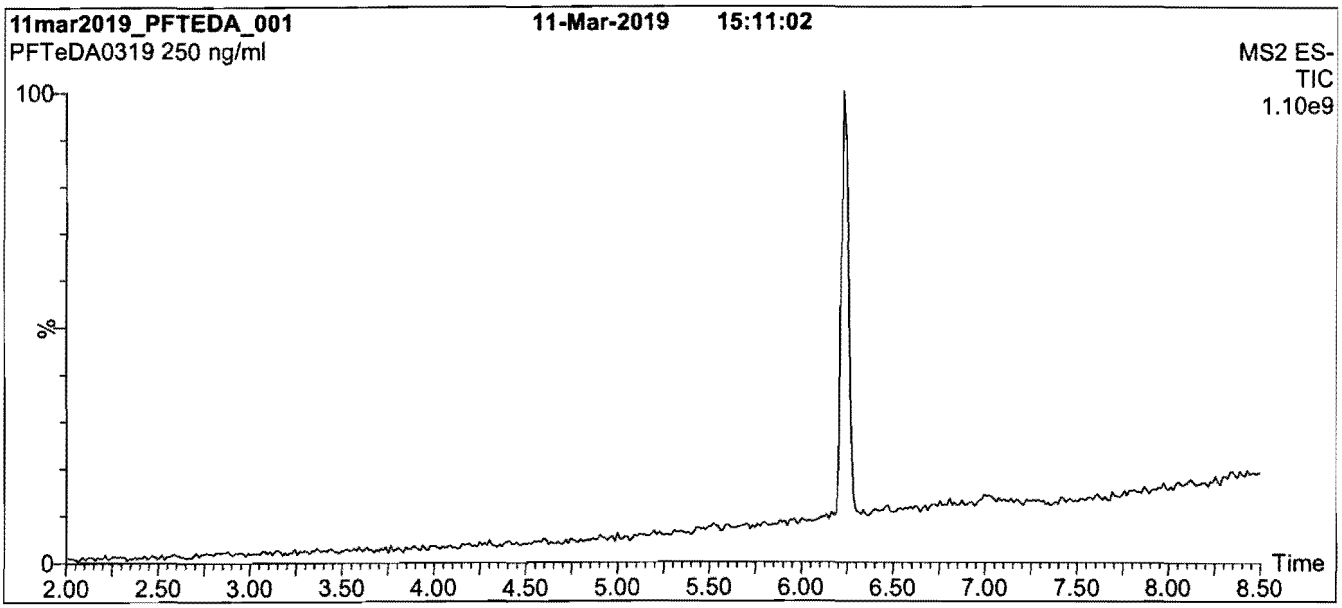
Flow: 300 µl/min

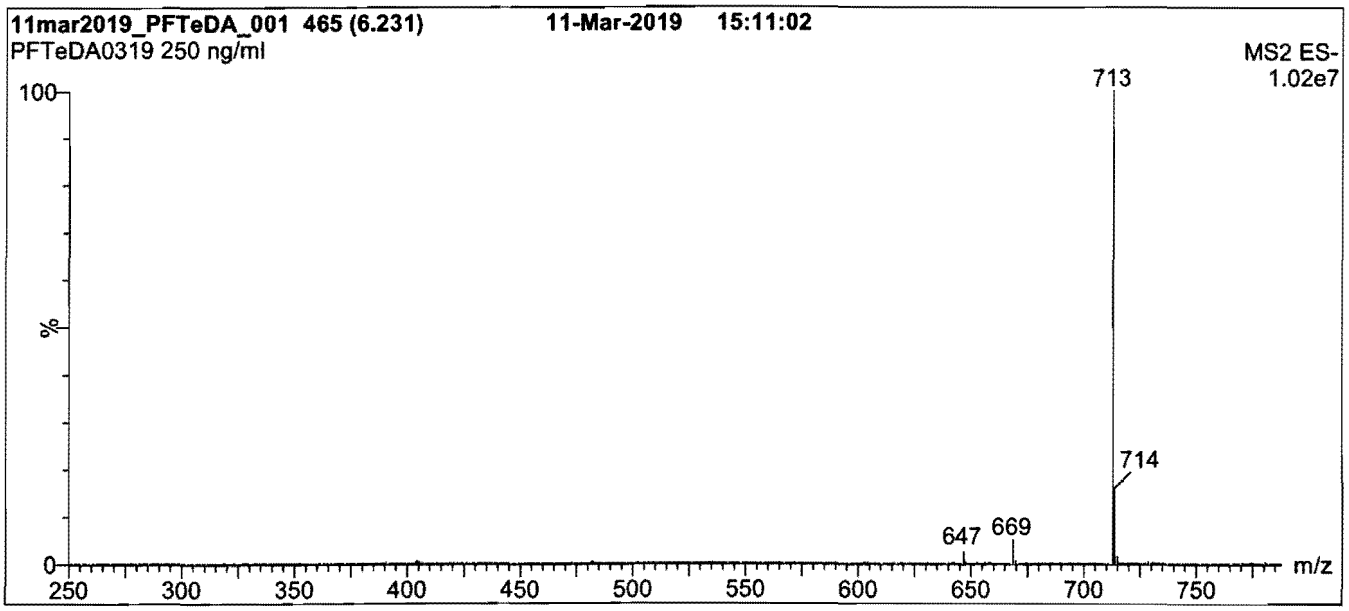
MS Parameters

Collision Gas (mbar) = 3.03e-3
Collision Energy (eV) = 14

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Figure 1: **PFTeDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 1200 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

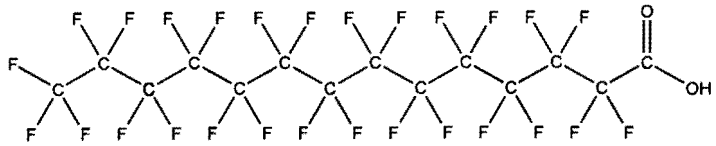
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19L0645

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFTeDA	**LOT NUMBER:**	PFTeDA0319
COMPOUND:	Perfluoro-n-tetradecanoic acid		
STRUCTURE:		**CAS #:**	376-06-7



MOLECULAR FORMULA:	$C_{14}HF_{27}O_2$	**MOLECULAR WEIGHT:**	714.11
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	03/11/2019		
EXPIRY DATE: (mm/dd/yyyy)	03/11/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.3% of PFDoA ($C_{12}HF_{23}O_2$), ~ 0.1% of PFTrDA ($C_{13}HF_{25}O_2$), and ~ 0.1% of PFHxDA ($C_{16}HF_{31}O_2$).

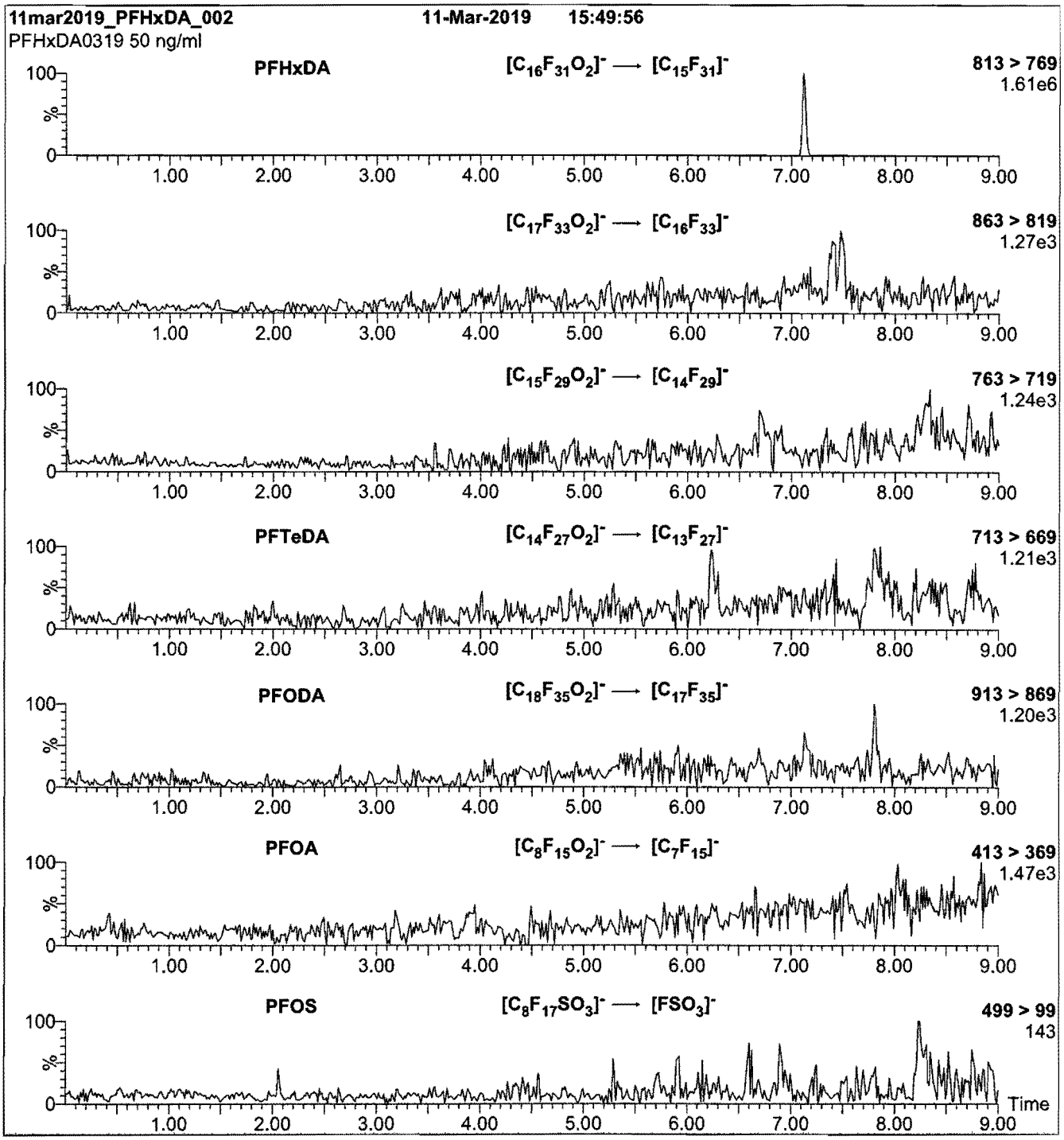
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 03/28/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0646

Figure 2: **PFHxDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFHxDA)

Mobile phase: Same as Figure 1

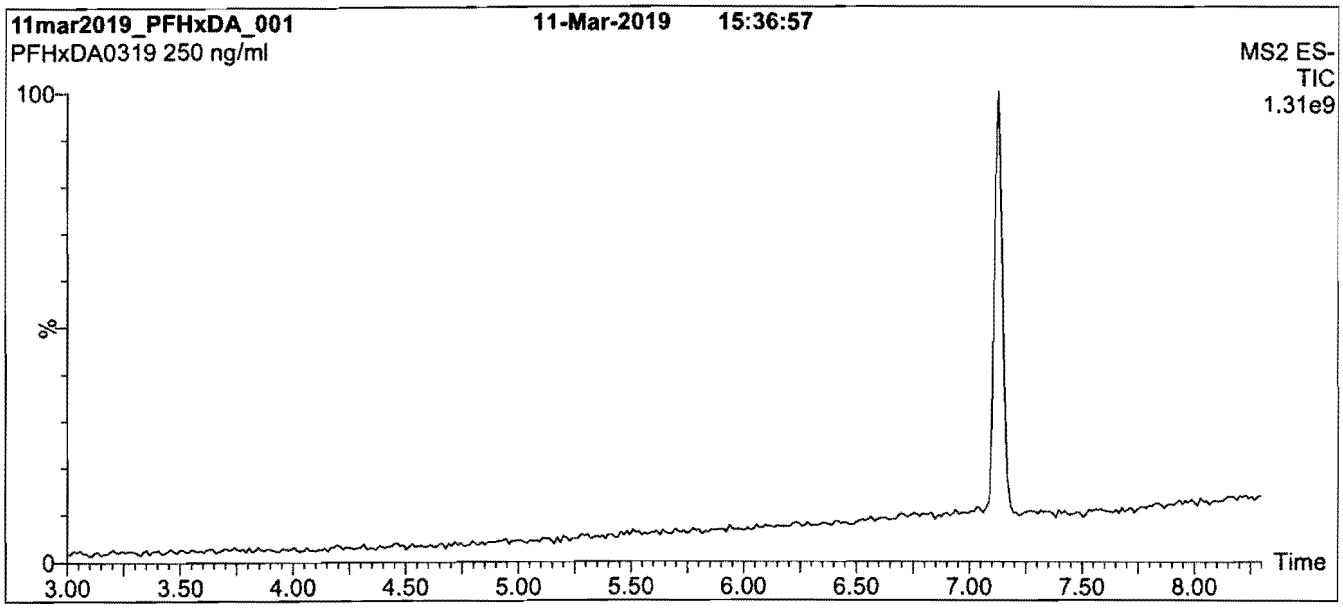
Flow: 300 µl/min

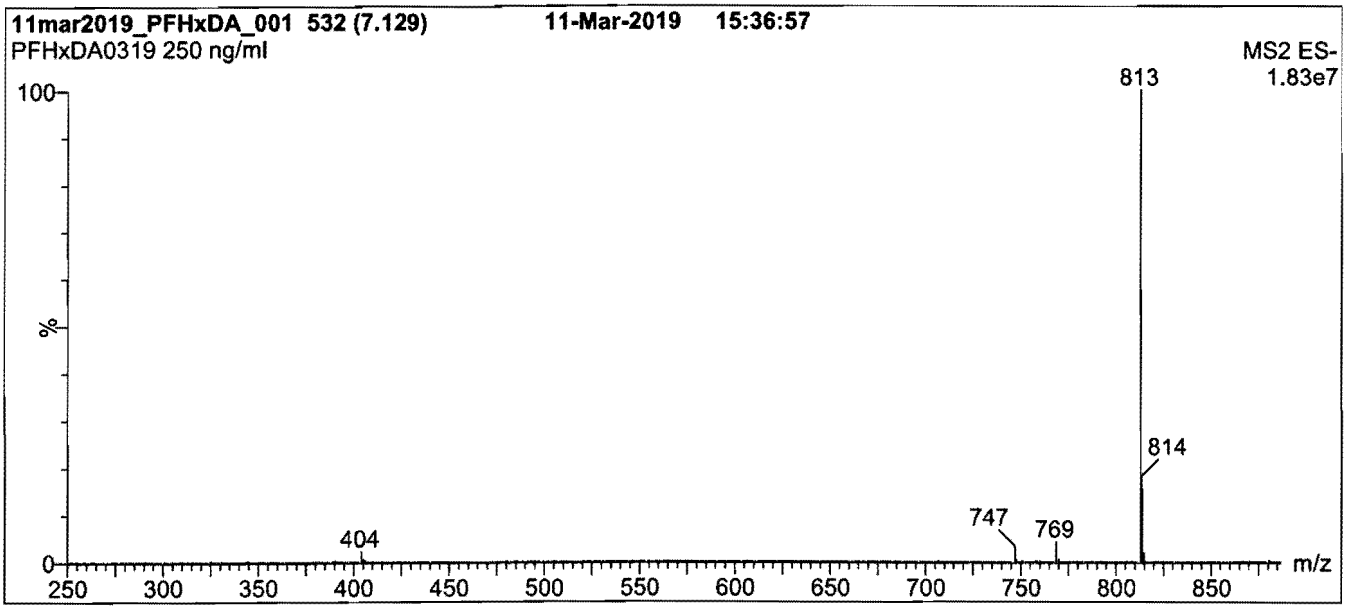
MS Parameters

Collision Gas (mbar) = 3.03e-3
Collision Energy (eV) = 15

19L0646

Figure 1: **PFHxDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
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Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 1200 amu)

Source: Electrospray (negative)
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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

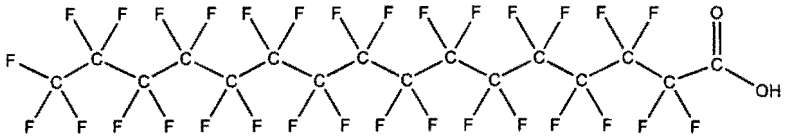
19L0646

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFHxDA
LOT NUMBER: PFHxDA0319
COMPOUND: Perfluoro-n-hexadecanoic acid

STRUCTURE:
CAS #: 67905-19-5



MOLECULAR FORMULA: $C_{16}HF_{31}O_2$
MOLECULAR WEIGHT: 814.13
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 03/11/2019
EXPIRY DATE: (mm/dd/yyyy) 03/11/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

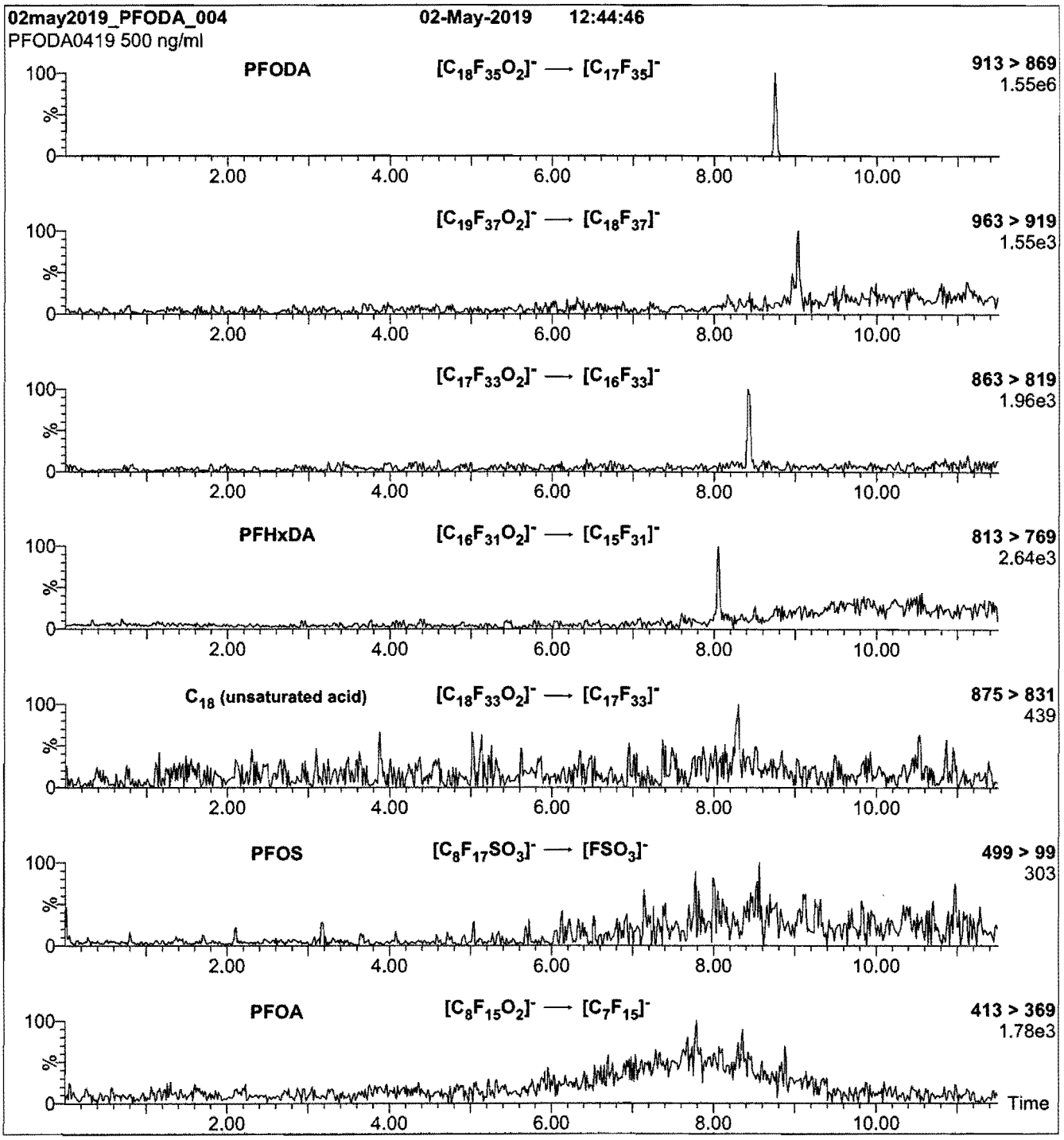
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 03/28/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **PFODA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFODA)

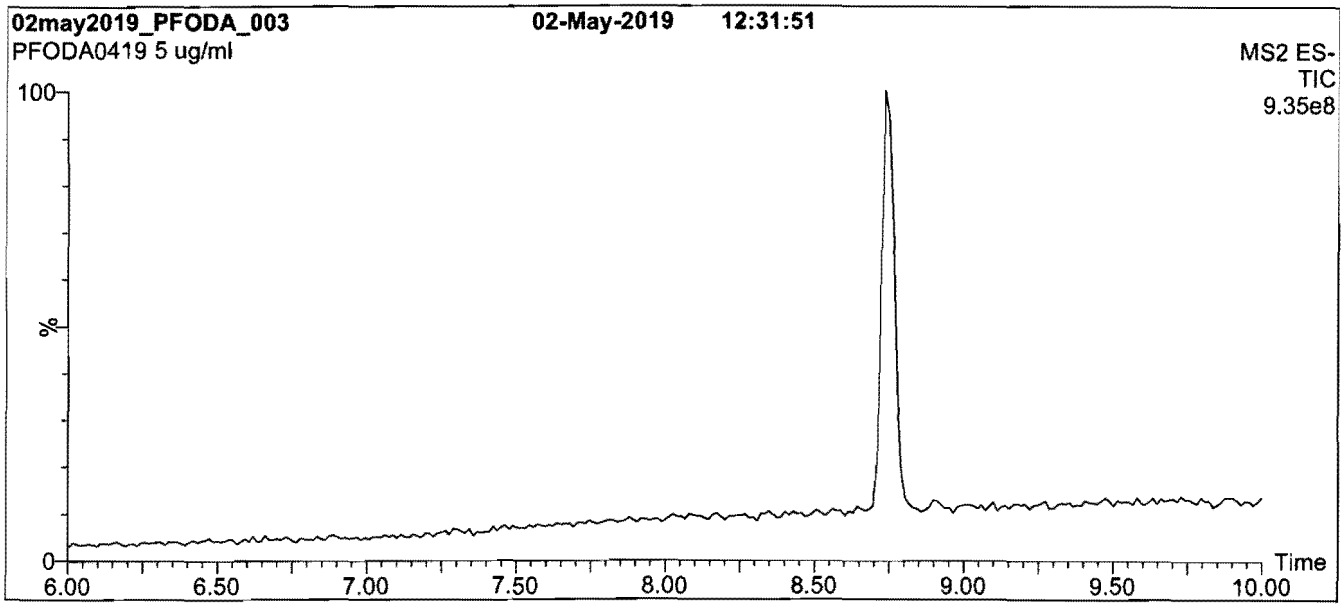
Mobile phase: Same as Figure 1

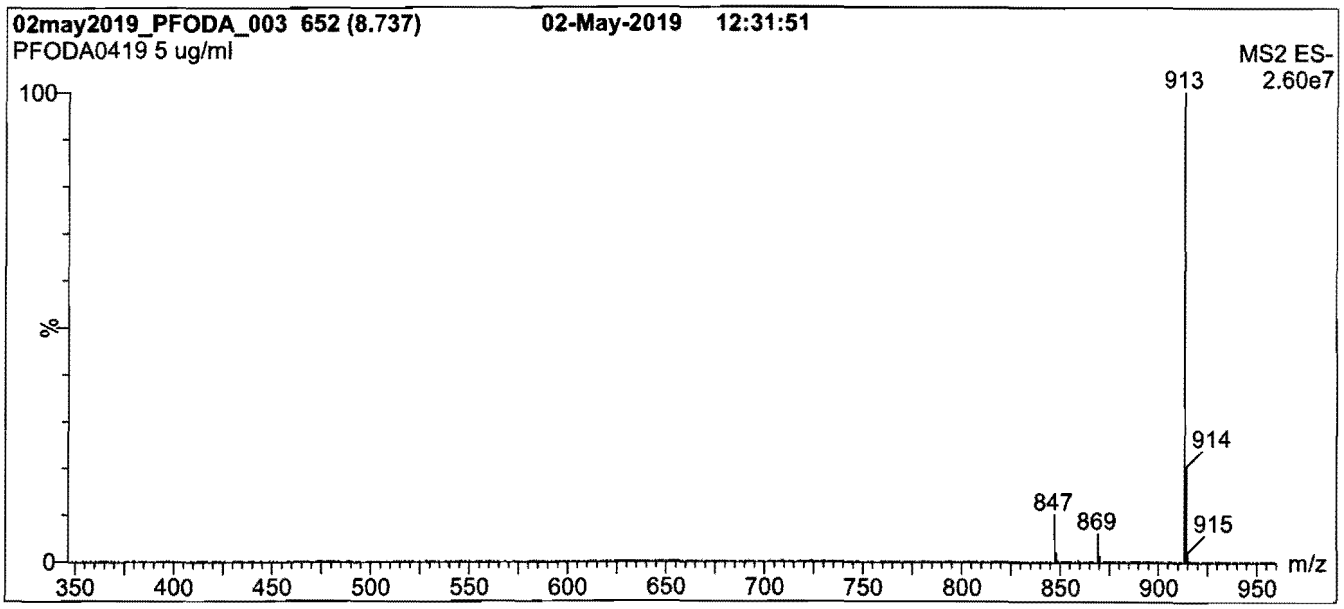
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.92e-3
Collision Energy (eV) = 15

Figure 1: **PFODA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 11 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 1200 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0647

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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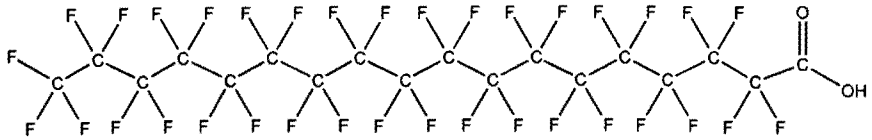
19L0647

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFODA
COMPOUND: Perfluoro-n-octadecanoic acid
LOT NUMBER: PFODA0419

STRUCTURE:
CAS #: 16517-11-6



MOLECULAR FORMULA: $C_{18}HF_{35}O_2$
MOLECULAR WEIGHT: 914.14
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 05/02/2019
EXPIRY DATE: (mm/dd/yyyy) 05/02/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.2% of PFHxDA ($C_{16}HF_{31}O_2$) and ~ 0.1% of PFHpDA ($C_{17}HF_{33}O_2$)

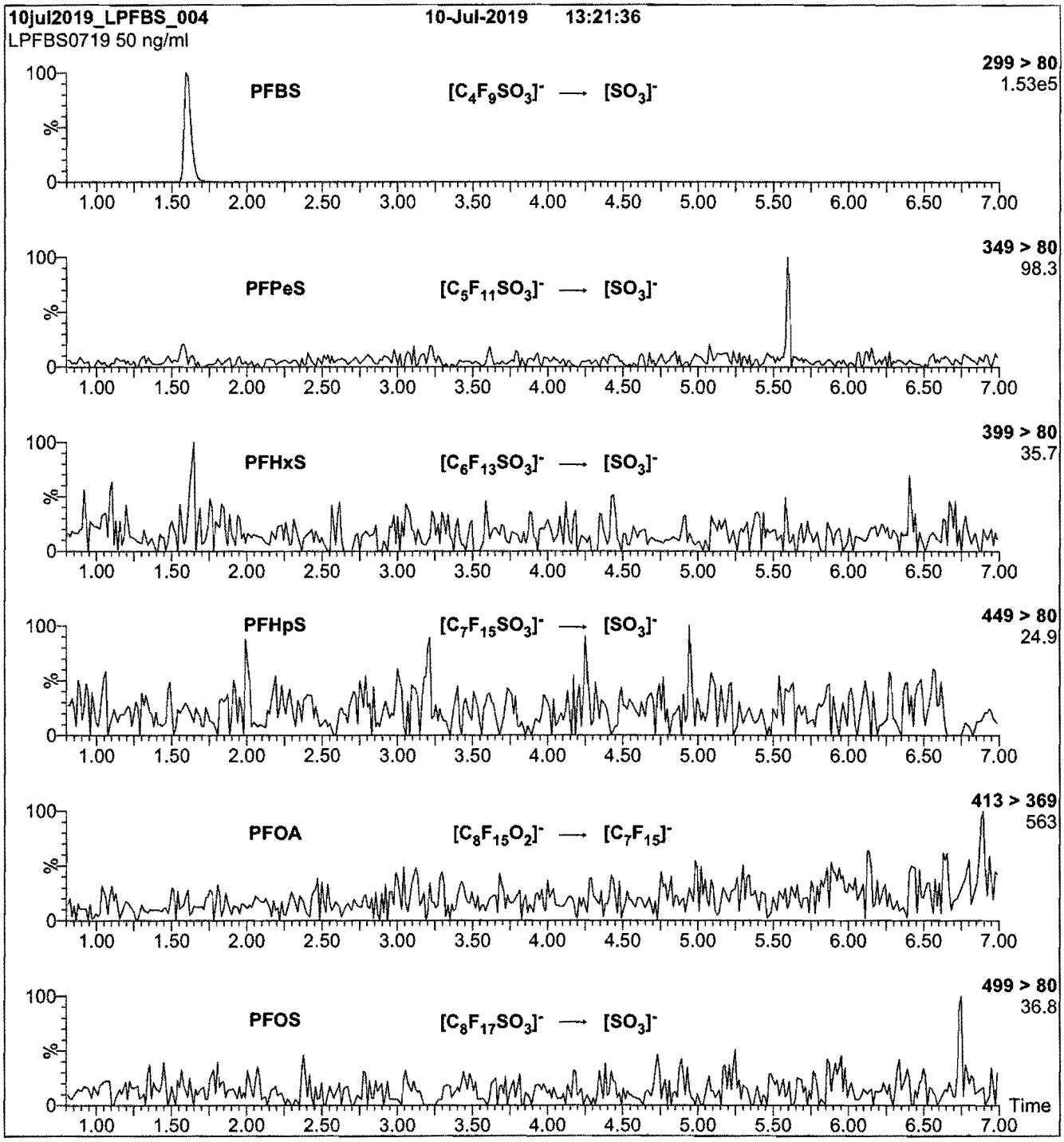
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/16/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0648

Figure 2: **L-PFBS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (L-PFBS)

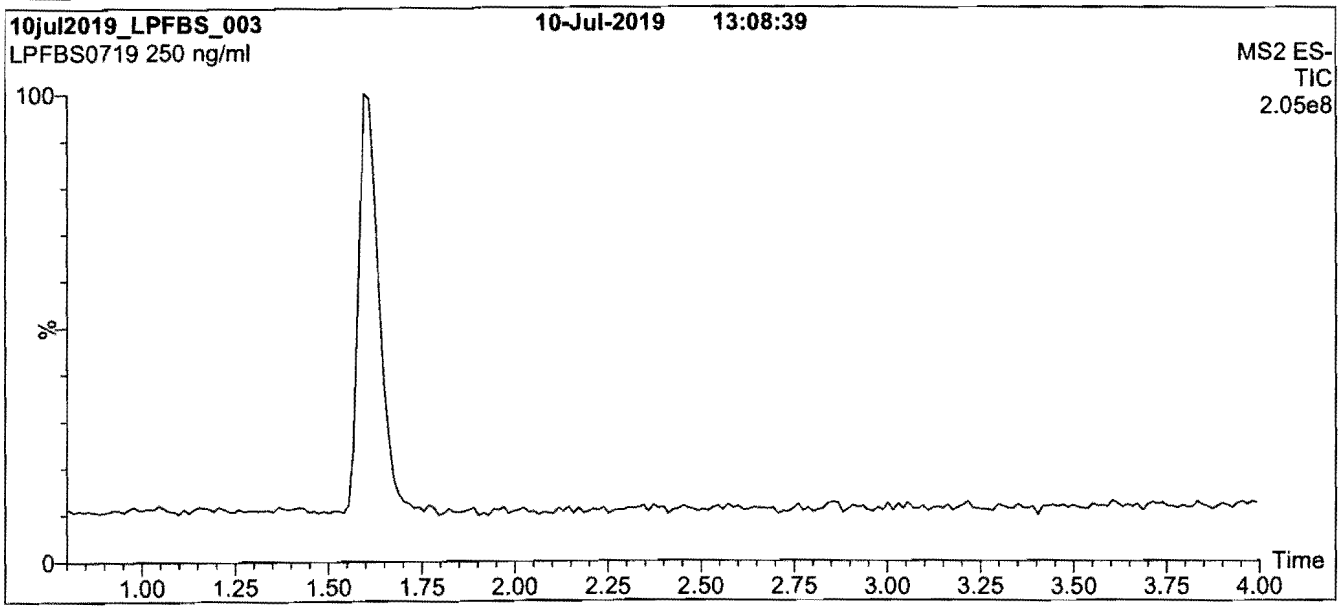
Mobile phase: Same as Figure 1

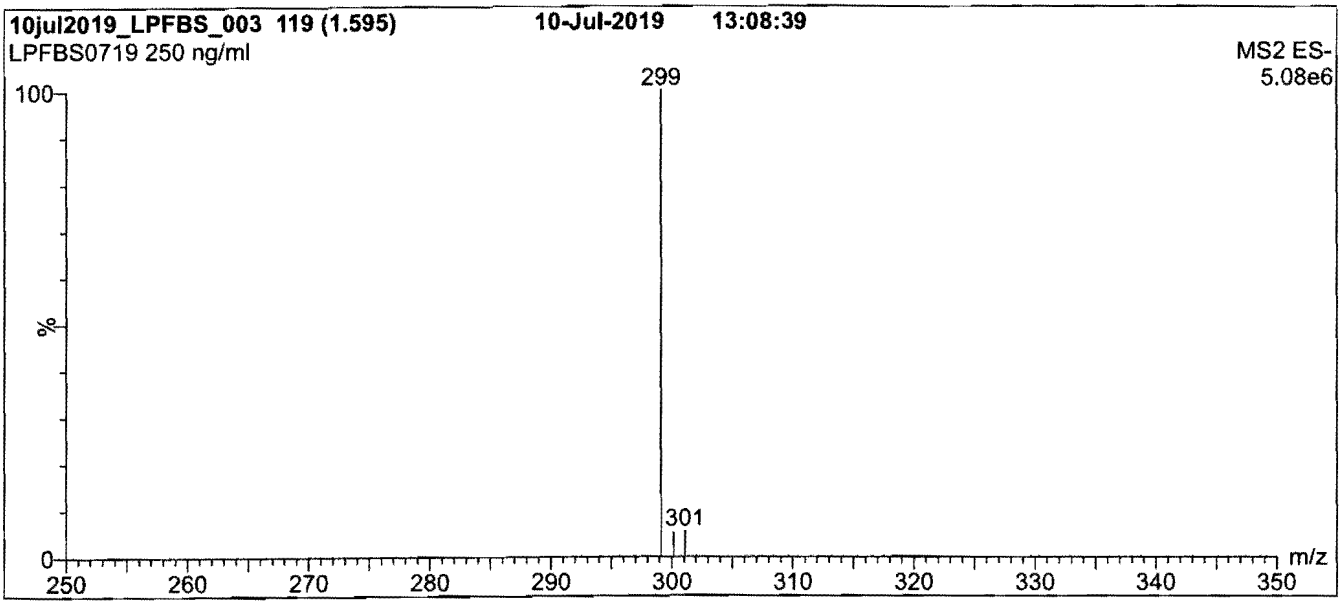
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.25e-3
Collision Energy (eV) = 30

Figure 1: **L-PFBS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 70% organic over 7 min, then ramp to 90% organic over 2 min and hold for 1.5 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0648

INTENDED USE:

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HANDLING:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

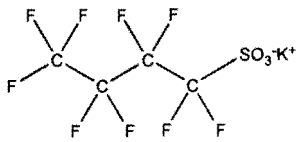
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0648

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	L-PFBS	**LOT NUMBER:**	LPFBS0719
COMPOUND:	Potassium perfluoro-1-butanesulfonate		
STRUCTURE:		**CAS #:**	29420-49-3



MOLECULAR FORMULA:	$C_4F_9SO_3K$	**MOLECULAR WEIGHT:**	338.19
CONCENTRATION:	50.0 ± 2.5 µg/ml (K salt) 44.2 ± 2.2 µg/ml (PFBS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	07/10/2019		
EXPIRY DATE: (mm/dd/yyyy)	07/10/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

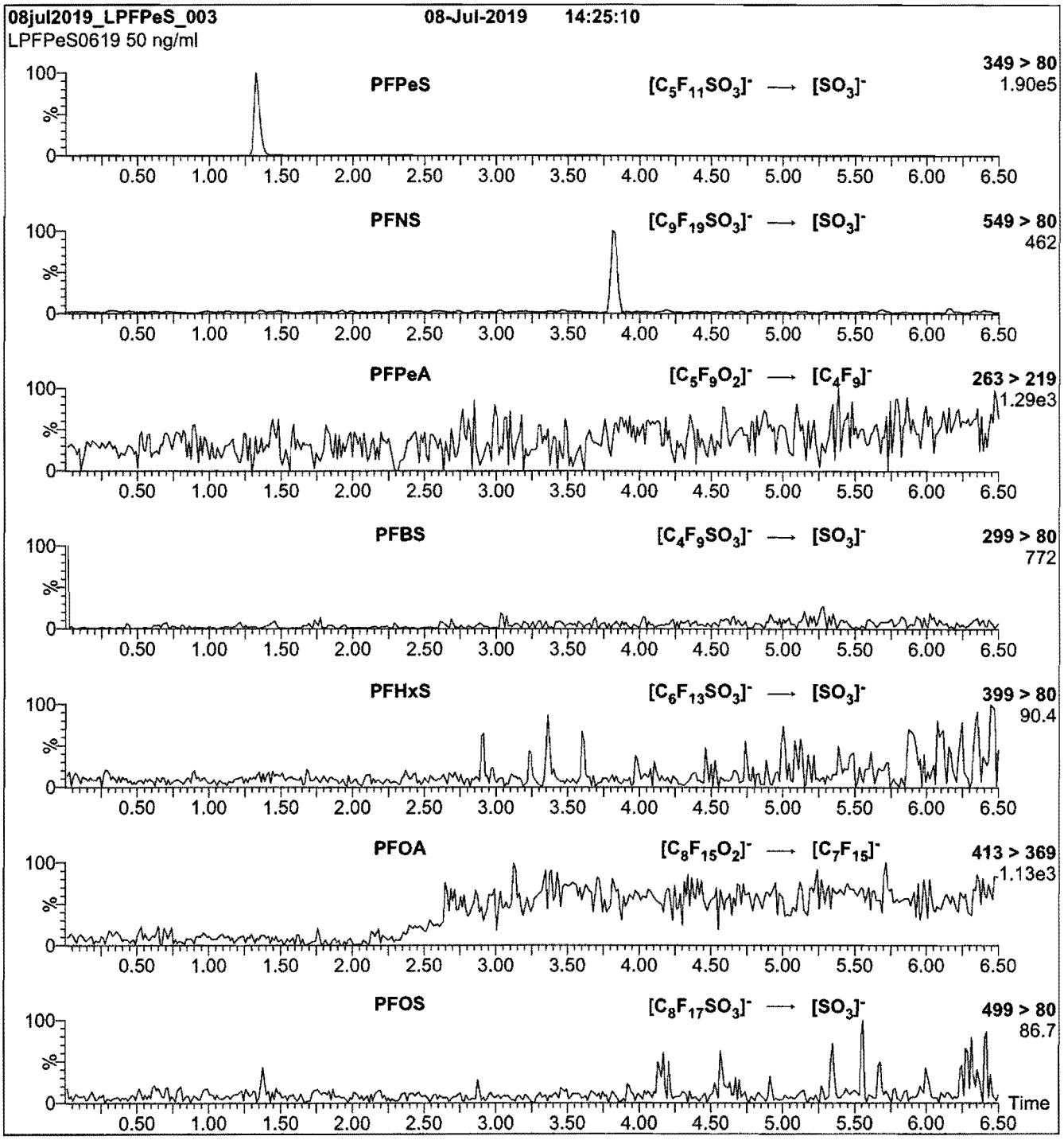
- See page 2 for further details.
- Contains ~ 0.2% of sodium perfluoro-1-nonanesulfonate (L-PFNS).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/06/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **L-PFPeS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (L-PFPeS)

Mobile phase: Same as Figure 1

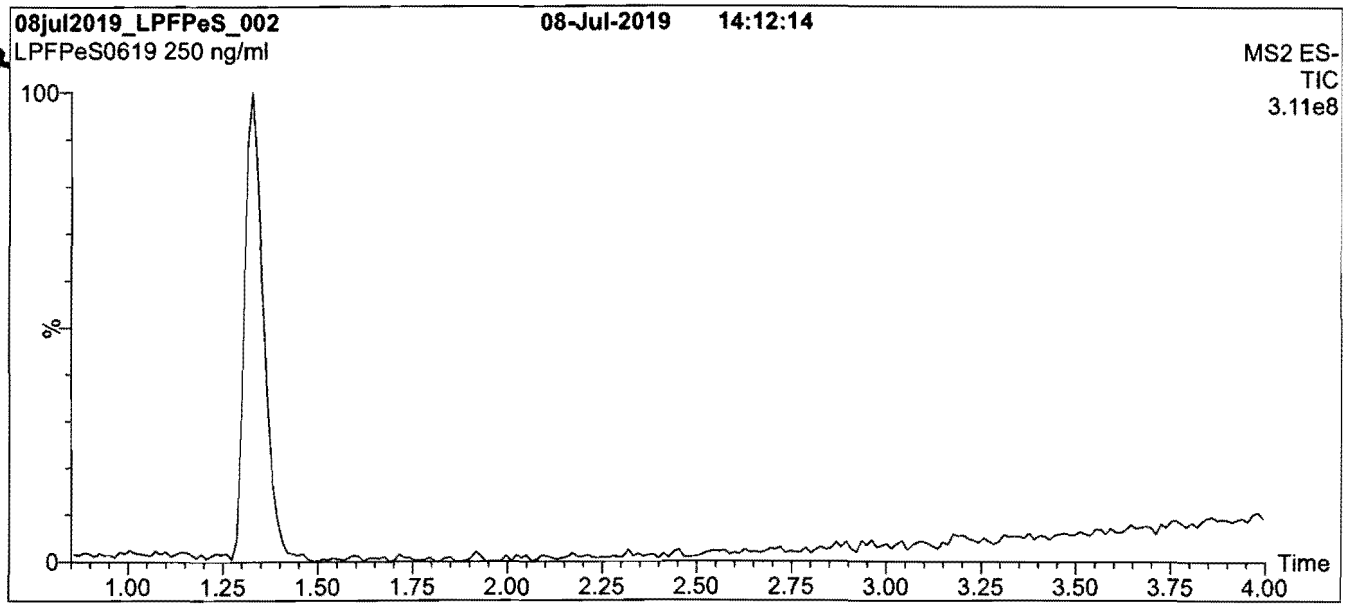
Flow: 300 µl/min

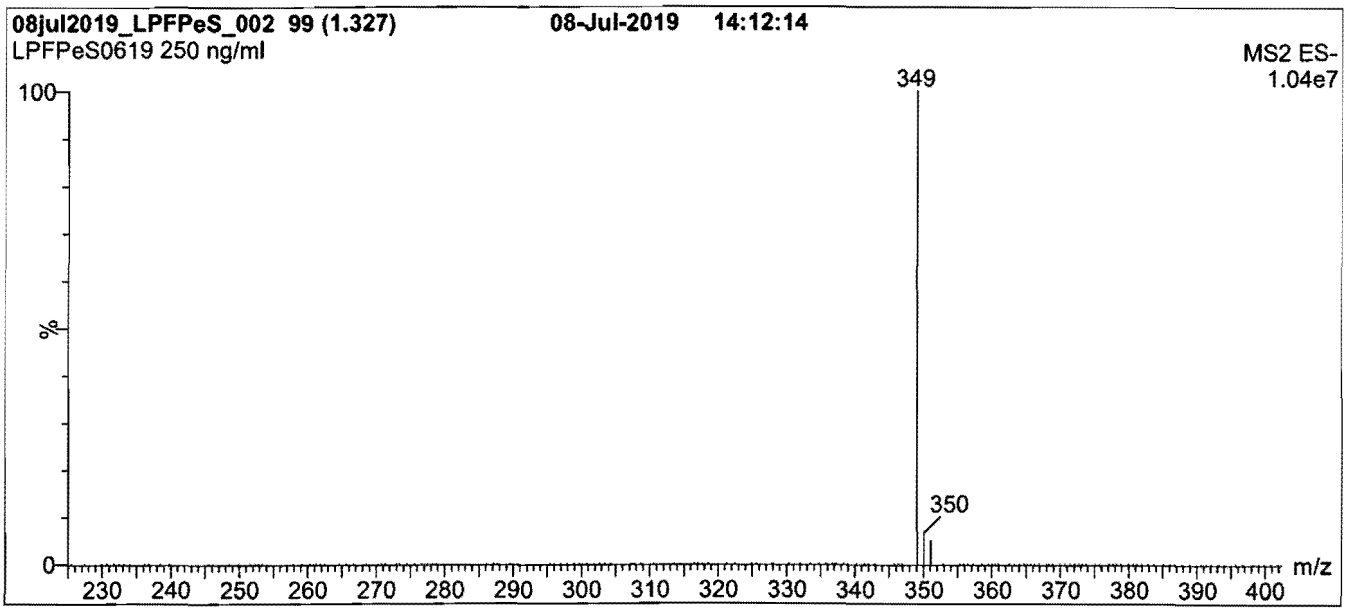
MS Parameters

Collision Gas (mbar) = 3.37e-3
Collision Energy (eV) = 32

19L0649

Figure 1: **L-PFPeS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0649

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

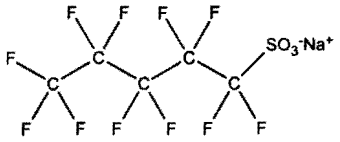
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19L0619

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	L-PFPeS	**LOT NUMBER:**	LPFPeS0619
COMPOUND:	Sodium perfluoro-1-pentanesulfonate		
STRUCTURE:		**CAS #:**	630402-22-1



MOLECULAR FORMULA:	$C_5F_{11}SO_3Na$	**MOLECULAR WEIGHT:**	372.09
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 46.9 ± 2.3 µg/ml (PFPeS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	07/08/2019		
EXPIRY DATE: (mm/dd/yyyy)	07/08/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

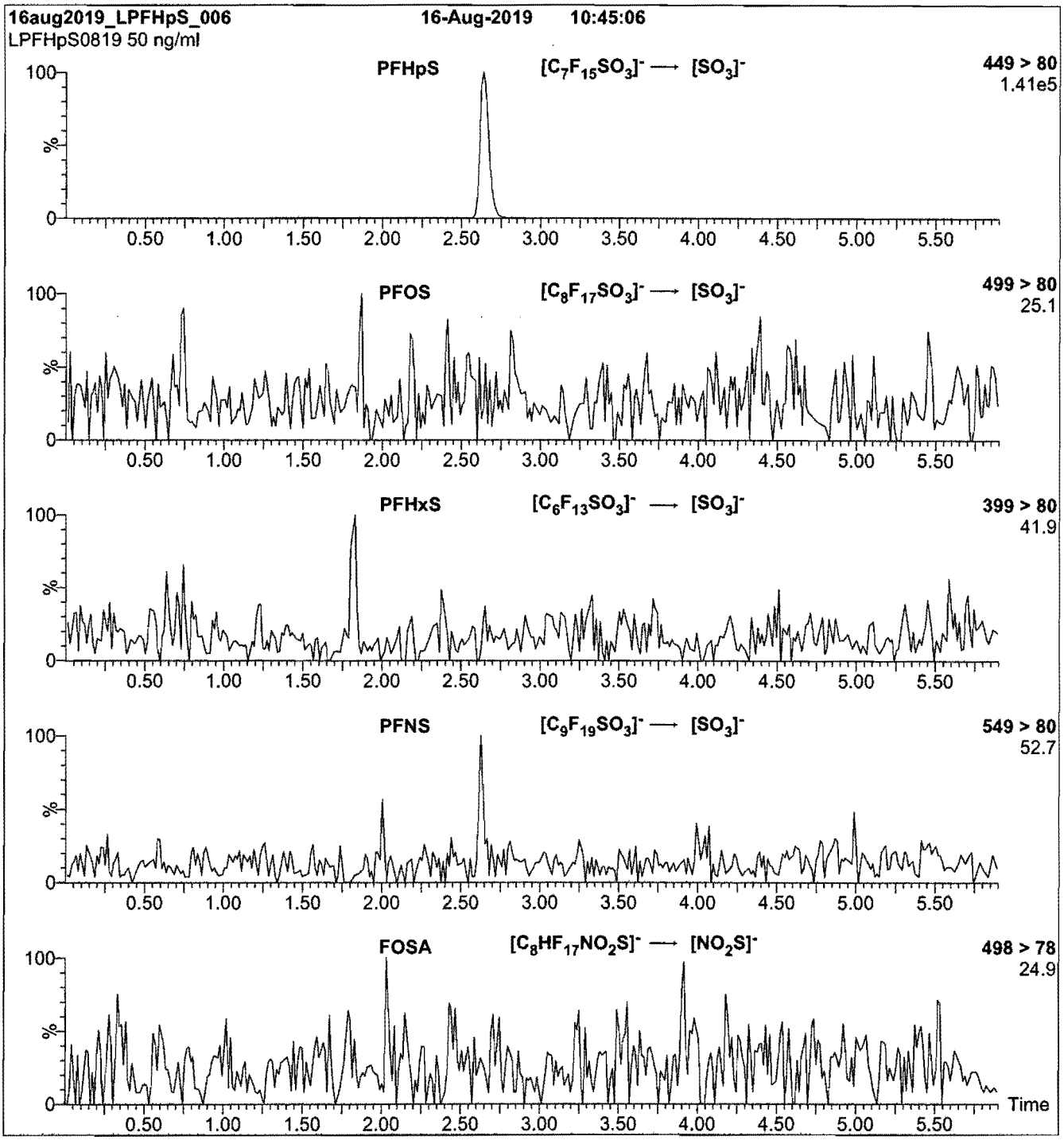
- See page 2 for further details.
- Contains ~ 0.3% of sodium perfluoro-1-nonanesulfonate (L-PFNS).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/11/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **L-PFHpS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

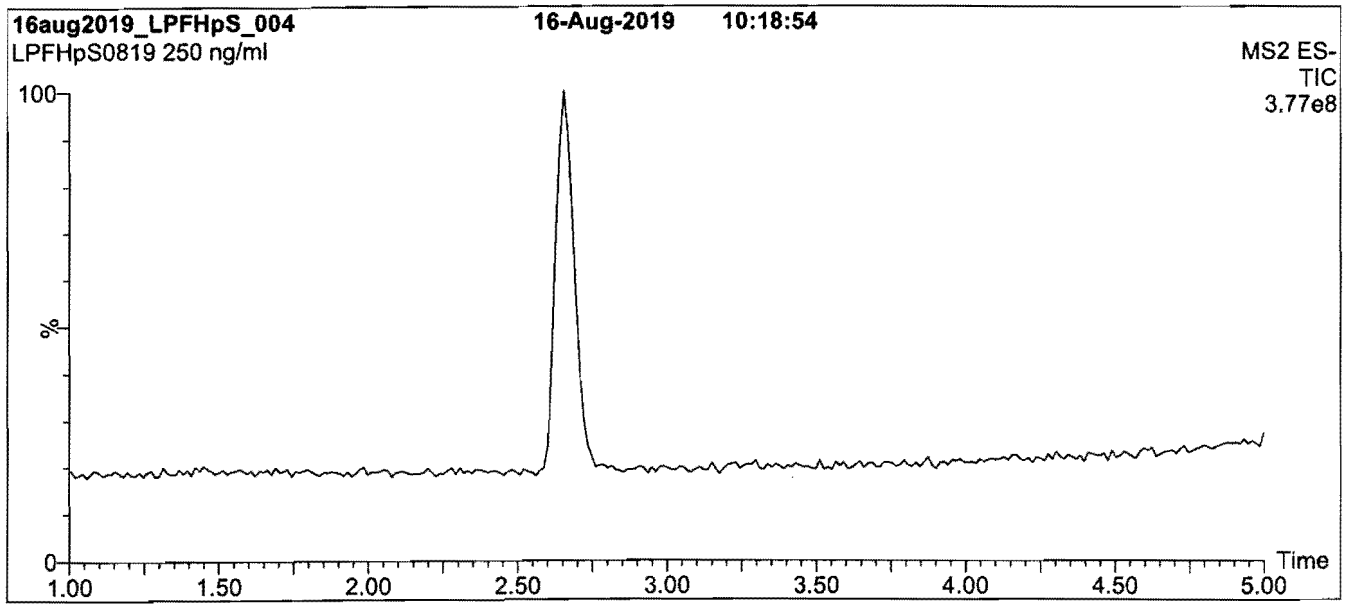
Injection: On-column (L-PFHpS)

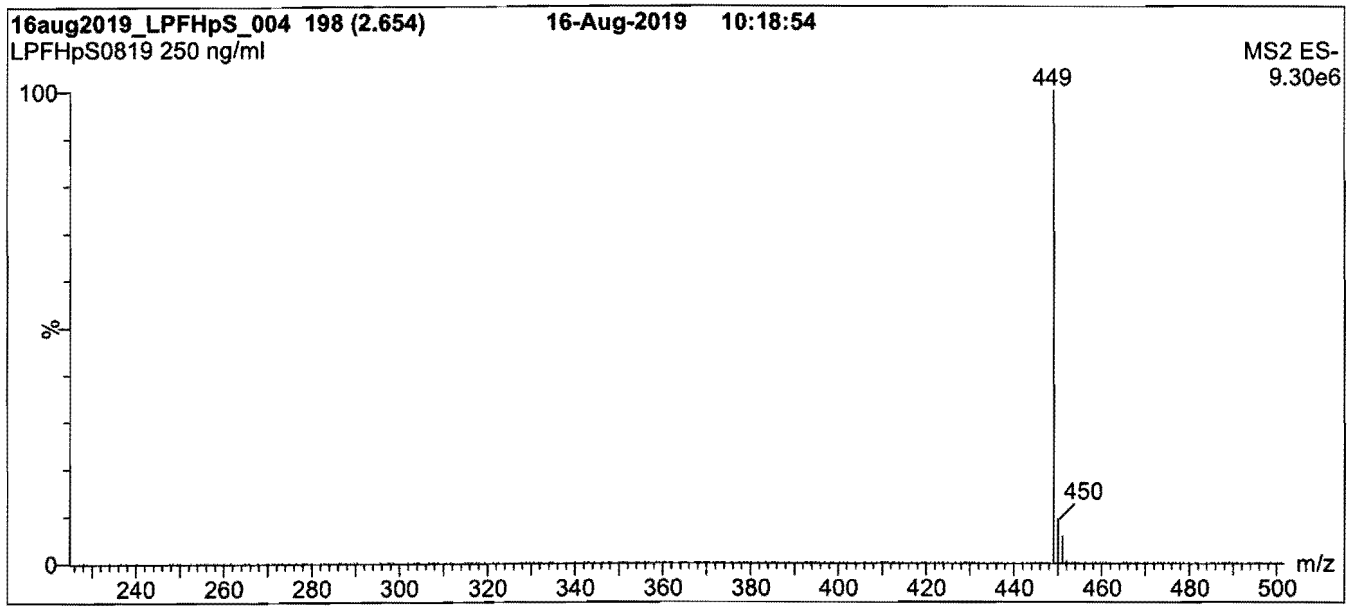
Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters
Collision Gas (mbar) = 3.61e-3
Collision Energy (eV) = 42

Figure 1: **L-PFHpS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0650

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

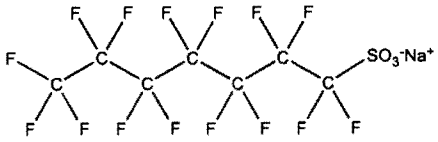
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0650

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	L-PFHpS	**LOT NUMBER:**	LPFHpS0819
COMPOUND:	Sodium perfluoro-1-heptanesulfonate		
STRUCTURE:		**CAS #:**	21934-50-9



MOLECULAR FORMULA:	$C_7F_{15}SO_3Na$	**MOLECULAR WEIGHT:**	472.10
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.6 ± 2.4 µg/ml (PFHpS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	08/16/2019		
EXPIRY DATE: (mm/dd/yyyy)	08/16/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

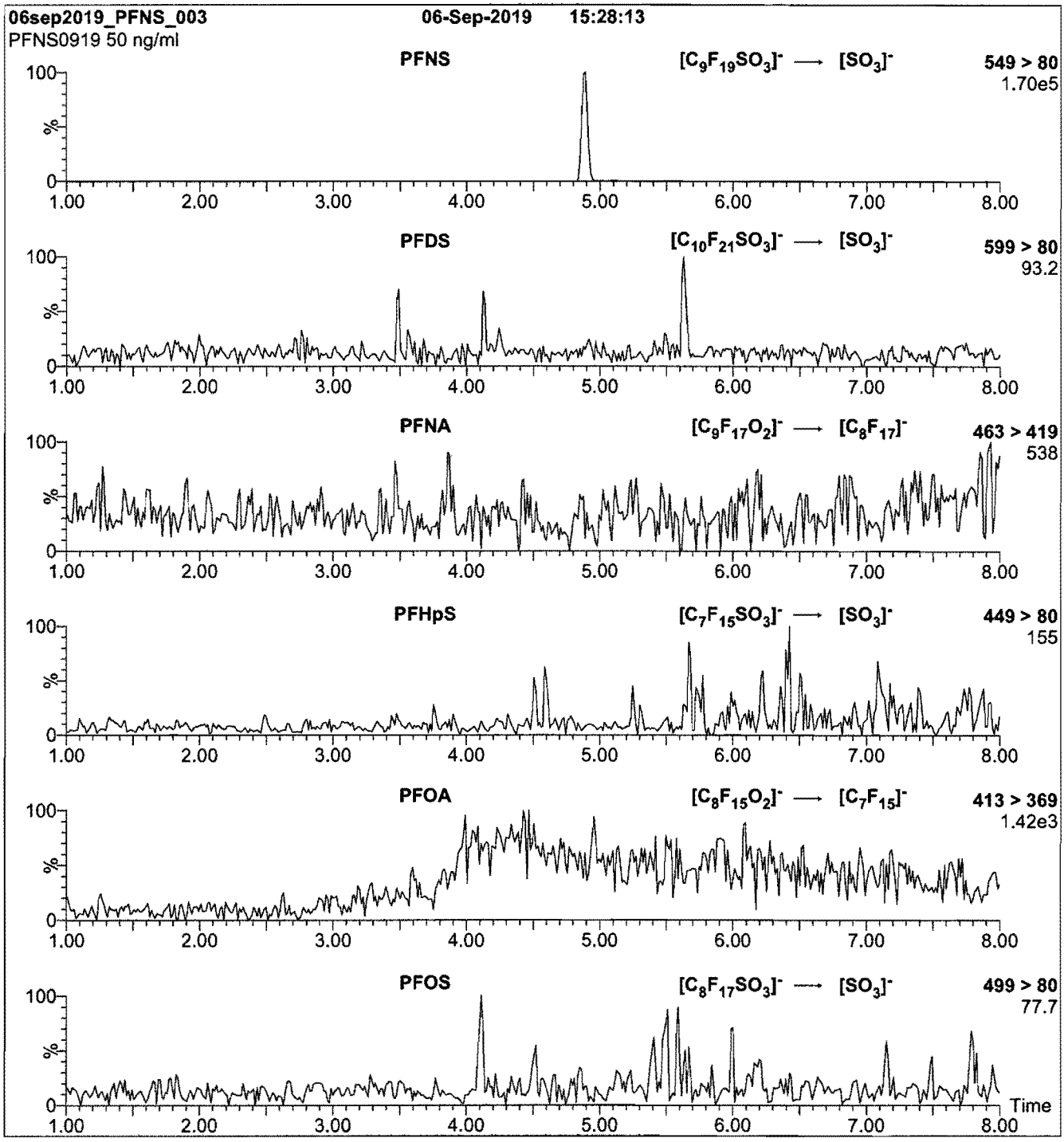
- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/29/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **L-PFNS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (L-PFNS)

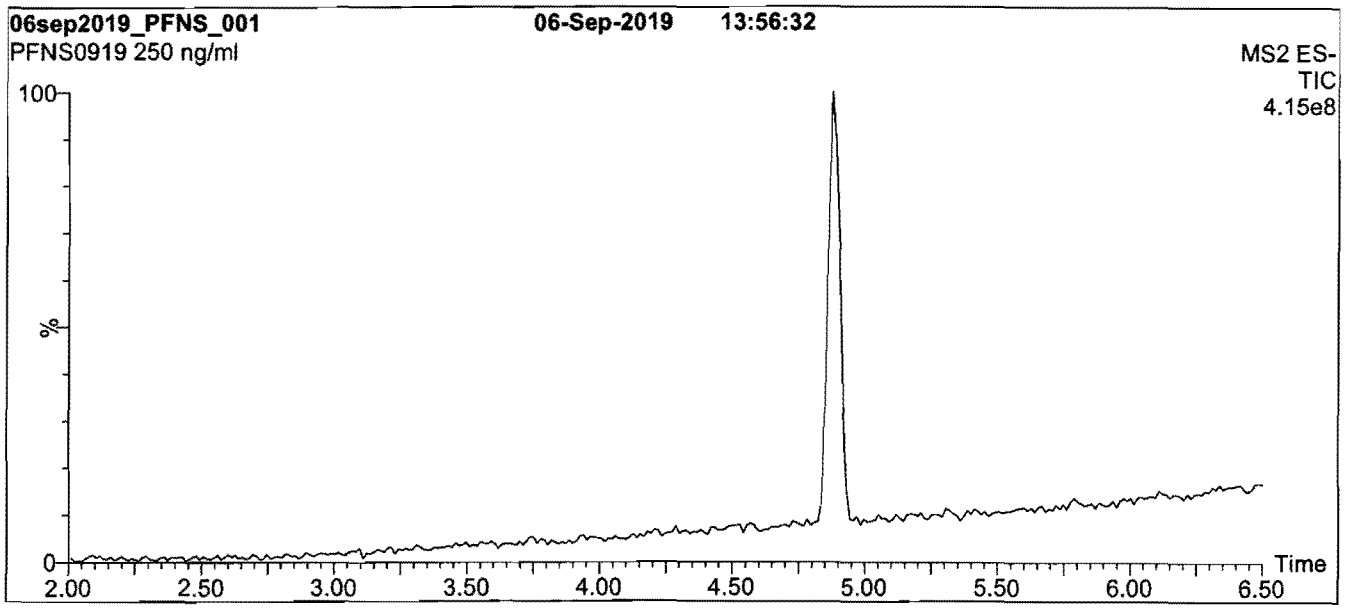
Mobile phase: Same as Figure 1

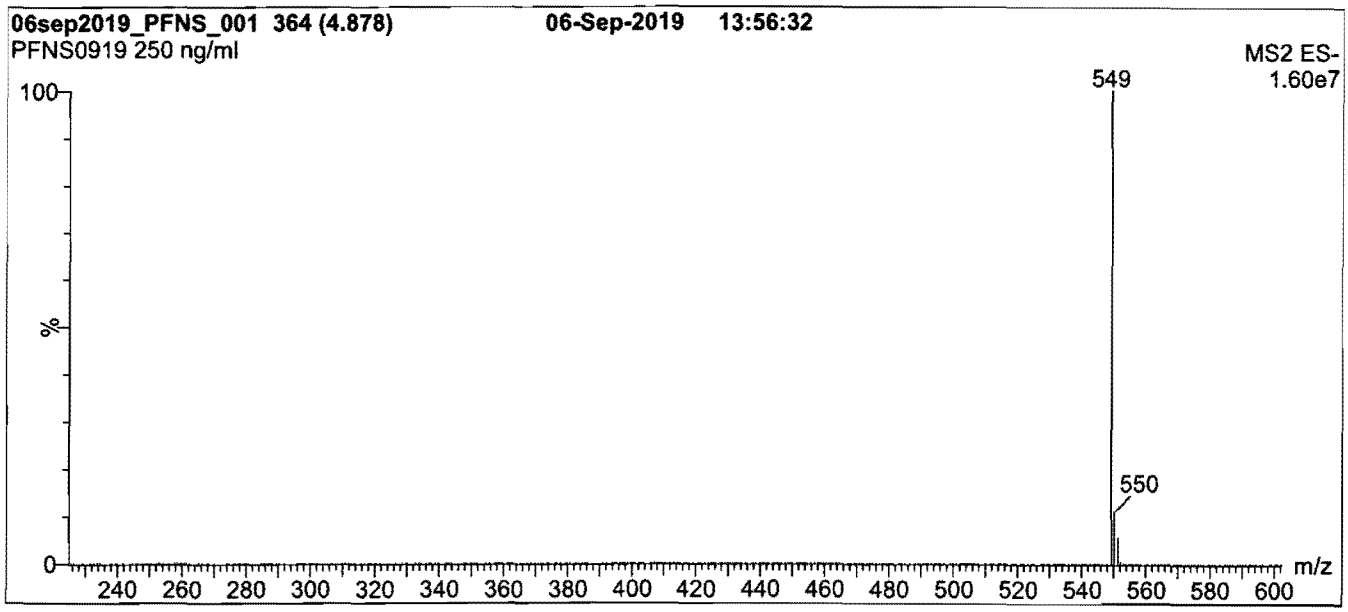
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.49e-3
Collision Energy (eV) = 64

Figure 1: **L-PFNS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

1910651

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

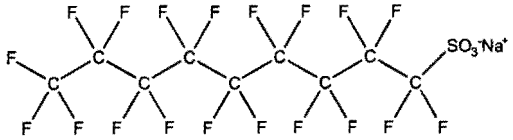
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: L-PFNS
LOT NUMBER: LPFNS0919
COMPOUND: Sodium perfluoro-1-nonanesulfonate

STRUCTURE:
CAS #: 98789-57-2



MOLECULAR FORMULA:	$C_9F_{19}SO_3Na$	**MOLECULAR WEIGHT:**	572.12
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 48.0 ± 2.4 µg/ml (PFNS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	09/06/2019		
EXPIRY DATE: (mm/dd/yyyy)	09/06/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

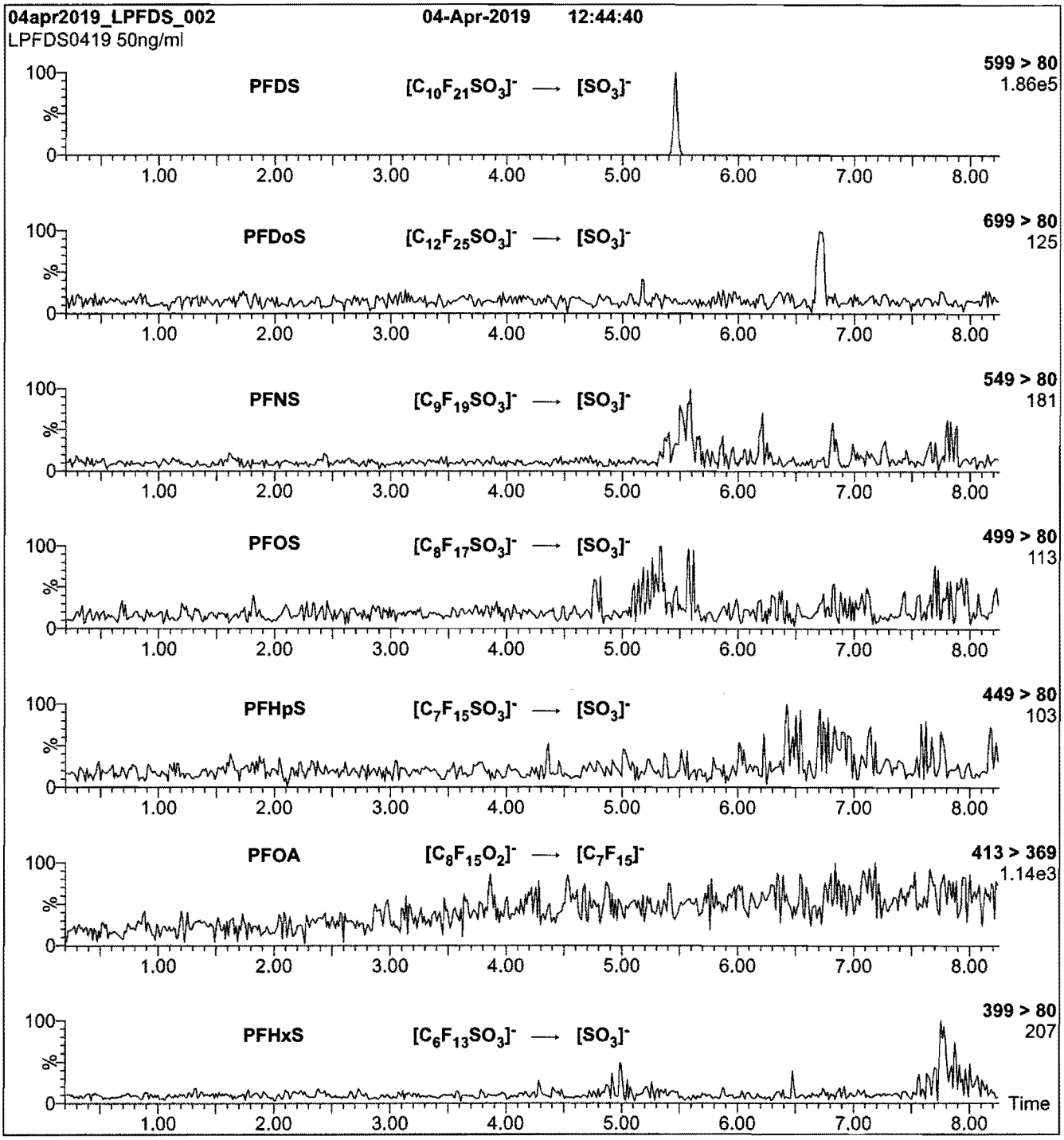
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 09/09/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0652

Figure 2: **L-PFDS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (L-PFDS)

Mobile phase: Same as Figure 1

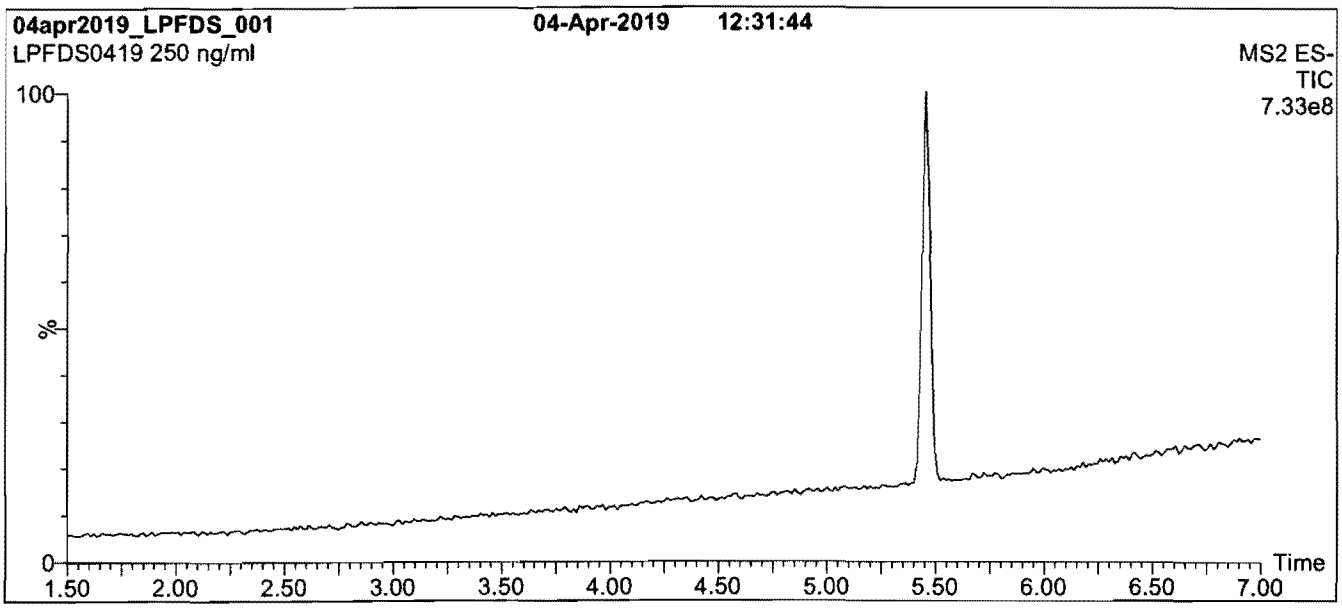
Flow: 300 µl/min

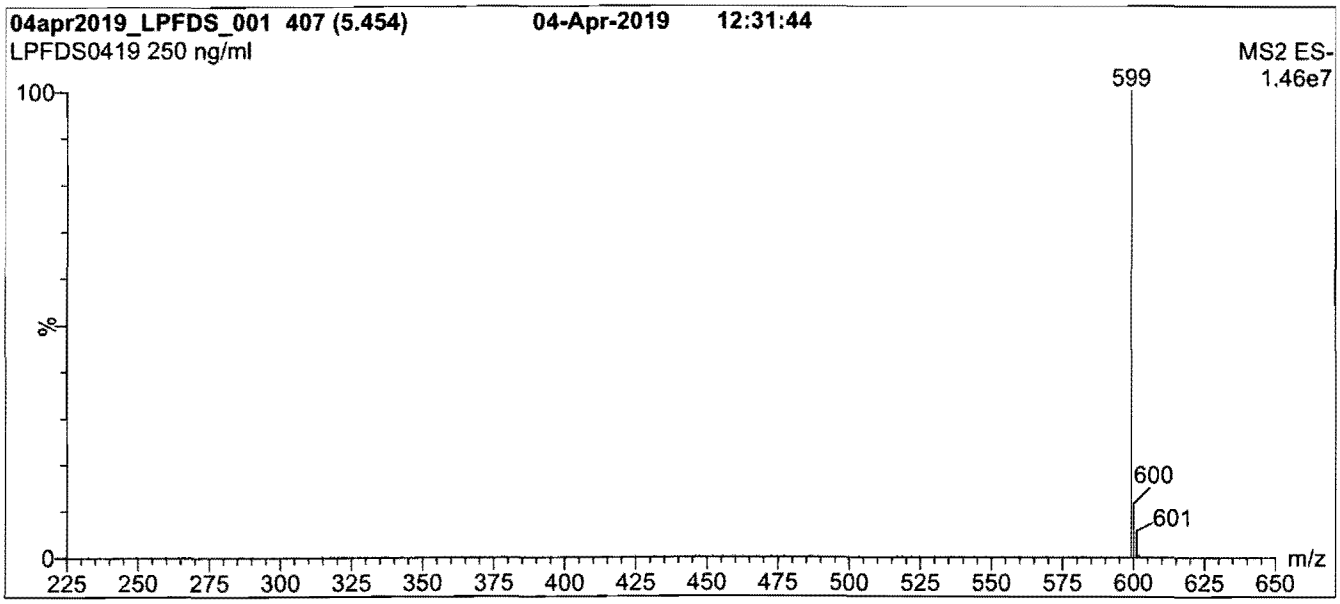
MS Parameters

Collision Gas (mbar) = 2.99e-3
Collision Energy (eV) = 56

19L0652

Figure 1: **L-PFDS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0652

INTENDED USE:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

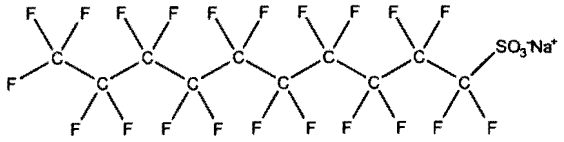
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19L0652

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	L-PFDS	**LOT NUMBER:**	LPFDS0419
COMPOUND:	Sodium perfluoro-1-decanesulfonate		
STRUCTURE:		**CAS #:**	2806-15-7



MOLECULAR FORMULA:	$C_{10}F_{21}SO_3Na$	**MOLECULAR WEIGHT:**	622.13
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 48.2 ± 2.4 µg/ml (PFDS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	04/04/2019		
EXPIRY DATE: (mm/dd/yyyy)	04/04/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.9% of sodium perfluoro-1-dodecanesulfonate (L-PFDoS).

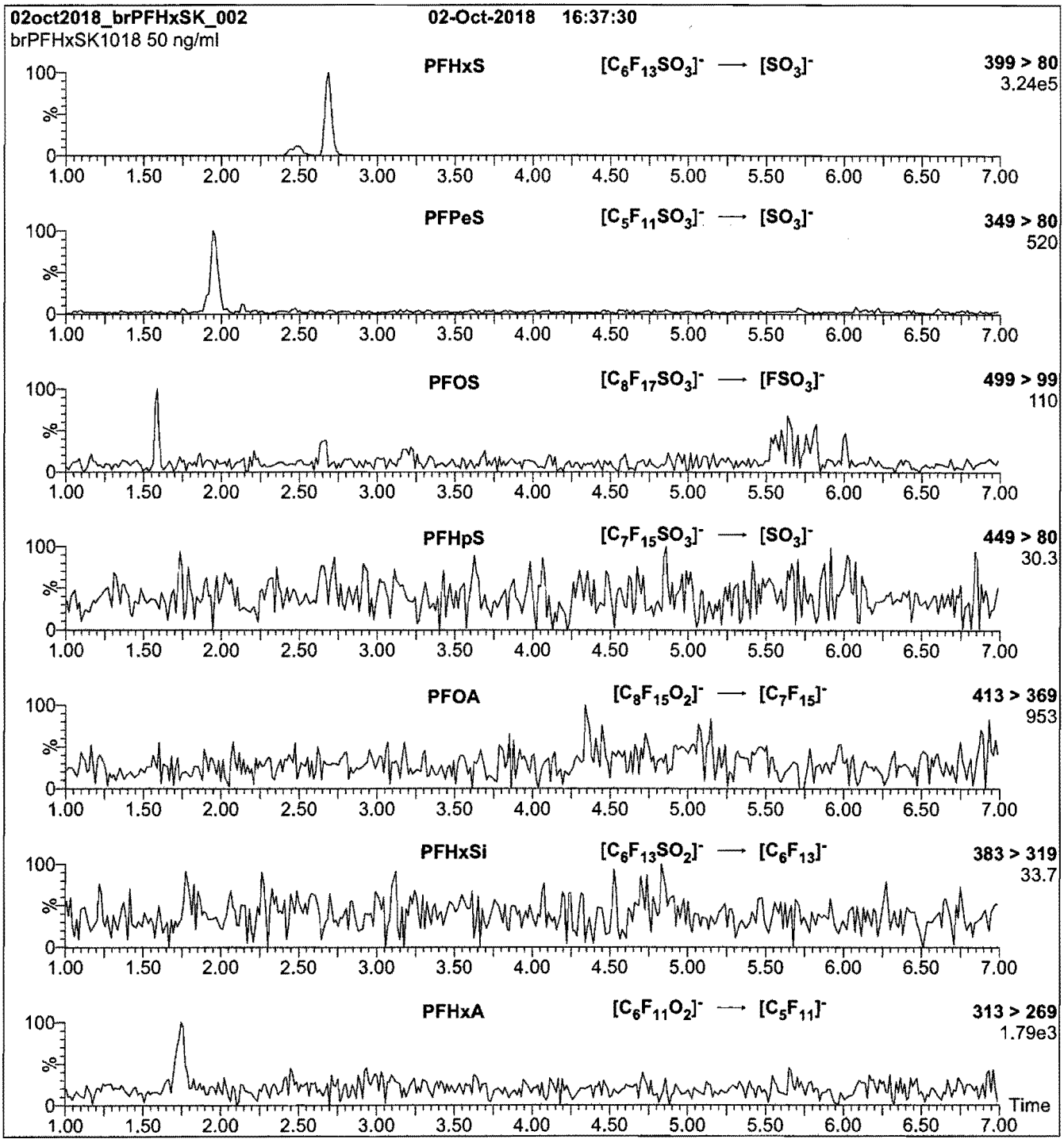
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 04/30/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0653

Figure 3: **br-PFHxSK; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column (br-PFHxSK)

Mobile phase: Same as Figures 1 and 2

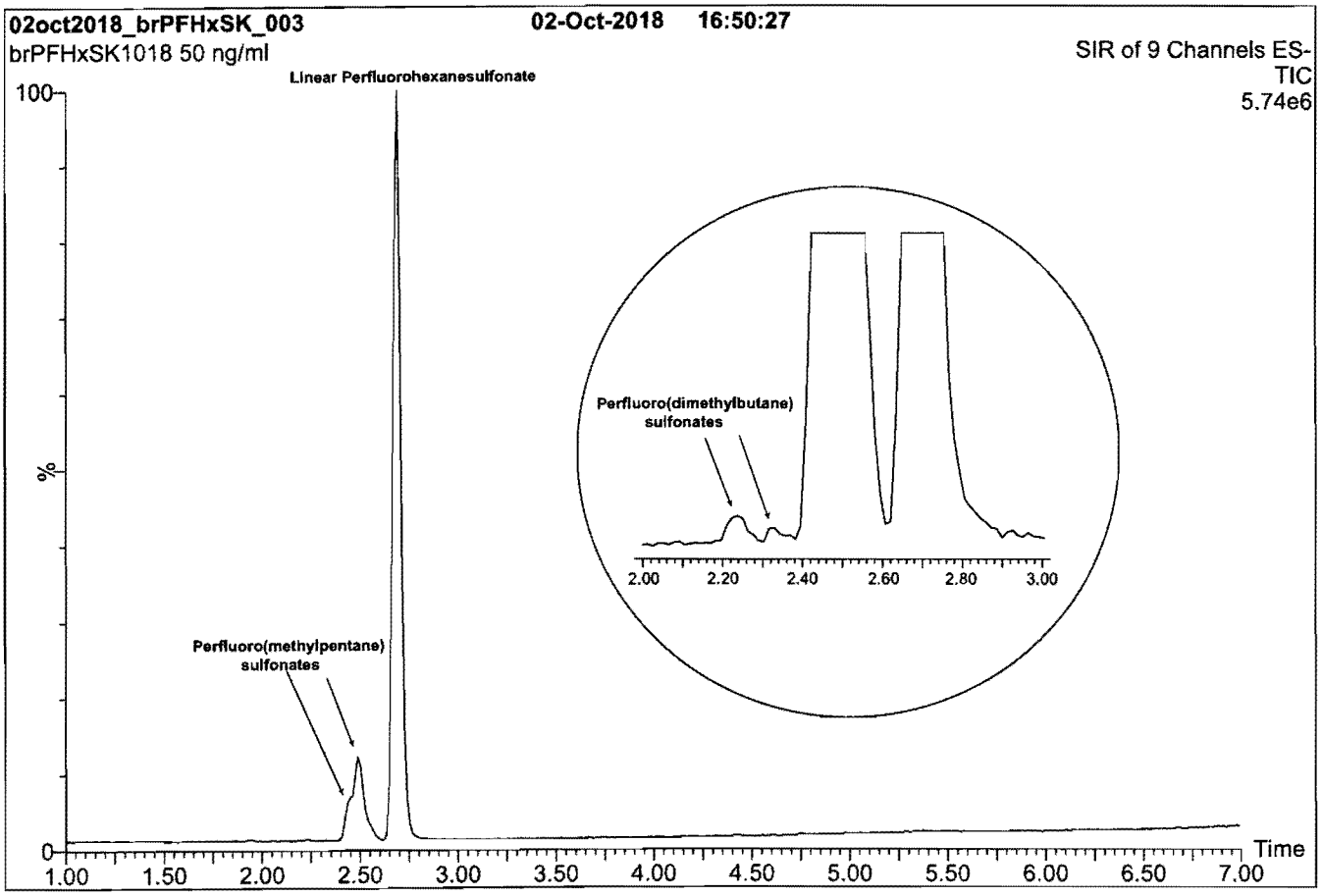
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.87e-3
Collision Energy (eV) = 42

1910653

Figure 2: **br-PFHxSK; LC/MS Data (SIR)**



Conditions for Figure 2:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min. Hold for 2 min
before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

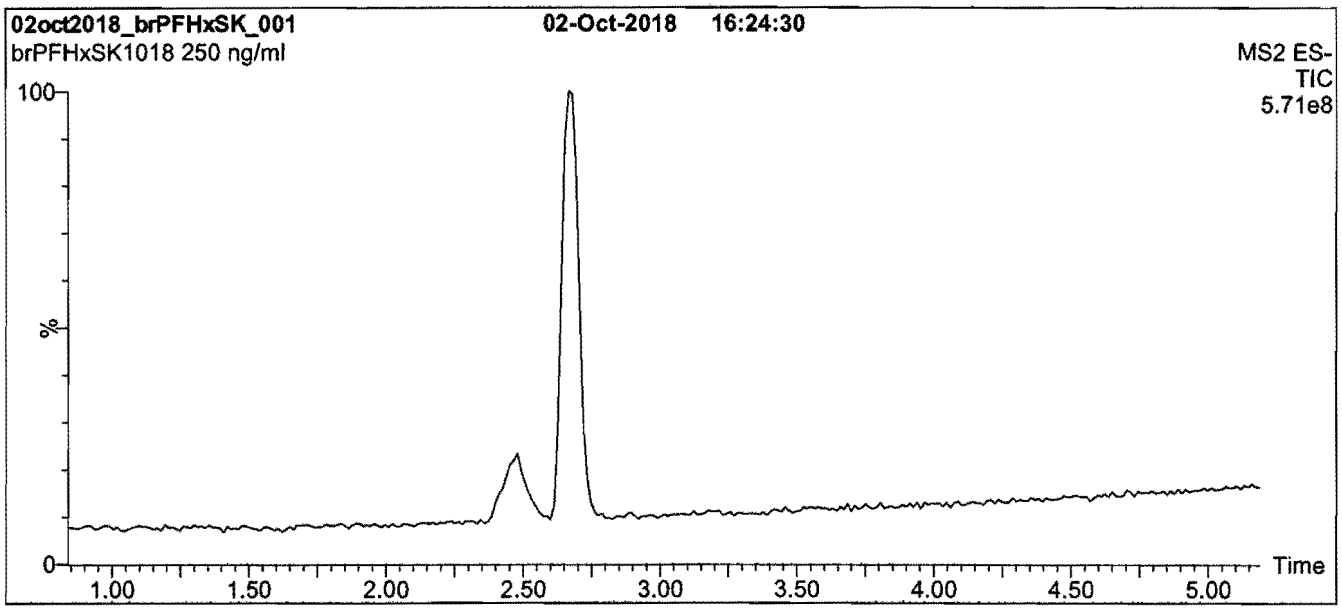
MS Parameters

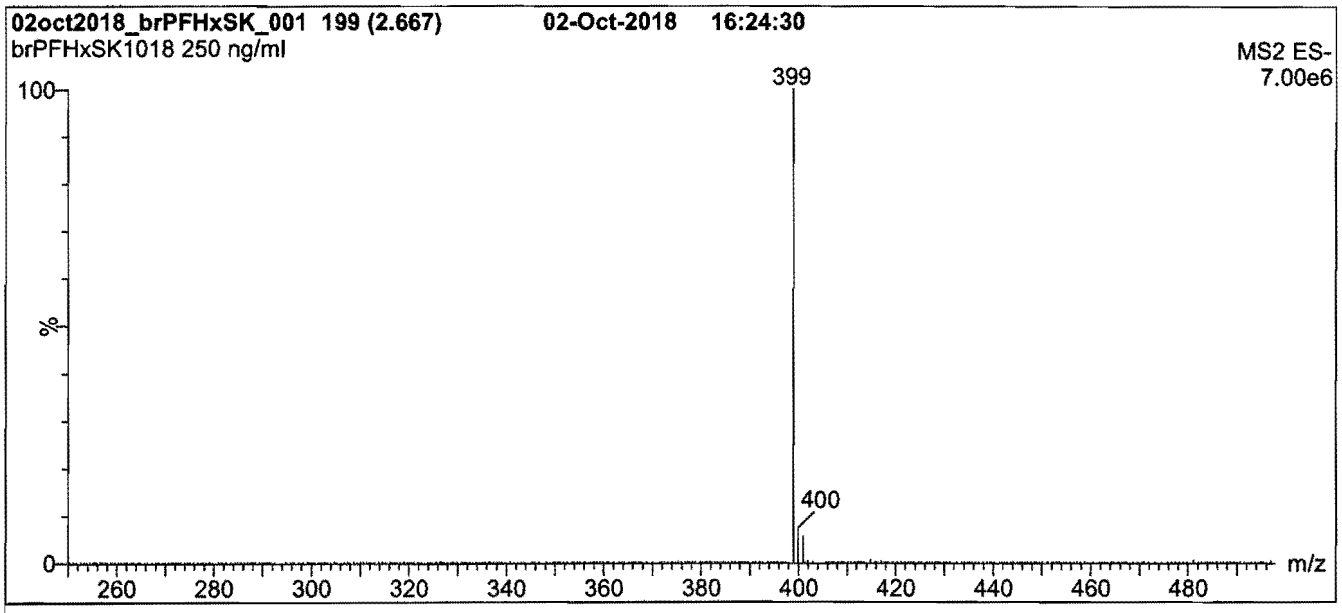
Experiment: SIR (9 channels)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = variable (2 - 6)
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0653

Figure 1: **br-PFHxSK; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min. Hold for 2 min
before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0653

Table A: **br-PFHxSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	81.1
2	Potassium 1-trifluoromethylperfluoropentanesulfonate**	$CF_3CF_2CF_2CF_2\underset{\displaystyle CF_3}{\underset{\vert}{C}}FSO_3^-K^+$	2.9
3	Potassium 2-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF_2\underset{\displaystyle CF_3}{\underset{\vert}{C}}FCF_2SO_3^-K^+$	1.4
4	Potassium 3-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2\underset{\displaystyle CF_3}{\underset{\vert}{C}}FCF_2CF_2SO_3^-K^+$	5.0
5	Potassium 4-trifluoromethylperfluoropentanesulfonate	$CF_3\underset{\displaystyle CF_3}{\underset{\vert}{C}}FCF_2CF_2CF_2SO_3^-K^+$	8.9
6	Potassium 3,3-di(trifluoromethyl)perfluorobutanesulfonate	$CF_3\underset{\displaystyle CF_3}{\underset{\vert}{\overset{\displaystyle CF_3}{\overset{\vert}{C}}}}CF_2CF_2SO_3^-K^+$	0.2
7	Other Unidentified Isomers		0.5

* Percent of total perfluorohexanesulfonate isomers only.
** Systematic Name: Potassium perfluorohexane-2-sulfonate.

Certified By: _____ **Date:** 10/05/2018
(mm/dd/yyyy)
B.G. Chittim, General Manager

19L0653

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0653

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

br-PFHxSK

Potassium Perfluorohexanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFHxSK
LOT NUMBER:	brPFHxSK1018
CONCENTRATION:	50.0 ± 2.5 µg/ml (total potassium salt)
	45.5 ± 2.3 µg/ml (total PFHxS anion)
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	10/01/2018
LAST TESTED: (mm/dd/yyyy)	10/02/2018
EXPIRY DATE: (mm/dd/yyyy)	10/02/2023
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorohexanesulfonate linear and branched isomers. The full name, structure and percent composition for each of the identified isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

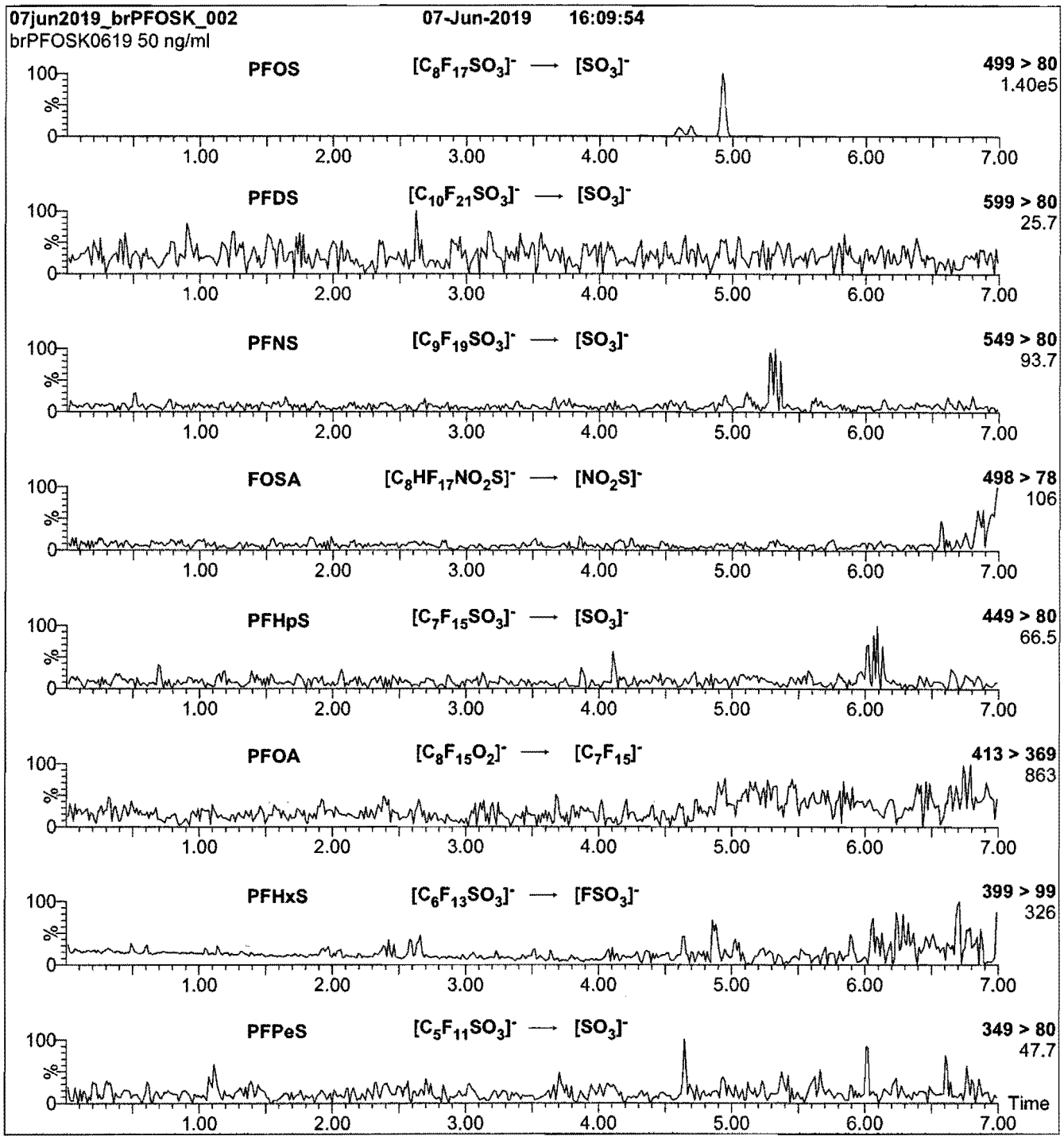
- See page 2 for further details.
- Contains ~ 0.3% of perfluoro-n-hexanoic acid and ~ 0.15% of perfluoro-1-pentanesulfonate.
- CAS#: 3871-99-6 (for linear isomer; potassium salt).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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19L0654

Figure 3: **br-PFOSK; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column (br-PFOSK)

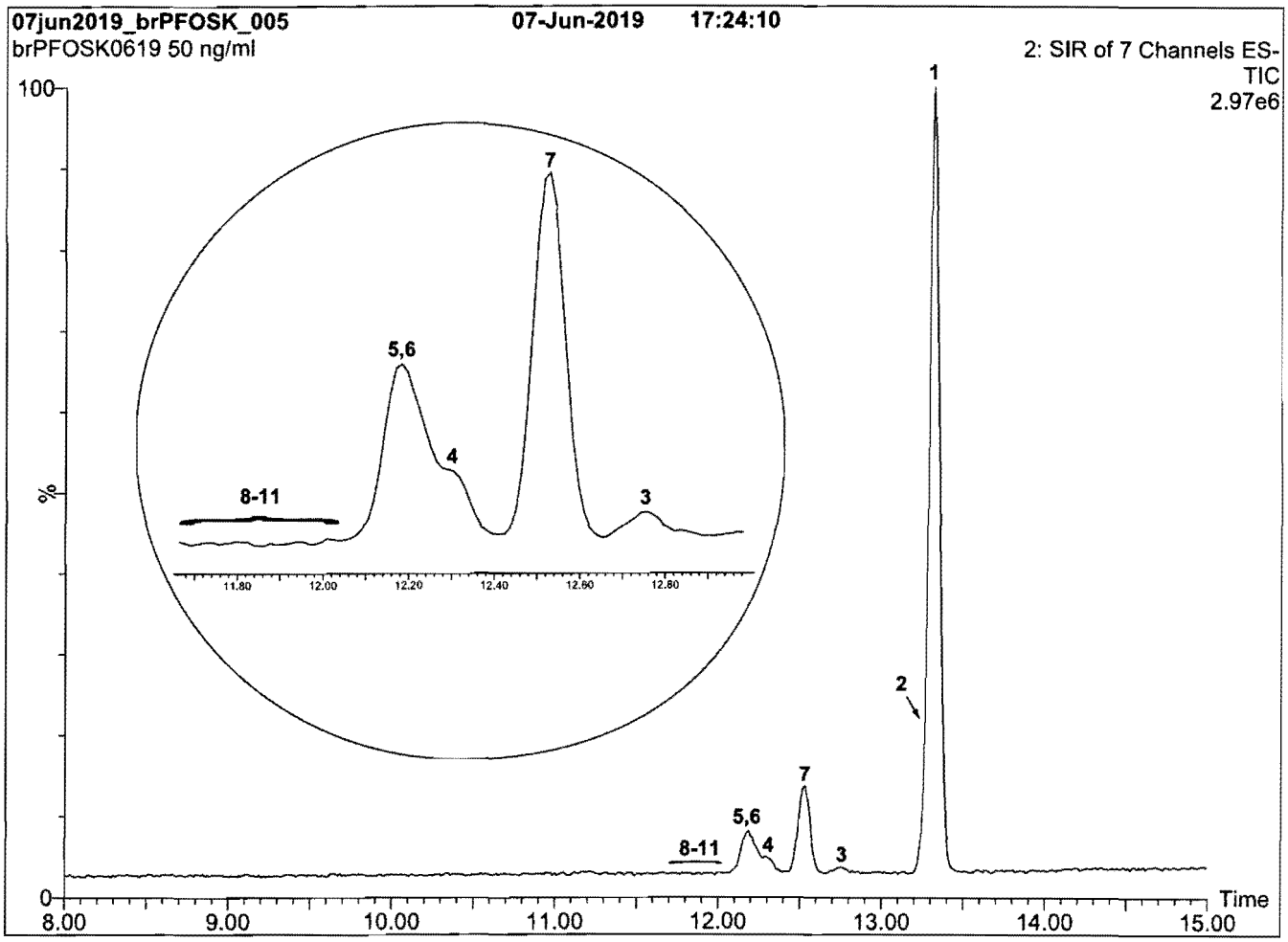
Mobile phase: Same as Figure 2

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.97e-3
Collision Energy (eV) = 64

Figure 2: **br-PFOSK; LC/MS Data (SIR)**



Conditions for Figure 2:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18} (1.7 µm, 2.1 x 100 mm)

Injection: 50 ng/ml of br-PFOSK

Mobile Phase: Gradient
50% (80:20 MeOH:ACN) / 50% H_2O (both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min.
Return to initial conditions over 0.75 min.
Time: 12 min

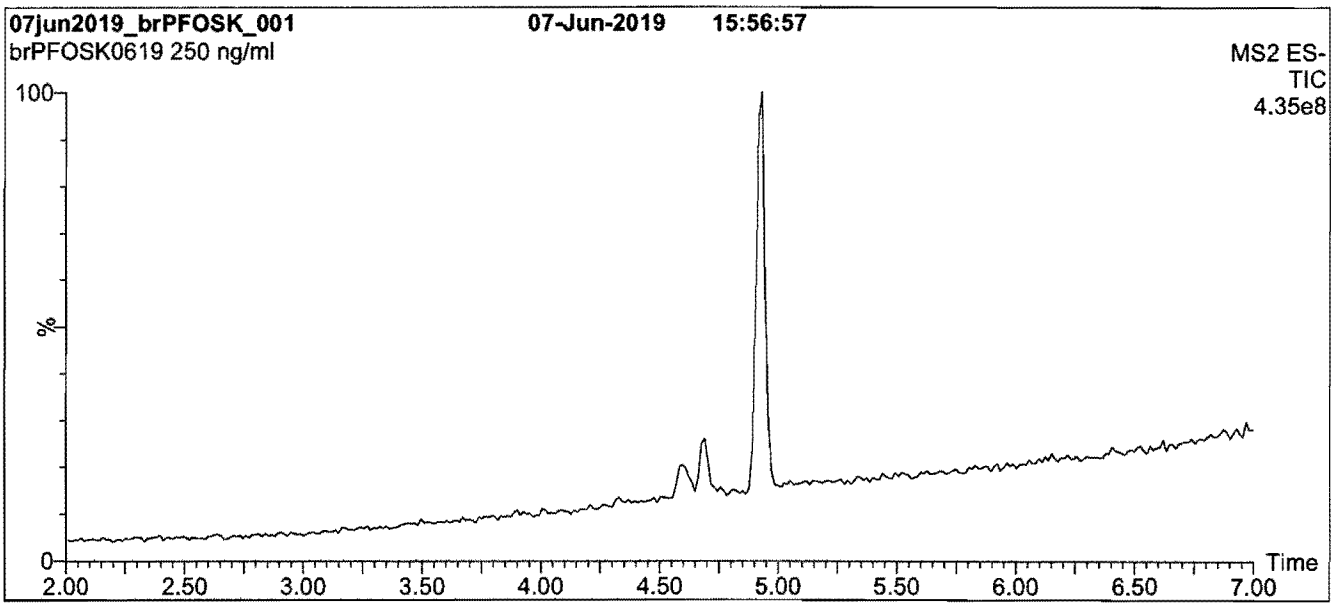
Flow: 300 µl/min

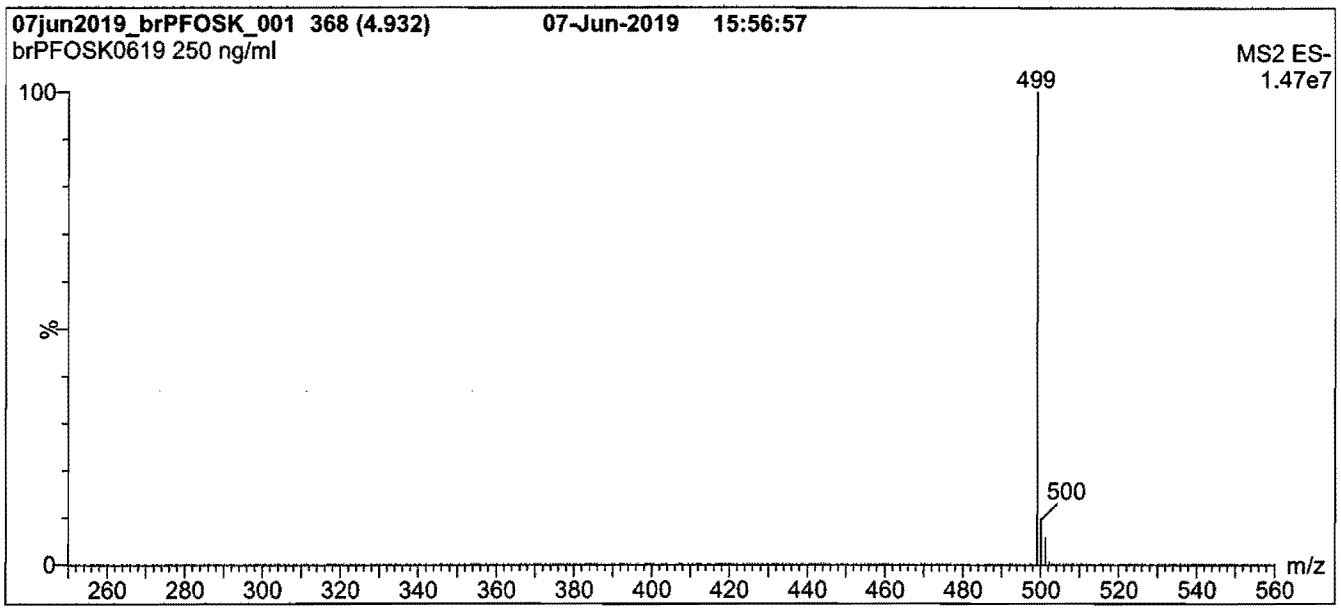
MS Conditions:

SIR (ES^-)
Source = 120 °C
Desolvation = 500 °C
Cone Voltage = 2.00V

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Figure 1: **br-PFOSK; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min.
Return to initial conditions over 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0654

Table A: **br-PFOSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-octanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	78.8
2	Potassium 1-trifluoromethylperfluoroheptanesulfonate**	$CF_3CF_2CF_2CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	1.2
3	Potassium 2-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	0.6
4	Potassium 3-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF_2CF(CF_3)CF_2CF_2SO_3^-K^+$	1.9
5	Potassium 4-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	2.2
6	Potassium 5-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF(CF_3)CF_2CF_2CF_2CF_2SO_3^-K^+$	4.5
7	Potassium 6-trifluoromethylperfluoroheptanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	10.0
8	Potassium 5,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3C(CF_3)_2CF_2CF_2CF_2CF_2SO_3^-K^+$	0.2
9	Potassium 4,4-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF_2C(CF_3)_2CF_2CF_2CF_2SO_3^-K^+$	0.03
10	Potassium 4,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2CF_2SO_3^-K^+$	0.4
11	Potassium 3,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF(CF_3)CF_2CF(CF_3)CF_2CF_2SO_3^-K^+$	0.07

* Percent of total perfluorooctanesulfonate isomers only. Isomers are labelled in Figure 2.
** Systematic Name: Potassium perfluorooctane-2-sulfonate.

Certified By: _____ **Date:** 06/17/2019 (mm/dd/yyyy)

B.G. Chittim, General Manager

19L0654

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0654

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

br-PFOSK

Potassium Perfluorooctanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFOSK
LOT NUMBER:	brPFOSK0619
CONCENTRATION:	50 ± 2.5 µg/ml (total potassium salt)
	46.4 ± 2.3 µg/ml (total PFOS anion)
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	06/03/2019
LAST TESTED: (mm/dd/yyyy)	06/07/2019
EXPIRY DATE: (mm/dd/yyyy)	06/07/2024
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonate linear and branched isomers. The full name, structure and percent composition for each of the isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

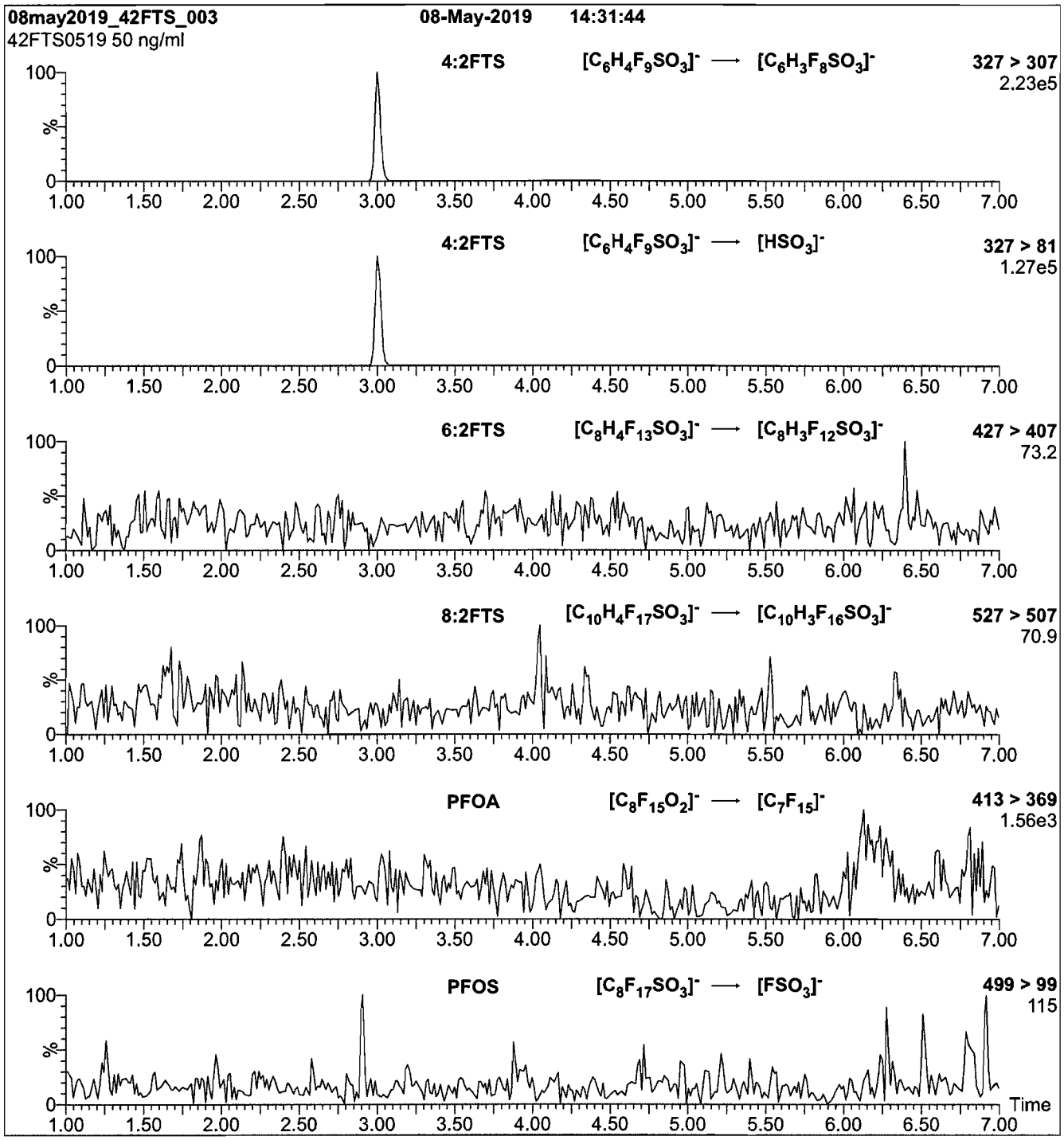
ADDITIONAL INFORMATION:

- See page 2 for further details.
- A 5-point calibration curve was generated using linear PFOS (potassium salt) and mass-labelled PFOS as an internal standard to enable quantitation of br-PFOSK using isotopic dilution.
- CAS#: 2795-39-3 (for linear isomer; potassium salt).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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Figure 2: **4:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (4:2FTS)

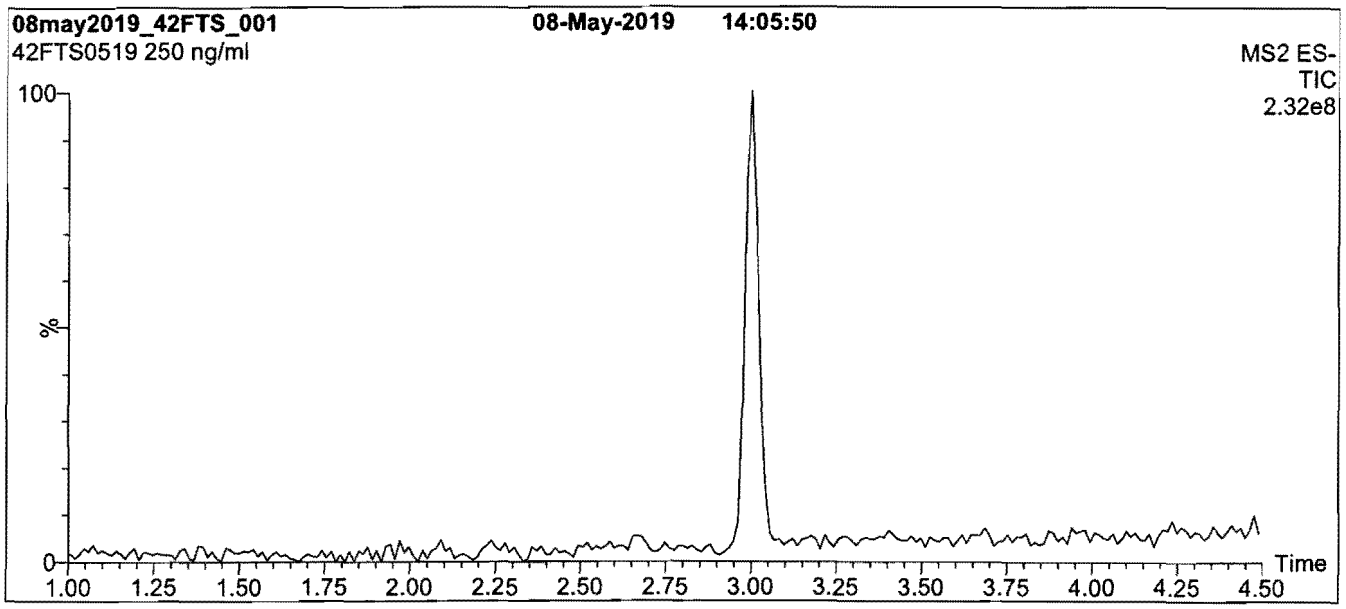
Mobile phase: Same as Figure 1

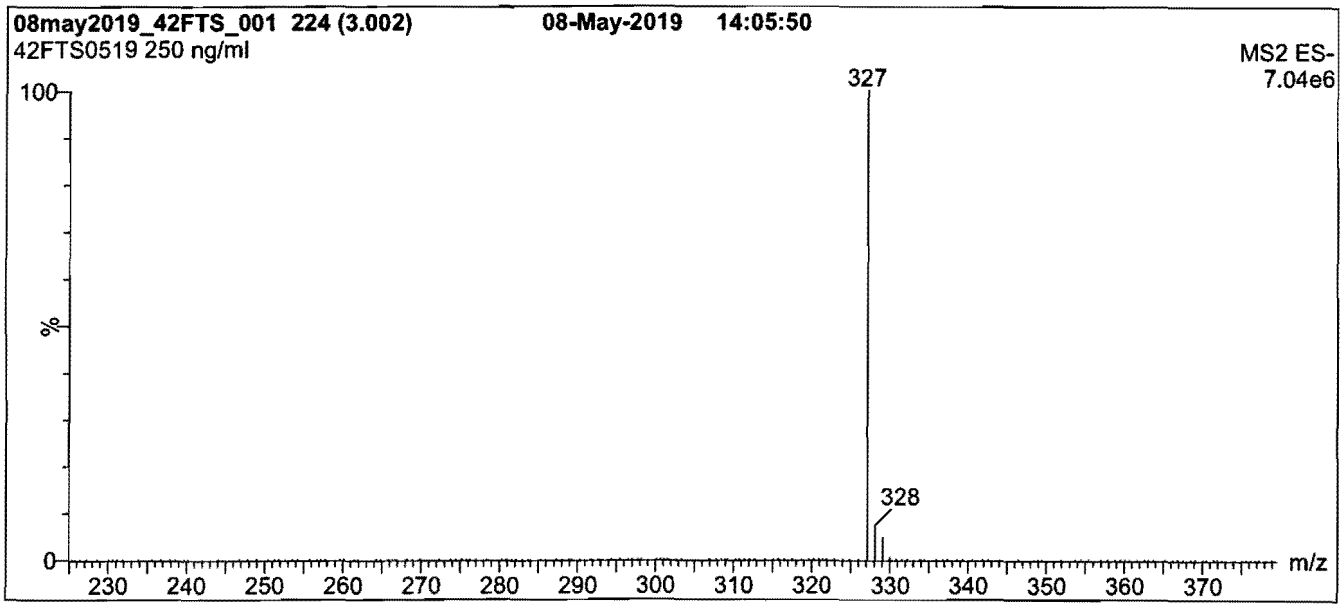
Flow: 300 µl/min

MS Parameters
Collision Gas (mbar) = 3.07e-3
Collision Energy (eV) = 18

19L0655

Figure 1: 4:2FTS; LC/MS Data (TIC and Mass Spectrum)





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% (80:20 MeOH:ACN) / 60% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.75 min.
Time: 11 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

INTENDED USE:

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HANDLING:

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UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

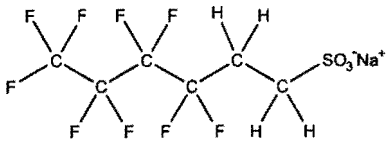
19L0655

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 4:2FTS **LOT NUMBER:** 42FTS0519
COMPOUND: Sodium 1H,1H,2H,2H-perfluorohexane sulfonate

STRUCTURE: **CAS #:** 27619-93-8



MOLECULAR FORMULA:	$C_6H_4F_9SO_3Na$	**MOLECULAR WEIGHT:**	350.13
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt)	**SOLVENT(S):**	Methanol
	46.7 ± 2.3 µg/ml (4:2FTS anion)		
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	05/08/2019		
EXPIRY DATE: (mm/dd/yyyy)	05/08/2024		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

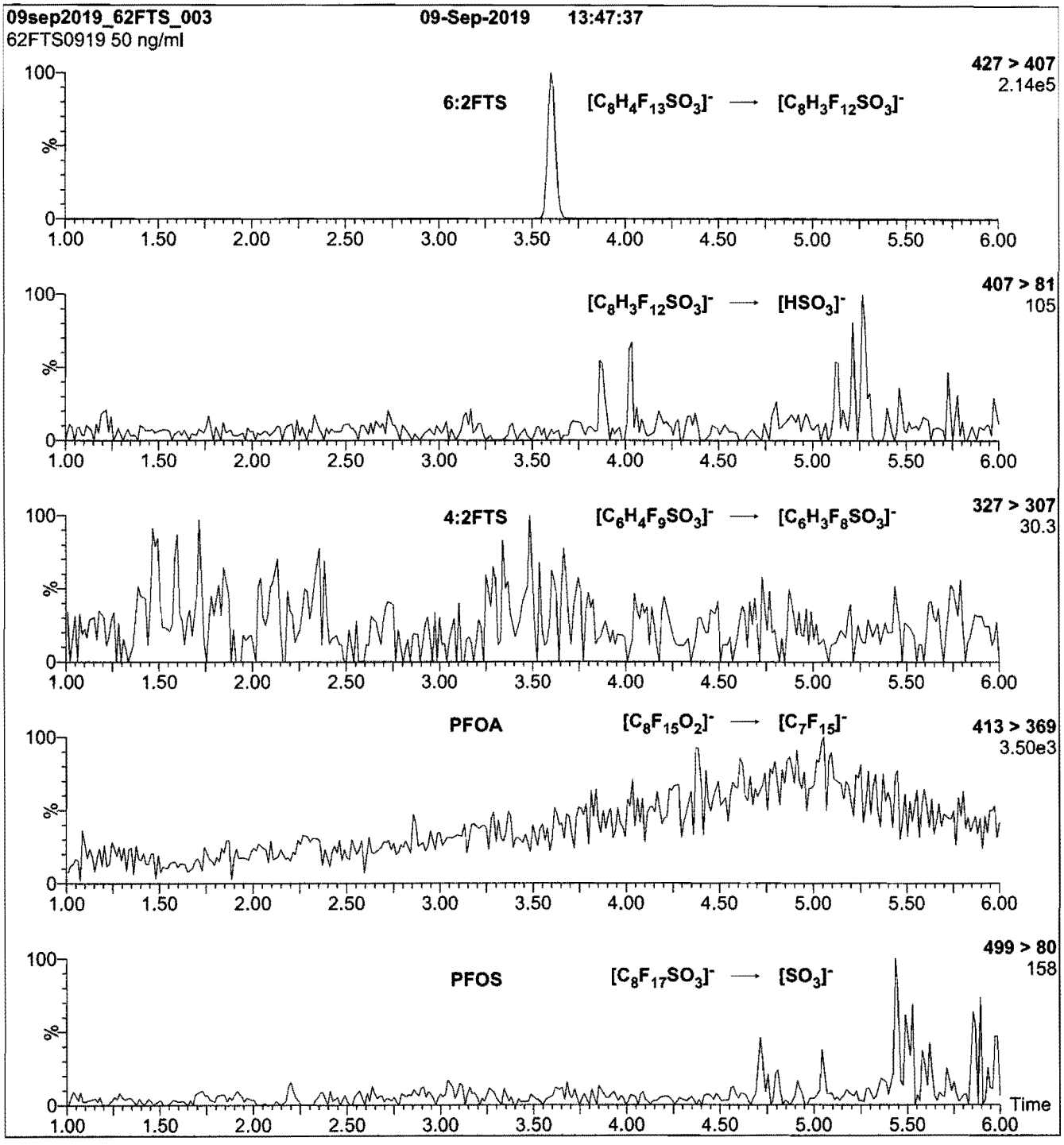
- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/09/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **6:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (6:2FTS)

Mobile phase: Same as Figure 1

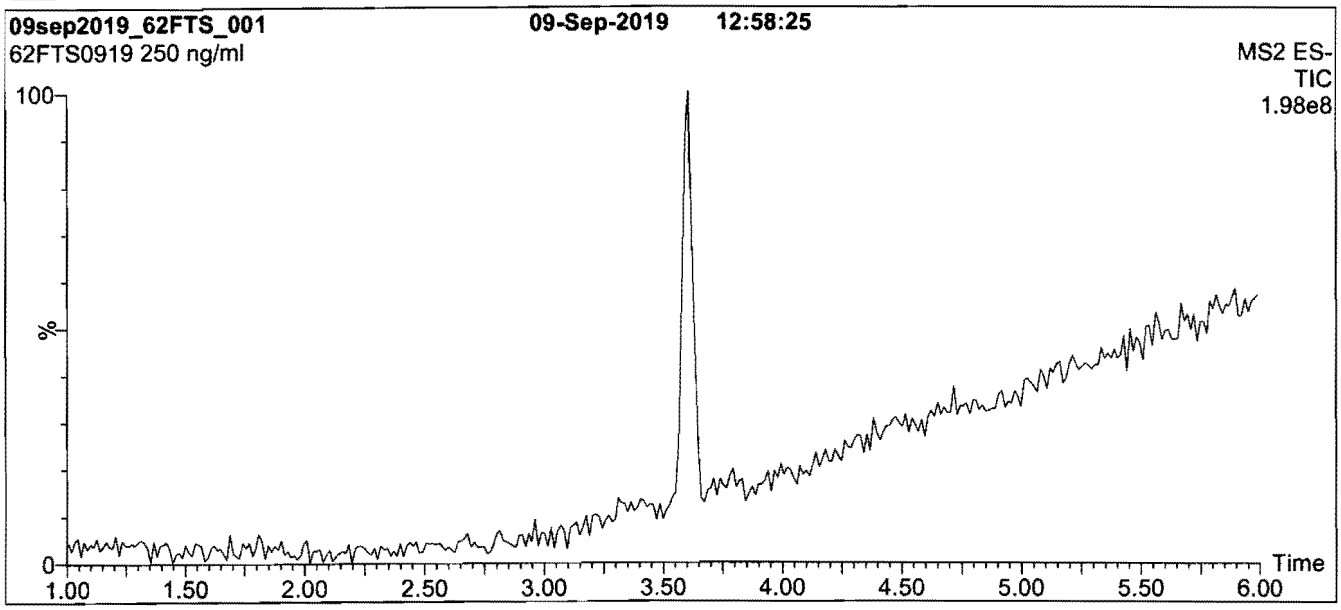
Flow: 300 µl/min

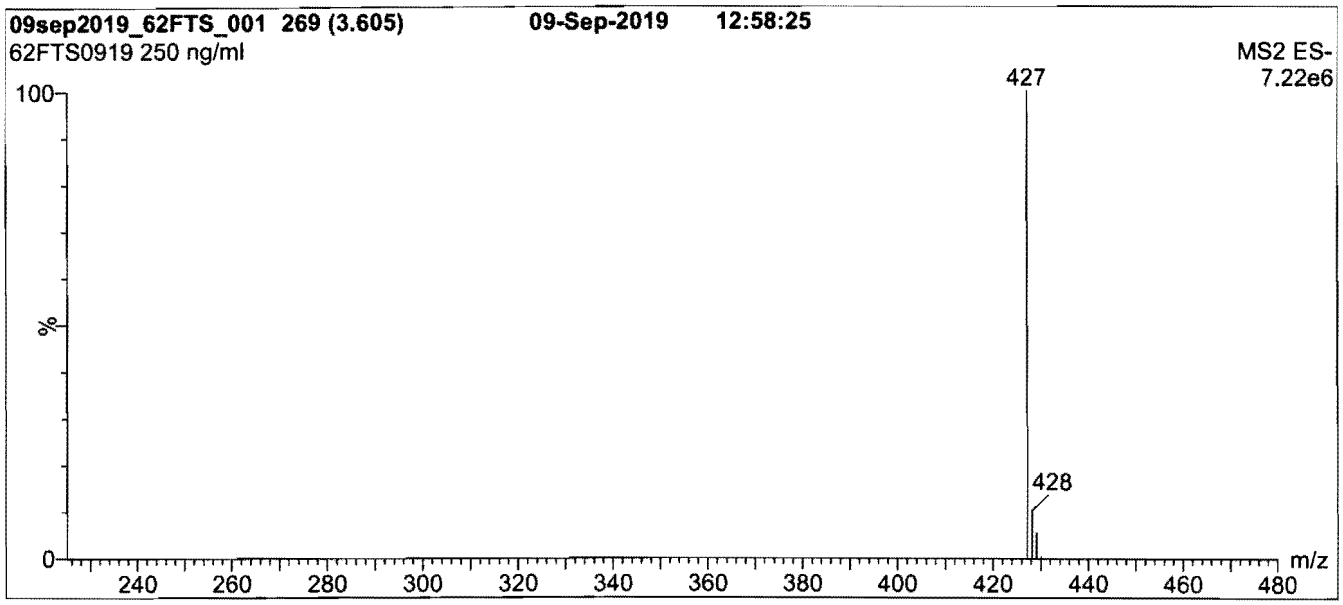
MS Parameters

Collision Gas (mbar) = 3.61e-3
Collision Energy (eV) = 20

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Figure 1: **6:2FTS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

1906S6

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED 0001 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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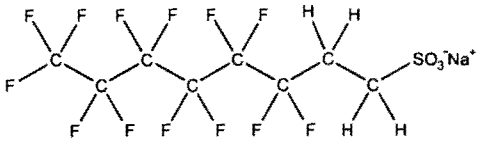
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 6:2FTS **LOT NUMBER:** 62FTS0919

COMPOUND: Sodium 1H,1H,2H,2H-perfluorooctane sulfonate

STRUCTURE: **CAS #:** 27619-94-9



MOLECULAR FORMULA:	$C_8H_4F_{13}SO_3Na$		**MOLECULAR WEIGHT:**	450.15
CONCENTRATION:	50.0 ± 2.5 µg/ml	(Na salt)	**SOLVENT(S):**	Methanol
	47.4 ± 2.4 µg/ml	(6:2FTS anion)		
CHEMICAL PURITY:	>98%			
LAST TESTED: (mm/dd/yyyy)	09/09/2019			
EXPIRY DATE: (mm/dd/yyyy)	09/09/2024			
RECOMMENDED STORAGE:	Refrigerate ampoule			

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

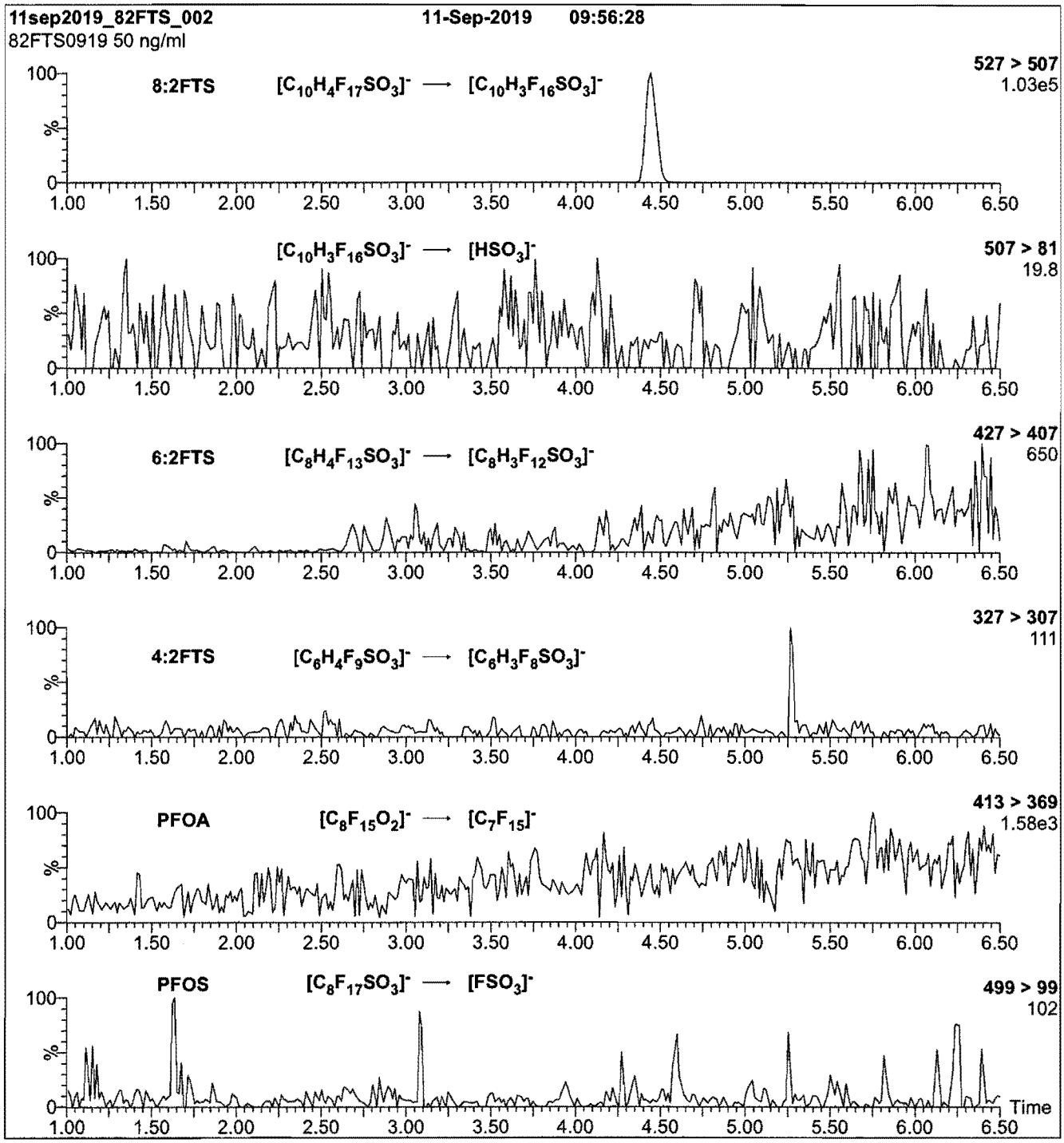
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Certified By: _____ **Date:** 09/09/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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Figure 2: **8:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (8:2FTS)

Mobile phase: Same as Figure 1

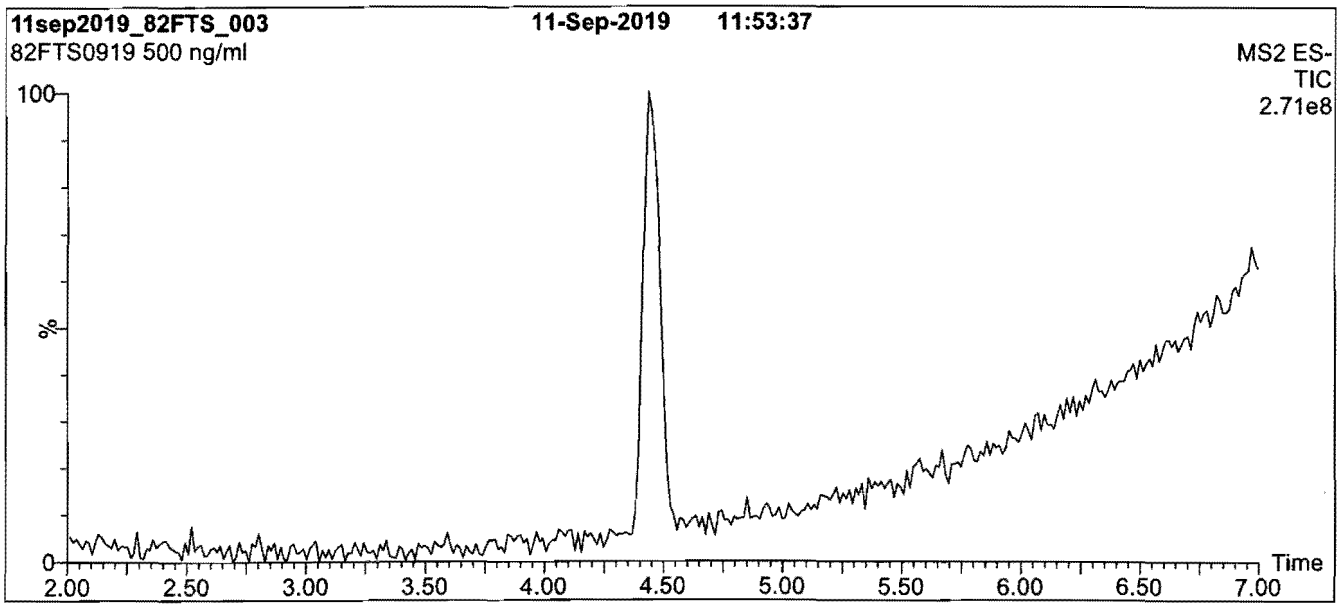
Flow: 300 µl/min

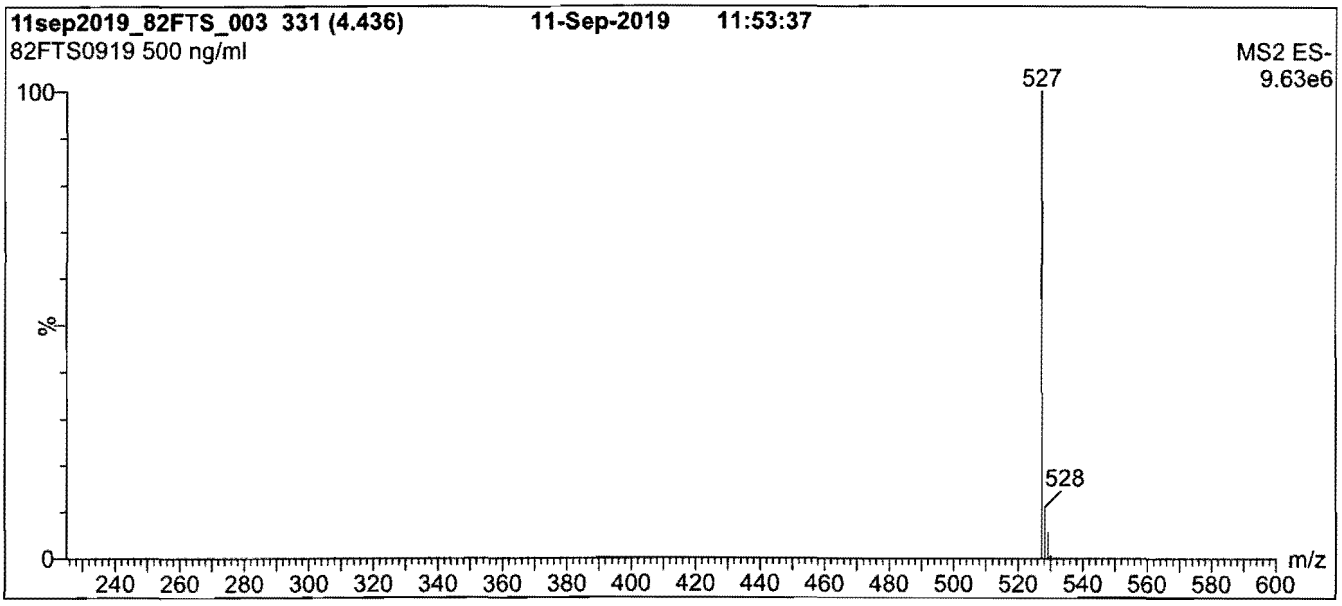
MS Parameters

Collision Gas (mbar) = 3.49e-3
Collision Energy (eV) = 26

19L0657

Figure 1: **8:2FTS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 3 min
before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

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INTENDED USE:

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$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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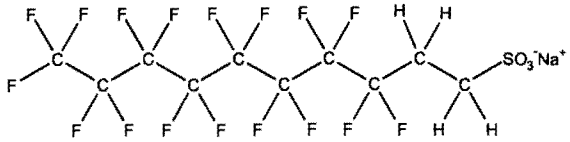
19L0657

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 8:2FTS **LOT NUMBER:** 82FTS0919
COMPOUND: Sodium 1H,1H,2H,2H-perfluorodecane sulfonate

STRUCTURE: **CAS #:** 27619-96-1



MOLECULAR FORMULA:	$C_{10}H_4F_{17}SO_3Na$		**MOLECULAR WEIGHT:**	550.16
CONCENTRATION:	50.0 ± 2.5 µg/ml	(Na salt)	**SOLVENT(S):**	Methanol
	47.9 ± 2.4 µg/ml	(8:2FTS anion)		
CHEMICAL PURITY:	>98%			
LAST TESTED: (mm/dd/yyyy)	09/11/2019			
EXPIRY DATE: (mm/dd/yyyy)	09/11/2024			
RECOMMENDED STORAGE:	Refrigerate ampoule			

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

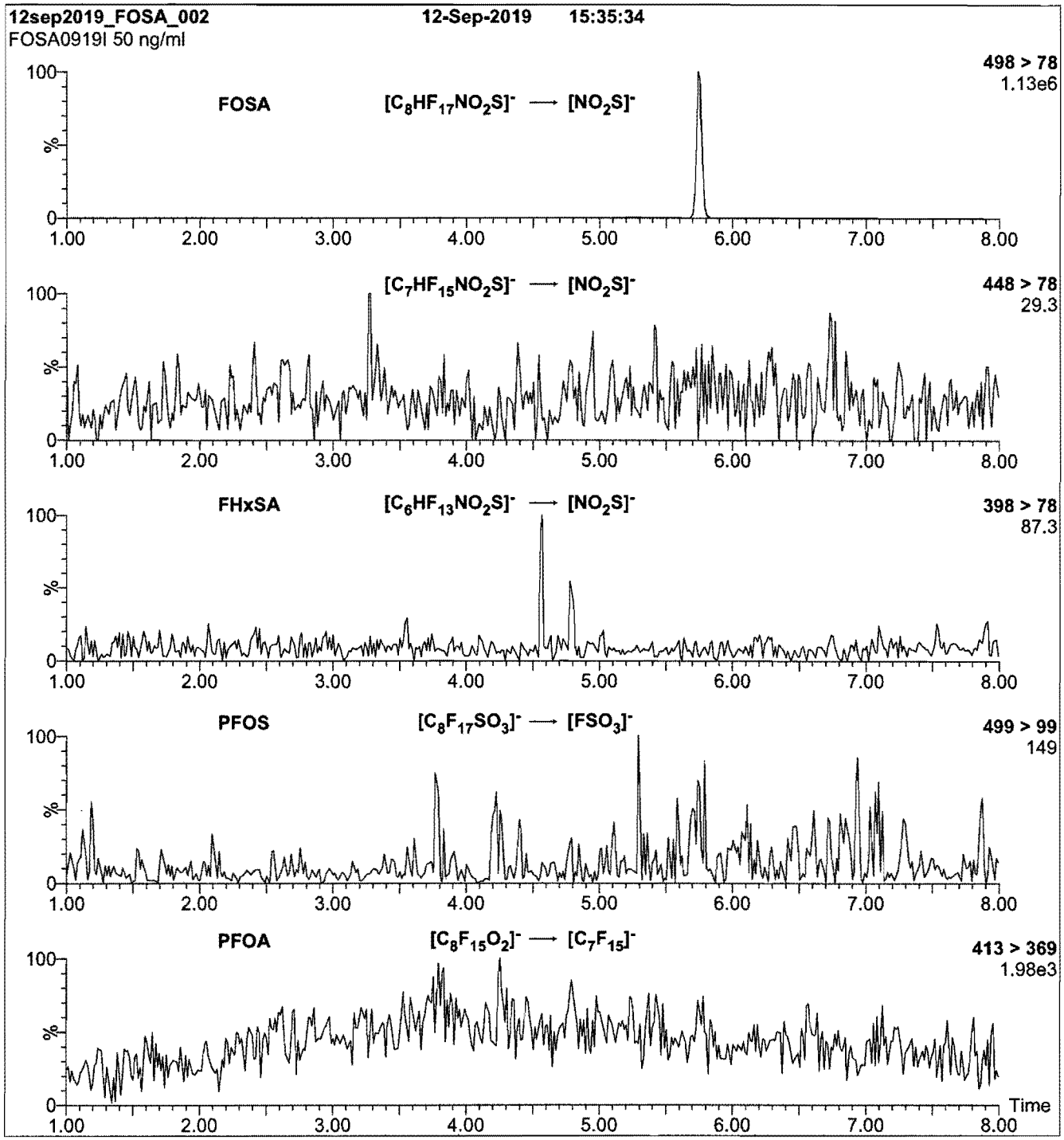
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Certified By: _____ **Date:** 09/11/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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19L0658

Figure 2: **FOSA-I; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (FOSA-I)

Mobile phase: Same as Figure 1

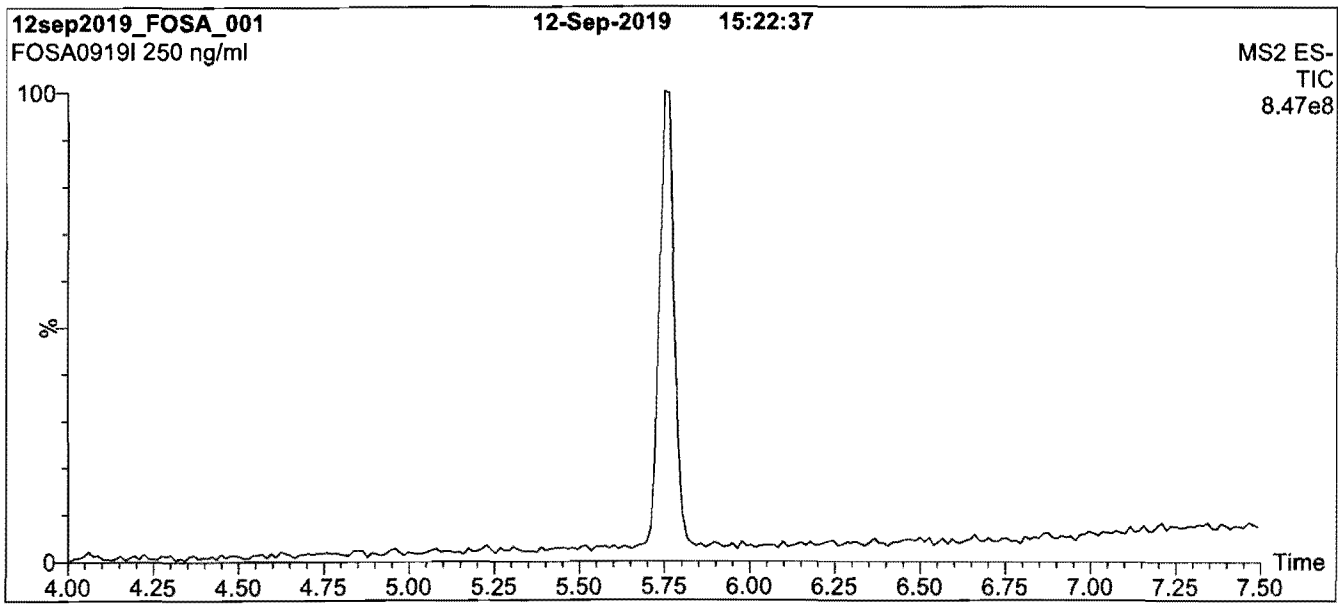
Flow: 300 µl/min

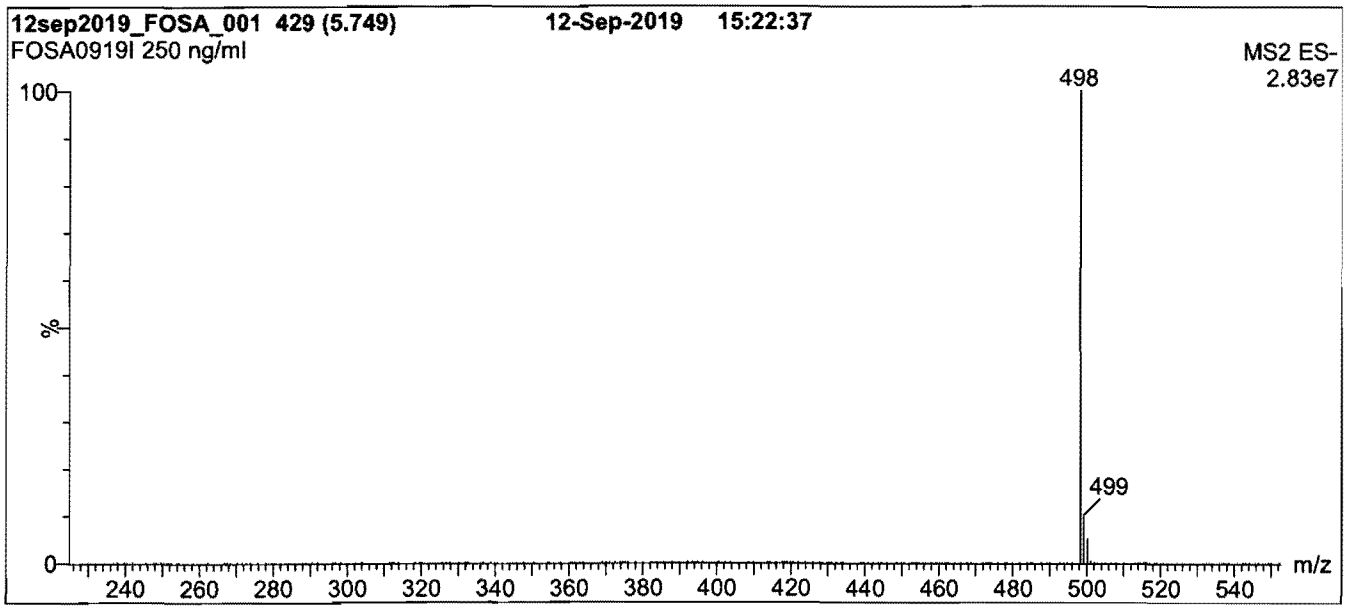
MS Parameters

Collision Gas (mbar) = 3.57e-3

Collision Energy (eV) = 30

Figure 1: **FOSA-I; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 3 min
before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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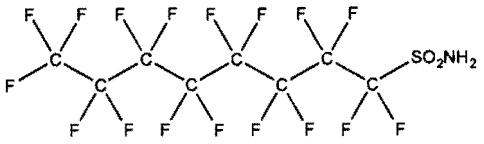
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WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: FOSA-I
COMPOUND: Perfluoro-1-octanesulfonamide
LOT NUMBER: FOSA0919I

STRUCTURE:
CAS #: 754-91-6



MOLECULAR FORMULA:	$C_8H_2F_{17}NO_2S$	**MOLECULAR WEIGHT:**	499.14
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Isopropanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	09/12/2019		
EXPIRY DATE: (mm/dd/yyyy)	09/12/2024		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

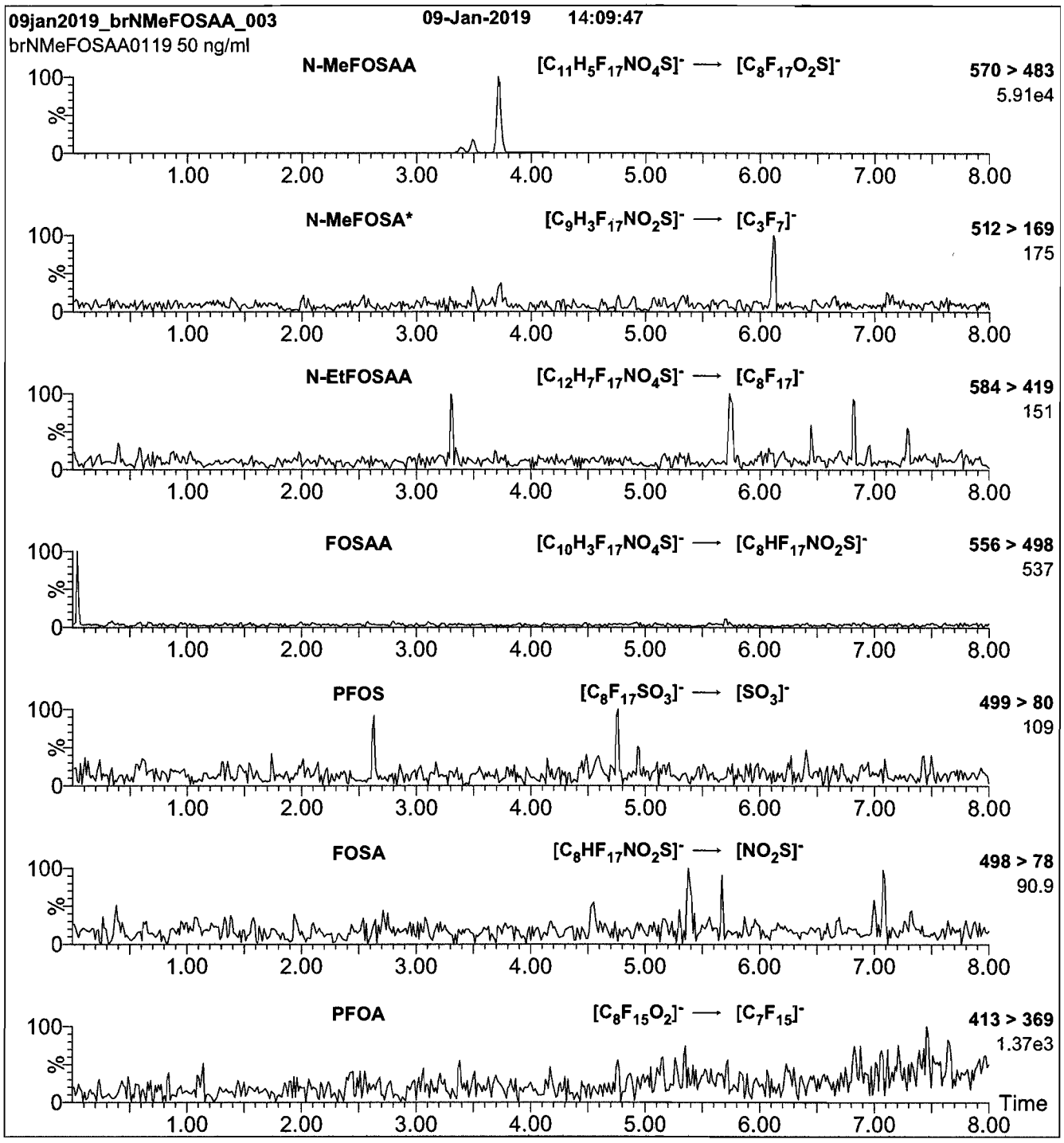
- See page 2 for further details.

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Certified By: _____ **Date:** 09/13/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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Figure 3: **br-NMeFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



***Note**: N-MeFOSA is formed by in-source fragmentation.

Conditions for Figure 3:

Injection: On-column (br-NMeFOSAA)

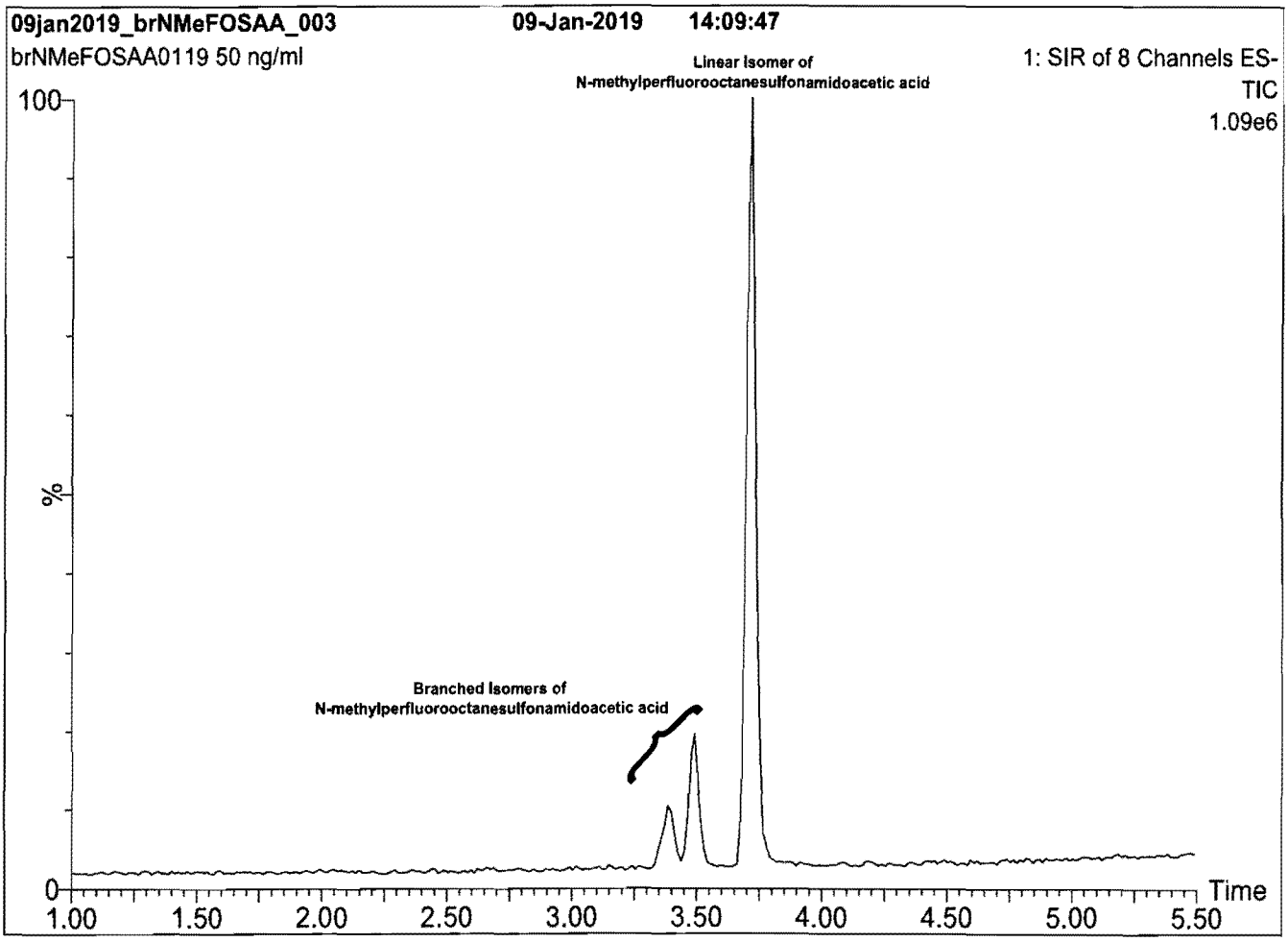
Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.79e-3
Collision Energy (eV) = 16

Figure 2: **br-NMeFOSAA; LC/MS Data (SIR)**



Conditions for Figure 2:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

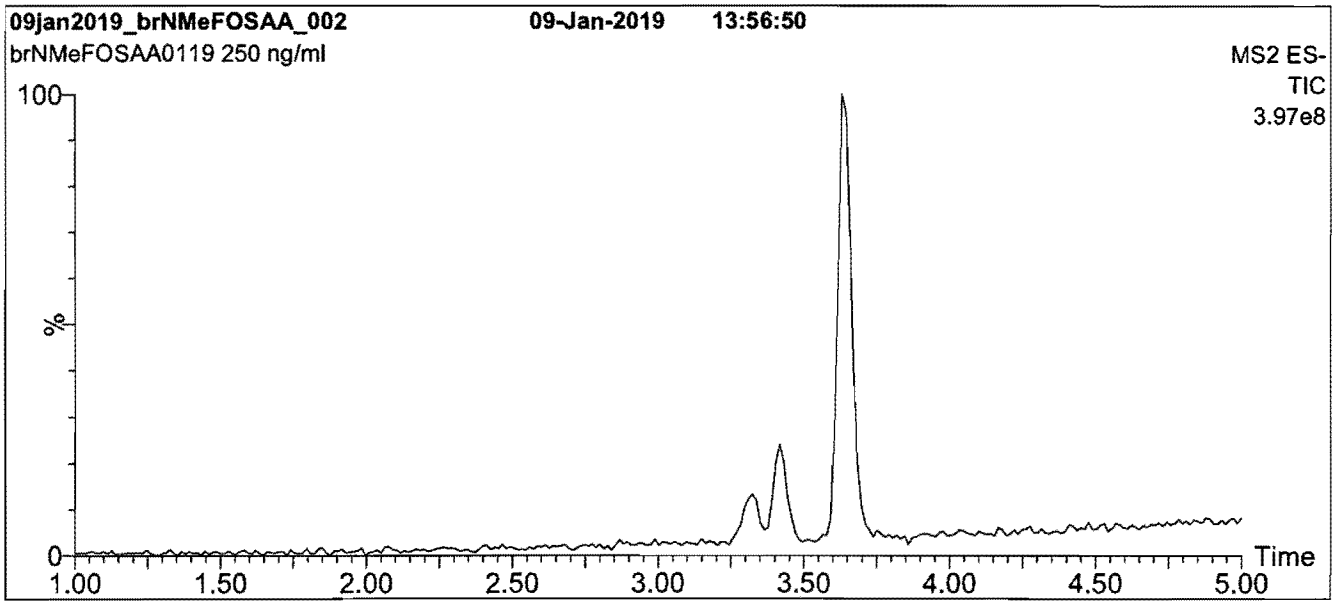
Flow: 300 µl/min

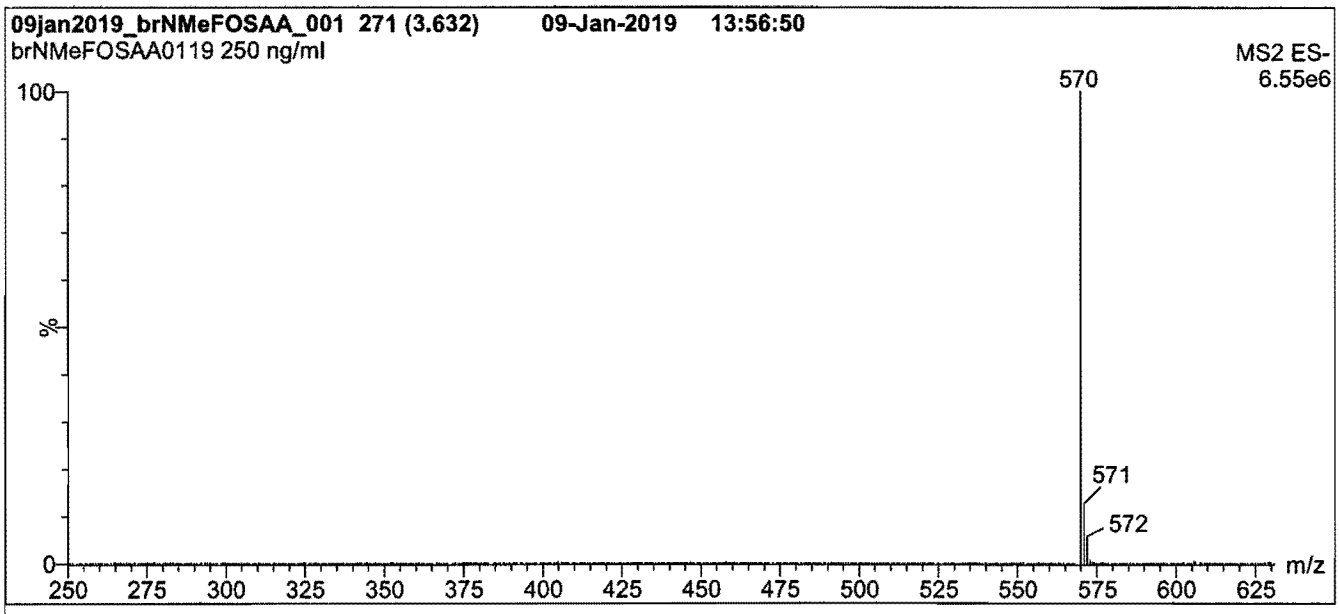
MS Parameters

Experiment: SIR (8 channels)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 2-64
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

Figure 1: **br-NMeFOSAA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

Table A: **br-NMeFOSAA; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	N-methylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(CH_3)CH_2CO_2H$	76.0
2	N-methylperfluoro-3-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CO_2H$	0.7
3	N-methylperfluoro-4-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_3)CH_2CO_2H$	2.0
4	N-methylperfluoro-5-methylheptanesulfonamidoacetic acid	$CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_3)CH_2CO_2H$	6.0
5	N-methylperfluoro-6-methylheptanesulfonamidoacetic acid	$CF_3CF(CF_3)(CF_2)_5SO_2N(CH_3)CH_2CO_2H$	14.0
6	N-methylperfluoro-5,5-dimethylhexanesulfonamidoacetic acid	$CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_3)CH_2CO_2H$	0.2
7	Other Unidentified Isomers		1.1

* Percent of total N-methylperfluorooctanesulfonamidoacetic acid isomers only.

Certified By: _____ **Date:** 01/16/2019 (mm/dd/yyyy)

B.G. Chittim, General Manager

19L0659

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0659

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

br-NMeFOSAA

N-Methylperfluorooctanesulfonamidoacetic Acid Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-NMeFOSAA
LOT NUMBER:	brNMeFOSAA0119
CONCENTRATION:	50.0 ± 2.5 µg/ml
SOLVENT(S):	Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	01/02/2019
LAST TESTED: (mm/dd/yyyy)	01/09/2019
EXPIRY DATE: (mm/dd/yyyy)	01/09/2024
RECOMMENDED STORAGE:	Refrigerate ampoule

DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamidoacetic acid (linear and branched isomers). The full name, structure and percent composition for each of the identified isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

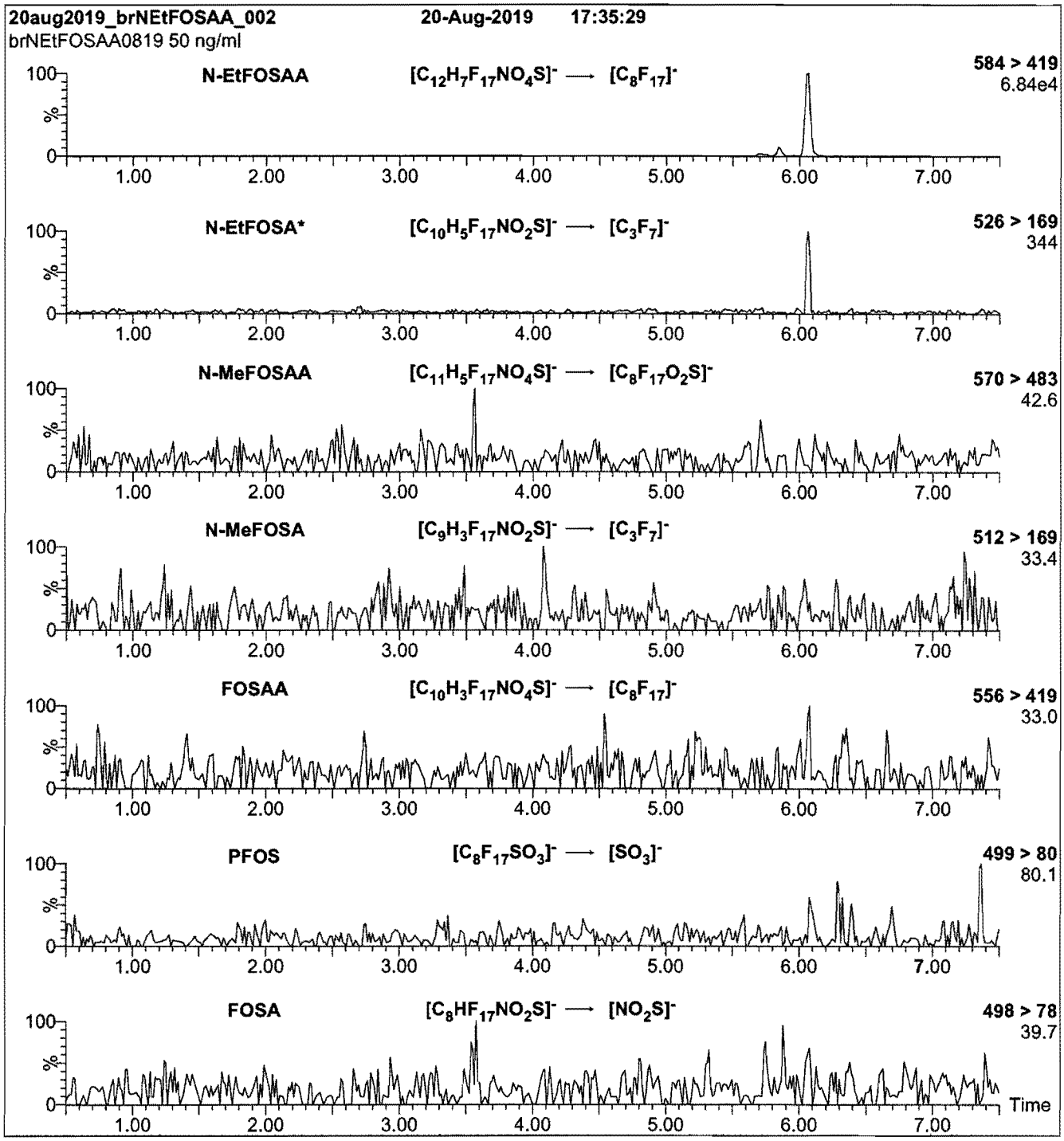
ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the acetic acid moiety to its respective methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 3: **br-NEtFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



*Note: N-EtFOSA is formed by in-source fragmentation.

Conditions for Figure 3:

Injection: On-column (br-NEtFOSAA)

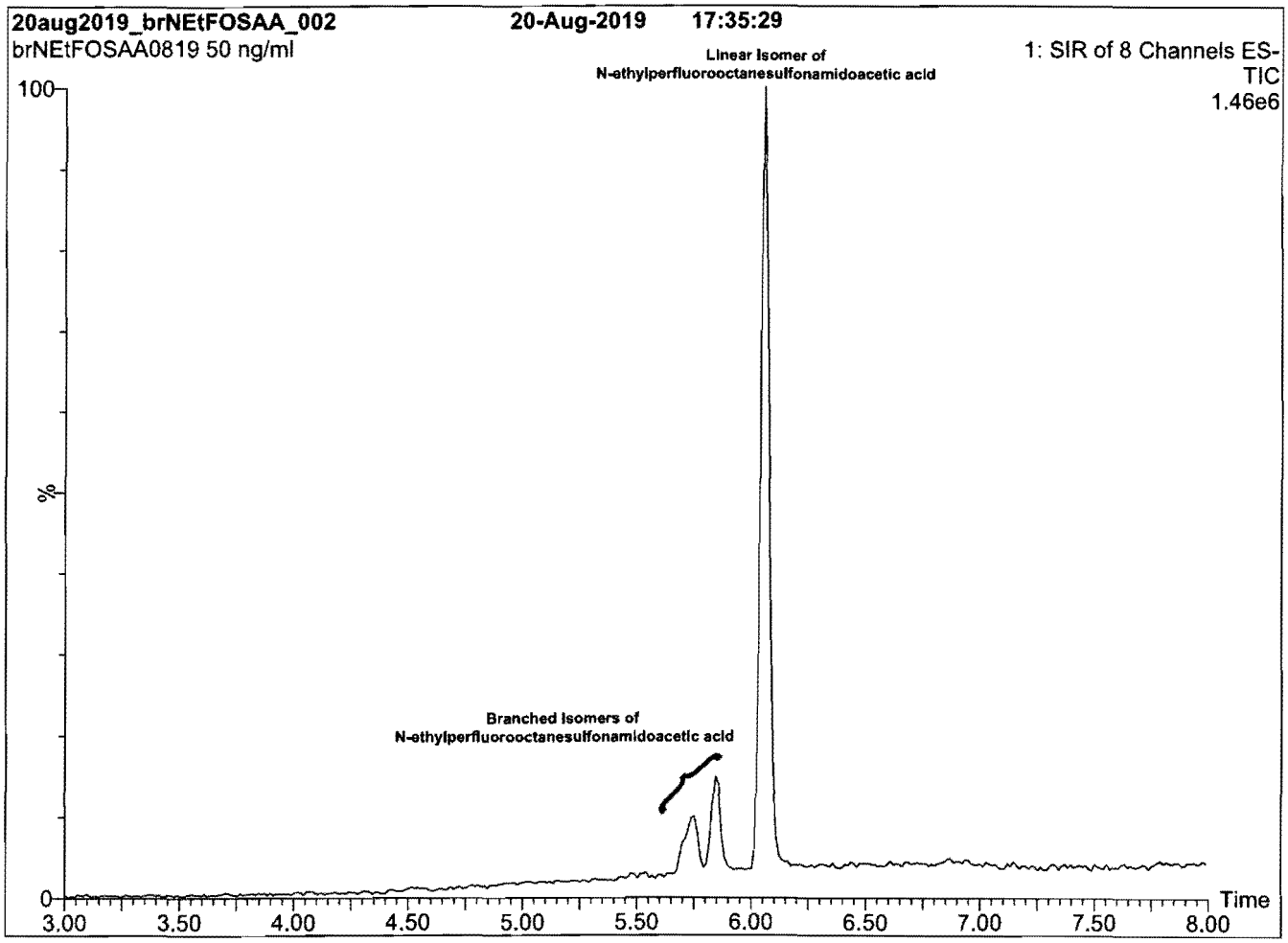
Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.53e-3
Collision Energy (eV) = 18

Figure 2: **br-NEtFOSAA; LC/MS Data (SIR)**



Conditions for Figure 2:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

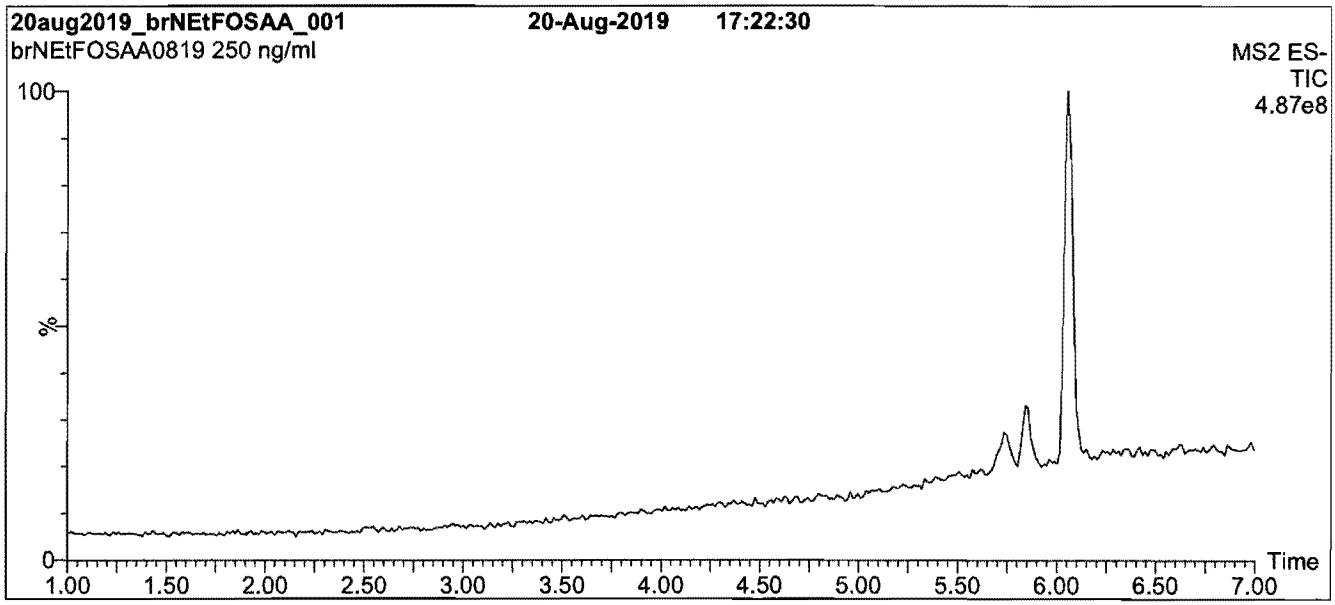
MS Parameters

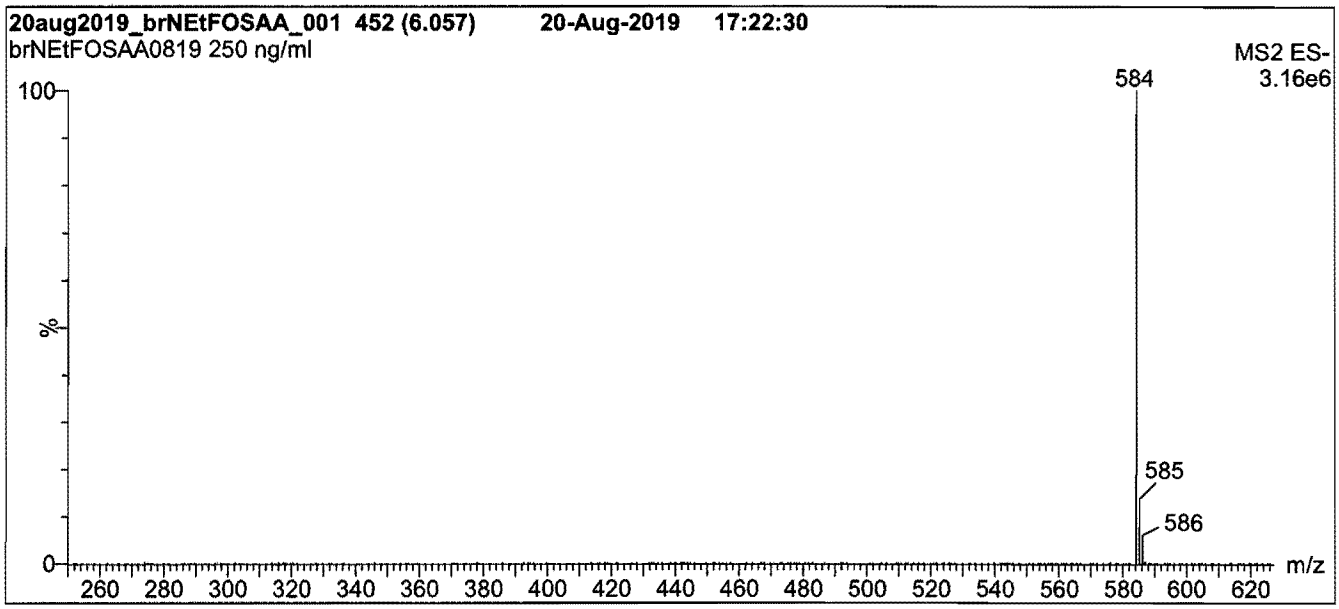
Experiment: SIR (8 channels)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = variable (2-64)
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0660

Figure 1: **br-NEtFOSAA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

Table A: **br-NEtFOSAA; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	N-ethylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(C_2H_5)CH_2CO_2H$	77.5
2	N-ethylperfluoro-3-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(C_2H_5)CH_2CO_2H$	2.3
3	N-ethylperfluoro-4-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(C_2H_5)CH_2CO_2H$	2.2
4	N-ethylperfluoro-5-methylheptanesulfonamidoacetic acid	$CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(C_2H_5)CH_2CO_2H$	5.4
5	N-ethylperfluoro-6-methylheptanesulfonamidoacetic acid	$CF_3CF(CF_3)(CF_2)_5SO_2N(C_2H_5)CH_2CO_2H$	10.4
6	N-ethylperfluoro-5,5-dimethylhexanesulfonamidoacetic acid	$CF_3C(CF_3)_2(CF_2)_4SO_2N(C_2H_5)CH_2CO_2H$	0.3
7	N-ethylperfluoro-4,5-dimethylhexanesulfonamidoacetic acid	$CF_3CF(CF_3)CF(CF_3)(CF_2)_3SO_2N(C_2H_5)CH_2CO_2H$	0.3
8	N-ethylperfluoro-3,5-dimethylhexanesulfonamidoacetic acid	$CF_3CF(CF_3)CF_2CF(CF_3)(CF_2)_2SO_2N(C_2H_5)CH_2CO_2H$	0.3
9	Other Unidentified Isomers		1.3

* Percent of total N-ethylperfluorooctanesulfonamidoacetic acid isomers only.

Certified By: _____ **Date:** 08/29/2019 (mm/dd/yyyy)

B.G. Chittim, General Manager

19L0660

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

br-NEtFOSAA

N-Ethylperfluorooctanesulfonamidoacetic Acid Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-NEtFOSAA
LOT NUMBER:	brNEtFOSAA0819
CONCENTRATION:	50.0 ± 2.5 µg/ml
SOLVENT(S):	Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	08/20/2019
LAST TESTED: (mm/dd/yyyy)	08/20/2019
EXPIRY DATE: (mm/dd/yyyy)	08/20/2024
RECOMMENDED STORAGE:	Refrigerate ampoule

DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamidoacetic acid (linear and branched isomers). The full name, structure and percent composition for each of the identified isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

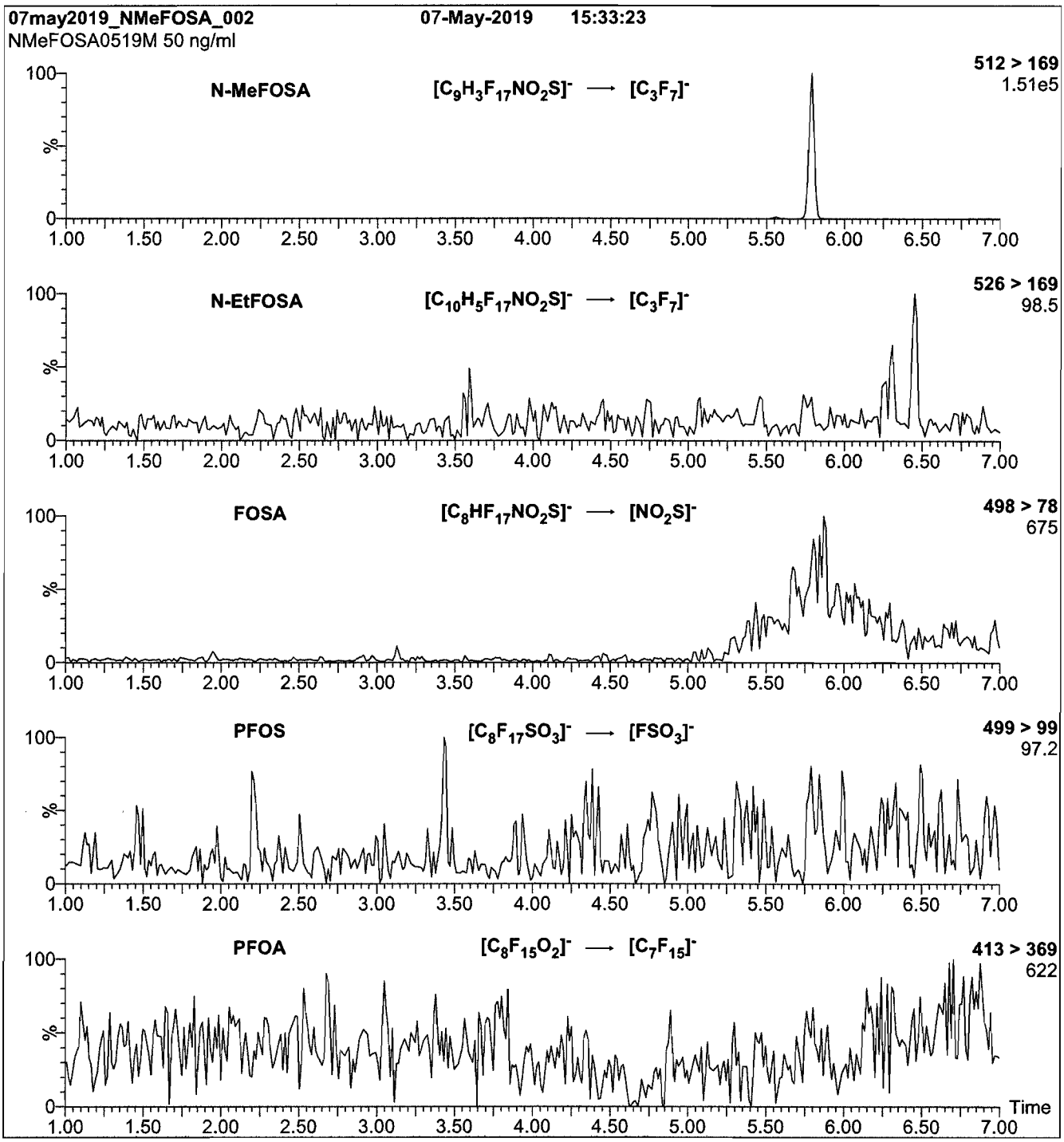
ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the acetic acid moiety to its respective methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **N-MeFOSA-M; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (N-MeFOSA-M)

Mobile phase: Same as Figure 1

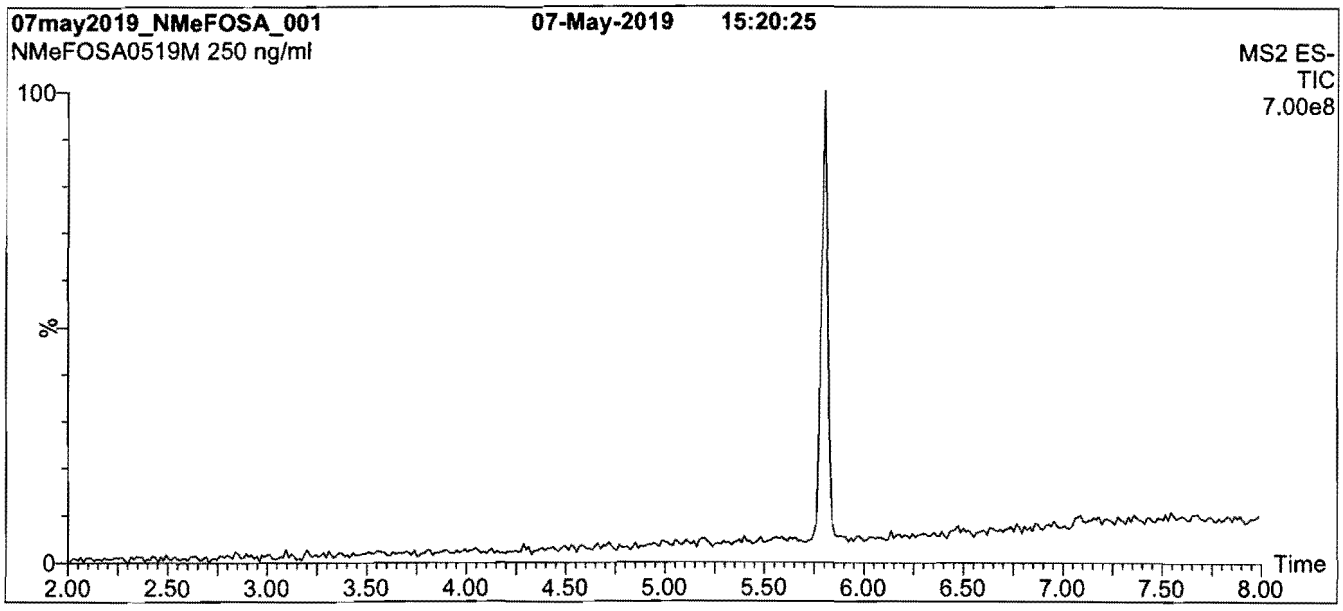
Flow: 300 µl/min

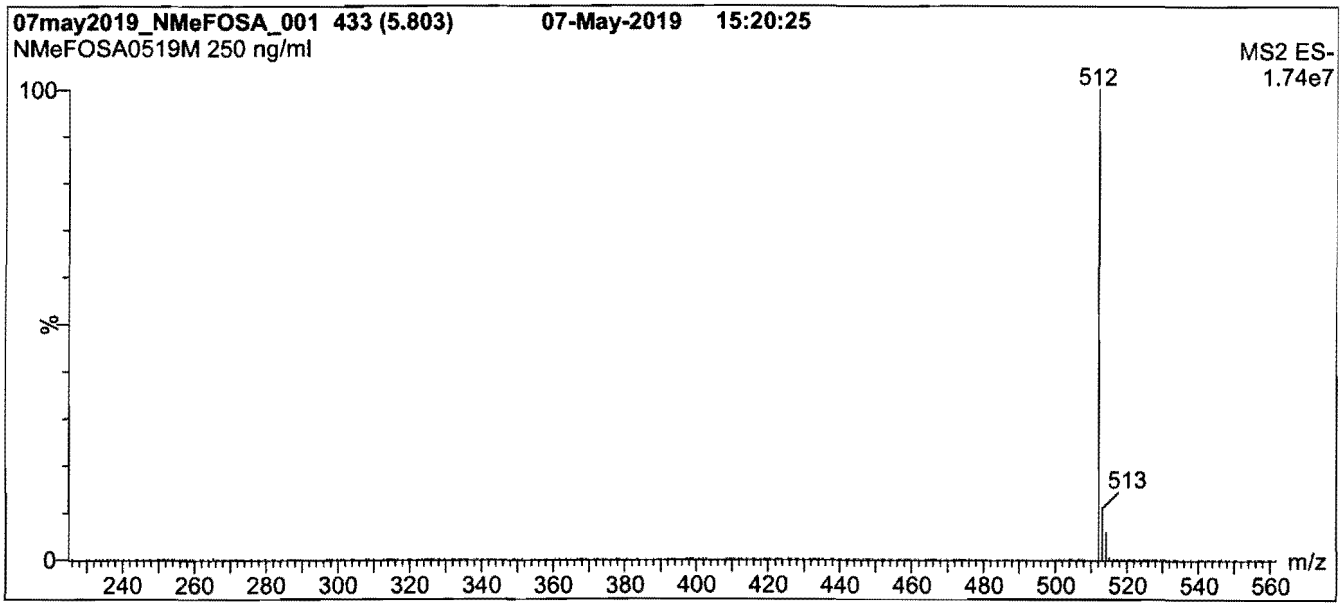
MS Parameters

Collision Gas (mbar) = 2.99e-3
Collision Energy (eV) = 24

19L0661

Figure 1: **N-MeFOSA-M; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 11 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0661

INTENDED USE:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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UNCERTAINTY:

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$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

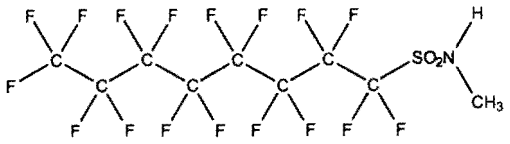
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19L0661

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	N-MeFOSA-M	**LOT NUMBER:**	NMeFOSA0519M
COMPOUND:	N-methylperfluoro-1-octanesulfonamide		
STRUCTURE:		**CAS #:**	31506-32-8



MOLECULAR FORMULA:	$C_9H_4F_{17}NO_2S$	**MOLECULAR WEIGHT:**	513.17
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	05/07/2019		
EXPIRY DATE: (mm/dd/yyyy)	05/07/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

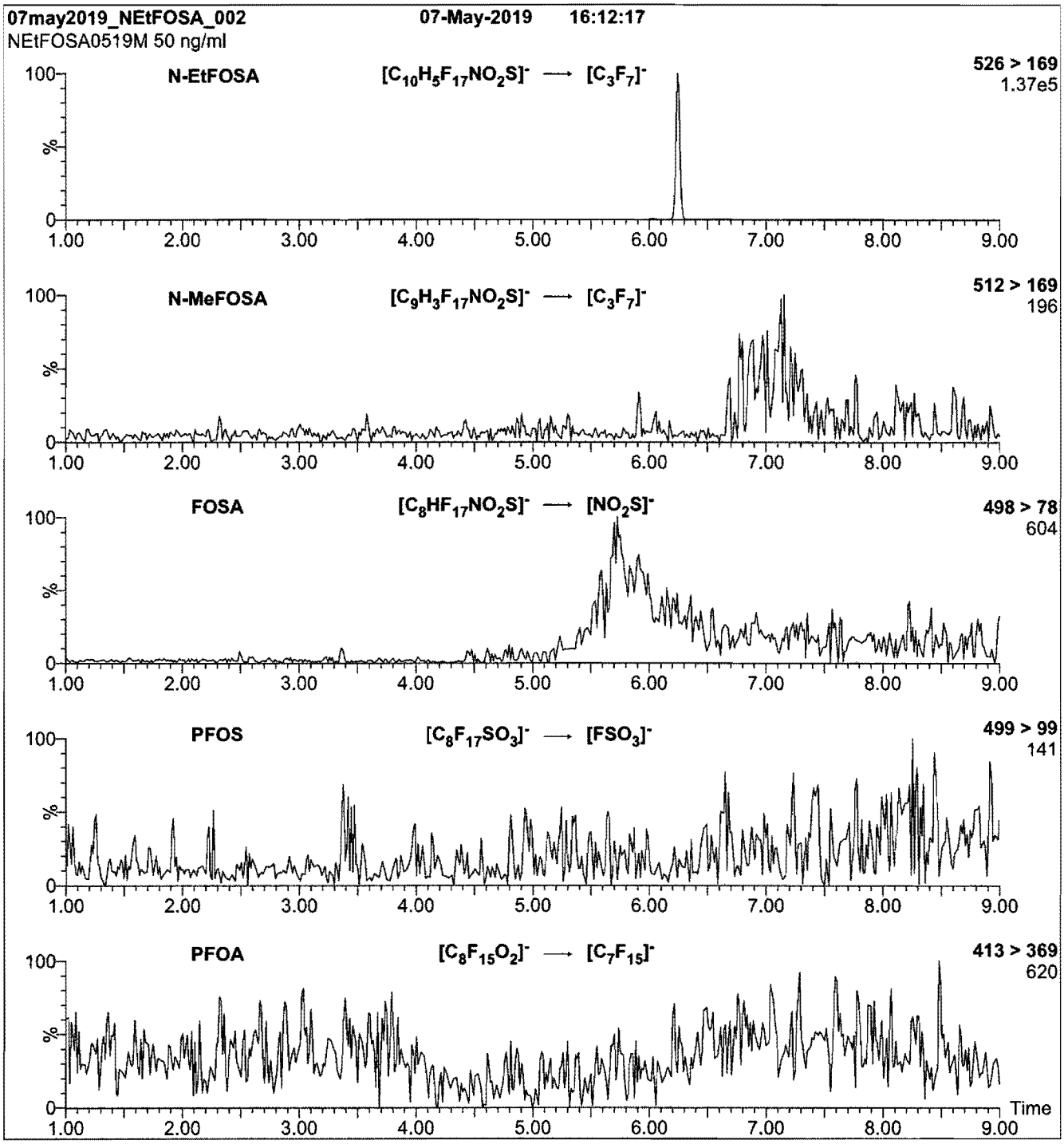
- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/09/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **N-EtFOSA-M; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (N-EtFOSA-M)

Mobile phase: Same as Figure 1

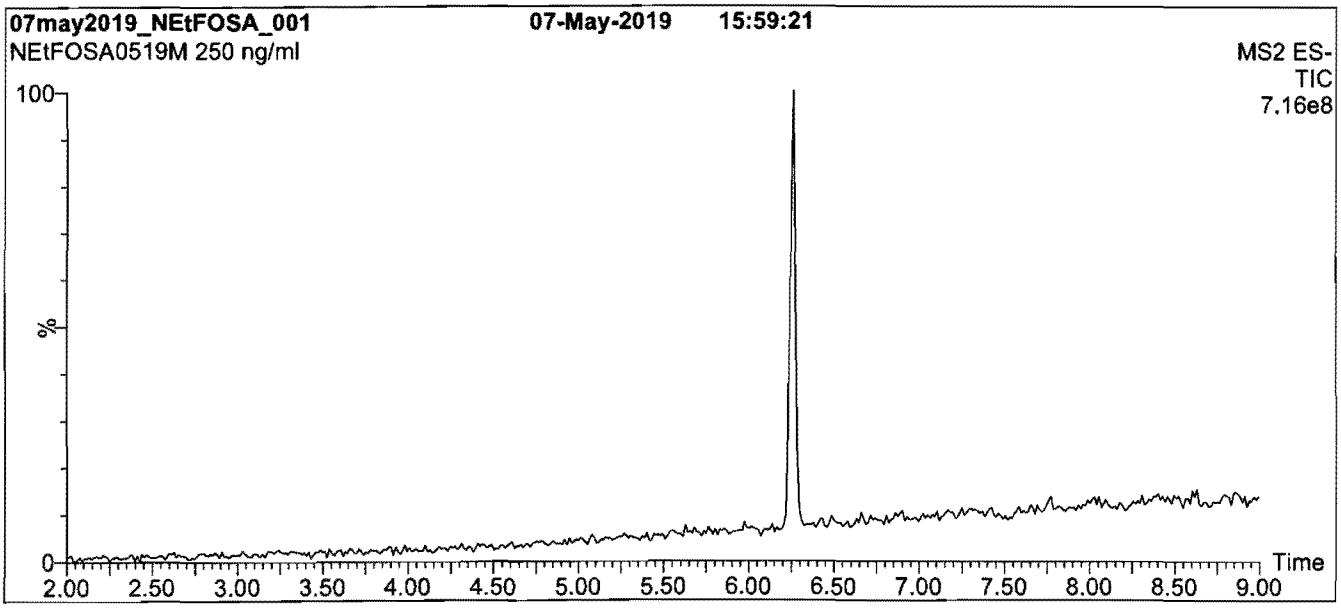
Flow: 300 µl/min

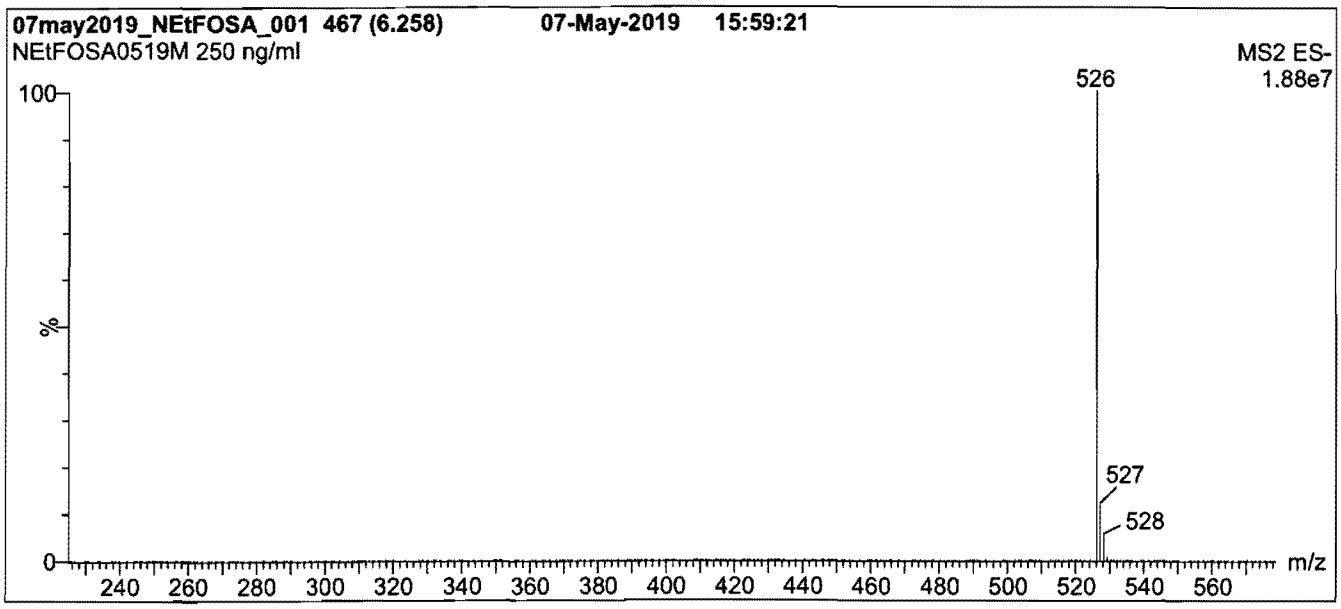
MS Parameters

Collision Gas (mbar) = 3.00e-3
Collision Energy (eV) = 24

19L0662

Figure 1: **N-EtFOSA-M; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 11 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0662

INTENDED USE:

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HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

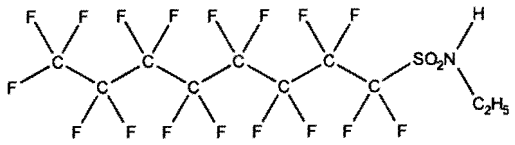
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0662

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	N-EtFOSA-M	**LOT NUMBER:**	NEtFOSA0519M
COMPOUND:	N-ethylperfluoro-1-octanesulfonamide		
STRUCTURE:		**CAS #:**	4151-50-2



MOLECULAR FORMULA:	$C_{10}H_6F_{17}NO_2S$	**MOLECULAR WEIGHT:**	527.20
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	05/07/2019		
EXPIRY DATE: (mm/dd/yyyy)	05/07/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

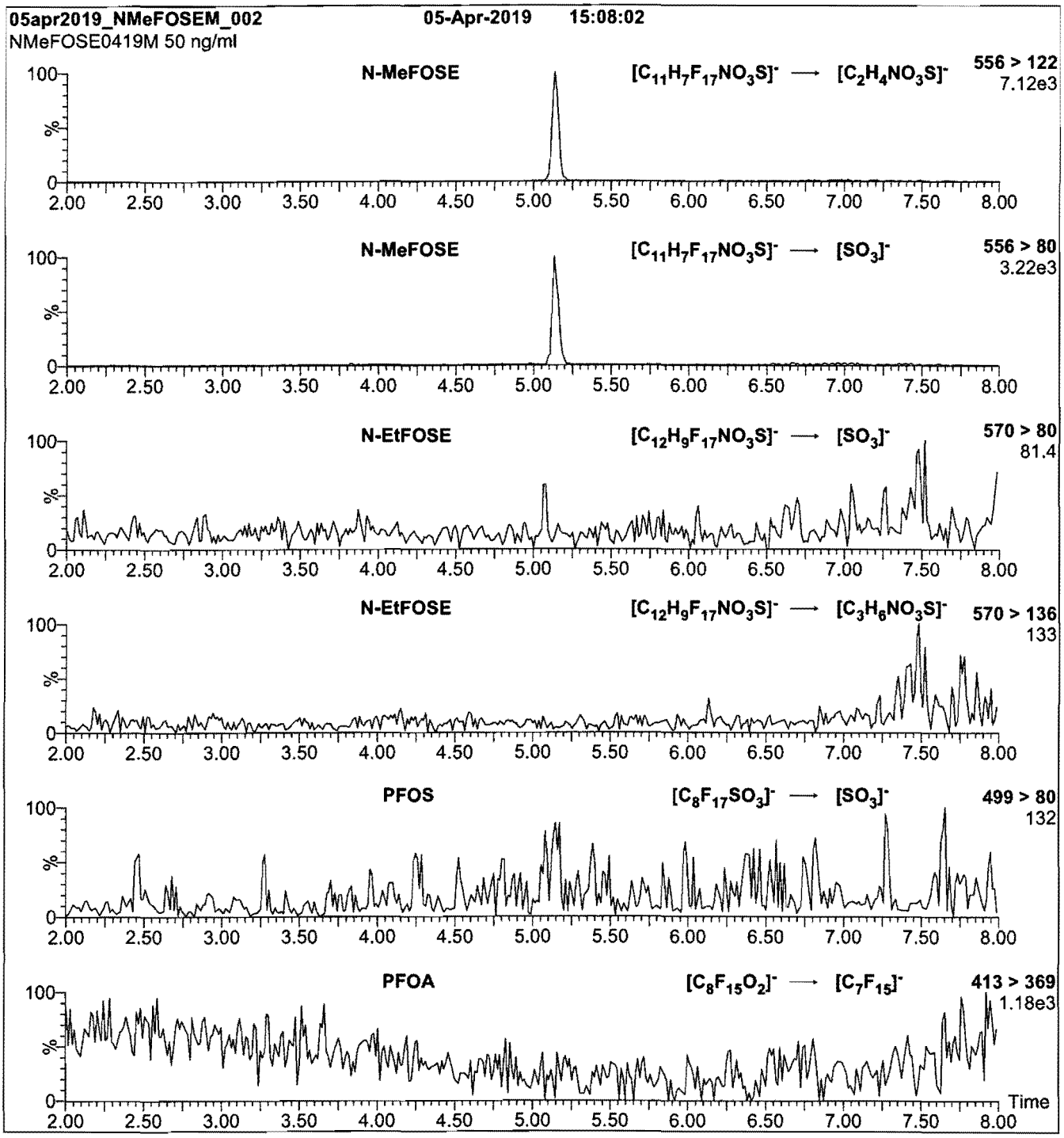
- See page 2 for further details.
- Contains ~ 0.5% branched isomers of N-ethylperfluorooctanesulfonamide.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/09/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 3: **N-MeFOSE-M; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column (N-MeFOSE-M)

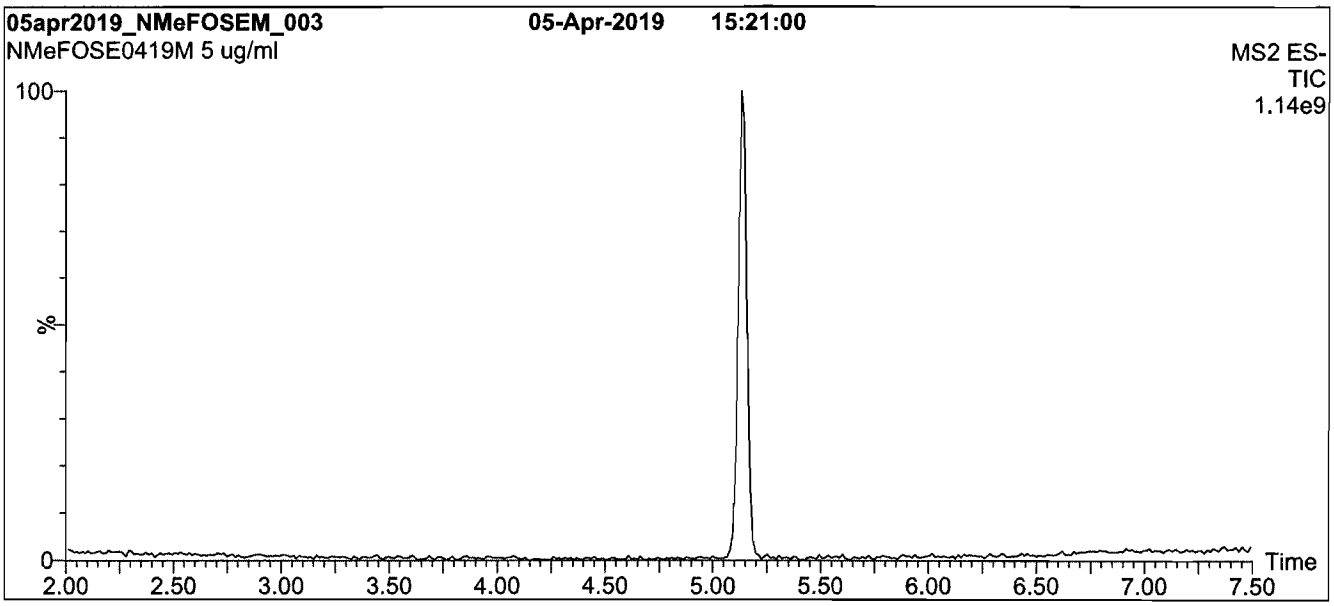
Mobile phase: Same as Figure 2

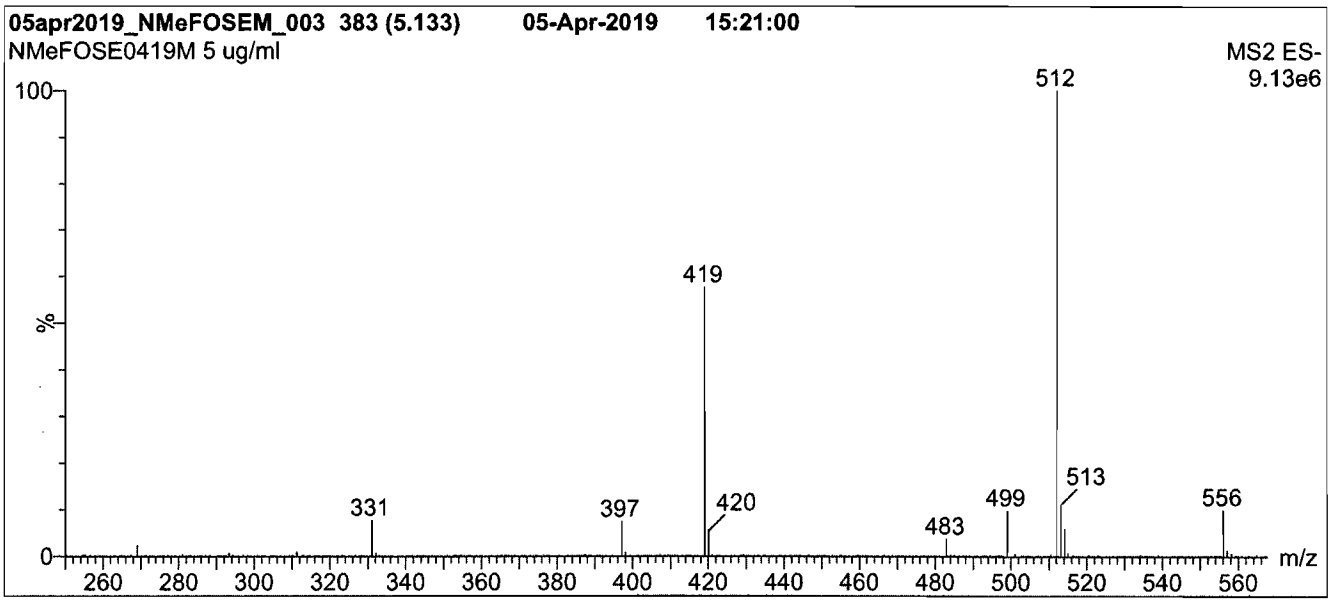
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.94e-3
Collision Energy (eV) = 36

Figure 2: **N-MeFOSE-M; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 2:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 65% MeOH / 35% H_2O
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

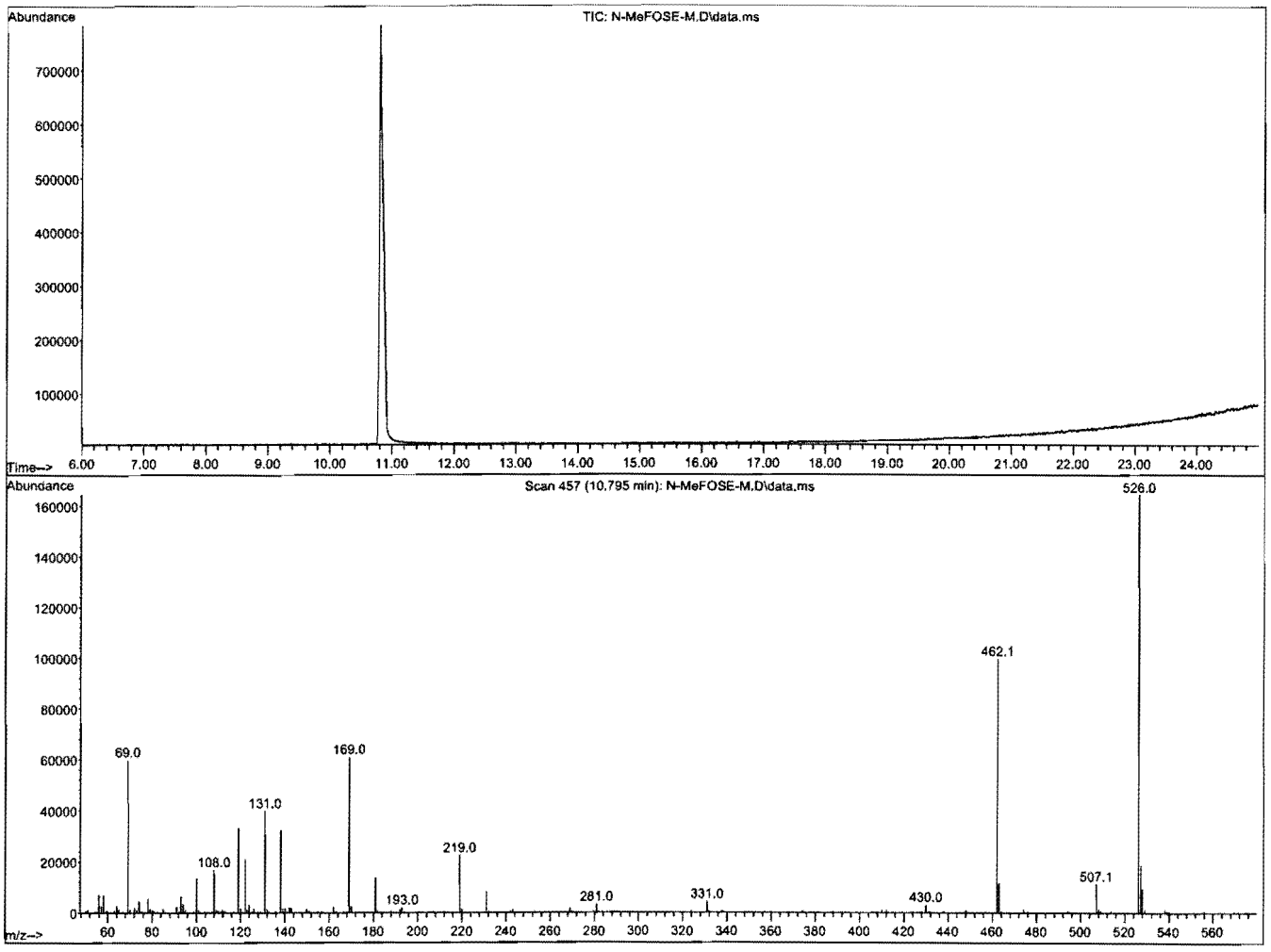
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 65.00
Desolvation Temperature (°C) = 450
Desolvation Gas Flow (l/hr) = 1000

Figure 1: **N-MeFOSE-M; HRGC/LRMS Data (TIC and Mass Spectrum)**



HRGC/LRMS:

Agilent 7890A (HRGC)
Agilent 5975C (LRMS)

Chromatographic Conditions:

Column:	30 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W
Injector:	250 °C (Splitless Injection)
Oven:	100 °C (5 min)
	10 °C/min to 325 °C
	325 °C (20 min)
Ionization:	EI+
Detector:	250 °C
	Full Scan (50-1000 amu)

INTENDED USE:

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HANDLING:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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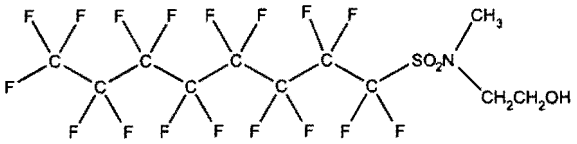
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: N-MeFOSE-M **LOT NUMBER:** NMeFOSE0419M

COMPOUND: 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol

STRUCTURE: **CAS #:** 24448-09-7



MOLECULAR FORMULA:	$C_{11}H_8F_{17}NO_3S$	**MOLECULAR WEIGHT:**	557.22
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	04/08/2019 (HRGC/LRMS) 04/05/2019 (LC/MS)		
EXPIRY DATE: (mm/dd/yyyy)	04/08/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: HRGC/LRMS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (TIC and Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

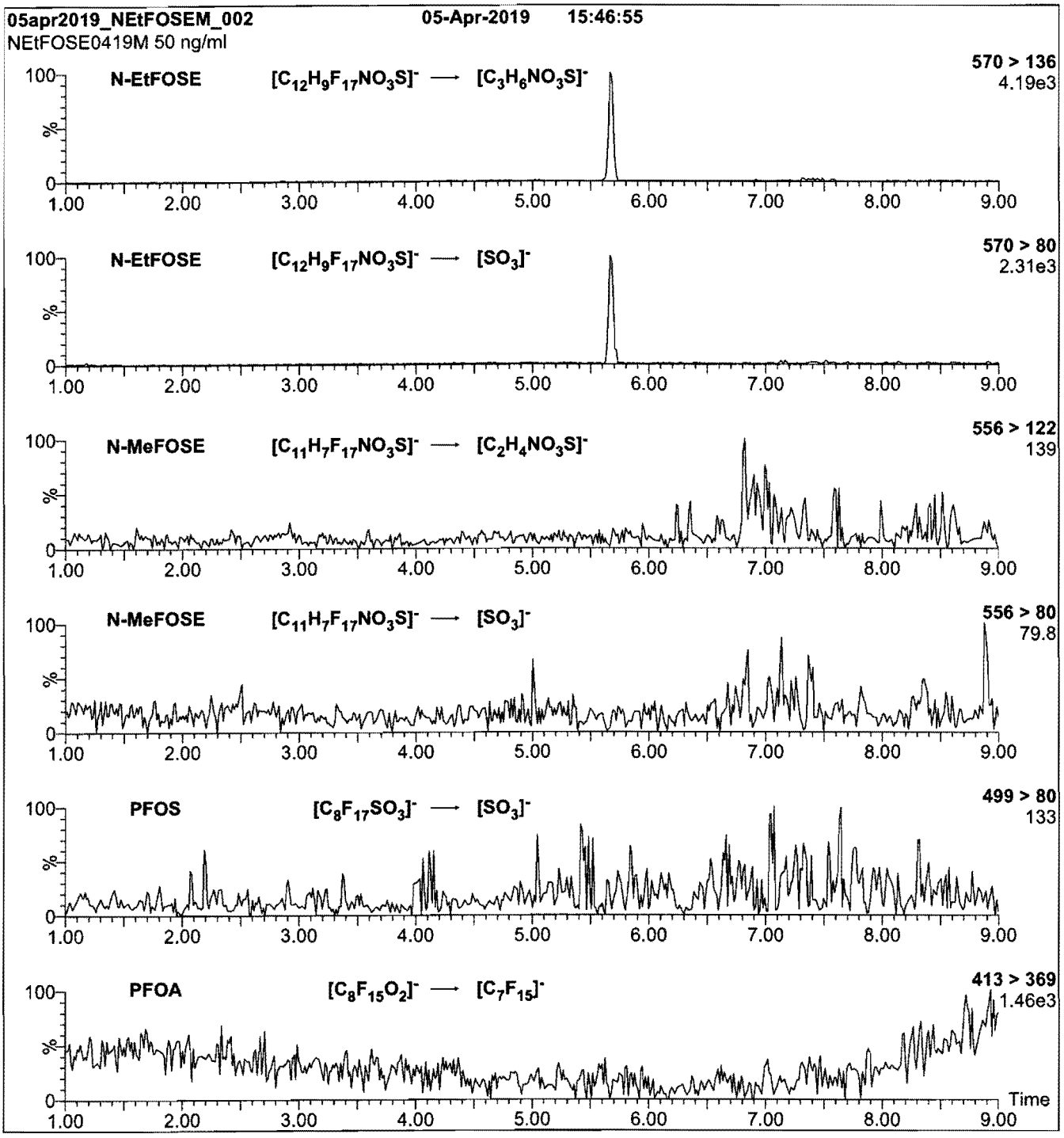
- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 04/12/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 3: **N-EtFOSE-M; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column (N-EtFOSE-M)

Mobile phase: Same as Figure 2

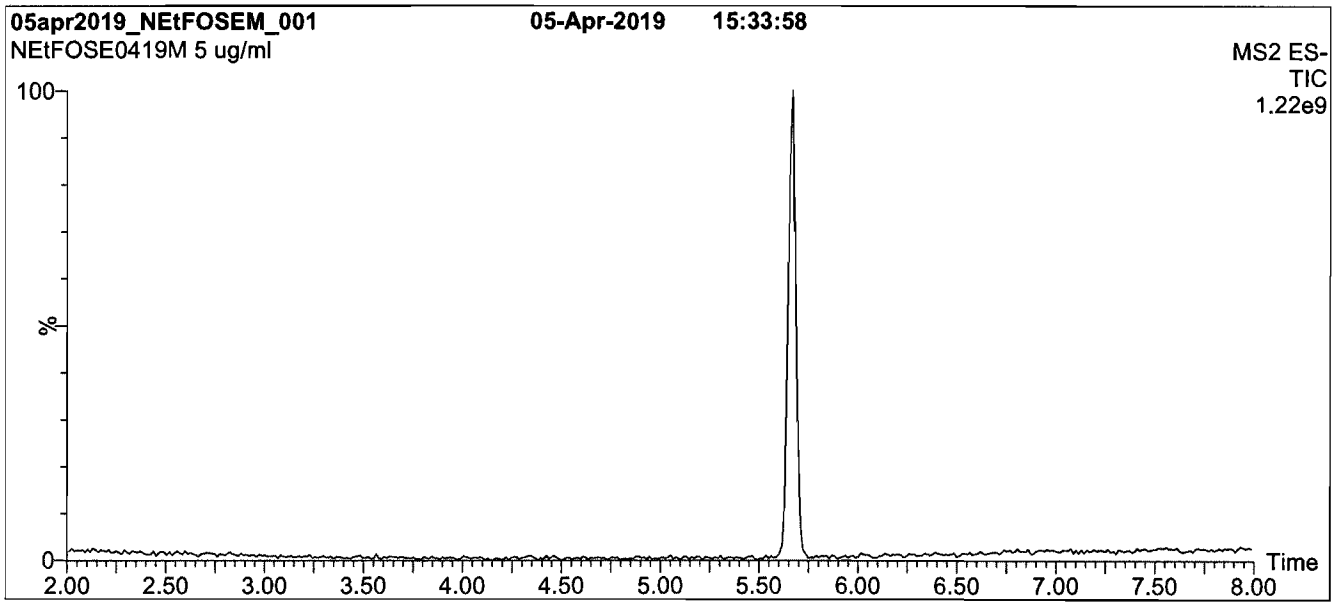
Flow: 300 µl/min

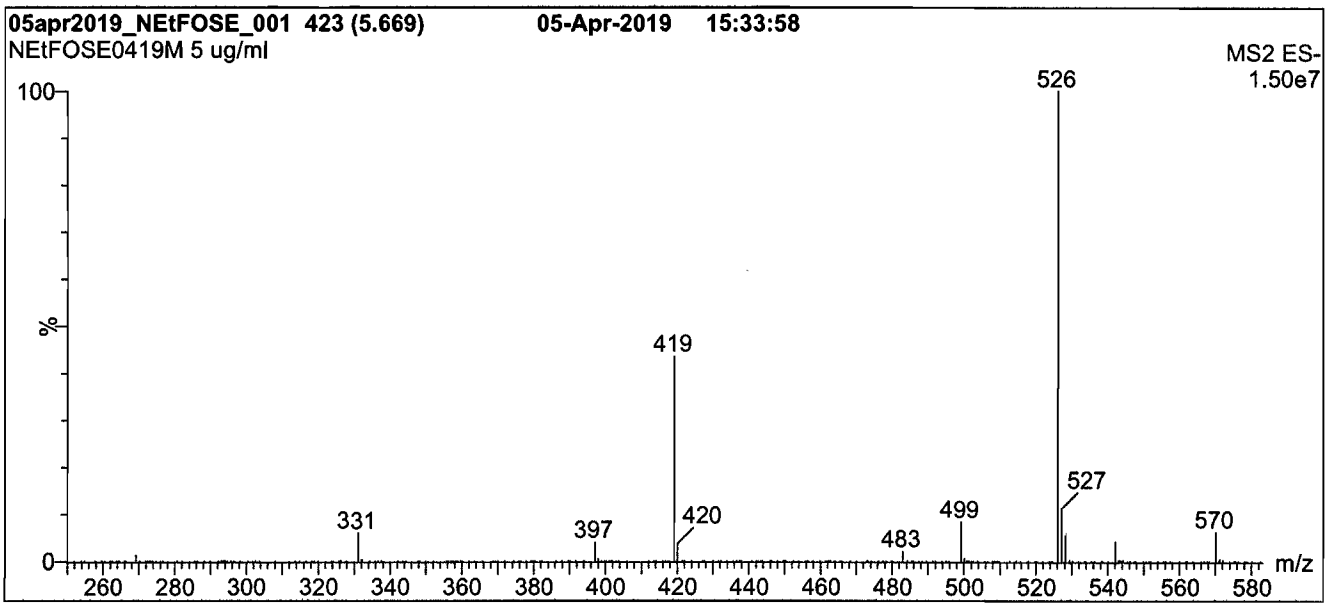
MS Parameters

Collision Gas (mbar) = 2.76e-3
Collision Energy (eV) = 32

19L0664

Figure 2: **N-EtFOSE-M; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 2:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 65% MeOH / 35% H_2O
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

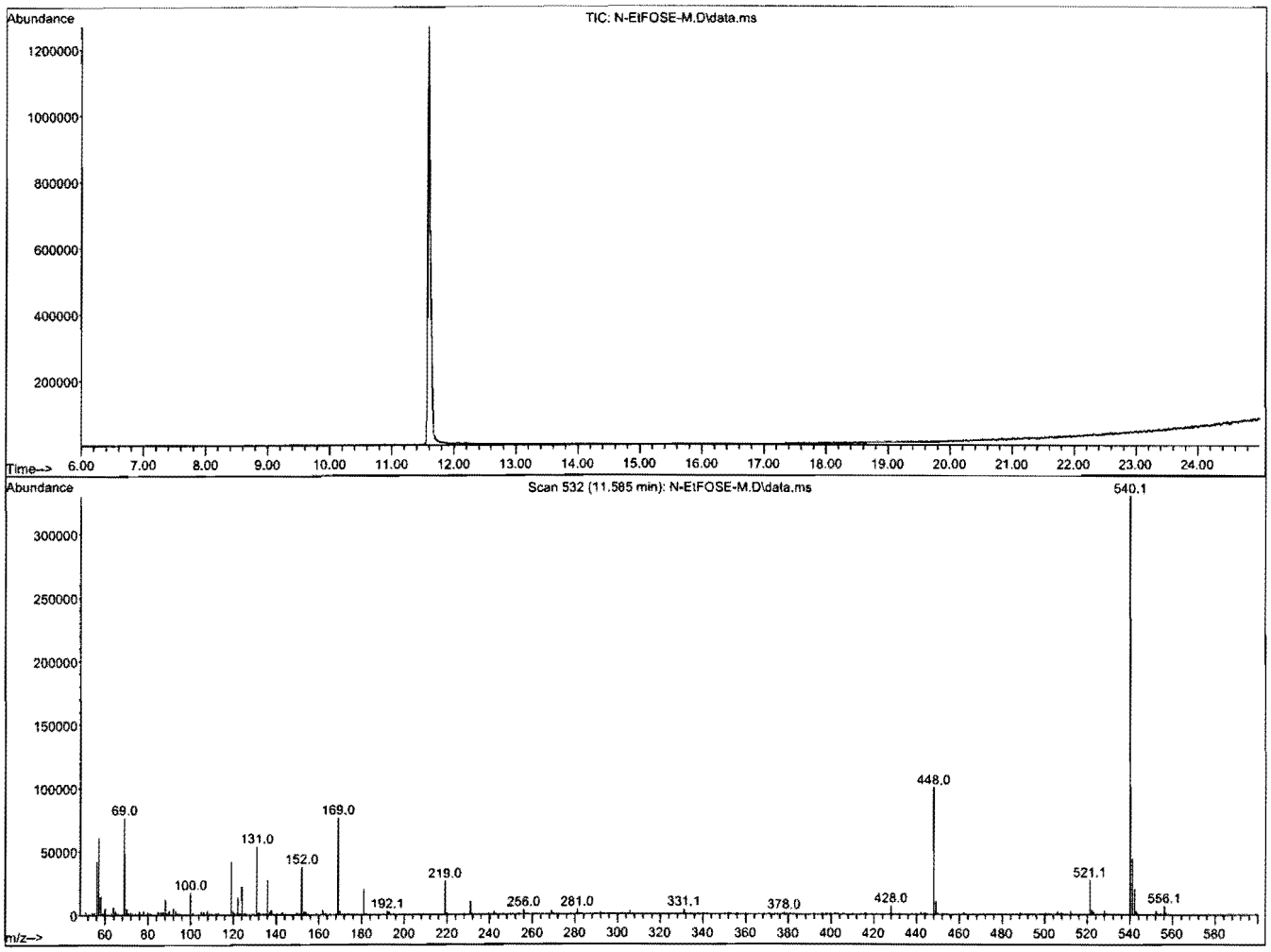
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 65.00
Desolvation Temperature (°C) = 450
Desolvation Gas Flow (l/hr) = 1000

Figure 1: **N-EtFOSE-M; HRGC/LRMS Data (TIC and Mass Spectrum)**



HRGC/LRMS:

Agilent 7890A (HRGC)
Agilent 5975C (LRMS)

Chromatographic Conditions:

Column:	30 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W
Injector:	250 °C (Splitless Injection)
Oven:	100 °C (5 min)
	10 °C/min to 325 °C
	325 °C (20 min)
Ionization:	EI+
Detector:	250 °C
	Full Scan (50-1000 amu)

19L0564

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where x is expressed as a relative standard uncertainty of the individual parameter.

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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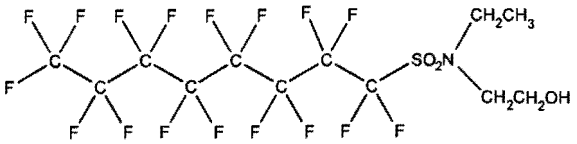
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-EtFOSE-M **LOT NUMBER:** NEtFOSE0419M

COMPOUND: 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol

STRUCTURE: **CAS #:** 1691-99-2



MOLECULAR FORMULA:	$C_{12}H_{10}F_{17}NO_3S$	**MOLECULAR WEIGHT:**	571.25
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	04/08/2019 (HRGC/LRMS) 04/05/2019 (LC/MS)		
EXPIRY DATE: (mm/dd/yyyy)	04/08/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: HRGC/LRMS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (TIC and Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

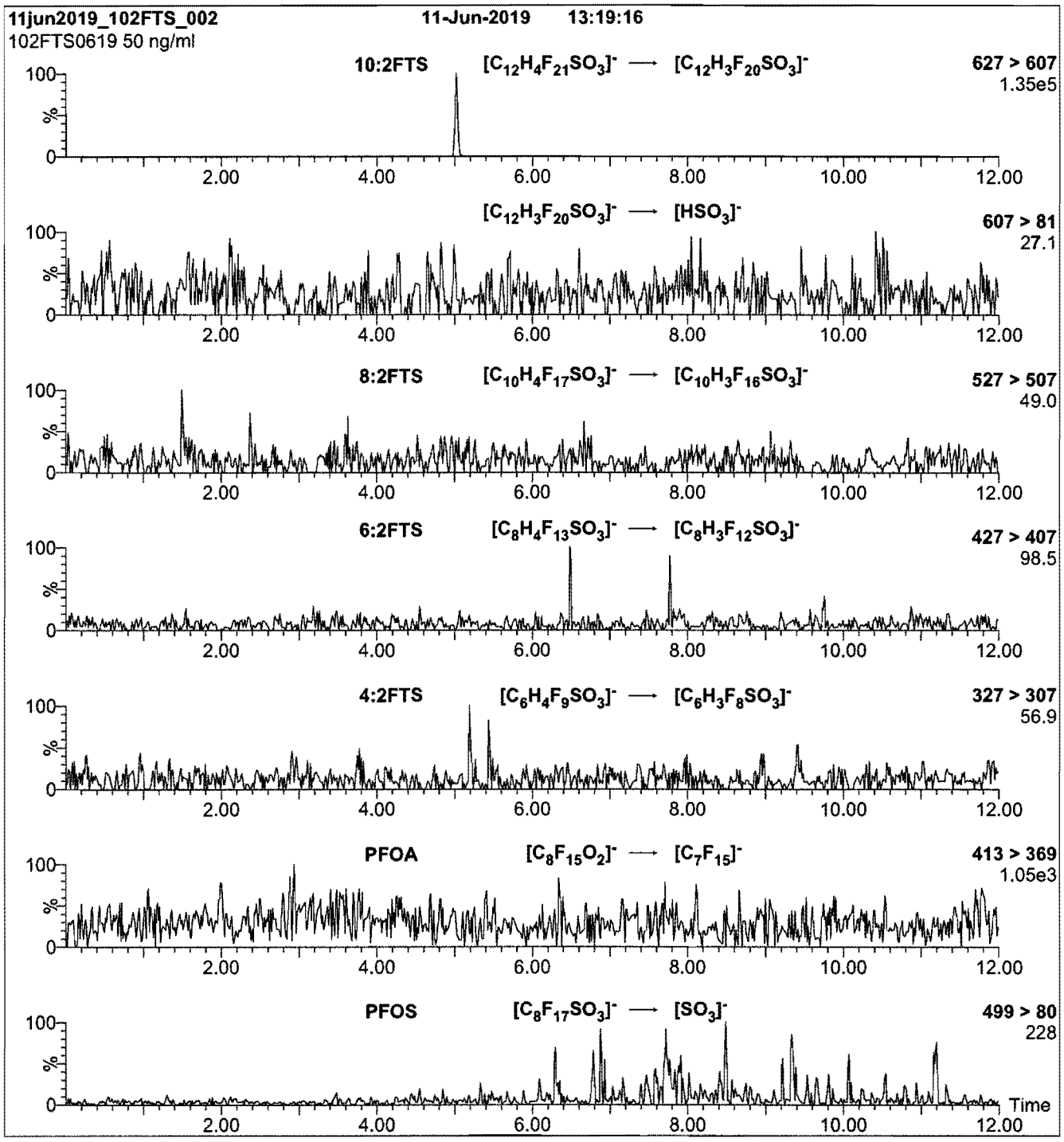
- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 04/15/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **10:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (10:2FTS)

Mobile phase: Same as Figure 1

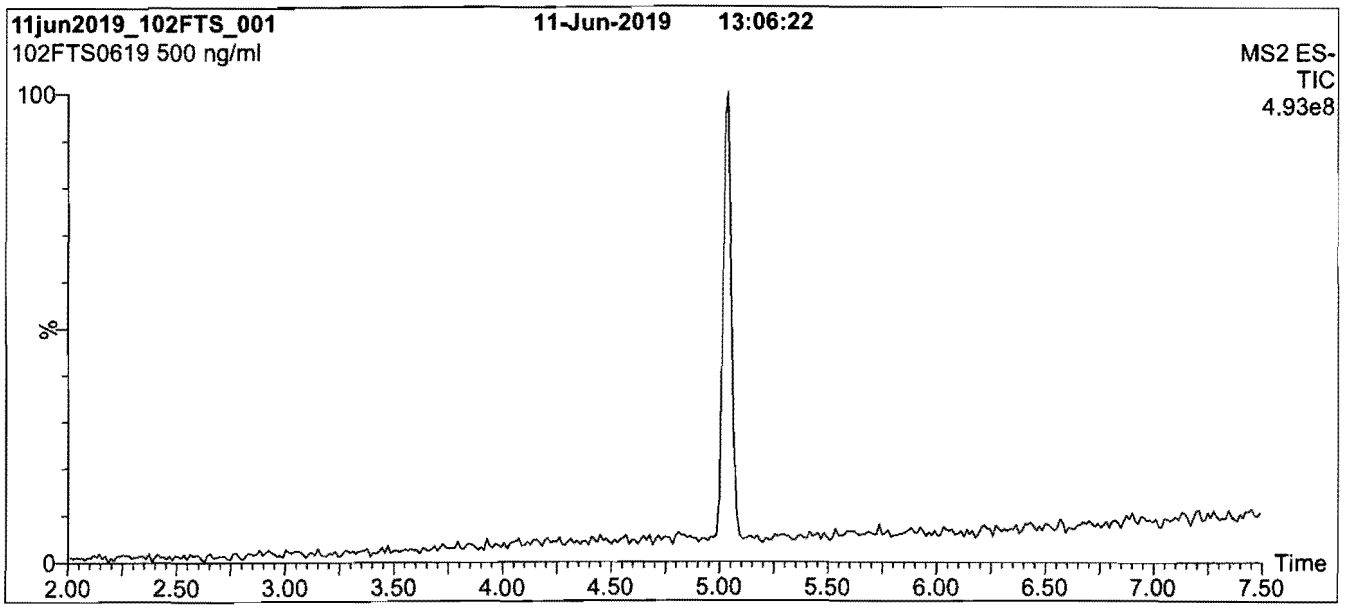
Flow: 300 µl/min

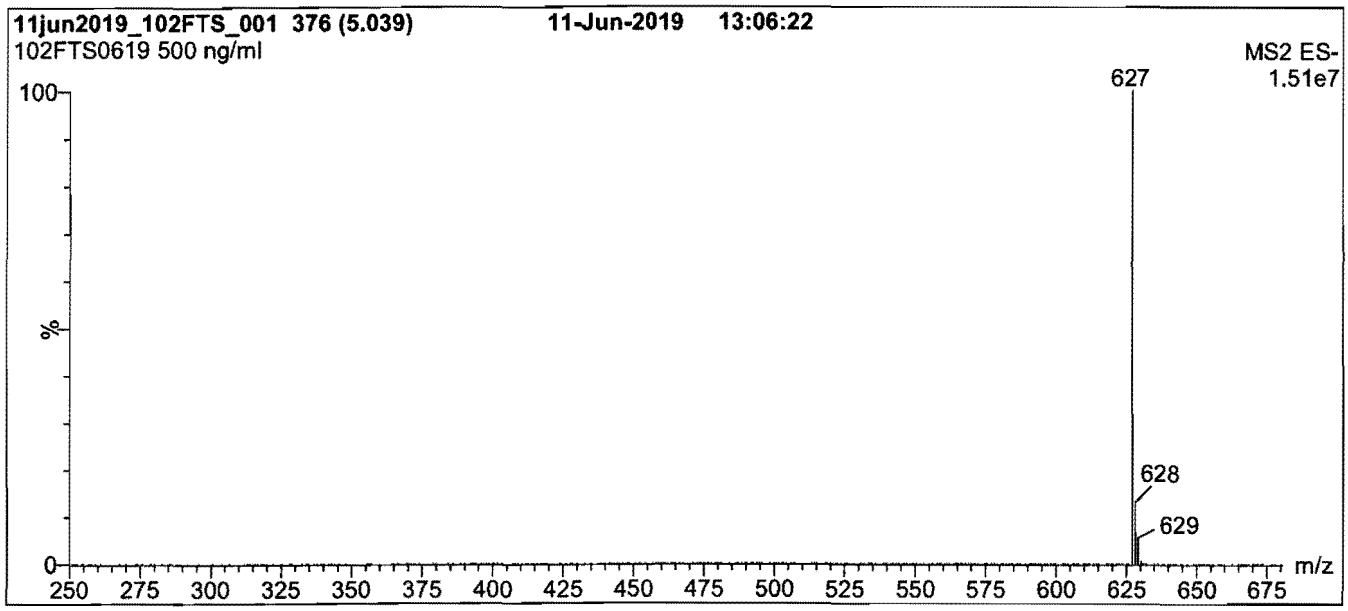
MS Parameters

Collision Gas (mbar) = 2.92e-3
Collision Energy (eV) = 25

19L0665

Figure 1: **10:2FTS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

INTENDED USE:

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HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

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UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

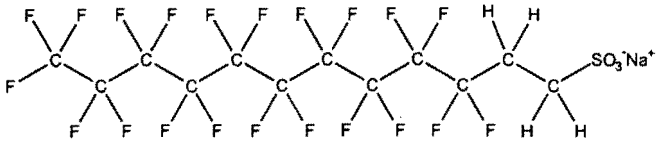
19L0665

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 10:2FTS **LOT NUMBER:** 102FTS0619
COMPOUND: Sodium 1H,1H,2H,2H-perfluorododecane sulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$C_{12}H_4F_{21}SO_3Na$		**MOLECULAR WEIGHT:**	650.18
CONCENTRATION:	50.0 ± 2.5 µg/ml	(Na salt)	**SOLVENT(S):**	Methanol
	48.2 ± 2.4 µg/ml	(10:2FTS anion)		
CHEMICAL PURITY:	>98%			
LAST TESTED: (mm/dd/yyyy)	06/11/2019			
EXPIRY DATE: (mm/dd/yyyy)	06/11/2022			
RECOMMENDED STORAGE:	Refrigerate ampoule			

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

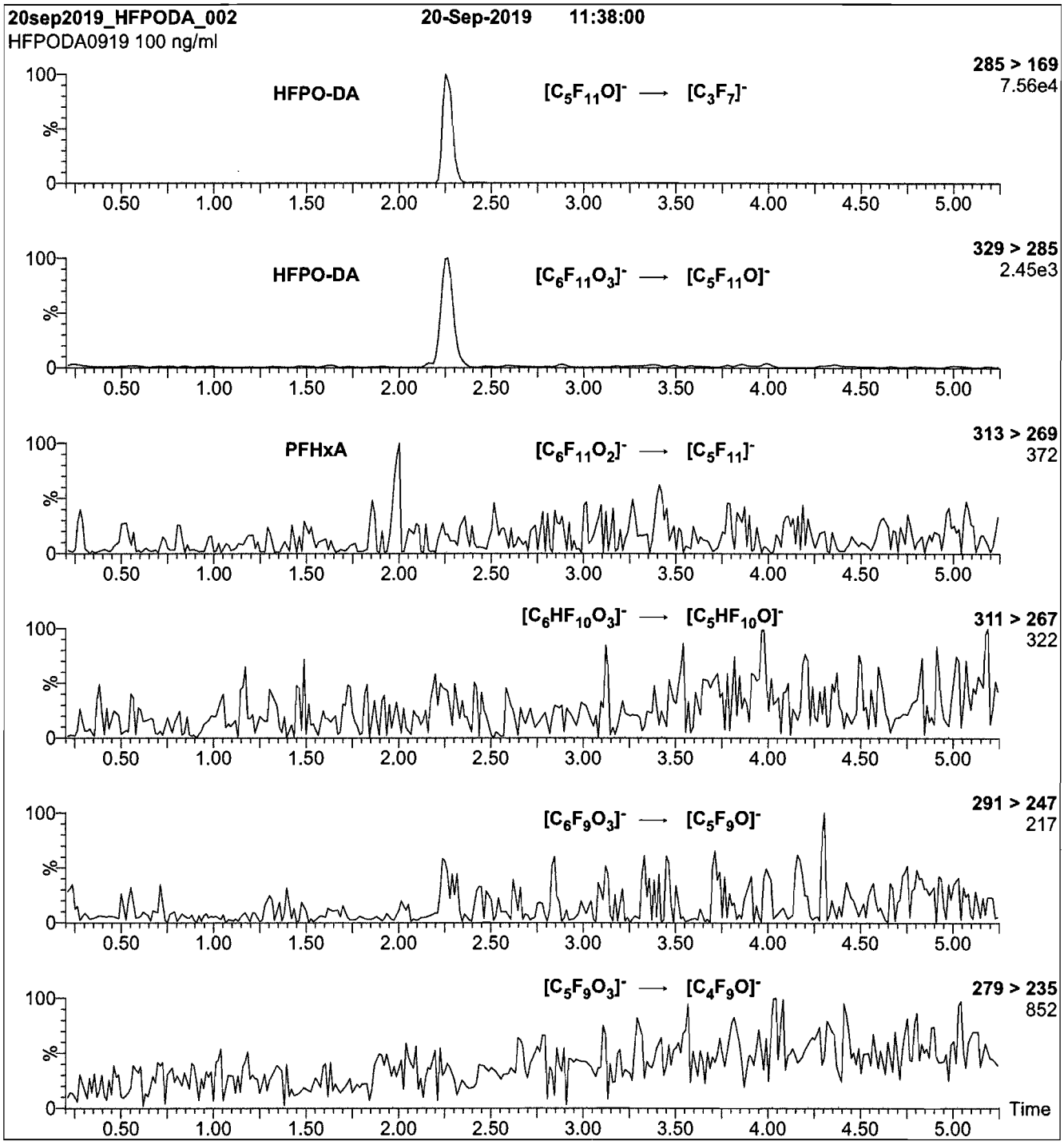
- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 06/18/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **HFPO-DA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (HFPO-DA)

Mobile phase: Same as Figure 1

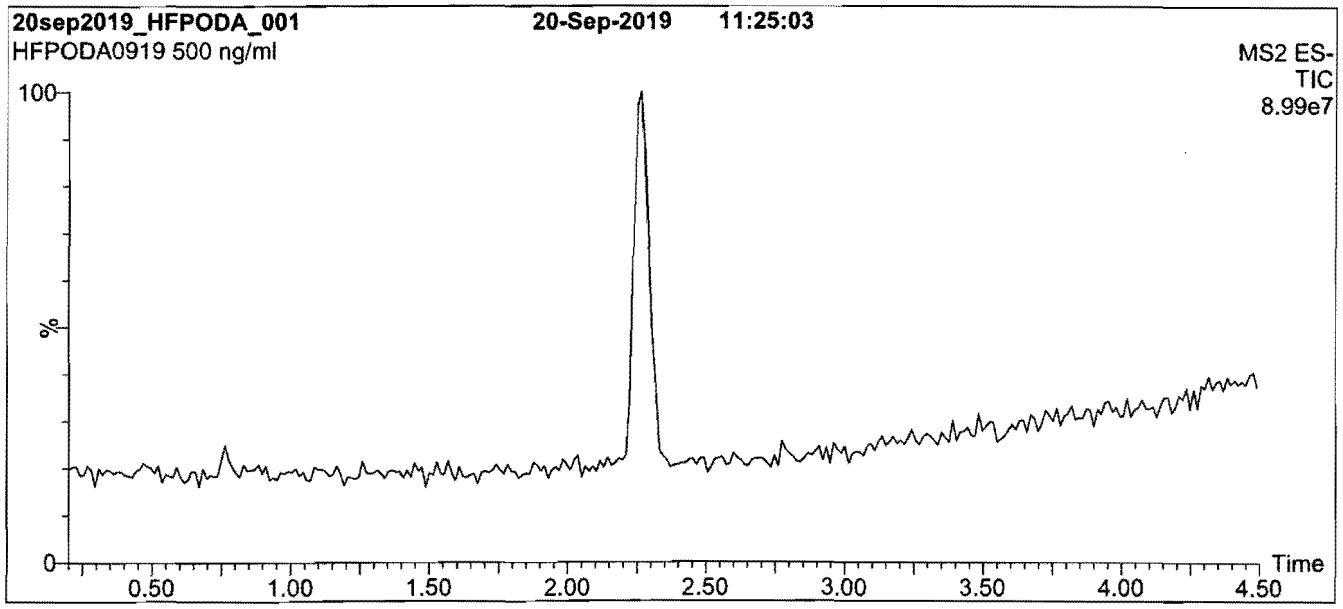
Flow: 300 µl/min

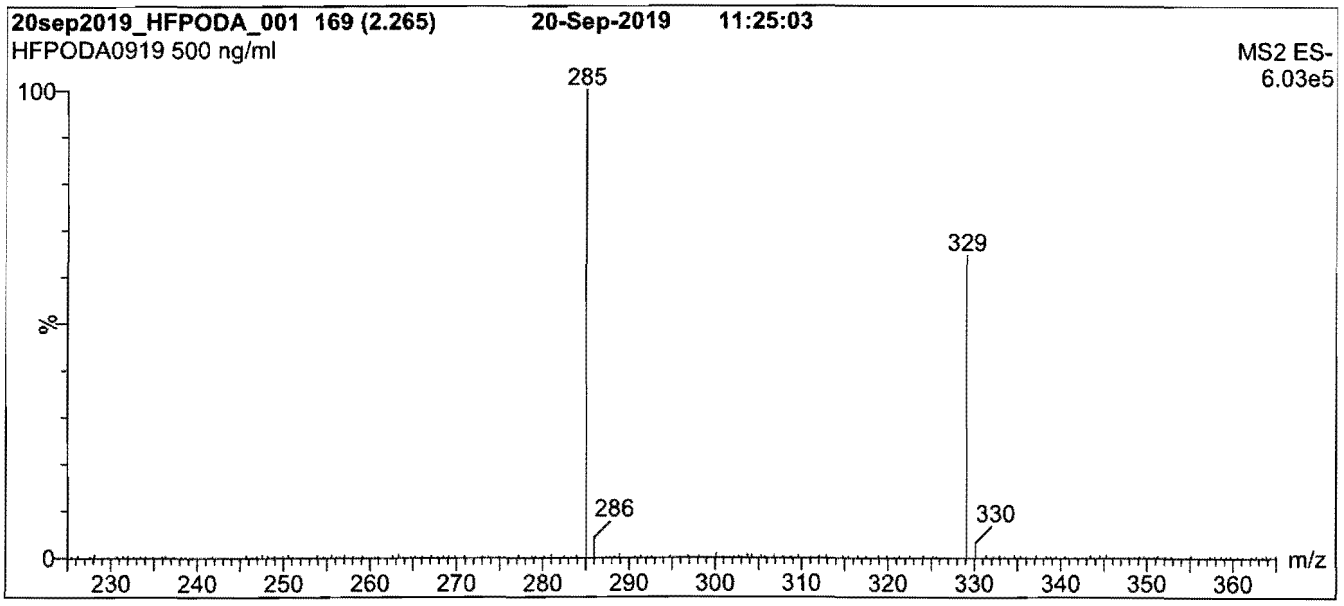
MS Parameters

Collision Gas (mbar) = 3.60e-3
Collision Energy (eV) = 8

1910666

Figure 1: **HFPO-DA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15.00
Desolvation Temperature (°C) = 325
Desolvation Gas Flow (l/hr) = 1000

19L 0666

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0666

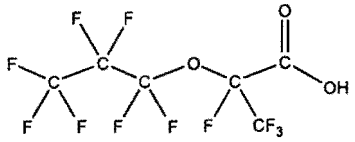
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: HFPO-DA **LOT NUMBER:** HFPODA0919

COMPOUND: 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid

STRUCTURE: **CAS #:** 13252-13-6



MOLECULAR FORMULA:	$C_6HF_{11}O_3$	**MOLECULAR WEIGHT:**	330.05
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	09/20/2019		
EXPIRY DATE: (mm/dd/yyyy)	09/20/2022		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

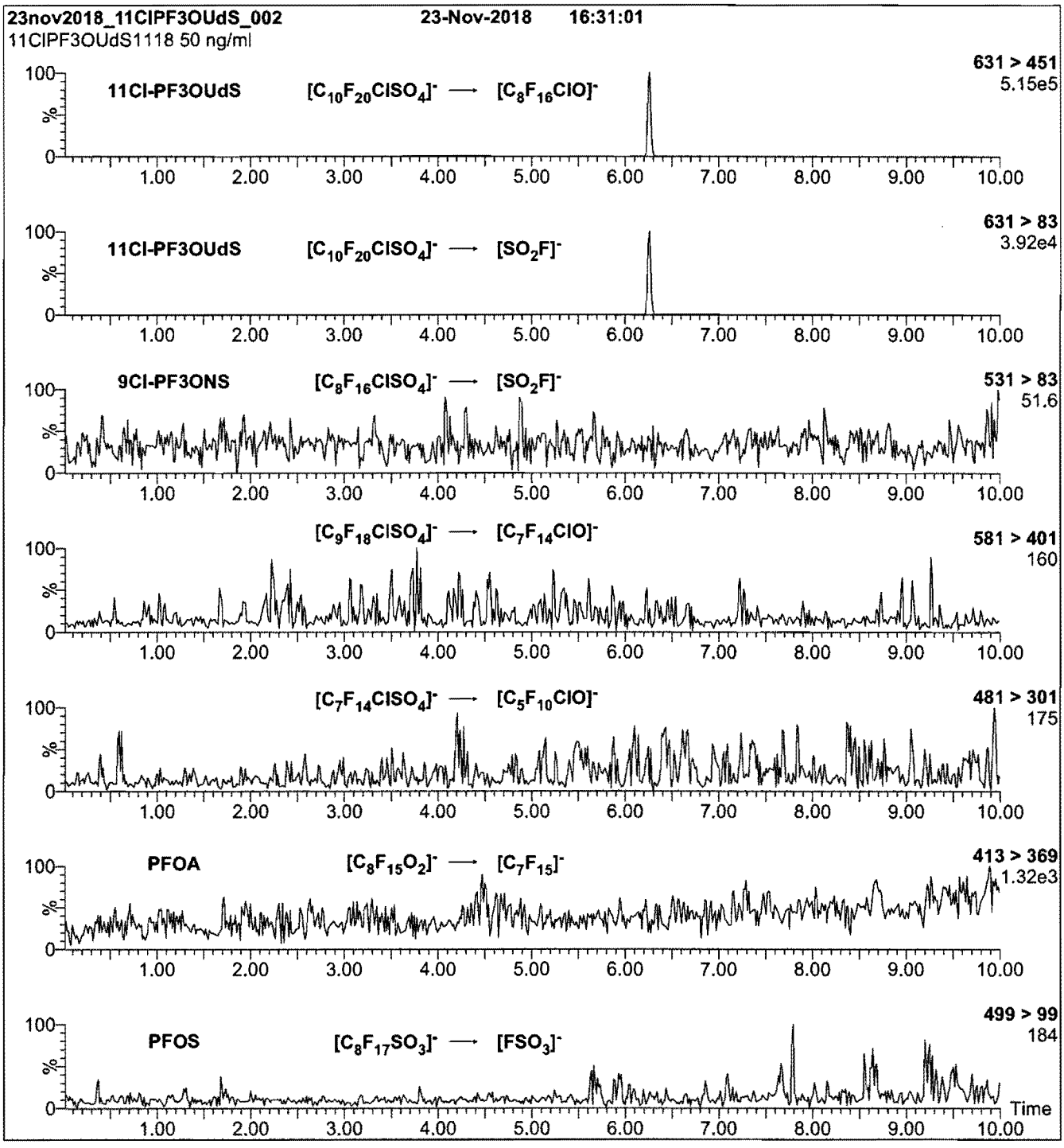
- See page 2 for further details.
- Product is commercially known as GenX.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 09/30/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **11Cl-PF3OUdS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (11Cl-PF3OUdS)

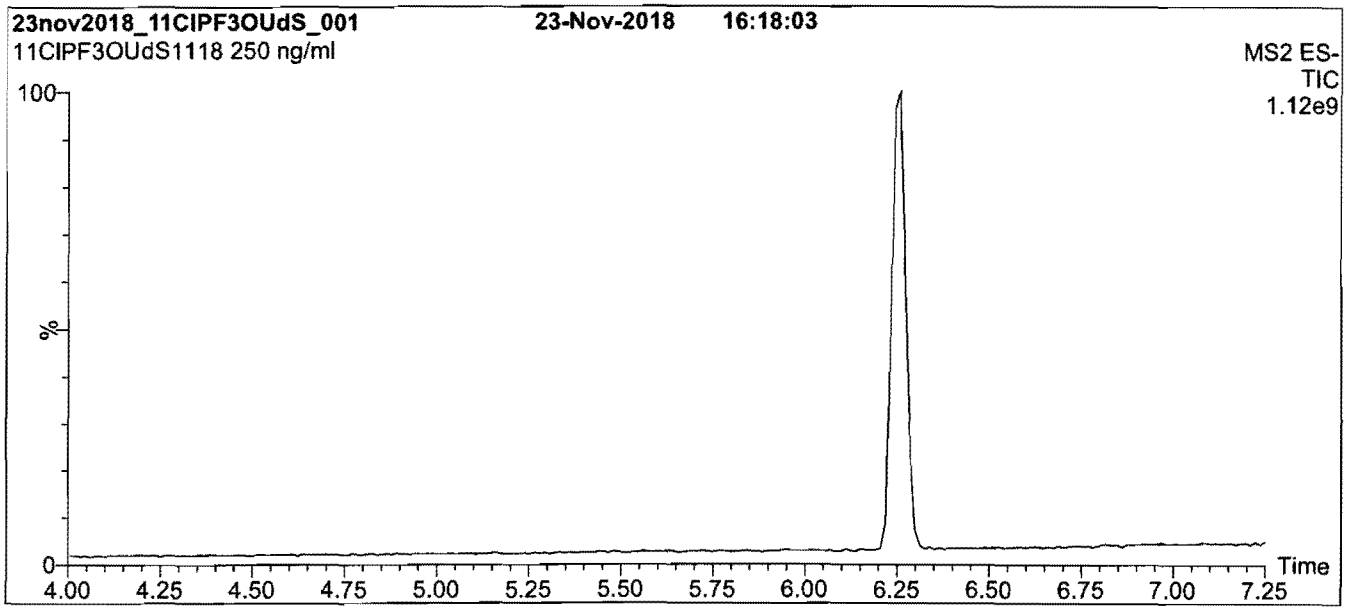
Mobile phase: Same as Figure 1

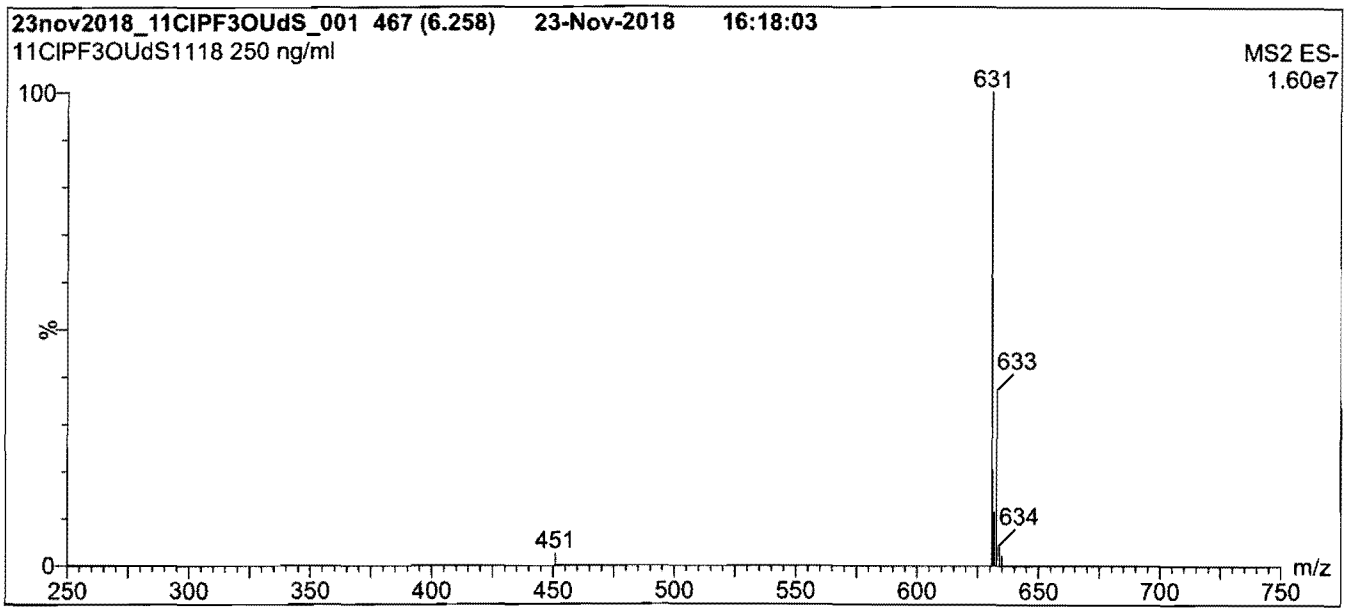
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.84e-3
Collision Energy (eV) = 24

Figure 1: **11Cl-PF3OUdS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 70.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

19L0667

INTENDED USE:

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HANDLING:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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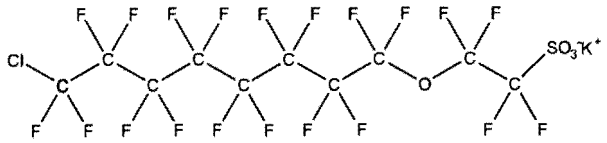
19L0667

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 11Cl-PF3OUdS **LOT NUMBER:** 11ClPF3OUdS1118
COMPOUND: Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate

STRUCTURE: **CAS #:** 83329-89-9



MOLECULAR FORMULA: $C_{10}F_{20}ClSO_4K$ **MOLECULAR WEIGHT:** 670.69
CONCENTRATION: 50.0 ± 2.5 µg/ml (K Salt) **SOLVENT(S):** Methanol
47.1 ± 2.4 µg/ml (11Cl-PF3OUdS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 11/23/2018
EXPIRY DATE: (mm/dd/yyyy) 11/23/2023
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- This compound is a minor component of the commercial formulation known as F-53B.

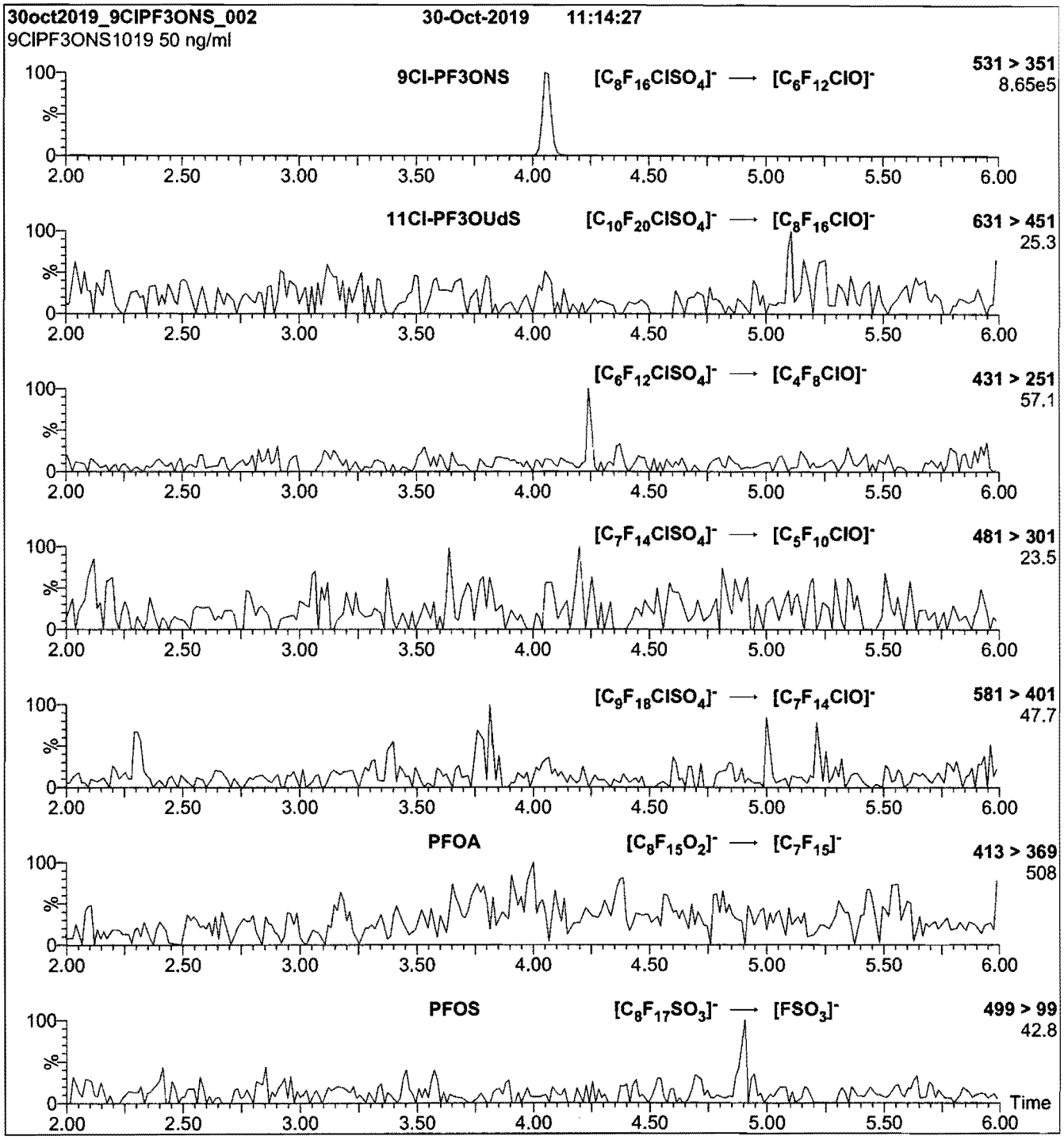
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/28/2018
(mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

1910668

Figure 2: **9Cl-PF3ONS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (9Cl-PF3ONS)

Mobile phase: Same as Figure 1

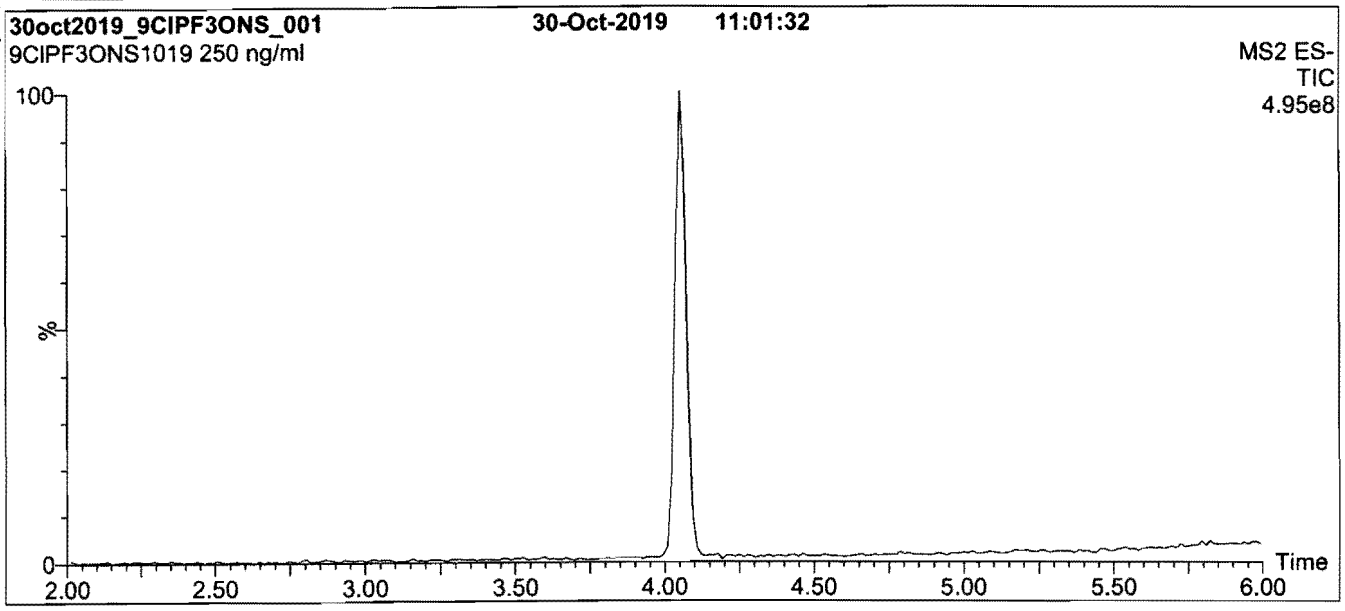
Flow: 300 µl/min

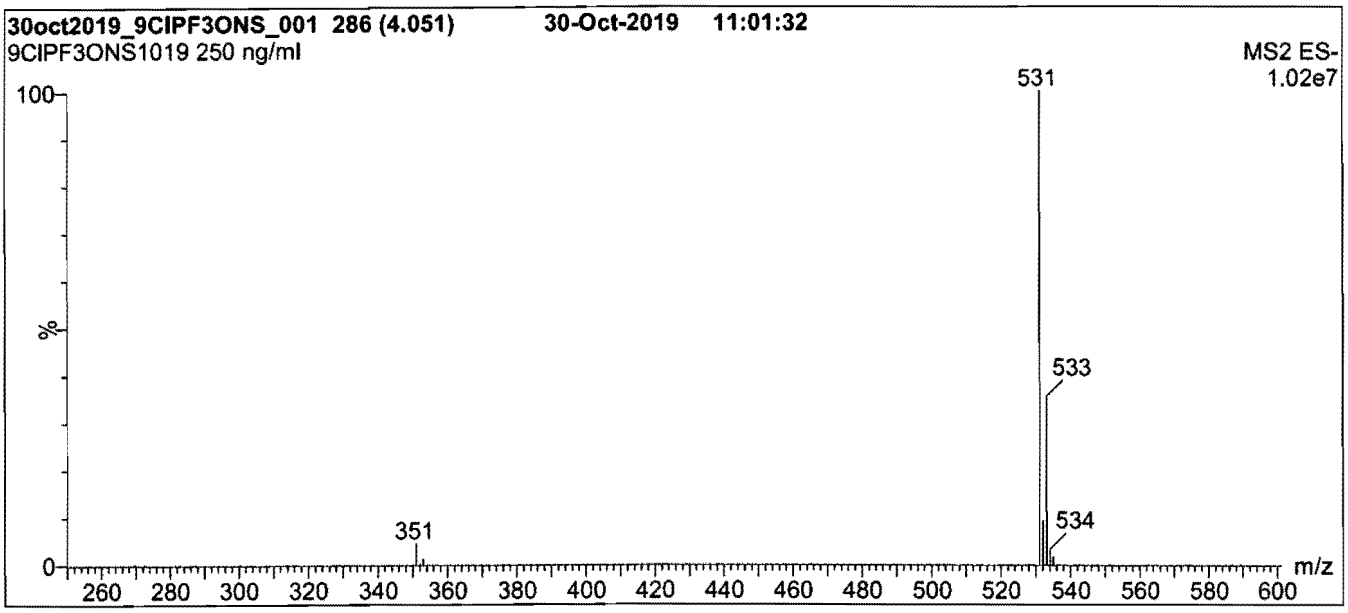
MS Parameters

Collision Gas (mbar) = 3.25e-3
Collision Energy (eV) = 20

19L0668

Figure 1: **9Cl-PF3ONS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 70.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

19L0668

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

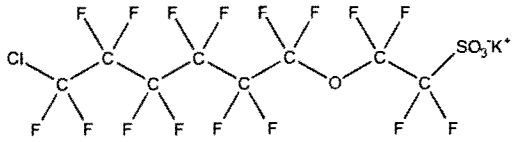
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0668

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	9Cl-PF3ONS	**LOT NUMBER:**	9ClPF3ONS1019
COMPOUND:	Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate		
STRUCTURE:		**CAS #:**	73606-19-6



MOLECULAR FORMULA:	$C_8F_{16}ClSO_4K$	**MOLECULAR WEIGHT:**	570.67
CONCENTRATION:	50.0 ± 2.5 µg/ml (K Salt) 46.6 ± 2.3 µg/ml (9Cl-PF3ONS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	10/30/2019		
EXPIRY DATE: (mm/dd/yyyy)	10/30/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- This compound is the major component of the commercial formulation known as F-53B.

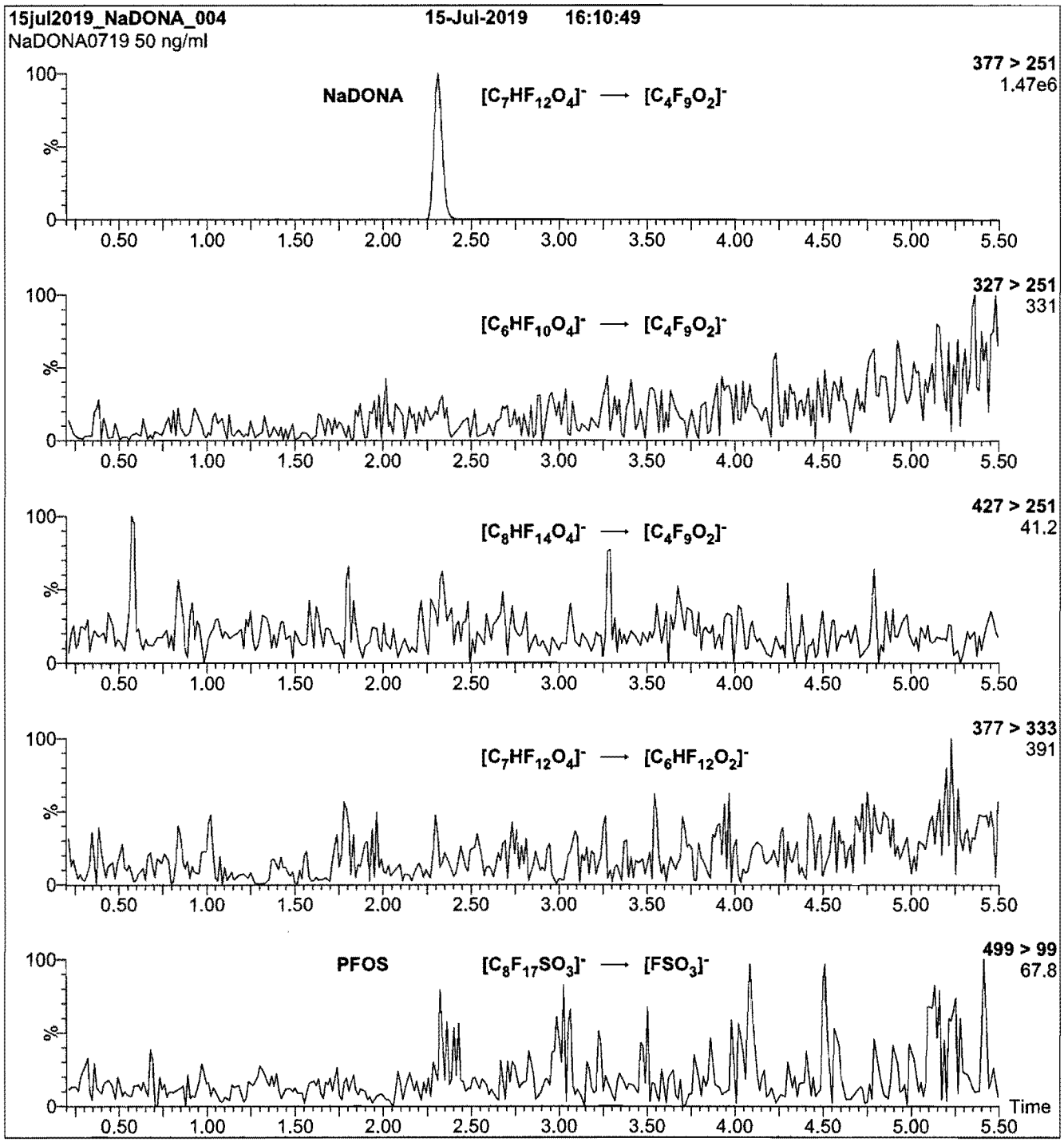
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/04/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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19L0669

Figure 2: **NaDONA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (NaDONA)

Mobile phase: Same as Figure 1

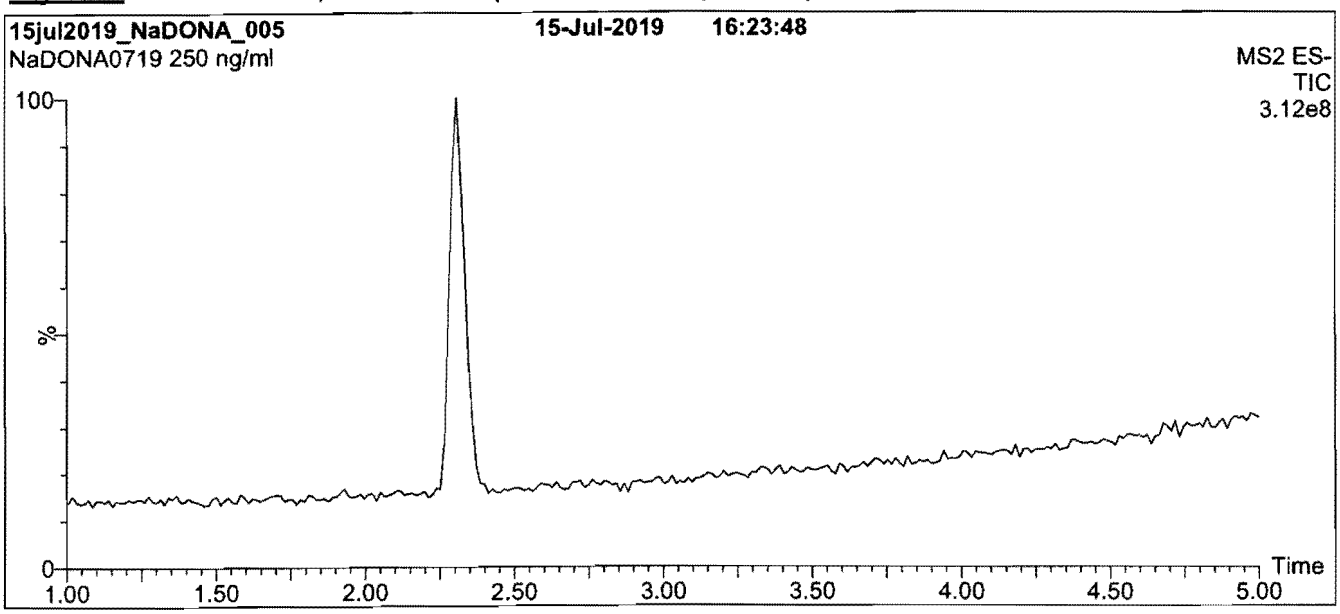
Flow: 300 µl/min

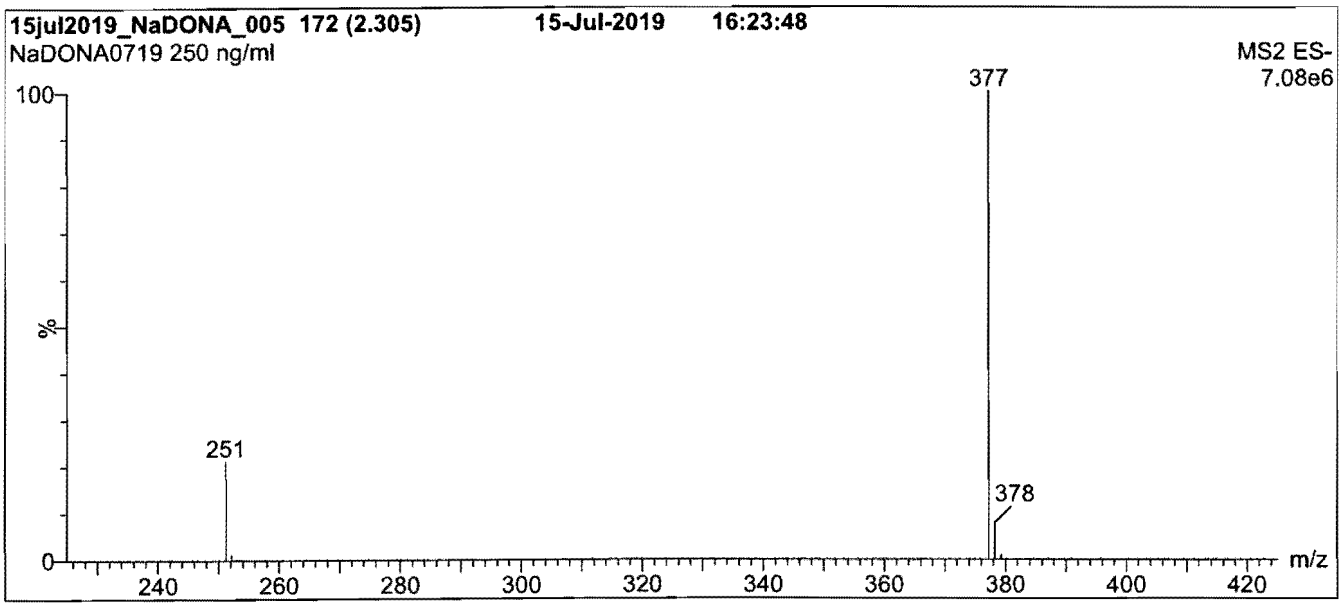
MS Parameters

Collision Gas (mbar) = 3.37e-3
Collision Energy (eV) = 10

19L0669

Figure 1: **NaDONA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.70
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0669

INTENDED USE:

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HANDLING:

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

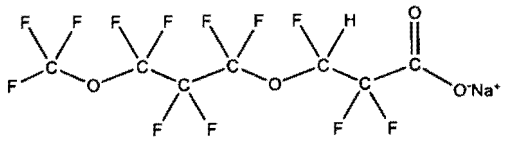
19L0669

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: NaDONA
LOT NUMBER: NaDONA0719
COMPOUND: Sodium dodecafluoro-3H-4,8-dioxanonanoate

STRUCTURE:



CAS #: 958445-44-8 (ammonium salt)

MOLECULAR FORMULA:	$C_7HF_{12}O_4Na$	**MOLECULAR WEIGHT:**	400.05
CONCENTRATION:	50 ± 2.5 µg/ml (Na Salt)	**SOLVENT(S):**	Methanol
	47.1 ± 2.4 µg/ml (NaDONA anion)		Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	07/15/2019		
EXPIRY DATE: (mm/dd/yyyy)	07/15/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Product is commercially known as ADONA.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

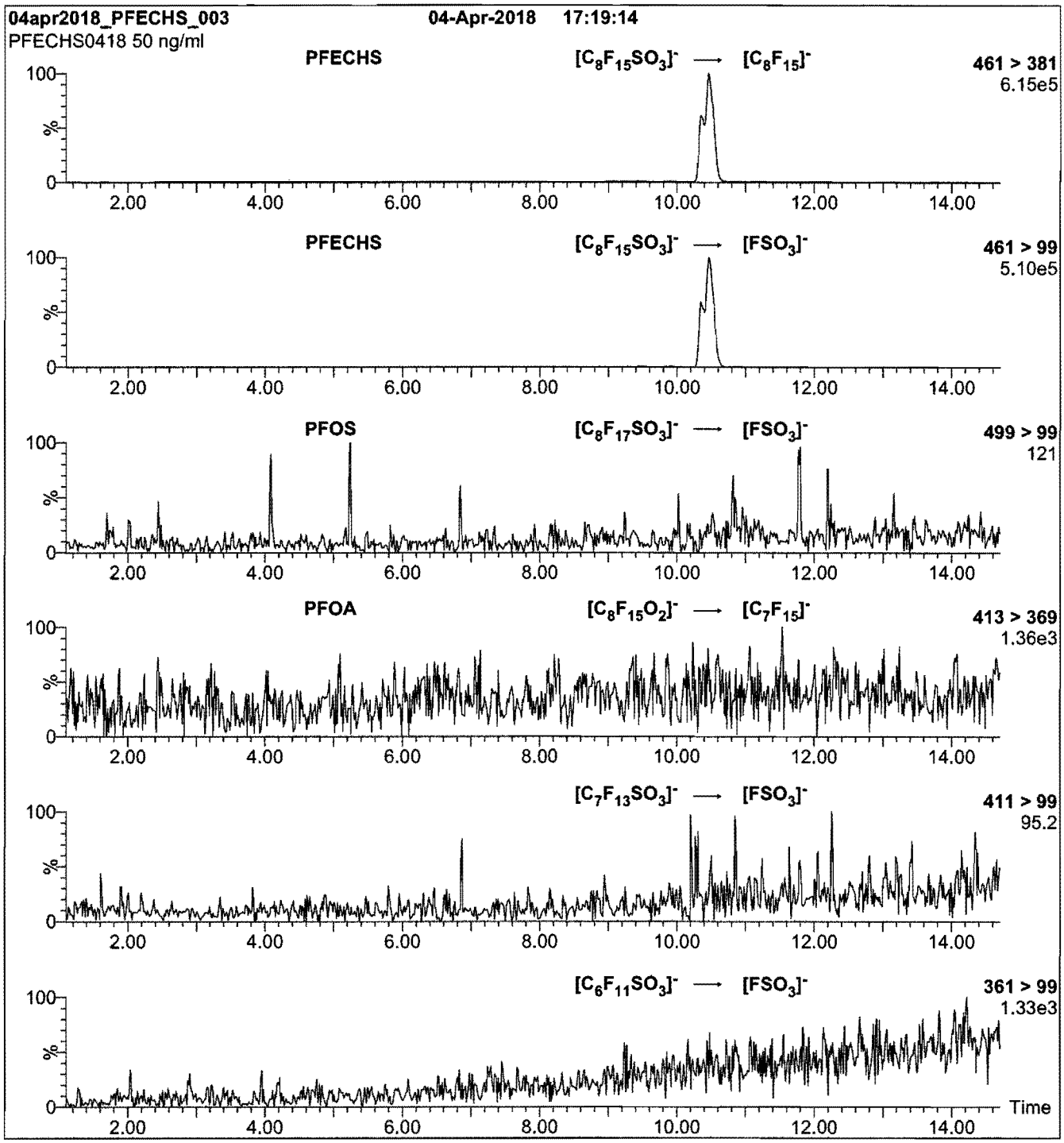
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/25/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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1910670

Figure 2: **PFECHS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFECHS)

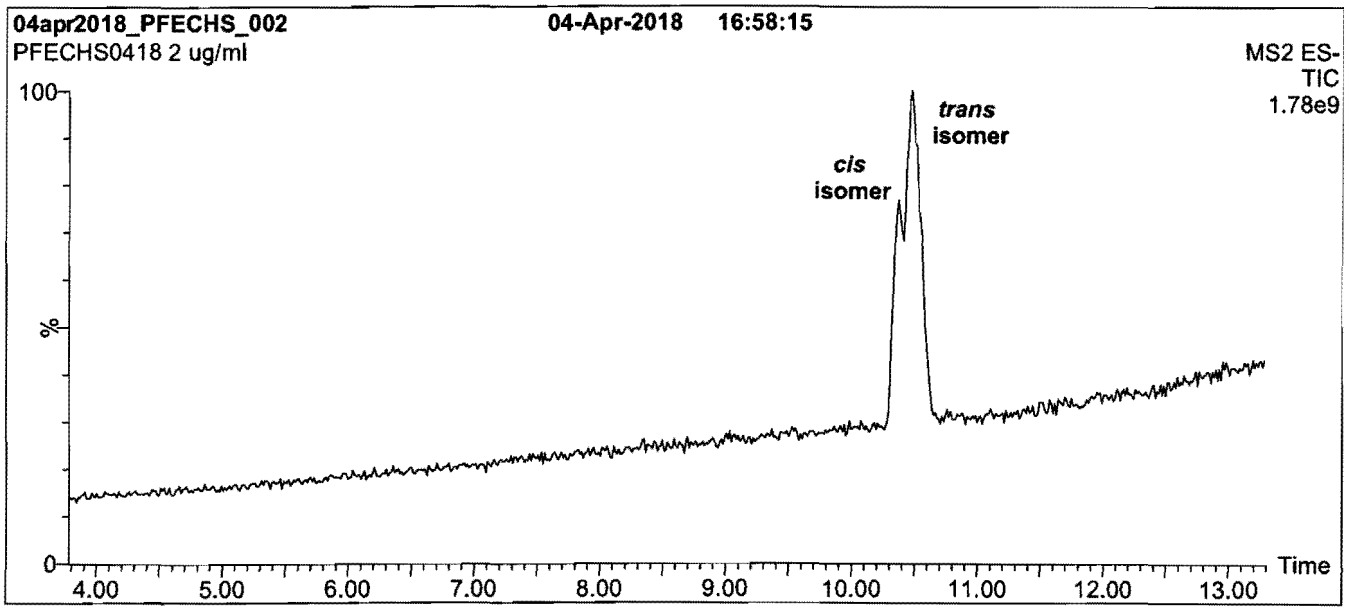
Mobile phase: Same as Figure 1

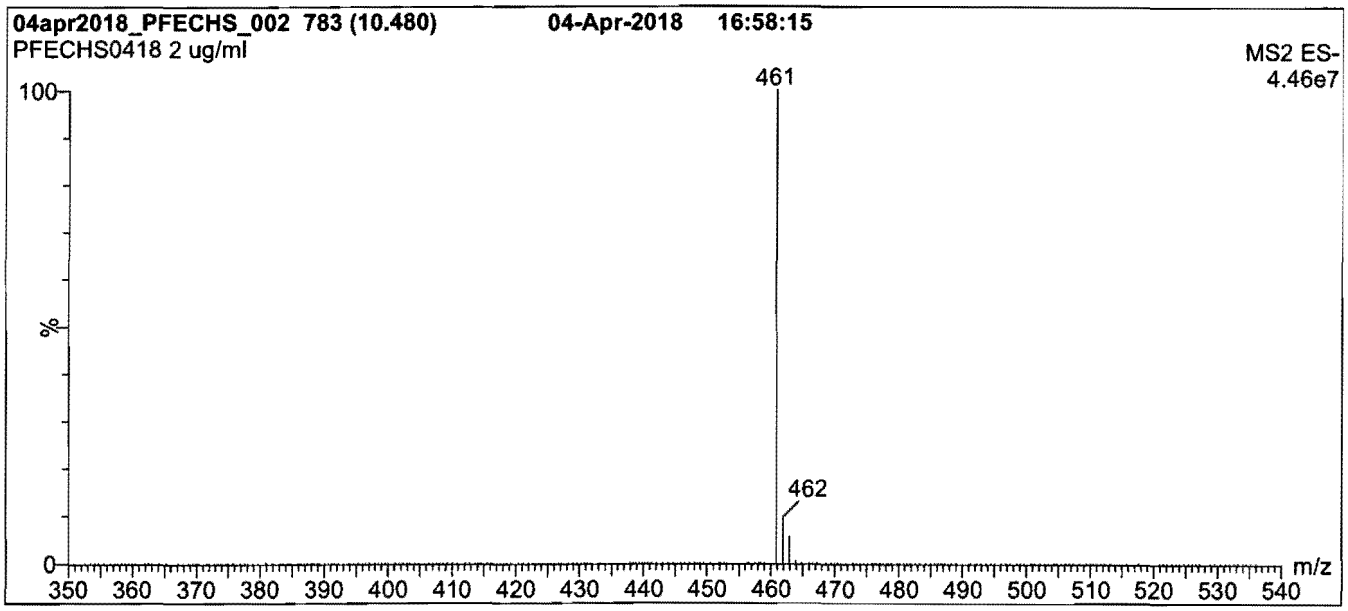
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.37e-3
Collision Energy (eV) = 24

Figure 1: **PFECHS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity CSH Fluoro-Phenyl
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 25% (80:20 MeOH:ACN) / 75% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 60% organic over 13 min.
Ramp to 80% organic over 2 min and hold for
2 min before returning to initial conditions in 1 min.
Time: 20 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (350 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 45.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

INTENDED USE:

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SYNTHESIS / CHARACTERIZATION:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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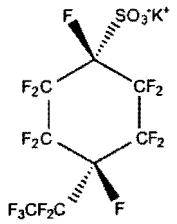
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CERTIFICATE OF ANALYSIS DOCUMENTATION

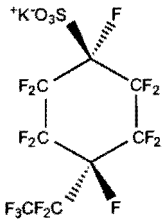
PRODUCT CODE: PFECHS **LOT NUMBER:** PFECHS0418

COMPOUND: Potassium perfluoro-4-ethylcyclohexanesulfonate (isomeric mixture)

STRUCTURE:



cis-isomer



trans-isomer

CAS #: 67584-42-3

MOLECULAR FORMULA: $C_8F_{15}SO_3K$ **MOLECULAR WEIGHT:** 500.22

CONCENTRATION: 50.0 ± 2.5 µg/ml (K salt) **SOLVENT(S):** Methanol
46.1 ± 2.3 µg/ml (PFECHS anion)

CHEMICAL PURITY: >98%

LAST TESTED: (mm/dd/yyyy) 04/04/2018

EXPIRY DATE: (mm/dd/yyyy) 04/04/2023

RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains a mixture of the *cis*/*trans* isomers of PFECHS at a ratio of 2:3 (*cis*:*trans*).
- Contains ~ 1.5% of other isomeric impurities.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

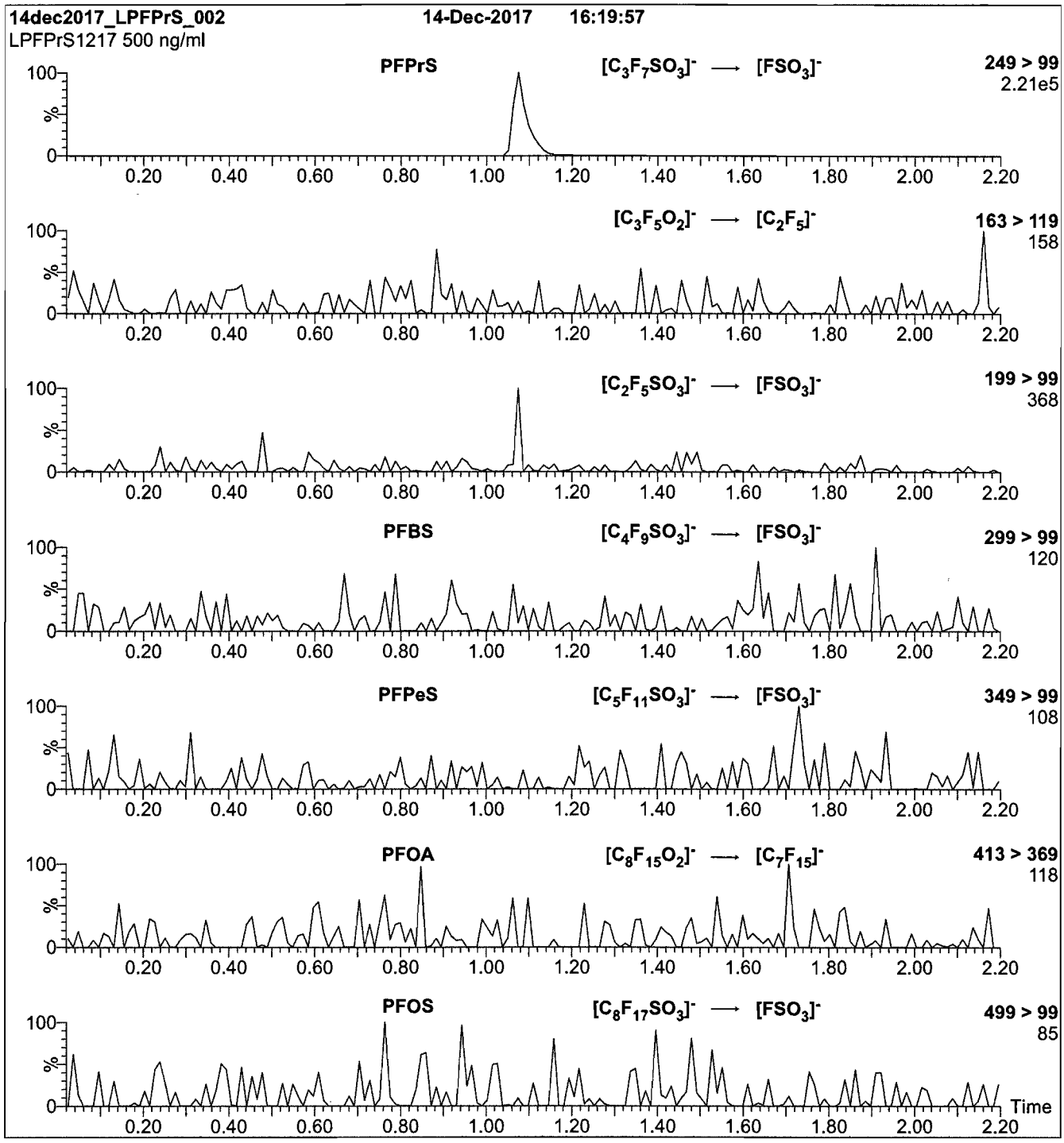
Certified By: _____ **Date:** 04/09/2018 (mm/dd/yyyy)

B.G. Chittim, General Manager

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17L0671

Figure 2: **L-PFPrS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml L-PFPrS)

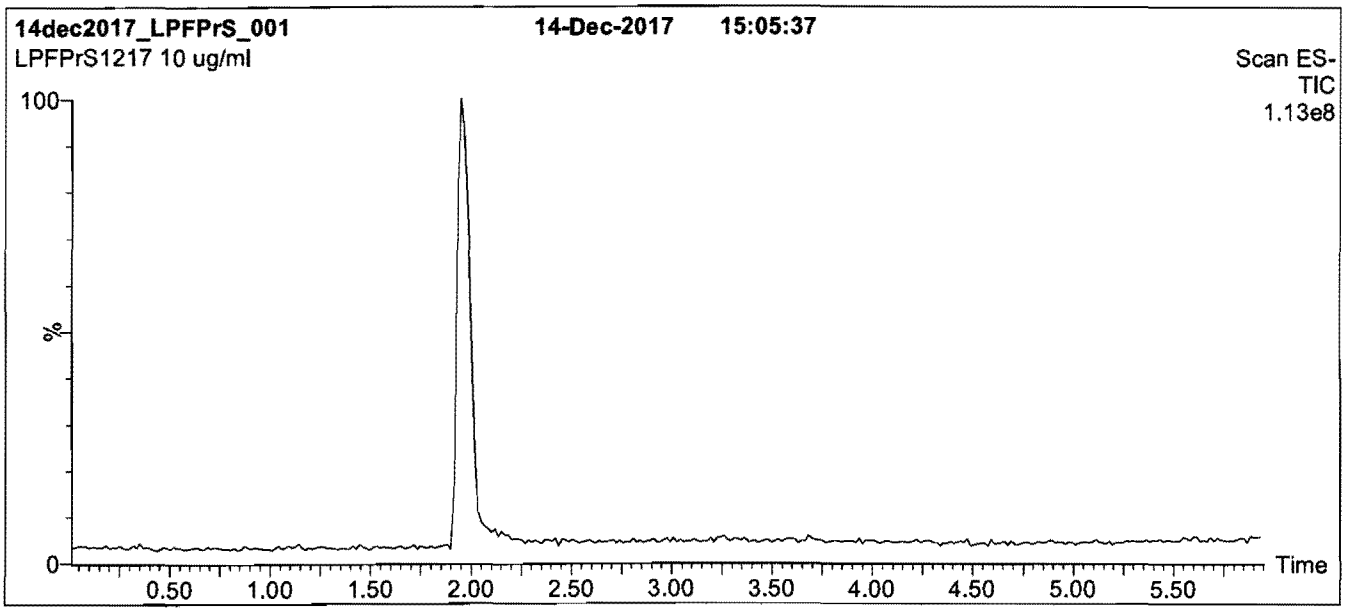
Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

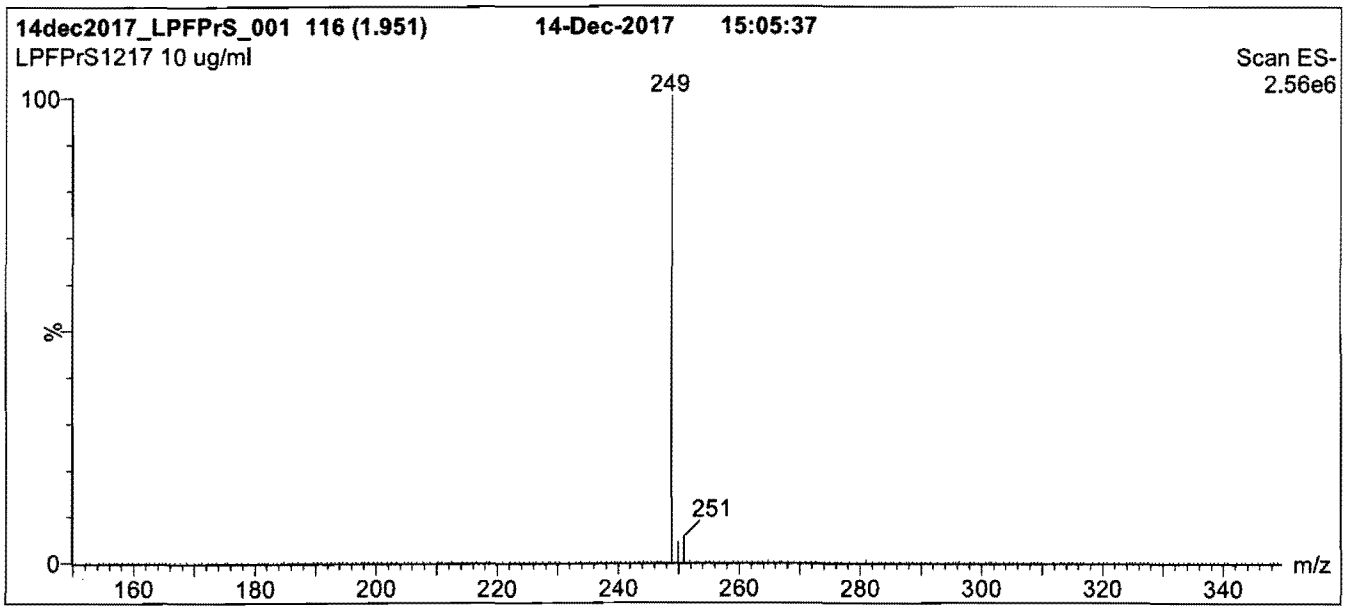
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.43e-3
Collision Energy (eV) = 25

Figure 1: **L-PFPrS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 30% (80:20 MeOH:ACN) / 70% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 1.5 min
before returning to initial conditions over 0.5 min.
Time: 10 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 40.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

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where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using calibrated NIST and/or NRC traceable external weights. All volumetric glassware used is calibrated, of Class A tolerance, and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

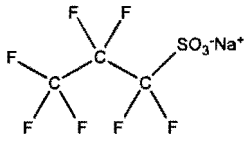
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

1910671

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	L-PFPrS	**LOT NUMBER:**	LPFPrS1217
COMPOUND:	Sodium perfluoro-1-propanesulfonate		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$C_3F_7SO_3Na$	**MOLECULAR WEIGHT:**	272.07
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 45.8 ± 2.3 µg/ml (PFPrS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	12/14/2017		
EXPIRY DATE: (mm/dd/yyyy)	12/14/2022		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/18/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

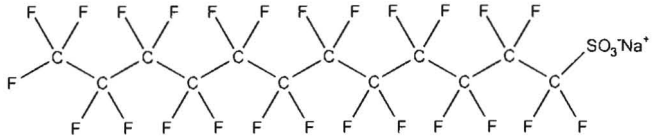
Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L1707

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	L-PFDoS	**LOT NUMBER:**	LPFDoS1218
COMPOUND:	Sodium perfluoro-1-dodecanesulfonate		
STRUCTURE:		**CAS #:**	1260224-54-1



MOLECULAR FORMULA:	$C_{12}F_{25}SO_3Na$	**MOLECULAR WEIGHT:**	722.14
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 48.4 ± 2.4 µg/ml (PFDoS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	12/06/2018		
EXPIRY DATE: (mm/dd/yyyy)	12/06/2023		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

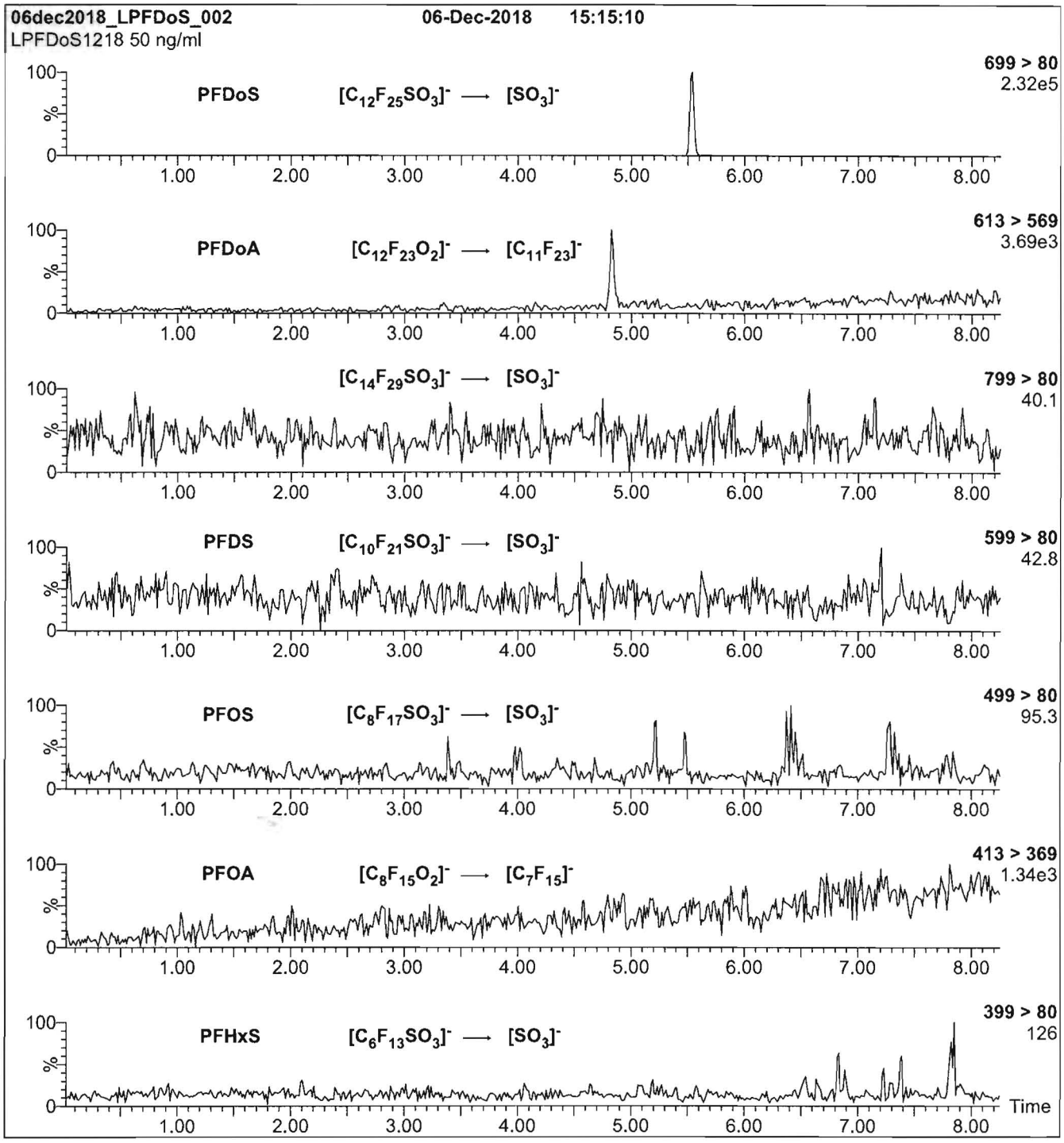
- See page 2 for further details.
- Contains ~ 0.2% of perfluoro-n-dodecanoic acid (PFDoA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/20/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **L-PFDoS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (L-PFDoS)

Mobile phase: Same as Figure 1

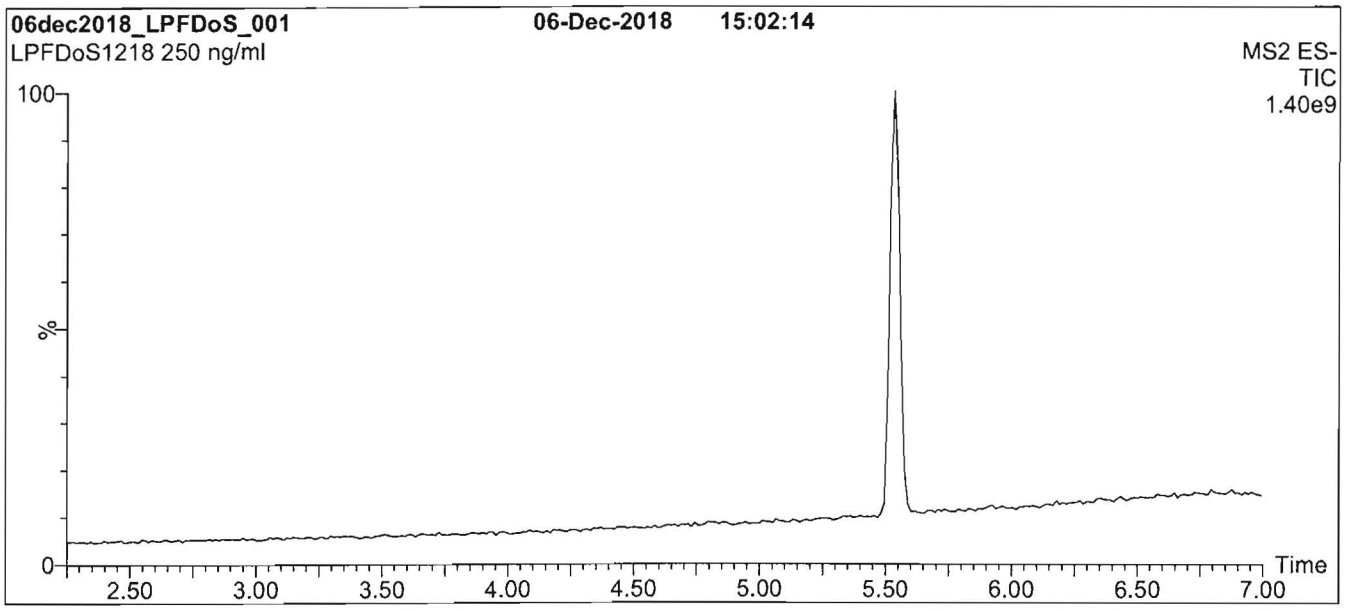
Flow: 300 µl/min

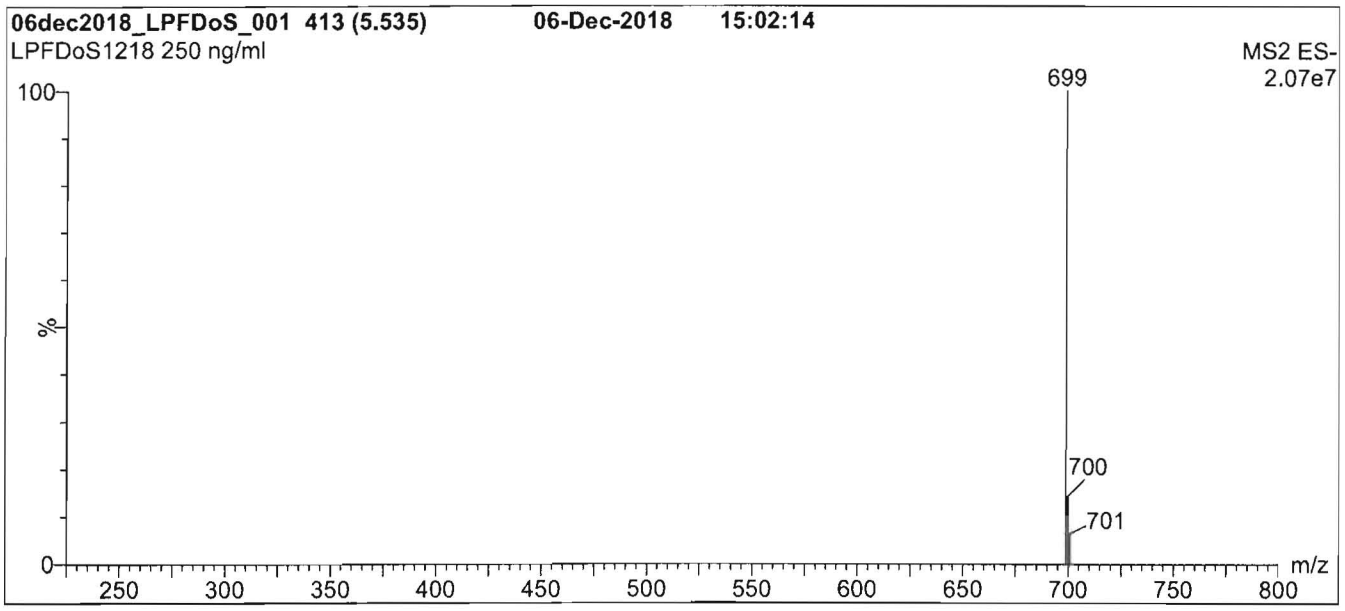
MS Parameters

Collision Gas (mbar) = 3.27e-3
Collision Energy (eV) = 60

19L1707

Figure 1: **L-PFDoS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L1707

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Analytical Standard Record

Vista Analytical Laboratory

20A0804

Parent Standards used in this standard:

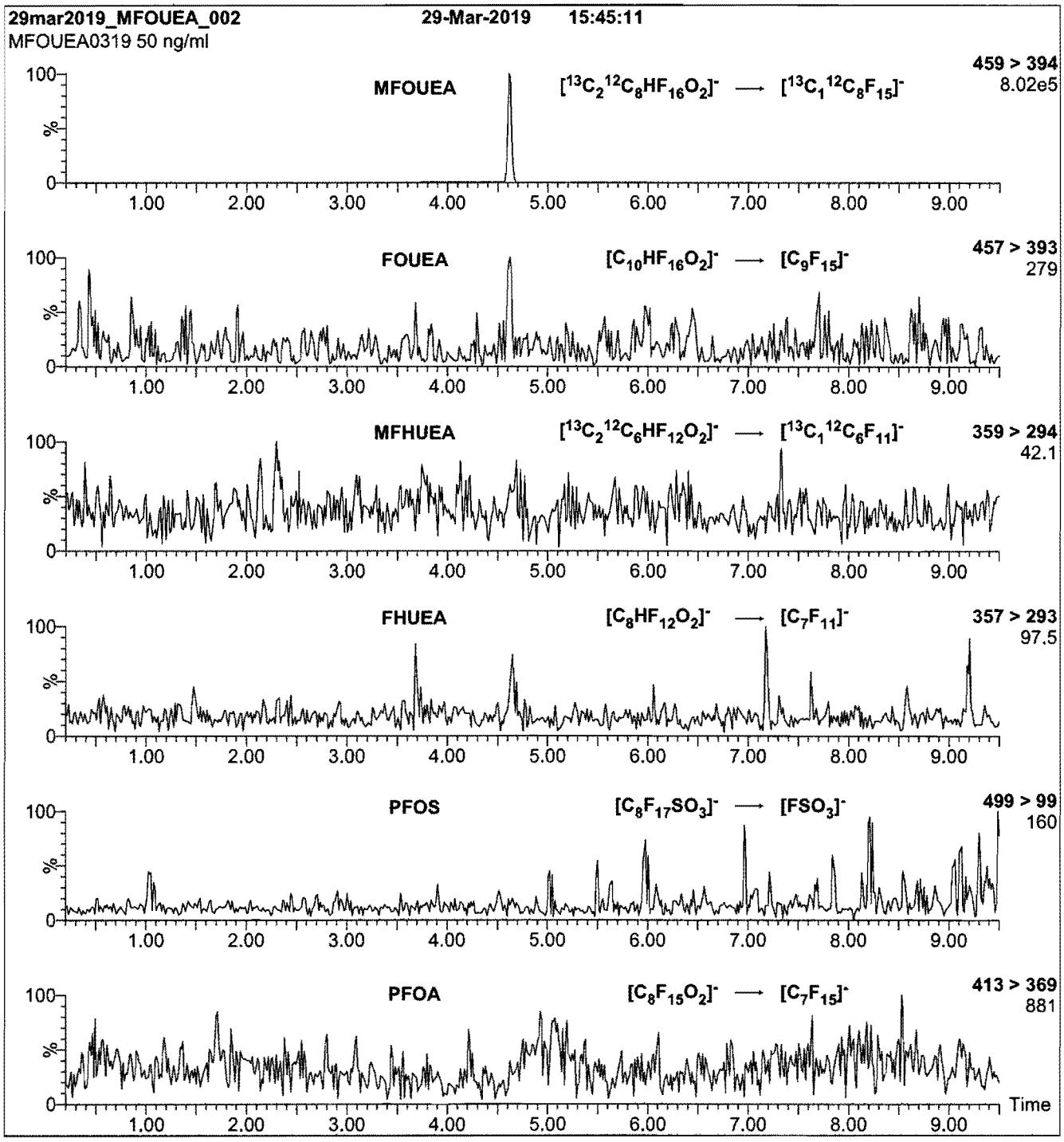
Standard	Description	Prepared	Prepared By	Expires	(mls)
19L0626	13C2-FOUEA	06-Dec-19	** Vendor **	29-Mar-21	1
19L0627	13C4-PFBA	06-Dec-19	** Vendor **	15-Nov-24	1
19L0628	13C6-PFDA	06-Dec-19	** Vendor **	25-Jul-24	1
19L0629	13C9-PFNA	06-Dec-19	** Vendor **	08-Sep-23	1
19L0630	13C7-PFUdA	06-Dec-19	** Vendor **	22-Jul-24	1
19L0631	13C5-PFHxA	06-Dec-19	** Vendor **	27-Sep-23	1
19L0632	18O2-PFHxS	06-Dec-19	** Vendor **	10-Jan-24	1.06
19L0633	13C4-PFOS	06-Dec-19	** Vendor **	01-Nov-24	1.05
19L0634	13C8-PFOA	06-Dec-19	** Vendor **	05-Mar-24	1.02

Description:	PFC-RS	Expires:	09-Jan-21
Standard Type:	Reagent	Prepared:	08-Jan-20
Solvent:	MeOH	Prepared By:	Brittany M. Lamb
Final Volume (mls):	40	Department:	LCMS
Vials:	1	Last Edit:	08-Jan-20 12:43 by BML

10 uL spike

Analyte	CAS Number	Concentration	Units
18O2-PFHxS		1.25	ug/mL
13C9-PFNA		1.25	ug/mL
13C8-PFOA		1.25	ug/mL
13C7-PFUnA		1.25	ug/mL
13C6-PFDA		1.25	ug/mL
13C5-PFHxA		1.25	ug/mL
13C4-PFOS		1.25	ug/mL
13C4-PFBA		1.25	ug/mL
13C2-FOUEA		1.25	ug/mL

Figure 2: **MFOUEA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MFOUEA)

Mobile phase: Same as Figure 1

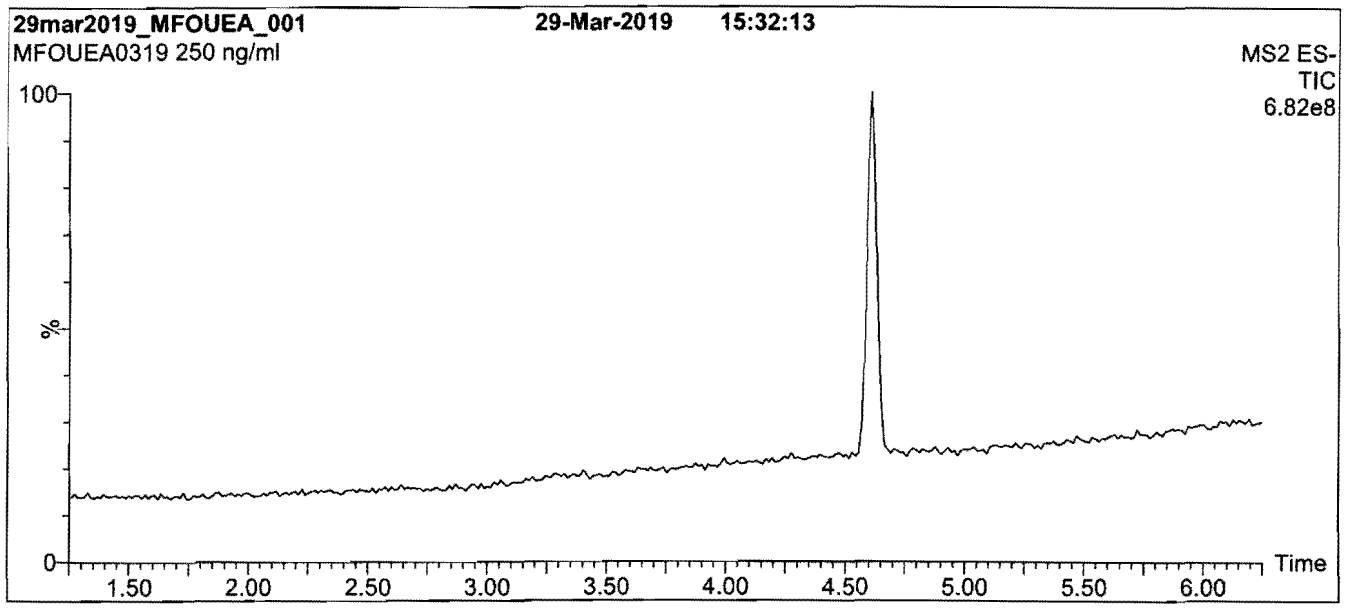
Flow: 300 µl/min

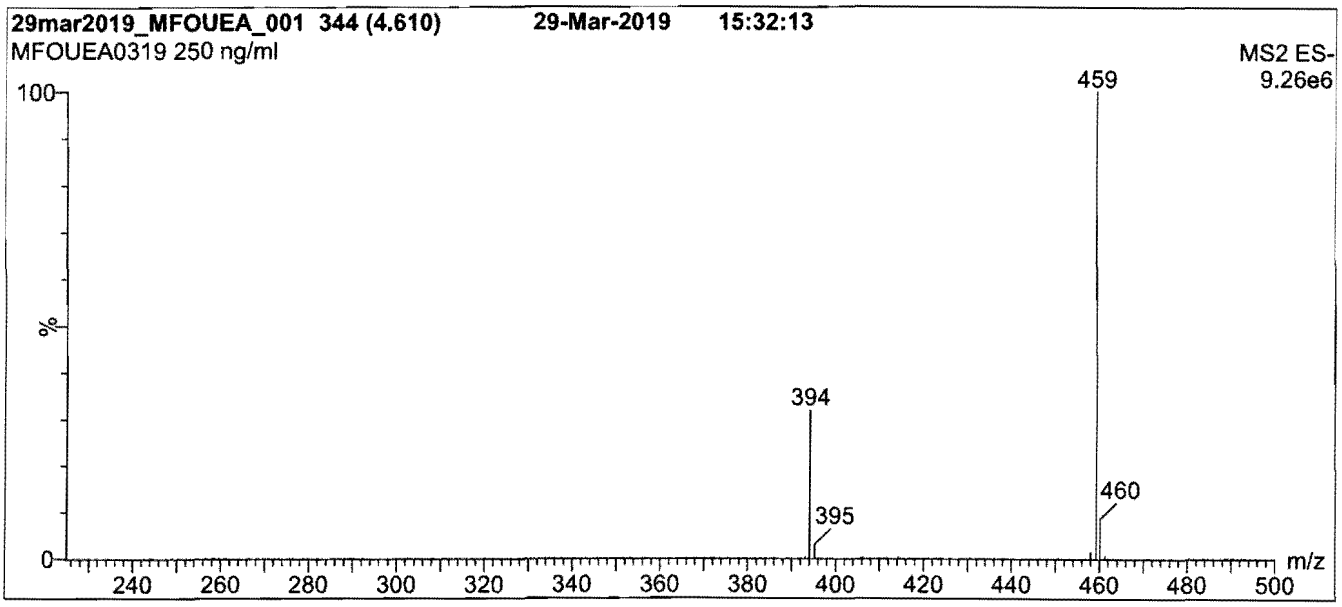
MS Parameters

Collision Gas (mbar) = 2.84e-3
Collision Energy (eV) = 10

19L0626

Figure 1: **MFOUEA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.70
Cone Voltage (V) = 28.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0626

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

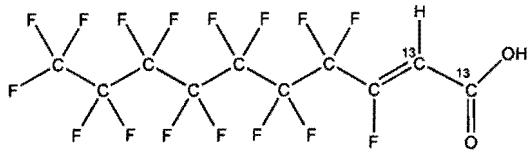
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0626

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MFOUEA	**LOT NUMBER:**	MFOUEA0319
COMPOUND:	2H-Perfluoro-[1,2-$^{13}C_2$]-2-decenoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_8H_2F_{16}O_2$	**MOLECULAR WEIGHT:**	460.08
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Anhydrous Isopropanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	03/29/2019		
EXPIRY DATE: (mm/dd/yyyy)	03/29/2021		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

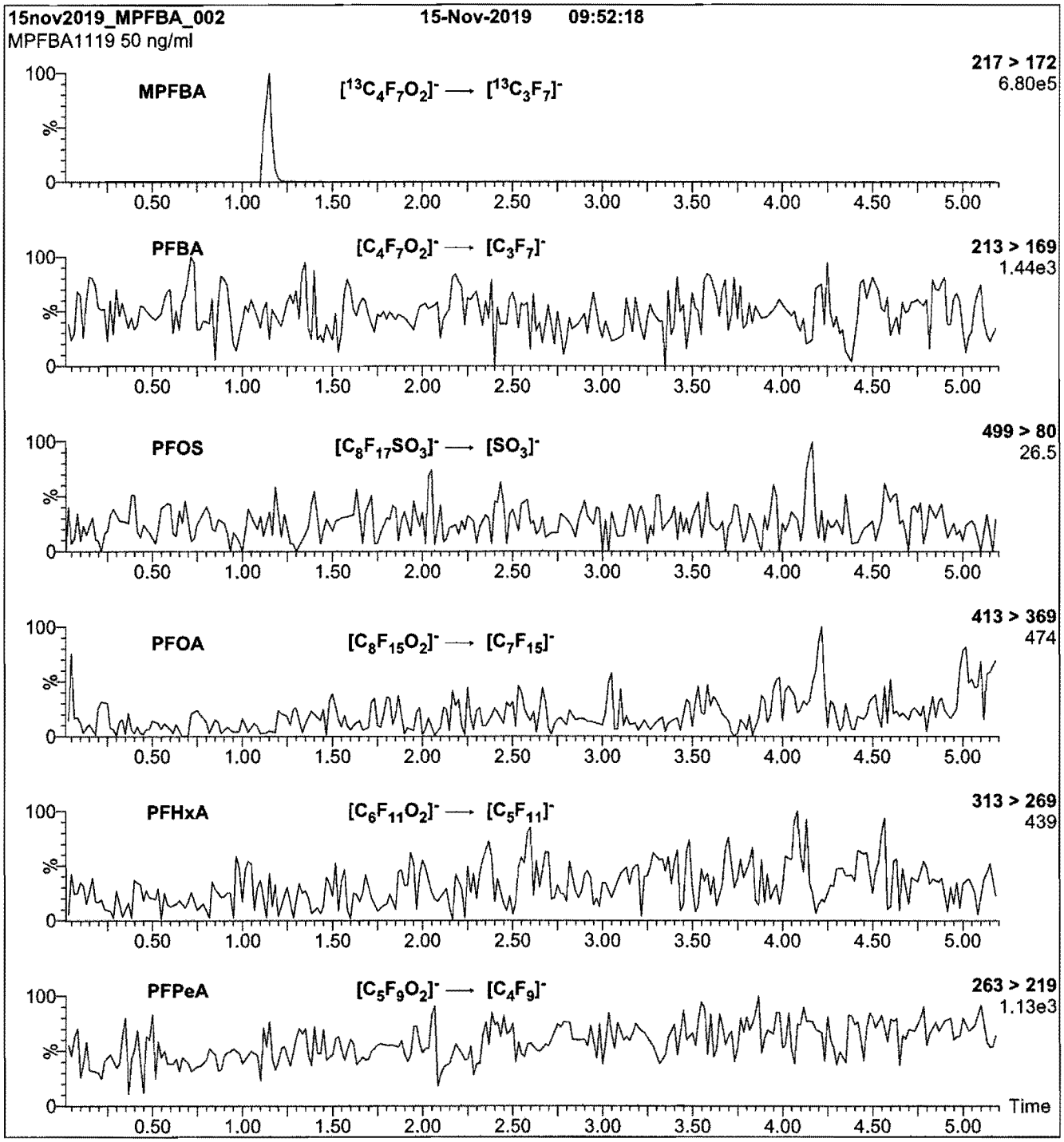
- See page 2 for further details.
- Dilution of this standard in methanol may lead to the formation of 2H-3-methoxy-perfluoro-[1,2-$^{13}C_2$]-2-decenoic acid. This reaction can be catalyzed by the presence of acid or base. All dilutions should be routinely checked for degradation.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 04/15/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **MPFBA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFBA)

Mobile phase: Same as Figure 1

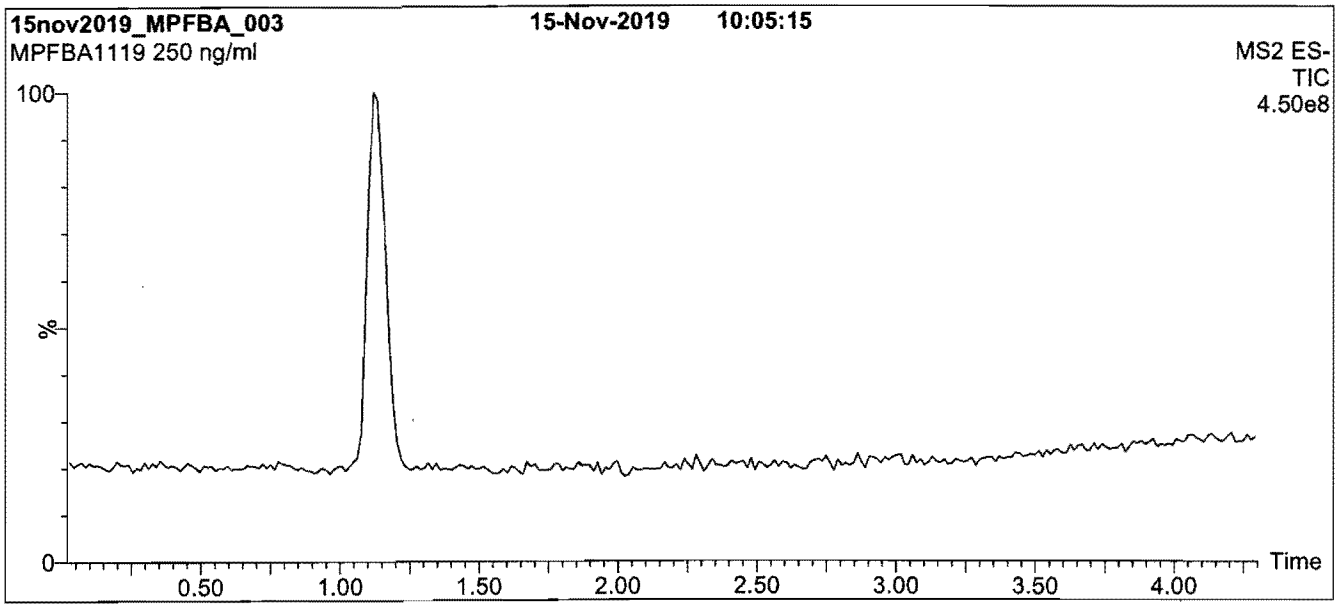
Flow: 300 µl/min

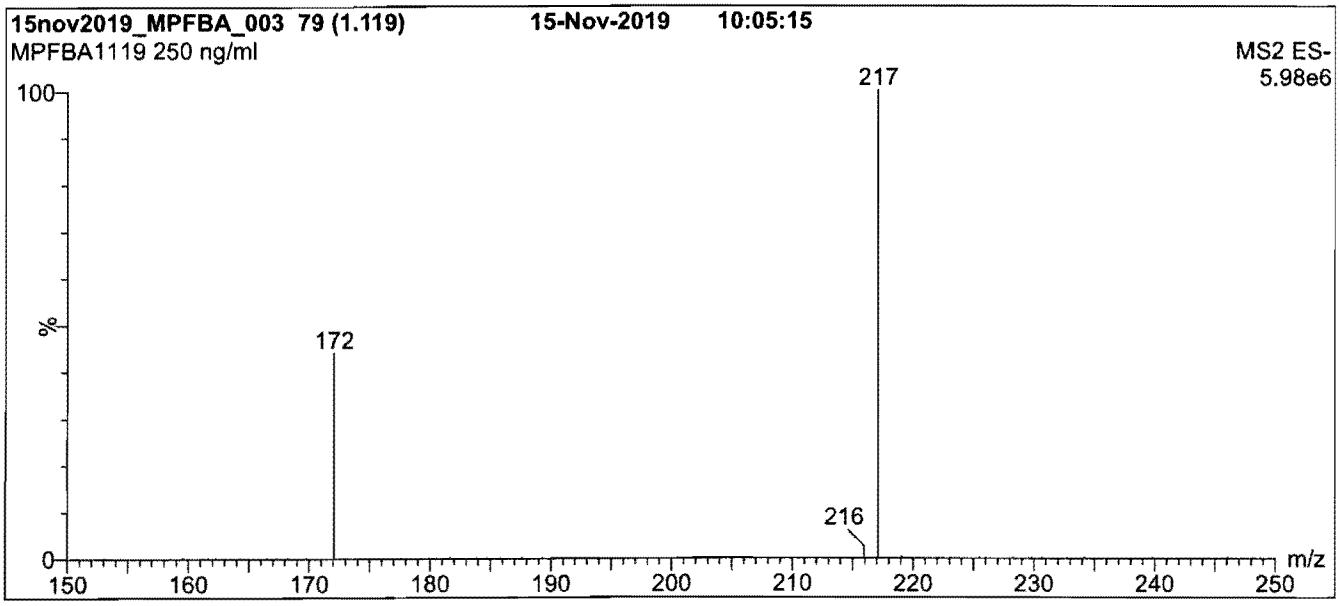
MS Parameters

Collision Gas (mbar) = 3.33e-3
Collision Energy (eV) = 8

19L0627

Figure 1: **MPFBA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0627

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

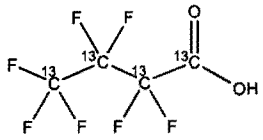
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0627

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MPFBA	**LOT NUMBER:**	MPFBA1119
COMPOUND:	Perfluoro-n-[1,2,3,4-$^{13}C_4$]butanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_4HF_7O_2$	**MOLECULAR WEIGHT:**	218.01
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C (1,2,3,4-$^{13}C_4$)
LAST TESTED: (mm/dd/yyyy)	11/15/2019		
EXPIRY DATE: (mm/dd/yyyy)	11/15/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

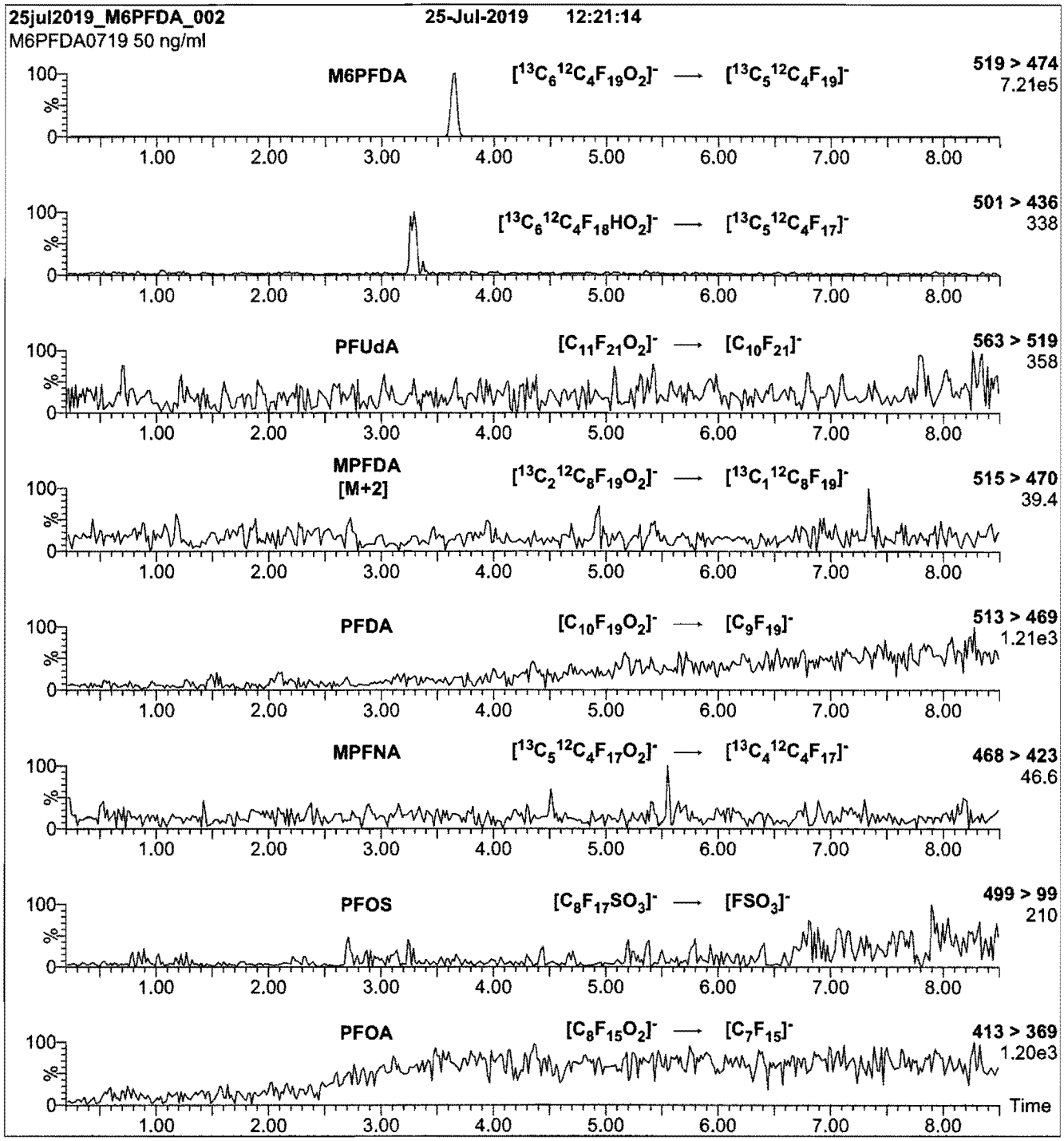
Certified By: _____ **Date:** 11/15/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:6, Revised 2018-08-14

19L0628

Figure 2: **M6PFDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M6PFDA)

Mobile phase: Same as Figure 1

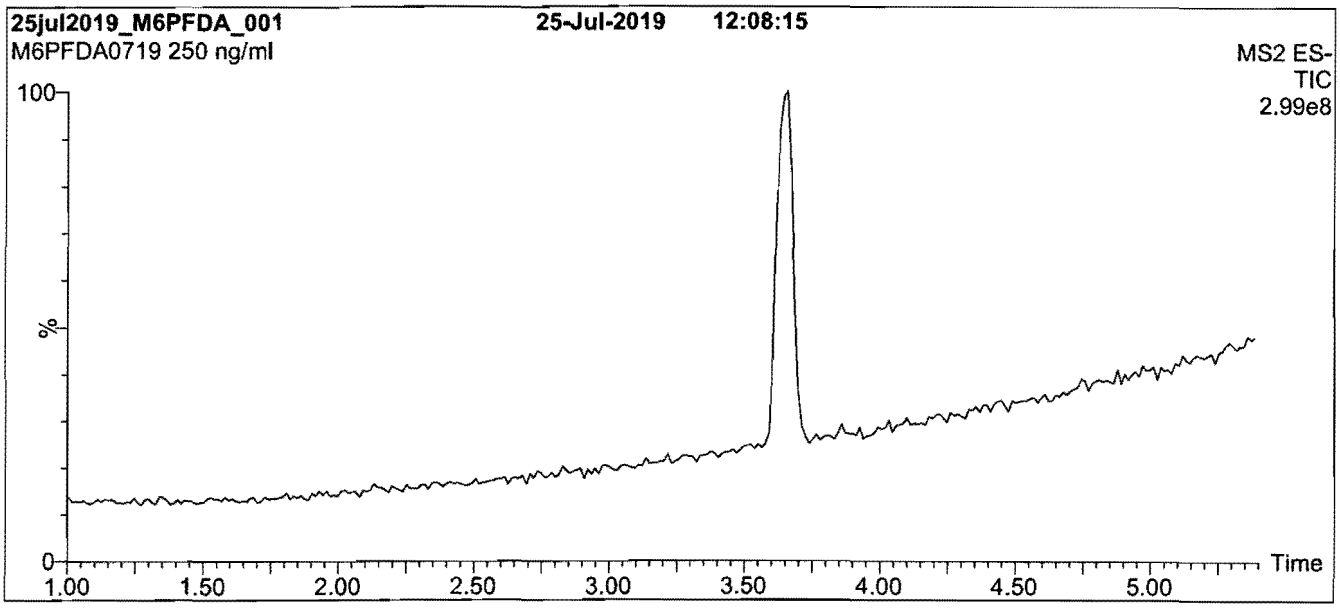
Flow: 300 µl/min

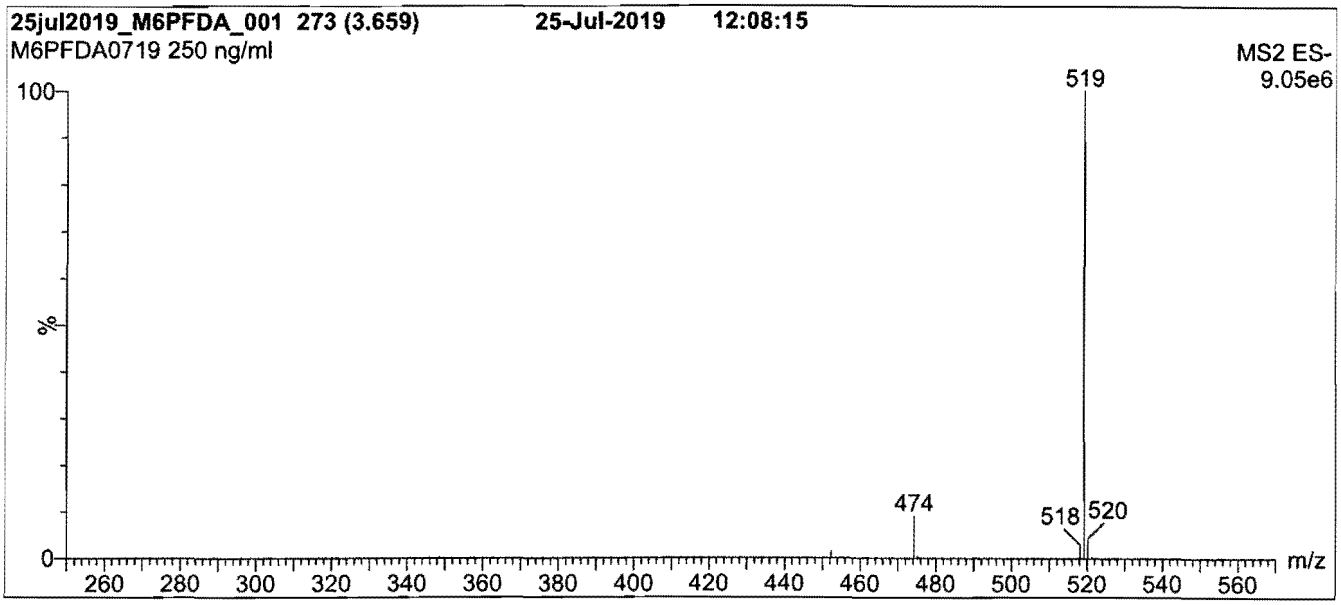
MS Parameters

Collision Gas (mbar) = 3.33e-3
Collision Energy (eV) = 10

19L0628

Figure 1: **M6PFDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0628

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

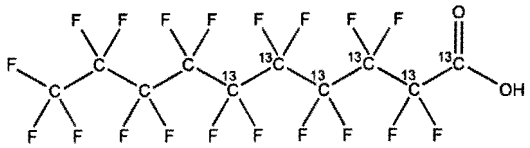
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0628

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M6PFDA	**LOT NUMBER:**	M6PFDA0719
COMPOUND:	Perfluoro-n-[1,2,3,4,5,6-$^{13}C_6$]decanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_6{}^{12}C_4HF_{19}O_2$	**MOLECULAR WEIGHT:**	520.04
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2,3,4,5,6$-$^{13}C_6$)
LAST TESTED: (mm/dd/yyyy)	07/25/2019		
EXPIRY DATE: (mm/dd/yyyy)	07/25/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

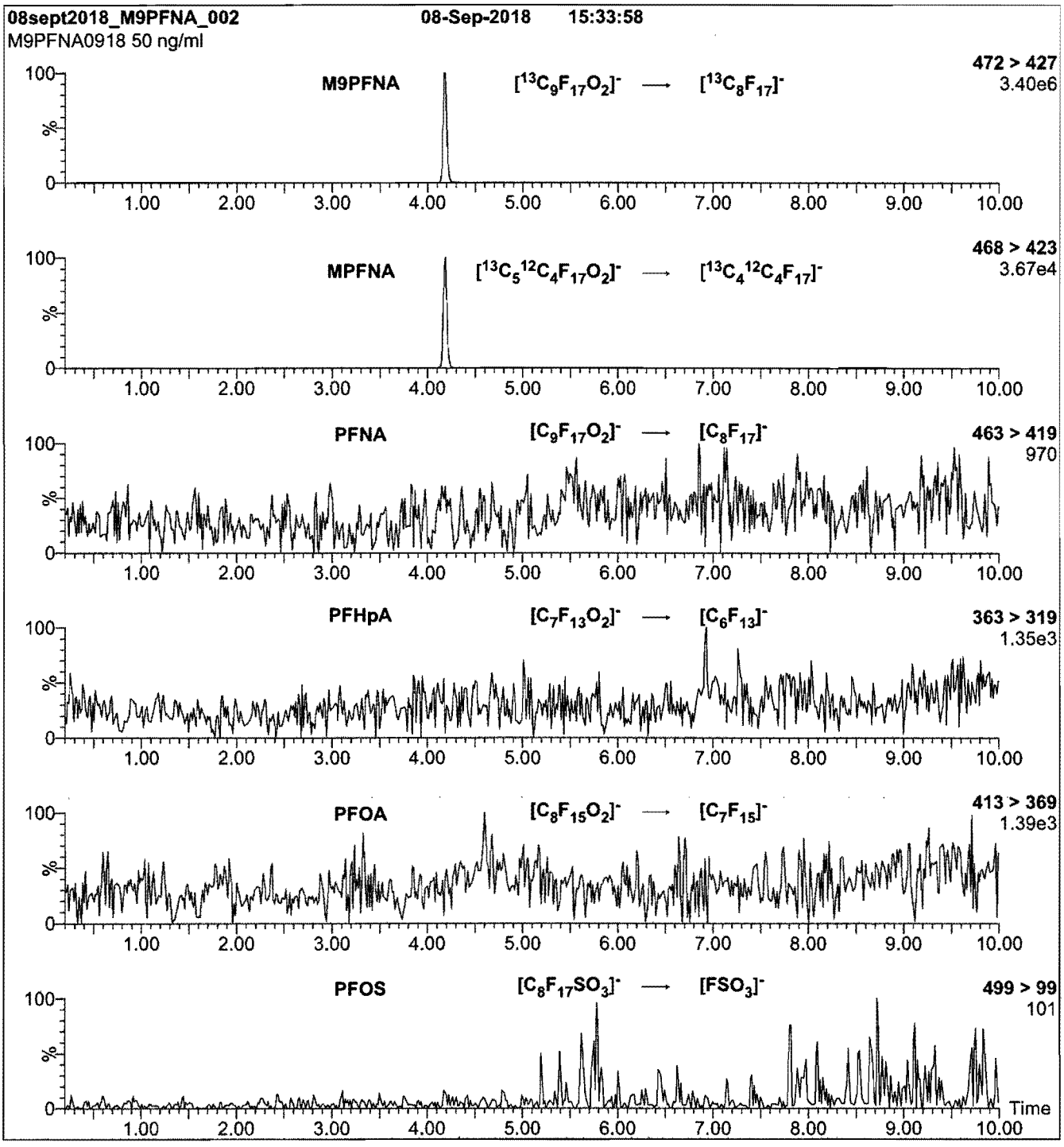
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/26/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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19L0629

Figure 2: **M9PFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M9PFNA)

Mobile phase: Same as Figure 1

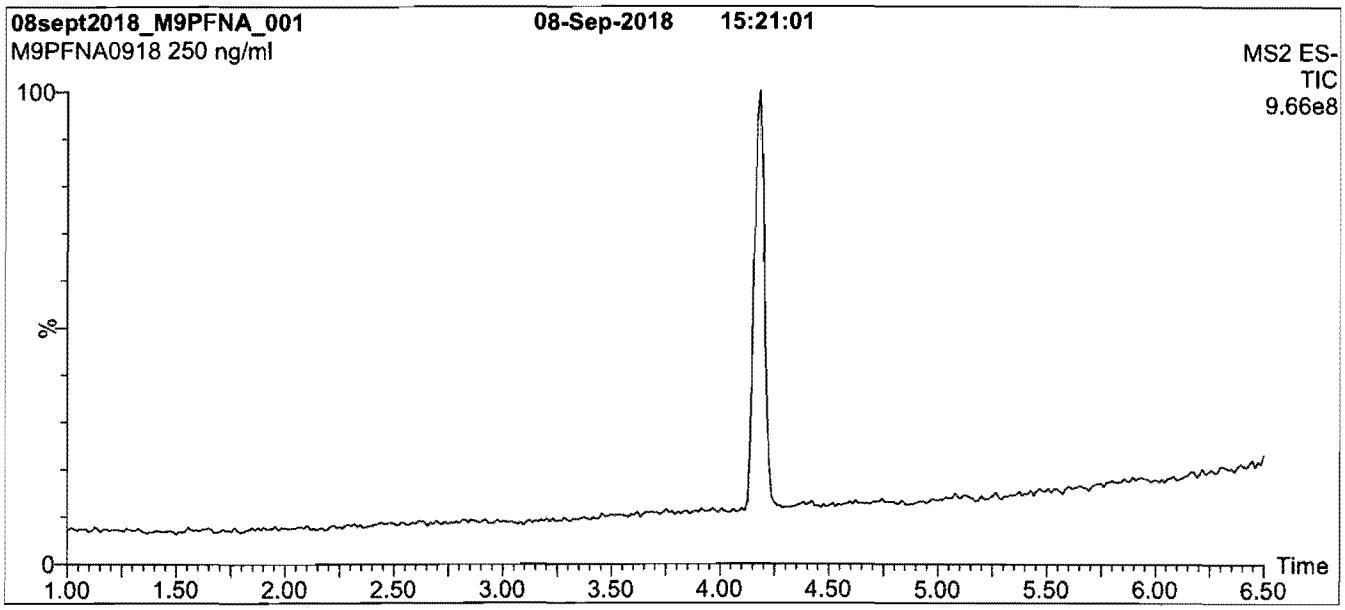
Flow: 300 µl/min

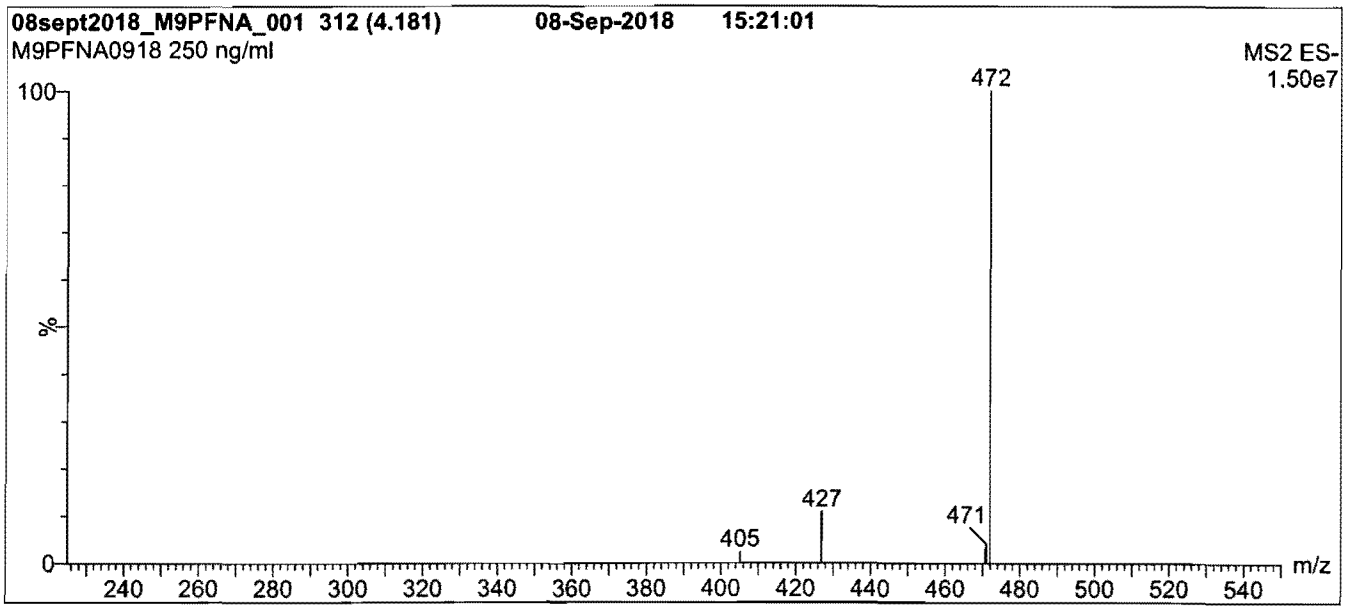
MS Parameters

Collision Gas (mbar) = 2.95e-3
Collision Energy (eV) = 10

19L0629

Figure 1: **M9PFNA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0629

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

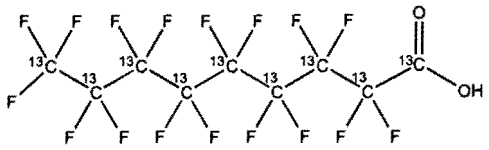
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19L0629

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M9PFNA	**LOT NUMBER:**	M9PFNA0918
COMPOUND:	Perfluoro-n-[$^{13}C_9$]nonanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_9HF_{17}O_2$	**MOLECULAR WEIGHT:**	473.01
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_9$)
LAST TESTED: (mm/dd/yyyy)	09/08/2018		
EXPIRY DATE: (mm/dd/yyyy)	09/08/2023		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 1.0% of $^{13}C_5{}^{12}C_4HF_{17}O_2$ (MPFNA).

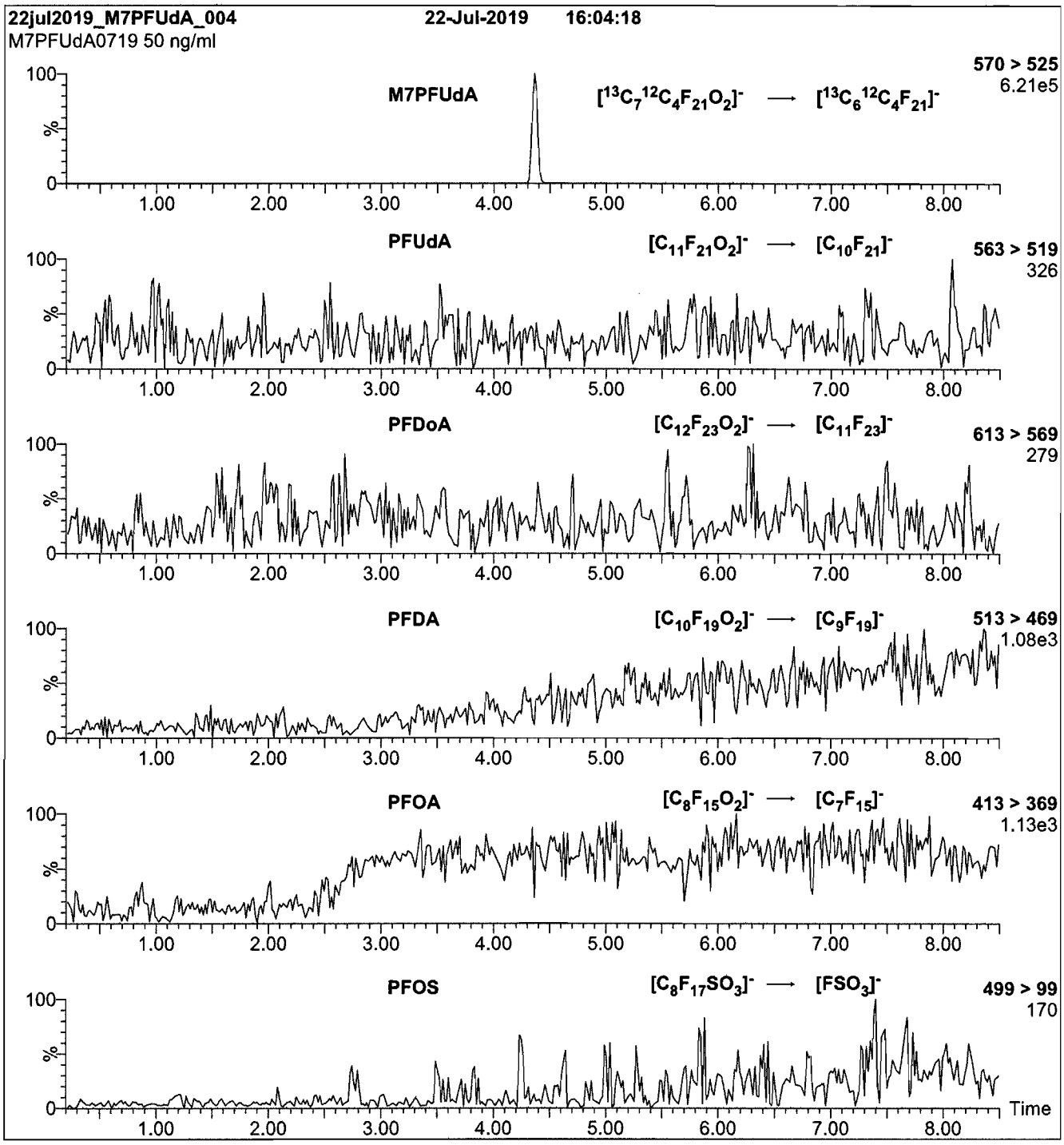
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 09/19/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0630

Figure 2: **M7PFUdA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M7PFUdA)

Mobile phase: Same as Figure 1

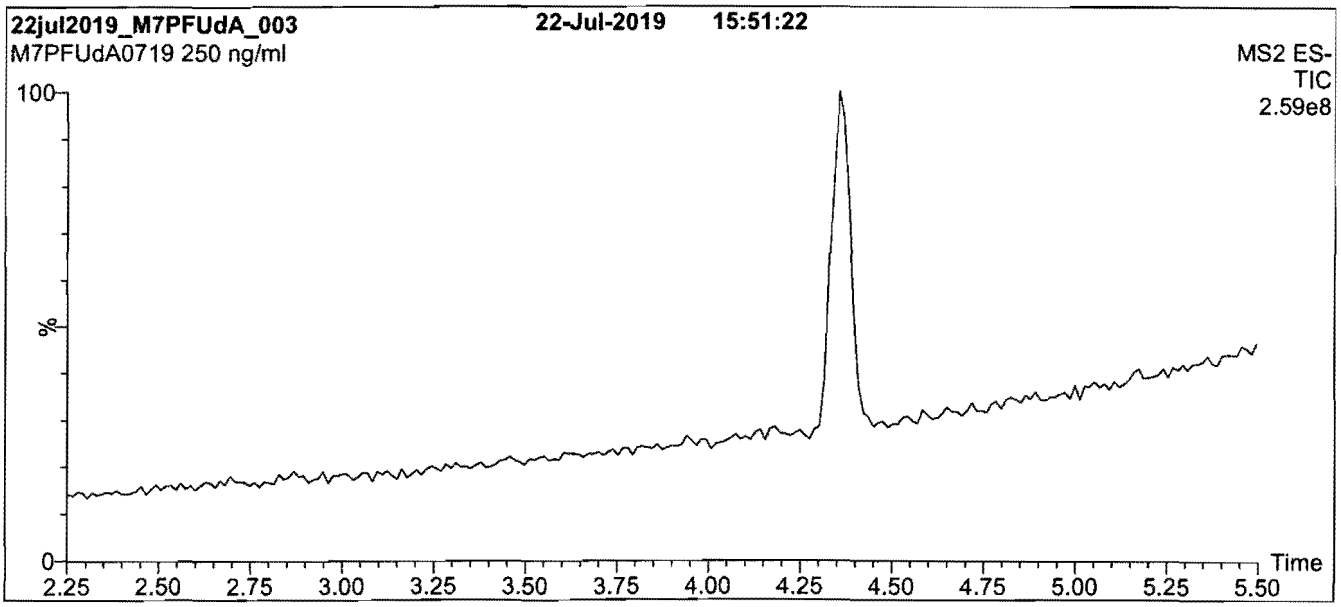
Flow: 300 µl/min

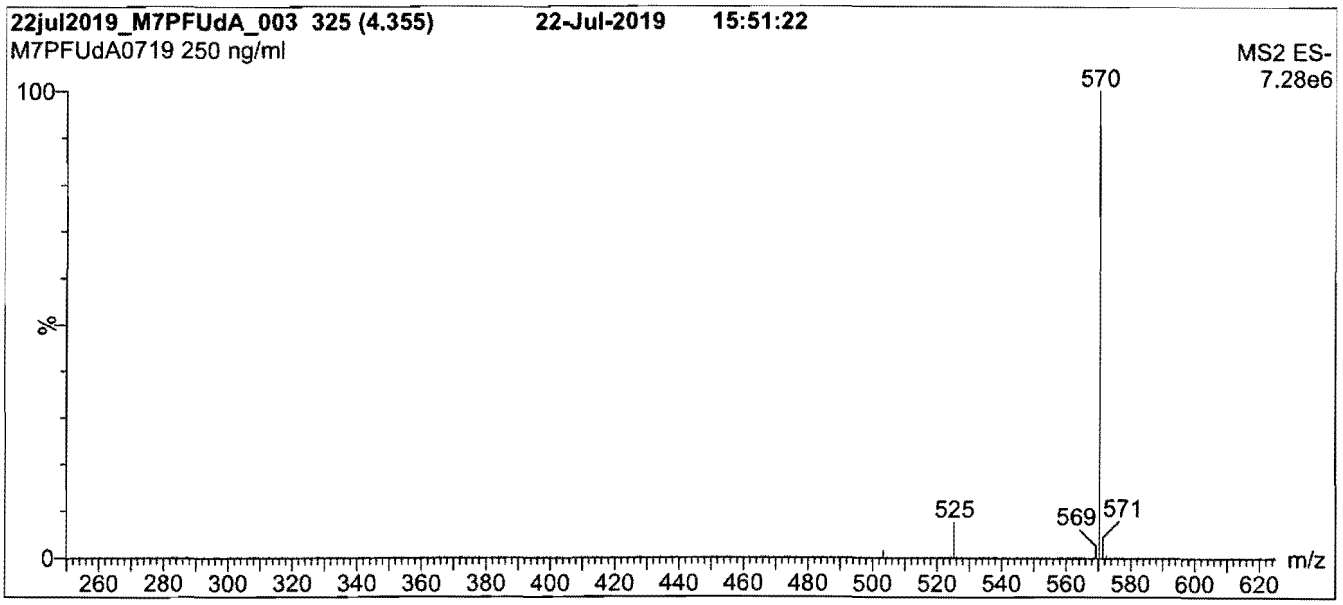
MS Parameters

Collision Gas (mbar) = 3.41e-3
Collision Energy (eV) = 12

19L0630

Figure 1: **M7PFUdA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0630

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

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UNCERTAINTY:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

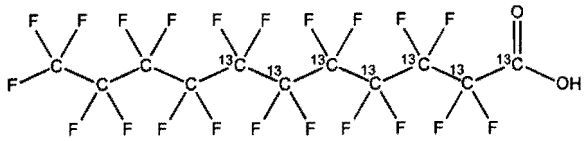
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0630

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M7PFUdA	**LOT NUMBER:**	M7PFUdA0719
COMPOUND:	Perfluoro-n-[1,2,3,4,5,6,7-$^{13}C_7$]undecanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_7{}^{12}C_4HF_{21}O_2$	**MOLECULAR WEIGHT:**	571.04
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED: (mm/dd/yyyy)	07/22/2019		(1,2,3,4,5,6,7-$^{13}C_7$)
EXPIRY DATE: (mm/dd/yyyy)	07/22/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

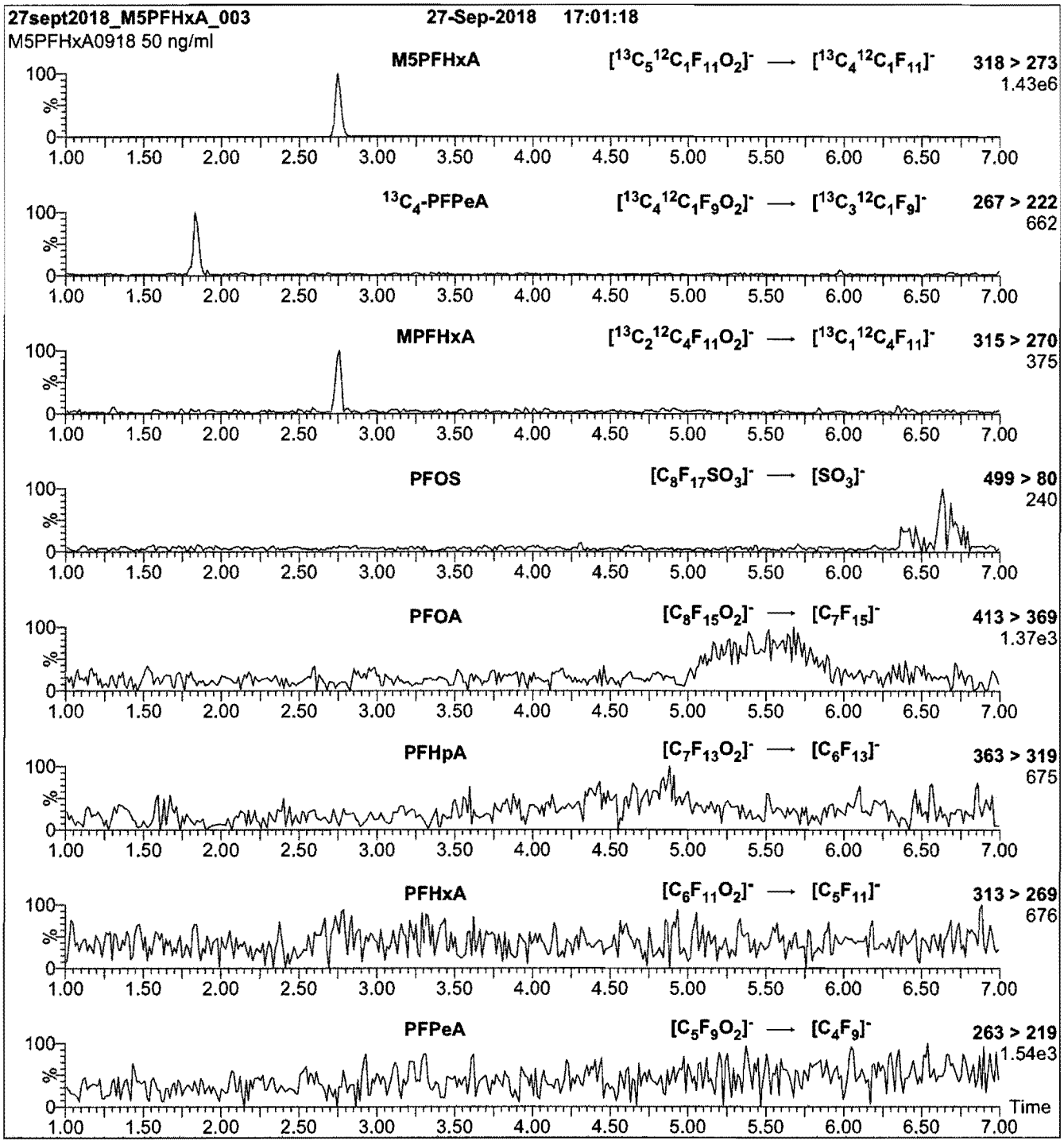
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 09/12/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0631

Figure 2: **M5PFHxA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M5PFHxA)

Mobile phase: Same as Figure 1

Flow: 300 µl/min

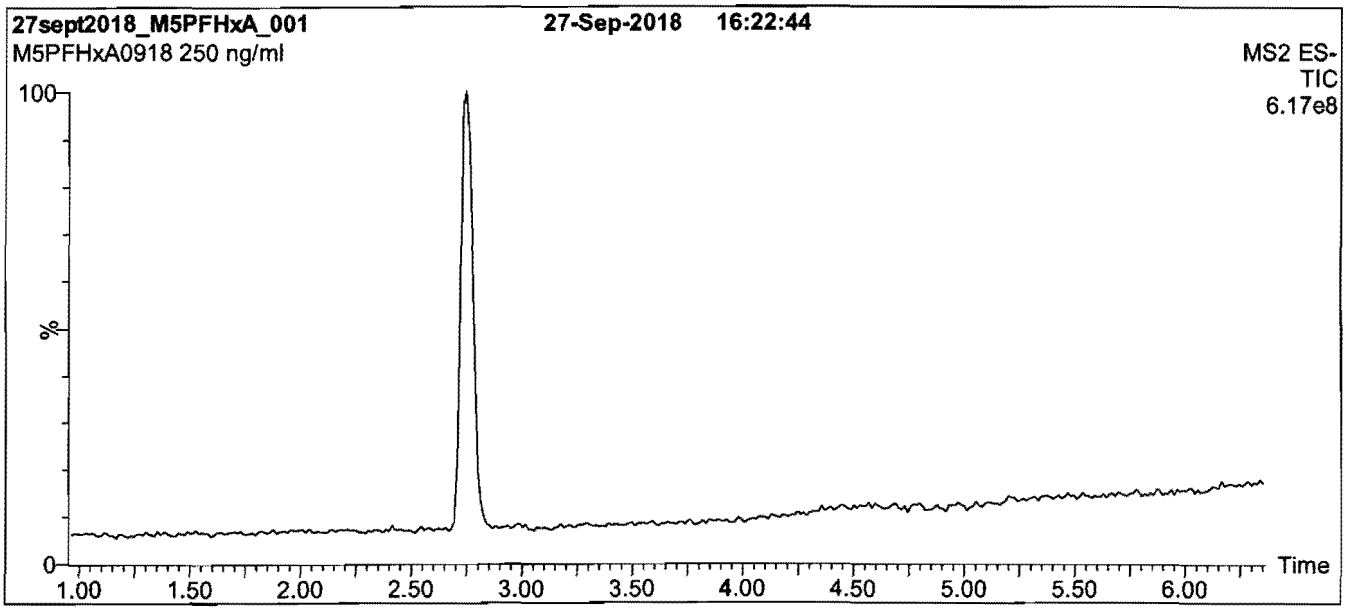
MS Parameters

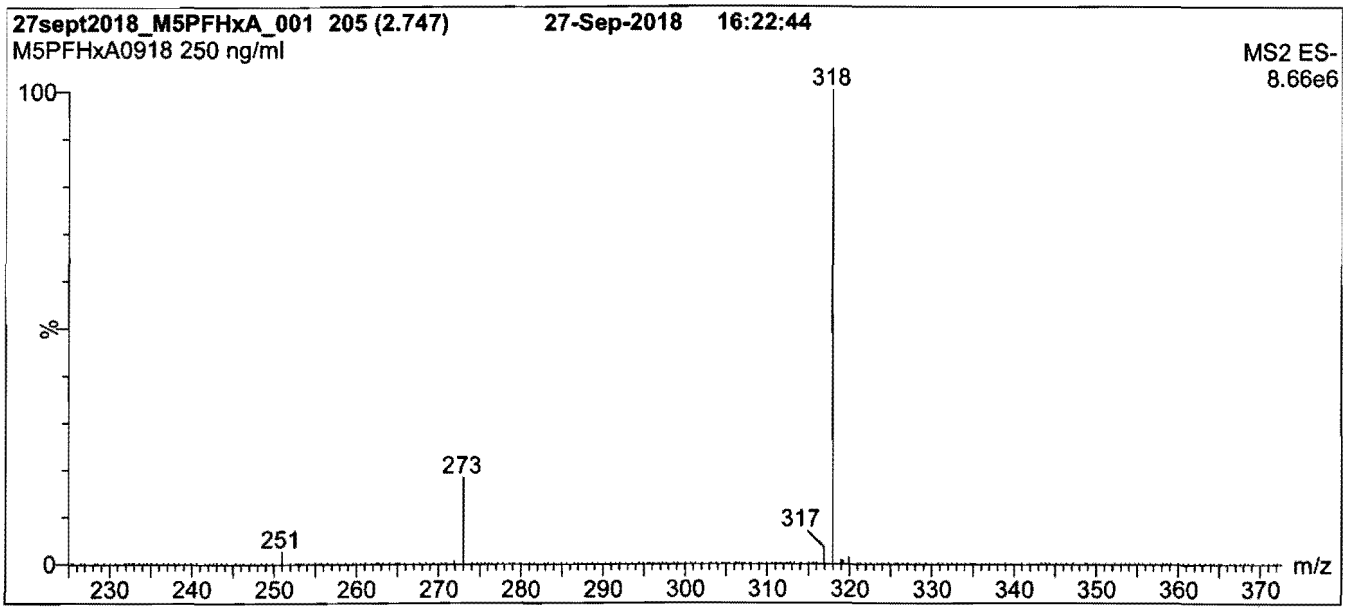
Collision Gas (mbar) = 2.97e-3
Collision Energy (eV) = 8

Form#:27, Issued 2004-11-10
Revision#:6, Revised 2018-08-14

19L0631

Figure 1: **M5PFHxA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% (80:20 MeOH:ACN) / 60% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

19L0631

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

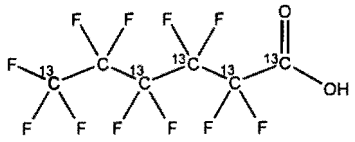
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19L0631

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M5PFHxA	**LOT NUMBER:**	M5PFHxA0918
COMPOUND:	Perfluoro-n-[1,2,3,4,6-$^{13}C_5$]hexanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_5{}^{12}C_1HF_{11}O_2$	**MOLECULAR WEIGHT:**	319.02
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2,3,4,6\text{-}^{13}C_5$)
LAST TESTED: (mm/dd/yyyy)	09/27/2018		
EXPIRY DATE: (mm/dd/yyyy)	09/27/2023		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

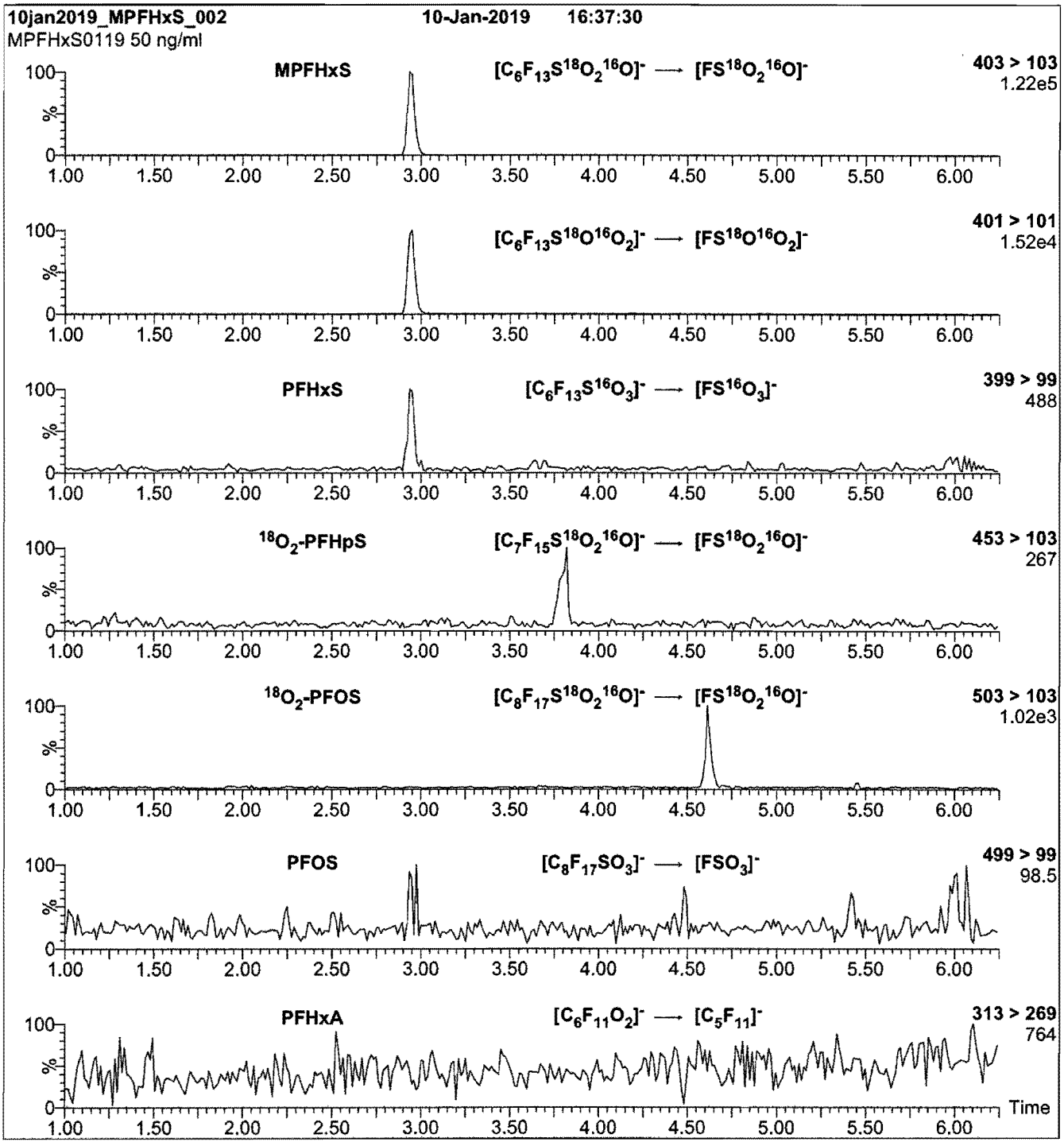
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 10/01/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **MPFHxS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFHxS)

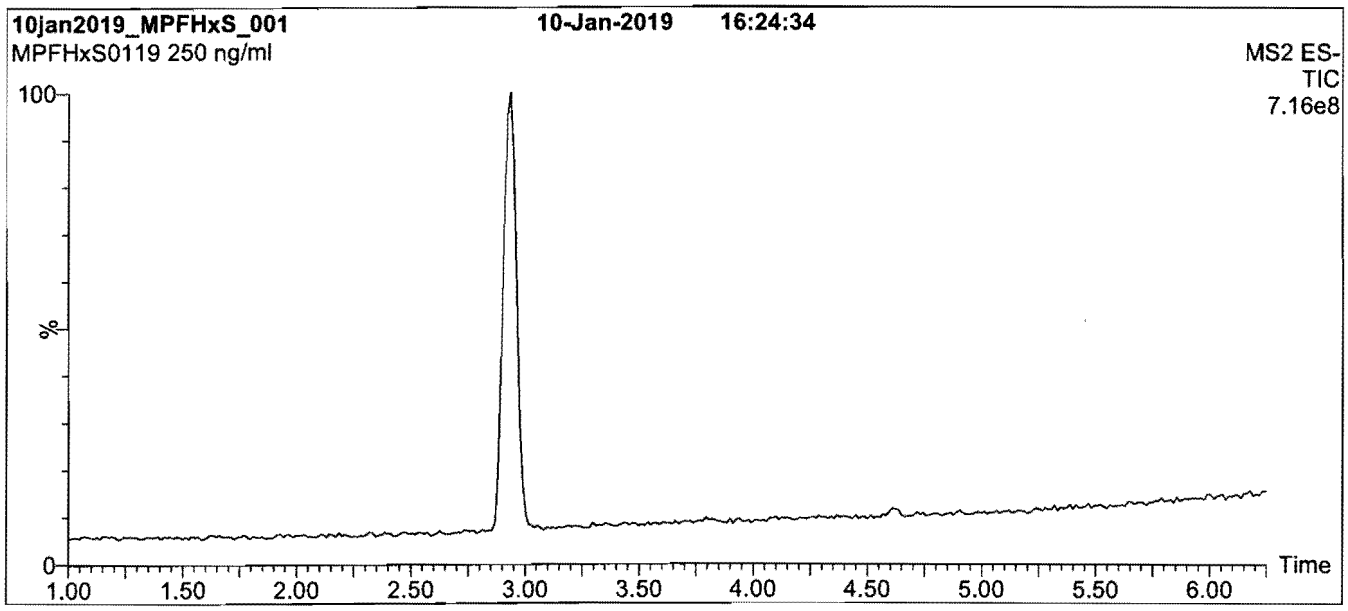
Mobile phase: Same as Figure 1

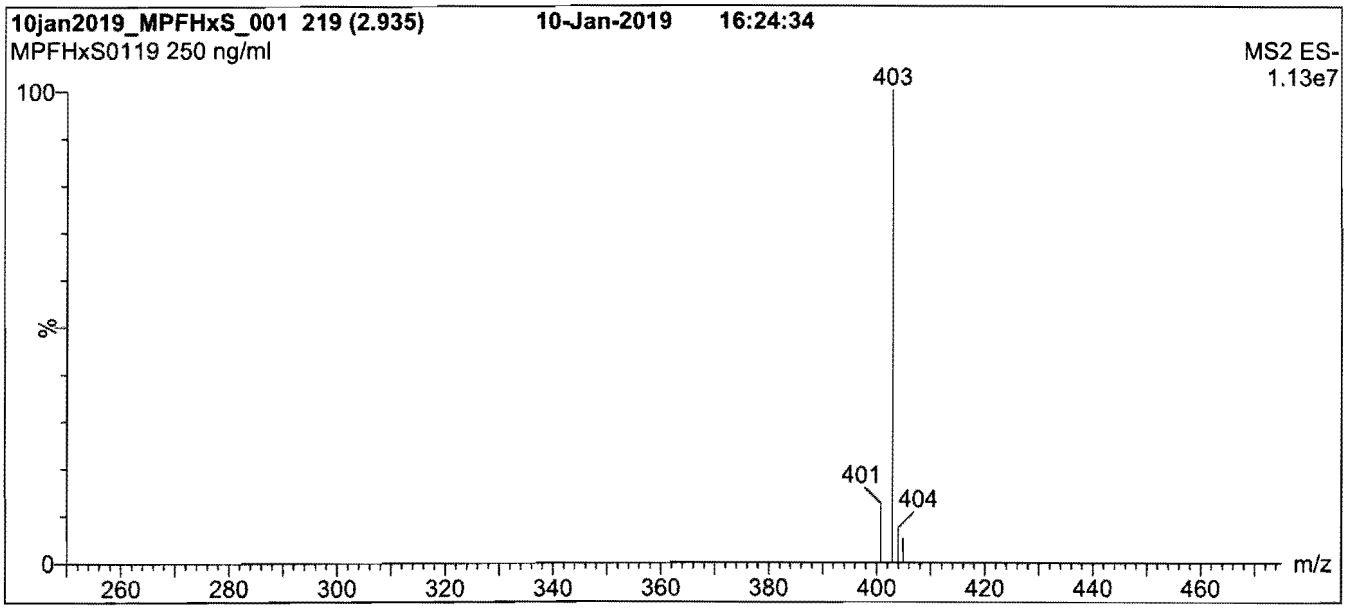
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.88e-3
Collision Energy (eV) = 32

Figure 1: **MPFHxS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

INTENDED USE:

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HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

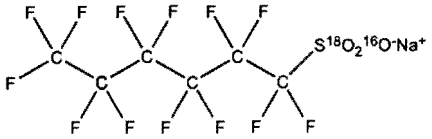
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19L0632

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MPFHxS	**LOT NUMBER:**	MPFHxS0119
COMPOUND:	Sodium perfluoro-1-hexane[$^{18}O_2$]sulfonate		
STRUCTURE:		**CAS #:**	1585941-14-5



MOLECULAR FORMULA:	$C_6F_{13}S^{18}O_2{}^{16}ONa$	**MOLECULAR WEIGHT:**	426.10
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.3 ± 2.4 µg/ml (MPFHxS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	>94% ($^{18}O_2$)
LAST TESTED: (mm/dd/yyyy)	01/10/2019		
EXPIRY DATE: (mm/dd/yyyy)	01/10/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

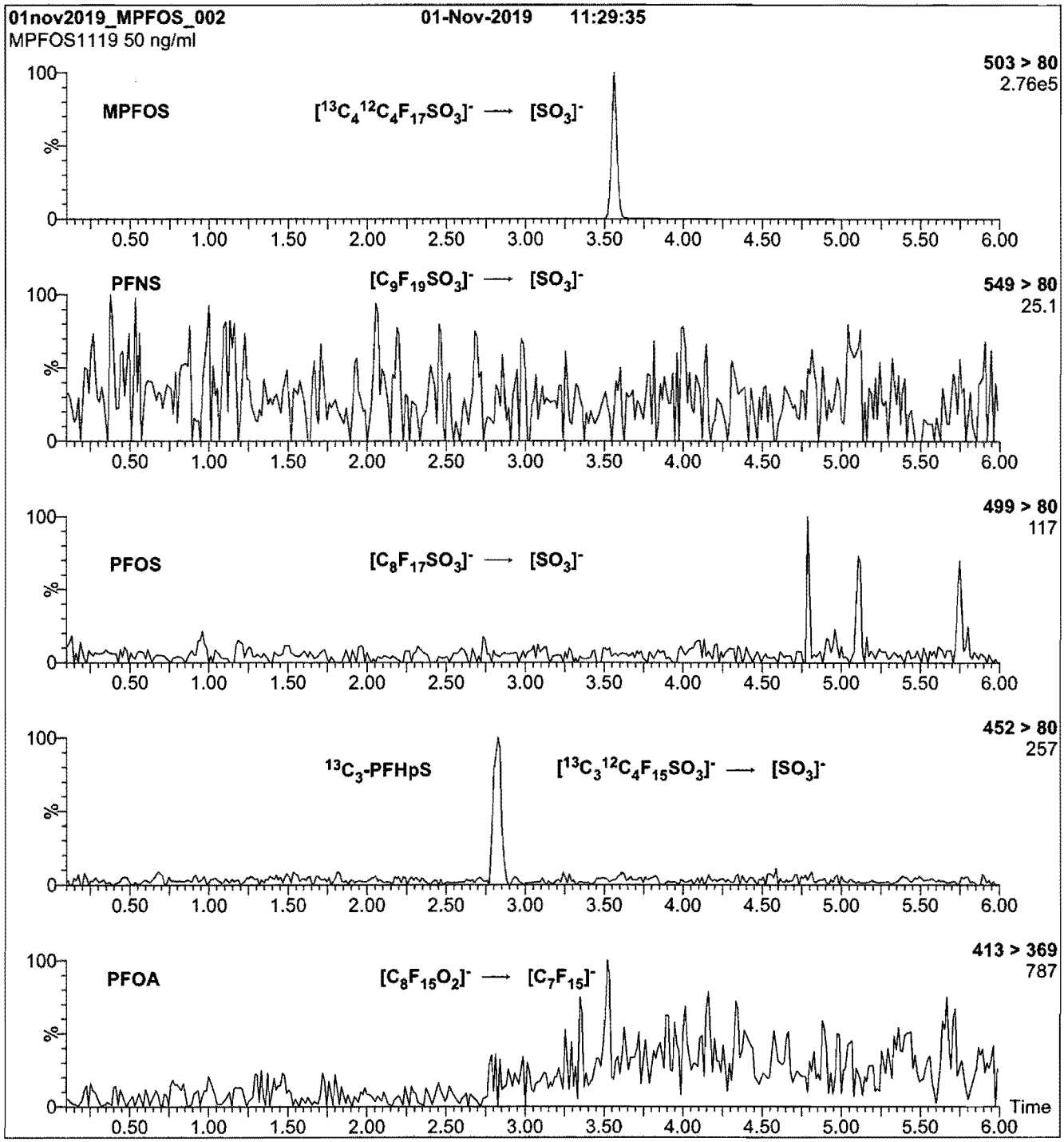
- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~ 0.6% of sodium perfluoro-1-octane[$^{18}O_2$]sulfonate ($^{18}O_2$-PFOS) and ~ 0.2% of sodium perfluoro-1-heptane[$^{18}O_2$]sulfonate ($^{18}O_2$-PFHpS).
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~ 0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 01/21/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Figure 2: **MPFOS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFOS)

Mobile phase: Same as Figure 1

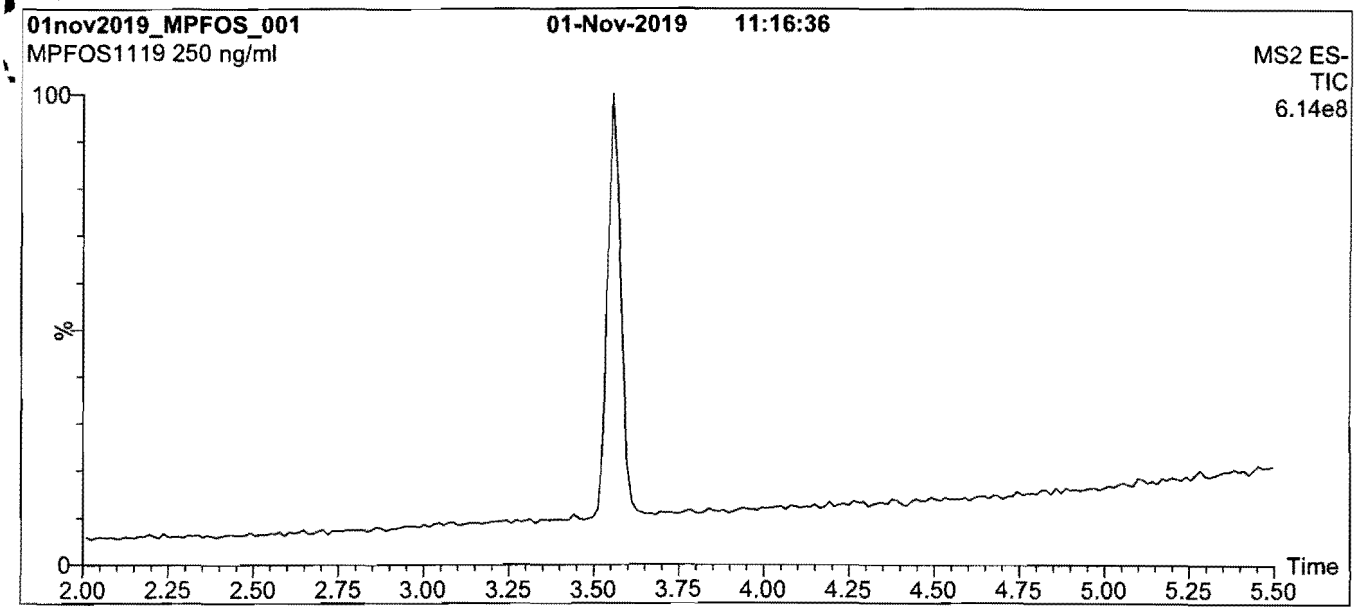
Flow: 300 µl/min

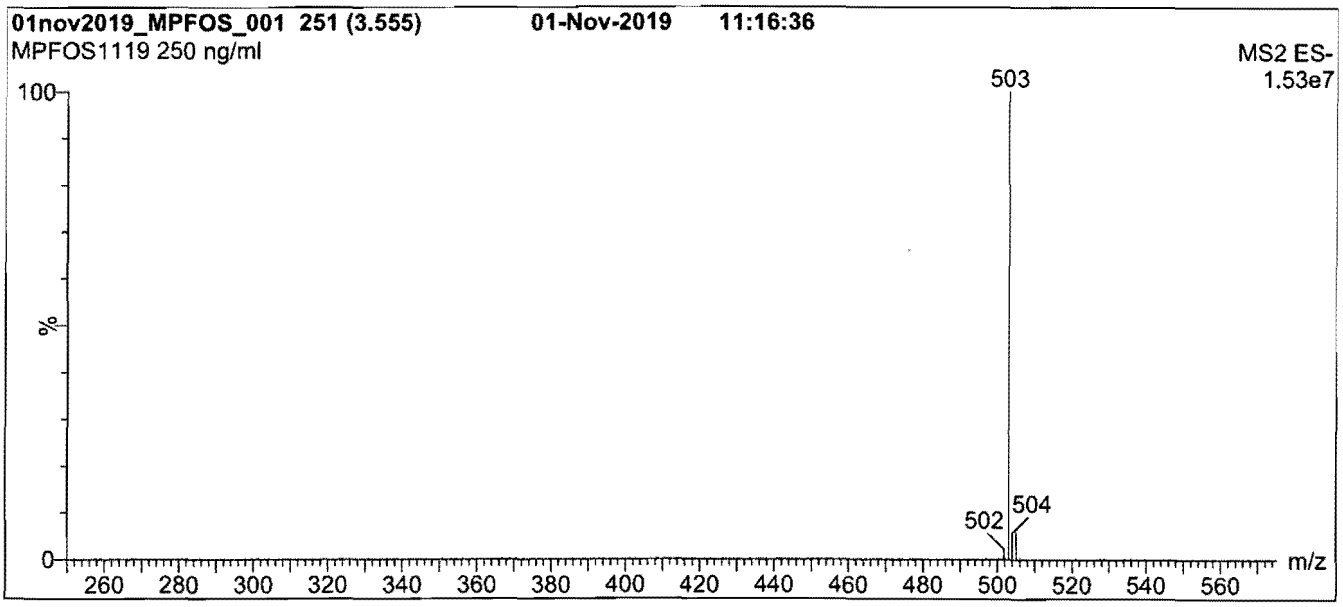
MS Parameters

Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 42

19L0633

Figure 1: **MPFOS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

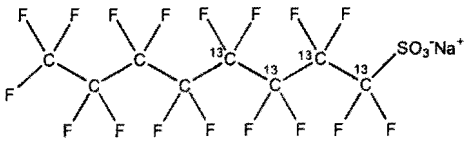
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MPFOS	**LOT NUMBER:**	MPFOS1119
COMPOUND:	Sodium perfluoro-1-[1,2,3,4-$^{13}C_4$]octanesulfonate		
STRUCTURE:		**CAS #:**	960315-53-1



MOLECULAR FORMULA:	$^{13}C_4{}^{12}C_4F_{17}SO_3Na$	**MOLECULAR WEIGHT:**	526.08
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.8 ± 2.4 µg/ml (MPFOS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2,3,4$-$^{13}C_4$)
LAST TESTED: (mm/dd/yyyy)	11/01/2019		
EXPIRY DATE: (mm/dd/yyyy)	11/01/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.3% Sodium perfluoro-1-[1,2,3-$^{13}C_3$]heptanesulfonate.

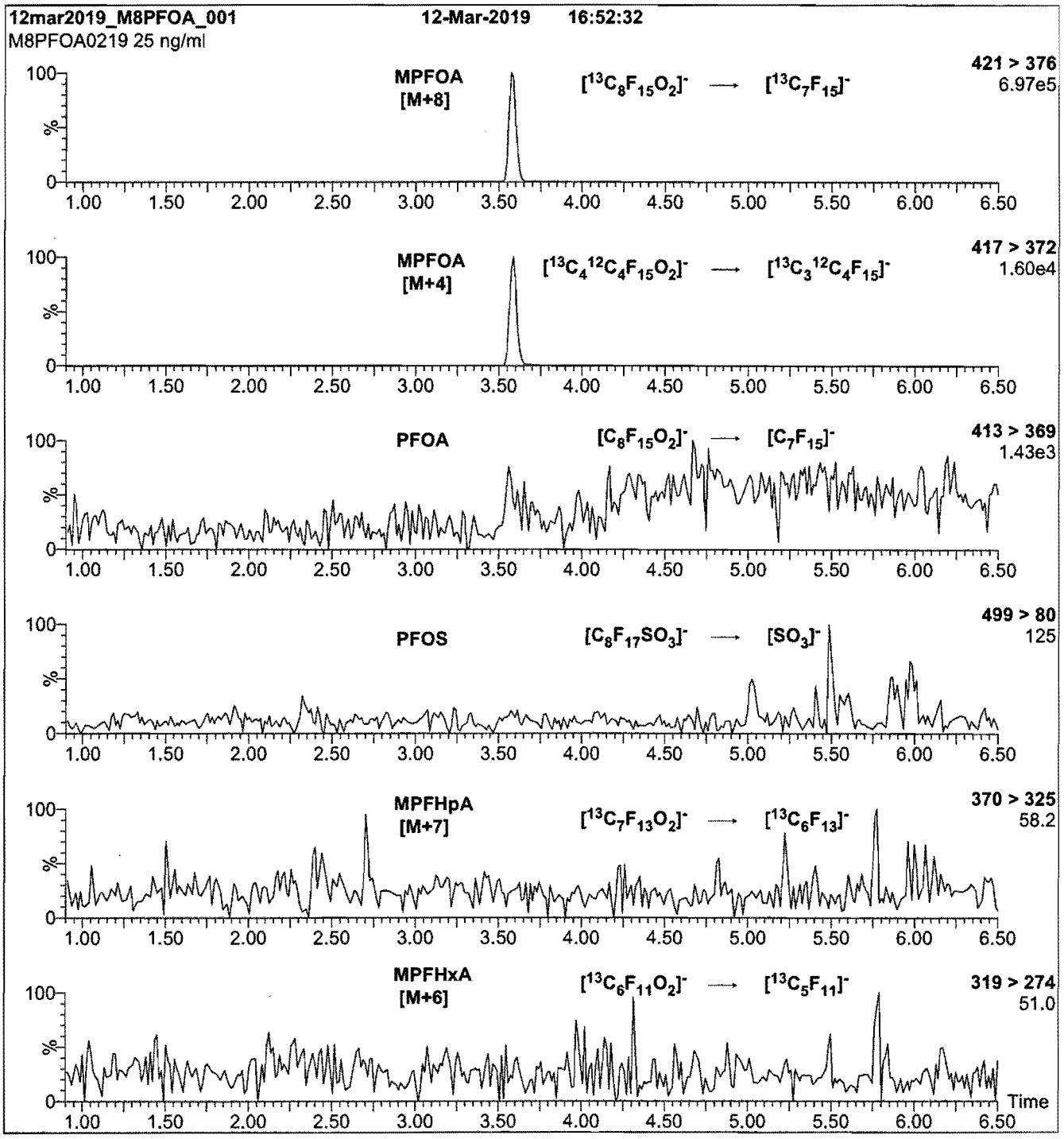
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/05/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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19L0634

Figure 2: **M8PFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M8PFOA)

Mobile phase: Same as Figure 1

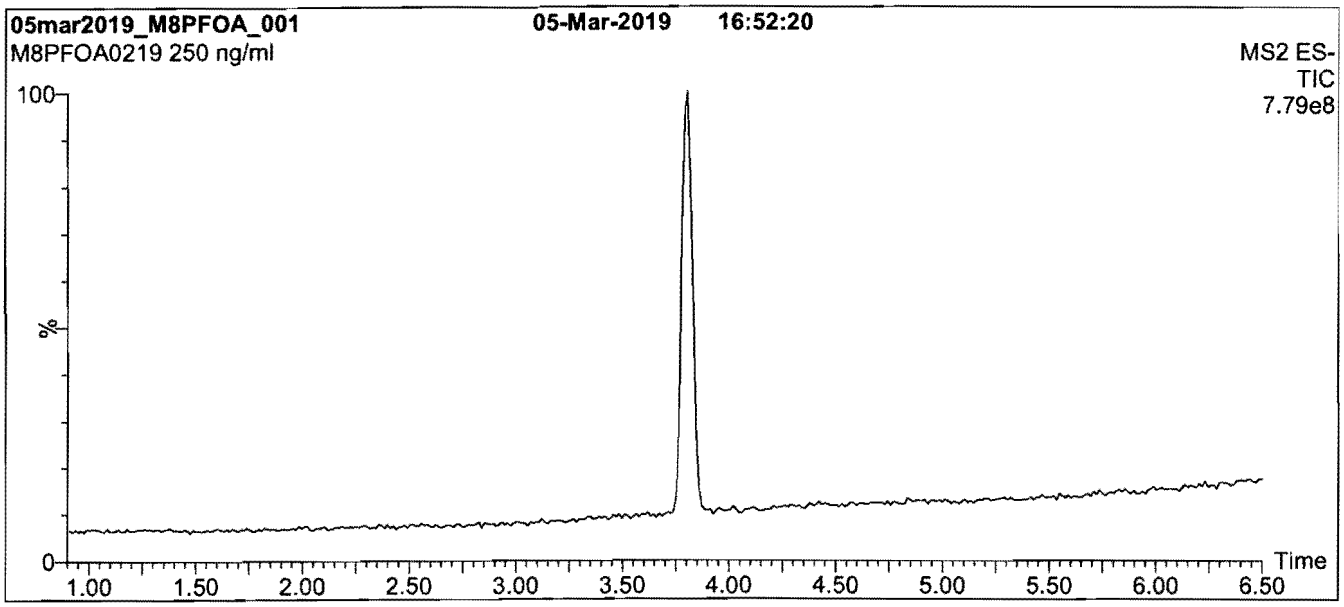
Flow: 300 µl/min

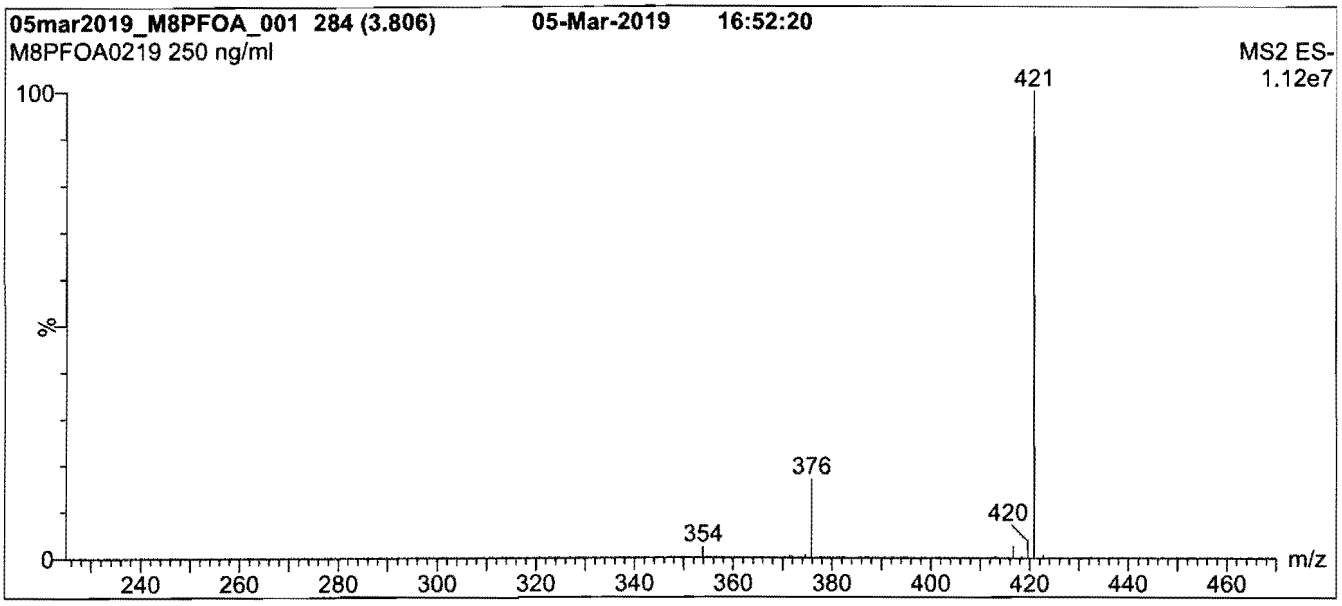
MS Parameters

Collision Gas (mbar) = 2.74e-3
Collision Energy (eV) = 8

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Figure 1: **M8PFOA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 10.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

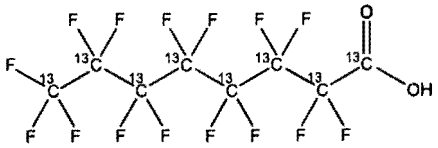
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M8PFOA	**LOT NUMBER:**	M8PFOA0219
COMPOUND:	Perfluoro-n-[$^{13}C_8$]octanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_8HF_{15}O_2$	**MOLECULAR WEIGHT:**	422.01
CONCENTRATION:	48.9 ± 2.4 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	97.8% (M8PFOA) 2.2% (MPFOA [M+4])	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_8$)
LAST TESTED: (mm/dd/yyyy)	03/05/2019		
EXPIRY DATE: (mm/dd/yyyy)	03/05/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of native perfluoro-n-octanoic acid (PFOA) and ~ 2.2% of [M+4] perfluoro-n-octanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/07/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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"sys_sample_code","lab_anl_method_name","analysis_date","analysis_time","total_or_dissolved","column_number","test_type","cas_rn","chemical_name","result_value","result_error_delta","result_type_code","reportable_result","detect_flag","lab_qualifiers","organic_yn","method_detection_limit","reporting_detection_limit","quantatation_limit","result_unit","detection_limit_unit","tic_retention_time","result_comment","qc_original_conc","qc_spike_added","qc_spike_measured","qc_spike_recovery","qc_dup_original_conc","qc_dup_spike_added","qc_dup_spike_measured","qc_dup_spike_recovery","qc_rpd","qc_spike_lcl","qc_spike_ucl","qc_rpd_cl","qc_spike_status","qc_dup_spike_status","qc_rpd_status"
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"BMW07S-20200212","537_MOD","02/21/20","00:55","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC ACID
(PFUNA)","","","TRG","Yes","N","U","Y","0.00135","0.00197","0.00394","UG_L","UG_L","
"BMW07S-20200212","537_MOD","02/21/20","00:55","N","NA","000","763051-92-9","11-CHLOROEICOSAFLUORO-3-OXAUNDECANE-1-SULFONIC ACID (11Cl-PF3OUdS)","","","TRG","Yes","N","U","Y","0.00135","0.00197","0.00394","UG_L","UG_L","

"BMW07S-20200212","537_MOD","02/21/20","00:55","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID
(PFDOA)","","","TRG","Yes","N","U","Y","0.00135","0.00197","0.00394","UG_L","UG_L","","","

"","","","","","","","","","","
"I005MW01SR-20200212","537_MOD","02/26/20","04:50","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID
(PFHXA)","1.52","","TRG","Yes","Y","","Y","0.00134","0.00196","0.00392","UG_L","UG_L","
"I005MW01SR-20200212","537_MOD","02/26/20","04:50","N","NA","000","13252-13-6","HEXAFLUOROPROPYLENE OXIDE DIMER ACID (HFPO-DA)","","","TRG","Yes","N","U","Y","0.00236","0.00294","0.00392","UG_L","UG_L","
"I005MW01SR-20200212","537_MOD","02/26/20","04:50","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID
(PFHPA)","0.395","","TRG","Yes","Y","","Y","0.00134","0.00196","0.00392","UG_L","UG_L","
"I005MW01SR-20200212","537_MOD","02/26/20","04:50","N","NA","000","919005-14-4","4,8-DIOXA-3H-PERFLUORONONANOIC ACID
(ADONA)","","","TRG","Yes","N","U","Y","0.00134","0.00196","0.00392","UG_L","UG_L","
"I005MW01SR-20200212","537_MOD","02/26/20","04:39","N","NA","DL1","355-46-4","PERFLUOROHEXANESULFONIC ACID
(PFHXS)","2.62","","TRG","Yes","Y","D","Y","0.00672","0.00980","0.0196","UG_L","UG_L","
"I005MW01SR-20200212","537_MOD","02/26/20","04:39","N","NA","DL1","335-67-1","PERFLUOROOCTANOIC ACID
(PFOA)","3.76","","TRG","Yes","Y","D","Y","0.00672","0.00980","0.0196","UG_L","UG_L","
"I005MW01SR-20200212","537_MOD","02/26/20","04:50","N","NA","000","375-95-1","PERFLUORONONANOIC ACID
(PFNA)","0.0245","","TRG","Yes","Y","","Y","0.00134","0.00196","0.00392","UG_L","UG_L","
"I005MW01SR-20200212","537_MOD","02/26/20","04:50","N","NA","000","1763-23-1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","1.08","","TRG","Yes","Y","","Y","0.00134","0.00196","0.00392","UG_L","UG_L","
"I005MW01SR-20200212","537_MOD","02/26/20","04:50","N","NA","000","756426-58-1","9-CHLOROHEXADECAFLUORO-3-OXANONE-1-SULFONIC ACID (9Cl-PF3ONS)","","","TRG","Yes","N","U","Y","0.00134","0.00196","0.00392","UG_L","UG_L","
"I005MW01SR-20200212","537_MOD","02/26/20","04:50","N","NA","000","335-76-2","PERFLUORODECANOIC ACID
(PFDA)","","","TRG","Yes","N","U","Y","0.00134","0.00196","0.00392","UG_L","UG_L","
"I005MW01SR-20200212","537_MOD","02/26/20","04:50","N","NA","000","2355-31-9","MeFOSAA","","","TRG","Yes","N","U","Y","0.00134","0.00196","0.00392","UG_L","UG_L","
"I005MW01SR-20200212","537_MOD","02/26/20","04:50","N","NA","000","2991-50-6","EtFOSAA","","","TRG","Yes","N","U","Y","0.00134","0.00196","0.00392","UG_L","UG_L","
"I005MW01SR-20200212","537_MOD","02/26/20","04:50","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC ACID
(PFUNA)","","","TRG","Yes","N","U","Y","0.00134","0.00196","0.00392","UG_L","UG_L","
"I005MW01SR-20200212","537_MOD","02/26/20","04:50","N","NA","000","763051-92-9","11-CHLOROEICOSAFLUORO-3-OXAUNDECANE-1-SULFONIC ACID (11Cl-PF3OUdS)","","","TRG","Yes","N","U","Y","0.00134","0.00196","0.00392","UG_L","UG_L","

"","","","","","","","","
"I005MW01SR-20200212","537_MOD","02/26/20","04:50","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID (PFDOA)","","","TRG","Yes","N","U","Y","0.00134","0.00196","0.00392","UG_L","UG_L","","","","","","","","

5","PFBS","0.525","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00396","UG_L","UG_L","","","

","","","","","","","","","
"DUP05-20200212","537_MOD","02/21/20","01:16","N","NA","000","72629-94-8","PFTrDA","","","TRG","Yes","N","U","Y","0.00135","0.00198","0.00396","UG_L","UG_L","","","","","","","","","

(PFHXA)","0.258","","TRG","Yes","Y","","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","

(PFDOA)","","","TRG","Yes","N","U","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","

ACID
(PFHXA)","0.0998","","TRG","Yes","Y","","Y","0.00140","0.00204","0.00409","UG_L","UG_L","","","

1","PERFLUORODODECANOIC ACID
(PFDOA)","","","TRG","Yes","N","U","Y","0.00140","0.00204","0.00409","UG_L","UG_L","","","","","","","","","","
","","","","","","","","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","72629-94-
8","PFTrDA","","","TRG","Yes","N","U","Y","0.00140","0.00204","0.00409","UG_L","UG_L","","","","","","","","","","
","","","","","","","","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","376-06-
7","PFTeDA","","","TRG","Yes","N","U","Y","0.00140","0.00204","0.00409","UG_L","UG_L","","","","","","","","","","
","","","","","","","","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","13C3-PFBS","13C3-
PFBS","99.2","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","99.2","99.2","","","","","","50","150","","
","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","13C3-HFPO-DA","13C3-HFPO-
DA","92.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","92.6","92.6","","","","","","50","150","","
","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","13C2-PFHxA","13C2-
PFHxA","89.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","89.6","89.6","","","","","","50","150","
","","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","13C4-PFHpA","13C4-
PFHpA","85.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","85.3","85.3","","","","","","50","150","
","","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","13C3-PFHxS","13C3-
PFHxS","90.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","90.6","90.6","","","","","","50","150","
","","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","13C5-PFNA","13C5-
PFNA","90.2","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","90.2","90.2","","","","","","50","150","
","","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","13C2-PFOA","13C2-
PFOA","91.4","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","91.4","91.4","","","","","","50","150","
","","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","13C8-PFOS","13C8-
PFOS","84.5","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","84.5","84.5","","","","","","50","150","","
","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","13C2-PFDA","13C2-
PFDA","94.8","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","94.8","94.8","","","","","","50","150","
","","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","d3-MeFOSAA","d3-
MeFOSAA","74.2","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","74.2","74.2","","","","","","50","15
0","","","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","13C2-PFUnA","13C2-
PFUnA","96.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","96.0","96.0","","","","","","50","150","
","","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","d5-EtFOSAA","d5-
EtFOSAA","80.5","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","80.5","80.5","","","","","","50","150
","","","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","13C2-PFDoA","13C2-
PFDoA","67.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","67.3","67.3","","","","","","50","150","
","","","
"IS72MW18SR-20200212","537_MOD","02/21/20","01:37","N","NA","000","13C2-PFTeDA","13C2-
PFTeDA","86.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","86.1","86.1","","","","","","50","150"
","","","","
"222MW02S-20200212","537_MOD","02/21/20","02:19","N","NA","000","375-73-
5","PFBS","0.00456","","TRG","Yes","Y","","Y","0.00136","0.00198","0.00396","UG_L","UG_L","","","","","","","","
","","","","","","","","","
"

"222MW02S-20200212","537_MOD","02/21/20","02:19","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID
(PFHXA)","","","TRG","Yes","N","U","Y","0.00136","0.00198","0.00396","UG_L","UG_L","","","

"222MW02S-20200212","537_MOD","02/21/20","02:19","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID
(PFDOA)","","","TRG","Yes","N","U","Y","0.00136","0.00198","0.00396","UG_L","UG_L","","","

"","","","

"DUP03-20200212","537_MOD","02/21/20","02:30","N","NA","000","72629-94-8","PFTrDA","","","TRG","Yes","N","U","Y","0.00140","0.00205","0.00409","UG_L","UG_L","","","

","","","","","","","","","
"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","13252-13-6","HEXAFLUOROPROPYLENE OXIDE DIMER ACID (HFPO-DA)","","","TRG","Yes","N","U","Y","0.00238","0.00296","0.00395","UG_L","UG_L","
"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID (PFHPA)","","","TRG","Yes","N","U","Y","0.00135","0.00198","0.00395","UG_L","UG_L","
"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","919005-14-4","4,8-DIOXA-3H-PERFLUORONONANOIC ACID (ADONA)","","","TRG","Yes","N","U","Y","0.00135","0.00198","0.00395","UG_L","UG_L","
"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC ACID (PFHXS)","0.0302","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","
"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","335-67-1","PERFLUOROOCTANOIC ACID (PFOA)","0.00366","","TRG","Yes","Y","J","Y","0.00135","0.00198","0.00395","UG_L","UG_L","
"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","375-95-1","PERFLUORONONANOIC ACID (PFNA)","","","TRG","Yes","N","U","Y","0.00135","0.00198","0.00395","UG_L","UG_L","
"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","1763-23-1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION ","0.00333","","TRG","Yes","Y","J,Q","Y","0.00135","0.00198","0.00395","UG_L","UG_L","
"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","756426-58-1","9-CHLOROHEXADECAFLUORO-3-OXANONE-1-SULFONIC ACID (9Cl-PF3ONS)","","","TRG","Yes","N","U","Y","0.00135","0.00198","0.00395","UG_L","UG_L","
"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","335-76-2","PERFLUORODECANOIC ACID (PFDA)","","","TRG","Yes","N","U","Y","0.00135","0.00198","0.00395","UG_L","UG_L","
"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","2355-31-9","MeFOSAA","","","TRG","Yes","N","U","Y","0.00135","0.00198","0.00395","UG_L","UG_L","
"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","2991-50-6","EtFOSAA","","","TRG","Yes","N","U","Y","0.00135","0.00198","0.00395","UG_L","UG_L","
"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC ACID (PFUNA)","","","TRG","Yes","N","U","Y","0.00135","0.00198","0.00395","UG_L","UG_L","
"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","763051-92-9","11-CHLOROEICOSAFLUORO-3-OXAUNDECANE-1-SULFONIC ACID (11Cl-PF3OUdS)","","","TRG","Yes","N","U","Y","0.00135","0.00198","0.00395","UG_L","UG_L","
"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID (PFDOA)","","","TRG","Yes","N","U","Y","0.00135","0.00198","0.00395","UG_L","UG_L","

"A000MW42S-20200212","537_MOD","02/21/20","02:40","N","NA","000","72629-94-8","PFTrDA","","","TRG","Yes","N","U","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","

"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","13252-13-6","HEXAFLUOROPROPYLENE OXIDE DIMER ACID (HFPO-DA)","","","TRG","Yes","N","U","Y","0.00241","0.00300","0.00400","UG_L","UG_L","","","

","","","","","","","","","","
"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","13C3-PFBS","13C3-PFBS","93.9","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","93.9","93.9","","","","","","50","150","","","","",""
"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","13C3-HFPO-DA","13C3-HFPO-DA","87.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","87.6","87.6","","","","","","50","150","","","","",""
"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","13C2-PFHxA","13C2-PFHxA","83.5","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","83.5","83.5","","","","","","50","150","","","","",""
"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","13C4-PFHpA","13C4-PFHpA","84.5","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","84.5","84.5","","","","","","50","150","","","","",""
"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","13C3-PFHxS","13C3-PFHxS","89.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","89.6","89.6","","","","","","50","150","","","","",""
"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","13C5-PFNA","13C5-PFNA","78.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","78.0","78.0","","","","","","50","150","","","","",""
"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","13C2-PFOA","13C2-PFOA","89.5","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","89.5","89.5","","","","","","50","150","","","","",""
"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","13C8-PFOS","13C8-PFOS","91.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","91.6","91.6","","","","","","50","150","","","","",""
"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","13C2-PFDA","13C2-PFDA","95.9","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","95.9","95.9","","","","","","50","150","","","","",""
"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","d3-MeFOSAA","d3-MeFOSAA","84.2","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","84.2","84.2","","","","","","50","150","","","","",""
"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","13C2-PFUnA","13C2-PFUnA","100","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","100","100","","","","","","50","150","","","","",""
"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","d5-EtFOSAA","d5-EtFOSAA","78.2","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","78.2","78.2","","","","","","50","150","","","","","",""
"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","13C2-PFDoA","13C2-PFDoA","73.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","73.3","73.3","","","","","","50","150","","","","",""
"B0B0118-BLK1","537_MOD","02/20/20","22:28","N","NA","000","13C2-PFTeDA","13C2-PFTeDA","79.9","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","79.9","79.9","","","","","","50","150","","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","375-73-5","PFBS","0.0400","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0400","100","","","","","","72","130","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID (PFHXA)","0.0388","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0388","97.1","","","","","","72","129","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","13252-13-6","HEXAFLUOROPROPYLENE OXIDE DIMER ACID (HFPO-DA)","0.0379","","TRG","Yes","Y","","Y","0.00241","0.00300","0.00400","UG_L","UG_L","","","","0.0400","0.0379","94.8","","","","","","70","130","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID

(PFHPA)","0.0365","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0365","91.3","","","","","","","72","130","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","919005-14-4","4,8-DIOXA-3H-PERFLUORONONANOIC ACID
(ADONA)","0.0359","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0359","89.7","","","","","","","70","130","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC ACID
(PFHXS)","0.0393","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0393","98.2","","","","","","","68","131","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","335-67-1","PERFLUOROOCTANOIC ACID (PFOA)","0.0355","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0355","88.7","","","","","","","71","133","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","375-95-1","PERFLUORONONANOIC ACID (PFNA)","0.0372","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0372","93.1","","","","","","","69","130","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","1763-23-1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","0.0369","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0369","92.2","","","","","","","65","140","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","756426-58-1","9-CHLOROHEXADECAFLUORO-3-OXANONE-1-SULFONIC ACID (9Cl-PF3ONS)","0.0344","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0344","86.1","","","","","","","70","130","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","335-76-2","PERFLUORODECANOIC ACID (PFDA)","0.0405","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0405","101","","","","","","","71","129","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","2355-31-9","MeFOSAA","0.0346","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0346","86.5","","","","","","","65","136","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","2991-50-6","EtFOSAA","0.0385","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0385","96.2","","","","","","","61","135","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC ACID (PFUNA)","0.0350","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0350","87.5","","","","","","","69","133","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","763051-92-9","11-CHLOROEICOSAFLUORO-3-OXAUNDECANE-1-SULFONIC ACID (11Cl-PF3OUdS)","0.0459","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0459","115","","","","","","","70","130","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID (PFDOA)","0.0421","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0421","105","","","","","","","72","134","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","72629-94-8","PFTrDA","0.0381","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0381","95.2","","","","","","","65","144","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","376-06-7","PFTeDA","0.0389","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0389","97.3","","","","","","","71","132","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","13C3-PFBS","13C3-PFBS","88.9","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","88.9","88.9","","","","","","50","150","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","13C3-HFPO-DA","13C3-HFPO-DA","81.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","81.0","81.0","","","","","","50","150","","",""

,"",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","13C2-PFHxA","13C2-PFHxA","84.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","84.6","84.6","","","","","","50","150","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","13C4-PFHpA","13C4-PFHpA","83.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","83.7","83.7","","","","","","50","150","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","13C3-PFHxS","13C3-PFHxS","75.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","75.7","75.7","","","","","","50","150","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","13C5-PFNA","13C5-PFNA","82.9","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","82.9","82.9","","","","","","50","150","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","13C2-PFOA","13C2-PFOA","86.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","86.1","86.1","","","","","","50","150","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","13C8-PFOS","13C8-PFOS","89.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","89.1","89.1","","","","","","50","150","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","13C2-PFDA","13C2-PFDA","86.2","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","86.2","86.2","","","","","","50","150","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","d3-MeFOSAA","d3-MeFOSAA","84.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","84.0","84.0","","","","","","50","150","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","13C2-PFUnA","13C2-PFUnA","90.9","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","90.9","90.9","","","","","","50","150","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","d5-EtFOSAA","d5-EtFOSAA","76.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","76.7","76.7","","","","","","50","150","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","13C2-PFDoA","13C2-PFDoA","71.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","71.1","71.1","","","","","","50","150","","","","",""
"B0B0118-BS1","537_MOD","02/20/20","22:39","N","NA","000","13C2-PFTeDA","13C2-PFTeDA","78.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","78.1","78.1","","","","","","50","150","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","375-73-5","PFBS","0.100","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","0.0513","0.0387","0.100","126","","","","","","72","130","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID (PFHXA)","0.670","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","0.628","0.0387","0.670","111","","","","","","72","129","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","13252-13-6","HEXAFLUOROPROPYLENE OXIDE DIMER ACID (HFPO-DA)","0.0386","","TRG","Yes","Y","","Y","0.00233","0.00291","0.00387","UG_L","UG_L","","","","0.0387","0.0386","99.8","","","","","","","70","130","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID (PFHPA)","0.273","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","0.226","0.0387","0.273","119","","","","","","72","130","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","919005-14-4","4,8-DIOXA-3H-PERFLUORONONANOIC ACID (ADONA)","0.0381","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","","0.0387","0.0381","98.4","","","","","","","70","130","","","","",""

"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC ACID
(PFHXS)","0.401","","TRG","Yes","Y","H","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","0.333","0.0387","0.401","174","","","","","","68","131","","+","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","335-67-1","PERFLUOROOCTANOIC ACID (PFOA)","0.350","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","0.303","0.0387","0.350","123","","","","","","71","133","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","375-95-1","PERFLUORONONANOIC ACID (PFNA)","0.0402","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","0.00140","0.0387","0.0402","100","","","","","","","69","130","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","1763-23-1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","0.0498","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","0.00993","0.0387","0.0498","103","","","","","","","65","140","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","756426-58-1","9-CHLOROHEXADECAFLUORO-3-OXANONE-1-SULFONIC ACID (9Cl-PF3ONS)","0.0357","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","","0.0387","0.0357","92.2","","","","","","","70","130","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","335-76-2","PERFLUORODECANOIC ACID (PFDA)","0.0399","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","","0.0387","0.0399","103","","","","","","","71","129","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","2355-31-9","MeFOSAA","0.0357","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","","0.0387","0.0357","92.2","","","","","","","65","136","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","2991-50-6","EtFOSAA","0.0379","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","","0.0387","0.0379","98.0","","","","","","","61","135","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC ACID (PFUNA)","0.0350","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","","0.0387","0.0350","90.4","","","","","","","69","133","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","763051-92-9","11-CHLOROEICOSAFLUORO-3-OXAUNDECANE-1-SULFONIC ACID (11Cl-PF3OUdS)","0.0443","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","","0.0387","0.0443","114","","","","","","","70","130","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID (PFDOA)","0.0429","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","","0.0387","0.0429","111","","","","","","","72","134","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","72629-94-8","PFTrDA","0.0380","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","","0.0387","0.0380","98.2","","","","","","","65","144","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","376-06-7","PFTeDA","0.0338","","TRG","Yes","Y","","Y","0.00133","0.00194","0.00387","UG_L","UG_L","","","","0.0387","0.0338","87.2","","","","","","","71","132","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","13C3-PFBS","13C3-PFBS","88.6","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","88.6","88.6","","","","","","50","150","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","13C3-HFPO-DA","13C3-HFPO-DA","97.0","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","97.0","97.0","","","","","","50","150","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","13C2-PFHxA","13C2-PFHxA","93.0","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","93.0","93.0","","","","","","50","150","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","13C4-PFHpA","13C4-PFHpA","82.2","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","82.2","82.2","","","","","","50","150","

","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","13C3-PFHxS","13C3-PFHxS","84.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","84.1","84.1","","","","","","50","150","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","13C5-PFNA","13C5-PFNA","83.2","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","83.2","83.2","","","","","","50","150","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","13C2-PFOA","13C2-PFOA","86.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","86.1","86.1","","","","","","50","150","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","13C8-PFOS","13C8-PFOS","80.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","80.7","80.7","","","","","","50","150","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","13C2-PFDA","13C2-PFDA","85.5","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","85.5","85.5","","","","","","50","150","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","d3-MeFOSAA","d3-MeFOSAA","83.9","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","83.9","83.9","","","","","","50","150","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","13C2-PFUnA","13C2-PFUnA","83.2","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","83.2","83.2","","","","","","50","150","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","d5-EtFOSAA","d5-EtFOSAA","76.4","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","76.4","76.4","","","","","","50","150","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","13C2-PFDoA","13C2-PFDoA","65.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","65.3","65.3","","","","","","50","150","","","","",""
"B0B0118-MS1","537_MOD","02/20/20","22:49","N","NA","000","13C2-PFTeDA","13C2-PFTeDA","68.4","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","68.4","68.4","","","","","","50","150","","","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","375-73-5","PFBS","0.0986","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","0.0513","0.0395","0.0986","120","0.100","0.0395","0.0986","120","4.88","72","130","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID (PFHXA)","0.655","","TRG","Yes","Y","H","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","0.628","0.0395","0.655","69.2","0.670","0.0395","0.655","69.2","46.4","72","129","30","","*","*"
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","13252-13-6","HEXAFLUOROPROPYLENE OXIDE DIMER ACID (HFPO-DA)","0.0378","","TRG","Yes","Y","","Y","0.00238","0.00296","0.00395","UG_L","UG_L","","","","0.0395","0.0378","95.7","0.0386","0.0395","0.0378","95.7","4.19","70","130","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID (PFHPA)","0.257","","TRG","Yes","Y","H","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","0.226","0.0395","0.257","77.9","0.273","0.0395","0.257","77.9","41.7","72","130","30","","","*"
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","919005-14-4","4,8-DIOXA-3H-PERFLUORONONANOIC ACID (ADONA)","0.0356","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","","0.0395","0.0356","90.1","0.0381","0.0395","0.0356","90.1","8.81","70","130","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC ACID (PFHXS)","0.385","","TRG","Yes","Y","H","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","0.333","0.0395","0.385","132","0.401","0.0395","0.385","132","27.5","68","131","30","","*",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","335-67-1","PERFLUOROOCTANOIC ACID (PFOA)","0.349","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","0.303","0.0395",

"0.349","116","0.350","0.0395","0.349","116","5.86","71","133","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","375-95-1","PERFLUORONONANOIC ACID
(PFNA)","0.0379","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","0.00140","0.03
95","0.0379","92.5","0.0402","0.0395","0.0379","92.5","7.79","69","130","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","1763-23-
1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","0.0447","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","0.00993","0.0395","0.0
447","88.1","0.0498","0.0395","0.0447","88.1","15.6","65","140","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","756426-58-1","9-
CHLOROHEXADECAFLUORO-3-OXANONE-1-SULFONIC ACID (9Cl-
PF3ONS)","0.0349","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","","0.0395","0.
0349","88.3","0.0357","0.0395","0.0349","88.3","4.32","70","130","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","335-76-2","PERFLUORODECANOIC ACID
(PFDA)","0.0394","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","","0.0395","0.0
394","99.7","0.0399","0.0395","0.0394","99.7","3.26","71","129","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","2355-31-
9","MeFOSAA","0.0349","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","","0.039
5","0.0349","88.4","0.0357","0.0395","0.0349","88.4","4.21","65","136","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","2991-50-
6","EtFOSAA","0.0366","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","","0.0395
","0.0366","92.7","0.0379","0.0395","0.0366","92.7","5.56","61","135","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC
ACID
(PFUNA)","0.0352","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","","0.0395","0.
0352","89.1","0.0350","0.0395","0.0352","89.1","1.45","69","133","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","763051-92-9","11-CHLOROEICOSAFLUORO-
3-OXAUNDECANE-1-SULFONIC ACID (11Cl-
PF3OUdS)","0.0416","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","","0.0395","
0.0416","105","0.0443","0.0395","0.0416","105","8.22","70","130","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","307-55-1","PERFLUORODODECANOIC
ACID
(PFDOA)","0.0410","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","","0.0395","0.
0410","104","0.0429","0.0395","0.0410","104","6.51","72","134","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","72629-94-
8","PFTrDA","0.0392","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","","0.0395",
"0.0392","99.2","0.0380","0.0395","0.0392","99.2","1.01","65","144","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","376-06-
7","PFTeDA","0.0389","","TRG","Yes","Y","","Y","0.00135","0.00198","0.00395","UG_L","UG_L","","","","0.0395",
"0.0389","98.5","0.0338","0.0395","0.0389","98.5","12.2","71","132","30","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","13C3-PFBS","13C3-
PFBS","94.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","94.3","94.3","","","","","","50","150","","
","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","13C3-HFPO-DA","13C3-HFPO-
DA","107","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","107","107","","","","","","50","150","","","
","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","13C2-PFHxA","13C2-
PFHxA","104","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","104","104","","","","","","50","150","","
","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","13C4-PFHpA","13C4-
PFHpA","97.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","97.6","97.6","","","","","","50","150","
","","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","13C3-PFHxS","13C3-
PFHxS","93.8","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","93.8","93.8","","","","","","50","150","
","","","",""

"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","13C5-PFNA","13C5-PFNA","90.5","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","90.5","90.5","","","","","","50","150","","","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","13C2-PFOA","13C2-PFOA","97.5","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","97.5","97.5","","","","","","50","150","","","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","13C8-PFOS","13C8-PFOS","90.2","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","90.2","90.2","","","","","","50","150","","","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","13C2-PFDA","13C2-PFDA","92.8","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","92.8","92.8","","","","","","50","150","","","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","d3-MeFOSAA","d3-MeFOSAA","95.7","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","95.7","95.7","","","","","","50","150","","","","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","13C2-PFUnA","13C2-PFUnA","92.3","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","92.3","92.3","","","","","","50","150","","","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","d5-EtFOSAA","d5-EtFOSAA","90.3","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","90.3","90.3","","","","","","50","150","","","","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","13C2-PFDoA","13C2-PFDoA","71.3","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","71.3","71.3","","","","","","50","150","","","","",""
"B0B0118-MSD1","537_MOD","02/20/20","23:00","N","NA","000","13C2-PFTeDA","13C2-PFTeDA","81.6","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","81.6","81.6","","","","","","50","150","","","","","",""

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Wood Environment & Infrastructure Solutions, Inc. March 20, 2020
7376 SW Durham Road
Portland, OR 97224
Attn: Ms. Kimberly Shiroodi
Kimberly.Shiroodi@woodplc.com

SUBJECT: MCAS El Toro & Tustin PFAs, Data Validation

Dear Ms. Shiroodi,

Enclosed are the final validation reports for the fraction listed below. These SDGs were received on March 11, 2020. Attachment 1 is a summary of the samples that were reviewed for analysis.

LDC Project #47508:

SDG #	**Fraction**
2000314,2000321,2000330 2000356,2000372,2000390	Perfluoroalkyl & Polyfluoroalkyl Substances

The data validation was performed under Stage 4 guidelines. The analyses were validated using the following documents, as applicable to each method:

- Final Sampling and Analysis Plan for Per- and Polyfluoroalkyl Substances in Groundwater in Carve -Outs 2, 5, 6 & 9 and Groundwater and Surface Water Near Operable Unit 3, Former Marine Corps Air Station Tustin, Tustin, California, with Addendum #02 to Final Sampling and Analysis Plan for Per- and Polyfluoroalkyl Substances Sampling for Groundwater Remedial Action at Operable Unit 3, Installation Restoration Program Site 1, February 2020
- U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 5.3, 2019
- DoD General Validation Guidelines, February 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Pgeng@lab-data.com
Project Manager/Senior Chemist

6,538 pages-ADV (100% Stage 4 for this job)

Attachment 1

Client Select / Stage 2B/4

LDC #47508 (Wood/KMEA - National City, CA / MCAS El Toro & Tustin PFAs)

PO001184

LDC	SDG#	DATE REC'D	(2) DATE DUE	PFAs (537M/ QSM 5.3)																															
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	2000314	03/11/20	03/25/20	13	0																														
B	2000321	03/11/20	03/25/20	10	0																														
C	2000330	03/11/20	03/25/20	4	0																														
D	2000356	03/11/20	03/25/20	9	0																														
E	2000372	03/11/20	03/25/20	7	0																														
F	2000390	03/11/20	03/25/20	4	0																														
Total	J/PG			47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

L:\Wood Environmental\El Toro\47508ST.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro and Tustin PFAS

LDC Report Date: March 19, 2020

Parameters: Perfluoroalkyl & Polyfluoroalkyl Substances

Validation Level: Stage 4

Laboratory: Vista Analytical Laboratory

Sample Delivery Group (SDG): 2000314

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
I006MW03SR-20200212	2000314-03	Water	02/12/20
I006MW05SR-20200212	2000314-04	Water	02/12/20
DUP01-20200212	2000314-05	Water	02/12/20
I006MW01S-20200212	2000314-06	Water	02/12/20
I006MW08S-20200212	2000314-07	Water	02/12/20
BMW07S-20200212	2000314-08	Water	02/12/20
I005MW01SR-20200212	2000314-09	Water	02/12/20
DUP05-20200212	2000314-10	Water	02/12/20
IS72MW15S-20200212	2000314-11	Water	02/12/20
IS72MW18SR-20200212	2000314-12	Water	02/12/20
222MW02S-20200212	2000314-13	Water	02/12/20
DUP03-20200212	2000314-14	Water	02/12/20
A000MW42S-20200212	2000314-15	Water	02/12/20
I006MW03SR-20200212MS	2000314-03MS	Water	02/12/20
I006MW03SR-20200212MSD	2000314-03MSD	Water	02/12/20

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Final Sampling and Analysis Plan for Per- and Polyfluoroalkyl Substances in Groundwater in Carve-Outs 2, 5, 6, and 9 and Groundwater and Surface Water Near Operable Unit 3, Former Marine Corps Air Station Tustin, Tustin, California, with Addendum #02 to Final Sampling and Analysis Plan for Per- and Polyfluoroalkyl Substances Sampling for Groundwater Remedial Action at Operable Unit 3, Installation Restoration Program Site 1 (February 2020), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.3 (2019), and the DoD General Validation Guidelines (February 2018). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) by Environmental Protection Agency (EPA) Method 537 Modified and LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

All sample results were subjected to Stage 4 data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. LC/MS Instrument Performance Check

Instrument performance was checked and the requirements were met.

III. Initial Calibration and Initial Calibration Verification

Initial calibration was performed as required by the methods.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

For each calibration standard, all compounds were within 70-130% of their true value.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

Retention time windows were established as required by the methods.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration and Instrument Sensitivity Check

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 30.0% for all compounds.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

The percent differences (%D) of the instrument sensitivity check (ISC) were less than or equal to 30.0% for all compounds.

Retention times of all compounds in the calibration standards were within the established retention time windows.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample EB01-20200212 was identified as an equipment blank. No contaminants were found.

Sample SB01-20200212 was identified as a source blank. No contaminants were found.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. For I006MW03SR-20200212MS/MSD, no data were qualified for perfluorohexane sulfonic acid (PFHxS) percent recoveries (%R) and Perfluorohexanoic acid (PFHxA) and Perfluoroheptanoic acid (PFHpA) relative percent differences (RPD) outside the QC limits since the parent sample results were greater than 4X the spike concentration. All other relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

Samples I006MW05SR-20200212 and DUP01-20200212, samples I005MW01SR-20200212 and DUP05-20200212, and samples 222MW02S-20200212 and DUP03-20200212 were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
	I006MW05SR-20200212	DUP01-20200212				
Perfluorobutanesulfonic acid (PFBS)	0.0509	0.0556	9 (≤30)	-	-	-
Perfluorohexanoic acid (PFHxA)	0.129	0.130	1 (≤30)	-	-	-
Perfluoroheptanoic acid (PFHpA)	0.0436	0.0468	7 (≤30)	-	-	-
Perfluorohexanesulfonic acid (PFHxS)	0.215	0.205	5 (≤30)	-	-	-
Perfluorooctanoic acid (PFOA)	0.0464	0.0441	5 (≤30)	-	-	-
Perfluorooctanesulfonic acid (PFOS)	0.0182	0.0226	22 (≤30)	-	-	-

Compound	Concentration (ug/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
	I005MW01SR-20200212	DUP05-20200212				
Perfluorobutanesulfonic acid (PFBS)	0.501	0.525	5 (≤30)	-	-	-
Perfluorohexanoic acid (PFHxA)	1.52	1.51	1 (≤30)	-	-	-
Perfluoroheptanoic acid (PFHpA)	0.395	0.411	4 (≤30)	-	-	-
Perfluorohexanesulfonic acid (PFHxS)	2.62	2.84	8 (≤30)	-	-	-
Perfluorooctanoic acid (PFOA)	3.76	4.15	10 (≤30)	-	-	-
Perfluorononanoic acid (PFNA)	0.0245	0.0267	9 (≤30)	-	-	-
Perfluorooctanesulfonic acid (PFOS)	1.08	1.11	3 (≤30)	-	-	-
Perfluorodecanoic acid (PFDA)	0.00196U	0.00176	-	0.0002 (≤0.00396)	-	-

Compound	Concentration (ug/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
	222MW02S-20200212	DUP03-20200212				
Perfluorobutanesulfonic acid (PFBS)	0.00456	0.00587	-	0.00131 (≤0.00409)	-	-
Perfluorohexanesulfonic acid (PFHxS)	0.0145	0.0166	-	0.0021 (≤0.00409)	-	-
Perfluorooctanesulfonic acid (PFOS)	0.00624	0.00544	-	0.0008 (≤0.00409)	-	-

X. Labeled Compounds

All percent recoveries (%R) for labeled compounds used to quantitate target compounds were within QC limits with the following exceptions:

Sample	Labeled Compound	%R (Limits)	Affected Compound	Flag	A or P
IS72MW15S-20200212	13C2-PFTeDA	34.4 (50-150)	Perfluorotetradecanoic acid (PFTeDA)	NA	-

XI. Compound Quantitation

All compound quantitations met validation criteria.

XII. Target Compound Identifications

All target compound identifications met validation criteria with the following exceptions:

Sample	Compound	Ion Abundance Ratio (Limits)	Flag	A or P
BMW07S-20200212	Perfluorodecanoic acid (PFDA)	50.940 (4.8175-14.4525)	J (all detects)	A
DUP03-20200212	Perfluorooctanesulfonic acid (PFOS)	3.412 (1.12-3.36)	J (all detects)	A
A000MW42S-20200212	Perfluorooctanesulfonic acid (PFOS)	9.108 (1.12-3.36)	J (all detects)	A
DUP05-20200212	Perfluorodecanoic acid (PFDA)	14.922 (4.8175-14.4525)	J (all detects)	A

XIII. System Performance

The system performance was acceptable.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to ion abundance ratio, data were qualified as estimated in four samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Data Qualification Summary - SDG 2000314

Sample	Compound	Flag	A or P	Reason
BMW07S-20200212	Perfluorodecanoic acid (PFDA)	J (all detects)	A	Target compound identification (ion abundance ratio)
DUP03-20200212	Perfluorooctanesulfonic acid (PFOS)	J (all detects)	A	Target compound identification (ion abundance ratio)
A000MW42S-20200212	Perfluorooctanesulfonic acid (PFOS)	J (all detects)	A	Target compound identification (ion abundance ratio)
DUP05-20200212	Perfluorodecanoic acid (PFDA)	J (all detects)	A	Target compound identification (ion abundance ratio)

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Laboratory Blank Data Qualification Summary - SDG 2000314

No Sample Data Qualified in this SDG

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Field Blank Data Qualification Summary - SDG 2000314

No Sample Data Qualified in this SDG

LDC #: 47508A96 **VALIDATION COMPLETENESS WORKSHEET** Date: 3/26/20

SDG #: 2000314 Stage 4 Page: 1 of 2

Laboratory: Vista Analytical Laboratory Reviewer: 2nd Reviewer:

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537M DOD QSM 5.3)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	RSD≤20% .Y² True /ICV≤30%
IV.	Continuing calibration/ISC	A	CCV/ISC≤30%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB=2. SB=1
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Field duplicates	SW	
X.	Labeled Compounds	SW	D=4+5. 13+14. 9+10
VI.	Compound quantitation RL/LOQ/LODs	A	
XII.	Target compound identification	SW	
XIII.	System performance	A	
XIV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
~~1~~	~~SB01-20200212~~	~~2000314-01~~	~~Water~~	~~02/12/20~~
~~2~~	~~EB01-20200212~~	~~2000314-02~~	~~Water~~	~~02/12/20~~
3	I006MW03SR-20200212	2000314-03	Water	02/12/20
4	I006MW05SR-20200212	2000314-04	Water	02/12/20
5	DUP01-20200212	2000314-05	Water	02/12/20
6	I006MW01S-20200212	2000314-06	Water	02/12/20
7	I006MW08S-20200212	2000314-07	Water	02/12/20
8	BMW07S-20200212	2000314-08	Water	02/12/20
9	I005MW01SR-20200212	2000314-09	Water	02/12/20
10	DUP05-20200212	2000314-10	Water	02/12/20
11	IS72MW15S-20200212	2000314-11	Water	02/12/20
12	IS72MW18SR-20200212	2000314-12	Water	02/12/20
13	222MW02S-20200212	2000314-13	Water	02/12/20
14	DUP03-20200212	2000314-14	Water	02/12/20
15	A000MW42S-20200212	2000314-15	Water	02/12/20

LDC #: 47508A96 **VALIDATION COMPLETENESS WORKSHEET** Date: 3/13/20
SDG #: 2000314 Stage 4 Page: 2 of 2
Laboratory: Vista Analytical Laboratory Reviewer:
2nd Reviewer: JW

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537M DOD QSM 5.3)

16	I006MW03SR-20200212MS	2000314-03MS	Water	02/12/20
17	I006MW03SR-20200212MSD	2000314-03MSD	Water	02/12/20
18				
19				
20				

Notes:

	B0B0118-BS1						

LDC #: 47528A86

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: CF
2nd Reviewer: JM

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. LC/MS Instrument performance check				
Were the instrument performance reviewed and found to be within the validation criteria?	✓			
III. Initial calibration and Initial Calibration Verification				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the coefficient of determination (r^2) criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard?	✓			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were the retention time windows properly established?	✓			
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) of the initial calibration verification ≤ 30%?	✓			
IV. Continuing calibration and Instrument Sensitivity Check				
Was a continuing calibration analyzed prior to sample analysis, after every 10 samples and at the end of the analytical sequence?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 30%?	✓			
Were all the retention times within the acceptance windows?	✓			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were all percent differences (%D) of the Instrument Sensitivity Check ≤ 30%?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		

LDC #: 47508A 46

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: [illegible]
2nd Reviewer: JVG

Validation Area	Yes	No	NA	Findings/Comments
VIII. Laboratory control samples				
Was an LCS analyzed per extraction batch for this SDG?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?	✓			
X. Labeled compounds				
Were labeled compound percent recoveries (%R) within the QC limits?		✓		
Were retention times within 0.4 minutes of the associated calibration standard?	✓			
XI. Compound quantitation				
Did the laboratory reporting limits (i.e. DL, LOD, LOQ) meet the QAPP?	✓			
Did reported results include both branched and linear isomers?	✓			
Were the correct ion transition, labeled compound and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound retention times within 0.1 minutes of the associated labeled compound for compounds with a labeled analog?	✓			
Were compound quantitation and reporting limits adjusted to reflect all sample dilutions and dry weight factors applicable to Stage 4 validation?	✓			
XII. Target compound identification				
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were two transitions and the ion transition ratio per analyte monitored and documented with the exception of PFBA and PFPeA?	✓			
Were ion ratios between 50-150%?		✓		
XIII. System performance				
System performance was found to be acceptable.	✓			
XIV. Overall assessment of Data	✓			
Overall assessment of data was found to be acceptable.				

TARGET COMPOUND WORKSHEET

METHOD: PFOS/PFOAs

A. Perfluorohexanoic acid (PFHxA)			
B. Perfluoroheptanoic acid (PFHpA)			
C. Perfluorooctanoic acid (PFOA)			
D. Perfluorononanoic acid (PFNA)			
E. Perfluorodecanoic acid (PFDA)			
F. Perfluoroundecanoic acid (PFUnA)			
G. Perfluorododecanoic acid (PFDoA)			
H. Perfluorotridecanoic acid (PFTriDA)			
I. Perfluorotetradecanoic acid (PFTeDA)			
J. Perfluorobutanesulfonic acid (PFBS)			
K. Perfluorohexanesulfonic acid (PFHxS)			
L. Perfluoroheptanesulfonic acid (PFHpS)			
M. Perfluorooctanesulfonic acid (PFOS)			
N.Perfluorodecanesulfonic acid (PFDS)			
O. Perfluorooctane Sulfonamide (FOSA)			
P. Perfluorobutanoic acid (PFBA)			
Q. Perfluoropentanoic acis (PFPeA)			
R. 1H, 1H, 2H, 2H-perfluorooctane sulfonate (6:2FTS)			
S. 1H, 1H, 2H, 2H-perfluorodecane sulfonate (8:2 FTS)			
T. N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)			
U. N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)			
V. 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)			

LDC #: 47508A96

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: 0
2nd Reviewer: JVG

METHOD: LC/MS PFAS (EPA Method 537M)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) or duplicate sample analyzed for each matrix in this SDG?

(Y) N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		16/17	~~PFHxS~~	172 (68-131)	132 (68-131)	( )	3	No Qual (>4x)
			~~PFHxA~~	( )	( )	46.4 (≤30)		
			~~PFHpA~~	( )	( )	41.7 (↓)		↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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LDC#: 47508A96

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: Q
2nd Reviewer: JM6

METHOD: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Compound	Concentration (ug/L)		(≤30) RPD	Difference (≤LOQ)	Limits	Qual
	4	5				
PFBS	0.0509	0.0556	9			
PFHxA	0.129	0.130	1			
PFHpA	0.0436	0.0468	7			
PFHxS	0.215	0.205	5			
PFOA	0.0464	0.0441	5			
PFOS	0.0182	0.0226	22			

Compound	Concentration (ug/L)		(≤30) RPD	Difference (≤LOQ)	Limits	Qual
	9	10				
PFBS	0.501	0.525	5			
PFHxA	1.52	1.51	1			
PFHpA	0.395	0.411	4			
PFHxS	2.62	2.84	8			
PFOA	3.76	4.15	10			
PFNA	0.0245	0.0267	9			
PFOS	1.08	1.11	3			
PFDA	0.00196U	0.00176		0.0002	≤0.00396	

Compound	Concentration (ug/L)		(≤30) RPD	Difference (≤LOQ)	Limits	Qual
	13	14				
PFBS	0.00456	0.00587		0.00131	≤0.00409	
PFHxS	0.0145	0.0166		0.0021	≤0.00409	
PFOS	0.00624	0.00544		0.0008	≤0.00409	

LDC #: 47503A96

VALIDATION FINDINGS WORKSHEET
Labeled Compounds

Reviewer: 9
2nd Reviewer: JK

METHOD: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y (N) N/A Were all labeled compound recoveries within the QC criteria?

#	Date	Lab ID/Reference	Labeled Compound	% Recovery	(Limit)	Qualifications
		11 (NO)	13C2-PFTeDA	34.4	(50-150)	J (all detects) (PFTeDA)
					( )	
					( )	
					( )	
					( )	
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LDC #: 47508A96

VALIDATION FINDINGS WORKSHEET
Target Compound Identification

Page: 1 of 1
Reviewer: 9
2nd Reviewer: SM

METHOD: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.1.1

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was the signal to noise (S/N) ratio for all compounds within the validation criteria?
Y N N/A Were two transitions and the ion transition ratio per analyte monitored and documented with the exception of PFBA and PFPeA?
Y N N/A Were ion ratios between 50-150%?

#	Date	Sample ID	Associated Samples	Ion Ratio ~~70~~ 50-150% Finding	Qualifications
		8	PFDA	50.946 (4.815*5-14.455)	J det/A
		14	PFOS	3.412 (1.12-3.36)	
		15	PFOS	9.108 ✓	
		10	PFDA	14.922 (4.815*5-14.455)	✓

LDC#: 47508896

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: 9
2nd Reviewer: JM

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
2/20/2020	MQ4	PFBS	1	0.778438094	0.250
			2	1.089880137	0.500
			3	2.682696141	1.000
			4	4.958188677	2.000
			5	12.64820119	5.000
			6	25.44695127	10.000
			7	117.4792844	50.000
			8	238.0977354	100.000
			9	566.0823864	250.000
			10	1133.899995	500.000

Regression Output		*Reported*
Constant	*2.209556*	*0.162081*
Std Err of Y Est		
R Squared	*0.999907*	*0.999487*
Degrees of Freedom		
X Coefficient(s)	*2.265108*	*2.287390*
Std Err of Coef.		
Correlation Coefficient	*0.999953*	
Coefficient of Determination (r^2)	*0.999907*	*0.999487*

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
2/20/2020	MQ4	PFHxA	1	0.284890588	0.250
			2	0.446339310	0.500
			3	0.984796904	1.000
			4	2.021324537	2.000
			5	5.003588711	5.000
			6	9.977193119	10.000
			7	47.15559216	50.000
			8	92.60790279	100.000
			9	225.8014014	250.000
			10	431.1547913	500.000

Regression Output		***Reported***
Constant	*1.829494*	*0.066967*
Std Err of Y Est		
R Squared	*0.999430*	*0.998785*
Degrees of Freedom		
X Coefficient(s)	*0.867639*	*0.886822*
Std Err of Coef.		
Correlation Coefficient	*0.999715*	
Coefficient of Determination (r^2)	*0.999430*	*0.998785*

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
2/25/2020	MQ4	PFHxA	1	0.248125134	0.250
			2	0.539146786	0.500
			3	1.168615070	1.000
			4	2.008352724	2.000
			5	5.175495037	5.000
			6	10.07310758	10.000
			7	47.12403550	50.000
			8	93.66908582	100.000
			9	221.5552772	250.000
			10	439.8474496	500.000

Regression Output		***Reported***
Constant	*1.341585*	*0.084469*
Std Err of Y Est		
R Squared	*0.999839*	*0.999064*
Degrees of Freedom		
X Coefficient(s)	*0.879448*	*0.893131*
Std Err of Coef.		
Correlation Coefficient	*0.999919*	
Coefficient of Determination (r^2)	*0.999839*	*0.999064*

LDC #: 47508A96

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer: CA
2nd Reviewer: JM

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	Instrument	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
2/25/2020	MQ4	PFOS	1	0.170391718	0.250	0.0625
			2	0.424665941	0.500	0.25
			3	0.885487794	1.000	1
			4	2.19426531	2.000	4
			5	5.106805482	5.000	25
			6	10.73537158	10.000	100
			7	43.83599873	50.000	2500
			8	96.62892738	100.000	10000
			9	229.6765896	250.000	62500
			10	466.5084977	500.000	250000

Regression Output	Calculated		*Reported*	
Constant	c	0.40720		-0.00626015
Std Err of Y Est				
R Squared		0.9998589		0.9992040
Degrees of Freedom				
	b	a	b	a
X Coefficient(s)	0.917505066	2.81034E-05	0.936367	-0.00001248
Std Err of Coef.				
Correlation Coefficient		0.999929		
Coefficient of Determination (r^2)		0.999859		

Validation Findings Worksheet
Initial Calibration Calculation Verification

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	Instrument	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
2/27/2020	MQ4	PFOA	1	0.322971593	0.250	0.0625
			2	0.664649291	0.500	0.25
			3	1.41593446	1.000	1
			4	2.504266854	2.000	4
			5	6.608790835	5.000	25
			6	12.89285388	10.000	100
			7	58.00272182	50.000	2500
			8	117.4198491	100.000	10000
			9	276.2363349	250.000	62500
			10	502.6360698	500.000	250000

Regression Output	Calculated		*Reported*	
Constant	c	0.20152		0.0799012
Std Err of Y Est				
R Squared		0.9999868		0.9998180
Degrees of Freedom				
	b	a	b	a
X Coefficient(s)	1.20400609	-0.000398275	1.20955	-0.000410213
Std Err of Coef.				
Correlation Coefficient		0.999993		
Coefficient of Determination (r^2)		0.999987		

LDC #: 47308A90

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: 9
2nd Reviewer: JB

METHOD: LC/MS PFAS (EPA Method 537M)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF	Recalculated RRF	Reported %D	Recalculated %D
1	20022004-37	2-20-20	~~PFOA ($^{13}C_2$-PFOA)~~ PFBS	10.000	11.8	11.77	17.7	17.7
			~~PFOS ($^{13}C_8$-PFOS)~~ PFHxA	↓	10.6	10.58	5.8	5.8
2	20022004-50	2/21/20	~~PFOA ($^{13}C_2$-PFOA)~~ PFBS	10.000	10.9	10.87	8.7	8.7
			PFOS ($^{13}C_8$-PFOS) PFHxA	↓	10.7	10.66	6.6	6.6
3	20022504-53	2/26/20	~~PFOA ($^{13}C_2$-PFOA)~~ PFHxA	10.00	11.1	11.06	10.6	10.6
			PFOS ($^{13}C_8$-PFOS) PFOS	10.00	11.2	11.20	12.0	12.0
4	20022704-86	2/28/20	~~PFOA ($^{13}C_2$-PFOA)~~ PFOA	10.00	9.67	9.67	3.3	3.3
			~~PFOS ($^{13}C_8$-PFOS)~~					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

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LDC #: 41508A96

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: 9
2nd Reviewer: JVG

METHOD: LC/MS PFAS (EPA Method 537M)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = | MSC - MSC | * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 16/17

Compound	Spike Added (µg/L)		Sample Concentration (µg/L)	Spiked Sample Concentration (µg/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD *	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
PFOA	0.038T	0.0395	0.303	0.350	0.349	123	121	116	116	5.86	4.22
PFOS	↓	↓	0.00993	0.0498	0.044T	103	103	88.1	88.0	15.6	15.6

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results. * Use %R to calculated RPD due to a different spike conc.

Privileged and Confidential

LDC #: 41508A96

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: 9
2nd Reviewer: JM

METHOD: LC/MS PFAS (EPA Method 537M)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: BQB0118-BS1

Compound	Spike Added (µg/L)		Spike Concentration (µg/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
PFOA	0.0400	NA	0.0355	NA	88.7	88.7				
PFOS	V	V	0.0369	V	92.2	92.2				

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Privileged and Confidential

LDC #: 47228A96

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: CR
2nd reviewer: JVG

METHOD: LC/MS PFOS/PFOAs (EPA Method 537M)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. 1, FBS

Conc. = $\frac{(3.5e3 \times 12.5 - 0.16208)(1)}{(2.28139)(25)}$ = 0.0513 ng/L

#	Sample ID	Compound	Reported Concentration (ng/L)	Calculated Concentration ( )	Qualification
	1	FBS	0.0513		

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Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro and Tustin PFAS

LDC Report Date: March 19, 2020

Parameters: Perfluoroalkyl & Polyfluoroalkyl Substances

Validation Level: Stage 4

Laboratory: Vista Analytical Laboratory

Sample Delivery Group (SDG): 2000321

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
EB02-20200213	2000321-01	Water	02/13/20
I013WMW02SR-20200213	2000321-02	Water	02/13/20
IS72MW17S-20200213	2000321-03	Water	02/13/20
I012MW01SR-20200213	2000321-04	Water	02/13/20
I012MW10S-20200213	2000321-05	Water	02/13/20
I012MW11S-20200213	2000321-06	Water	02/13/20
I012MW15S-20200213	2000321-07	Water	02/13/20
DUP02-20200213	2000321-08	Water	02/13/20
I003MW01S-20200213	2000321-09	Water	02/13/20
I003MW15S-20200213	2000321-10	Water	02/13/20
I003MW02S-20200213	2000321-11	Water	02/13/20
IS72MW17S-20200213MS	2000321-03MS	Water	02/13/20
IS72MW17S-20200213MSD	2000321-03MSD	Water	02/13/20

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Final Sampling and Analysis Plan for Per- and Polyfluoroalkyl Substances in Groundwater in Carve-Outs 2, 5, 6, and 9 and Groundwater and Surface Water Near Operable Unit 3, Former Marine Corps Air Station Tustin, Tustin, California, with Addendum #02 to Final Sampling and Analysis Plan for Per- and Polyfluoroalkyl Substances Sampling for Groundwater Remedial Action at Operable Unit 3, Installation Restoration Program Site 1 (February 2020), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.3 (2019), and the DoD General Validation Guidelines (February 2018). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) by Environmental Protection Agency (EPA) Method 537 Modified and LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

All sample results were subjected to Stage 4 data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. LC/MS Instrument Performance Check

Instrument performance was checked and the requirements were met.

III. Initial Calibration and Initial Calibration Verification

Initial calibration was performed as required by the methods.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

For each calibration standard, all compounds were within 70-130% of their true value.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

Retention time windows were established as required by the methods.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration and Instrument Sensitivity Check

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 30.0% for all compounds.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

The percent differences (%D) of the instrument sensitivity check (ISC) were less than or equal to 30.0% for all compounds.

Retention times of all compounds in the calibration standards were within the established retention time windows.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample EB02-20200213 was identified as an equipment blank. No contaminants were found.

Sample SB01-20200212 (from SDG 2000314) was identified as a source blank. No contaminants were found.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. For IS72MW17S-20200213MS/MSD, no data were qualified for perfluorohexanoic acid (PFHxA), perfluorohexanesulfonic acid (PFHxS), and perfluorooctanoic acid (PFOA) percent recoveries (%R) and perfluorooctanoic acid (PFOA), relative percent differences (RPD) outside the QC limits since the parent sample results were greater than 4X the spike concentration. All other relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

Samples I012MW15S-20200213 and DUP02-20200213 were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
	I012MW15S-20200213	DUP02-20200213				
Perfluorobutanesulfonic acid (PFBS)	0.179	0.181	1 (≤30)	-	-	-
Perfluorohexanoic acid (PFHxA)	0.908	0.881	3 (≤30)	-	-	-
Perfluoroheptanoic acid (PFHpA)	0.200	0.191	5 (≤30)	-	-	-
Perfluorohexanesulfonic acid (PFHxS)	0.526	0.505	4 (≤30)	-	-	-
Perfluorooctanoic acid (PFOA)	0.312	0.306	2 (≤30)	-	-	-
Perfluorononanoic acid (PFNA)	0.00292	0.00251	-	0.0004 (≤0.00406)	-	-
Perfluorooctanesulfonic acid (PFOS)	0.109	0.112	3 (≤30)	-	-	-

X. Labeled Compounds

All percent recoveries (%R) for labeled compounds used to quantitate target compounds were within QC limits.

XI. Compound Quantitation

All compound quantitations met validation criteria.

XII. Target Compound Identifications

All target compound identifications met validation criteria with the following exceptions:

Sample	Compound	Ion Abundance Ratio (Limits)	Flag	A or P
I013WMW02SR-20200213	Perfluorooctanesulfonic acid (PFOS)	4.901 (1.304-3.912)	J (all detects)	A

XIII. System Performance

The system performance was acceptable.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to ion abundance ratio, data were qualified as estimated in one sample.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Data Qualification Summary - SDG 2000321

Sample	Compound	Flag	A or P	Reason
I013WMW02SR-20200213	Perfluorooctanesulfonic acid (PFOS)	J (all detects)	A	Target compound identification (ion abundance ratio)

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Laboratory Blank Data Qualification Summary - SDG 2000321

No Sample Data Qualified in this SDG

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Field Blank Data Qualification Summary - SDG 2000321

No Sample Data Qualified in this SDG

LDC #: 47508B96 **VALIDATION COMPLETENESS WORKSHEET** Date: 3/16/20
SDG #: 2000321 Stage 4 Page: 1 of 1
Laboratory: Vista Analytical Laboratory Reviewer: 8
2nd Reviewer: JM

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537M DOD QSM 5.3)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A A	RSD ≤ 20% . r^2 TMe/ICV ≤ 30%
IV.	Continuing calibration/ISC	A	CCV/ISC ≤ 30%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB=1. SB=SB01-20200212 (2000314)
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Field duplicates	SW	D=T+8
X.	Labeled Compounds	SW	
VI.	Compound quantitation RL/LOQ/LODs	A	
XII.	Target compound identification	SW	
XIII.	System performance	A	
XIV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
~~1~~	~~EB02-20200213~~	~~2000321-01~~	~~Water~~	~~02/13/20~~
2	I013WMW02SR-20200213	2000321-02	Water	02/13/20
3	IS72MW17S-20200213	2000321-03	Water	02/13/20
4	I012MW01SR-20200213	2000321-04	Water	02/13/20
5	I012MW10S-20200213	2000321-05	Water	02/13/20
6	I012MW11S-20200213	2000321-06	Water	02/13/20
7	I012MW15S-20200213	2000321-07	Water	02/13/20
8	DUP02-20200213	2000321-08	Water	02/13/20
9	I003MW01S-20200213	2000321-09	Water	02/13/20
10	I003MW15S-20200213	2000321-10	Water	02/13/20
11	I003MW02S-20200213	2000321-11	Water	02/13/20
12	IS72MW17S-20200213MS	2000321-03MS	Water	02/13/20
13	IS72MW17S-20200213MSD	2000321-03MSD	Water	02/13/20
14				
15	BOBO12T-BK1			

LDC #: 47508B9S

VALIDATION FINDINGS CHECKLIST

Reviewer: Q
2nd Reviewer: JM

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. LC/MS Instrument performance check				
Were the instrument performance reviewed and found to be within the validation criteria?	✓			
III. Initial calibration and Initial Calibration Verification				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the coefficient of determination (r^2) criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard?	✓			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were the retention time windows properly established?	✓			
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) of the initial calibration verification ≤ 30%?	✓			
IV. Continuing calibration and Instrument Sensitivity Check				
Was a continuing calibration analyzed prior to sample analysis, after every 10 samples and at the end of the analytical sequence?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 30%?	✓			
Were all the retention times within the acceptance windows?	✓			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were all percent differences (%D) of the Instrument Sensitivity Check ≤ 30%?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		

LDC #: 47528B96

VALIDATION FINDINGS CHECKLIST

Reviewer: 9
2nd Reviewer: JM

Validation Area	Yes	No	NA	Findings/Comments
VIII. Laboratory control samples				
Was an LCS analyzed per extraction batch for this SDG?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?	✓			
X. Labeled compounds				
Were labeled compound percent recoveries (%R) within the QC limits?		✓		
Were retention times within 0.4 minutes of the associated calibration standard?	✓			
XI. Compound quantitation				
Did the laboratory reporting limits (i.e. DL, LOD, LOQ) meet the QAPP?	✓			
Did reported results include both branched and linear isomers?	✓			
Were the correct ion transition, labeled compound and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound retention times within 0.1 minutes of the associated labeled compound for compounds with a labeled analog?	✓			
Were compound quantitation and reporting limits adjusted to reflect all sample dilutions and dry weight factors applicable to Stage 4 validation?	✓			
XII. Target compound identification				
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were two transitions and the ion transition ratio per analyte monitored and documented with the exception of PFBA and PFPeA?	✓			
Were ion ratios between 50-150%?		✓		
XIII. System performance				
System performance was found to be acceptable.	✓			
XIV. Overall assessment of Data				
Overall assessment of data was found to be acceptable.	✓			

TARGET COMPOUND WORKSHEET

METHOD: PFOS/PFOAs

A. Perfluorohexanoic acid (PFHxA)			
B. Perfluoroheptanoic acid (PFHpA)			
C. Perfluorooctanoic acid (PFOA)			
D. Perfluorononanoic acid (PFNA)			
E. Perfluorodecanoic acid (PFDA)			
F. Perfluoroundecanoic acid (PFUnA)			
G. Perfluorododecanoic acid (PFDoA)			
H. Perfluorotridecanoic acid (PFTriDA)			
I. Perfluorotetradecanoic acid (PFTeDA)			
J. Perfluorobutanesulfonic acid (PFBS)			
K. Perfluorohexanesulfonic acid (PFHxS)			
L. Perfluoroheptanesulfonic acid (PFHpS)			
M. Perfluorooctanesulfonic acid (PFOS)			
N.Perfluorodecanesulfonic acid (PFDS)			
O. Perfluorooctane Sulfonamide (FOSA)			
P. Perfluorobutanoic acid (PFBA)			
Q. Perfluoropentanoic acis (PFPeA)			
R. 1H, 1H, 2H, 2H-perfluorooctane sulfonate (6:2FTS)			
S. 1H, 1H, 2H, 2H-perfluorodecane sulfonate (8:2 FTS)			
T. N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)			
U. N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)			
V. 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)			

LDC #: 47308B96

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: 9+
2nd Reviewer: SV6

METHOD: LC/MS PFAS (EPA Method 537M)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) or duplicate sample analyzed for each matrix in this SDG?
Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?
Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		12/13	PFHxA	101 (72-129)	145 (72-129)	( )	3	No Qual >4x
			PFHxS	191 (68-131)	158 (68-131)	( )		↓
			PFOA	419 (71-133)	225 (71-133)	( )		
			PFOA	( )	( )	60.2 (≤30)		✓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )	

LDC#: 47508B96

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JV4

METHOD: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Compound	Concentration (ug/L)		(≤30) RPD	Difference (≤LOQ)	Limits	Qual
	7	8				
PFBS	0.179	0.181	1			
PFHxA	0.908	0.881	3			
PFHpA	0.200	0.191	5			
PFHxS	0.526	0.505	4			
PFOA	0.312	0.306	2			
PFNA	0.00292	0.00251		0.0004	≤0.00406	
PFOS	0.109	0.112	3			

V:\FIELD DUPLICATES\Field Duplicates\FD_Organics\2020\47508B96_WOOD.wpd

LDC #: 47008B96

VALIDATION FINDINGS WORKSHEET
Labeled Compounds

Page: 1 of 1
Reviewer: 9
2nd Reviewer: AM

METHOD: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y (N) N/A Were all labeled compound recoveries within the QC criteria?

#	Date	Lab ID/Reference	Labeled Compound	% Recovery	(Limit)	Qualifications
		9	$^{13}C_3$-PFHxS	35.2	(50-150)	No Qual (20x)
			$^{13}C_8$-PFOS	156	(↓)	↓ (10x)
					( )	
					( )	
					( )	
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LDC #: 47508B96

VALIDATION FINDINGS WORKSHEET
Target Compound Identification

Reviewer: 9
2nd Reviewer: JM6

METHOD: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.1.1

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was the signal to noise (S/N) ratio for all compounds within the validation criteria?
Y N N/A Were two transitions and the ion transition ratio per analyte monitored and documented with the exception of PFBA and PFPeA?
Y N N/A Were ion ratios between 50-150%?

#	Date	Sample ID	Associated Samples	Finding (Ion Ratio (50-150%))	Qualifications
		2	PFOS	4.901 (1.304 - 3.913)	Lots/J

LDC#: 47508B96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: 9
2nd Reviewer: SV

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
2/25/2020	MQ4	PFHxA	1	0.248125134	0.250
			2	0.539146786	0.500
			3	1.168615070	1.000
			4	2.008352724	2.000
			5	5.175495037	5.000
			6	10.07310758	10.000
			7	47.12403550	50.000
			8	93.66908582	100.000
			9	221.5552772	250.000
			10	439.8474496	500.000

Regression Output		***Reported***
Constant	*1.341585*	*0.084469*
Std Err of Y Est		
R Squared	*0.999839*	*0.999064*
Degrees of Freedom		
X Coefficient(s)	*0.879448*	*0.893131*
Std Err of Coef.		
Correlation Coefficient	*0.999919*	
Coefficient of Determination (r^2)	*0.999839*	*0.999064*

LDC #: 47528B96

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer: 9
2nd Reviewer: SM

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	Instrument	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
2/25/2020	MQ4	PFOS	1	0.170391718	0.250	0.0625
			2	0.424665941	0.500	0.25
			3	0.885487794	1.000	1
			4	2.19426531	2.000	4
			5	5.106805482	5.000	25
			6	10.73537158	10.000	100
			7	43.83599873	50.000	2500
			8	96.62892738	100.000	10000
			9	229.6765896	250.000	62500
			10	466.5084977	500.000	250000

Regression Output	Calculated		*Reported*	
Constant	c	0.40720		-0.00626015
Std Err of Y Est				
R Squared		0.9998589		0.9992040
Degrees of Freedom				
	b	a	b	a
X Coefficient(s)	0.917505066	2.81034E-05	0.936367	-0.00001248
Std Err of Coef.				
Correlation Coefficient		0.999929		
Coefficient of Determination (r^2)		0.999859		

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
2/20/2020	MQ4	PFBS	1	0.218140541	0.250
			2	0.476012601	0.500
			3	0.98083487	1.000
			4	2.429106694	2.000
			5	6.071180012	5.000
			6	11.56255063	10.000
			7	59.02012306	50.000
			8	115.8441307	100.000
			9	268.6755383	250.000
			10	533.3780838	500.000

Regression Output		***Reported***
Constant	*1.855723*	*0.000349*
Std Err of Y Est		
R Squared	*0.999682*	*0.998678*
Degrees of Freedom		
X Coefficient(s)	*1.066774*	*1.087170*
Std Err of Coef.		
Correlation Coefficient	*0.999841*	
Coefficient of Determination (r^2)	*0.999682*	*0.998678*

LDC #: 47288B46

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer: 9
2nd Reviewer: JM

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	Instrument	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
2/26/2020	MQ4	PFOA	1	0.364321782	0.250	0.0625
			2	0.719574409	0.500	0.25
			3	1.352100428	1.000	1
			4	2.401378426	2.000	4
			5	6.039297964	5.000	25
			6	11.76681779	10.000	100
			7	54.54803356	50.000	2500
			8	115.7280924	100.000	10000
			9	272.0486296	250.000	62500
			10	521.2496897	500.000	250000

Regression Output	Calculated		*Reported*	
Constant	c	0.18709		0.120191
Std Err of Y Est				
R Squared		0.9999340		0.9997660
Degrees of Freedom				
	b	a	b	a
X Coefficient(s)	1.143310231	-0.000203208	1.14636	-0.000209775
Std Err of Coef.				
Correlation Coefficient		0.999967		
Coefficient of Determination (r^2)		0.999934		

LDC #: 45088B96

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer: 9
2nd Reviewer: DM

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	Instrument	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
2/29/2020	MQ4	PFHxS	1	0.090312611	0.250	0.0625
			2	0.554619134	0.500	0.25
			3	0.879094479	1.000	1
			4	1.88339845	2.000	4
			5	5.243644386	5.000	25
			6	11.85984225	10.000	100
			7	50.53408586	50.000	2500
			8	102.9247442	100.000	10000
			9	270.4999765	250.000	62500
			10	481.5067366	500.000	250000

Regression Output	Calculated		*Reported*	
Constant	c	-1.40260		-0.145925
Std Err of Y Est				
R Squared		0.9994316		0.9986790
Degrees of Freedom				
	b	a	b	a
X Coefficient(s)	1.155909744	-0.000375202	1.09858	-0.000251852
Std Err of Coef.				
Correlation Coefficient		0.999716		
Coefficient of Determination (r^2)		0.999432		

LDC #: 47503B96

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer: A
2nd Reviewer: JVG

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	Instrument	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
2/29/2020	MQ4	PFOA	1	0.341872059	0.250	0.0625
			2	0.833811058	0.500	0.25
			3	1.310270348	1.000	1
			4	2.523838971	2.000	4
			5	6.966030299	5.000	25
			6	13.0191009	10.000	100
			7	62.65294692	50.000	2500
			8	116.749093	100.000	10000
			9	284.132683	250.000	62500
			10	558.8260031	500.000	250000

Regression Output	Calculated		*Reported*	
Constant	c	1.01258		0.255567
Std Err of Y Est				
R Squared		0.9999339		0.9995660
Degrees of Freedom				
	b	a	b	a
X Coefficient(s)	1.162937577	-9.60201E-05	1.19871	-0.000173152
Std Err of Coef.				
Correlation Coefficient		0.999967		
Coefficient of Determination (r^2)		0.999934		

LDC #: 47588396

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JV6

METHOD: LC/MS PFAS (EPA Method 537M)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF	Recalculated RRF	Reported %D	Recalculated %D
1	20022501-3C	2/25/20	PFOA ($^{13}C_2$-PFOA) PFHxA	10.00	10.9	10.87	8.7	8.7
			PFOS ($^{13}C_8$-PFOS) PFOS	10.00	10.6	10.55	5.5	5.5
2	20022501-3	2/26/20	PFOA ($^{13}C_2$-PFOA) PFHxA	10.0	11.1	11.06	10.6	10.6
			PFOS ($^{13}C_8$-PFOS) PFOS	↓	11.2	11.2	12.0	12.0
3	20022601-3	2/26/20	PFOA ($^{13}C_2$-PFOA) PFBA	10.0	10.4	10.41	4.1	4.1
			PFOS ($^{13}C_8$-PFOS) PFOA	10.0	10.7	10.66	6.6	6.6
4	20022601-5	2/27/20	PFOA ($^{13}C_2$-PFOA) PFBA	10.00	10.1	10.13	1.3	1.3
			PFOS ($^{13}C_8$-PFOS) PFOA	10.00	9.56	9.56	4.4	4.4

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Privileged and Confidential

LDC #: 41508B46

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: 4
2nd Reviewer: JVL

METHOD: LC/MS PFAS (EPA Method 537M)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = | MSC - MSC | * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 13/13

Compound	Spike Added (µg/L)		Sample Concentration (µg/L)	Spiked Sample Concentration (µg/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
PFOA	0.0396	0.0408	0.881	1.05	0.973	419	417	~~60.2~~ 25	225	60.2	62.0
PFOS	↓	↓	0.134	0.175	0.184	103	103	120	122	15.2	16.9

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Privileged and Confidential

LDC #: 47988B96

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JVG

METHOD: LC/MS PFAS (EPA Method 537M)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: BOB012T-BS1

Compound	Spike Added (µg/L)		Spike Concentration (µg/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
PFOA	0.0400	NA	0.0406	NA	102	102				
PFOS	↓	↓	0.0342	↓	~~85.6~~	~~85.5~~				

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Privileged and Confidential

LDC #: 41508B96

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: JV6

METHOD: LC/MS PFOS/PFOAs (EPA Method 537M)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

V_i = Volume of extract injected in microliters (ul)

V_t = Volume of the concentrated extract in microliters (ul)

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

2.0 = Factor of 2 to account for GPC cleanup

Example:

Sample I.D. 2, PFOA:

Conc. = $\frac{(-1.1436+\sqrt{(1.1436)^2-4(-0.00020977)(-\frac{22324\times B^5}{1138e4})}+0.120191)}{(2)(-0.00020977)(245)(\quad)}$

= 0.7401 ng/L

#	Sample ID	Compound	Reported Concentration (ng/L)	Calculated Concentration ( )	Qualification
	2	PFOA	0.7401		

Privileged and Confidential

LDC Report# 47508C96

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro and Tustin PFAS

LDC Report Date: March 19, 2020

Parameters: Perfluoroalkyl & Polyfluoroalkyl Substances

Validation Level: Stage 4

Laboratory: Vista Analytical Laboratory

Sample Delivery Group (SDG): 2000330

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
I003MW05S-20200214	2000330-02	Water	02/14/20
I003MW12S-20200214	2000330-03	Water	02/14/20
DUP04-20200214	2000330-04	Water	02/14/20
I003MW14S-20200214	2000330-05	Water	02/14/20
I003MW14S-20200214MS	2000330-05MS	Water	02/14/20
I003MW14S-20200214MSD	2000330-05MSD	Water	02/14/20

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Final Sampling and Analysis Plan for Per- and Polyfluoroalkyl Substances in Groundwater in Carve-Outs 2, 5, 6, and 9 and Groundwater and Surface Water Near Operable Unit 3, Former Marine Corps Air Station Tustin, Tustin, California, with Addendum #02 to Final Sampling and Analysis Plan for Per- and Polyfluoroalkyl Substances Sampling for Groundwater Remedial Action at Operable Unit 3, Installation Restoration Program Site 1 (February 2020), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.3 (2019), and the DoD General Validation Guidelines (February 2018). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) by Environmental Protection Agency (EPA) Method 537 Modified and LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

All sample results were subjected to Stage 4 data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. LC/MS Instrument Performance Check

Instrument performance was checked and the requirements were met.

III. Initial Calibration and Initial Calibration Verification

Initial calibration was performed as required by the methods.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

For each calibration standard, all compounds were within 70-130% of their true value.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

Retention time windows were established as required by the methods.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration and Instrument Sensitivity Check

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 30.0% for all compounds.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

The percent differences (%D) of the instrument sensitivity check (ISC) were less than or equal to 30.0% for all compounds.

Retention times of all compounds in the calibration standards were within the established retention time windows.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample EB03-20200214 was identified as an equipment blank. No contaminants were found.

Sample SB01-20200212 (from SDG 2000314) was identified as a source blank. No contaminants were found.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. For I003MW14S-20200214MS/MSD, no data were qualified for perfluorobutanesulfonic acid (PFBS), perfluorohexanoic acid (PFHxA), perfluoroheptanoic acid (PFHpA), and perfluorooctanoic acid (PFOA) percent outside the QC limits since the parent sample results were greater than 4X the spike concentration.

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
I003MW14S-20200214MS/MSD (I003MW14S-20200214)	MeFOSAA	32.5 (≤30)	NA	-

For I003MW14S-20200214MS/MSD, no data were qualified for perfluorobutanesulfonic acid (PFBS), perfluorohexanoic acid (PFHxA), perfluoroheptanoic acid (PFHpA), and perfluorooctanoic acid (PFOA) relative percent differences (RPD) outside the QC limits since the parent sample results were greater than 4X the spike concentration.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

Samples I003MW12S-20200214 and DUP04-20200214 were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
	I003MW12S-20200214	DUP04-20200214				
Perfluorobutanesulfonic acid (PFBS)	0.0346	0.0349	1 (≤30)	-	-	-
Perfluorohexanoic acid (PFHxA)	0.164	0.155	6 (≤30)	-	-	-

Compound	Concentration (ug/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
	I003MW12S-20200214	DUP04-20200214				
Perfluoroheptanoic acid (PFHpA)	0.0538	0.0547	2 (≤30)	-	-	-
Perfluorohexanesulfonic acid (PFHxS)	0.190	0.166	13 (≤30)	-	-	-
Perfluorooctanoic acid (PFOA)	0.402	0.403	0 (≤30)	-	-	-
Perfluorooctanesulfonic acid (PFOS)	0.0519	0.0574	10 (≤30)	-	-	-

X. Labeled Compounds

All percent recoveries (%R) for labeled compounds used to quantitate target compounds were within QC limits with the following exceptions:

Sample	Labeled Compound	%R (Limits)	Affected Compound	Flag	A or P
DUP04-20200214	13C2-PFTeDA	39.9 (50-150)	Perfluorotetradecanoic acid (PFTeDA)	NA	-

XI. Compound Quantitation

All compound quantitations met validation criteria.

XII. Target Compound Identifications

All target compound identifications met validation criteria.

XIII. System Performance

The system performance was acceptable.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

The quality control criteria reviewed were met and are considered acceptable.

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Data Qualification Summary - SDG 2000330

No Sample Data Qualified in this SDG

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Laboratory Blank Data Qualification Summary - SDG 2000330

No Sample Data Qualified in this SDG

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Field Blank Data Qualification Summary - SDG 2000330

No Sample Data Qualified in this SDG

LDC #: 47508C96

SDG #: 2000330

Laboratory: Vista Analytical Laboratory

VALIDATION COMPLETENESS WORKSHEET

Stage 4

Date: 3/16/20

Page: 1 of 1

Reviewer:

2nd Reviewer: SVG

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537M DOD QSM 5.3)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	RSD≤20% or r^2 ≥0.99/ICV=30%
IV.	Continuing calibration/ICSC	A	CCV/ISC=30%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB=1 .SB=SB01-20200212(20003I4)
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Field duplicates	SW	D=3+4
X.	Labeled Compounds	SW	
VI.	Compound quantitation RL/LOQ/LODs	A	
XII.	Target compound identification	A	
XIII.	System performance	A	
XIV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
~~1~~	~~EB03-20200214~~	~~2000330-01~~	~~Water~~	~~02/14/20~~
2	I003MW05S-20200214	2000330-02	Water	02/14/20
3	I003MW12S-20200214	2000330-03	Water	02/14/20
4	DUP04-20200214	2000330-04	Water	02/14/20
5	I003MW14S-20200214	2000330-05	Water	02/14/20
6	I003MW14S-20200214MS	2000330-05MS	Water	02/14/20
7	I003MW14S-20200214MSD	2000330-05MSD	Water	02/14/20
8				
9				
10				

Notes:

	BOB0137-BK1						

LDC #: 47508C96

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: 9
2nd Reviewer: JVC

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. LC/MS Instrument performance check				
Were the instrument performance reviewed and found to be within the validation criteria?	✓			
III. Initial calibration and Initial Calibration Verification				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the coefficient of determination (r^2) criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard?	✓			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were the retention time windows properly established?	✓			
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) of the initial calibration verification ≤ 30%?	✓			
IV. Continuing calibration and Instrument Sensitivity Check				
Was a continuing calibration analyzed prior to sample analysis, after every 10 samples and at the end of the analytical sequence?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 30%?	✓			
Were all the retention times within the acceptance windows?	✓			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were all percent differences (%D) of the Instrument Sensitivity Check ≤ 30%?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		

LDC #: 47508C96

VALIDATION FINDINGS CHECKLIST

Reviewer: Q
2nd Reviewer: SM6

Validation Area	Yes	No	NA	Findings/Comments
VIII. Laboratory control samples				
Was an LCS analyzed per extraction batch for this SDG?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?	✓			
X. Labeled compounds				
Were labeled compound percent recoveries (%R) within the QC limits?		✓		
Were retention times within 0.4 minutes of the associated calibration standard?	✓			
XI. Compound quantitation				
Did the laboratory reporting limits (i.e. DL, LOD, LOQ) meet the QAPP?	✓			
Did reported results include both branched and linear isomers?	✓			
Were the correct ion transition, labeled compound and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound retention times within 0.1 minutes of the associated labeled compound for compounds with a labeled analog?	✓			
Were compound quantitation and reporting limits adjusted to reflect all sample dilutions and dry weight factors applicable to Stage 4 validation?	✓			
XII. Target compound identification				
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were two transitions and the ion transition ratio per analyte monitored and documented with the exception of PFBA and PFPeA?	✓			
Were ion ratios between 50-150%?	✓			
XIII. System performance				
System performance was found to be acceptable.	✓			
XIV. Overall assessment of Data				
Overall assessment of data was found to be acceptable.	✓			

TARGET COMPOUND WORKSHEET

METHOD: PFOS/PFOAs

A. Perfluorohexanoic acid (PFHxA)			
B. Perfluoroheptanoic acid (PFHpA)			
C. Perfluorooctanoic acid (PFOA)			
D. Perfluorononanoic acid (PFNA)			
E. Perfluorodecanoic acid (PFDA)			
F. Perfluoroundecanoic acid (PFUnA)			
G. Perfluorododecanoic acid (PFDoA)			
H. Perfluorotridecanoic acid (PFTriDA)			
I. Perfluorotetradecanoic acid (PFTeDA)			
J. Perfluorobutanesulfonic acid (PFBS)			
K. Perfluorohexanesulfonic acid (PFHxS)			
L. Perfluoroheptanesulfonic acid (PFHpS)			
M. Perfluorooctanesulfonic acid (PFOS)			
N.Perfluorodecanesulfonic acid (PFDS)			
O. Perfluorooctane Sulfonamide (FOSA)			
P. Perfluorobutanoic acid (PFBA)			
Q. Perfluoropentanoic acis (PFPeA)			
R. 1H, 1H, 2H, 2H-perfluorooctane sulfonate (6:2FTS)			
S. 1H, 1H, 2H, 2H-perfluorodecane sulfonate (8:2 FTS)			
T. N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)			
U. N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)			
V. 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)			

LDC #: 47508c96

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: 2
2nd Reviewer: JM

METHOD: LC/MS PFAS (EPA Method 537M)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) or duplicate sample analyzed for each matrix in this SDG?
Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?
Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		6/7	~~PFBS~~	53.1 (72-130)	68.3 (72-130)	( )	5	No Qual >4x
			~~PFHxA~~	( )	69.9 (72-129)	69.9 (≤30)		
			~~PFHpA~~	138 (72-130)	~~572~~ (70-130) -314	614 ( )		
				( )	( )	( )		
			~~PFHxS~~	44.2 (68-131)	-379 (68-131)	253 ( )		
			PFOA	64.4 (71-133)	26.4 (71-133)	83.7 ( )		
				( )	( )	( )		
			MeFOSAA	( )	( )	32.5 (≤30)	5 (ND)	Hold/A
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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LDC#: 47508C96

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: 9
2nd Reviewer: JM

METHOD: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Compound	Concentration (ug/L)		(≤30) RPD	Difference (≤LOQ)	Limits	Qual
	3	4				
PFBS	0.0346	0.0349	1			
PFHxA	0.164	0.155	6			
PFHpA	0.0538	0.0547	2			
PFHxS	0.190	0.166	13			
PFOA	0.402	0.403	0			
PFOS	0.0519	0.0574	10			

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LDC #: 47508C96

VALIDATION FINDINGS WORKSHEET
Labeled Compounds

Reviewer: 9
2nd Reviewer: JM

METHOD: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were all labeled compound recoveries within the QC criteria?

#	Date	Lab ID/Reference	Labeled Compound	% Recovery	(Limit)	Qualifications
		2	13C2-PFOA	161	(50-150)	No qual (5x)
					( )	
		4 (N/D)	13C2PFTeDA	39.9	( )	Verify (PFTeDA)
					( )	
		5	13C3-PFHxA	187	( )	No qual (5x)
			13C3-PFOA	174	( )	
					( )	
					( )	
					( )	
					( )	
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LDC#: 47508C96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: 2
2nd Reviewer: JV6

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
2/24/2020	MQ4	PFBS	1	0.633875728	0.250
			2	1.101680907	0.500
			3	2.371425822	1.000
			4	5.122410556	2.000
			5	12.14561292	5.000
			6	24.17966012	10.000
			7	120.66273230	50.000
			8	249.1365015	100.000
			9	585.9840235	250.000
			10	1193.961241	500.000

Regression Output		*Reported*
Constant	*0.816967*	*0.022226*
Std Err of Y Est		
R Squared	*0.999841*	*0.999677*
Degrees of Freedom		
X Coefficient(s)	*2.380549*	*2.389200*
Std Err of Coef.		
Correlation Coefficient	*0.999921*	
Coefficient of Determination (r^2)	*0.999841*	*0.999677*

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
2/24/2020	MQ4	PFHxA	1	0.315503721	0.250
			2	0.503071002	0.500
			3	1.029558277	1.000
			4	2.035496213	2.000
			5	5.038662651	5.000
			6	9.900583622	10.000
			7	47.51574284	50.000
			8	91.75496192	100.000
			9	228.7017249	250.000
			10	450.1274278	500.000

Regression Output		***Reported***
Constant	*0.859876*	*0.075621*
Std Err of Y Est		
R Squared	*0.999930*	*0.999659*
Degrees of Freedom		
X Coefficient(s)	*0.901577*	*0.910113*
Std Err of Coef.		
Correlation Coefficient	*0.999965*	
Coefficient of Determination (r^2)	*0.999930*	*0.999659*

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
2/27/2020	MQ4	PFBS	1	0.632118722	0.250
			2	1.586507597	0.500
			3	2.742775839	1.000
			4	4.901326024	2.000
			5	12.22165384	5.000
			6	27.67974785	10.000
			7	128.6912281	50.000
			8	253.2448455	100.000
			9	578.2133693	250.000
			10	1165.917419	500.000

Regression Output		***Reported***
Constant	*3.957059*	*0.185525*
Std Err of Y Est		
R Squared	*0.999640*	*0.998443*
Degrees of Freedom		
X Coefficient(s)	*2.325181*	*2.366230*
Std Err of Coef.		
Correlation Coefficient	*0.999820*	
Coefficient of Determination (r^2)	*0.999640*	*0.998443*

LDC #: 47508C96

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer: 9
2nd Reviewer: DV

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	Instrument	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
2/27/2020	MQ4	PFOA	1	0.322971593	0.250	0.0625
			2	0.664649291	0.500	0.25
			3	1.41593446	1.000	1
			4	2.504266854	2.000	4
			5	6.608790835	5.000	25
			6	12.89285388	10.000	100
			7	58.00272182	50.000	2500
			8	117.4198491	100.000	10000
			9	276.2363349	250.000	62500
			10	502.6360698	500.000	250000

Regression Output	Calculated		*Reported*	
Constant	c	0.20152		0.0799012
Std Err of Y Est				
R Squared		0.9999868		0.9998180
Degrees of Freedom				
	b	a	b	a
X Coefficient(s)	1.20400609	-0.000398275	1.20955	-0.000410213
Std Err of Coef.				
Correlation Coefficient		0.999993		
Coefficient of Determination (r^2)		0.999987		

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
2/28/2020	MQ4	PFHxA	1	0.303600128	0.250
			2	0.597584798	0.500
			3	1.164206205	1.000
			4	1.968289604	2.000
			5	5.098500037	5.000
			6	9.640800994	10.000
			7	47.14252829	50.000
			8	95.7879666	100.000
			9	219.0447367	250.000
			10	420.3159336	500.000

Regression Output		***Reported***
Constant	*2.481143*	*0.122807*
Std Err of Y Est		
R Squared	*0.999080*	*0.997551*
Degrees of Freedom		
X Coefficient(s)	*0.844901*	*0.870570*
Std Err of Coef.		
Correlation Coefficient	*0.999540*	
Coefficient of Determination (r^2)	*0.999080*	*0.997551*

LDC #: 47988C96

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer: 9
2nd Reviewer: SM

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	Instrument	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
2/28/2020	MQ4	PFHxS	1	0.12583571	0.250	0.0625
			2	0.546220095	0.500	0.25
			3	1.100093989	1.000	1
			4	2.268965029	2.000	4
			5	5.842901742	5.000	25
			6	12.00998324	10.000	100
			7	51.40861626	50.000	2500
			8	106.1284785	100.000	10000
			9	267.918899	250.000	62500
			10	468.4202122	500.000	250000

Regression Output	Calculated		*Reported*	
Constant	c	-1.04004		-0.0812317
Std Err of Y Est				
R Squared		0.9996150		0.9990280
Degrees of Freedom				
	b	a	b	a
X Coefficient(s)	1.170779375	-0.000459763	1.12704	-0.00036565
Std Err of Coef.				
Correlation Coefficient		0.999807		
Coefficient of Determination (r^2)		0.999615		

LDC #: ~~#50896~~

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JM

METHOD: LC/MS PFAS (EPA Method 537M)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF	Recalculated RRF	Reported %D	Recalculated %D
1	200224PFAS34	2/24/20	~~PFOA ($^{13}C_2$-PFOA)~~ PFBS	10.00	10.4	10.37	3.7	3.7
			~~PFOS ($^{13}C_8$-PFOS)~~	10.00	10.8	10.77	7.7	7.7
2	200228PFAS75	2/29/20	~~PFOA ($^{13}C_2$-PFOA)~~ PFHxA	10.0	11.1	11.14	11.4	11.4
			~~PFOS ($^{13}C_8$-PFOS)~~	10.0	9.57	9.57	4.3	4.3
3			PFOA ($^{13}C_2$-PFOA)					
			PFOS ($^{13}C_8$-PFOS)					
4			PFOA ($^{13}C_2$-PFOA)					
			PFOS ($^{13}C_8$-PFOS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Privileged and Confidential

LDC #: 47508C96

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JV6

METHOD: LC/MS PFAS (EPA Method 537M)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 6/7

Compound	Spike Added (ng/L)		Sample Concentration (ng/L)	Spiked Sample Concentration (ng/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
PFOA	0.202	0.202	4.36	4.49	4.42	64.4	64.4	26.4	29.7	83.7	31.57
PFOS	~~0.675~~ 0.0403	0.0405	0.601	~~0.695~~ 0.649	0.649	111	109	120	119	7.79	0.62

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Privileged and Confidential

LDC #: AT508C-96

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: 1
2nd Reviewer: SW

METHOD: LC/MS PFAS (EPA Method 537M)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: BOB013T-BS1

Compound	Spike Added (ng/L)		Spike Concentration (ng/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
PFOA	0.0400	NA	0.0354	NA	88.5	88.5				
PFOS	"	"	0.0359	"	89.7	89.7				

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Privileged and Confidential

LDC #: 47508C96

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: 9
2nd reviewer: JM

METHOD: LC/MS PFOS/PFOAs (EPA Method 537M)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

V_i = Volume of extract injected in microliters (ul)

V_t = Volume of the concentrated extract in microliters (ul)

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

2.0 = Factor of 2 to account for GPC cleanup

Example:

Sample I.D. 1, PFBS:

Conc. = $\frac{(1380)(\frac{134000 \times 12.5}{2.3892} - 0.022262)}{(256)}$

= 0.198 ng/L

#	Sample ID	Compound	Reported Concentration (ng/L)	Calculated Concentration ( )	Qualification
	1	PFBS	0.198		

Privileged and Confidential

LDC Report# 47508D96

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro and Tustin PFAS

LDC Report Date: March 19, 2020

Parameters: Perfluoroalkyl & Polyfluoroalkyl Substances

Validation Level: Stage 4

Laboratory: Vista Analytical Laboratory

Sample Delivery Group (SDG): 2000356

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
IS720W02D-20200219	2000356-02	Water	02/19/20
IS720W06D-20200219	2000356-03	Water	02/19/20
IS720W03D-20200219	2000356-04	Water	02/19/20
TW08S-20200219	2000356-05	Water	02/19/20
TW09S-20200219	2000356-06	Water	02/19/20
TW10S-20200219	2000356-07	Water	02/19/20
TW11S-20200219	2000356-08	Water	02/19/20
TW13S-20200219	2000356-09	Water	02/19/20
TW12S-20200219	2000356-10	Water	02/19/20

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Final Sampling and Analysis Plan for Per- and Polyfluoroalkyl Substances in Groundwater in Carve-Outs 2, 5, 6, and 9 and Groundwater and Surface Water Near Operable Unit 3, Former Marine Corps Air Station Tustin, Tustin, California, with Addendum #02 to Final Sampling and Analysis Plan for Per- and Polyfluoroalkyl Substances Sampling for Groundwater Remedial Action at Operable Unit 3, Installation Restoration Program Site 1 (February 2020), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.3 (2019), and the DoD General Validation Guidelines (February 2018). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) by Environmental Protection Agency (EPA) Method 537 Modified and LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

All sample results were subjected to Stage 4 data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. LC/MS Instrument Performance Check

Instrument performance was checked and the requirements were met.

III. Initial Calibration and Initial Calibration Verification

Initial calibration was performed as required by the methods.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

For each calibration standard, all compounds were within 70-130% of their true value.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

Retention time windows were established as required by the methods.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration and Instrument Sensitivity Check

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 30.0% for all compounds.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

The percent differences (%D) of the instrument sensitivity check (ISC) were less than or equal to 30.0% for all compounds.

Retention times of all compounds in the calibration standards were within the established retention time windows.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample EB04-20200219 was identified as an equipment blank. No contaminants were found.

Sample SB01-20200212 (from SDG 2000314) was identified as a source blank. No contaminants were found.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Labeled Compounds

All percent recoveries (%R) for labeled compounds used to quantitate target compounds were within QC limits.

XI. Compound Quantitation

All compound quantitations met validation criteria.

XII. Target Compound Identifications

All target compound identifications met validation criteria with the following exceptions:

Sample	Compound	Ion Abundance Ratio (Limits)	Flag	A or P
IS720W06D-20200219	Perfluorononanoic acid (PFNA)	14.064 (2.6685-8.0055)	J (all detects)	A
TW08S-20200219	Perfluorononanoic acid (PFNA) Perfluorooctanesulfonic acid (PFOS)	8.031 (2.6685-8.005) 3.631 (1.027-3.081)	J (all detects) J (all detects)	A
TW09S-20200219	Perfluorononanoic acid (PFNA)	8.314 (2.6685-8.0055)	J (all detects)	A

XIII. System Performance

The system performance was acceptable.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to ion abundance ratio, data were qualified as estimated in three samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Data Qualification Summary - SDG 2000356

Sample	Compound	Flag	A or P	Reason
IS720W06D-20200219 TW09S-20200219	Perfluorononanoic acid (PFNA)	J (all detects)	A	Target compound identification (ion abundance ratio)
TW08S-20200219	Perfluorononanoic acid (PFNA) Perfluorooctanesulfonic acid (PFOS)	J (all detects) J (all detects)	A	Target compound identification (ion abundance ratio)

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Laboratory Blank Data Qualification Summary - SDG 2000356

No Sample Data Qualified in this SDG

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Field Blank Data Qualification Summary - SDG 2000356

No Sample Data Qualified in this SDG

LDC #: 47508D96 **VALIDATION COMPLETENESS WORKSHEET** Date: 3/4/20

SDG #: 2000356 Stage 4 Page: 1 of 1

Laboratory: Vista Analytical Laboratory Reviewer: V

2nd Reviewer: JVG

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537M DOD QSM 5.3)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	RSD≤20%. r² ≥ 0.990/ICV=70-130%
IV.	Continuing calibration/ICV	A	CCV/ICV=70-130%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB=1. SB=SB01-20200212(2000314)
VII.	Matrix spike/Matrix spike duplicates	N	CS
VIII.	Laboratory control samples	A	LCS/D
IX.	Field duplicates	N	
X.	Labeled Compounds	SW	
VI.	Compound quantitation RL/LOQ/LODs	A	
XII.	Target compound identification	SW	
XIII.	System performance	A	
XIV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
~~1~~	~~EB04-20200219~~	~~2000356-01~~	~~Water~~	~~02/19/20~~
2	IS720W02D-20200219	2000356-02	Water	02/19/20
3	IS720W06D-20200219	2000356-03	Water	02/19/20
4	IS720W03D-20200219	2000356-04	Water	02/19/20
5	TW08S-20200219	2000356-05	Water	02/19/20
6	TW09S-20200219	2000356-06	Water	02/19/20
7	TW10S-20200219	2000356-07	Water	02/19/20
8	TW11S-20200219	2000356-08	Water	02/19/20
9	TW13S-20200219	2000356-09	Water	02/19/20
10	TW12S-20200219	2000356-10	Water	02/19/20
11				

Notes:

	B0B0186-BK1						

LDC #: 47808696

VALIDATION FINDINGS CHECKLIST

Reviewer: 9
2nd Reviewer: JM

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. LC/MS Instrument performance check				
Were the instrument performance reviewed and found to be within the validation criteria?	✓			
III. Initial calibration and Initial Calibration Verification				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the coefficient of determination (r^2) criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard?	✓			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were the retention time windows properly established?	✓			
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) of the initial calibration verification ≤ 30%?	✓			
IV. Continuing calibration and Instrument Sensitivity Check				
Was a continuing calibration analyzed prior to sample analysis, after every 10 samples and at the end of the analytical sequence?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 30%?	✓			
Were all the retention times within the acceptance windows?	✓			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were all percent differences (%D) of the Instrument Sensitivity Check ≤ 30%?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	

LDC #: 47583D96

VALIDATION FINDINGS CHECKLIST

Reviewer: 9
2nd Reviewer: JW

Validation Area	Yes	No	NA	Findings/Comments
VIII. Laboratory control samples				
Was an LCS analyzed per extraction batch for this SDG?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?			✓	
X. Labeled compounds				
Were labeled compound percent recoveries (%R) within the QC limits?		✓		
Were retention times within 0.4 minutes of the associated calibration standard?	✓			
XI. Compound quantitation				
Did the laboratory reporting limits (i.e. DL, LOD, LOQ) meet the QAPP?	✓			
Did reported results include both branched and linear isomers?	✓			
Were the correct ion transition, labeled compound and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound retention times within 0.1 minutes of the associated labeled compound for compounds with a labeled analog?	✓			
Were compound quantitation and reporting limits adjusted to reflect all sample dilutions and dry weight factors applicable to Stage 4 validation?	✓			
XII. Target compound identification				
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were two transitions and the ion transition ratio per analyte monitored and documented with the exception of PFBA and PFPeA?	✓			
Were ion ratios between 50-150%?		✓		
XIII. System performance				
System performance was found to be acceptable.	✓			
XIV. Overall assessment of Data				
Overall assessment of data was found to be acceptable.	✓			

TARGET COMPOUND WORKSHEET

METHOD: PFOS/PFOAs

A. Perfluorohexanoic acid (PFHxA)			
B. Perfluoroheptanoic acid (PFHpA)			
C. Perfluorooctanoic acid (PFOA)			
D. Perfluorononanoic acid (PFNA)			
E. Perfluorodecanoic acid (PFDA)			
F. Perfluoroundecanoic acid (PFUnA)			
G. Perfluorododecanoic acid (PFDoA)			
H. Perfluorotridecanoic acid (PFTriDA)			
I. Perfluorotetradecanoic acid (PFTeDA)			
J. Perfluorobutanesulfonic acid (PFBS)			
K. Perfluorohexanesulfonic acid (PFHxS)			
L. Perfluoroheptanesulfonic acid (PFHpS)			
M. Perfluorooctanesulfonic acid (PFOS)			
N.Perfluorodecanesulfonic acid (PFDS)			
O. Perfluorooctane Sulfonamide (FOSA)			
P. Perfluorobutanoic acid (PFBA)			
Q. Perfluoropentanoic acis (PFPeA)			
R. 1H, 1H, 2H, 2H-perfluorooctane sulfonate (6:2FTS)			
S. 1H, 1H, 2H, 2H-perfluorodecane sulfonate (8:2 FTS)			
T. N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)			
U. N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)			
V. 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)			

LDC #: 47508096

VALIDATION FINDINGS WORKSHEET
Labeled Compounds

Reviewer: 9
2nd Reviewer: JV4

METHOD: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y (N) N/A Were all labeled compound recoveries within the QC criteria?

#	Date	Lab ID/Reference	Labeled Compound	% Recovery	(Limit)	Qualifications
		300B0186-BLK1	d5-EtFOSAA	45.1	(30-150)	J+ (all detects) A
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
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					( )	
					( )	
					( )	
					( )	
					( )	

LDC #: 47608D 96

VALIDATION FINDINGS WORKSHEET
Target Compound Identification

Reviewer: 9
2nd Reviewer: RL

METHOD: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.1.1

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was the signal to noise (S/N) ratio for all compounds within the validation criteria?
Y N N/A Were two transitions and the ion transition ratio per analyte monitored and documented with the exception of PFBA and PFPeA?
Y (N) N/A Were ion ratios between 50-150%?

#	Date	Sample ID	Associated Samples	Finding (ion Ratio 50-150%)	Qualifications
		3	PFNA	14.06J (2.6685-8.0055)	J det, /A
		5	PFNA	8.031 (2.6685-8.0055)	
			PFOS	3.631 (1.027-3.081)	
		6	PFNA	8.31J (2.6685-8.0055)	✓

LDC#: 47508D96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: 4
2nd Reviewer: JM

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
3/3/2020	MQ4	PFBS	1	0.554705098	0.250
			2	1.200240315	0.500
			3	2.661566497	1.000
			4	4.565038616	2.000
			5	11.70798422	5.000
			6	24.59190858	10.000
			7	123.1772944	50.000
			8	228.7428464	100.000
			9	652.3548228	250.000
			10	1232.788197	500.000

Regression Output		***Reported***
Constant	*-0.438622*	*-0.055572*
Std Err of Y Est		
R Squared	*0.999028*	*0.998545*
Degrees of Freedom		
X Coefficient(s)	*2.488959*	*2.484790*
Std Err of Coef.		
Correlation Coefficient	*0.999514*	
Coefficient of Determination (r^2)	*0.999028*	*0.998545*

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
3/3/2020	MQ4	PFHxA	1	0.284453925	0.250
			2	0.563641632	0.500
			3	0.853216191	1.000
			4	1.758122628	2.000
			5	3.931533913	5.000
			6	8.197558343	10.000
			7	44.22352528	50.000
			8	88.16450415	100.000
			9	228.8115199	250.000
			10	439.6866489	500.000

Regression Output		***Reported***
Constant	*0.288773*	*0.023652*
Std Err of Y Est		
R Squared	*0.999657*	*0.999493*
Degrees of Freedom		
X Coefficient(s)	*0.885537*	*0.888423*
Std Err of Coef.		
Correlation Coefficient	*0.999829*	
Coefficient of Determination (r^2)	*0.999657*	*0.999493*

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
3/4/2020	MQ4	PFBS	1	0.587190232	0.250
			2	1.302489993	0.500
			3	2.382420295	1.000
			4	4.640189802	2.000
			5	12.43729927	5.000
			6	22.28433527	10.000
			7	120.4758055	50.000
			8	242.8732193	100.000
			9	682.9602572	250.000
			10	1288.660676	500.000

Regression Output		***Reported***
Constant	*-1.500233*	*-0.116823*
Std Err of Y Est		
R Squared	*0.999024*	*0.998244*
Degrees of Freedom		
X Coefficient(s)	*2.605286*	*2.590230*
Std Err of Coef.		
Correlation Coefficient	*0.999512*	
Coefficient of Determination (r^2)	*0.999024*	*0.998244*

LDC#: 47898D96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: 9
2nd Reviewer: JM

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
3/4/2020	MQ4	PFHxA	1	0.31107562	0.250
			2	0.537330688	0.500
			3	0.920922420	1.000
			4	1.813037164	2.000
			5	4.474043531	5.000
			6	9.166550489	10.000
			7	43.86348346	50.000
			8	85.83019426	100.000
			9	226.2737151	250.000
			10	433.2922326	500.000

Regression Output		***Reported***
Constant	*0.492762*	*0.058589*
Std Err of Y Est		
R Squared	*0.999590*	*0.999543*
Degrees of Freedom		
X Coefficient(s)	*0.872441*	*0.877166*
Std Err of Coef.		
Correlation Coefficient	*0.999795*	
Coefficient of Determination (r^2)	*0.999590*	*0.999543*

LDC #: 47088D96

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: 9
2nd Reviewer: SM

METHOD: LC/MS PFAS (EPA Method 537M)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF	Recalculated RRF	Reported %D	Recalculated %D
1	20030422S9	3/5/20	~~PFOA ($^{13}C_2$-PFOA)~~ ~~PFBS~~	10.00	9.86	9.86	1.4	1.4
			~~PFOS ($^{13}C_8$-PFOS)~~	10.00	10.1	10.08	0.8	0.8
2			PFOA ($^{13}C_2$-PFOA)					
			PFOS ($^{13}C_8$-PFOS)					
3			PFOA ($^{13}C_2$-PFOA)					
			PFOS ($^{13}C_8$-PFOS)					
4			PFOA ($^{13}C_2$-PFOA)					
			PFOS ($^{13}C_8$-PFOS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Privileged and Confidential

LDC #41608D96

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: 9
2nd Reviewer: JM

METHOD: LC/MS PFAS (EPA Method 537M)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 80B0186-BS1/BSD1

Compound	Spike Added (µL)		Spike Concentration (µg/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
PFOA	0.0400	0.0400	0.0374	0.0385	93.4	93.4	96.3	96.3	3.06	2.90
PFOS	↓	↓	0.0361	0.0403	90.2	90.2	101	101	11.1	11.0

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Privileged and Confidential

LDC #: 47508D96

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: 9
2nd reviewer: JVG

METHOD: LC/MS PFOS/PFOAs (EPA Method 537M)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

V_i = Volume of extract injected in microliters (ul)

V_t = Volume of the concentrated extract in microliters (ul)

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

2.0 = Factor of 2 to account for GPC cleanup

Example:

Sample I.D. 2, PFBS

Conc. = $\frac{(995 \times 12.5)}{(756)(2.48474)(252)} \times \frac{0.055572}{(1)} \times \frac{(2.0)}{(1)}$

= 0.0264 µg/L

#	Sample ID	Compound	Reported Concentration µg/L	Calculated Concentration ( )	Qualification
	2	PFBS	0.0264		

Privileged and Confidential

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro and Tustin PFAS

LDC Report Date: March 19, 2020

Parameters: Perfluoroalkyl & Polyfluoroalkyl Substances

Validation Level: Stage 4

Laboratory: Vista Analytical Laboratory

Sample Delivery Group (SDG): 2000372

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
TW07S-20200220	2000372-02	Water	02/20/20
TW05S-20200220	2000372-03	Water	02/20/20
TW06S-20200220	2000372-04	Water	02/20/20
TW21S-20200220	2000372-05	Water	02/20/20
TW20S-20200220	2000372-06	Water	02/20/20
TW19S-20200220	2000372-07	Water	02/20/20
TW18S-20200220	2000372-08	Water	02/20/20

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Final Sampling and Analysis Plan for Per- and Polyfluoroalkyl Substances in Groundwater in Carve-Outs 2, 5, 6, and 9 and Groundwater and Surface Water Near Operable Unit 3, Former Marine Corps Air Station Tustin, Tustin, California, with Addendum #02 to Final Sampling and Analysis Plan for Per- and Polyfluoroalkyl Substances Sampling for Groundwater Remedial Action at Operable Unit 3, Installation Restoration Program Site 1 (February 2020), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.3 (2019), and the DoD General Validation Guidelines (February 2018). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) by Environmental Protection Agency (EPA) Method 537 Modified and LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

All sample results were subjected to Stage 4 data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. LC/MS Instrument Performance Check

Instrument performance was checked and the requirements were met.

III. Initial Calibration and Initial Calibration Verification

Initial calibration was performed as required by the methods.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

For each calibration standard, all compounds were within 70-130% of their true value.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

Retention time windows were established as required by the methods.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration and Instrument Sensitivity Check

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 30.0% for all compounds.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

The percent differences (%D) of the instrument sensitivity check (ISC) were less than or equal to 30.0% for all compounds.

Retention times of all compounds in the calibration standards were within the established retention time windows.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample EB04-20200219 was identified as an equipment blank. No contaminants were found.

Sample SB01-20200212 (from SDG 2000314) was identified as a source blank. No contaminants were found.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Labeled Compounds

All percent recoveries (%R) for labeled compounds used to quantitate target compounds were within QC limits.

XI. Compound Quantitation

All compound quantitations met validation criteria.

XII. Target Compound Identifications

All target compound identifications met validation criteria with the following exceptions:

Sample	Compound	Ion Abundance Ratio (Limits)	Flag	A or P
TW05S-20200220	Perfluorononanoic acid (PFNA)	9.388 (2.6685-8.0055)	J (all detects)	A
TW21S-20200220	Perfluorononanoic acid (PFNA)	16.165 (3.6265-10.8795)	J (all detects)	A
TW20S-20200220	Perfluorohexanoic acid (PFHxA)	125.926 (10.3835-31.1505)	J (all detects)	A
TW18S-20200220	Perfluoroheptanoic acid (PFHpA)	27.375 (8.382-25.146)	J (all detects)	A

XIII. System Performance

The system performance was acceptable.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to ion abundance ratio, data were qualified as estimated in four samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Data Qualification Summary - SDG 2000372

Sample	Compound	Flag	A or P	Reason
TW05S-20200220 TW21S-20200220	Perfluorononanoic acid (PFNA)	J (all detects)	A	Target compound identification (ion abundance ratio)
TW20S-20200220	Perfluorohexanoic acid (PFHxA)	J (all detects)	A	Target compound identification (ion abundance ratio)
TW18S-20200220	Perfluoroheptanoic acid (PFHpA)	J (all detects)	A	Target compound identification (ion abundance ratio)

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Laboratory Blank Data Qualification Summary - SDG 2000372

No Sample Data Qualified in this SDG

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Field Blank Data Qualification Summary - SDG 2000372

No Sample Data Qualified in this SDG

LDC #: 47508E96 **VALIDATION COMPLETENESS WORKSHEET** Date: 3/16/20
SDG #: 2000372 Stage 4 Page: 1 of 1
Laboratory: Vista Analytical Laboratory Reviewer:
2nd Reviewer: JVG

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537M DOD QSM 5.3)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	RSD≤20% r² ICV/ICV≤30%
IV.	Continuing calibration/ISC	A	CCV/ISC≤30%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB=1 SB=SB01-20200212(2000314)
VII.	Matrix spike/Matrix spike duplicates	N	CS
VIII.	Laboratory control samples	A	LCS/D
IX.	Field duplicates	N	
X.	Labeled Compounds	A	
VI.	Compound quantitation RL/LOQ/LODs	A	
XII.	Target compound identification	A	
XIII.	System performance	A	
XIV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
~~1~~	~~EB05-20200220~~	~~2000372-01~~	~~Water~~	~~02/20/20~~
2	TW07S-20200220	2000372-02	Water	02/20/20
3	TW05S-20200220	2000372-03	Water	02/20/20
4	TW06S-20200220	2000372-04	Water	02/20/20
5	TW21S-20200220	2000372-05	Water	02/20/20
6	TW20S-20200220	2000372-06	Water	02/20/20
7	TW19S-20200220	2000372-07	Water	02/20/20
8	TW18S-20200220	2000372-08	Water	02/20/20
9				
10				

Notes:

	BOB0213-BLK1						

LDC #: 47508296

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: 9
2nd Reviewer: JW

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. LC/MS Instrument performance check				
Were the instrument performance reviewed and found to be within the validation criteria?	✓			
III. Initial calibration and Initial Calibration Verification				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the coefficient of determination (r^2) criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard?	✓			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were the retention time windows properly established?	✓			
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) of the initial calibration verification ≤ 30%?	✓			
IV. Continuing calibration and Instrument Sensitivity Check				
Was a continuing calibration analyzed prior to sample analysis, after every 10 samples and at the end of the analytical sequence?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 30%?	✓			
Were all the retention times within the acceptance windows?	✓			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were all percent differences (%D) of the Instrument Sensitivity Check ≤ 30%?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	

LDC #: 47508296

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: 9
2nd Reviewer: JV6

Validation Area	Yes	No	NA	Findings/Comments
VIII. Laboratory control samples				
Was an LCS analyzed per extraction batch for this SDG?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?			✓	
X. Labeled compounds				
Were labeled compound percent recoveries (%R) within the QC limits?	✓			
Were retention times within 0.4 minutes of the associated calibration standard?	✓			
XI. Compound quantitation				
Did the laboratory reporting limits (i.e. DL, LOD, LOQ) meet the QAPP?	✓			
Did reported results include both branched and linear isomers?	✓			
Were the correct ion transition, labeled compound and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound retention times within 0.1 minutes of the associated labeled compound for compounds with a labeled analog?	✓			
Were compound quantitation and reporting limits adjusted to reflect all sample dilutions and dry weight factors applicable to Stage 4 validation?	✓			
XII. Target compound identification				
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were two transitions and the ion transition ratio per analyte monitored and documented with the exception of PFBA and PFPeA?	✓			
Were ion ratios between 50-150%?		✓		
XIII. System performance				
System performance was found to be acceptable.	✓			
XIV. Overall assessment of Data				
Overall assessment of data was found to be acceptable.	✓			

TARGET COMPOUND WORKSHEET

METHOD: PFOS/PFOAs

A. Perfluorohexanoic acid (PFHxA)			
B. Perfluoroheptanoic acid (PFHpA)			
C. Perfluorooctanoic acid (PFOA)			
D. Perfluorononanoic acid (PFNA)			
E. Perfluorodecanoic acid (PFDA)			
F. Perfluoroundecanoic acid (PFUnA)			
G. Perfluorododecanoic acid (PFDoA)			
H. Perfluorotridecanoic acid (PFTriDA)			
I. Perfluorotetradecanoic acid (PFTeDA)			
J. Perfluorobutanesulfonic acid (PFBS)			
K. Perfluorohexanesulfonic acid (PFHxS)			
L. Perfluoroheptanesulfonic acid (PFHpS)			
M. Perfluorooctanesulfonic acid (PFOS)			
N.Perfluorodecanesulfonic acid (PFDS)			
O. Perfluorooctane Sulfonamide (FOSA)			
P. Perfluorobutanoic acid (PFBA)			
Q. Perfluoropentanoic acis (PFPeA)			
R. 1H, 1H, 2H, 2H-perfluorooctane sulfonate (6:2FTS)			
S. 1H, 1H, 2H, 2H-perfluorodecane sulfonate (8:2 FTS)			
T. N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)			
U. N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)			
V. 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)			

LDC #: 47508E96

VALIDATION FINDINGS WORKSHEET
Target Compound Identification

Reviewer: 9
2nd Reviewer: JM

METHOD: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.1.1

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Was the signal to noise (S/N) ratio for all compounds within the validation criteria?
Y (N) N/A Were two transitions and the ion transition ratio per analyte monitored and documented with the exception of PFBA and PFPeA?
Y (N) N/A Were ion ratios between 50-150%?

#	Date	Sample ID	Associated Samples	Ion Ratio (50-150%) Finding	Qualifications
		3	PFNA	9.388 (2.685-8.0055)	J+ (all) / A
		5	PFNA	16.165 (3.6265-10.8795)	
		6	PFHxA	125.926 (10.3835-31.1505)	
		8	PFHpA	27.375 (0.382-25.146)	

LDC#: 41582 98

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: 9
2nd Reviewer: JM

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
3/4/2020	MQ4	PFBS	1	0.587190232	0.250
			2	1.302489993	0.500
			3	2.382420295	1.000
			4	4.640189802	2.000
			5	12.43729927	5.000
			6	22.28433527	10.000
			7	120.4758055	50.000
			8	242.8732193	100.000
			9	682.9602572	250.000
			10	1288.660676	500.000

Regression Output		***Reported***
Constant	*-1.500233*	*-0.116823*
Std Err of Y Est		
R Squared	*0.999024*	*0.998244*
Degrees of Freedom		
X Coefficient(s)	*2.605286*	*2.590230*
Std Err of Coef.		
Correlation Coefficient	*0.999512*	
Coefficient of Determination (r^2)	*0.999024*	*0.998244*

LDC#: 47582-96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer:
2nd Reviewer: JM

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
3/4/2020	MQ4	PFHxA	1	0.31107562	0.250
			2	0.537330688	0.500
			3	0.920922420	1.000
			4	1.813037164	2.000
			5	4.474043531	5.000
			6	9.166550489	10.000
			7	43.86348346	50.000
			8	85.83019426	100.000
			9	226.2737151	250.000
			10	433.2922326	500.000

Regression Output		***Reported***
Constant	*0.492762*	*0.058589*
Std Err of Y Est		
R Squared	*0.999590*	*0.999543*
Degrees of Freedom		
X Coefficient(s)	*0.872441*	*0.877166*
Std Err of Coef.		
Correlation Coefficient	*0.999795*	
Coefficient of Determination (r^2)	*0.999590*	*0.999543*

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
3/5/2020	MQ4	PFBS	1	0.726555356	0.250
			2	1.104992504	0.500
			3	2.524191830	1.000
			4	5.242095397	2.000
			5	12.56394309	5.000
			6	24.35921505	10.000
			7	128.0155043	50.000
			8	263.9439244	100.000
			9	580.1280986	250.000
			10	1282.892279	500.000

Regression Output		***Reported***
Constant	*-1.958225*	*0.020965*
Std Err of Y Est		
R Squared	*0.997967*	*0.997821*
Degrees of Freedom		
X Coefficient(s)	*2.526349*	*2.504810*
Std Err of Coef.		
Correlation Coefficient	*0.998983*	
Coefficient of Determination (r^2)	*0.997967*	*0.997821*

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
3/5/2020	MQ4	PFHxA	1	0.303339179	0.250
			2	0.512576408	0.500
			3	0.938837798	1.000
			4	1.910591972	2.000
			5	4.666418299	5.000
			6	9.287534991	10.000
			7	45.54031784	50.000
			8	89.32557222	100.000
			9	217.1793728	250.000
			10	414.4291907	500.000

Regression Output		***Reported***
Constant	*1.769943*	*0.082029*
Std Err of Y Est		
R Squared	*0.999397*	*0.998840*
Degrees of Freedom		
X Coefficient(s)	*0.834171*	*0.852543*
Std Err of Coef.		
Correlation Coefficient	*0.999698*	
Coefficient of Determination (r^2)	*0.999397*	*0.998840*

LDC #: ~~41508270~~

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: LC/MS PFAS (EPA Method 537M)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF	Recalculated RRF	Reported %D	Recalculated %D
1	~~20030SP-31~~	~~3/6/20~~	~~PFOA ($^{13}C_2$-PFOA)~~ ~~PFBS~~	10.00	9.65	9.65	3.5	3.5
			~~PFOS ($^{13}C_8$-PFOS)~~ ~~PFHxA~~	10.00	10.4	10.42	4.2	4.2
2			PFOA ($^{13}C_2$-PFOA)					
			PFOS ($^{13}C_8$-PFOS)					
3			PFOA ($^{13}C_2$-PFOA)					
			PFOS ($^{13}C_8$-PFOS)					
4			PFOA ($^{13}C_2$-PFOA)					
			PFOS ($^{13}C_8$-PFOS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Privileged and Confidential

LDC #: 47008296

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JVC

METHOD: LC/MS PFAS (EPA Method 537M)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: BOB0213-BS1/-BSD1

Compound	Spike Added (µg/L)		Spike Concentration (ng)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
PFOA	0.0400	0.0400	0.0429	0.0420	107	107	105	105	2.03	2.12
PFOS	↓	↓	0.0403	0.0436	101	101	109	109	7.91	7.87

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Privileged and Confidential

LDC #: 47508296

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: 9
2nd reviewer: JM

METHOD: LC/MS PFOS/PFOAs (EPA Method 537M)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. 2, PFHxA

Conc. = $\frac{(1.33e4 \times 12.5)}{(1.38e4 \times 1)} \times \frac{0.005859}{(0.877166)(254)} \times \frac{(1)}{(\quad)} \times \frac{(\quad)}{(\quad)}$

= 0.0497 ng/L

#	Sample ID	Compound	Reported Concentration (ng/L)	Calculated Concentration ( )	Qualification
	2	PFHxA	0.0494		

Privileged and Confidential

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro and Tustin PFAS

LDC Report Date: March 20, 2020

Parameters: Perfluoroalkyl & Polyfluoroalkyl Substances

Validation Level: Stage 4

Laboratory: Vista Analytical Laboratory

Sample Delivery Group (SDG): 2000390

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
TW14S-20200221	2000390-02	Water	02/21/20
TW17S-20200221	2000390-03	Water	02/21/20
TW16S-20200221	2000390-04	Water	02/21/20
TW15S-20200221	2000390-05	Water	02/21/20

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Final Sampling and Analysis Plan for Per- and Polyfluoroalkyl Substances in Groundwater in Carve-Outs 2, 5, 6, and 9 and Groundwater and Surface Water Near Operable Unit 3, Former Marine Corps Air Station Tustin, Tustin, California, with Addendum #02 to Final Sampling and Analysis Plan for Per- and Polyfluoroalkyl Substances Sampling for Groundwater Remedial Action at Operable Unit 3, Installation Restoration Program Site 1 (February 2020), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.3 (2019), and the DoD General Validation Guidelines (February 2018). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) by Environmental Protection Agency (EPA) Method 537 Modified and LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

All sample results were subjected to Stage 4 data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. LC/MS Instrument Performance Check

Instrument performance was checked and the requirements were met.

III. Initial Calibration and Initial Calibration Verification

Initial calibration was performed as required by the methods.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

For each calibration standard, all compounds were within 70-130% of their true value.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

Retention time windows were established as required by the methods.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration and Instrument Sensitivity Check

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 30.0% for all compounds.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

The percent differences (%D) of the instrument sensitivity check (ISC) were less than or equal to 30.0% for all compounds.

Retention times of all compounds in the calibration standards were within the established retention time windows.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample EB06-20200221 was identified as an equipment blank. No contaminants were found.

Sample SB01-20200212 (from SDG 2000314) was identified as a source blank. No contaminants were found.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Labeled Compounds

All percent recoveries (%R) for labeled compounds used to quantitate target compounds were within QC limits.

XI. Compound Quantitation

All compound quantitations met validation criteria.

XII. Target Compound Identifications

All target compound identifications met validation criteria with the following exceptions:

Sample	Compound	Ion Abundance Ratio (Limits)	Flag	A or P
TW14S-20200221	Perfluorononanoic acid (PFNA)	8.665 (2.6685-8.0055)	J (all detects)	A
TW15S-20200221	Perfluorononanoic acid (PFNA)	8.257 (2.6685-8.0055)	J (all detects)	A

XIII. System Performance

The system performance was acceptable.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to ion abundance ratio, data were qualified as estimated in two samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Data Qualification Summary - SDG 2000390

Sample	Compound	Flag	A or P	Reason
TW14S-20200221 TW15S-20200221	Perfluorononanoic acid (PFNA)	J (all detects)	A	Target compound identification (ion abundance ratio)

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Laboratory Blank Data Qualification Summary - SDG 2000390

No Sample Data Qualified in this SDG

MCAS El Toro and Tustin PFAS
Perfluoroalkyl & Polyfluoroalkyl Substances - Field Blank Data Qualification Summary - SDG 2000390

No Sample Data Qualified in this SDG

LDC #: 47508F96 **VALIDATION COMPLETENESS WORKSHEET** Date: 3/16/20
SDG #: 2000390 Stage 4 Page: 1 of 1
Laboratory: Vista Analytical Laboratory Reviewer: 1
2nd Reviewer: JM

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537M DOD QSM 5.3)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	≤20%, r² True/lcv=30%
IV.	Continuing calibration/ISC	A	ccv/isc=30%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	FB=1 .SB=SB01-20200213(2000314)
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	A	LCS/D
IX.	Field duplicates	N	
X.	Labeled Compounds	SW	
VI.	Compound quantitation RL/LOQ/LODs	A	
XII.	Target compound identification	SW	
XIII.	System performance	A	
XIV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
~~1~~	~~EB06-20200221~~	~~2000390-01~~	~~Water~~	~~02/21/20~~
2	TW14S-20200221	2000390-02	Water	02/21/20
3	TW17S-20200221	2000390-03	Water	02/21/20
4	TW16S-20200221	2000390-04	Water	02/21/20
5	TW15S-20200221	2000390-05	Water	02/21/20
6				
7				
8				
9				
10				

Notes:

	BOBO213-Pdd						

LDC #: 47508F96

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: 9
2nd Reviewer: JM

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. LC/MS Instrument performance check				
Were the instrument performance reviewed and found to be within the validation criteria?	✓			
III. Initial calibration and Initial Calibration Verification				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the coefficient of determination (r^2) criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard?	✓			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were the retention time windows properly established?	✓			
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) of the initial calibration verification ≤ 30%?	✓			
IV. Continuing calibration and Instrument Sensitivity Check				
Was a continuing calibration analyzed prior to sample analysis, after every 10 samples and at the end of the analytical sequence?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 30%?	✓			
Were all the retention times within the acceptance windows?	✓			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were all percent differences (%D) of the Instrument Sensitivity Check ≤ 30%?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks?		✓		
VI. Field blanks				
Were field blanks identified in this SDG?	✓			
Were target compounds detected in the field blanks?		✓		
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	

LDC #: 47508F96

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: 9
2nd Reviewer: SW

Validation Area	Yes	No	NA	Findings/Comments
VIII. Laboratory control samples				
Was an LCS analyzed per extraction batch for this SDG?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?			✓	
X. Labeled compounds				
Were labeled compound percent recoveries (%R) within the QC limits?		✓		
Were retention times within 0.4 minutes of the associated calibration standard?	✓			
XI. Compound quantitation				
Did the laboratory reporting limits (i.e. DL, LOD, LOQ) meet the QAPP?	✓			
Did reported results include both branched and linear isomers?	✓			
Were the correct ion transition, labeled compound and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound retention times within 0.1 minutes of the associated labeled compound for compounds with a labeled analog?	✓			
Were compound quantitation and reporting limits adjusted to reflect all sample dilutions and dry weight factors applicable to Stage 4 validation?	✓			
XII. Target compound identification				
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	✓			
Were two transitions and the ion transition ratio per analyte monitored and documented with the exception of PFBA and PFPeA?	✓			
Were ion ratios between 50-150%?		✓		
XIII. System performance				
System performance was found to be acceptable.	✓			
XIV. Overall assessment of Data				
Overall assessment of data was found to be acceptable.	✓			

TARGET COMPOUND WORKSHEET

METHOD: PFOS/PFOAs

A. Perfluorohexanoic acid (PFHxA)			
B. Perfluoroheptanoic acid (PFHpA)			
C. Perfluorooctanoic acid (PFOA)			
D. Perfluorononanoic acid (PFNA)			
E. Perfluorodecanoic acid (PFDA)			
F. Perfluoroundecanoic acid (PFUnA)			
G. Perfluorododecanoic acid (PFDoA)			
H. Perfluorotridecanoic acid (PFTriDA)			
I. Perfluorotetradecanoic acid (PFTeDA)			
J. Perfluorobutanesulfonic acid (PFBS)			
K. Perfluorohexanesulfonic acid (PFHxS)			
L. Perfluoroheptanesulfonic acid (PFHpS)			
M. Perfluorooctanesulfonic acid (PFOS)			
N.Perfluorodecanesulfonic acid (PFDS)			
O. Perfluorooctane Sulfonamide (FOSA)			
P. Perfluorobutanoic acid (PFBA)			
Q. Perfluoropentanoic acis (PFPeA)			
R. 1H, 1H, 2H, 2H-perfluorooctane sulfonate (6:2FTS)			
S. 1H, 1H, 2H, 2H-perfluorodecane sulfonate (8:2 FTS)			
T. N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)			
U. N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)			
V. 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)			

LDC #: 47308E96

VALIDATION FINDINGS WORKSHEET
Labeled Compounds

Reviewer: 9
2nd Reviewer: JVG

METHOD: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y (N) N/A Were all labeled compound recoveries within the QC criteria?

#	Date	Lab ID/Reference	Labeled Compound	% Recovery	(Limit)	Qualifications
		3	13C2-PFOA	160	(50-150)	No Qual (15X)
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
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					( )	

LDC #: #17508E96

VALIDATION FINDINGS WORKSHEET
Target Compound Identification

Reviewer: 9
2nd Reviewer: JM

METHOD: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.1.1

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was the signal to noise (S/N) ratio for all compounds within the validation criteria?
Y N N/A Were two transitions and the ion transition ratio per analyte monitored and documented with the exception of PFBA and PFPeA?
Y N N/A Were ion ratios between 50-150%?

#	Date	Sample ID	Associated Samples	Finding (Ion Ratio 150-150%)	Qualifications
		2	PFNA	8.665 (2.6685 - 8.005)	J det/☆
		5	PFNA	8.257	↓

LDC#: 47508F96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: 2nd Reviewer:

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
3/4/2020	MQ4	PFBS	1	0.587190232	0.250
			2	1.302489993	0.500
			3	2.382420295	1.000
			4	4.640189802	2.000
			5	12.43729927	5.000
			6	22.28433527	10.000
			7	120.4758055	50.000
			8	242.8732193	100.000
			9	682.9602572	250.000
			10	1288.660676	500.000

Regression Output		*Reported*
Constant	*-1.500233*	*-0.116823*
Std Err of Y Est		
R Squared	*0.999024*	*0.998244*
Degrees of Freedom		
X Coefficient(s)	*2.605286*	*2.590230*
Std Err of Coef.		
Correlation Coefficient	*0.999512*	
Coefficient of Determination (r^2)	*0.999024*	*0.998244*

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
3/4/2020	MQ4	PFHxA	1	0.31107562	0.250
			2	0.537330688	0.500
			3	0.920922420	1.000
			4	1.813037164	2.000
			5	4.474043531	5.000
			6	9.166550489	10.000
			7	43.86348346	50.000
			8	85.83019426	100.000
			9	226.2737151	250.000
			10	433.2922326	500.000

Regression Output		***Reported***
Constant	*0.492762*	*0.058589*
Std Err of Y Est		
R Squared	*0.999590*	*0.999543*
Degrees of Freedom		
X Coefficient(s)	*0.872441*	*0.877166*
Std Err of Coef.		
Correlation Coefficient	*0.999795*	
Coefficient of Determination (r^2)	*0.999590*	*0.999543*

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
3/5/2020	MQ4	PFBS	1	0.726555356	0.250
			2	1.104992504	0.500
			3	2.524191830	1.000
			4	5.242095397	2.000
			5	12.56394309	5.000
			6	24.35921505	10.000
			7	128.0155043	50.000
			8	263.9439244	100.000
			9	580.1280986	250.000
			10	1282.892279	500.000

Regression Output		*Reported*
Constant	*-1.958225*	*0.020965*
Std Err of Y Est		
R Squared	*0.997967*	*0.997821*
Degrees of Freedom		
X Coefficient(s)	*2.526349*	*2.504810*
Std Err of Coef.		
Correlation Coefficient	*0.998983*	
Coefficient of Determination (r^2)	*0.997967*	*0.997821*

LDC#: 47608F96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: 9
2nd Reviewer: JM

Method: LC/MS PFCs (EPA Method 537)

Calibration Date	System	Compound	Standard	(Y) Response	(X) Concentration
3/5/2020	MQ4	PFHxA	1	0.303339179	0.250
			2	0.512576408	0.500
			3	0.938837798	1.000
			4	1.910591972	2.000
			5	4.666418299	5.000
			6	9.287534991	10.000
			7	45.54031784	50.000
			8	89.32557222	100.000
			9	217.1793728	250.000
			10	414.4291907	500.000

Regression Output		***Reported***
Constant	*1.769943*	*0.082029*
Std Err of Y Est		
R Squared	*0.999397*	*0.998840*
Degrees of Freedom		
X Coefficient(s)	*0.834171*	*0.852543*
Std Err of Coef.		
Correlation Coefficient	*0.999698*	
Coefficient of Determination (r^2)	*0.999397*	*0.998840*

LDC #: 47508F96

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: 9
2nd Reviewer: JVG

METHOD: LC/MS PFAS (EPA Method 537M)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF	Recalculated RRF	Reported %D	Recalculated %D
1	200324P2-29	3/5/20	~~PFOA ($^{13}C_2$-PFOA)~~ PFBS	10.00	9.73	9.73	2.7	2.7
			~~PFOS ($^{13}C_8$-PFOS)~~ PFHxA	10.00	9.92	9.92	0.8	0.8
2			PFOA ($^{13}C_2$-PFOA)					
			PFOS ($^{13}C_8$-PFOS)					
3			PFOA ($^{13}C_2$-PFOA)					
			PFOS ($^{13}C_8$-PFOS)					
4			PFOA ($^{13}C_2$-PFOA)					
			PFOS ($^{13}C_8$-PFOS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

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LDC #: 47808-7D

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: Q
2nd Reviewer: JM6

METHOD: LC/MS PFAS (EPA Method 537M)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 280B0213-BS1/-BSD1

Compound	Spike Added (µg/L)		Spike Concentration (µg/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
PFOA	0.0400	0.0400	0.0429	0.0420	107	107	105	105	2.03	2.12
PFOS	↓	↓	0.0403	0.0436	101	101	109	109	7.91	7.87

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

Privileged and Confidential

LDC #: 47508F96

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: 2
2nd reviewer: JM

METHOD: LC/MS PFOS/PFOAs (EPA Method 537M)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. 2 PFHxA:

Conc. = $\frac{(1.51e4 \times 12.5) - 9.05859}{(1.33e4)(0.8771)(60)} \frac{(1)}{(52)}$

= 0.0639 ng/L

#	Sample ID	Compound	Reported Concentration ng/L	Calculated Concentration ( )	Qualification
	2	PFHxA	0.064 J		

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INSTALLATION_ID	SITE_NAME	LOCATION_NAME	LOCATION_TYPE_DESC	COORD_X	COORD_Y	SAMPLE_NAME	SAMPLE_MATRIX_DESC	COLLECT_DATE	ANALYTICAL_METHOD_GRP_DESC	SDG
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314

INSTALLATION_ID	SITE_NAME	LOCATION_NAME	LOCATION_TYPE_DESC	COORD_X	COORD_Y	SAMPLE_NAME	SAMPLE_MATRIX_DESC	COLLECT_DATE	ANALYTICAL_METHOD_GRP_DESC	SDG
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314

INSTALLATION_ID	SITE_NAME	LOCATION_NAME	LOCATION_TYPE_DESC	COORD_X	COORD_Y	SAMPLE_NAME	SAMPLE_MATRIX_DESC	COLLECT_DATE	ANALYTICAL_METHOD_GRP_DESC	SDG
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314

INSTALLATION_ID	SITE_NAME	LOCATION_NAME	LOCATION_TYPE_DESC	COORD_X	COORD_Y	SAMPLE_NAME	SAMPLE_MATRIX_DESC	COLLECT_DATE	ANALYTICAL_METHOD_GRP_DESC	SDG
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	OU 0000001A	IS72MW18SR	Monitoring well	6080878.6	2206101	IS72MW18SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	DUP03-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314

INSTALLATION_ID	SITE_NAME	LOCATION_NAME	LOCATION_TYPE_DESC	COORD_X	COORD_Y	SAMPLE_NAME	SAMPLE_MATRIX_DESC	COLLECT_DATE	ANALYTICAL_METHOD_GRP_DESC	SDG
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	I006MW05SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005 SOUTH-A	BMW07S	Monitoring well	6083933.12	2202044.05	BMW07S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW01S	Monitoring well	6082832.42	2201302.28	I006MW01S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW05SR	Monitoring well	6082775.54	2201315.4	DUP01-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	I005MW01SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00005	I005MW01SR	Monitoring well	6083854.94	2202499.94	DUP05-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW03SR	Monitoring well	6082820.6	2201165.2	I006MW03SR-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	222MW02S	Monitoring well	6081283.5	2207582.9	222MW02S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	A000MW42S	Monitoring well	6081103.46	2207072.5	A000MW42S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00006	I006MW08S	Well	6082854.35	2201435.38	I006MW08S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314
TUSTIN_MCAS	SITE 00013S	IS72MW15D	Monitoring well	6080923.8	2205875.3	IS72MW15S-20200212	Ground water	12-Feb-20	Perfluoroalkyl Compounds	2000314